

2016 **MAY 30-31**  
MARRAKECH, MOROCCO

*Sustainability of Territories in the Context of Global Changes*

1<sup>st</sup> AMSR CONGRESS and 23<sup>rd</sup> APDR CONGRESS



# ABSTRACTS BOOK and PROGRAM





# ABSTRACTS BOOK and PROGRAM

1st AMRS Congress and 23rd APDR Congress

*'Sustainability of Territories in the Context of Global Changes'*

During the last four decades, the world is experiencing heavy pressures resulting from both human and natural driven forces, causing severe disturbances for territories and their natural and manmade assets. In terms of global climate change, the IPCC fifth report attested that the atmosphere and oceans have warmed, the quantity of snow and ice diminished, the level of the sea and the greenhouse gases concentration in the atmosphere have increased. It indicated as well that each of the three last decades was successively warmer more than the previous decades since 1850. The special report of the IPCC on the management of climate extreme events risks and disasters states that it is practically certain that the increase in the frequency and magnitude of the daily warm temperature extremes and the decrease in the extreme cold temperatures will take place globally in the 21st century. Climate change and the speed of its occurrence may risk conjuring up in the future a number of harmful environmental and socio-economic impacts on territories. Climate change can have impacts on several sectors at a time. It affects and interacts with the human and environmental systems, dictating consequently the need for adaptation in order to reduce vulnerability and increase resilience.

In the context of the preparation of Morocco for the organisation of UNFCCC COP 22, the Moroccan Association and of Regional Sciences, in partnership with the Portuguese Association of Regional Development, is organising its first congress in Marrakech under the main theme of Sustainability of Territories in the context of global changes. This event is approved as 'Certified Event' by the Steering Committee of the COP 22.

We wish you a good Conference!

*Abdellatif Khattabi* (Local organizer Chair) and *Francisco Carballo-Cruz* (President of the APDR)

## Organization



ASSOCIATION MAROCAINE DES  
SCIENCES RÉGIONALES



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# Overview General Program

Monday 30 May		Tuesday 31 May
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09:00-09:45		<b>PLENARY SESSION 2</b> <i>Sustainable Development Goals and regional growth: qualitative visions and quantitative evidence</i> by <b>Peter Nijkamp</b>
09:45-10:00		Coffee break
10:00-11:00	<b>OPENING SESSION</b> [10:00-11:00]	Regular Sessions II [10:00-12:00]
11:00-12:00	<b>PLENARY SESSION 1</b> <i>How to make Morocco a regional Hub for sustainable strategic planning in the context of climate change?</i> by <b>Mohammed Tawfik Mouline</b>	
12:00-13:00	Lunch	Lunch
13:00-15:00	Special Sessions I [13:00-15:00]	Special Sessions III [13:00-15:00]
15:00-15:30	Coffee break	Coffee break
15:30-17:30	Regular Sessions I [15:30-17:30]	Regular Sessions III [15:30-17:30]
17:30-18:30	Special Sessions II [17:30-19:00]	<b>CLOSING SESSION</b>
18:30-19:00		
19:00-20:00		
20:00-22:30	<b>OFFICIAL DINNER</b>	

# Overview Sessions Program

	Monday 30 May			Tuesday 31 May		
	Room 1	Room 2	Room 3	Room 1	Room 2	Room 3
10:00-12:00				<b>Regular Sessions II</b>		
				RS01.2	RS03.2	RS04
13:00-15:00	<b>Special Sessions I</b>			<b>Special Sessions III</b>		
	SS03	SS05.1	SS10.1	SS04	SS05.2	SS10.2
15:30-17:30	<b>Regular Sessions I</b>			<b>Regular Sessions III</b>		
	RS01.1	RS02	RS03.1	RS05	RS06	RS07
17:30-19:00	<b>Special Sessions II</b>					
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### Special Sessions

- SS01 - Regional Science in Africa
- SS02 - Asymmetries in metropolitan areas: measuring, correcting and rethinking
- SS03 - Sustainable Tourism in the Age of Globalization
- SS04 - Entrepreneurship in sustainable and creative territories
- SS05 - Cultural Tourism and Regional Development
- SS06 - Contributions of higher education institutions (HEIs) for territorial development: building bridges between the local and global
- SS08 - Participatory Planning and Sustainable Built Space
- SS10 - Adapting to climate change through improved watershed management and payment for environmental services

### Regular Sessions

- RS01 - Natural resources, biodiversity, environment and sustainable development
- RS02 - Financial System and Regional Development
- RS03 - Rural Development and Agriculture Economics
- RS04 - Territorial Multi functionality and, Sustainable Regional Development
- RS05 - Climate change mitigation and adaptation
- RS06 - Green growth in natural resources, energy, transport and infrastructures
- RS07 - Migration, Urbanization and Spatial Justice



# Program

Location: Adam Park Hotel & Spa Marrakech. 7th Avenue Art, Agdal Tourist Area, Marrakech, 40050, Marrocos

Monday, 30 May 2016

09:00-17:00 | Registration

10:00-11:00 | Opening Session

**Officials from the City of Marrakech** (tbc)

**Abdellatif Khattabi**, President of AMRS and Chair of the LOC, National School of Forestry Engineering

**Tomás Ponce Dentinho**, Assembly President of APDR, University of Azores

11:00-12:00 | Plenary Session I

**Chair:** Fabio Mazzola, University of Palermo

*How to make Morocco a regional Hub for sustainable strategic planning in the context of climate change?*

**Mohammed Tawfik Mouline**

Directeur Général de l'Institut Royal des Etudes Stratégiques, Rabat

12:00-13:00 | Lunch

13:00-15:00 | Special Sessions I

## SS03 Sustainable Tourism in the Age of Globalization

**Chair:** Paolo Rizzi

**Location:** ROOM 1

ID	Title	Authors
01067	LE TOURISME ET LE DÉVELOPPEMENT ÉCONOMIQUE DE LA MONTAGNE AU MAROC: CAS DU PARC NATIONAL DU TOUBKAL, HAUT ATLAS OCCIDENTAL	Mohamed El Bouziani (Haut Commissariat aux Eaux et Forêts) Abdellatif Khattabi (ENFI) <b>Brahim Moudoud</b> (FLSH, Ibnou Zohr University)
01103	GOVERNANCE AND SUSTAINABLE TOURISM IN THE AGE OF GLOBALIZATION: ESTABLISHING LINKAGES BETWEEN BOTH CONCEPTS	<b>Maria do Rosário Borges</b> (U of Évora)
01111	REDES DE COLABORAÇÃO E SUSTENTABILIDADE DO TURISMO. DESAFIOS DE VALORIZAÇÃO DOS DESTINOS DE MONTANHA	<b>Gonçalo Fernandes</b> (Instituto Politécnico da Guarda/CICS.NOVA)

## SS05.1 Cultural Tourism and Regional Development

**Chair:** Paula Remoaldo

**Location:** ROOM 2

ID	Title	Authors
01027	TOURISTS' MOTIVATION TOWARD VISITING A WORLD HERITAGE SITE: THE CASE OF GUIMARÃES	José Cadima Ribeiro (U of Minho) <b>Paula Remoaldo</b> (U of Minho) Laurentina Vareiro (Instituto Politécnico do Cávado e do Ave) Vitor Marques (U of Minho)
01034	CITY BRAND HAS CHANGED. WHAT NEXT IN THE LOCAL DEVELOPMENT?	<b>Oto Hudec</b> (Technical U of Kosice) Natasa Urbancikova (Technical U of Kosice)
01063	CONTRIBUTION TO THE DEVELOPMENT OF TOURISM IN LOW DENSITY TERRITORIES OF THE NORTHEAST OF PORTUGAL: THE CASE OF BOTICAS	<b>Paula Remoaldo</b> (U of Minho) Helder Lopes (U of Minho) Vitor Ribeiro (U of Minho) José Cadima Ribeiro (U of Minho) Sara Silva (U of Minho)
01075	CONSERVATION ET RESTAURATION DU PATRIMOINE CULTUREL EN LIBYE: MÉTHODOLOGIE POUR UN RÉSEAU MÉDITERRANÉEN DU TOURISME CULTUREL	<b>Nicola Masotto</b> (U of Padua) Giovanni Campeol (U of Venice) Sandra Carollo (U of Venice, Studio ALIA)

**SS10.1 Adapting to climate change through improved watershed management and payment for environmental services****Chair:** Abdellatif Khattabi**Location:** ROOM 3

ID	Title	Authors
01050	CHANGEMENTS CLIMATIQUES AU MAROC ET FOCUS SUR LE BASSIN DE TENSIFT	<b>Fatima Driouech</b> (DMN, Maroc) Khalid ElRhaz (DMN, Maroc) Wafae Badi (DMN, Maroc)
01052	ADAPTATION TO CLIMATE CHANGE IN A RIVER BASIN IN MOROCCO THROUGH IMPROVED WATERSHED MANAGEMENT AND PAYMENT FOR ENVIRONMENTAL SERVICES	<b>Abdellatif Khattabi</b> (ENFI)
01062	ANALYSIS OF METEOROLOGICAL DROUGHT SEQUENCES IN THE TENSIFT WATERSHED: IMPACTS ON THE ANNUAL INFLOWS TO THE TAKERKOUST DAM AND ON THE IRRIGATED AREAS OF N'FIS.	<b>MELIHO Modeste</b> (Scientific Institute of Rabat) Abdellatif Khattabi (ENFI) JOBINS Guy (Research Fellow, ODI) NEWBORNE Pierre (Research Associate, ODI) MHAMMDI Nadia (U Med V,) SGHIR Fathallah (ORMVA du Haouz)
01070	MODELISATION OF THE IMPACT OF LAND USE CHANGE ON THE HYDROLOGY OF OURIKA'S BASIN	<b>Reda RIHANE</b> (ENFI) Abdellatif Khattabi (ENFI) Said Lahssini (ENFI)
01073	WATER GOVERNANCE AND STAKEHOLDERS' INTERACTION DURING WATER SCARCITY PERIODS— CASE STUDY OF NFIS BASIN	<b>Sara Bouarais</b> (ENFI) Abdellatif Khattabi (ENFI) JOBINS Guy (Research Fellow, ODI) NEWBORNE Pierre (Research Associate, ODI) Boumaaza Taieb (U Hassan II)

**15:00-15:30 | Coffee-Break****15:30-17:30 | Regular Sessions I****RS01.1 Natural resources, biodiversity, environment and sustainable development****Chair:** Jamel Ben Nasr**Location:** ROOM 1

ID	Title	Authors
01057	GEOECOLOGICAL REGIONALIZATION AS A METHOD FOR COMPLEX ANALYSIS IN AFRICA	<b>Oxana Klimanova</b> (Moscow Lomonosov SU) Evgeniy Kolbowski (Moscow Lomonosov SU) Daria Tretyachenko (Moscow Lomonosov SU)
01101	CONTRIBUTOS PARA UM PLANO ESTRATÉGICO PARA O TURISMO DO PORTO SANTO: A IMPORTÂNCIA DO GEOTURISMO	<b>Samuel Barros</b> (Instituto Politécnico de Viseu) Joaquim Antunes (Instituto Politécnico de Viseu) Cristina Castro (Instituto Politécnico de Viseu)
01109	RETROSPECTIVE STUDY OF SOIL EROSION AT WATERSHED SCALE FROM 137CS MEASUREMENTS: CASE STUDY IN THE NORTH OF MOROCCO	<b>Anis Zouagui</b> (Centre des études nucléaires Maamora (CNESTEN)) Asmae Noura (CNESTEN) Mohamed Sabir (ENFI) Mustapha Naimi (IAV HASSAN II) Moncef Benmansour (CNESTEN) Mohamed Chikhaoui (IAV HASSA II)
01112	ASPIRING ESTRELA GEOPARK: ESTRATÉGIA PARA A VALORIZAÇÃO E DESENVOLVIMENTO DO TERRITÓRIO DA SERRA DA ESTRELA	<b>Gonçalo Fernandes</b> (Instituto Politécnico da Guarda/CICS.NOVA) Emanuel Castro (Instituto Politécnico da Guarda/AGE)
01126	LOCAL GOVERNANCE AND SUSTAINABLE WATER MANAGEMENT IN TUNISIAN IRRIGATED AREA	<b>Jamel Ben Nasr</b> (Institut National Agronomique de Tunisie)

## RS02 Financial System and Regional Development

Chair: Fabio Mazzola

Location: ROOM 2

ID	Title	Authors
01036	THE IMPORTANCE OF LOCATION CHOICES OF TWO IBERIAN CORK FAMILY FIRMS	João Lopes (ISEG, U de Lisboa) Amélia Branco (ISEG, U de Lisboa) Francisco Parejo (U de Extremadura) Jose F. Rangel Preciado (U de Extremadura)
01060	EDUCATION, POVERTY, AND THE ALGERIAN BORDER: SPATIAL PERSPECTIVES IN MOROCCO	Matthew Lehnert (U of Toledo)
01079	OBSERVATORY OF RESILIENCE PRACTICES: FIRST RESULTS AND PERSPECTIVES	Catherine Dezio (Politecnico di Milano) Angela Colucci (Politecnico di Milano) Marcello Magoni (Politecnico di Milano) Giulia Pesaro (Politecnico di Milano) Rachele Radaelli (Politecnico di Milano)
01108	THE EFFECTIVENESS OF TERRITORIAL INTEGRATED PROJECTS IN SOUTHERN ITALY: A REGIONAL CASE	Fabio Mazzola (U of Palermo) Alessandro Cusimano (U of Kent, UK) Sylvain Barde (U of Kent, UK)
01121	ENTREPRENEURIAL PROFILE AND ENVIRONMENTAL CONDITIONS TO ENTREPRENEURSHIP	Vitor Braga (ESTGF-IPP; CIICESI) Célia Pereira (ESTGF-IPP; CIICESI) Aldina Correia (ESTGF-IPP; CIICESI) Alexandra Braga (ESTGF-IPP; CIICESI)

## RS03.1 Rural Development and Agriculture Economics

Chair: Deokho Cho

Location: ROOM 3

ID	Title	Authors
01010	SKILLS AND GEOGRAPHICAL ECONOMICS	Jesus Lopez-Rodriguez (U da Coruña) Andres Faiña (U da Coruña) Cosmin Gabriel Bolea (UNAM)
01025	SMART SPECIALISATION FOR SUSTAINABLE GROWTH IN THE EUROPEAN UNION	Marcelino Cabrera Giraldez (European Commission - Joint Research Centre)
01066	MACRO-REGIONS, COUNTRY EFFECT AND FINANCIAL RATIOS: A COMPARATIVE STUDY IN THE EURO AREA (2000-2009)	João Soares (IST, U de Lisboa) Joaquim Pina (FCT, U Nova de Lisboa)
01077	UNDERSTANDING URBAN SHRINKAGE VIA BUSINESS DEMOGRAPHY. THE CASE STUDY OF LARISSA, GREECE	Michail Agorastakis (U of Thessaly) Stella Manika (U of Thessaly)
01097	BUILDING A SOCIAL ENTERPRISE BEYOND THE FARMLAND PENSION SYSTEM IN THE RURAL AREAS	Deokho Cho (Daegu University) Changwhan Yeo (Daegu University)

## 17:30-19:00 | Special Sessions II

### SS01 Regional Science in Africa and SS02 Asymmetries in metropolitan areas: measuring, correcting and rethinking

Chair: Jorge Gonçalves

Location: ROOM 1

ID	Title	Authors
01026	THE REGIONAL AND LOCAL IMPACT OF INFRASTRUCTURES THAT DON'T EXIST. REFLECTION ABOUT THE CASE OF METROPOLITAN AREA OF LISBON.	Jorge Gonçalves (IST-UL) André Saraiva (IST-UL) Luís Carvalho (FAUL-UL)
01061	SUSTAINABLE DEVELOPMENT OF RESOURCE RICH REGIONS; THE CASE OF THE ZAMBEZI RIVER BASIN IN MOZAMBIQUE	Tomás Dentinho (U of Azores)
01105	INOVAÇÃO E SUSTENTABILIDADE NO COMÉRCIO URBANO: O CASO DO MERCADO DE CAMPO DE OURIQUE	João Soares (IST-UL) Sara Tomaz (IST-UL) Cristina Coutinho (ADEC-ISEL)
01107	COST BENEFIT ANALYSIS OF PUBLIC SERVICES DISTRIBUTIONS IN AFRICAN URBAN AREAS USING BID-RENTS FROM SPATIAL INTERACTION MODELS	César Pakissi (ISCED-Huambo) Tomás Dentinho (U of Azores)

### SS06 Contributions of higher education institutions (HEIs) for territorial development: building bridges between the local and global

Chair: Conceição Rego

Location: ROOM 2

ID	Title	Authors
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01051	A UNIVERSIDADE NOS PALOP: QUE ESPELHO MIRAR? UMA DISCUSSÃO TOMANDO COMO EXEMPLO A DISCIPLINA ECONOMIA REGIONAL E URBANA.	<b>Cássio Rolim</b> (UFPR)
01080	LANDSCAPE CHANGE MONITORING AND ANALYSIS IN NORTHEASTERN PORTUGAL	<b>João Azevedo</b> (CIMO, IPB) Soukaina Rachdi (IPB Institut Agronomique et Vétérinaire Hassan II) Youssef Qaouqaou (IPB and Institut Agronomique et Vétérinaire Hassan II) Ângelo Sil (CIMO, IPB) Paulo. M. Fernandes (CITAB, UTAD) Sérgio Deusdado (CIMO, IPB)
01099	ORIGEM E DESTINO DOS ESTUDANTES NO ENSINO SUPERIOR: UM ESTUDO ACERCA DA MOBILIDADE GEOGRÁFICA	<b>Conceição Rego</b> (U de Évora)

### SS08 Participatory Planning and Sustainable Built Space

**Chair:** José Luís Crespo

**Location:** ROOM 3

ID	Title	Authors
01069	CHOIX D'INDICATEURS DE MOBILITE URBAINE DURABLE POUR LE TERRITOIRE DE CASABLANCA	<b>Ishak Hbiak</b> (Institut National d'Aménagement et d'Urbanisme) Abdelaziz Adidi (INAU) Jean-Pierre Nicolas (ENTPE) ELHassan ELBirchi (EHTP)
01084	SOCIAL SUSTAINABILITY OF POSTCOLONIAL MARRAKESH: ISSUES ON THE CONCEPTION AND RECEPTION OF THE CITY	<b>Assia Lamzah</b> (National Institute for Regional and Urban Planning)
01113	LA CROISSANCE VERTE ET LE DÉVELOPPEMENT TERRITORIAL	<b>Faiçal Benchakroun</b> (Haut-Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification)
01125	URBAN SUSTAINABLE DEVELOPMENT: MUNICIPAL DECISION-MAKING STEERING TOOLS AND CITIZENS AWARENESS AND PARTICIPATION	Tarsila Lampert (Faculty of Medicine, U of Lisbon) Ana Rego (FA-UL) <b>Elisabete Freire</b> (FA-UL) José Crespo (FA-UL)

**20:00-22:30 | Official Congress Dinner** [restaurant 'Chez Ali']

## Tuesday, 31 May 2016

### 09:00-09:45 | Plenary Session II

**Chair:** Abdellatif Khattabi, National School of Forestry Engineering

*Sustainable Development Goals and regional growth: qualitative visions and quantitative evidence*

**Peter Nijkamp**

Professor in regional and urban economics and in economic geography at the VU University Amsterdam

### 09:45-10:00 | Coffee-Break

### 10:00-12:00 | Regular Sessions II

#### RS01.2 Natural resources, biodiversity, environment and sustainable development

**Chair:** Ahmed Ouhammou

**Location:** ROOM 1

ID	Title	Authors
01040	TOURISME, NORMES SOCIALES IMPORTÉES ET TRI DES DÉCHETS: LE CAS D'UNE ZONE CÔTIÈRE MÉDITERRANÉENNE	<b>Anne Casabianca</b> (CNRS - U de Corse) Dominique Prunetti (U de Corse) Olivier Beaumais (U de Corse) Ludovic Martel (U de Corse)
01044	NECESSITE D'OUTILS D'AMENAGEMENT DU TERRITOIRE POUR UNE GESTION RATIONNELLE D'UNE VILLE COTIERE (LOME)	<b>Yéndoubé Demakou</b> (Ministère de la planification du développement)
01048	CARACTÉRISATION AGRONOMIQUE, BIOCHIMIQUE ET NUTRITIONNELLE DE L'ORGE LOCALE TUNISIENNE POUR SA VALORISATION	<b>Sonia Mansouri</b> (INRAT) Ines Abidi (INRAT) Leila Radhouane (INRAT)

01064	ECOTOURISM IN THE TOUBKAL NATIONAL PARK: OPPORTUNITIES AND CONSTRAINTS OF DEVELOPMENT	Mohamed El Bouziani (Haut Commissariat aux Eaux et Forêts) Abdellatif Khattabi (ENFI) <b>Ahmed Ouhammou</b> (Faculty of Sciences Semlalia)
01102	L'EXPÉRIENCE MAROCAINE EN MATIÈRE DE COMPENSATION POUR MISES EN DÉFENS: BILAN ET PERSPECTIVES	<b>Abdelmoughit Benchad</b> (Ministère de l'Economie et des Finances) Said Laaribya (Ibn Zohr U Agadir)

### RS03.2 Rural Development and Agriculture Economics

Chair: **Virginie Moisson**

Location: ROOM 2

ID	Title	Authors
01042	RENAISSANCE DE LA DIETE MEDITERRANEENNE EN TUNISIE POUR UNE ALIMENTATION DURABLE A TRAVERS UNE APPROCHE TERRITORIALE INTEGREE	Raoudha Khaldi (National Institute of Agricultural Research of Tunisia) <b>Mehrez Ameur</b> (ESAK KEF TUNISIA) Sonia Boudiche (High School of agribusinessfood) Dorra Sfayhi (National Institute of Agricultural Research) Deryne Dorra (Consumer institute)
01088	LA VIOLENCE PSYCHOLOGIQUE AU TRAVAIL	<b>Virginie Moisson</b> (IAE REUNION) Picard Pascal (IAE REUNION)
01128	RÔLE DES OUTILS PARTICIPATIFS DE COLLECTE DES DONNÉES DANS LE RENFORCEMENT DU CAPITAL SOCIAL DES COMMUNAUTÉS RURALES	<b>Harrad Asmae</b> (Agence de Développement Social, Asfi) Abdellatif Khattabi (ENFI)

### RS04 Territorial Multi functionality and, Sustainable Regional Development

Chair: **Catherine Dezio**

Location: ROOM 3

ID	Title	Authors
01033	UM NOVO MOMENTO PARA A INDÚSTRIA DE TRANSFORMAÇÃO DO NORDESTE?	Fagner Diego Spindola (UFPE) <b>João Policarpo Lima</b> (U Federal de Pernambuco)
01047	RESILIENCE AND SUSTAINABILITY: THE CASE OF EUROPEAN REGIONS	<b>Paolo Rizzi</b> (UCattolica di Piacenza) Paola Graziano (U Cattolica di Piacenza)
01083	RESILIENCE IN CULTURAL AGRARIAN LANDSCAPES: APPROACHES AND METHODS	<b>Catherine Dezio</b> (Politecnico di Milano) Davide Marino (U del Molise)
01085	A EFICÁCIA DA COMUNICAÇÃO ORGANIZACIONAL: ESTUDO APLICADO À ASSOCIAÇÃO EMPRESARIAL AIRV	<b>Joaquim Antunes</b> (Instituto Politécnico de Viseu) Samuel Barros (Instituto Politécnico de Viseu) Ana Pinto (Instituto Politécnico de Viseu)
01119	RED: EMERGING RISKS OF SUSTAINABLE MOBILITIES	<b>Thierry Saint-Gérand</b> (U de Caen Normandie) Mohand Medjkane (U. de Caen Normandie) Hélène REIGNER (Institut d'Urbanisme et d'Aménagement Régional) Marie-Claude Montel (Laboratoire LMA IFSTTAR Salon de Provence) Eliane Propeck (U de Strasbourg)

12:00-13:00 | Lunch

13:00-15:00 | Special Sessions III

### SS04 Entrepreneurship in sustainable and creative territories

Chair: **José Santos**

Location: ROOM 1

ID	Title	Authors
01017	MODÈLE ÉCONOMIQUE POUR LA PRODUCTION DE BIOMASSE ÉNERGÉTIQUE À PARTIR DE LA PLANTE ALFA AU MAROC ORIENTAL	<b>Joel Poustis</b> (HEXABIO SARL)
01019	FINANCING LOCAL DEVELOPMENT THROUGH CROWDFUNDING: AN EMPIRICAL ANALYSIS OF SOCIAL PROJECTS IN PORTUGAL	<b>José Santos</b> (Politécnico do Porto - ISCAP) Susana Bernardino (Instituto Politécnico do Porto) José Cadima Ribeiro (U of Minho)
01037	L'ENTREPRENEURIAT SOCIAL VECTEUR CLÉ DU DÉVELOPPEMENT TERRITORIAL DURABLE, QU'EN EST-IL AU MAROC?	<b>Oumhani Eddelani</b> (FSJES - USMBA) Abdellatif Khattabi (ENFI)

01043	INOVAÇÃO TERRITORIAL, SOCIAL VENTURES E DESENVOLVIMENTO LOCAL: UM ESTUDO DE CASO EXPLORATÓRIO	<b>José Santos</b> (Politécnico do Porto - ISCAP) Susana Bernardino (Instituto Politécnico do Porto)
01124	A COGNITIVE APPROACH TO ENTREPRENEURSHIP: A FACTORIAL ANALYSIS TO GEM EMPIRICAL EVIDENCE	<b>Vitor Braga</b> (ESTGF-IPP; CIICESI) Luisa Ferreira (ESTGF-IPP; CIICESI) Aldina Correia (ESTGF-IPP; CIICESI) Alexandra Braga (ESTGF-IPP; CIICESI)

### SS05.2 Cultural Tourism and Regional Development

**Chair:** José Cadima Ribeiro

**Location:** ROOM 2

ID	Title	Authors
01028	PERFIL DOS VISITANTES E PERCEÇÕES DO DESTINO GUIMARÃES ANTES E APÓS A CEC 2012	<b>José Cadima Ribeiro</b> (U of Minho) Paula Remoaldo (U of Minho) Laurentina Vareiro (Instituto Politécnico do Cávado e do Ave) Vitor Marques (U of Minho)
01035	TYPLOGIE ET EVALUATION DES PAYSAGES DE LA VALLEE D'OURIKA (MARRAKECH, MAROC) EN VUE D'UN AMENAGEMENT ECOTOURISTIQUE	<b>Mostafa Lamrani-Alaoui</b> (ENFI) Abdellatif Khattabi (ENFI) Ramaralofy Tsilavina (ENFI)
01104	MODELAÇÃO DE MOTIVAÇÕES DE VISITA ASSOCIADAS À ESCOLHA DE UM DESTINO TURÍSTICO CULTURAL: O CASO DE ÉVORA, CIDADE PATRIMÓNIO DA HUMANIDADE	<b>Maria do Rosário Borges</b> (U de Évora) Noemi Marujo (U de Évora) Jaime Serra (U de Évora)
01118	O QUE LEVA AS PESSOAS A VISITAR A REGIÃO DO DOURO	<b>Adriano Costa</b> (Instituto Politécnico da Guarda) Joaquim Antunes (Instituto Politécnico de Viseu)

### SS10.2 Adapting to climate change through improved watershed management and payment for environmental services

**Chair:** Benchakroun Faïçal

**Location:** ROOM 3

ID	Title	Authors
01054	CONCEPTION ET RÉALISATION D'UN SYSTÈME D'AIDE À LA DÉCISION POUR UNE GESTION INTÉGRÉE DES RESSOURCES EN EAU DANS LE BASSIN VERSANT DE TENSIFT	<b>Said Lahssini</b> (ENFI) Hicham Mharzi Alaoui (IAV Hassan II, HCEFLCD) Anass Nabaha (HCEFLCD) Abdellatif Khattabi (ENFI)
01056	EVALUATION DES SERVICES DE RÉCRÉATION DANS LA VALLÉE DE L'OURIKA ET LEUR VULNÉRABILITÉ AUX ALÉAS DES INONDATIONS	Omar Elmalki (HCEFLCD) Abdellatif Khattabi (ENFI) <b>Said Hajib</b> (Centre de Recherche Forestière)
01110	THE HYDRAULIC SPACE OF THE CONCA D'ORO OF PALERMO AS A PARADIGM OF THE MEDITERRANEAN WATER SENSITIVE CITY.	<b>Lucio Pettine</b> (Sapienza university) Giuseppe Barbera (U of Palermo, Dept. SAF) Francesca Lotta (U of Palermo, Dept. SAF) Lorenzo Nofroni (Sapienza U, Dept. DIAP) Serena Savelli (U of Palermo, Dept. SAF)
01114	ETUDE DE LA SENSIBILITÉ À L'ÉROSION HYDRIQUE BASSIN VERSANT D'OURIKA (HAUT ATLAS, MAROC)	<b>Asmae Nouira</b> (CNESTEN) Abdellatif Khattabi (ENFI) Modeste Meliho (Scientific Institute of Rabat)

**15:00-15:30 | Coffee-Break**

**15:30-17:30 | Regular Sessions III**

### RS05 Climate change mitigation and adaptation

**Chair:** Mohamed Sinan

**Location:** ROOM 1

ID	Title	Authors
01065	PERCEPTION DU CHANGEMENT CLIMATIQUE PAR LES MARINS PÊCHEURS DE MEHDIA ET BOUSSELHAM (MAROC ATLANTIQUE)	<b>Laïla Amraoui</b> (Climat/envir. consulting) Michel Desse (U de Nantes) Aissa Elbouzidi (U Ibn Toufail)
01115	PARAMETERS REGIONALIZATION OF TEMPERATURE INTENSITIES, DURATION, FREQUENCY RELATIONSHIPS	Hasnaoui Moulay Driss (Ministère Délégué chargé de l'Eau) Driss Ouazar (EMI, U Mohammed V)

		<b>Ahmed Bouziane</b> (EMI-LASH, U Mohammed V) Serhir Najat (EHTP – Casablanca) Arif Hayat (DMN)
01117	ANALYSE ET CARTOGRAPHIE DE LA VULNÉRABILITÉ AUX ÉVÉNEMENTS CLIMATIQUES EXTRÊMES ET ESTIMATION DES COÛTS DE LEURS IMPACTS DANS LES RÉGIONS MARRAKECH SAFI	<b>Abdelaziz Babqiqi</b> (Ministry of Environment)
01127	VULNERABILITE DES SECTEURS CLES DU MAROC AUX CHANGEMENTS CLIMATIQUES ET MESURES D'ADPTATION	<b>Mohamed Sinan</b> (Ecole des Travaux Publics) Abdelaziz Belhouji Mohamed WAKRIM

#### RS06 Green growth in natural resources

**Chair:** Francisco Carballo-Cruz

**Location:** ROOM 2

ID	Title	Authors
01020	TRANSPORT INFRASTRUCTURE AND ECONOMIC GROWTH: CASE OF TUNISIA	<b>Amairia Radhia</b> (Faculte des Sciences Economiques et de Gestion De Sousse)
01030	ECOLOGICAL SOLUTIONS FOR PUBLIC TRANSPORTATION IN SMART CITIES	<b>Giorgio Saibene</b> (U of Milan) Giancarlo Manzi (U of Milan)
01058	SUSTAINABILITY EMPHASIZES THE FARMING WITH TREES (AGROFORESTRY)	<b>Patrick Sama-Lang</b> (IRAD Cameroon)
01122	SPATIAL COMPETITION BETWEEN LOW COST AND FULL COST CARRIERS	<b>Francisco Carballo-Cruz</b> (U of Minho)
01123	WHAT ENCOURAGES ENTREPRENEURIAL RISK TAKING? - MULTIPLE LINEAR REGRESSION ANALYSIS APPROACH TO THE GLOBAL ENTREPRENEURSHIP MONITOR	<b>Vitor Braga</b> (ESTGF-IPP; CIICESI) Eliana Gonçalves (ESTGF-IPP; CIICESI) Aldina Correia (ESTGF-IPP; CIICESI) Alexandra Braga (ESTGF-IPP; CIICESI)

#### RS07 Migration, Urbanization and Spatial Justice

**Chair:** Mercedes G Alvarez

**Location:** ROOM 3

ID	Title	Authors
01006	THE IMPACT OF RAPID URBAN POPULATION GROWTH ON FOOD AND WATER SHORTAGES	<b>Adebola Adedugbe</b> (Farmideas Nigeria)
01012	LOOKING BACK CRITICALLY INSIDE THE BOX TO UNDERSTAND ECO-MIGRATION OF PASTORALISTS IN THE UNENDING QUEST FOR WATER AND PASTURE THROUGH A LIVELIHOOD MIRROR	<b>Herbert Kasiita</b> (Veterinary Practitioners Without Borders Uganda)
01096	RÉGIME FRONTALIER DANS LA MÉDITERRANÉE	<b>Mercedes G Alvarez</b> (Abdelmalek Essadi)

#### 17:30-18:00 | Closing Session

**Officials from the city of Marrakech** (tbc)

**Francisco Carballo-Cruz**, President of APDR, University of Minho

**Abdellatif Khattabi**, President of AMRS and Chair of the LOC, National School of Forestry Engineering

# Abstracts

Monday, 30 May 2016

11:00-12:00 | Plenary Session I

Chair: Fabio Mazzola, University of Palermo

## How to make Morocco a regional Hub for sustainable strategic planning in the context of climate change?

Mohammed Tawfik Mouline

Directeur Général de l'Institut Royal des Etudes Stratégiques, Rabat

13:00-15:00 | Special Sessions I

### SS03 SUSTAINABLE TOURISM IN THE AGE OF GLOBALIZATION

Chair: Paolo Rizzi

Location: ROOM 1

#### [01067] LE TOURISME ET LE DÉVELOPPEMENT ÉCONOMIQUE DE LA MONTAGNE AU MAROC: CAS DU PARC NATIONAL DU TOUBKAL, HAUT ATLAS OCCIDENTAL

Mohamed El Bouziani (Haut Commissariat aux Eaux et Forêts), Abdellatif Khattabi (ENFI), **Brahim Moudoud** (FLSH, Ibnou Zohr University)

L'activité du tourisme est longuement pratiquée dans la zone du Parc National du Toubkal, la plus ancienne aire protégée du Maroc, située dans le Haut Atlas Occidental. Elle constitue un secteur économique où s'interfèrent de nombreux acteurs locaux et externes. En effet, le parc représente actuellement le lieu d'attraction touristique phare de la montagne marocaine, en toute saison, en raison de son offre diversifiée, s'adressant à plusieurs cibles : tourisme de villégiature et de repos, pratique sportive de ski et contemplation, le pèlerinage vers les lieux « sacrés » et la pratique de la randonnée pédestre et l'exploit d'atteindre le plus haut sommet de l'Afrique du Nord. Un engouement d'investisseurs locaux et étrangers à la zone se manifeste continuellement, mais la problématique de la durabilité de l'activité touristique dans cette zone soulève des questionnements quant à la préservation des services environnementaux et l'intégrité des écosystèmes qui les produisent. L'évaluation de l'apport économique pour les différents intervenants et ses retombées sur la population locale n'est pas encore cernée. La présente étude, réalisée dans le cadre du projet GIREPSE cherche à répondre à ces questions en procédant à des investigations qualitatives et quantitatives auprès des différentes parties prenantes de l'activité. Il ressort de cette étude que les voyages de visiteurs organisés dans le massif de Toubkal sont généralement opérés par des acteurs externes (tours opérateurs et agences de voyages), les acteurs locaux n'interviennent que partiellement dans le secteur et bénéficient d'une marge très minime et irrégulière. En outre, ces retombées ne concernent qu'une minorité d'acteurs à savoir les guides et accompagnateurs, les propriétaires des unités d'hébergement et les muletiers. Cependant, l'analyse du rythme de croissance de certaines entreprises touristiques et les services liés au tourisme dans la zone permet de conclure que le nombre des entreprises et des personnes qui exercent l'activité tendent à accroître durant les deux dernières décennies.

#### [01103] GOVERNANCE AND SUSTAINABLE TOURISM IN THE AGE OF GLOBALIZATION: ESTABLISHING LINKAGES BETWEEN BOTH CONCEPTS

**Maria do Rosário Borges** (U of Évora)

The concepts of sustainable development and public governance are associated with processes of development, rather than with a specific kind of sector, product, market or destination area. The first assumed an important institutional dimension in the 90s, in the context of the globalization of several problems. The second arose few years later to speed up the identification of structures and processes able to mitigate negative impacts and to set up solutions to develop territories based on the ideals of sustainable development. Like many others, the tourism sector also embraced this global project and several challenges have been put to the public, private and civil society and tourists. Governance solutions to improve the development of sustainable tourism also have been advocated. This paper aims to establish linkages between the concepts of sustainable tourism and public governance based on a literature review. This approach will be used to make a synthesis of the main characteristics of each concept and to reflect on their similarities and differences. The paper argues that these concepts are multidimensional and although they have several common characteristics, governance has some additional complementary features which make sustainable tourism a more operational concept. Finally, some pathways for future research on this topic of governance for sustainable tourism are also identified.

#### [01111] REDES DE COLABORAÇÃO E SUSTENTABILIDADE DO TURISMO. DESAFIOS DE VALORIZAÇÃO DOS DESTINOS DE MONTANHA

**Gonçalo Fernandes** (Instituto Politécnico da Guarda/CICS.NOVA)



A globalização dos mercados, a concorrência transnacional, o aumento dos rendimentos e da educação, a desregulamentação e a harmonização legislativa obrigaram as empresas a adaptar-se. A colaboração estabelecida dentro de uma rede induz transformações importantes aos participantes alterando as perceções sobre a competição. Neste contexto as alterações tecnológicas, culturais e sociais que caracterizam as últimas décadas têm criado impactos relevantes na organização empresarial e nos formatos de competitividade entre empresas, promovendo o desenvolvimento de estratégias adaptativas e de maior capacitação competitiva. A colaboração promove alinhamentos estratégicos e organizacional que no âmbito do turismo se revelam determinantes para a qualificação e sustentabilidade do destino, potenciando novos mercados e sinergias facilitadoras de maiores dinamismo entre empresas. No destino serra da Estrela o desenvolvimento de relações de colaboração é valorizado como recurso para empresas e território, assim como fonte de vantagens competitivas. A partilha de conhecimentos e experiências, a associação das imagens empresariais e a disponibilidade para absorver novos métodos são considerações favoráveis, apresentando contudo problemas formalização e comunicação.

## **SS05.1 CULTURAL TOURISM AND REGIONAL DEVELOPMENT**

**Chair:** Paula Remoaldo

**Location:** ROOM 2

### **[01027] TOURISTS' MOTIVATION TOWARD VISITING A WORLD HERITAGE SITE: THE CASE OF GUIMARÃES**

José Cadima Ribeiro (U of Minho), **Paula Remoaldo** (U of Minho), Laurentina Vareiro (Instituto Politécnico do Cávado e do Ave), Vitor Marques (U of Minho)

Within the major role that the tourism industry is taking in sustaining and enhancing growth in economies all around the world, the cultural segment deserves a particular look as in most cases, it is playing a leading role. This has to do with the idea of tourists' visits as a memorable happening and an authentic experience and relates to the psychological dimension of tourist demand. This study investigated the motivation behind the choice of a cultural/heritage destination, and particularly a World Heritage Site (WHS). Taking the case of Guimarães, the study inquired on the tourists' motivations and perceived attributes of the city to conclude on the level of satisfaction tourists get from their visits and the destination attributes. The methodology used in this research was of a quantitative nature, based on a self-administered survey applied to 325 tourists who visited Guimarães during 2015. In that analytical approach, tourists were organized according to their main visit motivation, i.e., if they were mainly motivated by visiting a World Heritage Site or by other reasons. An interesting result was that despite WHS visitors reporting higher satisfaction levels, the other type of visitors want to return in greater numbers. The study concluded that the destination is performing well but is suffering from not having a consolidated image in the market. Looking at these and other results obtained, several recommendations were made to increase tourists' satisfaction vis-à-vis the destination by mainly addressing the strategy to be used in advertising the set of products and services it can provide to visitors.

### **[01034] CITY BRAND HAS CHANGED. WHAT NEXT IN THE LOCAL DEVELOPMENT?**

**Oto Hudec** (Technical U of Kosice), Natasa Urbancikova (Technical U of Kosice)

Cities organise events for their residents but also to exploit them to compete with other cities and to attracting new visitors. The success of a cultural event depends on multiple factors - the scope and quality of the event, an effective marketing strategy; but also on the accessibility of the location within the country and the continent. A targeted urban strategy can be aimed at gaining a competitive advantage based on an event and/or a widely recognised cultural landmark. However, even a much broader goal might be set up - to establish the entirely new brand identity of the city. The city brand of Cannes is associated today with Cannes Film Festival, the city of Bilbao builds its image on the iconic Guggenheim Museum. Both cities rebranded their former image with a help of new cultural event or landmark, and to launched a new economic trajectory of their city development. One of the most important cultural projects shown to have an ability to rebrand the city in the case of its sophisticated implementation is the European Capital of Culture (ECOC). The programme originally aimed at raising the capacity of the cultural offer in the host city during one year. A typical impact was an image enhancement or repositioning as a foremost cultural centre. Sometimes ECOC contributed significantly to alter the path and image, sometimes only passed away without leaving permanent traces in the city. However, In some cases (Glasgow 1990 and others) ECOC stimulated local development, the growth of new industries, but it was even a catalyst of changing urban trajectory to a new path of city development. A prospective change in the local economy obviously depends on the project setting and implementation, but also whether the cultural project can leverage local resources and develop a new sustainable path. The city of Kosice (Slovakia), the European Capital of Culture in 2013, was inspired significantly by the example of Liverpool in 2008 and has managed to move its image of the old-industrial post-socialist Eastern European city to European creative city. It shifted the cultural agenda to urban regeneration and also contributed to culture-led regeneration, social inclusion, and creative business development. The case study explains the evolutionary relationships in the line ECOC nomination and selection - cultural events – rebranding - local development. However, a well-founded fear of the long-term sustainability of the newly created path of culture-led regeneration still exist.

### **[01063] CONTRIBUTION TO THE DEVELOPMENT OF TOURISM IN LOW DENSITY TERRITORIES OF THE NORTHEAST OF PORTUGAL: THE CASE OF BOTICAS**

**Paula Remoaldo** (U of Minho), Helder Lopes (U of Minho), Vitor Ribeiro (U of Minho), José Cadima Ribeiro (U of Minho), Sara Silva (U of Minho)

Attaining sustainable development of the municipalities located in low density areas, just as in the Boticas case, is one of the main problems Portugal has to embrace. Reversing the depopulation trend installed is essential to prevent the continuing of the economic fragility and, consequently, the adverse impacts of the weakening of the institutional framework and the closing of general public equipment and services. With this goal, various municipalities have been developing regional development strategies based on taking profit from their endogenous resources and the enhancement of the tourism industry. However, the success of this development strategy depends a lot of the set of resources available and of the local entrepreneurial and institutional capabilities. This paper aims to raise the debate on this issue and, particularly, to address the potential role of the tourism industry as a contributor of the economic

revitalization of the Boticas municipality, approached through the experiences and perceptions of the local actors. In more specific terms, the paper presents: i) a preliminary diagnose of the tourism potential of the municipality of Boticas, ii) approaches the Boticas destination image and stakeholders perceptions on the development of the tourism industry; and iii) and raises a few questions on role of those stakeholders and the development of partnerships with neighbour municipalities to attain sustainable development on that territory. A qualitative methodological approach was followed, based on two focus group sessions conducted on 14 September 2015. As a result of the empirical approach undertaken, the idea that the municipality should base its strategy mainly on its own resources and social needs emerged. Additionally, it was underlined the need to grant local community commitment towards the policies to implement, namely those looking to take profit from cultural tourism. Acting this way, with the supplementary help of European structural funds, it was thought that a new tourism destination could be enhanced and a more inclusive social development path could be achieved.

## **[01075] CONSERVATION ET RESTAURATION DU PATRIMOINE CULTUREL EN LIBYE: MÉTHODOLOGIE POUR UN RÉSEAU MÉDITERRANÉEN DU TOURISME CULTUREL**

**Nicola Masotto** (U of Padua), **Giovanni Campeol** (U of Venice), **Sandra Carollo** (U of Venice, Studio ALIA)

La Méditerranée est le lieu géographique de la grande diversité, anthropologique, architectural, urbanisme culturel, linguistique, mais aussi le plus grand réservoir du monde du patrimoine culturel. Une stratification unique et exceptionnelle des «patrimoine» représentait l'archéologie égyptienne, carthaginoise, grecque, romaine, byzantine, arabe, normande, etc. qui pourrait devenir le dénominateur commun de l'économie durable, où les différences sont les valeurs fondamentales. Entre 2008 et 2009, des plans ont été faits une intervention extraordinaire de type culturel fondé sur les garanties, l'acquisition et l'utilisation de tout le patrimoine culturel libyen représenté par les sites archéologiques de Leptis Magna, Sabratha, Cyrène, Ptolémaïs et Murzuk (dont certains inclus la WHL UNESCO). Intervention dont la méthodologie a été basée sur les phases suivantes: - Développement des connaissances de la population locale de la valeur du patrimoine archéologique présente; - Plan de restauration et de reconstruction du patrimoine archéologique dans le but de rendre ces sites très utilisables pour autant la population locale et la Méditerranée en particulier; - Création d'une nouvelle urbanisation avec des fonctions touristiques (hôtels notamment), mais aussi résidentiels pour la population locale, avec un design urbain basé sur l'intégration de la ville natale établie et la nouvelle ville; - Récupération des agglomérations urbaines de l'époque coloniale qui avait une valeur formelle et documentaire haute; - Approche-une à un tourisme «intégration ouverte» culturelle définissable, qui va au-delà de l'idée de «de prison doré» des grandes stations touristiques homogénéisant et répétitives, en regardant dans le «genius loci» la «forme» de resort urbain. Ce mode de développement du tourisme culturel est censé avoir la capacité de générer de fortes poussées dans l'économie régionales, ainsi que de promouvoir la compréhension des particularités culturelles locales. Enfin, nous avons l'intention de présenter une hypothèse du réseau culturel méditerranéen du tourisme à travers la création de nœuds primaires et secondaires nœuds reliés entre eux non seulement par le biais des communications physiques, mais aussi avec un système électronique commun. Seule une connaissance généralisée du patrimoine culturel, en particulier archéologique, la Méditerranée vous permet de construire une politique de coexistence entre les différentes populations et d'augmenter considérablement la croissance économique de la même chose.

## **SS10.1 ADAPTING TO CLIMATE CHANGE THROUGH IMPROVED WATERSHED MANAGEMENT AND PAYMENT FOR ENVIRONMENTAL SERVICES**

**Chair:** Abdellatif Khattabi

**Location:** ROOM 3

### **[01050] CHANGEMENTS CLIMATIQUES AU MAROC ET FOCUS SUR LE BASSIN DE TENSIFT**

**Fatima Driouech** (DMN, Maroc), **Khalid ElRhazi** (DMN, Maroc), **Wafae Badi** (DMN, Maroc)

L'étude réalisée a pour objectif de quantifier les changements observés et futurs du climat au niveau du Maroc et en particulier le bassin de Tensift en se basant d'une part sur les données issues des stations météorologiques de la DMN, et d'autre part en utilisant les sorties de modèles régionaux de climat dont la résolution varie entre 50 et 12km. En termes climatologiques, la pluviométrie de la région de Tensift est variable à la fois dans le temps et dans l'espace. Les précipitations moyennes annuelles varient entre 600 et 700mm sur les sommets du Haut-Atlas et vont environ de 200 à 400mm à l'ouest des reliefs. Les chutes de neige sont généralement localisées sur les hautes montagnes à partir de 1800m environ. Les situations météorologiques qualifiées d'ouest et de nord-ouest restent les plus favorables aux précipitations et à la chute de neiges sur la région. En termes de changements observés, on note une tendance significative au réchauffement à l'échelle annuelle à laquelle s'ajoute une augmentation du nombre de jours de vagues de chaleur estivales et un rétrécissement du nombre de jours de vague de froids hivernales. Pour l'aspect pluviométrique, la région montre un allongement de la période maximale de sécheresse et une réduction de la pluviométrie moyenne annuelle. L'évaluation des changements futurs faite pour les deux horizons 2021-2050 et 2036-2065 sous deux scénarios (rcp4.5 et rcp8.5) donne des réductions des cumuls pluviométriques annuels de 10 à 20% accompagnées d'un allongement de la période maximale de sécheresse. Pour les températures, les trois modèles utilisés s'accordent sur le sens de la tendance et projettent un réchauffement sur toute la zone mais avec des intensités variables selon l'horizon et le scénario. L'augmentation des extrêmes chauds et la diminution des extrêmes froids relevées à travers les données observées est aussi projetée pour le futur.

### **[01052] ADAPTATION TO CLIMATE CHANGE IN A RIVER BASIN IN MOROCCO THROUGH IMPROVED WATERSHED MANAGEMENT AND PAYMENT FOR ENVIRONMENTAL SERVICES**

**Abdellatif Khattabi** (ENFI)

This research aims to analyze the situation on the ground and formulate recommendations and guidelines for an integrated water resources management (IWRM) strategy in Morocco. It stems from an in-depth understanding of the impact of climate change and the sustainability of resource-related environmental services in general. These recommendations cover aspects related to environmental services, socioeconomic dimensions and adaptation to climate change. The research is based on a participatory and consultative approach for the analysis of priorities and strategic options for an integrated and adapted water resource management. In conjunction

with this, efforts were dedicated to building capacities of stakeholders through training and sensitization, including gender component through an effective and inclusive participation in the conceptualization and implementation of the research project. Extending over three years, this research strives to shed light on the factors that affect water management. It involves erosion control as well as the improvement of the quality of surface water for irrigation and mitigating floods intensity. In other words, the objective is to improve forest and land management practices upstream of the river in order to ensure the sustainability of water services for the community downstream. It seeks to test the feasibility and to identify the economic benefits of the market approach to water management in a catchment area in Morocco in view of water demand and the constraints posed by climate change. The research links the two economic systems upstream and downstream through the transfer of payments to the communities upstream. These communities, in exchange, commit to perform actions to improve the ecosystem services offer. Among the people of these communities are farmers, domestic water users and tourism and recreation services providers. The overriding goal is not only to improve integrated water management but also to contribute to improving people's livelihoods and strengthen vulnerable ecosystems by funding preservation through environmental services. In essence, this mode of interaction between the upstream and downstream economies would represent climate change adaptation based on the win-win principle. This challenge can be met by financing management strategies aimed at improving the population's ability to adapt and promote the ecosystem's health. Operating in collaboration with various stakeholders, the research project also seeks to reach agreement on a common vision for the management of water resources and adapt this vision to local conditions, as well as secure the tools and skills necessary to fulfill such vision.

### **[01062] ANALYSIS OF METEOROLOGICAL DROUGHT SEQUENCES IN THE TENSIFT WATERSHED: IMPACTS ON THE ANNUAL INFLOWS TO THE TAKERKOUST DAM AND ON THE IRRIGATED AREAS OF N'FIS.**

**MELIHO Modeste** (Scientific Institute of Rabat), **Abdellatif Khattabi** (ENFI), **JOBINS Guy** (Research Fellow, ODI) **NEWBORNE Pierre** (Research Associate, ODI), **MHAMMDI Nadia** (U Med V), **SGHIR Fathallah** (ORMVA du Haouz)

Analysis of data on precipitation over a period of forty-six years allowed determining wet and dry periods. The analysis of trend curves and the standardized precipitation index (SPI) were used to highlight the temporal evolution of periods of droughts. The trend observed showed that the Tensift watershed experienced the most significant wet periods during the years 1970-1978, followed by a succession of dry periods of varying intensities extending till the years of 2007/2008. Since that period up to the year 2011, a return of precipitation was observed, but with less intensity than in the 1970-1978 period. Another period of declining precipitation intensity was again observed starting from the year 2011. Droughts experienced in the Tensift watershed have negatively affected water supply to the Takerkoust dam, and therefore the amount of water allocated to irrigation. However, a lag effect is witnessed depending on previous years' precipitations and state of the total stock of water in the dam reservoir. Some years have known a big shortage of water allocation to irrigation even though the years' precipitations are relatively high and vice versa. The agricultural years that experienced moderate drought showed a restriction of more than 50% of the water needed resulting in a drop of the cultivated area, while there was no restriction in water allocation during the years in which there had been a moderate water availability. In the N'fis irrigation scheme, cereals, fodder and vegetable crops are the ones abandoned first when the drought is occurring. The strategy adopted by farmers during drought periods is to reduce or at the extreme abandon annual crops like cereals, vegetables and forages, so the available water will be devoted only to irrigate crops trees to avoid important damages on trees being cared for many years. The adoption of a comprehensive strategy associated with adaptation actions to climate change perspectives is a necessity to preserve the land production and to enhance the agro ecosystems resilience.

### **[01070] MODELISATION OF THE IMPACT OF LAND USE CHANGE ON THE HYDROLOGY OF OURIKA'S BASIN**

**Reda RIHANE** (ENFI), **Abdellatif Khattabi** (ENFI), **Said Lahssini** (ENFI)

Subject to a climate and anthropogenic forcing, the watershed of Ourika in Morocco has experienced a very strong dynamic of vegetation cover during the thirty last years. In this context, this study is devoted to the evaluation of the impact of changes in land use on the hydrological functioning of the catchment area of Ourika. The models HEC-HMS and HEC-RAS have been used to simulate the hydrological response of the watershed following two scenarios of change in land use, and to determine the extent of the centennial flood of the river respectively. The first scenario was used to simulate the impact of deforestation and urbanization on peak flows. The simulation results show that the peak flow has increased by 31.68 %. As for the second scenario, it evaluates the impact of actions taken in the watershed of Ourika through reforestation actions and proscription of exploitations. The simulation results show that this change has led to a decline of 17.25 % in the peak flows. However, for extreme events, there is a decrease in the influence of land use on flows.

### **[01073] WATER GOVERNANCE AND STAKEHOLDERS' INTERACTION DURING WATER SCARCITY PERIODS- CASE STUDY OF NFIS BASIN**

**Sara Bouarais** (ENFI), **Abdellatif Khattabi** (ENFI), **JOBINS Guy** (Research Fellow, ODI), **NEWBORNE Pierre** (Research Associate, ODI), **Boumaaza Taieb** (U Hassan II)

The main feature of the Tensift watershed basin and more specifically the irrigated land of the N'Fis perimeter is its important hydraulic history. This plain has benefited for a long time from water for irrigation, evolving from traditional practices and tenures of using and sharing water among users to innovative processes built on modern techniques and structured institutions. This transition promoted by the State has led to profound changes in the allocation and sharing of water resources among various uses and users. As water connects different stakeholders, sectors and users, surface and ground waters, issues of quality and quantity, environmental functions and different levels of decision-making, management of water becomes complex and challenging. The management becomes more sensitive and critical during periods of water scarcity induced by structural periods of droughts. When the resource is limited, conflicts of uses and interests around the distribution and allocation of water become more pronounced and latent conflicts tend to be active ones. This study tries to answer the questions related to how such a process sometimes leads to conflicting reactions, and in other cases solutions promoting collective action, and to how water scarcity motivates negotiation and leads to a compromise and a consensus in water

allocation? The investigation is carried out using the Rietbergen-McCracken and Narayan and the Mactor methods to analyse the stakeholders and their power and interests. This analysis showed the existence of "multi-shareholders" management that presents series of obstacles characterized by a dispersion of efforts and carries the risk of a "multi-cephalic power" which results in a lack of harmony and cooperation in decision making. Through the interviews conducted at different levels of management in the aim to understand the process of sharing water, it was concluded the establishment of large irrigation equipment under the State control has made the irrigation communities dependent on this system, which is not often able to fulfil the demand. This situation has exacerbated social tensions related to water resources access.

## 15:30-17:30 | Regular Sessions I

### RS01.1 NATURAL RESOURCES, BIODIVERSITY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

**Chair:** Jamel Ben Nasr

**Location:** ROOM 1

#### [01057] GEOECOLOGICAL REGIONALIZATION AS A METHOD FOR COMPLEX ANALYSIS IN AFRICA

**Oxana Klimanova** (Moscow Lomonosov SU), **Evgeniy Kolbowski** (Moscow Lomonosov SU), **Daria Tretyachenko** (Moscow Lomonosov SU)

Regionalization is usually defined as a procedure of identification of integral territorial systems and, unlike typology, it concentrates the attention of a researcher on the distinctions between them, on the determination of their identity. Geoecological regionalization is a rather new type of that procedure aimed at the identification of the areas of similar environmental situations. This type of regionalization poses a specific problem of the reasonable balance between the use of various criteria of regionalization defined on objective and subjective approaches to the identification of individual areas. Geoecological regionalization of Africa was based on analysis of natural and historical-cultural features and the level of anthropogenic impact on landscapes. As a result 52 individual geoecological areas were identified according to the combination of the leading factors of regionalization (natural, civilization, ethnolinguistic, social-economic). The resulting regionalization was verified using the group of methodologies offered by the ArcMap software package for modeling of the complex spatially distributed phenomena connected with the analysis of polytypic and diverse input data. Taking into account specific features of anthropogenic impact on the territory of the African continent, and also the availability of information sources, we gave the preference to the indicators characterizing agricultural impact, and the impact of the urbanized areas. The general logical model of geoecological regionalization was divided into thematic submodels: natural factors of area formation (1), anthropogenic pressure on landscapes (2) and geoecological state of landscapes and their separate components (3). The result of the geoinformation modeling reflects the differentiation of the African territory in terms of three groups of factors: natural features, anthropogenic load and the state of environment. Considering the total character of areas, it is necessary to notice that they are really more diverse if the level of their generalization is higher. The diversity is the highest within savanna and woodland zones on the plains of Sahel and Sudan where the mosaic of population density, forms of anthropogenic influence and geoenvironmental pressure is the most pronounced. For each region on the data of MODIS global land cover the properties of land-use/land-cover dynamics were determined.

#### [01101] CONTRIBUTOS PARA UM PLANO ESTRATÉGICO PARA O TURISMO DO PORTO SANTO: A IMPORTÂNCIA DO GEOTURISMO

**Samuel Barros** (Instituto Politécnico de Viseu), **Joaquim Antunes** (Instituto Politécnico de Viseu), **Cristina Castro** (Instituto Politécnico de Viseu)

A ilha de Porto Santo é conhecida como ilha dourada devido à sua extensa praia de areia fina e dourada e águas cálidas de cor turquesa. Mais recentemente, para além do lazer, passou a ser apreciada também pelas suas qualidades terapêuticas e medicinais. Apesar dos esforços investidos, quer pelas entidades competentes, quer por investidores particulares, na criação e no melhoramento das infraestruturas, a realidade é que a sua promoção turística continua a ir no sentido do produto Sol

#### [01109] RETROSPECTIVE STUDY OF SOIL EROSION AT WATERSHED SCALE FROM 137CS MEASUREMENTS: CASE STUDY IN THE NORTH OF MOROCCO

**Anis Zouagui** (Centre des études nucléaires Maamora (CNESTEN)), **Asmae Noura** (CNESTEN), **Mohamed Sabir** (ENFI), **Mustapha Naimi** (IAV HASSAN II), **Moncef Benmansour** (CNESTEN), **Mohamed Chikhaoui** (IAV HASSA II)

In Morocco, soil erosion poses the greatest threat to agriculture and food security, especially in the case of the Rif Mountain, which is characterized by steep and long slopes, soft geologic material (marl and shale), and severe climatic conditions. Many studies have been conducted to assess soil erosion phenomenon. Nuclear techniques through the use of radioactive tracer 137Cs showed the goal potential for determining the soil redistribution as a valuable tool to complement the classical techniques. 137Cs is an artificial radionuclide from atomic testing of 50s and 60s. The impact of this radionuclide is strongly adsorbed by fine soil particles and thus constitutes a tracer movement. The importance of soil movement is based on the comparison of the 137Cs inventories for a sampling point with a reference inventory where neither erosion nor deposition of soil occurred. Generally, in a place where soil erosion occurs, the 137Cs inventory is smaller than the reference inventory. However, to obtain quantitative estimation of soil erosion one of the models should be used to convert 137Cs data into erosion rate, for undisturbed areas (diffusion model) and for agricultural areas (mass balance model). The study area is "My Bouchta" watershed (7664 ha), located in Rif mountains. It encompasses a complex fragmented and varied landscape. Thus, to optimize the sampling, we produced a map of homogeneous units using a GIS tool, by combining three agro-

environmental parameters \land use, soil type and slope gradient\". 18 units, representing 96% of the watershed, were considered to study the long-term erosion rates (50 years). The results show that the majority of the eroded soil (98%) is located mainly on cultivated lands, these lands have an important mean erosion rate around 27.6 (t/ha/year), while sites shrub and forest have significantly lower rates of erosion, with average rates of 3.7 and 0.9 (t/ha/year) respectively. The overall soil erosion calculated by weighting the production area of each unit is estimated at 23 (t/ha/year), and annual losses across the watershed is 150 435 (t/year). In the absence of any anti-erosion management, the siltation of the future dam rate is estimated to be 12.3 (t/ha/year). With an average coefficient of delivery 56%, the quantity of sediments that reach the outlet is 54 872 (m<sup>3</sup>/year). The study of radionuclide <sup>137</sup>Cs gave a quick and accurate estimate of the rate of soil erosion and allowed to take into account the temporal and spatial variations across the watershed.

## **[01112] ASPIRING ESTRELA GEOPARK: ESTRATÉGIA PARA A VALORIZAÇÃO E DESENVOLVIMENTO DO TERRITÓRIO DA SERRA DA ESTRELA**

**Gonçalo Fernandes** (Instituto Politécnico da Guarda/CICS.NOVA), Emanuel Castro (Instituto Politécnico da Guarda/AGE)

A criação de geoparques constituiu um novo paradigma no modo como se divulga as Geociências, os territórios, o seu património (material e imaterial) e os modos de vida das suas comunidades. A estratégia de gestão de um geoparque não é só o património geológico, como também a biodiversidade, a arqueologia e outros aspetos da herança cultural. Desta forma as Geociências ganharam visibilidade pública e dimensão patrimonial. O Geopark aposta igualmente na rede de responsabilidade social, bem como, no estabelecimento estratégico de parcerias que promovam o fortalecimento do território no que respeita à sua qualidade de vida, assente, nomeadamente, em atividades económicas suportadas em produtos e serviços de alto valor acrescentado e de índices de conhecimento e rendimento. A diversidade das marcas glaciárias, a riqueza do seu património e o carácter da sua paisagem fazem da Serra da Estrela uma geografia única, cuja sua abordagem estruturada permitirá a criação de uma marca forte, com potencial turístico, patrimonial e cultural.

## **[01126] LOCAL GOVERNANCE AND SUSTAINABLE WATER MANAGEMENT IN TUNISIAN IRRIGATED AREA**

**Jamel Bem Nasr** (Institut National Agronomique de Tunisie)

Since 1989, Tunisia has embarked on a policy of decentralization and participatory water management in irrigated areas "IA". This policy has led to the dissolution of development offices and the progressive State disengagement in favor of collective water management. Since then, water irrigation management becomes a task of irrigator associations. These associations have experienced a series of transformations ranging from "collective interest associations: CIA" to the current form "development agricultural Groups: DGA". In spite of these institutional changes, DGAs are currently suffering from several problems impeding their functioning such as the increased budget deficits and the more accentuated conflicts. Consequently, the situation is becoming more threatening in IA and even chaotic: low rates farms, leaving of irrigated activity by some farmers, inequality, etc. The current situation of DGA and most IA hypothesizes the existence of local governance problems around the water resource, these governance problems are causing performance decrease in IA. The analysis of the interdependence between governance and performance of irrigation water management, in Nadhour IA, is the main aim of this paper. To conduct this analysis, the strategic analysis approach was adopted. Assuming that IA constitutes a concrete action system, the analysis of structured games between actors allowed to assess their: power, convergence, divergence and ambivalence degrees. Results confirm the hypothesis of a significant effect of governance problems, including political source, on the performance of irrigation water collective management.

## **RS02 FINANCIAL SYSTEM AND REGIONAL DEVELOPMENT**

**Chair:** Fabio Mazzola

**Location:** ROOM 2

### **[01036] THE IMPORTANCE OF LOCATION CHOICES OF TWO IBERIAN CORK FAMILY FIRMS**

**João Lopes** (ISEG, U de Lisboa), Amélia Branco (ISEG, U de Lisboa), Francisco Parejo (U de Extremadura), Jose F. Rangel Preciado (U de Extremadura)

The location choices of family firms are one important determinant of its economic performance and, in a long run perspective, of its ultimate failure or success. Clusters and industrial districts are relevant spatial concepts needed to understand these choices. Although criticized by some authors as being somewhat vague, or fuzzy, notions, clusters and industrial districts can also be operational concepts useful for understanding the relative performance of family firms, inside or outside them. In the particular case of the two cork family companies studied in this paper, the economic performance was certainly conditioned, among other factors, by the different kind of regional cluster they chose: Setubal, a southern district of Portugal in the case of Mundet, and Santa Maria da Feira, a northern district, in the case of Corticeira Amorim. The implications of these different location choices, as well as the influence of other features of the two families – Mundet and Amorim - in the business evolution, is the central issue of this research.

### **[01060] EDUCATION, POVERTY, AND THE ALGERIAN BORDER: SPATIAL PERSPECTIVES IN MOROCCO**

**Matthew Lehnert** (U of Toledo)

The human development approach has dominated the discourse of international development since 1990. The ever-changing demographic and cultural profiles of developing countries has rendered simplistic measurements and rankings based solely on economic performance as obsolete. After half a century of progress being measured largely in monetary terms, human development has brought many advantages to viewing the growth of a country in broader strokes that account for other important indicators other than GDP (GNP in earlier literature). While spatial aspects of economic growth are well studied at regional levels (Reyand Janikas 2005; Bode and

Rey 2006; Resende 2011; Li and Fang 2014), there remains a dearth of studies related to the spatial aspects of human development. However, economic growth and human development are inherently related. Indeed, in their most noble state both share common goals of poverty alleviation, education, environmental sustainability, among others. Spatial aspects of economic growth then become important as there is a plethora of theory, methods, and models that, under the right conditions, can be used in approaching human development in a profoundly spatial way. Morocco is uniquely positioned to show how this can be done. The Recensement général de la population et de l'habitat 2004 (RGPH 2004) provides HDI values, among others, for three geographical scales: regional, provincial, and commune. With over 1600 communes, Morocco provides a promising context for showing how a geographical analysis of HDI, and its related indicators, can provide a more comprehensive basis for measuring and analyzing paths towards human development. Specifically, a model is developed at the commune scale to explore the inter-relationship between poverty rates and education rates. The model also explores spatial dependence among the variables and introduces territorial variables that effect the variables in the model. These territorial variables include communes that fall within the so-called "disputed Sahara" and also communes that border Algeria. The results of the model indicate that spatial decision making could assist in the path towards human development in Morocco.

### **[01079] OBSERVATORY OF RESILIENCE PRACTICES: FIRST RESULTS AND PERSPECTIVES**

**Catherine Dezio** (Politecnico di Milano), **Angela Colucci** (Politecnico di Milano), **Marcello Magoni** (Politecnico di Milano), **Giulia Pesaro** (Politecnico di Milano), **Rachele Radaelli** (Politecnico di Milano)

The paper presents the first results of the first year of activity of the Italian Observatory of Resilience Practices (ORP). The ORP was officially launched in April 2015. Partners of ORP are RESilienceLAB, the Department of Architecture and Urban Studies of Politecnico di Milano, the DIST of Politecnico di Torino and CURSA Consortium. The project is supported by Fondazione Cariplo. The main activities and working axes of the ORP are: *\_Mapping resilience practices at national level or the "Practices path" development of a mapping of Italian resilience initiatives.* *\_Tools for resilience or the "Methodological path" theoretical and methodological advancements based on the results of the applied research developed at the local community levels.* *\_Resilience thinking or the "Cultural path" development of conceptual instruments for the dissemination of resilience approaches.* *\_Actors of resilience or the "Networking path" development of a national resilience network, aiming at developing mutual relationships between ORP and the local communities and among the communities themselves.* **1\_ Resilience practices:** a panorama from the first mapping and survey activities The ORP collected more than 100 project proposals, the basis of the collection being the "Resilient communities" calls for projects launched in 2014 and in 2015 by Fondazione Cariplo. **2\_ Resilience practices engagement and involvement** ORP has organised the first National Forum on Resilience Practices (Milan, January 29th 2016) involving in an exposition about 50 practices collected through an open call. The Forum is a moment of networking but also a moment of debate, in order to identify the main critical points and innovative strategies and solutions. **3\_ Cultural and methodological paths:** focus on capacity building and innovation in knowledge approach The approach adopted is incremental and innovative. It plays a role of facilitation in supporting and promoting the resilience practices and, at the same time, it integrates different knowledge sources and adaptive approaches. During the process of the ORP, some assets of research were identified, based on the needs of different stakeholders. The ORP aim is to connect and contaminate different approaches and "cultures", being an "exchange and useful" platform promoting and supporting the diffusion of resilience practices. **4\_ Perspectives and next steps** ORP will develop several activities, for example: promote and improve the activities of local and thematic workgroups and organise an International conference in September/October 2016, develop an Online platform as the main dissemination tool and produce and diffuse more specific and stakeholder oriented toolboxes as products

### **[01108] THE EFFECTIVENESS OF TERRITORIAL INTEGRATED PROJECTS IN SOUTHERN ITALY: A REGIONAL CASE**

**Fabio Mazzola** (U of Palermo), **Alessandro Cusimano** (U of Kent, UK), **Sylvain Barde** (U of Kent, UK)

In this work we aim at contributing to this field by measuring the effectiveness of an incentive program for local development realized in southern Italy during the 2000-2006 cycle of EU Structural Funds. Territorial integrated projects (TIPs) were designed to implement the Regional Operational Programmes and were based upon the combination and integration of different interventions concerning infrastructures, aid schemes and other networking and system actions. Despite the relevance of the program (in Southern Italy 7 billion euros were spent in the mentioned period), empirical evaluations of TIPs are quite limited in literature. In previous analyses we showed the positive effects of the TIPs at firm level (Cusimano, Mazzola 2014), despite some selection bias issues arise when beneficiaries are chosen by the public authority (Cusimano et al. 2015). In this paper, in order to reach a more comprehensive perspective, we implement an empirical analysis regarding the effects at territorial level of infrastructural interventions, which absorbed 51.3% of planned resources and 58.5% of actual spending. We exploit data referring to the municipalities which were selected as beneficiaries in Sicily and we use propensity score matching methods for the identification of the appropriate counterfactual and a difference in differences approach to determine the effectiveness of the policy. Furthermore we aim at taking into consideration the specific characteristics of TIPs which distinguish them from other local development programs. As well as the integrated approach previously mentioned, in fact, we need to stress that the majority of resources spent in southern Italy for TIPs in the period 2000-06 has been devoted to infrastructures related to tourism such as cultural assets, rural development projects and urban regeneration. For this reason we divide our analysis into two parts by focusing, in the first stage, on the effectiveness of the whole set of infrastructural interventions and by looking, in the second stage, at the effects of the program on specific outcome measures directly related to the touristic sector. The estimation of the average treatment effect on the treated (ATT) is realized by using different methodologies and specifications in order to test for robustness. Results show that the policy, even if effective at firm level, becomes weaker at territorial level. A final part of the analysis concerns the use of specific outcome measures for TIPs and the outline of the methodology to be used to investigate in further detail the effectiveness of this policy.

### **[01121] ENTREPRENEURIAL PROFILE AND ENVIRONMENTAL CONDITIONS TO ENTREPRENEURSHIP**

**Vitor Braga** (ESTGF-IPP; CIICESI), **Célia Pereira** (ESTGF-IPP; CIICESI), **Aldina Correia** (ESTGF-IPP; CIICESI), **Alexandra Braga** (ESTGF-IPP; CIICESI)

Entrepreneurship as a driver to economic, social and cultural development and growth, has become an important issue to all individuals, whether individually or collectively organized in firms, governmental organizations, academic, social or cultural institutions. The perception, knowledge and information in this area will influence individuals and contribute to a whole, shared and extended to a global level. The access to a database the GEM project, whose main goal is to measure the volume of entrepreneurship activities in diverse geographical areas, allows a variety of studies and investigation in different contexts. According to Lekovicet et al. (2012) the entrepreneurial activities and behaviour in the recent economic context are identified as a potential and as a significant source to the economic growth and development. They also sustain that the barriers to development to small and medium enterprises (SMEs) are the result of the environmental conditions, as institutions crisis, undefined political, legal and financial framework where the cited sector dominates. This paper reports the entrepreneurial profile and environmental conditions to entrepreneurship activities using statistical procedures (SPSS) for determining differences between groups using ANOVA, MANOVA and discriminant analysis, based on GEM 2011 NES Global Individual Level Data. The results show that certain factors, such as governmental policies, availability of funding, support to engineers and scientist to new ideas or product innovation, banking services or even national programs efficiency have an impact on the entrepreneurship levels. It is also shown that the education background has an impact on entrepreneurship since it affects individuals' perception of the reality depending on their specialization areas.

### **RS03.1 RURAL DEVELOPMENT AND AGRICULTURE ECONOMICS**

**Chair:** Deokho Cho

**Location:** ROOM 3

#### **[01010] SKILLS AND GEOGRAPHICAL ECONOMICS**

**Jesus Lopez-Rodriguez** (U da Coruña), **Andres Faiña** (U da Coruña), **Cosmin Gabriel Bolea** (UNAM)

This paper looks at the link between human capital and geographical location for the Romanian regions based on the theoretical model developed in Redding and Schott's (2003) paper. Using 2013 data on the different educational attainment levels for the 42 Romanian regions, it identifies that the percentage of individuals with medium and high educational levels is affected positively by the regions' market access. Doubling market access would increase the percentage of individuals with medium and high educational levels between 22-25%. Moreover the econometric results show that between 45% and 59% of the spatial variation in human capital levels is explained by the market access variable. Some policy implications to overcome the costs remoteness imposes on human capital accumulation in Romania are also drawn.

#### **[01025] SMART SPECIALISATION FOR SUSTAINABLE GROWTH IN THE EUROPEAN UNION**

**Marcelino Cabrera Giraldez** (European Commission - Joint Research Centre)

In the European Union (EU), a new multi-billion programme for regional development and innovation will steer economic development policies for the coming five years. For the first time, it requires national and regional policymakers to design evidence-based innovation strategies based on a comprehensive analyses of socio-economic indicators reflecting strengths and weaknesses of their innovation systems, i.e. Research and Innovation Smart Specialisation Strategies (RIS3). Smart specialisation is a place-based approach, meaning that it builds on the assets and resources available to regions and EU Member States and on their specific socio-economic challenges in order to identify unique opportunities for development and growth. In the policy design phase, policymakers had to prioritise economic activity areas with the best growth and innovation opportunities based on this analysis. The challenging implementation phase is already taking place, whilst other regions in the world are inspiring themselves from the novel policy concept. The methodology developed for its bottom-up approach will be discussed, as well as their potential benefits and bottlenecks that are being noted in the implementation phase. The Smart Specialisation Platform (<http://s3platform.jrc.ec.europa.eu/>), a service of the European Commission created in 2011 to provide professional advice to EU countries and regions for the design and implementation of their RIS3, will be also presented. These services include: providing guidance material and good practice examples; organising information sessions for policy makers and participating in conferences; providing training to policy-makers; Facilitating peer-reviews and mutual learning; supporting access to relevant data; and participating in high quality research projects to inform strategy formation and policy making.

#### **[01066] MACRO-REGIONS, COUNTRY EFFECT AND FINANCIAL RATIOS: A COMPARATIVE STUDY IN THE EURO AREA (2000-2009)**

**João Soares** (IST, U de Lisboa), **Joaquim Pina** (FCT, U Nova de Lisboa)

During the sovereign debt crisis that has hit Europe, many economists and political actors have questioned if a common strong currency can accommodate countries and regions that clearly exhibit very different macroeconomic performances. The aim of this paper is to contribute to a deeper discussion of this problem, by analyzing the disparities within the Eurozone beyond the usual macroeconomic point of view. This study analyses differences among financial ratios belonging to a representative set of firms from six Euro area countries. The analysis covers the first decade of the 21st century and investigates patterns in these ratios and the existence of possible clusters and breaks in the data series after 2008, the beginning of the present financial crisis. The empirical and statistical analyses confirm these changes as well as the existence of territorial clusters that show the relevance of future macro-regional strategies across Europe, following the creation of the first European Union macro-regional strategy in 2009.

#### **[01077] UNDERSTANDING URBAN SHRINKAGE VIA BUSINESS DEMOGRAPHY. THE CASE STUDY OF LARISSA, GREECE**

**Michail Agorastakis** (U of Thessaly), **Stella Manika** (U of Thessaly)

Urban shrinkage as a result of population decline, recession, and social transformations or suburbanization, gives new shape to the urban landscape along with its common aspects, such as density changes in the built environment at the center of the urban network (Bontje and Musterd 2012, Frazier and Bagchi-Sen 2015), and the gradual limitation of human presence, activity, and intervention in the emerging suburban landscapes (Rink 2009, Burkholder 2012). Urban shrinkage and its results, even though not exactly a new

phenomenon, are the main cause of the impact on financial crisis in the structure and functions of modern cities. Greek cities, reflecting the prevailing situation in many Mediterranean cities, since 2009 and onward, show signs of shrinkage in a socio-economic level, with different strengths and speeds. Demographic shrinkage, intense economic changes, and the dramatic population decline of small businesses, along with the intensity of their mobility within the urban network consist characteristic indicators of urban shrinkage in Greece, common in the majority of cities (Gospodini 2012). Given the crisis on the sector of small businesses, this paper aims to the mapping, analysis and typological classification of the emerging urban landscapes. In order to keep up to this goal, for the time 2008-2014 through tools of demographic analysis and spatial indexes, the examination and systematic record of change in the small business population in representative geographic regions according to a) the kind of their activity and b) their mobility within the urban network, is achieved. The results of this research along with the analysis of the examined geographic regions are used for the typology of new urban landscapes in modern Greek cities. Our analyses are based on data from the General Secretariat of Information Systems, Ministry of Finance. References: Bontje, M. and S. Musterd (2012). \Understanding Shrinkage in European Regions; BUILT ENVIRONMENT 38(2). Burkholder, S. (2012); The New Ecology of Vacancy: Rethinking Land Use in Shrinking Cities; Sustainability 4(12): 1154-1172. Frazier, A. E. and S. Bagchi-Sen (2015); Developing open space networks in shrinking cities; Applied Geography 59(0): 1-9. Gospodini, A. (2012). Economic Crisis and the Shrinking Greek Cities. 1st International Conference on Architecture and Urban Design, International Conference on Architecture and Urban Design, EPOKA University. Rink, D. (2009); Wilderness: The Nature of Urban Shrinkage? The Debate on Urban Restructuring and Restoration in Eastern Germany; Nature and Culture 4(3): 275-292.

### **[01097] BUILDING A SOCIAL ENTERPRISE BEYOND THE FARMLAND PENSION SYSTEM IN THE RURAL AREAS**

**Deokho Cho** (Daegu University), Changwhan Yeo (Daegu University)

Despite of Korea experiencing the fastest economic growth in the world Korea simultaneously suffers from the fastest population aging due to the lowest birth rates and extension of the average life expectancy. These problems become more serious in the rural areas because a lot of young generations move into the urban areas for children education and better job opportunity. Population aging in the rural areas becomes deteriorates the social problems. In order to solve these social and economic problems in the rural areas, the Korean government eventually introduced in 2011 the farmland reverse mortgage system, which is called "Farmland Pension" (FP). However its policy effects are still questionable in term of economic development and social welfare delivery in the rural areas. And then this paper tries to identify the farmland pension monthly payment for the rural elderly and also to figure out a method how the farmland returned from the rural elderly can be developed into a social enterprise. Finally it notes that this social enterprise, which represents a convergence of agriculture, manufacturing and marketing (CAMM), can be implemented at the local community level and it results in the economic development and good welfare delivery for the rural community.

## **17:30-19:00 | Special Sessions II**

### **SS01 REGIONAL SCIENCE IN AFRICA AND SS02 ASYMMETRIES IN METROPOLITAN AREAS: MEASURING, CORRECTING AND RETHINKING**

**Chair:** Jorge Gonçalves

**Location:** ROOM 1

### **[01026] THE REGIONAL AND LOCAL IMPACT OF INFRASTRUCTURES THAT DON'T EXIST. REFLECTION ABOUT THE CASE OF METROPOLITAN AREA OF LISBON.**

**Jorge Gonçalves** (IST-UL), André Saraiva (IST-UL), Luís Carvalho (FAUL-UL)

Some infrastructures, such as seaports, airports or high-speed railway, among others, for its relevance, can generate significant effects at differentiated scales. These effects begin to be felt even much before their physical implementation. Its simple announcement is enough to shake sectors such as real estate, specialized consulting or the municipal and/or regional policies. Beyond this automatic effects, is also important to consider the difficulty to politically decide their effective implementation by either the complexity or uncertainty but also for the associated costs. The indecision, delay and, often, the retreat in the decision carries heavy costs, sometimes unrecoverable to people, activities and territories, even if dealing with an infrastructure that never had a real existence. The inconsistency of the announced decisions can have political origins (change of priorities), techniques (technical decision challenged either in the location plan or the project plan), financial (worsening of the economic and financial context) or coming from civil society (pressure interest groups, media campaigns of protest). The Lisbon Metropolitan Area is a very interesting area to investigate the existence of such decisions and the respective financial effects, real estate and various instruments that support the planning and urban management. The new Lisbon airport (NLA), the high-speed railway or the third crossing over the Tagus river, in Lisbon Metropolitan Area, are magnificent examples of costs that lead to indecision or retreat in the decision. From the perspective of instruments for territorial management, these decisions are taken on in absentia, forcing successive revisions of plans at national, regional, local and sectorial scale. Furthermore, a number of other documents that are part of what if can designate informal planning – strategic plans, economic development, tourism development, etc. – they combine the future of the territories with the expected impact of those new investments. This communication intends to reflect on this problem, since the postponement, suspension, reformulation or persistent indecision in the implementation of these major public infrastructures, as a result of the financial crisis, strategic and effective losses for the municipalities and regions concerned. There were also problems for the country, since decision's annulment, as seen in the case of NLA in Ota, involved enormous costs in financial packages designed to compensate the West region of Portugal, for the relocation of an infrastructure that, paradoxically, never existed.

### **[01061] SUSTAINABLE DEVELOPMENT OF RESOURCE RICH REGIONS; THE CASE OF THE ZAMBEZI RIVER BASIN IN MOZAMBIQUE**

**Tomás Dentinho** (U of Azores)



The main economic drivers of development in Africa are royalties of oil and mineral exports and the public spending they allow. In Mozambique development prospects for the sustainable development of the Zambezi River Basin depends very much on the deployment of infrastructures and resources associated with the exploitation of mineral and agricultural resources. The issue is where the money goes and what are the effects of that allocation on urban and rural sustainability? To answer this question for the Zambezi Basin in Mozambique we first develop a methodological tool suitable to assess the impacts on population and employment distribution of different political-economic scenarios associated with the spatial distribution of private investment on the exploitation of natural resources and the public investment that uses the rents coming from the exploitation of natural resources (point 2). In point 3 we describe the region summarily, calibrate the model developed in the point 2 and present the results. Point 4 is to discuss the results. Finally, in the last section, some conclusions and recommendations are highlighted. We conclude that beyond the eventual potential created by the deployment of infrastructure there are not major impacts the regional economy if royalties are transferred elsewhere.

## **[01105] INOVAÇÃO E SUSTENTABILIDADE NO COMÉRCIO URBANO: O CASO DO MERCADO DE CAMPO DE OURIQUE**

João Soares (IST-UL), Sara Tomaz (IST-UL), Cristina Coutinho (ADEC-ISEL)

Nas últimas décadas os centros urbanos registaram o aparecimento de novos formatos comerciais. Tem o presente trabalho o objetivo de abordar os impactos de um formato comercial em particular, que surgiu reinventado e tem sido uma peça importante na evolução experimentada pelo sector comercial nos últimos anos – os mercados municipais. A requalificação e revitalização dos mercados municipais tem sido uma das estratégias usadas para dar coesão e revitalizar os bairros e as cidades, introduzindo uma nova dinâmica dentro do próprio mercado e na relação do mesmo com a cidade. A partir do caso de estudo do mercado de Campo de Ourique e através de uma análise da informação recolhida juntos dos diferentes stakeholders, são estudados os impactos da revitalização deste mercado municipal em termos internos e ao nível do comércio circundante e da dinâmica do bairro onde o mesmo se encontra. É feita uma análise aos princípios que levaram à sua reestruturação e à aplicabilidade do modelo noutros mercados. Por fim, são identificadas algumas lacunas e oportunidades na implementação do modelo em estudo e são elencados os principais benefícios para os diferentes stakeholders.

## **[01107] COST BENEFIT ANALYSIS OF PUBLIC SERVICES DISTRIBUTIONS IN AFRICAN URBAN AREAS USING BID-RENTS FROM SPATIAL INTERACTION MODELS**

César Pakissi (ISCED-Huambo), Tomás Dentinho (U of Azores)

An appropriate supply of infrastructures and services has been seen by the politics and academics as key factor in the economic development of many countries. In this study, and under the premise that the distribution of public education services – according to an equity criteria – has an impact on the economic modernization of Africa, a cost-benefit analysis of the provisioning of these services in Huambo, Angola has been performed with the aid of a spatial interaction model developed in MATLAB. Through this methodology, and after we have calibrated the “status quo” of the considered region, we simulated the considered scenarios and performed hedonic modelling in order to measure the price changes in the real estate rents of each municipality of Huambo. Results indicate that the increase of employment according to two types of principles (equity and politic) have an influence in the house pricing, therefore valuating the zones and contributing to an emergence of scale economies. Moreover, the hedonic modelling has enabled the measuring of the benefits that arise from the valuation of the zones where the education services are distributed for subsequent comparison with the investment costs. The distribution of the services through an equity principle is a consistent method for resources rationalization and maximizing the profit of public investments. The applied methodology has proven its importance as a decision support system in circumstances of public investment needs and an equity principle should be considered during its application.

## **SS06 CONTRIBUTIONS OF HIGHER EDUCATION INSTITUTIONS (HEIS) FOR TERRITORIAL DEVELOPMENT: BUILDING BRIDGES BETWEEN THE LOCAL AND GLOBAL**

Chair: Conceição Rego

Location: ROOM 2

## **[01051] A UNIVERSIDADE NOS PALOP: QUE ESPELHO MIRAR? UMA DISCUSSÃO TOMANDO COMO EXEMPLO A DISCIPLINA ECONOMIA REGIONAL E URBANA.**

Cássio Rolim (UFPR)

Este trabalho irá discutir algumas questões relativas ao que seria uma Universidade Necessária para um país dos PALOP tomando como exemplo o que poderia ser uma disciplina de Economia Regional e Urbana ministrada em um curso de Economia. O trabalho está focado na quase impossibilidade e na pouca utilidade para o país em formar pessoas com o mesmo perfil de um académico saído das universidades ditas de padrão internacional. O primeiro problema a ser discutido será a definição do perfil esperado para esse formando; em segundo lugar será o que deverá ser oferecido a ele dentro do amplo cabaz de conhecimento acumulado pela ciência regional; finalmente, como isso será ensinado, quais as técnicas e metodologias mais adequadas. O texto enfatiza a necessidade da adoção de metodologias de ensino baseadas na solução de problemas como o PBL (Problem Based Learning).

## **[01080] LANDSCAPE CHANGE MONITORING AND ANALYSIS IN NORTHEASTERN PORTUGAL**

João Azevedo (CIMO, IPB), Soukaina Rachdi (IPB Institut Agronomique et Vétérinaire Hassan II), Youssef Qaouqaou (IPB and Institut Agronomique et Vétérinaire Hassan II), Ângelo Sil (CIMO, IPB), Paulo. M. Fernandes (CITAB, UTAD), Sérgio Deusdado (CIMO, IPB)

Change is an inherent condition in landscapes. In the Northeast of Portugal landscape change is currently driven mostly by agriculture abandonment and agriculture and energy policy. Ongoing change affects not just landscape patterns but also physical, biological, and

socioeconomic processes, and the ecosystem services that result from them. Landscape change in the region has been studied for more 20 years in different and complementary perspectives. However, there are increasing needs for monitoring and predicting changes in composition, configuration, processes, functions, and services in the landscape. This work summarizes two thesis projects currently under development intending to contribute to monitoring landscape change and to assess effects of these changes in landscape processes in the Northeastern region of Portugal. One project aims to establish an online repository of oblique digital photography from the region to be used to register the condition of the landscape as recorded in historical and contemporary photography over time as well as to support qualitative and quantitative assessment of change in the landscape using repeat photography techniques and methods. It involves the development of a database and a series of protocols using PHP: Hypertext Preprocessor language, and the development of an interface, with Joomla, for pictures uploading and downloading by users. The repository will make possible to upload, store, search by location, theme, or date, display, and download pictures for Northeastern Portugal. The second project aims to understand and model the effects of Holm oak woodlands on fire behavior at the landscape level in the same region. It has been previously observed that Holm oak woodlands have an effect on the spread of fire at the edge scale. In this study we address this effect at the landscape level based on modeling and simulation of fire behavior in the Upper Sabor watershed, north of Bragança. We use the FlamMap model with elevation, weather, and land use data for simulating spread rate, flame length, and fireline intensity. Holm oak is tested in terms of area and configuration of woodlands in the landscape according to scenarios built based on the likely expansion of these vegetation units in the future in the area of study.

## **[01099] ORIGEM E DESTINO DOS ESTUDANTES NO ENSINO SUPERIOR: UM ESTUDO ACERCA DA MOBILIDADE GEOGRÁFICA**

**Conceição Rego** (U de Évora)

É aceite de forma generalizada que as Instituições de Ensino Superior (IES) provocam efeitos variados no desenvolvimento das regiões onde se instalam. Entre estes efeitos conta-se o da atração de estudantes, oriundos de outras regiões, bem como o da retenção dos alunos locais para prosseguirem os seus estudos superiores. Para além desta deslocação temporária / retenção, espera-se que no futuro estes diplomados venham a integrar-se nos mercados de trabalho locais contribuindo assim para reforçar o papel das IES enquanto promotores de crescimento económico, desenvolvimento e coesão territorial. No caso português, a rede de IES está instalada ao longo de todo o país ainda que com níveis de intensidade diferentes nas várias regiões. Para esta distinção contribui a dimensão das IES que pode ser maior ou menor em consequência do número de alunos, do número de vagas bem como da diversidade da oferta formativa existente, entre outros. Quais são as IES que mais estudantes atraem, provenientes de outras regiões? Qual é a capacidade de retenção dos estudantes locais pelas respectivas IES? A dimensão é relevante quando se trata de avaliar a capacidade de atração / retenção de estudantes? Com este estudo pretende-se averiguar acerca da capacidade de atração das várias IES portuguesas, verificando qual a origem geográfica (distrito de origem) dos estudantes nas diversas instituições. Para tal, usaremos dados da Direção Geral do Ensino Superior (DGES), para os anos entre 2008 e 2003, de caracterização do sistema de ensino superior português. Os dados serão analisados com o recurso a métodos de análise estatística e a indicadores de localização.

### **SS08 PARTICIPATORY PLANNING AND SUSTAINABLE BUILT SPACE**

**Chair:** José Luís Crespo

**Location:** ROOM 3

## **[01069] CHOIX D'INDICATEURS DE MOBILITE URBAINE DURABLE POUR LE TERRITOIRE DE CASABLANCA**

**Ishak Hbiak** (Institut National d'Aménagement et d'Urbanisme), **Abdelaziz Adidi** (INAU), **Jean-Pierre Nicolas** (ENTPE), **ELHassan ELBirchi** (EHTP)

Le transport durable est une application ou une expression directe du développement durable dans le secteur du transport. Ainsi une mobilité durable espérée a pour rôle de satisfaire les principaux besoins d'accès et de développement des individus et entreprises et des sociétés, en toute sécurité et d'une manière compatible avec la santé de l'Homme et des écosystèmes, et assurant l'équité au sein et entre les générations successives. La planification du transport urbain doit tenir compte donc des piliers économique, social, environnemental et institutionnel de la durabilité. Casablanca, comme beaucoup de villes des pays en développement, connaît un étalement urbain rapide et difficile à contrôler, ce qui pose une grande difficulté pour assurer la fonction de transport urbain. Ces difficultés peuvent se traduire par une faible participation des modes des transports en commun dans la mobilité urbaine, une orientation de la demande vers le véhicule privé ainsi qu'une présence importante du transport artisanal. Cette situation complique l'effort de planification entretenu par les acteurs de la ville qui fournissent des efforts importants pour assurer la gestion opérationnelle du transport urbain. Ce travail a pour but de renforcer la position de la durabilité dans le processus de planification entrepris au sein de Casablanca. Ainsi nous proposons d'analyser, de comparer, et de choisir un ensemble d'indicateurs de mobilité durable adaptés au contexte de Casablanca. Ces indicateurs choisis constituent aussi un outil de recueil et de mesure des données sur la mobilité durable au sein du territoire urbain de Casablanca. L'application de ce système d'indicateur a servi, dans le contexte de Casablanca, à mesurer la non durabilité du système de transport urbain, au côté des effets d'autres actions positives comme l'introduction de la première ligne du tramway.

## **[01084] SOCIAL SUSTAINABILITY OF POSTCOLONIAL MARRAKESH: ISSUES ON THE CONCEPTION AND RECEPTION OF THE CITY**

**Assia Lamzah** (National Institute for Regional and Urban Planning)

This paper explores contemporary Marrakesh as a contested site between multiple group interests and how it is conceived to satisfy divergent objectives in relation to its historical and socio-political contexts and in a context of globalisation. It shows evidence of the ways local elites and the government use cultural heritage to confirm state power and construct Moroccan identity in opposition, or continuity, with the colonial legacy and how this impacts or no a supposed social sustainability of the space of the medina. I demonstrate how, in contemporary Marrakesh, space and cultural heritage are used to impose a bureaucratic ideology and to construct a national

identity and analyses whether this process is socially and culturally sustainable. At the same time, Marrakesh, for its non-official users, is a site of everyday life, work, residence, leisure, and tourism that answers different aspirations in very complex and contested ways. In my analysis of contemporary Marrakesh and the way cultural heritage is perceived, appropriated and managed by its different users, I try to draw links with the pre-colonial, but more importantly the colonial era as they can partly guide the explanation of some phenomena. This paper aims to understand what Marrakesh medina means to its different users. The data of this paper are mainly obtained from structured and unstructured interviews that I conducted in Marrakesh between January and November 2007, when conducting fieldwork for my PhD dissertation, and that I completed in December 2012. I spoke to different users and managers of the medina; officials and non-officials; Moroccans and foreigners; old and young; rich and less rich; men and women; Arabs and Berbers; educated and less educated. I tried to have a sample of interviewees as diverse as possible to be able to assess the way in which medina is perceived by its different users and managers in a relatively accurate way. I approached different groups acting in the medina's heritage management. I talked to NGOs, private architects, government officers, state managers, and private investors. In addition, I conducted observation to track specific information as people moved around medina space in their daily lives. I do not pretend that my findings are an objective image or assessment of the situation, but they provide insights for the reading of the situations and question the findings of previous scholars.

## **[01113] LA CROISSANCE VERTE ET LE DÉVELOPPEMENT TERRITORIAL**

**Faiçal Benchakroun** (Haut-Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification)

La croissance verte dépend en grande partie de l'innovation et de la gestion responsable des ressources naturelles tout en mettant en lumière le rôle fondamental des politiques territoriales et locales. En premier lieu, les politiques régionales peuvent accélérer le passage à des technologies propres en élargissant leur marché et en promouvant directement leur développement. En deuxième lieu, les interactions à niveau local créent des effets de concentration et de cumulation qui sont essentiels à l'émergence de nouvelles voies de développement. Les responsables locaux et régionaux, les autorités chargées de la planification et de la réglementation, les promoteurs et les responsables de l'infrastructure et les facilitateurs d'investissements privés, ont un rôle fondamental dans la transition vers un développement économique plus solide et plus respectueux de la préservation des ressources. Cependant, étant donnée la multiplicité des acteurs publics et privés mutuellement dépendants impliqués dans la transition vers la croissance verte, des instruments de gouvernance sont nécessaires pour faire face aux possibles déficits de coordination et de capacité qui risquent d'entraver la cohérence et l'impact des politiques de croissance verte. Les stratégies territoriales en faveur de la croissance verte doivent être traitées aussi bien au niveau local et régional que national et reposent sur différents contextes institutionnels et dispositifs de gouvernance. Au vu du rôle fondamental des gestionnaires locaux et régionaux dans l'élaboration et la mise en œuvre de stratégies en faveur de la croissance verte, il est nécessaire d'établir un cadre de gouvernance multi-niveaux afin de coordonner leurs interventions dans les politiques et garantir ainsi une cohérence politique entre les réponses nationales et locales, et avec le secteur privé et la société civile. Tout ceci en tenant compte de l'intégration des différentes composantes de l'espace dans une gestion intégrée et durable.

## **[01125] URBAN SUSTAINABLE DEVELOPMENT: MUNICIPAL DECISION-MAKING STEERING TOOLS AND CITIZENS AWARENESS AND PARTICIPATION**

Tarsila Lampert (Faculty of Medicine, U of Lisbon), Ana Rego (FA-UL), **Elisabete Freire** (FA-UL), José Crespo (FA-UL)

Nowadays, with higher urban densities and worsened of living conditions in the cities, municipalities have been adopting and incorporating sustainable tools in their planning and management policies and procedures. In Portugal, municipalities of the Metropolitan Area of Lisbon (LMA) have been showing some awareness for the need of this urban sustainable development approach and thus defining strategies in order to improve the urban environment quality for a better and healthier life of their inhabitants. As evidence of this, is the Lisbon Municipality (LM) that has made available a group of formal and informal planning and management tools such as: the Municipal Master Plan, the Strategic Plans, the Participative Budget and the 21 Local Agenda, as well as, other smaller projects related to urban, social and environmental sustainability. So, considering those municipalities of LMA planning and management system reveals a growing interest on a sustainable development path; it is also relevant to determine if their inhabitants have been actively responsive to those municipal actions and showing vigilance for creating a more sustainable living. Despite most of the procedures encourage the participation of citizens, and consequently, empowers the social layer, the success of the urban policies is the result of a bilateral will, so, it is relevant to assess the significance of this social component on urban decision-making. Finally, it is important to emphasize that Lisbon it's an appropriated case study since it is the only capital of Europe with such participatory tools as the Participative Budget.

# Tuesday, 31 May 2016

**09:00-09:45 | Plenary Session II**

**Chair:** Abdellatif Khattabi, National School of Forestry Engineering

**Sustainable Development Goals and regional growth: qualitative visions and quantitative evidence**

Peter Nijkamp

*Professor in regional and urban economics and in economic geography at the VU University Amsterdam*

**RS01.2 NATURAL RESOURCES, BIODIVERSITY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT**

Chair: Ahmed Ouhammou

Location: ROOM 1

**[01040] TOURISME, NORMES SOCIALES IMPORTÉES ET TRI DES DÉCHETS: LE CAS D'UNE ZONE CÔTIÈRE MÉDITERRANÉENNE**

Anne Casabianca (CNRS - U de Corse), Dominique Prunetti (U de Corse), Olivier Beaumais (U de Corse), Ludovic Martel (U de Corse)

Notre objectif est d'étudier l'influence des comportements des touristes en matière de tri des déchets sur les comportements de tri des résidents dans une région corse. La situation en Corse se caractérise par une production de déchets ménagers plus importante que la moyenne nationale (663 kg/an/hab en 2013 contre 590). Une partie de cette surproduction de déchets s'explique par une forte pression touristique, notamment sur la zone côtière, où la population est multipliée par quatre en période estivale. Le taux de valorisation de ces déchets est par ailleurs faible en Corse: 25% contre 33% au niveau national. En l'absence d'incitations financières stratégiquement orientées, l'effort de tri des déchets en France, relève essentiellement d'une démarche volontaire, guidée par des motivations morales, sociales ou altruistes. Pour analyser comment des normes de comportements de tri « importées » via la population touristique, peuvent en retour influencer les comportements de tri des locaux, nous avons réalisé une enquête de type choice experiment auprès des résidents et touristes sur le littoral. Cela a consisté à faire raisonner les répondants sur des scénarii de tri des déchets ménagers comprenant quatre attributs: nombre de déchets triés, distance aux points de collecte, fréquence de collecte et coût. L'analyse économétrique des données collectées nous permet de modéliser les comportements de tri de touristes et résidents d'une zone côtière touristique. Les premiers résultats font apparaître que l'intégration des normes de tri varie clairement selon la population concernée; ainsi l'intensité de tri dépend notamment de façon différenciée de la manière dont les individus se positionnent par rapport au comportement de tri des autres individus. Les répondants montrent également une sensibilité différenciée aux caractéristiques des scénarii de tri proposés. Cela nous permet d'éclairer les politiques publiques dans ce domaine. Nos résultats débouchent sur une première réflexion sur la mise en place de dispositifs spécifiques d'incitation au tri à destination des touristes ou sur les voies de diffusion de normes sociales de tri « importées » auprès des résidents.

**[01044] NECESSITE D'OUTILS D'AMENAGEMENT DU TERRITOIRE POUR UNE GESTION RATIONNELLE D'UNE VILLE COTIERE (LOME)**

Yéndoubé Demakou (Ministère de la planification du développement)

Lomé, la capitale du Togo est située au bord de l'océan atlantique entre 01° 14' et 1°32' de longitude Est et entre 06° 9' et 6°27' de latitude Nord, dans le Golfe de Guinée, à l'extrême Sud-Ouest du territoire national. La frontière ghanéo-togolaise constitue sa limite occidentale de fait. La Ville de Lomé (333 km<sup>2</sup> dont 30 km<sup>2</sup> de zone lagunaire), a un effectif de 1 348 619 habitants selon les résultats du 4ème Recensement Général de la Population et de l'Habitat de novembre 2010. Un peu plus de six citadins sur dix (62,64%) vivent donc dans cette agglomération, ce qui représente presque le quart (23,4%) de la population totale nationale. La mise en valeur de l'espace est souvent source de perturbation des écosystèmes et de dégradation prononcée de l'environnement et du cadre de vie. La présente étude permet d'analyser les impacts négatifs liés à la mise en valeur de l'espace de la ville de Lomé (ville côtière) sans référence aux outils techniques d'aménagement du territoire. La méthodologie adoptée repose sur la recherche documentaire, les enquêtes par questionnaire et les entretiens individuels à l'aide d'un guide auprès des différents cibles. En outre, l'observation directe s'est faite en vue de constater et d'apprécier la réalité du terrain. Les résultats obtenus montrent que l'absence des outils de planification spatiale que sont les schémas est fondamentalement à l'origine de la forte concentration de la population et des activités économiques dans la ville de Lomé au détriment du reste du territoire national. En effet, Lomé est marquée par un étalement urbain sans précédent avec un foisonnement d'activités de diverses natures faisant du territoire la plaque tournante du commerce transsaharien et sous-régional. Cette situation, soutenue par la fragilité du site de cette ville aux multiples fonctions entraîne des impacts négatifs très significatifs qui risquent de s'empirer avec les changements globaux constatés ces dernières années. Les problèmes de dégradation de l'environnement et du cadre de vie inhérentes à cette situation,

**[01048] CARACTÉRISATION AGRONOMIQUE, BIOCHIMIQUE ET NUTRITIONNELLE DE L'ORGE LOCALE TUNISIENNE POUR SA VALORISATION**

Sonia Mansouri (INRAT), Ines Abidi (INRAT), Leila Radhouane (INRAT)

Dans le cadre d'une agriculture durable, plus soucieuse de l'environnement, la connaissance des ressources génétiques locales céréalières et leurs utilisations correctes et responsables sont primordiales pour exploiter, valoriser et conserver leurs spécificités génétiques, agronomiques et nutritionnelles et leurs potentialités d'adaptation aux changements climatiques. En Tunisie les céréales occupent généralement le tiers des superficies cultivables dans le pays avec une part réservée à l'orge de 40% dont la culture est essentiellement pluviale et soumise aux aléas climatiques. Les variétés utilisées sont principalement des variétés améliorées alors que les variétés populations locales sont plus concentrées au sud du pays. En effet, celles-ci sont beaucoup plus adaptées aux conditions extrêmes du milieu (sécheresse, haute température). L'objectif de cet article est d'identifier la biodiversité assez riche de 371 populations locales d'orge, ensuite de les caractériser du point de vue agronomique, physiologique, biochimique et nutritionnel. Les résultats obtenus montrent une variabilité significative au niveau des caractéristiques agro-morphologiques (indice de diversité H'= 0.45), physiologiques et au niveau de la composition biochimique en amidon, en sucres solubles, en hordéines et en quelques acides aminés. La richesse de l'orge en fibres alimentaires a également été démontrée par le dosage de la cellulose, de la lignine et des hémicelluloses. Cette recherche a mis également l'accent sur la capacité antioxydante et la richesse de l'orge en polyphénols totaux et en flavonoïdes. L'analyse multivariable des données de la diversité génétique trouvée au sein des populations locales d'orge laisse

entrevoir une possibilité de sélection d'accessions pouvant répondre aux nouveaux contextes du changement climatiques. En effet, sur les 371 variétés locales, 7 d'entre elles montrent une haute efficacité de l'utilisation de l'eau, un haut potentiel hydrique et une meilleure assimilation photosynthétique s'adaptant parfaitement aux conditions du sud méditerranéen. Ces résultats conduisent à recommander d'une part l'utilisation de l'orge tunisienne dans une large gamme de produits agro-alimentaires de terroirs, de qualité sensorielle acceptable et de valeur nutritionnelle élevée et d'autre part un plan national de conservation de ces populations locales.

### **[01064] ECOTOURISM IN THE TOUBKAL NATIONAL PARK: OPPORTUNITIES AND CONSTRAINTS OF DEVELOPMENT**

Mohamed El Bouziani (Haut Commissariat aux Eaux et Forêts), Abdellatif Khattabi (ENFI), **Ahmed Ouhammou** (Faculty of Sciences Semlalia)

Toubkal National Park (TNP) is a protected area situated in Central zone of Marrakech High Atlas, Morocco. Because of the beauty of its natural landscape, the diversity and the quality of its fauna and its flora, it knows an attendance of tourists and visitors who are looking of natural and cultural authenticity. However, the development of this activity, if it is not controlled, may engender negative impacts damaging the constituent elements of the ecosystem and consequently the durability of the tourism activity. The present study was registered in this perspective. It was realized within the GIREPSE project which has as objective to reveal the opportunities and the constraints of the development of the ecotourism as effective instrument of development of the ecosystemic services in this protected area. A mixed approach associating tools of collection of data and qualitative and quantitative information was adopted. It emerges from this study that TNP has a good tourist infrastructure, both at the level of the accommodation and administrative department support in peripheral zone essentially. TNP registered about 86 500 visitors by year, 43 % of them reached the territory of the Park via the village of Imlil. This attendance of visitors is marked by seasonal and annual fluctuations, largely connected to the local weather conditions. In spite of the beneficial contribution of this activity to the local economic development, natural resources of this protected area undergo some pressures on the landscape values and the water resources as solid and liquid waste, emitted by the visitors. On the redundancy and cultural aspects, acculturation phenomenon begins to appear and affects negatively the traditional values of the inhabitants of the zone.

### **[01102] L'EXPÉRIENCE MAROCAINE EN MATIÈRE DE COMPENSATION POUR MISES EN DÉFENS: BILAN ET PERSPECTIVES**

**Abdelmoughit Benchad** (Ministère de l'Economie et des Finances), Said Laariby (Ibn Zohr U Agadir)

La compensation pour mises en défens est un mécanisme d'incitation à la conservation des services environnementaux fournis par les écosystèmes forestiers multifonctionnels. Au Maroc, la formalisation et la concrétisation de ce mécanisme, dans le contexte socio-économique qui lui est propre, a été rendu possible par l'implémentation des dispositions de l'arrêté n°1855-01 du 6 moharrem 1423 (21 mars 2002) fixant les limites, conditions et modalités de demande et d'octroi de la compensation pour mises en défens du domaine forestier à exploiter ou à régénérer. L'objectif de cette communication est de faire le point sur l'expérience marocaine en matière de compensation pour mises en défens et d'interroger cette initiative sur les plans socio-économique et de reconstitution des espaces forestiers, et ce dans une perspective de gestion durable.

## **RS03.2 RURAL DEVELOPMENT AND AGRICULTURE ECONOMICS**

**Chair:** Virginie Moisson

**Location:** ROOM 2

### **[01042] RENAISSANCE DE LA DIETE MEDITERRANEENNE EN TUNISIE POUR UNE ALIMENTATION DURABLE A TRAVERS UNE APPROCHE TERRITORIALE INTEGREE**

Raoudha Khaldi (National Institute of Agricultural Research of Tunisia), **Mehrez Ameur** (ESAK KEF TUNISIA), Sonia Boudiche (Hight School of agribusinessfood), Dorra Sfayhi (National Institute of Agricultural Research), Deryne Dorra (Consumer institute)

La construction d'un système alimentaire durable, localement et globalement implique la recherche d'alternatives liées à des pratiques alimentaires plus saines et des pratiques de protection de l'environnement dans les secteurs agricole et agro-alimentaire. La Tunisie a joint cette initiative en adoptant les mesures de sécurité alimentaire qualitative particulièrement dans le contexte global de l'extension des maladies liées à la mal nutrition humaine et aux maladies animales émergentes. Au niveau de l'offre alimentaire, ces mesures ont concerné la diversité et la qualité des produits par des labels d'origine et l'introduction de l'agriculture biologique. Cependant, ces mesures demeurent sectorielles et ne peuvent pas joindre une approche de système alimentaire durable avec une stratégie cohérente. La renaissance de la diète méditerranéenne pourrait constituer une base sur laquelle ce système pourrait être construit parce qu'il représente un style de vie alliant le consommateur et le producteur aux meilleures pratiques connectées à la culture et au savoir-faire local. Cet article, a pour objectif de présenter les caractéristiques générales de la diète méditerranéenne, d'analyser le dérapage de la consommation des ménages tunisiens sur une période de 30ans par rapport à ce modèle méditerranéen, autrefois adopté, peu calorique et riche en céréales, fruits et légumes et huiles d'olive. Une étude de cas sera présentée afin de montrer l'intérêt d'une approche intégrée territoriale pour la valorisation des produits de terroirs méditerranéens, leur sauvegarde et leur promotion auprès des consommateurs. Cette approche prend en compte les spécificités des territoires, les besoins des collectivités locales, des décideurs (agriculture, industrie, éducation, culture et tourisme) et des consommateurs.

### **[01088] LA VIOLENCE PSYCHOLOGIQUE AU TRAVAIL**

**Virginie Moisson** (IAE REUNION), Picard Pascal (IAE REUNION)

Ces dernières années ont été tristement marquées par des violences multiples ayant conduit certains individus à l'irréparable. S'il est vrai que le travail et la violence physique ont toujours cohabité, aujourd'hui cette nouvelle forme de violence semble davantage

s'orienter sur le mental. La recherche sur la violence en milieu de travail, et notamment, psychologique, s'est principalement développée au cours des deux dernières décennies dans les pays scandinaves, les chercheurs des autres pays étant nettement moins nombreux à avoir abordé cette thématique de recherche (Niedhammer, 2006). Pourtant, les cas de violence en France semblent être en nette progression et les formes sont multiples. Nous souhaitons proposer une réflexion et des pistes d'actions sur les outils de prévention de la violence psychologique au travail. Pour ce faire, nous posons l'hypothèse que les salariés les plus exposés sont ceux pour lesquels les relations humaines représentent une dimension déterminante de leur activité professionnelle. Aussi, de même que les salariés les plus impliqués seraient les plus sensibles aux tensions, ce seraient les employés et agents pour lesquels les contacts auraient le plus d'importance dans leur travail qui seraient les plus susceptibles de subir des violences. Si toutes les organisations sont susceptibles d'être des lieux où apparaissent des formes de violence, il est notable que le management porte une responsabilité particulière et que les choix managériaux, tant en termes d'organisation du travail que de communication interne, sont déterminants dans le déclenchement ou l'amplification des tensions. Après une revue de la littérature sur les concepts de violence psychologique, de stress au travail et d'épuisement professionnel, nous nous attacherons à présenter au travers d'une étude empirique quantitative les liens entre les conflits latents et l'épuisement professionnel. Enfin, plusieurs outils de prévention s'inscrivant dans de nouvelles pratiques RH, seront exposés.

## **[01128] RÔLE DES OUTILS PARTICIPATIFS DE COLLECTE DES DONNÉES DANS LE RENFORCEMENT DU CAPITAL SOCIAL DES COMMUNAUTÉS RURALES**

**Harrad Asmae** (Agence de Développement Social, Asfi), **Abdellatif Khattabi** (ENFI)

Le capital social devient une mesure des actifs immatériels tels que les réseaux communautaires, des activités culturelles, la confiance, les liens, et l'engagement à des valeurs locales partagées... Il détermine le degré de cohésion et la capacité d'une communauté à absorber les chocs, exploiter les opportunités de développement, etc. Le projet GIREPSE utilise un certain nombre d'outils de recherche-action et de collecte d'information de manière participative dans plusieurs communautés rurales du bassin versant de l'Ourika. Dans cette recherche, nous nous questionnons sur l'effet de ces outils de recherche sur le renforcement du capital social local. Nous nous intéressons aux dimensions Genre pour voir si elle n'influence pas ce renforcement. Ce présent travail s'inscrit dans cette perspective et l'objectif est de dégager comment ces outils sont perçus par les femmes et les hommes, à travers leur degré de maîtrise et leur de satisfaction vis-à-vis des informations générées. Nos investigations ont été effectuées au niveau de communautés principalement agricoles et majoritairement de faible instruction scolaire et de langue Amazigh. Il est supposé que cette situation particulière nécessite un soin particulier de la part des chercheurs pour trouver des façons d'assurer une occasion pour les membres des communautés et surtout des femmes à exprimer leurs opinions aux chercheurs et à apprendre autant que possible, de l'exercice qu'offre l'utilisation des outils participatifs. Pour ce faire, nous avons eu recours à plusieurs outils dont on peut citer: carte des ressources, carte de mobilité, diagramme de Venn, matrice conflits-partenariats, champ de force, ...). Les résultats préliminaires obtenus montrent que les outils qui décrivent l'espace dans lequel vivent les femmes et les hommes sont facilement maîtrisés. Par contre une certaine difficulté de maîtrise est liée aux outils qui traitent des aspects organisationnels. Aussi bien les hommes que les femmes sont plus satisfaits, à des degrés différents, des informations générées par les outils difficilement maîtrisés c'est-à-dire les outils qui étudient les organisations et la vie dans leur espace. Ces informations permettent aux participants (es) de voir autrement leur espace, de comprendre mieux cette dynamique organisationnelle qui se fait au sein de leur territoire et pourquoi elle est restée peu développée. Ces outils ont aussi permis aux membres des communautés d'accéder aux informations et idées générées collectivement par les participants, ce qui a motivé la population à comprendre mieux et à se donner plus de valeur.

## **RS04 TERRITORIAL MULTI FUNCTIONALITY AND, SUSTAINABLE REGIONAL DEVELOPMENT**

**Chair:** Catherine Dezio

**Location:** ROOM 3

## **[01033] UM NOVO MOMENTO PARA A INDÚSTRIA DE TRANSFORMAÇÃO DO NORDESTE?**

**Fagner Diego Spindola** (UFPE), **João Policarpo Lima** (U Federal de Pernambuco)

Este artigo analisa a indústria de transformação do Nordeste por meio de reconstrução histórica e através de dados e índices pouco ou ainda não explorados na temática regional. Para isso, fez-se uso de dados sobre anúncios de investimentos na indústria de transformação das regiões e se analisou a intensidade tecnológica do valor da transformação industrial de regiões com indícios de desindustrialização. Adicionalmente, construiu-se e se analisou um índice de ciência, tecnologia e inovação para estados industriais. Por fim, discorreu-se sobre o perfil das trocas regionais. Essas análises contaram com horizonte temporal de 1996 a 2014 (quando possível). Com os resultados obtidos, é possível concluir que a indústria de transformação do Nordeste já apresenta indícios de mudança produtiva em favor de produtos mais intensivos em tecnologia, sendo estes preponderantes para aproximar os indicadores produtivos desta região aos das regiões Sudeste e Sul, e que o aprofundamento desse processo poderá modificar a visão de que a indústria nordestina é, em geral, especializada na produção de bens de menor valor adicionado.

## **[01047] RESILIENCE AND SUSTAINABILITY: THE CASE OF EUROPEAN REGIONS**

**Paolo Rizzi** (UCattolica di Piacenza), **Paola Graziano** (U Cattolica di Piacenza)

The debate on regional resilience has expanded increasingly in recent decades, showing very different approaches: on one hand a strictly economic orientation which describes dynamics of value added or employment in period of crisis, on the other hand a gradual transition towards models of analysis and measurement more oriented to the multidimensionality and sustainability framework. Resilience is the ability to cope with a negative event, tolerating the negative impact produced by the perturbing action (Carpenter et al., 1999; Holling, 1973). More recent studies (Martin, 2012; Martin and Sunley, 2015) emphasize more explicitly the resilience of regions as the ability to adapt, recover and regenerate. In our approach, the evaluation of resilience of a system, by adopting a holistic reading of the phenomenon, involves the identification of systemic components and attributes such as openness to the external environment, availability of resources, structural dependence/independence, adaptability strategy. In this view, we have used the contributions on

the theme of the economic systems fragility and resilience (Briguglio et.al., 2009; Liou and Ding, 2004; Naudé et.al., 2009; Sotarauta, 2005; The World Bank, 2014), social factors (Bachrach and Zautra, 1985; Cutter and Finch, 2007) and environmental factors (Intergovernmental Panel on Climate Change, 2001). Finally, these components have been traced back to the descriptive categories through some logical criteria suggested by the literature on the complex adaptive systems (Resilience Alliance, 2007). At the design stage of the theoretical framework, described above, a collection of some indicators of European regions has been connected with the dimensions and with the individual themes that constitute the phenomenon investigated. We use an aggregation of the target variables, that we name territorial virtuosity. The paper aims to verify, through a study on European regions over the last decade, the scheme defined. We use a multivariate technique of dimensional reduction and then propose a system of indicators and composite indicators, which allow to get a synthetic and complete evaluation of the phenomena investigated, and a comparison among regions. The final focus of the analysis is the relationship between regional competitiveness and territorial resilience, measured by simple correlations of descriptive statistics and through econometric exercises to test the effect of the indicators of resilience on regional performance in terms of economic, social and environmental sustainability.

### **[01083] RESILIENCE IN CULTURAL AGRARIAN LANDSCAPES: APPROACHES AND METHODS**

**Catherine Dezio** (Politecnico di Milano), **Davide Marino** (U del Molise)

The paper focuses on the results of a PhD thesis which deals with the reading of Cultural Agrarian Landscape (CAL) through the interpretative key of resilience. The research consists of a deductive path led by red thread methodological optics coevolutionary. The coevolutionary approach has been recognized as a key framework for understanding change in complex social ecological systems and as a foundational concept for ecological economics. The coevolutionary approach describes as a dynamic relationship between environmental systems and social systems. Coevolution is different than mere co-dynamic change, is that at least one system is evolving or changing through variation, selection and inheritance. This leads to the necessity of identifying the set of anthropic &#8211; or cultural - and natural &#8211; biological - relationships that influence change within these relationships, determining their destiny or, in other words, whether these landscapes are conserved or lost. The need to protect local resources, and conserve the functions that come from natural capital, determines processes that can be guaranteed in a more efficient and sustainable way by local communities. The thesis uses the coevolutionary approach and starts with a critical theoretical framework of the key concepts of work, proposing categories for the study of resilience in the CAL and continues with the historical overview of the definitions and analysis of localized and comparative mapping and existing awards at international level. Then it gets to develop and propose descriptive and evaluative matrices for measuring the resilience in wine landscapes and ends with the interpretative reading of resilience in the case study sites. The case study chosen for the application depth is a network of European wine landscapes, already inscribed on the World Heritage List. The thesis also shows its bilateral dimension, theoretical and practical, coming to propose methods and tools for reading resilience in ACL. The case study landscapes have become a laboratory for the experimental phase of the research that has compared different models of action of the local community. Fundamental to the thesis were the structured interviews conducted during site visits, participation as auditor to VITOUR project, a scholarship in continuity of a National Research project on Agrarian Traditional Landscapes and a six-month of internship at UNESCO. The thesis wishes to suggest new ways of integrated and adaptive governance of the historical agricultural heritage, that is founded on continuity through enhanced resilience.

### **[01085] A EFICÁCIA DA COMUNICAÇÃO ORGANIZACIONAL: ESTUDO APLICADO À ASSOCIAÇÃO EMPRESARIAL AIRV**

**Joaquim Antunes** (Instituto Politécnico de Viseu), **Samuel Barros** (Instituto Politécnico de Viseu), **Ana Pinto** (Instituto Politécnico de Viseu)

Assiste-se, atualmente, a uma grande competitividade empresarial, obrigando os empresários a adaptarem-se a uma nova realidade, de modo a assegurar a sua permanência no mercado. Mudanças comportamentais dos empresários e modernas formas de gestão tornaram-se indispensáveis para a garantia de um futuro próspero para os seus negócios. Mas, o papel das associações empresariais acaba também por ter uma função essencial no dinamismo das organizações de uma dada região. Estas associações têm como objetivo defender os interesses das empresas associadas e proporcionar-lhes serviços que potenciem a sua competitividade. Contudo, as associações empresariais precisam de ser ágeis conforme exige o mercado e mudar também seu perfil e forma de atuação, tornando-se, de facto, entidades articuladoras e prestadoras de serviços para os seus associados. As associações empresariais, à semelhança de outras organizações, preocupam-se, cada vez mais, com a comunicação. Esta assume um papel de extrema importância, funcionando como elo de ligação entre a associação empresarial e o seu target - os seus associados. Com este estudo pretende-se perceber a forma como a comunicação organizacional é encarada e tratada nas associações empresariais, mais em pormenor, na Associação Empresarial da Região de Viseu – AIRV. Procura-se conhecer as estratégias de comunicação utilizadas pela AIRV na transmissão da sua mensagem e se, efetivamente, essa mensagem chega eficazmente ao seu target. É objetivo também analisar que tipo de relação existe entre o associado e a AIRV. A metodologia de investigação aplicada assentou numa base teórica onde se abordou o conceito de comunicação e os paradigmas teóricos que o envolvem, reconhecendo a sua importância no meio empresarial, complementada com um estudo empírico, realizado através de entrevista e inquérito aplicado aos associados da AIRV. Em termos de resultados globais, os associados consideram que a AIRV representa corretamente os seus interesses, sendo que a comunicação entre ambos é eficaz. Conclui-se que a relação entre as empresas e a AIRV é, de um modo geral, positiva e de proximidade entre ambas, que convém fortalecer.

### **[01119] RED: EMERGING RISKS OF SUSTAINABLE MOBILITIES**

**Thierry Saint-Gérand** (U de Caen Normandie), **Mohand Medjkane** (U. de Caen Normandie), **Hélène REIGNER** (Institut d'Urbanisme et d'Aménagement Régional), **Marie-Claude Montel** (Laboratoire LMA IFSTTAR Salon de Provence), **Eliane Propeck** (U de Strasbourg)

All around EuroMediterranean sea, more and more urban zones increase and intensify. Thus, many urban stakeholders attempt to reshape the circulation systems in aim to limit impact upon energy and ecology cost. To reduce car traffic, limitations, barriers, land management programs, and centre town avoiding dispositions are settled under the virtuous flag of sustainable mobilities promotion.

If such measures look acceptable because this aspect of global change occurs really worrying impacts, questions can be asked upon their undesired, even unthought, effects: new types of risks raise from inconsistencies, or sometimes blackouted orientations in public policies. Thus, certain spaces, when suited for sustainable purpose, become difficult to understand for users, and new road accidents types appear. For instance, in bus corridors, or in case of tramway /pedestrian percussions, or when car entry restrictions correlatively increase motor-cycle and bikes circulation and multiply risky situations, despite efforts to manage appropriate lanes. "Green sectors" and "quiet sectors", too, developed in centre town strengthen building speculation and contribute to selection and social segregation inside urban zones. Beside the risk dimension, that research experiment a new operative concept in territorial diagnosis: Spatial Ergonomy. So, this complementary issue tries to qualify and evaluate the effect of sustainable public policies on the global availability a territory offers to it's different kinds of users (inhabitants, companies and local stakeholders) upon their proper needs. Such issues are explored in a French Governmental ANR trans-disciplinarian Program: RED. Researchers (geographers, politists, economists, sociologists, statisticians, urbanists...) and technical urban services collaborate around the conception and use of a collaborative Territorial Information System (GIS based). The basal hypothesis considers the circulation system as spatialized socio-technical complex system. Thus it's features (accident patterns, flows, traffics, densities...) are assumed as aspects of varying numerous interactions, feedbacks and regulations loops, working at different scales: thematic phenomena, space, time. Settled in Lille, Caen, Marseille, the case-studies use harmonized GIS methodology in aim to deliver comparable informations."

## 13:00-15:00 | Special Sessions III

### SS04 ENTREPRENEURSHIP IN SUSTAINABLE AND CREATIVE TERRITORIES

Chair: José Santos

Location: ROOM 1

#### [01017] MODÈLE ÉCONOMIQUE POUR LA PRODUCTION DE BIOMASSE ÉNERGÉTIQUE À PARTIR DE LA PLANTE ALFA AU MAROC ORIENTAL

Joel Poustis (HEXABIO SARL)

La création de nouveaux marchés de Bio Énergie et plus particulièrement ceux concernant la biomasse comme énergie renouvelable au Maroc, aura pour but de palier au manque d'énergie primaire et pourra se substituer au marché de Bois de Feu traditionnels dont l'usage non contrôlé a eu pour conséquences une déforestation accrue et une extension des zones de désertification. Il existe dans la Région de l'Oriental une ressource naturelle, la plante ALFA qui peut être valorisée comme source d'énergie si on la transforme en briquettes de combustible. Le projet ALFA concerne un potentiel économique évalué à plus de 150 000 tonnes par an de la matière ALFA pour autant que des mesures agricoles pour l'amélioration du rendement de cette culture soient prises en considération. La production des briquettes d'alfa est basée sur une technologie simple et fiable. Les briquettes compressées d'alfa sont définies par les normes DIN et pourront alimenter les chaufferies, les hammams et les cimenteries qui sont à proximité de la zone étudiée. L'auteur propose un modèle économique équilibré mais dont l'application nécessite la prise en charge du projet par un entrepreneur qui sera manager les potentialités des ressources et de la population locale pour rendre pérenne cette nouvelle activité agro-industrielle dans la filière énergétique.

#### [01019] FINANCING LOCAL DEVELOPMENT THROUGH CROWDFUNDING: AN EMPIRICAL ANALYSIS OF SOCIAL PROJECTS IN PORTUGAL

José Santos (Politécnico do Porto - ISCAP), Susana Bernardino (Instituto Politécnico do Porto), José Cadima Ribeiro (U of Minho)

Crowdfunding (CF) is an increasingly attractive source to fund social projects. However, to our best knowledge, the study of CF for social purposes has remained largely unexplored in the literature. This research envisages a detailed examination of the role of CF on the early-stage of the social projects at regional level. By comparing the characteristics of the projects available in the Portuguese Social Stock Exchange (PSSE) platform with others that did not use this source of financial support, we explore its role on regional development. The results we got show that, in most cases, both PSSE and Non-Governmental Organizations projects complemented the services offered by the State or by the private sector. Furthermore, about a quarter of the projects present in PSSE operated in areas that were not being addressed neither by the services offered by the State nor by the ones of the private sector. The results attained show that more recent social ventures have a greater propensity to use PSSE. The same is find in those organizations which work closely with the target audience. We also observed that the use of PSSE was correlated with the geographical scope of the Social Venture. The circumstance of having the social organization acting at a local or regional level seems to be strongly associated with the possibility of using social crowdfunding for financing social projects.

#### [01037] L'ENTREPRENEURIAT SOCIAL VECTEUR CLÉ DU DÉVELOPPEMENT TERRITORIAL DURABLE, QU'EN EST-IL AU MAROC?

Oumhani Eddelani (FSJES - USMBA), Abdellatif Khattabi (ENFI)

En cette ère historique de l'évolution des économies aussi bien développées qu'en voie de l'être, un nouveau contexte de la création des richesses se dessine. La globalisation exige des alternatives face aux modes de pilotage fonctionnalistes et réglementaires des territoires et des autres nids de création d'opportunité. Le dit contexte est alors celui de recomposition des services de l'Etat, des réformes territoriales et d'une sorte de contraction des ressources dans la sphère publique. Et le privé (agissant sous concurrence à couteaux tirés) et le public (aux enjeux divers) laissent du blanc en termes de production et de distribution de biens et services. Potentiellement fragilisées de part et d'autre, l'ingénierie des territoires et l'intelligence économique sont amenées à croiser leurs champs de compétences pour innover davantage aussi bien économiquement que socialement. D'où l'importance de l'entrepreneuriat social surtout face à l'actuelle crise multiforme. En rappelant que cette variante d'entrepreneuriat reste encore un néologisme à contours confus (périmètre en cours de définition) et aux approches diverses, le présent papier interrogera l'entrepreneuriat social au



Maroc. De quoi parle t- on alors au juste? Quelle en la relation avec le développement territorial pris comme foisonnement d'initiatives ? Quelles particularités, quels apports et quels enjeux pour l'économie marocaine?

### **[01043] INOVAÇÃO TERRITORIAL, SOCIAL VENTURES E DESENVOLVIMENTO LOCAL: UM ESTUDO DE CASO EXPLORATÓRIO**

**José Santos** (Politécnico do Porto - ISCAP), Susana Bernardino (Instituto Politécnico do Porto)

Social innovation is recognized as an important driver of growth and social value creation. Social innovative strategies are often pursued at the local level, by (social) organizations which have a more comprehensive knowledge of the complex social problems that a specific community is facing. The objective of the present study is to analyse the extent to which innovative social ventures are able to contribute to local development. By means of a qualitative approach, based on the case study method, we attempt to illustrate the innovative strategies conceived on the ground by a social venture specifically created to foster the local development of its inhabitants. The results shows that social innovation is a viable strategy to revitalize the economic growth of a region, through the creation of local employment on the basis of village's traditional activities that are redefined in a new and competitive way. However, to be successful the strategy demands the deep knowledge of existing social problems as well as the availability of endogenous local resources and capabilities that could be used by social entrepreneurs. Social innovation ensures that local development and social cohesion are achieved in a sustainable way, at the same time that cultural and environmental heritage are also preserved.

### **[01124] A COGNITIVE APPROACH TO ENTREPRENEURSHIP: A FACTORIAL ANALYSIS TO GEM EMPIRICAL EVIDENCE**

**Vitor Braga** (ESTGF-IPP; CIICESI), Luisa Ferreira (ESTGF-IPP; CIICESI), Aldina Correia (ESTGF-IPP; CIICESI), Alexandra Braga (ESTGF-IPP; CIICESI)

A substantial part of entrepreneurship is associated to cognitive, learning, and knowledge issues. The cognitive aspect of entrepreneurship is highly associated to the (future) entrepreneurs' view of the world, which influence their mental models, and therefore, their business models and decision making skills. The aim of our study is to explore the potential existence of a cognitive divergence (knowledge-related divergences) among key actors in what relates to the structural conditions of entrepreneurship. I.e. this study attempts to explore if specialists on entrepreneurship display divergent perceptions about the government supporting schemes. In addition, it also aims to explore which are the areas in which such perceptions converge and diverge. This study consists of conducting a factorial statistical analysis on the Global Entrepreneurship Motor 2011 database. Through the factor analysis there are grouped 23 variables (survey questions) on 4 factors. Factor 1 agglomerates the existence of issues and perception of opportunities to start a new business. In factor 2 variables concerning the influence of social and cultural norms are included. Relatively the third factor one can find variables relating to the sufficiency or insufficiency of financial support for creation of new businesses. Finally the last factor, classified as "Market opening" encompasses issues related to market developments.

## **SS05.2 CULTURAL TOURISM AND REGIONAL DEVELOPMENT**

**Chair:** José Cadima Ribeiro

**Location:** ROOM 2

### **[01028] PERFIL DOS VISITANTES E PERCEÇÕES DO DESTINO GUIMARÃES ANTES E APÓS A CEC 2012**

**José Cadima Ribeiro** (U of Minho), Paula Remoaldo (U of Minho), Laurentina Vareiro (Instituto Politécnico do Cávado e do Ave), Vitor Marques (U of Minho)

As Capitais Europeias da Cultura (CEC) são o projeto cultural colaborativo mais ambicioso, em termos de escala, que se realiza na Europa. Em 2012, pela primeira vez em Portugal, uma cidade média recebeu o título de Capital Europeia da Cultura. Guimarães foi a cidade eleita. Três anos após a realização da CEC 2012, importa aferir o que mudou em termos do perfil do visitante e percepção deste dos atributos da cidade. A essa luz, a presente investigação tem como principais objetivos aferir a evolução do perfil dos visitantes, detetar as principais alterações ocorridas nos atributos percebidos da cidade entre 2010/2011 (antes do megaevento) e 2015 (depois do megaevento) e contribuir para uma melhor identificação do posicionamento atual do destino, na perspetiva do visitante. Optou-se por usar fontes primárias, alicerçadas na realização de inquéritos aos visitantes de Guimarães. Em matéria de tratamento analítico, fez-se uso de métodos estatísticos que permitem evidenciar a semelhança ou diferença dos perfis dos visitantes e das percepções dos atributos do destino mantidas por estes no horizonte temporal tratado. A nível de resultados obtidos, constatou-se uma alteração do perfil do visitante do destino Guimarães (maior equilíbrio em termos de homens e mulheres; descida dos inquiridos com idade compreendida entre os 0 e os 25 anos e um aumento dos inquiridos entre os 46 e os 65 anos; e aumento dos visitantes com habilitações académicas mais baixas) e uma evolução notória dos atributos percebidos da cidade. Crê-se que os resultados empíricos a que se chegou são informação que os operadores turísticos e, sobretudo, pelos responsáveis pelo planeamento e gestão turística da cidade deveriam ter em devido conta.

### **[01035] TYPOLOGIE ET EVALUATION DES PAYSAGES DE LA VALLEE D'OURIKA (MARRAKECH, MAROC) EN VUE D'UN AMENAGEMENT ECOTOURISTIQUE**

**Mostafa Lamrani-Alaoui** (ENFI), Abdellatif Khattabi (ENFI), Ramaralofy Tsilavina (ENFI)

La perception des paysages offerte au regard de l'observateur n'est que la facette facilement compréhensible mais elle reste toujours universelle et partagée avec tout le monde. Cette particularité de la perception visuelle permet de mettre au point des approches moins subjectives pour organiser les appréciations par rapport à la relation entre observateur et paysage observé. Si cette fréquentation dépasse les limites de la capacité de charge du territoire ou bien elle n'est pas régulée et planifiée, elle peut affecter négativement les appréciations des paysages en dépit de leurs qualité et potentiel d'attraction. C'est dans cet esprit de planification raisonnée basée sur

une connaissance des potentialités et des limites du territoire que s'inscrit la présente étude en vue de formuler des recommandations d'aménagement écotouristique et d'organisation de l'usage public. La vallée d'Ourika proprement dite et la vallée d'Oukaimden sont les deux sites où une trentaine de points d'observations constitue le nombre d'échantillons d'observation et d'évaluation de la perception des paysages offerts afin de les caractériser, typifier et évaluer directement et indirectement moyennant des fiches d'évaluation préétablies. A partir de chaque point d'observation, le bassin de visibilité a été délimité et les paysages perçus ont été évalués moyennant des fiches d'évaluation indirecte. La typologie des paysages nous a permis d'identifier des paysages naturels, des paysages semi-naturels agroforestiers et des paysages ruraux. En termes de qualité visuelle, la vallée de l'Ourika l'emporte sur celle de l'Oukaimden par sa qualité intrinsèque et par la fréquentation printanière et estivale alors que pendant la période hivernale elle cède la place à celle d'Oukaimden ce qui témoigne de la pression potentielle sur le territoire durant toute l'année. Afin de valoriser les potentialités paysagères offertes aux visiteurs, une sélection de 15 points d'observation a été proposée avec des mesures d'aménagement et/ou d'équipements.

## **[01104] MODELAÇÃO DE MOTIVAÇÕES DE VISITA ASSOCIADAS À ESCOLHA DE UM DESTINO TURÍSTICO CULTURAL: O CASO DE ÉVORA, CIDADE PATRIMÓNIO DA HUMANIDADE**

**Maria do Rosário Borges** (U de Évora), **Noemi Marujo** (U de Évora), **Jaime Serra** (U de Évora)

O turismo cultural é um domínio que permite múltiplas abordagens de investigação, cada uma com a sua importância para compreender o contexto dinâmico da sua evolução. O objetivo do presente artigo é identificar as motivações do visitante do Centro Histórico de Évora, classificado como Património Mundial da UNESCO desde 1986. A análise das motivações é feita com base no perfil sociodemográfico, nas razões de visita e no grau de importância dos atributos do destino. Os dados primários foram recolhidos através da aplicação de um questionário aos visitantes da cidade. Como método foi adotada a Análise de Componentes Principais (ACP), que se identifica como uma técnica de análise exploratória multivariada que permite transformar um conjunto de variáveis correlacionadas num conjunto menor de variáveis independentes (Maroco, 2014). A aplicação da ACP no artigo pretende identificar fatores que explicam a decisão de viajar para Évora, bem como identificar os atributos do destino aos quais os visitantes conferiram um maior grau de importância. Como resultado procurou-se identificar os fatores push (motivos) e pull (atributos), sugeridos por Dann (1977) e Crompton (1979) que melhor descrevem o perfil do visitante do destino em análise. O modelo de ACP determinado, identifica dois fatores distintos, revelando um fator que apresenta uma concentração de vários atributos relacionados com a componente física do destino. Outro fator identificado está associado ao facto do Centro Histórico de Évora estar classificado pela UNESCO. O carácter exploratório do estudo ainda não permite identificar perfis que representam estabelecer uma extrapolação de características e fatores de decisão no universo de visitantes da cidade de Évora, contudo, os resultados preliminares sugerem a emergência de segmentos de mercado distintos. Para além de diferenças no âmbito do perfis sociodemográficos, motivos de visita relacionados com a fuga à rotina e estar com a família, parecem contrapor-se a motivos relacionados com o perfil padrão do turista cultural. No seguimento dos resultados identificados o artigo apresenta um conjunto de sugestões dirigidas aos atores locais e regionais do turismo.

## **[01118] O QUE LEVA AS PESSOAS A VISITAR A REGIÃO DO DOURO**

**Adriano Costa** (Instituto Politécnico da Guarda), **Joaquim Antunes** (Instituto Politécnico de Viseu)

Para os países e em particular para os destinos turísticos é importante saber o que leva as pessoas a esse destino e que o destino tem para oferecer aos turistas. Assim, o sucesso do marketing dos destinos turísticos depende muito do conhecimento das motivações de viagem dos turistas, e das razões que levam a que o mesmo visite uma região em detrimento de outra. Este estudo adotou um modelo baseado nas motivações push e pull, como ferramenta concetual. Com a pouca informação disponível a respeito das pessoas que visitam o Douro, nomeadamente no que diz respeito aos factores motivacionais, procurou-se fazer um levantamento exaustivo para identificar os mesmos. Deste modo, foram feitas entrevistas exploratórias, uma revisão bibliográfica em termos de motivações push e pull e de seguida foi aplicado um inquérito para identificar as principais motivações destes turistas. Os turistas identificaram diferentes tipos de motivações com diferentes pesos e influencia no seu comportamento. Estes resultados podem ter implicações importantes no marketing da região do Douro, especialmente na identificação das motivações e consequente segmentação de mercados, na criação de pacotes turísticos, na promoção do destino, bem como nas decisões de desenvolvimento que se possa adotar para o mesmo.

## **SS10.2 ADAPTING TO CLIMATE CHANGE THROUGH IMPROVED WATERSHED MANAGEMENT AND PAYMENT FOR ENVIRONMENTAL SERVICES**

**Chair:** Benchakroun Faiçal

**Location:** ROOM 3

## **[01054] CONCEPTION ET RÉALISATION D'UN SYSTÈME D'AIDE À LA DÉCISION POUR UNE GESTION INTÉGRÉE DES RESSOURCES EN EAU DANS LE BASSIN VERSANT DE TENSIFT**

**Said Lahssini** (ENFI), **Hicham Mharzi Alaoui** (IAV Hassan II, HCEFLCD), **Anass Nabaha** (HCEFLCD), **Abdellatif Khattabi** (ENFI)

Le Maroc a atteint le seuil critique d'exploitation de ses ressources hydriques de surface (Roy et al., 2005) et il est considéré présentant un risque extrême de stress hydrique (WWRI, 2014) notamment avec les changements actuels que connaît le climat. Soucieux de cette problématique, les pouvoirs publics avaient mis en place une panoplie d'outils (stratégique: PNABV en 1998, réglementaire: loi sur l'eau, et opérationnel) pour une gestion intégrée des ressources en eau. Si la gestion de l'eau est de nature multidisciplinaire faisant valoir une multiplicité d'acteurs aux intérêts forts divergents, elle nécessite et mobilise une énorme masse d'information de formes et de natures très différentes qui ne sont pas faciles à trouver et/ou à exploiter. Pour palier cette contrainte, le présent travail vise à développer un système d'aide à la décision (SAD) permettant aux acteurs du bassin versant de Tensift de partager les données relatives à la gestion des ressources en eau et d'éclairer leurs décisions en la matière dans une perspective d'assurer la bonne gouvernance et la gestion durable des ressources en eau. Le SAD, à travers l'implémentation des standards d'interopérabilité et de partage de données conformes aux normes internationales en vigueur (ISO, OGC), vise à offrir aux différents acteurs des services geo-référencés et des informations utiles et ce de manière interactive, simple et conviviale. La conception du SAD a consisté en la définition du contour du système et en

l'identification des acteurs, des types de données mobilisées et des procédures sous-jacentes à la production, transfert et exploitation de données spatiales. L'implémentation a été réalisée dans un environnement open source. Elle est basée sur une architecture ouverte et orientée services qui implémente les standards OGC (Web Map Service: WMS, Web Feature Service: WFS, Catalog Web Service: CSW). La solution permet ainsi d'intégrer des composants SOS et de gérer des droits spatiaux (GeoDRM). Les fonctionnalités du prototype développé peuvent facilement être étendues pour prendre en compte d'autres préoccupations des acteurs. Les premiers résultats issus du test montrent que ce SAD permet aux acteurs de constituer, partager et disposer de données se rapportant aussi bien aux infrastructures, aux ressources, à l'aménagement et à la structuration de l'espace ainsi qu'à la planification et à la gestion des risques inhérents aux événements extrêmes. Le SAD constitue ainsi un outil pour une gestion intégrée et durable de cette ressource et un moyen de bonne gouvernance permettant d'éclairer les décisions des acteurs.

## **[01056] EVALUATION DES SERVICES DE RÉCRÉATION DANS LA VALLÉE DE L'OURIKA ET LEUR VULNÉRABILITÉ AUX ALÉAS DES INONDATIONS**

Omar El Malki (HCEFLCD), Abdellatif Khattabi (ENFI), **Said Hajib** (Centre de Recherche Forestière)

Située à l'une des entrées du parc national de Toubkal, la vallée de l'Ourika constitue une attraction touristique en raison de ses valeurs paysagères et culturelles. En effet, le contraste entre les vallées étroites et les reliefs escarpés offre un paysage d'une valeur indéniablement exceptionnelle. Ce site est visité par plus de 8000 personnes par jour, essentiellement durant les périodes de printemps et d'été. Cette fréquentation peu contrôlée exerce une pression sur le milieu naturel déjà soumis à des aléas climatiques extrêmes (crues et inondations). La nécessité de concilier la préservation de la nature et son utilisation par une activité touristique ou de récréation soulèvent des questionnements fondamentaux sur la vulnérabilité du milieu naturel et des actifs artificiels exposés aux différentes pressions anthropiques exacerbées par ces aléas climatiques extrêmes. A cet égard, les réflexions renvoient à la notion de la capacité de charge touristique de la vallée qui reste sur le plan pratique très difficile à définir et sur le renforcement de la résilience des écosystèmes naturels et des communautés concernées. L'évaluation de la fréquentation (besoins et perceptions de visiteurs, services et infrastructures disponibles, contraintes et risques, etc.) est une condition préalable à la mise en place d'une stratégie de gestion éclairée prenant en considération à la fois le bien être des visiteurs et les impératifs de conservation des éléments et services environnementaux. Ce travail, réalisé dans le cadre du projet GIREPSE ambitionne de répondre à ces questionnements en analysant la fréquentation touristique et récréative, ses retombées économiques, les impacts environnementaux qui en résultant ainsi que les risques d'inondation auxquels les actifs bâtis sont exposés. La méthodologie adoptée consiste en l'exploitation des données secondaires, l'observation, des entretiens semi structurés et des enquêtes par questionnaire et l'usage des outils cartographiques pour spatialiser les circuits fréquentés et les actifs artificiels à risque d'inondation. L'étude qui s'est étalée sur une année (fin 2014-fin 2015) a dressé un état des lieux sur les composantes environnementales et les structures touristiques ainsi que leur exposition au risque et a défini les besoins et perceptions des visiteurs. Les résultats obtenus ont permis de dégager des éléments de base pour l'élaboration d'une stratégie de développement d'un tourisme durable dans la vallée et de déterminer des indicateurs ayant pour objectifs de faciliter aux gestionnaires de l'espace le suivi de la fréquentation touristique et mesurer les niveaux de capacité du site.

## **[01110] THE HYDRAULIC SPACE OF THE CONCA D'ORO OF PALERMO AS A PARADIGM OF THE MEDITERRANEAN WATER SENSITIVE CITY.**

**Lucio Pettine** (Sapienza U), Giuseppe Barbera (U of Palermo, Dept. SAF), Francesca Lotta (U of Palermo, Dept. SAF), Lorenzo Nofroni (Sapienza U, Dept. DIAP), Serena Savelli (U of Palermo, Dept. SAF)

This paper submit an analytical reading on gardens Traditional Agricultural Landscape (TAL) of Conca d'Oro and, in wider terms, on Conca d'Oro landscape in light of Water Sensitive Urban Design (WSUD) paradigm. The orchards TAL on Palermo periurban countryside follows the Arab conception of hydraulic space. The concept of Hydraulic space combines several technologies to achieve the best use of water resources by differentiating agricultural productions in time and space and by connecting different functions (hydraulic, climatic and aesthetic) in a homogeneous system (Barbera, 2004). This conception of space extends to the whole Conca d'Oro across the countryside to the heart of the historical town to the intimate domestic space in the end. During the Norman age the Zisa source used to refresh and embellish the interior of the castle before water slides towards the gardens; on the surface of Fawara-Maredolce lake "citrus fruits smiled to fish" as well as in the other agdal; quanat supplied water to the old town. Water was the fundamental matrix and the systemic element underlining to the whole landscape design anywhere. Water and management of the urban water cycle are the higher-level issues in WSUD emerging paradigm too. Water is superordinate and in keeping with all processes of urban planning and design in order to overturn the urbanistic conception of "forgetfulness waters" emphasizing its perception. WSUD is a land planning and design approach which integrates the urban water cycle, including stormwater, groundwater, wastewater management and water supply, into urban design to minimise environmental degradation and to improve aesthetic and recreational appeal (Wong, Lloyd et al., 2002). Nowadays there are many aspects that make the Arab-Norman's Palermo a case study of a precursor water sensitive city. Likewise there are many reasons to assume its landscape maid of citrus gardens as a WSUD device for the Mediterranean environment; his continuous flow of water chains through terraces, gebbie, vattali and saje (dialectal arabisms) the Mediterranean garden TAL can be taken as emblematic paradigm of aesthetic and perceptual WSUD instances. In a city that taught to Europe the notion of hydraulic space, as Palermo did before, ancient streams run piped or dammed. Due to coastalization and thickening the city is in competition for water with neighbouring agricultural systems. Moreover in a widely impervious city surrounded by steep mountains last piece of Mediterranean garden is threatened by the agricultural crisis and insensitive to water and beauty urbanization.

## **[01114] TUDE DE LA SENSIBILITÉ À L'ÉROSION HYDRIQUE BASSIN VERSANT D'OURIKA (HAUT ATLAS, MAROC)**

**Asmae Nouira** (CNESTEN), Abdellatif Khattabi (ENFI), Modeste Meliho (Scientific Institute of Rabat)

Les écosystèmes du bassin versant d'Ourika, un sous bassin du grand bassin de Tensift qui se situe sur le versant nord-ouest du Haut Atlas de Marrakech, ont subi au cours de leur histoire, d'importants changements dans le temps et dans l'espace sous l'action de plusieurs facteurs dont notamment les facteurs anthropiques et les contraintes écologiques. L'objectif est d'étudier la susceptibilité du

bassin à l'érosion hydrique par la méthode PAP/CAR et de quantifier les pertes en sols à l'aide du radioélément Cs-37. Les résultats de l'étude de la susceptibilité à l'érosion révèle que 75% du bassin versant est d'une sensibilité à l'érosion élevée à très élevée. Une proportion de 50% de la superficie du bassin est d'une sensibilité élevée à l'érosion et 25% d'une susceptibilité très élevée à l'érosion. Ces zones concernent les terrains à fortes pentes, à cultures ou matorrals qui possèdent soit un couvert végétal herbacé ou dégradé, avec des labours sur des terres en pente et à formation superficielle peu résistante. Les unités moyennement sensibles à l'érosion occupent 18% de la superficie du bassin et correspondent aux affleurements à pente modérée à faible, et/ou sont occupés par un couvert végétal dense, ou des sols où les pratiques culturales sont appropriées. Par contre, les classes des sols à risque très faible (7% du bassin) sont localisées principalement au niveau des arboricultures et des forêts denses. Les zones les plus sensibles à l'érosion hydrique connaîtront les pertes les plus importantes en sols. Les terrains à fortes pentes, à cultures avec des labours en pente ou matorrals à couvert végétal dégradé, et à substrats tendres et friables enregistreront les pertes les plus importantes en sols. Par contre les pertes en sols seront faibles dans les forêts denses quel que soit la pente et le substrat. L'adoption d'une stratégie intégrée pour la gestion écologique des écosystèmes associée à des actions d'adaptation aux conditions du milieu et aux perspectives des changements climatiques permettront d'assurer la durabilité des services écosystémiques environnementaux rendus par les ressources naturelles du bassin versant de d'Ourika.

## 15:30-17:30 | Regular Sessions III

### RS05 CLIMATE CHANGE MITIGATION AND ADAPTATION

Chair: Mohamed Sinan

Location: ROOM 1

#### [01065] PERCEPTION DU CHANGEMENT CLIMATIQUE PAR LES MARINS PÊCHEURS DE MEHDIA ET BOUSSELHAM (MAROC ATLANTIQUE)

Laïla Amraoui (Climat/envir. consulting), Michel Desse (U de Nantes), Aïssa Elbouzidi (U Ibn Toufail)

Le Maroc, avec ses 3500 kilomètres de côte, est la première puissance halieutique en Afrique et dans le monde arabe. L'exploitation des ressources halieutiques contribue d'une manière significative à la richesse nationale (10% du PIB) et à l'équilibre de la balance commerciale notamment depuis les années 1970, date à partir de laquelle le secteur de la pêche a été considéré parmi les priorités des plans de développement économique du pays. Par ailleurs, si les années 1970 constituent une date importante qui a amorcé un intérêt grandissant pour ce secteur, cette décennie a été décisive sur le plan climatique de la région. Ce rôle décisif se traduit par des changements majeurs constatés au niveau des températures de surface marine, de l'acidité des eaux, de l'upwelling côtier, de la pression atmosphérique et des vents de surface soufflant parallèlement à la côte marocaine atlantique. Dans ce contexte, il convient de s'interroger sur l'impact du changement climatique sur cette filière. D'autre part, l'adaptation au changement climatique paraît comme une nécessité absolue mais elle implique une prise de conscience et une connaissance de la nature des changements climatiques tout en les distinguant des mutations d'origine sociale, sociétale et économique. Nous avons mené une enquête dans le but de mesurer la perception des marins pêcheurs vis-à-vis des changements subis par le milieu littoral et par la pêche. Cette enquête a été réalisée dans les trois ports du Gharb atlantique (deux à Mehdiya et un à Bousselham). L'objectif de l'enquête était d'aborder les changements qui touchent l'environnement, les captures (espèces et tonnages), les données du climat et l'état de la mer, sans utiliser le terme de changement climatique qui risquerait de biaiser les réponses. Il ne s'agit donc pas d'évaluer la réalité objective du changement climatique, mais l'impression du changement ou au contraire de stabilité qui est ressenti par les pêcheurs marins. Les résultats de l'enquête sont ensuite mis en parallèle avec les observations climatologiques et océanographiques de la région, pour examiner dans quelle mesure, la perception du changement climatique, est confirmée ou infirmée par les faits réels. Cette étude consacre la dernière partie aux mesures d'adaptation entreprises par les marins-pêcheurs. L'enquête révèle que 42% d'entre eux comptent modifier leurs habitudes de conservation du poisson, que 77,5% vont modifier leurs calendriers de pêche et ajuster leurs zones d'intervention, et que 70% utilisent déjà leur moteur différemment...

#### [01115] PARAMETERS REGIONALIZATION OF TEMPERATURE INTENSITIES, DURATION, FREQUENCY RELATIONSHIPS

Hasnaoui Moulay Driss (Ministère Délégué chargé de l'Eau), Driss Ouazar (EMI, U Mohammed V), Ahmed Bouziane (EMI-LASH, U Mohammed V), Serhir Najat (EHTP – Casablanca), Arif Hayat (DMN)

Within the framework of FACE project sponsored by IDRC, some adaptations to climate changes aspects are discussed. Emphasis on parameters regionalisation is particularly discussed that permit the knowledge of heat and cold waves. The knowledge of extreme temperatures is of extreme importance for decision making in various areas for water, agriculture and health. The meteorological reanalysis models after their corrections with ground observations, today offer an opportunity to describe the acuity and seriousness of these phenomena. We have as part of this work, developed relationships between temperature intensity, duration, frequency for the region of the upper Moulouya basin and Ziz - Guir - Rhéris. To facilitate the decision making, parameters regionalization maps, probability laws and (Intensity, Duration Frequency) relation have been established. These relationships will enable each citizen to make a forecast on possible changes in temperature extremes in his area.

#### [01117] ANALYSE ET CARTOGRAPHIE DE LA VULNÉRABILITÉ AUX ÉVÉNEMENTS CLIMATIQUES EXTRÊMES ET ESTIMATION DES COÛTS DE LEURS IMPACTS DANS LES RÉGIONS MARRAKECH SAFI

Abdelaziz Babqiqi (Ministry of Environment)

La gravité des événements extrêmes se sont intensifiés au cours des dernières décennies, cette tendance devrait s'accroître dans le futur en raison du changement climatique et des changements dans l'affectation des terres et l'augmentation des établissements

humains dans les zones sujettes aux catastrophes (SREX/IPCC, 2012; AR5/IPCC, 2013 et 2014). A l'horizon 2030 les coûts additionnels en millions de dollars, dus aux changements et extrêmes climatiques au Maroc, seront de l'ordre 3000 USD pour l'agriculture et 7250 USD pour la pêche, la foresterie en sera modérément affectée avec 75 USD. L'impact sur la santé coûtera au pays plus de 1055 USD, la désertification affichera un coût de 200 USD alors que l'augmentation du niveau de la mer causera des dégâts équivalents à 1750 USD (DARA, 2012). Toutefois, la vulnérabilité socio-économique et environnementale, à ces risques climatiques, continue à entraver le développement de nos régions et l'enjeu stratégique que représente le risque climatique demeure considérable à l'échelle des territoires: En effet, en dépit des efforts du Royaume le coût total des catastrophes ne cesse d'augmenter et le Maroc éprouve des difficultés à élaborer un cadre national de GRC. Notre travail est motivé par la volonté de doter les régions d'un dispositif institutionnel permettant d'assurer le suivi de la vulnérabilité climatique et les résultats de l'action en matière d'adaptation et de dégager des conclusions et des recommandations appropriées qui permettront d'éclairer la politique publique régionale en matière de gestion des risques climatiques extrêmes. Elle constitue un prolongement du système de suivi-évaluation de la vulnérabilité et de l'adaptation au changement climatique, dont le projet pilote a été récemment testé dans les régions de Souss-Massa-Drâa et Marrakech Tensift Al Haouz. Tenant compte de ces considérations, notre travail vise à concrétiser la stratégie de proximité tracée par la Politique du Changement Climatique du Maroc (PCCM) par: L'amélioration et le renforcement de la compréhension des risques de catastrophe dans toutes leurs dimensions: caractéristiques des aléas, vulnérabilité, capacités et exposition des personnes et des biens; L'apport d'un soutien au pays pour la révision de la vision de réduction des risques de catastrophe à la lumière du Cadre de Sendai 2015-2030 pour la réduction des risques de catastrophe qui met en évidence l'importance clé de la préparation et des actions préventives pour réduire les vulnérabilités aux catastrophes et renforcer la résilience.

## **[01127] VULNERABILITE DES SECTEURS CLES DU MAROC AUX CHANGEMENTS CLIMATIQUES ET MESURES D'ADPTATION**

**Mohamed Sinan** (Ecole des Travaux Publics), Abdelaziz Belhouji, Mohamed WAKRIM

Cette communication porte sur l'évaluation de l'impact du changement climatique sur quelques secteurs socio-économiques clés du Maroc. Cette étude a été effectuée dans le cadre de la préparation de la 3ème Communication Nationale du Maroc sur le Changement Climatique pour le compte du Département de l'Environnement du Maroc et en partenariat avec le PNUD. Les résultats des différentes projections effectuées (basées sur les scénarios d'émission des gaz à effet de serre retenus par le 5ème rapport du GIEC, 2013) aux horizons 2020, 2050 et 2080 indiquent les impacts suivants à l'horizon 2080: Il y aurait une tendance globale à la hausse des températures moyennes annuelles variant entre 2 et 5°C; et une tendance globale à la baisse des cumuls annuels des précipitations variant entre 10 % et 30 %. Les projections des apports en ressources en eau effectuées au niveau des bassins des barrages Hassan Addakhil (sud-est du Maroc) et Idriss 1er (centre-nord du Maroc), basées sur les projections climatiques, ci-dessus, ont permis d'estimer une baisse des ressources en eau variant globalement entre environ 8% et 40%. L'accroissement des besoins en eau des cultures irriguées serait compris entre 7 et 12%; et la réduction des rendements des céréales serait de 10% en année normale et de 50% en année sèche. L'extension de la désertification et le déplacement des peuplements végétaux vers le Nord à la recherche de la fraîcheur et de l'humidité seront aussi observés. La submersion marine et l'érosion de la ligne de rivage, notamment pour le littoral meuble ou pourvu de côtes sableuses de faibles altitudes seront constatées. On pourra assister aussi à une menace de détérioration des ressources naturelles et des infrastructures côtières ainsi qu'à des impacts négatifs sur les activités socio-économiques du littoral. Plusieurs mesures d'adaptation ont été mises en œuvre et programmées par le Maroc pour limiter les impacts négatifs des changements climatiques sur les secteurs socio-économiques clés, notamment sur les secteurs de l'eau et de l'agriculture.

### **RS06 GREEN GROWTH IN NATURAL RESOURCES**

**Chair:** Francisco Carballo-Cruz

**Location:** ROOM 2

#### **[01020] TRANSPORT INFRASTRUCTURE AND ECONOMIC GROWTH: CASE OF TUNISIA**

**Amairia Radhia** (Faculte des Sciences Economiques et de Gestion De Sousse)

The achievement of an effective infrastructure, reliable and fair is essential for economic growth. Indeed, the transport infrastructure is essential to the prosperity of regions. To investigate the relationship between transport infrastructure and economic growth, we use regression ordinary least squares (OLS), the overall technical paper makes use of the Cobb-Douglas production and generalized to include the stock of infrastructure transport (road and rail) and the capital stock (investment in transport infrastructure) and gross domestic product. We use annual data for the period 1980-2013. The study found that the transport infrastructure and investment in transport infrastructure in Tunisia have a significant positive contribution to growth, which shows that each impact is strong and statistically significant. The Tunisian experience suggests that it is necessary to design an economic policy that will improve the transport infrastructure and to increase investments in the sector of sustainable economic growth. It is necessary to improve the existing road and rail networks.

#### **[01030] ECOLOGICAL SOLUTIONS FOR PUBLIC TRANSPORTATION IN SMART CITIES**

**Giorgio Saibene** (U of Milan), Giancarlo Manzi (U of Milan)

In the last decade new public transportation solutions have proliferated in smart cities, both for cars and bicycles. These initiatives, boosted by policy interventions, have mainly been developed in Europe at different levels of technology. The constant increase of public shared bicycle systems (PSBSs) in western cities suggests that nowadays city councils consider public bike sharing systems a serious alternative to traditional public transportation in urban areas. PSBSs can represent a solution in the hands of citizens for short journeys in highly urbanized areas. In this paper we focus on the successful example of Milan's BikeMi which is giving very positive results in terms of satisfaction for all the actors involved, i.e. the service management, city council and users. A further point of development is the introduction of large scale e-vehicle systems such as the red bicycles offered in Milan. From the available data it can be inferred that the bicycle overcome the car in central areas in terms of speed, distance travelled daily, and choice of multiple itineraries, especially during peak periods for commuting and in proximity of the main railway stations. The main bicycle tracks and hotspots are also detected revealing an imbalance between the northern and the southern part of the city, with the northern part better covered by the service.

## **[01058] SUSTAINABILITY EMPHASIZES THE FARMING WITH TREES (AGROFORESTRY)**

**Patrick Sama-Lang** (IRAD Cameroon)

Sustainability emphasizes the farming with trees (Agroforestry). This is towards regenerating multistory primary forest trends through tree crop and food crop systems. Simulating primary virgin forest ecologies by balancing enough tree crops in to farming practices is to be considered. Sustainability in the context of global changes in climate is the aim which in this paper is to identify Agroforestry patterns selectively used with bananas. Targeted is south western Cameroon in its ecological diversity to carve out in to zones based on soils and climates. Respective vegetation trends are indicators. Farming practices will be identified for respective zones, emphasizing the place of bananas and trees. Needs to increase the presence of trees and bananas will be targets, to be used in subsequent aspects towards multistory regeneration. In south western Cameroon, zones were in three major landscapes (low, mid and highland altitudes. Lowlands were richest in trees and showed much more trends towards the primary virgin forest, with farming of tree crops, roots, tubers, bananas and plantains and small ruminants in the majority. Highlands were generally grasslands like the higher latitudes because of drier conditions and with annual cereal crops like maize and cattle rearing in the majority in farming practices. The midlands were transitions and higher areas were of mountain forest, dense enough to be considered primary. Midlands had a mixture of tree crops like Robusta coffee, oil palm and cocoa. Recommended Agroforestry practices include selective felling of trees living behind non timber forest products like the bush mango (*Irvingia gabonensis*), eru (*Gnetum africanum*) and others like bitter-kola, plums and moringa (*Moringa oleifera*) for various uses with bananas (*Musa sp.*) as shade. Alley cropping with leguminous trees in hedgerows was being introduced across but most especially in higher altitudes and latitudes, including *Gliricidia* (*Gliricidia sepium*), *Calliandra*, *Senna* (*Senna spectabilis*) and *Leucaena* (*Leucaena leucocephala*). Life fences of these plants to protect farms and confine animals included species with spines like *Caesalpinia*. Bananas were introduced across the three ecologies as shade crop and once in a while enjoying semi-shading. This was especially in association with perennial crops.

## **[01122] SPATIAL COMPETITION BETWEEN LOW COST AND FULL COST CARRIERS**

**Francisco Carballo-Cruz** (U of Minho)

In recent years the level of competition among low cost and full cost carriers has considerably increased, namely in certain O/D pairs. The decrease in full cost carriers' prices and the improve in low cost carriers' service quality have intensified even more competition levels, forcing some operators to abandon some of the more competitive routes. This paper develops a theoretical competition model between heterogeneous airlines. The theoretical exercise is based on a Hotelling model within an oligopolistic framework. The heterogeneity between carriers is modelled on a spatial dimension (airport location) and on a service level dimension. The aim of this paper is to derive the Nash Equilibrium prices and how model parameters affect market shares, prices and profits. We also aim to extent the static model to a dynamic setting as a way to investigate whether one of the carriers has strategic incentives to expel the other one from the route.

## **[01123] WHAT ENCOURAGES ENTREPRENEURIAL RISK TAKING? - MULTIPLE LINEAR REGRESSION ANALYSIS APPROACH TO THE GLOBAL ENTREPRENEURSHIP MONITOR**

**Vitor Braga** (ESTGF-IPP; CIICESI), **Eliana Gonçalves** (ESTGF-IPP; CIICESI), **Aldina Correia** (ESTGF-IPP; CIICESI), **Alexandra Braga** (ESTGF-IPP; CIICESI)

Nowadays entrepreneurship represents not only a way to solve a problem, but also a means to identify an opportunity that can be used to create products and firms, and subsequently jobs, supporting the reason why this concept is entirely related with innovation, creativity, investment, risk and economic growth. However, the factors that promote entrepreneurship and the ways that entrepreneurship is managed are different, driven to discrepancies between different economies. The literature acknowledges a strong relationship between risk and entrepreneurship and, therefore, one is led to associate the national culture to the entrepreneurship levels via the attitude towards risk of the generality of individuals within a country. In line with such a debate, the aim of this paper is to discuss what factors encourage entrepreneurial risk attitudes. This paper uses data from The Global Entrepreneurship Monitor (GEM), which is an international research database that aims to observe the entrepreneurship and entrepreneur profile both globally and at an individual country level. We use Multiple Linear Regression Analysis Approach to analyse which factors encourages entrepreneurial risk taking. Our findings shows positive impacts of the national culture on encouraging creativity and emphasizing self-sufficiency, autonomy, and personal initiative on entrepreneurial risk taking.

## **RS07 MIGRATION, URBANIZATION AND SPATIAL JUSTICE**

**Chair:** Mercedes G Alvarez

**Location:** ROOM 3

## **[01006] THE IMPACT OF RAPID URBAN POPULATION GROWTH ON FOOD AND WATER SHORTAGES**

**Adebola Adedugbe** (Farmideas Nigeria)

As the global Population climbs steadily towards 9 billion, natural systems that support us all may not be able to withstand the pressure that this growth exerts. Water scarcity, land degradation and the loss of natural (ecosystem) services we all depend on, point to fundamental problems caused by unsustainable development. Urbanization has major implications for rural-urban resource allocations and the provision of ecosystem services including food and drinking water. Competition for limited resources is most severe in urban areas, which are the target zones of rural-urban migration, offer opportunities for agricultural intensification but also face a boom of informal water marketers targeting urban demands. Food and water shortages in some urban cities especially in sub Saharan Africa and Asia are an ongoing problem, and long term projections suggest that regional food production per capita is likely to diminish into the future. Food and water crises together with chronic food shortages lead to compromised human well-being, hunger and malnutrition,

posing serious challenges to governmental and non-governmental institutions; formal and informal policy and decision makers at all levels. Half of humanity now lives in cities and within two decades, nearly 60 percent of the world's people will be urban dwellers. Urban growth is the most rapid in the developing world, where cities gain an average of 5 million residents every month. The exploding urban population growth created unprecedented challenges, among which provision for water and sanitation have been the most pressing and painfully felt when lacking. Urban food and water supply will require pro-poor strategies balancing the needs of various sectors, while minimizing the negative impacts of the urban footprint, in particular, pollution. This paper provides a framework to help city leaders make informed decisions for sustainable development in their cities. It also gives a short description of the potential influence of urbanization on allocation of resources for sustainable development.

## **[01012] LOOKING BACK CRITICALLY INSIDE THE BOX TO UNDERSTAND ECO-MIGRATION OF PASTORALISTS IN THE UNENDING QUEST FOR WATER AND PASTURE THROUGH A LIVELIHOOD MIRROR**

**Herbert Kasiita** (Veterinary Practitioners Without Borders Uganda)

This paper is a literature review to throwing light on how migration by pastoralist in the face of climate change and the sustainable development agenda is the best tool for resilience and climate change mitigation. Pastoralism is a tested production system uniquely suited to dry lands for last 7,000 years [1]. Mobility enables pastoralists to inhabit areas of harsh and volatile climate and to transform seemingly unproductive 'wastelands' into productive assets. Dry lands occupy the biggest land cover in East and Horn of Africa, [3] supporting agriculture, livestock rearing, tourism and wild resource harvesting, and play a critical role in ensuring national food security. African grasslands extend to 13m km<sup>2</sup> and have vast carbon sequestration potential. Traditionally, whenever scarcity of pasture and water or disease depleted a community's livestock, it often sought to replenish numbers through raiding/rustling which increases the pace and frequency at which pastoralists move. Legislative systems in the countries of the Horn and East Africa are largely based on those of the former colonial powers where customary rights and pastoral social institutions are not recognized by law e.g. in Ethiopia, Somaliland, South Sudan [2] and Uganda. Strategies for 'modernizing' the pastoral sector, such as allocating parcels of land and controlling stocking rates, increasing off-take for markets and providing in-situ services like water, and veterinary care have performed poorly. Pastoralism is the best way to turn dry waste lands into meat and white gold, let us look back into the box and appreciate how pastoral communities have evolved and employ a 'freedom' to take action approach and allow them to choose either to remain in pastoralism, or to diversify their livelihoods and ensure economic well-being and resilience to climate change [4]. References: 1. Brooks, N. (2006) 'Climate Change, Drought and Pastoralism in the Sahel' Discussion note for the World Initiative on Sustainable Pastoralism, IUCN; 2. Dyer, N. (2008) Securing Pastoralism in East and West Africa: Protecting and Promoting Livestock Mobility: Review of the Legislative and Institutional Environment Governing Livestock Mobility in East and West Africa. IIED; 3. Kirkbride, M. and R. Grahm (2008) Survival of the Fittest: Pastoralism and Climate Change in East Africa. Oxfam Briefing Paper 116, August. Oxfam International. Available at <http://www.oxfam.org>; 4. Magrath, J. (2008) 'Turning Up the Heat: Climate Change and Poverty in Uganda' E-publication for Oxfam.

## **[01096] RÉGIME FRONTALIER DANS LA MÉDITERRANÉE**

**Mercedes G Alvarez** (Abdelmalek Essadi)

Dans cette intervention nous tiendrons à analyser les nouvelles formes d'externalisation de la frontière européenne, grâce à l'étude des aspects juridiques, «procedimentals», institutionnels et idéologiques (notre point de départ sera la situation de crise qui caractérise la Politique Européenne de Voisinage dans l'actualité). Aussi, nous traiterons la nouvelle mobilité des réfugiés et demandeurs d'asile, des migrants économiques des ressortissants des pays de l'Europe du sud (l'Espagne, l'Italie et la France); des migrants des pays de l'Afrique de l'Ouest, de l'Afrique Centrale et de l'Est qui se trouvent en situation de "transit" des migrants européens qualifiés insérés dans les processus de délocalisation de la production et finalement les migrants concernés par les processus de "retour" suite à la crise économique en Europe.

# List of participants

The room code is stated for presenters and chairs mentioned in the programme.

**Abdelaziz Babqiqi**  
 Ministry of Environment  
 Morocco

1117 Tue\_15:30-17:30\_Room 1

**Abdellatif Khattabi**

Ecole Nationale Forestière d'Ingenieurs  
 (ENFI)

1052/ Chair Mon\_13:00-15:00\_Room 3

Chair Tue\_09:00-09:45\_Main Room

**Abdelmoughit Benchad**

Ministère de l'Economie et des Finances  
 Morocco

1102 Tue\_10:00-12:00\_Room 1

**Adebola Adedugbe**

Farmideas Nigeria  
 Nigeria

1006 Tue\_15:30-17:30\_Room 3

**Adriano Costa**

Instituto Politécnico da Guarda  
 Portugal

1118 Tue\_13:00-15:00\_Room 2

**Ahmed Bouziane**

EMI-LASH, U Mohammed V  
 Morocco

1115 Tue\_15:30-17:30\_Room 1

**Ahmed Ouhammou**

Faculty of Sciences Semlalia  
 Morocco

1064/ Chair Tue\_10:00-12:00\_Room 1

**Amairia Radhia**

Faculte des Sciences Economiques et de  
 Gestion De Sousse  
 Tunisia

1020 Tue\_15:30-17:30\_Room 2

**Amélia Branco**

ISEG, U de Lisboa  
 Portugal

1036 Mon\_15:30-17:30\_Room 2

**Anis Zouagui**

Centre des études nucléaires Maamora -  
 CNESTEN

Morocco

1109 Mon\_15:30-17:30\_Room 1

**Anne Casabianca**

CNRS U de Corse  
 France

1040 Tue\_10:00-12:00\_Room 1

**Asmae Nouria**

CNESTEN  
 Morocco

1114 Tue\_13:00-15:00\_Room 3

**Assia Lamzah**

National Institute for Regional and Urban  
 Planning  
 Morocco

1084 Mon\_17:30-19:00\_Room 3

**Brahim Moudoud**

FLSH, Ibnou Zohr University  
 Morocco

1067 Mon\_13:00-15:00\_Room 1

**Cássio Rolim**

UFPR  
 Brazil

1051 Mon\_17:30-19:00\_Room 2

**Catherine Dezio**

Politecnico di Milano  
 Italy

1079 Mon\_15:30-17:30\_Room 2

1083/ Chair Tue\_10:00-12:00\_Room 3

**César Pakissi**

ISCEDHuambo  
 Angola

1107 Mon\_17:30-19:00\_Room 1

**Conceição Rego**

U de Évora  
 Portugal

1099/ Chair Mon\_17:30-19:00\_Room 2

**Cristina Castro**

Instituto Politécnico de Viseu  
 Portugal

1101 Mon\_15:30-17:30\_Room 1

**Deokho Cho**

Daegu University  
 South Korea

1097/ Chair Mon\_15:30-17:30\_Room 3

**Dominique Prunetti**

U de Corse  
 France

1040 Tue\_10:00-12:00\_Room 1

**Elisabete Freire**

FA-UL  
 Portugal

1125 Mon\_17:30-19:00\_Room 3

**Fabio Mazzola**

U of Palermo  
 Italy

Chair Mon\_11:00-12:00\_Main Room

1108/ Chair Mon\_15:30-17:30\_Room 2

**Faiçal Benchakroun**

HautCommissariat aux Eaux et Forêts et à la  
 Lutte Contre la Désertification  
 Morocco

1113 Mon\_17:30-19:00\_Room 3

Chair Tue\_13:00-15:00\_Room 3

**Fatima Driouech**

DMN, Maroc  
 Morocco

1050 Mon\_13:00-15:00\_Room 3

**Francisco CarballoCruz**

U of Minho  
 Portugal

1122/ Chair Tue\_15:30-17:30\_Room 2

**Giorgio Saibene**

U of Milan  
 Italy

1030 Tue\_15:30-17:30\_Room 2

**Gonçalo Fernandes**

Instituto Politécnico da Guarda/CICS.NOVA  
 Portugal

1112 Mon\_15:30-17:30\_Room 1

1111 Mon\_13:00-15:00\_Room 1

**Harrad Asmae**

Agence de Développement Social, Asfi  
 Morocco

1128 Tue\_10:00-12:00\_Room 2

**Herbert Kasiita**

Veterinary Practitioners Without Borders  
 Uganda  
 Uganda

1012 Tue\_15:30-17:30\_Room 3

**Ishak Hbiak**

Institut National d'Aménagement et  
 d'Urbanisme  
 Morocco

1069 Mon\_17:30-19:00\_Room 3

**Jamel Ben Nasr**

Institut National Agronomique de Tunisie  
 Tunisia

1126/ Chair Mon\_15:30-17:30\_Room 1

**Jesus LopezRodriguez**

U da Coruña  
 Spain

1010 Mon\_15:30-17:30\_Room 3

**João Azevedo**

CIMO, IPB  
 Portugal

1080 Mon\_17:30-19:00\_Room 2

**João Lopes**

ISEG, U de Lisboa  
 Portugal

1036 Mon\_15:30-17:30\_Room 2

**João Policarpo Lima**

U Federal de Pernambuco  
 Brazil

1033 Tue\_10:00-12:00\_Room 3

**João Soares**

ISTUL  
 Portugal

1066 Mon\_15:30-17:30\_Room 3

1105 Mon\_17:30-19:00\_Room 1

**Joaquim Antunes**

Instituto Politécnico de Viseu  
 Portugal

1085 Tue\_10:00-12:00\_Room 3

**Joel Poustis**

HEXABIO SARL  
 France



1017 Tue\_13:00-15:00\_Room 1

**Jorge Gonçalves**

ISTUL  
Portugal  
1026/ Chair Mon\_17:30-19:00\_Room 1

**José Cadima Ribeiro**

U of Minho  
Portugal  
1028/ Chair Tue\_13:00-15:00\_Room 2

**José Luís Crespo**

FA-UL  
Portugal  
1125/ Chair Mon\_17:30-19:00\_Room 3

**José Santos**

Politécnico do Porto ISCAP  
Portugal  
1019/ 1043/ chair Tue\_13:00-15:00\_Room 1

**Laïla Amraoui**

Climat/envir. consulting  
Morocco  
1065 Tue\_15:30-17:30\_Room 1

**Leila Radhouane**

INRAT  
Tunisia  
1048 Tue\_10:00-12:00\_Room 1

**Lucio Pettine**

Sapienza university  
Italy  
1110 Tue\_13:00-15:00\_Room 3

**Marcelino Cabrera Giraldez**

European Commission Joint Research Centre  
Spain  
1025 Mon\_15:30-17:30\_Room 3

**Maria do Rosário Borges**

U of Évora  
Portugal  
1103 Mon\_13:00-15:00\_Room 1  
1104 Tue\_13:00-15:00\_Room 2

**Maria Emília Pepeka**

Instituto Superior de Ciências da Educação do Huambo  
Angola

**Matthew Lehnert**

U of Toledo  
Morocco  
1060 Mon\_15:30-17:30\_Room 2

**Mehrez Amez**

ESAK KEF TUNISIA  
Tunisia  
1042 Tue\_10:00-12:00\_Room 2

**MELIHO Modeste**

Scientific Institute of Rabat  
Morocco

1062 Mon\_13:00-15:00\_Room 3

**Mercedes G Alvarez**

Abdelmalek Essadi  
Morocco  
1096/ Chair Tue\_15:30-17:30\_Room 3

**Mohamed Sinan**

Ecole Hassania des Travaux Publics  
Morocco  
1127/ Chair Tue\_15:30-17:30\_Room 1

**Mohammed Tawfik Mouline**

Directeur Général de l'Institut Royal des Etudes Stratégiques, Rabat  
Morocco  
Keynote Speaker Mon\_11:00-12:00\_Main Room

**Mostafa LamraniAlaoui**

ENFI  
Morocco  
1035 Tue\_13:00-15:00\_Room 2

**Natasa Urbancikova**

Technical U of Kosice  
Slovak  
1034 Mon\_13:00-15:00\_Room 2

**Nicola Masotto**

U of Padua  
Italy  
1075 Mon\_13:00-15:00\_Room 2

**Oto Hudec**

Technical U of Kosice  
Slovak  
1034 Mon\_13:00-15:00\_Room 2

**Oumhani Eddelani**

FSJES USMBA  
Morocco  
1037 Tue\_13:00-15:00\_Room 1

**Oxana Klimanova**

Moscow Lomonosov SU  
Russia  
1057 Mon\_15:30-17:30\_Room 1

**Paolo Rizzi**

Università Cattolica di Piacenza  
Italy  
Chair Mon\_13:00-15:00\_Room 1  
1047 Tue\_10:00-12:00\_Room 3

**Patrick SamaLang**

IRAD Cameroon  
Cameroon  
1058 Tue\_15:30-17:30\_Room 2

**Paula Remoaldo**

Universidade do Minho  
Portugal  
1027/ 1063/ Chair Mon\_13:00-15:00\_Room 2

**Peter Nijkamp**

VU University Amsterdam  
Netherlands

Keynote Speaker Tue\_09:00-09:45\_Main Room

**Reda RIHANE**

ENFI  
Morocco  
1070 Mon\_13:00-15:00\_Room 3

**Said Hajib**

Centre de Recherche Forestière  
Morocco  
1056 Tue\_13:00-15:00\_Room 3

**Said Lahssini**

ENFI  
Morocco  
1054 Tue\_13:00-15:00\_Room 3

**Samuel Barros**

Instituto Politécnico de Viseu  
Portugal  
1101 Mon\_15:30-17:30\_Room 1

**Sara Bouarais**

ENFI  
Morocco  
1073 Mon\_13:00-15:00\_Room 3

**Siham Belhaj**

Ecole Mohammadia d'ingénieurs  
Morocco

**Sonia Mansouri**

INRAT  
Tunisia  
1048 Tue\_10:00-12:00\_Room 1

**Stella Manika**

U of Thessaly  
Greece  
1077 Mon\_15:30-17:30\_Room 3

**Thierry SaintGérand**

U de Caen Normandie  
France  
1119 Tue\_10:00-12:00\_Room 3

**Tomás Dentinho**

U of Azores  
Portugal  
1061 Mon\_17:30-19:00\_Room 1

**Virginie Moisson**

IAE REUNION  
France  
1088/ Chair Tue\_10:00-12:00\_Room 2

**Vitor Braga**

ESTGF-IPP; CIICESI  
Portugal  
1121 Mon\_15:30-17:30\_Room 2  
1124 Tue\_13:00-15:00\_Room 1  
1123 Tue\_15:30-17:30\_Room 2

**Yéndoubé Demakou**

Ministère de la planification du développement  
Togo  
1044 Tue\_10:00-12:00\_Room 1

# REVISTA PORTUGUESA DE ESTUDOS REGIONAIS/ PORTUGUESE REVIEW OF REGIONAL STUDIES

ESTUDOS  
REGIONAIS

Revista Portuguesa de Estudos Regionais



Dear Colleague,

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Revista Portuguesa de Estudos Regionais (Portuguese Review of Regional Studies), ISSN 1645-586X, is a quarterly journal published by the Portuguese Association for Regional Development (APDR).

The journal is indexed in Econlit (and associated bases: JEL on CD, e-JEL and Journal of Economic Literature), in WebQualis and in Scopus.

The main purpose of Revista Portuguesa de Estudos Regionais (RPER) is to publish the results of the most recent research in the interdisciplinary area of Regional Science, embracing regional, local and urban studies, and is currently accepting manuscripts for publication. We will be glad if you partner with the journal, by sending in your original research papers.

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We await the submission of your manuscript for publishing in our next issues.

Best regards,

J. Cadima Ribeiro

Chief Editor

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