



## Poster Session 2

### Session: Challenges and Integration

**The potential of indicator-based GIS mapping as an integrative tool for climate change risk and vulnerability assessment in complex socio-ecological systems of Africa**

R.A.G. Davies (1), S.J.E. Midgley (2) presenting; *HabitatInfo, UK (1), OneWorld, South Africa (2)*

**Sustainability... but how to assess it?**

M. Brandão (1), A. Miola (1) presenting; *European Commission, Italy (1)*

**The MONTES Consolider project and Mediterranean forests under global change: the challenge of interdisciplinary research and manager involvement**

E. Doblas-Miranda (1), J. Retana (1), F. Valladares (2) presenting; *Centre for Ecological Research and Forestry Applications, Spain (1), Spanish National Research Council, Spain (2)*

**Transdisciplinary Research in Watershed Conservation: Experiences, Lessons, and Future Directions**

C. Umetsu (1), M. Taniguchi (1), T. Watanabe (1), S. Yachi (2) presenting; *Research Institute for Humanity and Nature, Japan (1), Kyoto University, Japan (2)*

### Session: Pathways to Sustainability

**Territorial potentials for a greener economy: the European perspective**

C. Tapia (1), E. Feliu (1) presenting, I. Peña (1); *Tecnalia, Unit of Environment, Spain (1)*

### Session: 0012-2-KEY-Searching the Past

**Food security and urban resilience: lessons from historical ecology**

C. Isendahl (1), S. Barthel (2) presenting, S. Sörlin (3), P. Sinclair (1); *Uppsala University, Sweden (1), Stockholm University, Sweden (2), Royal Institute of Technology, Sweden (3)*

**Looking into the past to learn for the future: climate extremes informing climate change adaptation**

S.L. Boulter (1) presenting, J.P. Palutikof (2), A.S. Kiem (3), D.C. Verdon-Kidd (3); *Griffith University - Environmental Futures Centre/NCCARF, Australia (1), National Climate Change Adaptation Research Facility, Australia (2), The University of Newcastle, Australia (3)*

**Insular perspectives on planetary boundaries: understanding vulnerabilities and building resilience in the Pacific, Atlantic and Caribbean island communities.**

J. Cooper (1) presenting, S. Hamilton (1), T. McGovern (2), R. Valcarcel Rojas (3); *University College London, UK (1), City University of New York, USA (2), Departamento Centro Oriental de Arqueología, Cuba (3)*

**Energy gain and resource specialization: the Roman Empire and today**

C. Crumley (1) presenting, J. Tainter (2); *Stockholm University, Sweden (1), Utah State University, USA (2)*

### **Palaeoenvironmental perspectives on the complex dynamics of modern socio-ecological systems**

J.A. Dearing (1) presenting; *University of Southampton, UK (1)*

### **Extinction and survival on multi-century time-scales in the N. Atlantic**

A. Dugmore (1,2) presenting, T. McGovern (2), O. Vesteinsson (3), J. Arneborg (4), R. Streeeter (1), C. Keller (5); *University of Edinburgh, UK (1), City University of New York, USA (2), University of Iceland, Iceland (3), National Museum, Denmark (4), University of Oslo, Norway (5)*

### **Evaluating climate-vegetation feedbacks and the effect of anthropogenic land-cover change at 6000 and 250 yrs BP at the regional spatial scale – a solution for better understanding the climate system today and in the future**

M-J. Gaillard (1) presenting, R. Fyfe (2), J. Kaplan (3), E. Kjellström (4), K. Krumhardt (3), L. Marquer (1); *Linnaeus University, Sweden (1), Plymouth University, UK (2), EPFL, Lausanne, Switzerland (3), SMHI, Norrköping, Sweden (4), University of Toulouse, France (5), Lund University, Sweden (6), Tallinn University, Estonia (7)*

### **Grazing activities and biodiversity in the Pyrenean Mountains: potential insights from long-term records**

D. Galop (1) presenting, F. Mazier (1), D. Rius (1), C. Cugny (1); *GEODE UMR 5602 CNRS - University of Toulouse 2, France (1)*

### **Echoes from the Past: Global Environmental Near Misses in Retrospect**

B. GUILLAUME (1) presenting; *University of Technology of Troyes, France (1), Dartmouth College, USA (2)*

### **Modern lessons in sustainability from the ancient Maya**

C. Isendahl (4) presenting, S.R. Heckbert (1), V.L. Scarborough (2), J.D. Gunn (3); *Portland State University, USA (1), University of Cincinnati, USA (2), University of North Carolina, USA (3), Uppsala University, Sweden (4)*

### **Rio de Janeiro 1992 UN Year of Indigenous People summit & UN General Assembly 1992 - the CMPCC summit 2010 of Climate Change and Mother Earth's Rights: the long pursuit of Hopi to get their Puebloan etnoclimatology investigated**

V.A. Kallio (1) presenting; *Vice-President, Sea Research Society (marine anthropology and archeology), USA (1), Fellow, Civilizations Bridge, USA (2), Member, International Friends of Bibliotheca Alexandrina, Egypt (3), Fellow, Royal Geographical Society, UK (4), Chairman, Frozen Isthmuses Protection Campaign of the Arctic and North Atlantic Oceans, Finland (5), Fellow, The Explorers Club, USA (6)*

### **What can we learn from the past and use for the future? A tool called HYDE.**

K. Klein Goldewijk (1) presenting; *PBL Netherlands Environmental Assessment Agency, The Netherlands (1), Utrecht University, The Netherlands (2)*

### **Integrated prehistory of people and environment: linking the global scale to regional narratives**

C. Lemmen (1) presenting, A. Khan (1), K.W. Wirtz (1), D. Gronenborn (2); *Helmholtz-Zentrum Geesthacht, Germany (1), Römisch-Germanisches Zentralmuseum Mainz, Germany (2)*

### **The Significance of Material Culture: From Origins to Megacities**

W. Lucht (1,2) presenting; *Potsdam Institute for Climate Impact Research, Germany (1), Department of Geography, Humboldt University Berlin, Germany (2)*

### **Tipping the Caipirinha Teleconnection: Anthropogenic forcing of the disputed Medieval Climatic Anomaly?**

U.C. Plachetka (1) presenting, W. Stadler (1); *University of natural resources and life sciences, Austria (1)*

**Land management and biodiversity through time in upper Ribblesdale, North Yorkshire, UK: understanding the impact of traditional management.**

H. Shaw (1) presenting, I. Whyte (1); *Lancaster University, UK (1)*

**Using 20<sup>th</sup> century climate variability to assess regional vulnerability to anthropogenic climate change**

A.K. Snover (1) presenting, N.J. Mantua (1,2), J.S. Littell (1), A.F. Hamlet (1,3); *Climate Impacts Group, University of Washington, USA (1), School of Aquatic & Fishery Sciences, University of Washington, USA (2), Dept. Civil & Environmental Engineering, University of Washington, USA (3)*

**Applying traditional worldviews to contemporary farming systems: would the pressure be off?**

J. Wright (1) presenting; *Coventry University, UK (1), Garden Organic, UK (2)*

## **Session: Planetary Boundaries**

**Effect of climate on the water consumption related to biofuels production in Italy**

A. Dalla Marta (1) presenting, F. Orlando (1), M. Mancini (1), F. Natali (1), S. Orlandini (1); *University of Florence, Italy (1)*

**Estimating the CO<sub>2</sub> mitigation potential of horizontal Ground Source Heat Pumps in the UK**

R. Garcia (1,2) presenting, A. Verhoef (1,5), G. Gan (3), A. Chong (3), D. Clark (4), P.L. Vidale (2,5); *The University of Reading, Reading, UK (1), NCAS-Climate, Reading, UK (2), The University of Nottingham, Nottingham, UK (3), Centre for Ecology and Hydrology, Wallingford, UK (4), Walker Institute, The University of Reading, Reading, UK (5)*

**Freshwater ecosystems. A global perspective of service delivery for human water security**

L. Saenz-Cruz (1), C. Vörösmarty (2), T. Farrell (1), P. Green (2), I. Harrison (1) presenting, M. Honzak (1); *Conservation International, USA (1), CUNY–City University of New York, Environmental CrossRoads Initiative, USA (2)*

**Uncovering CLEWs - A new Methodology for Modelling Climate, Land Use, Energy and Water Interactions**

S. Hermann (1) presenting, H.H. Rogner (2), M. Howells (1), M. Welsch (1), C. Young (3), G. Fischer (4); *Royal Institute of Technology, Sweden (1), International Atomic Energy Agency (IAEA), Austria (2), Stockholm Environmental Institute (SEI), USA (3), International Institute for Applied Systems Analysis, Austria (4)*

**The climate penalty of clean fossil fuel energy production**

W. Junkermann (1) presenting, B. Vogel (2), M. Sutton (3); *Karlsruhe Institute of Technology, IMK-IFU, Germany (1), Karlsruhe Institute of Technology, IMK-TRO, Germany (2), Centre for Ecology and Hydrology, UK (3)*

**MUtopia: A design and simulation tool for urban precincts**

M. Arora (1), L. Aye (1), P. Christopher (1), C. Ingvarson (1), H. Malano (1) presenting, P. Mendis (1); *The University of Melbourne, Australia (1)*

**Enhancing information for solar and wind energy technology deployment in Brazil**

F. Martins (1,2) presenting, E. Pereira (1); *Brazilian Institute for Space Research, Brazil (1), Centro Universitário São Camilo, Brazil (2)*

**Carbon in the landscape: The Australian experiment**

S. McGlennon (1) presenting, J. Pittock (1,2), K. Hussey (1); *Australian National University, Australia (1), United States Studies Centre, Australia (2)*

### **Water - Energy Nexus And Urban Sustainability**

S. Nair (1) presenting, B. George (1), H.M. Malano (1), B. Nawarathna (1), M. Arora (1); *University of Melbourne, Australia (1)*

### **Responding to climate change, sustaining freshwater services, meeting energy needs: some reflections from the south**

M-B. Wehbe (1) presenting, D-S. Tello (1); *National University of Rio Cuarto, Argentina (1)*

## **Session: Soil Value**

### **Re-connecting with the Soil.**

B.C. Ball (1) presenting; *SAC, UK (1)*

### **Winners and losers in the application of sanitary and phytosanitary measures to food commodity distribution.**

R. Day (1) presenting, R. Khetarpal (2), K. Lum (3), S. Simons (1); *CAB International (CABI), Kenya (1), CAB International (CABI), India (2), CAB International (CABI), Malaysia (3)*

### **Restoring the ecological functionality of eroded terrains: lessons drawn during ten years of ecological engineering in marly gullies.**

A. Erktan (1) presenting, S. Louis (1), M. Bruciamacchie (2), F. Rey (1); *CEMAGREF-Grenoble, France (1), AgroParistech-ENGREF-Nancy, France (2)*

### **Effective Management of Soil Organic Matter for Sustainable Crop Production**

C. Ghee (1,2) presenting, E. Paterson (2), D. Robinson (1), R. Nielson (2), P. Hallett (2); *University of Aberdeen, UK (1), The James Hutton Institute, UK (2)*

### **Engineering of the soil physical environment by plant roots**

P-D. Hallett (1) presenting, K-W. Loades (1), A-G. Bengough (1,3), E. Paterson (1), P. Barre (2), J-A. Knappett (1); *The James Hutton Institute, UK (1), Geology Laboratory (CNRS-ENS), France (2), University of Dundee, UK (3)*

### **Factors affecting the use of soil conservation measures by upland farmers in the walawe river watershed in Sri Lanka.**

N. Hettiarachchi (1) presenting, H. Gunatilake (2); *Natural Resources Management Center, Sri Lanka (1), University of Peradeniya, Sri Lanka (2)*

### **The pedogenesis and regeneration of the health and nutrient dynamics of degraded soils**

W. Jehne (1) presenting; *Outcomes Australia, Australia (1)*

### **Ecological thinking for sustainable agriculture**

N. Kaneko (1) presenting; *Yokohama National University, Japan (1)*

### **A functional approach to mineral nutrients in soils – how can rock minerals fill the gap?**

D.A.C. Manning (1) presenting; *Newcastle University, UK (1)*

### **An Agro-Ecological Soil Use and Management System MicroLEIS: From Science to Practice**

M. Anaya-Romero (1), M. Muñoz-Rojas (1) presenting, D. De la Rosa (2); *Evenor-Tech, CSIC Spin-off, CSIC-IRNAS Building, Ave. Reina Mercedes 10, 41012 Sevilla, Spain, Spain (1), Instituto de Recursos Naturales y Agrobiología de Sevilla (CSIC), Avda. Reina Mercedes, 10, 41012, Sevilla, Spain, Spain (2)*

### **Benefits of soil carbon**

E. Noellemeyer (1) presenting, R. Victoria (2), D. Hill (3), E. Milne (4), H. Joosten (5), H. Black (6); *Facultad de Agronomia UNLPam, Argentina (1), CENA, Universidade Sao Paulo, Brazil (2), University of Sheffield, UK (3), Dept. of Soils and Crop Science, Colorado State University, USA (4), Institute of Botany and Landscape Ecology, University of Greifswald, Germany (5), The James Hutton Institute, Aberdeen, UK (6), The Environmental Change Institute, Oxford, UK (7), Environmental Engineering Science, University of Sheffield, UK (8)*

### **Analysis of the Effects of Climate Change on Cassava Production in Osumenyi, Nnewi South Local Government Area of Anambra State, Nigeria**

N.A. Onyekuru (1) presenting, C.U. Agbo (1), M.K. Ibrahim (2), G. Uzuegbu (1); *University of Nigeria, Nsukka,, Nigeria (1), Kogi State University, Nigeria (2)*

### **Land Management in the Pamir-Alai Mountains in Central Asia: Community Priorities and Trade-offs between Alternative Land Use and Management Practices**

N. Pachova (1) presenting, F. Renaud (1); *United Nations University Institute for Environment and Human Security, Germany (1)*

### **Climate change and forest migration in coastal USA and Canada: a soils perspective**

W. Peterman (1) presenting; *Conservation Biology Institute, USA (1)*

### **Soil erosion and the disruption of soil macronutrient cycles**

J.N. Quinton (1) presenting, G. Govers (2), K. Van Oost (3), R. Bardgett (1); *Lancaster University, UK (1), KU Leuven, Belgium (2), Université catholique de Louvain, Belgium (3)*

### **Application of organic Waste to Soil - Benefits, Risks and the Reality?**

A. Cundill (1), K. Dobbie (1), C. Erber (1), J. Shepherd (1) presenting; *Scottish Environment Protection Agency, UK (1)*

### **Sustainable Land Management: Maximizing the Value of Soil Systems**

A. Kassam (1), T. Friedrich (2), F. Shaxson (3), N. Uphoff (4) presenting; *Reading University, UK (1), Food and Agriculture Organization (FAO), Italy (2), Tropical Agriculture Association (TAA), UK (3), Cornell University, USA (4)*

### **Korea's Agricultural Paradigm Shifts during Past Six Decades Affected Soil and Water Qualities**

S-H. Yoo (1) presenting, H-M. Ro (1); *National Academy of Sciences, Republic of Korea (1), Seoul National University, Republic of Korea (2)*

### **Arbuscular mycorrhiza fungi and crop management diversity: An agroecological approach towards sustainable crop production**

E.M. Njeru (1,2) presenting, L. Avio (3), P. Barberi (1), M. Giovannetti (4); *Land Lab, Sant' Anna School of Advanced studies, P.za Martiri della Libertà 33, 56127 Pisa, Italy (1), Department of Plant and Microbial Sciences, Kenyatta University, P.O. Box 43844-00100, Nairobi, Kenya (2), Institute of Agricultural Biology and Biotechnology, UO Pisa, CNR, Via del Borghetto 80, 56124 Pisa, Italy (3), Department of Crop Plant Biology, University of Pisa, Via del Borghetto 80, 56124 Pisa, Italy (4)*

### **Climate Change in Oman: Current Knowledge and Way Forward**

A. Al-Busaidi (1) presenting, M. Ahmed (1), B. Choudri (1); *Sultan Qaboos University, Oman (1)*

### **Adaptive soil management of contaminated and degraded lands**

P.C. Abhilash (1) presenting, G.S. Singh (1); *Institute of Environment & Sustainable Development, Banaras Hindu University, Varanasi 221005, Uttar Pradesh, India (1)*

## **Harnessing plant-microbe-pollutant interactions: Implications for bioremediation of anthropogenic pollutants in a changing climate**

P.C. Abhilash (1) presenting; *Banaras Hindu University, India (1)*

## **Session: Biodiversity Monitoring**

### **The role of Earth observation in biodiversity monitoring: lessons learnt from EBONE**

F. Gerard (1) presenting, A. Allard (10), D. Bauwens (2), L. Blank (3), R.G.B. Bunce (4), Y. Carmel (3); *Centre for Ecology and Hydrology (CEH), UK (1), Research Institute for Nature and Forest (INBO), Belgium (2), Faculty of Civil and Environmental Engineering, Technion – Israel Institute of Technology, Israel (3), ALTERRA, The Netherlands (4), Joint Research Centre - Institute for Environment and Sustainability, EC-DG, Italy (5), L'institut de recherche en sciences et technologies pour l'environnement (CEMAGREF), France (6), Norwegian Institute for Nature Research (NINA), Norway (7), Institute of Landscape Ecology, Slovak Academy of Sciences (ILE-SAS), Slovakia (8), Department of Geography, The Hebrew University of Jerusalem, Israel (9), Department of forest resource management, Swedish University of Agricultural Sciences (SLU), Sweden (10), Institute of Agricultural and Environmental Sciences, Estonian University of Life Sciences, Estonia (11), Council for Scientific and Industrial Research (CSIR), South Africa (12), Israel Nature and Parks Authority (INPA), Israel (13)*

### **Interlinking Earth observation with in-situ biodiversity monitoring - EBONE approach**

L. Halada (1) presenting, F. Gerard (2), C.A. Múcher (3), A. Halabuk (1), C. Estreguil (4), L. Olsvig-Whittaker (5); *Institute of Landscape Ecology SAS, Slovakia (1), Centre for Ecology and Hydrology, UK (2), ALTERRA, The Netherlands (3), Joint Research Centre - Institute for Environment and Sustainability, EC-DG, Italy (4), Israel Nature and Parks Authority, Israel (5)*

### **Managing biodiversity observation data: the EBONE example**

B. Magagna (1), C. Estreguil (2), R. Jongman (3) presenting, J. Peterseil (1), H. Schentz (1); *Umweltbundesamt GmbH, Austria (1), Joint Research Centre, Institute for Environment and Sustainability, EC-DG, Italy (2), ALTERRA Wageningen UR, The Netherlands (3)*

### **A Correspondence Analysis between Biodiversity Hotspots and Conservation Priority Zones in Costa Rica**

B. Kohlmann (1) presenting; *EARTH University, Costa Rica (1)*

### **Bridging the communication gap between biodiversity knowledge and decision making: The Network of Knowledge approach for Europe**

B.A. Livoreil (1) presenting, A.S. Pullin (1), C. Neßhöver (2), M. Vanderwalle (2), I. Geijzendorffer (3), R.H.G. Jongman (3); *Centre for Evidence-Based Conservation - Bangor University, UK (1), Helmholtz-Zentrum fuer Umweltforschung GMBH-UFZ, Germany (2), Alterra, The Netherlands (3)*

### **Environmental stratifications as the basis for biodiversity monitoring**

M.J. Metzger (1) presenting, R. Bunce (2), D.J. Brus (2), J. Gonçalves (3), R.G.H. Jongman (1), A. Trabucco (4), R. Zomer (5); *The University of Edinburgh, UK (1), Alterra, Wageningen University and Research Centre, The Netherlands (2), CIBIO, University of Porto, Portugal (3), Katholieke Universiteit Leuven, Belgium (4), International Centre for Integrated Mountain Development, Nepal (5)*

### **Global biodiversity monitoring: filling the gaps where it counts the most.**

V. Proença (1), H.M. Pereira (1) presenting; *Centro de Biologia Ambiental - Universidade de Lisboa, Portugal (1)*

### **A habitat and biodiversity monitoring harmonised protocol: the General Habitat Categories system and habitat mapping**

P.K.D. Roche (1) presenting, R.G.H. Bunce (2), G. de Blust (3), M. Bogers (2), I.R. Geijzendorffer (2), E. Gkanatsou (4); *Mediterranean Ecology and Risk research group (EMAX), Cemagref, France (1), ALTERRA*

*Wageningen UR, The Netherlands (2), Research Institute for Nature and Forest (INBO), Belgium (3), Laboratory of Rangeland Ecology (LARE), Aristotle University of Thessaloniki, Greece (4)*

**From biodiversity monitoring to biodiversity indicators: tracking progress towards CBD goals and targets at multiple scales**

P. Bubb (1), A. Chenery (1), D. Stanwell-Smith (1), M. Walpole (1) presenting; *UNEP-WCMC, UK (1)*

**The GEOSS advantage: integrating biodiversity observations with data from climate and other domains**

M.J. Williams (1) presenting; *Group on Earth Observations (GE), Switzerland (1)*

**Global legume diversity assessment as the first step of global legume diversity assessments**

T. Yahara (1) presenting, T. Kadoya (3), N. Raes (4), A. Egan (12), T. Pennington (15), D. Faith (15); *Kyushu University, Japan (1), Chiba University, Japan (2), National Institute of Environmental Science, Japan (3), Leiden University, The Netherlands (4), Feira de Santana State University, Brazil (5), Facultad de Ciencias Agrarias, Argentina (6), Indonesian Institute of Sciences, Indonesia (7), Chinese Academy of Science, China (8), Kunming Institute of Botany, China (9), Xishuangbanna Tropical Botanical Garden, China (10), Harvard University, USA (11), East Carolina University, USA (12), Royal Botanic Gardens, Kew, UK (13), Royal Botanic Garden Edinburgh, UK (14), The Australian Museum, Australia (15)*

**Session: Challenges and Integration**

**The challenge of integration in city scale analysis: case studies in Durban and London**

R. Dawson (1,4) presenting, C. Walsh (1,4), D. Roberts (3), R. Hounsome (2); *Newcastle University, UK (1), Golders Associates, South Africa (2), eThekweni Municipality, South Africa (3), Tyndall Centre for Climate Change Research, UK (4)*

**Integration of remote sensing, biophysical and socioeconomic data for global change research**

A.M. de Sherbinin (1) presenting; *CIESIN, Columbia University, USA (1)*

**GLOBE: New tools to accelerate global integration of local knowledge**

E.C. Ellis (1) presenting; *University of Maryland, Baltimore County, USA (1)*

**Sustainable Land Management in Madagascar (SuLaMa) - What Does Inter- and Transdisciplinary Research Need to Learn?**

N.V.M. Fritz-Vietta (1) presenting; *University of Greifswald, Germany (1)*

**The integrative potential of impact assessment: examples from Canada**

K.S. Hanna (1) presenting, B. Noble (1); *Wilfrid Laurier University, Canada (1), University of Saskatchewan, Canada (2)*

**Integrating climate and energy research: the challenges and accomplishments in Kansas, USA**

J. Harrington Jr (1) presenting; *Kansas State University, USA (1)*

**Challenges in the Integration of Systems Knowledge for Governance of the Earth System**

S.I. Karlsson-Vinkhuyzen (1) presenting, A.L. Dahl (1); *Wageningen University, The Netherlands (1), International Environment Forum, Switzerland (2)*

**Integrating placed-based research on ecosystem services and greenhouse emissions driven by land management: challenges, experiences and results.**

R. Seppelt (1) presenting, A. Werntze (1); *Helmholtz Centre of Environmental Research, Department Computational Landscape Ecology, Germany (1)*

## **Integrating the social sciences and humanities in Earth System Science to address the ICSU/ISSC Grand Challenges**

D. Taylor (1) presenting; *Hofstra University, USA (1)*

## **Merging research agendas to find global patterns: elevation and latitudinal gradients of forest regeneration across Europe**

F. Valladares (1) presenting, S. García-Rabasa (1), R. Benavides (1), E. Granda (1), E. Doblas (2), J. Retana (2); *Spanish Research Council CSIC, Spain (1), Centre for Ecological Research and Forestry Applications, Spain (2)*

## **Integration models, adaptation and sustainable development: the case for the establishment of multi-institution and interdisciplinary collaboration indices.**

J. Yakah (1) presenting, C. Gordon (1), O. Sakyi-Dawson (1); *University of Ghana, Legon, Ghana (1)*

## **Tackling the challenge of carbon dioxide mitigation through biomimicry as a Small & Medium Enterprise (SME): Teachings from the European FP7 CO2SolStock R&D project**

C. Zaoui (1) presenting, G. Chapelle (1), P-J. Valayer (1); *Biomim-Greenloop nv/sa, Aalststraat 7-11, 1000, Brussels, Belgium (1)*

## **Land use and land cover dynamics in the Brazilian Amazon: understanding human-environmental interactions**

L. Soler (2) presenting, K. Kok (1), G. Câmara (2), A. Veldkamp (1); *Wageningen University, The Netherlands (1), National Institute for Space Research (INPE), Brazil (2), Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, The Netherlands (3)*

## **Session: Demographic Transition I**

### **Changing population dynamics**

S. Harper (1,2) presenting; *Royal Society, UK (1), University of Oxford, UK (2)*

### **Population, consumption and human wellbeing**

S. Harper (1,2) presenting; *Royal Society, UK (1), University of Oxford, UK (2)*

### **People and the Planet - what's missing from the Rio+20 agenda?**

S. Harper (1,2) presenting; *Royal Society, UK (1), University of Oxford, UK (2)*

### **Mind the gap: bringing sustainability into sharper focus**

E. Barry (1), M. Campbell (2), T. Dietz (3), E. Rosa (4), R. Heinberg (5), W. Ryerson (6) presenting; *Sustainable World Initiative of the Population Institute, USA (1), University of California at Berkeley and Venture Strategies, USA (2), Michigan State University, USA (3), Washington State University, USA (4), Post Carbon Institute, USA (5), Population Institute, USA (6)*

## **Session: Demographic Transition II**

### **Growing Old in a Changing Climate: Risks and Opportunities for an Ageing Population**

G. Haq (1) presenting; *Stockholm Environment Institute, UK (1), University of York, UK (2)*

### **Wildlife of the Mongolian Steppe Project: Partnership with local communities to achieve conservation outcomes**

R.P. Reading (1) presenting, S. Amgalanbaatar (2,1), J. Azua (1), S. Buyandelger (3), T. Galbaatar (2), T. Garrett (1), S. Burgess (6); *Denver Zoological Foundation, USA (1), Mongolian Academy of Sciences, Mongolia (2),*



*Mongolia National University, Mongolia (3), Denver Zoological Gardens, USA (4), Wildlife Conservation Research Unit, Oxford University, UK (5), Earthwatch, UK (6)*

## **Session: Air Pollution**

### **Integrated management of global warming gases and air pollutants in Korea: a case study and suggestions**

S-O. BAEK (1) presenting; *Yeungnam University, Republic of Korea (1)*

### **Australian ethanol-petrol blends: health and greenhouse gas impacts.**

T. Beer (1) presenting; *CAWCR, Australia (1)*

### **Sources of aerosol and black carbon in urban areas of the northern hemisphere**

C.A. Belis (1) presenting, F. Karagulian (1), E. Vignati (1), R. Van Dingenen (1), P.K. Hopke (2); *European Commission -JRC IES Unit CCAQ, Italy (1), Clarkson University - CARES, USA (2)*

### **Bridging the regional and global scales: the science and policy implications of the hemispheric transport of air pollution**

F.J. Dentener (1), T.J. Keating (2) presenting, T.F. HTAP (3); *European Commission Joint Research Centre, Ispra, Italy (1), Environmental Protection Agency, Washington, USA (2), UN Economic Commission for Europe, Geneva, Switzerland (3)*

### **The impact of climate change on global air pollution-related premature mortality**

Y. Fang (1) presenting, D. Mauzerall (1), J. Liu (1,2), A. Fiore (2,3), L. Horowitz (1,2); *Princeton University, USA (1), Geophysical Fluid Dynamics Laboratory, USA (2), Peking University, China (3), Columbia University, USA (4), Lamont Doherty Earth Observatory, USA (5)*

### **Research needs for the review of ambient air quality and National Emissions ceilings directives**

D. Fowler (1) presenting, P.S. Monks (2), M.A. Sutton (1), S. Fuzzi (3), G. Brasseur (4), B. Brunekreef (1); *CEH, UK (1), University of Leicester, UK (2), ISAC, CNR, Italy (3), Climate Services Centre, Germany (4), Univ. Utrecht, The Netherlands (5)*

### **Tools for comparing climate impacts of short- and long-lived climate forcing agents**

J. Fuglestedt (1) presenting, G. Peters (1), T. Berntsen (1,2), D. Olivé (1,2), M. Lund (1), K. Shine (3); *CICERO, Norway (1), University of Oslo, Norway (2), University of Reading, UK (3)*

### **Particulate matter, air quality and climate: lessons learned and future needs**

S. Fuzzi (1) presenting, U. Baltensperger (2), K. Karlaw (3), H. Denier van der Gon (4), E. de Saeger (5), U. Lohmann (6); *Istitute of Atmospheric Sciences and Climate, National Research Council, Bologna, Italy (1), Paul Scherrer Institute, Villigen, Switzerland (2), School of Earth and Environment, University of Leeds, UK (3), TNO Built Environment and Geosciences, Apeldoorn, The Netherlands (4), Joint Research Centre, Ispra, Italy (5), Institute for Atmospheric and Climate Science, ETH, Zurich, Switzerland (6), Department of Chemical Engineering, University of Patras, Greece (7), Department of Environmental Sciences, Weizmann Institute, Rehovot, Israel (8)*

### **Policy-relevant messages from CityZen – an EU FP7 project about the environmental impact of megacities.**

M. Gauss (1) presenting, E. von Schneidmesser (2), P.S. Monks (2), A. Colette (3), M. Amann (4), M. Kanakidou (5); *Norwegian Meteorological Institute, Oslo, Norway (1), University of Leicester, Department of Chemistry, Leicester, UK (2), Institut National de l'Environnement Industriel et des Risques (INERIS), Verneuil-en-Halatte, France (3), International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria (4),*

*Environmental Chemical Processes Laboratory (ECPL), Department of Chemistry, University of Crete, Heraklion, Greece (5)*

#### **How can emission data best serve policy needs?**

L. Tarrasón (1), G.J. Frost (2), C. Granier (2) presenting, P. Middleton (3); *NILU, Norway (1), NOAA, USA (2), PanoramaPathways, USA (3)*

#### **WMO Global Atmosphere Watch Programme addressing air pollution and climate change**

L. Jalkanen (1) presenting; *WMO, Switzerland (1)*

#### **The Reacting Atmosphere - From Research to Sustainable Solution**

R. Koppmann (1) presenting, G. Erhardt (2), P. Wiesen (2); *University of Wuppertal, Physics Department, Atmospheric Physics, Wuppertal, Germany (1), University of Wuppertal, Chemistry Department, Atmospheric Chemistry, Wuppertal, Germany (2)*

#### **The multiple climate and air quality benefits of addressing black carbon and tropospheric ozone**

J.C.I. Kuylensstierna (1) presenting, D. Shindell (2), Z. Klimont (3), R. van Dingenen (4), W.K. Hicks (1), M. Amann (3), S. Annenberg (5), E. Vignati (4), H. Vallack (1), L. Emberson (1), D. Streets (6), M. Williams (7), R. Mills (9), L. Cifuentes (8); *Stockholm Environment Institute, Environment Department, University of York, UK (1), NASA Goddard Institute for Space Studies, USA (2), IIASA, Austria (3), Joint Research Centre, European Commission, Italy (4), USEnvironmental Protection Agency, USA (5), Argonne National Laboratory, - (6), Kings College, London, UK (7), Catholic University, Chile (8), IUAPPA, - (9)*

#### **Emissions, air quality and radiative Impact of African aerosols**

C. Lioussé (1) presenting, T. Doumbia (1,2), E.M. Assamoi (1), C. Galy-Lacaux (1), A. Baeza (3), J.E. Penner (4); *CNRS/Laboratoire d'Aerologie, France (1), Université C. A. Diop, Senegal (2), RMCX/Université Paris Diderot-Paris 7, France (3), University of Michigan, USA (4), LSCE/CEA-CNRS, France (5), LCP/Université d'Aix-Marseille 1, France (6), LEPII Grenoble, France (7)*

#### **Aerosol compositions during heatwave in an Asian Megacity**

S.C. Lung (1) presenting, P.K. Hsiao (1), C.H. Liu (1), T.Y. Wen (1), C. Fu (1), S.Y. Hwang (1); *Academia Sinica, Taiwan (1)*

#### **The global climate in 2035 as simulated by the global climate model Oslo-CAM and the potential influence of reductions in aerosol particle emissions from different sectors**

A.M.L. Ekman (1,2), H. Struthers (1,4), A. Lewinschal (1,3), K.J. Noone (3,4) presenting, T. Iversen (5,6), A. Kirkevåg (5); *Department of Meteorology, Stockholm University, Sweden (1), Institute for Atmospheric and Climate Science, ETH-Zurich, Switzerland (2), Bert Bolin Center for Climate Research, Sweden (3), Department of Applied Environmental Science, Stockholm University, Sweden (4), Norwegian Meteorological Institute, Norway (5), Department of Geosciences, University of Oslo, Norway (6)*

#### **Enabling and motivating air quality management in a new global era**

J. Seddon Wallack (1), T.J. Keating (1) presenting; *Indian Institute for Human Settlements, India (1), Environmental Protection Agency, USA (2)*

#### **Impact of global changes on European air quality under RCP scenarios at the 2050 horizon**

S. Szopa (1) presenting, G. Clain (1), B. Bessagnet (2), R. Vautard (1), A. Colette (2), L. Menut (3); *LSCE/IPSL, France (1), INERIS, France (2), LMD/IPSL, France (3)*

#### **Effects of non-European air quality policies on the European climate**

E. Vignati (1) presenting, L. Pozzoli (1,2), S. Kloster (3), I. Fischer-Bruns (4), J. Feichter (3); *Joint Research Centre, Italy (1), Eurasia Institute of Earth Sciences, Istanbul Technical University, Turkey (2), Max Planck Institute, Hamburg, Germany (3), Climate Server Centre, Hamburg, Germany (4)*

#### **Air pollution and climate co-benefits modeling through CNG conversion of vehicles in Dhaka**

Z. Wadud (1) presenting, T. Khan (2); *Bangladesh University of Engineering and Technology, Bangladesh (1), Stamford University, Bangladesh (2)*

#### **Tackling Air Pollution and Climate Change: Progress and Challenges in Reducing Vehicle Emissions**

T.J. Wallington (1) presenting; *Ford Motor Company, USA (1)*

### **Session: Climate Science**

#### **AFCLIX: A Knowledge Exchange programme towards improving food security for Sub-Saharan Africa**

R-J. Cornforth (1) presenting; *NCAS-Climate, University of Reading, UK (1)*

#### **Local understanding of climate change and the actions they inspire: the case of a mountain farming community in Norway**

S.H. Eriksen (1) presenting; *Norwegian University of Life Sciences, Norway (1)*

#### **Translating research into impact on food security and health in sub-saharan africa**

D.J.B. Howlett (1) presenting, A.J. Challinor (1); *University of Leeds, UK (1)*

#### **Socio-climatic hot-spots in Brazil**

R.R. Torres (1), D.M. Lapola (2) presenting, J.A. Marengo (1), M.A. Lombardo (3); *Centro de Ciência do Sistema Terrestre, Instituto Nacional de Pesquisas Espaciais (CCST/INPE), São José dos Campos, Brazil (1), Earth System Science Lab, Dep. Ecology, Universidade Estadual Paulista - UNESP at Rio Claro, Brazil (2), Centro de Análise e Planejamento Ambiental - CEAPLA, Universidade Estadual Paulista - UNESP at Rio Claro, Brazil (3)*

#### **Communicating climate change and environmental changes in Botswana: NGOs Perspective**

M.R. Mosokotso (1) presenting; *University of Botswana, Botswana (1)*

#### **Integratration of appropriate scientific technologies in indigenous adaptation Strategies; best options for enhancing small scale farming income and food in LDCs**

B. Twinomugisha (1) presenting; *Choice Africa, Uganda (1)*

#### **Development and visualisation of the WorldRiskIndex - A tool for communication?**

T. Welle (1) presenting, J. Birkmann (1), D. Krause (1); *UNU-EHS, Germany (1)*

### **Session: Asian Vision**

#### **Asia: proving ground for global sustainability**

K. Abe (1) presenting, D. Niles (1), S. McCauley (1,2), D. Sinha (1,3); *Research Institute for Humanity and Nature, Japan (1), G. P. Marsh Institute, Clark University, USA (2), Ciudad Territorio y Ambiente, Peru (3)*

#### **Ecological Sanitation: An Option for Sustainable Human Waste Management and Rural Food Security In Bangladesh**

M. Chowdhury (1) presenting; *Bangladesh Academy for Rural Development (BARD), Bangladesh (1)*

#### **Where Do the Farmers Live? The Case of 'Productive Green Lands' in the Mega-Urban Regions in Japan**

A. Guseva (1) presenting; *Research Institute for Humanity and Nature, Japan (1)*

### **Humanity Boundaries as humanity-oriented regional counterparts to Planetary Boundaries**

I.C. Handoh (1) presenting, T. Onishi (2); *The Futurability Initiatives, Research Institute for Humanity and Nature, Japan (1), Faculty of Applied Biological Science, Gifu University, Japan (2)*

### **A quantitative prediction for ecological and economical sustainability under different scenarios in Mongolian mobile pastoral systems**

S. Kato (1) presenting, N. Fujita (1), N. Yamamura (1); *Research Institute for Humanity and Nature, Japan (1)*

### **Soil alkalization by overgrazing can delay the recovery of pastureland in Mongolia**

R. Koda (1) presenting, N. Amartuvshin (2), S. Amartuvshin (3), N. Fujita (1); *Research Institute for Humanity and Nature, Japan (1), Institute of Botany, Mongolian Academy of Science, Mongolia (2), Institute of Geocology, Mongolian Academy of Science, Mongolia (3)*

### **Tibetan Ethnobotany of Climate Change in the Eastern Himalaya**

J. Salick (1) presenting; *Missouri Botanical Garden, USA (1)*

### **Changes in land use, biodiversity, ecosystem services and local livelihoods in tropical forests of Malaysian Borneo**

K.T. Takano (1) presenting, M. Nakagawa (2), T. Itoioka (3), K. Kishimoto-Yamada (4), S. Yamashita (5), H.O. Tanaka (6), Y. Tokumoto (2), D. Fukuda (7), H. Nagamasu (8), M. Ichikawa (9), K. Momose (10), S. Sakai (1), T. Nakashizuka (11); *RIHN, Japan (1), Nagoya University, Japan (2), Kyoto University, Japan (3), The University of Tokyo, Japan (4), FFPRI, Japan (5), Okayama University, Japan (6), Kyoto University, Japan (7), The Kyoto University Museum, Japan (8), Kochi University, Japan (9), Ehime University, Japan (10), Tohoku University, Japan (11)*

### **“Environmental regionalism” within global change and sustainability development of Asia**

A. Uyar (1) presenting; *Research Institute for Humanity and Nature, Japan (1)*

### **SME-friendly policies and the contribution of local SMEs to community resilience**

T. Yamamoto (1) presenting; *Takushoku University, Japan (1)*

### **Features of ecological resources and their sustainable use: implication from case studies in Mongolia and Malaysia**

N. Yamamura (1) presenting, R. Ishii (2), S. Sakai (1), N. Fujita (1); *Research Institute for Humanity and Nature, Japan (1), JAMSTEC, Japan (2)*

### **Managing Adaptation to Environmental Change in Tourist Hot Spots in the Gulf of Thailand through a Coral Reef Management and Restoration Project**

T. Yeemin (1) presenting, S. Pengsakun (1), K. Sangmanee (1), M. Yucharoen (1), M. Sutthacheep (1); *Marine Biodiversity Research Group, Ramkhamhaeng University, Thailand (1)*

## **Session: Resilient Communities**

### **Strengthening community-based natural resource management through social marketing: the power of community ownership**

C. Canlas (1) presenting, S. Green (1); *Rare, The Philippines (1)*

### **Changing environment, resilient society: insight into the social resilience of a rural region of Taiwan**

Y.C. Chiang (1) presenting, F.F. Tsai (2), H.P. Chang (2), C.F. Chen (3), P. Lu (4); *Center for Environmental Studies, National Central University, Taiwan (1), Graduate Institute of Hakka Social and Cultural Studies, National Central University, Taiwan (2), Center for Space and Remote Sensing Research, National Central University, Taiwan (3), Delft University of Technology, The Netherlands (4)*

**COLLABORATIVE GOVERNANCE: How a Geographically-remote Community Established an Exemplar, Bottom-up Adaptation Governance Model**

C. Woolford (1), H. Horrocks (1), B. Foster (1) presenting; *EPICCA, Australia (1)*

**Indigenous peoples, climate change and a planet under pressure: traditional knowledge and adaptive pathways for the future**

K. Galloway McLean (1) presenting, A. Ramos Castillo (1), S. Johnston (1); *United Nations University - Institute of Advanced Studies, Japan (1)*

**The Quest to Carbon Neutrality: Opportunity Knocking on Ecosystem Service Door?**

L. Gorissen (1) presenting, P. Lodewijks (1), P. Vercaemst (1); *Flemish Institute of Technological Research, Belgium (1)*

**Laying the foundations for adaptive co-management through futures analysis: an Irish case study in building climate-resilient coastal communities**

S.R.J. Gray (1) presenting, M. Falaleeva (1), C. O'Mahony (1), V. Cummins (2); *Coastal and Marine Research Centre, Environmental Research Institute, University College Cork, Ireland (1), Maritime and Energy Research Campus and Commercial Cluster, Ireland (2)*

**Evaluating the impact, effectiveness and success of Government funded low carbon communities on localised energy behaviours using an action research approach**

R. Gupta (1) presenting, N. Eyre (2), S. Darby (2), K. Lucas (2), C. Fox (1), J. Hamilton (2); *Oxford Brookes University, UK (1), University of Oxford, UK (2)*

**Rural democratization and sustainable rural societies: Experiences and inferences for scaling up natural resource management and rural livelihood initiatives in developing economies**

P. JIJU ALEX (1) presenting; *Kerala Agricultural university, India (1)*

**Project TIPiCo: Training Indigenous People in Conservation**

M. Olmedo (1,2) presenting, A. von Hardenberg (1); *Rayuela Association, Italy (1), Interdisciplinary Centre for Research and Education in Environment and Society, Italy (2), Wildlife Research Centre, Gran Paradiso National Park, Italy (3)*

**Change, innovation and energy demand reduction: community led initiatives as seen through the lens of "energy biographies"**

K. Henwood (1), N. Pidgeon (1) presenting, K. Parkhill (1), C. Butler (1), F. Shirani (1); *Cardiff University, UK (1)*

**Communitarian lifestyles - structural and behavioral characteristics of social innovations**

K-H. Simon (1) presenting; *University of kassel, Germany (1)*

**Climate justice and local communities: the energy/health/poverty nexus in the U.S. southwest**

M. Wilder (1) presenting, L. Bellante (1); *University of Arizona, USA (1)*

**Autonomous crop adaptation processes to extreme floods: a case study in Bangladesh**

M. Younus (1) presenting; *Flinders University, Australia (1)*

## Session: River Corridors

### **Achieving co-operate in transboundary groundwater management: Challenges and opportunities to water and food security amid climate change**

A. Asamoah (1) presenting, C. Frimpong-Mensah (1), K. Atwi-Boasiako (1); *Kwame Nkrumah University of Science & Technology, Ghana (1)*

### **The Lower Danube "Green Corridor": Multiple Pressures and Integrated Management of Large-Scale Floodplains**

J. Bloesch (1) presenting, M-T. Gomoiu (1), C. Sandu (1), R. Kalchev (1), U. Schwarz (1); *IAD (International Association for Danube Research, Switzerland (1), GeoEcoMar, Romania (2), Biological Institute Bucharest, Romania (3), Zoological Institute Sofia, Bulgaria (4), Fluvius Consulting Vienna, Austria (5)*

### **Estimating Discharge Dependent Sizes of Riparian Wetlands on Landscape Scale**

S. Natho (1), M. Venohr (1), J. Mahnkopf (1) presenting; *IGB, Germany (1)*

### **Options to reduce nutrient emissions into the baltic sea from rivers of german catchments**

U. Hirt (1), J. Mahnkopf (1) presenting, M. Venohr (1); *IGB Berlin, Germany (1)*

### **Floodplain soils as hot zones of nitrogen cycling and consequences for ecosystem services of restored river corridors**

J. Luster (1) presenting, J. Shrestha (1), B. Huber (1), E. Samaritani (2), B. Fournier (2), P.A. Niklaus (3); *Swiss Federal Research Institute WSL, Switzerland (1), University of Neuchatel, Switzerland (2), University of Zürich, Switzerland (3), Swiss Federal Institute of Technology Zürich ETHZ, Switzerland (4), Swiss Federal Institute of Technology Lausanne EPFL, Switzerland (5), Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany (6)*

### **Climate Change and Water Balance in the Osse-Ossiomo sub-basin of S. W. Nigeria**

C.I. Ikhile (1), D.O. Olorode (1) presenting; *University of Benin, Nigeria (1), University of Lagos, Nigeria (2)*

### **Multidisciplinary Approach to Assessing Long- and Short-term Water Quality Variability in Groundwater Bodies**

R. Page (1,2) presenting, J. Epting (1), J. Simovic (1), P. Huggenberger (1); *Applied and Environmental Geology, Institute for Geology and Paleontology, Department of Environmental Sciences, University of Basel, Bernoullistr. 32, 4056 Basel, Switzerland (1), Endress+Hauser Metso AG, Kägenstr. 2, 4153 Reinach, Switzerland (2)*

### **Diversity of mycorrhizal fungal communities of riparian edge forests in Hungary**

I. Paradi (1) presenting, K. Rethy (1), A-K. Orczan (1), Z. Pato (1), A. Kuglics (1), Z. Bratek (1); *Eotvos Lorand University, Department of Plant Physiology and Molecular Plant Biology, Hungary (1)*

### **River restoration with complex hydrological and ecological interactions: The RECORD project**

M. Schirmer (1) presenting; *Eawag - Swiss Federal Institute of Aquatic Science and Technology, Switzerland (1)*

### **Combined flood prevention and restoration projects: inputs and their social and substantial effects**

S. Menzel (1,2), M. Buchecker (1), I. Seidl (1) presenting; *Swiss Federal Research Institute WSL, Switzerland (1), Eawag: Swiss Federal Institute of Aquatic Science and Technology, Switzerland (2)*

### **Supporting river health: what role for ecosystem services?**

C.A. Sullivan (1) presenting, A. Reichelt-Brushett (1), J. Butler (2), M. Wood (3); *Southern Cross University, Australia (1), CSIRO, Australia (2), Richmond River County Council, Australia (3)*

### **Managing Large Rivers in the Era of the Anthropocene**

K. Tockner (1) presenting, J. Gessner (1), C. Wolter (1); *Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany (1)*

### **Mapping and valuation of water purification services in Europe**

J. Maes (1), W.J. van de Bund (1) presenting, A. La Notte (1), L. Carvalho (1), F. Bouraoui (1), G. Bidoglio (1); *European Commission Joint Research Centre - Institute for Environment and Sustainability, Italy (1)*

### **Water Governance through Integrated Hydroinformatics System for Real-time Monitoring and 5D Flood Simulation**

H. VATHANANUKIJ (1) presenting, S. MALAIKRISANACHALEE (2), T. KOIKE (3); *Kasetsart University, Bangkok, Thailand (1), Kasetsart University, Bangkok, Thailand (2), The University of Tokyo, Tokyo, Japan (3)*

### **Dissolved organic matter cycling in the Evros trans-boundary river corridor and coastal delta of Eastern Mediterranean**

M. Tzortziou (1), C. Zeri (2) presenting, E. Dimitriou (2), E. Pitta (3), P. Neale (4), R. Jaffé and Y. Ding (5); *University of Maryland, Earth System Science Interdisciplinary Center, College Park, Maryland, USA (1), Hellenic Center for Marine Research, Anavyssos, Attiki, Greece (2), National and Kapodistrian University of Athens, Dept of Chemistry, Athens, Greece (3), Smithsonian Environmental Research Center, Edgewater, Maryland, USA (4), Florida International University, Southeast Environmental Research Center, Miami, Florida, USA (5)*

## **Session: Adaptation Strategies**

### **Using hotspots of natural hazards to infer risk of wildlife population deletions: challenges and opportunities for pre-emptive conservation planning under uncertainty**

E.I. Ameca - y Juarez (1,2) presenting, G.M. Mace (2), N. Pettorelli (1), G. Cowlishaw (1); *Institute of Zoology, The Zoological Society of London, Regent's Park NW1 4RY, London, UK (1), Imperial College London, Centre for Population Biology, Silwood Park Campus SL5 7PY, Ascot, UK (2)*

### **Managing without managers: Climate change adaptation at Ramgati coast, Bangladesh**

S. Sarker (1) presenting, M.S. Hossain (1); *Institute of Marine Sciences and Fisheries, University of Chittagong, Chittagong-4331, Bangladesh (1)*

## **Key Event: Ecosystem Change**

### **Pockets of Social-Ecological Memory: - combating bio-cultural erosion in landscapes of food production**

S. Barthel (1) presenting, C. Crumley (1), U. Svedin (1), C. Folke (1); *Stockholm University, Sweden (1)*

### **Long-Term (Socio) Ecological Research for integrated natural resource management - LTER-Europe approach**

K. Krauze (1) presenting, M. Mirtl (1); *ERCE, Poland (1), EAA, Austria (2)*

### **Program on ecosystem change and society: an international research strategy for integrated social-ecological systems**

S-R. Carpenter (2), C. Folke (3,1), A-V. Norström (1) presenting; *Stockholm Resilience Centre, Stockholm University, Sweden (1), Center for Limnology, University of Wisconsin, USA (2), Beijer Institute, Royal Swedish Academy of Science, Sweden (3), Institute of Economic Growth, Delhi University, India (4), Centro de Investigaciones en Ecosistemas, Universidad Nacional Autónoma de México, México (5), CGIAR Research Program on Climate Change, Agriculture and Food Security, International Centre for Tropical Agriculture, Denmark (6), Departamento de Ecología and Center for Advanced Studies in Biodiversity and Ecology, Facultad de Ciencias Biológicas, P. Universidad Católica de Chile, Chile (7), Institut Méditerranéen d'Ecologie et de Paléocécologie (IMEP), France (8), Ecology, Evolution and Environmental Biology, Columbia University, USA (9),*

*Bioversity International, CGIAR, Italy (10), Australian Research Council Centre of Excellence for Coral Reef Studies, James Cook University, Australia (11), Department of Applied Economics & Department of Ecology, Evolution and Behavior, University of Minnesota, USA (12), Centre for Global Sustainability Studies, Universiti Sains, Malaysia (13), Council for Scientific and Industrial Research, South Africa (14), Department of Organisation Studies, VU University of Amsterdam, The Netherlands (15)*

### **The Art Of Holistic Thinking: Analysis Of Ecosystem Services Case Studies And The Link To Valuation**

S. Schmidt (1) presenting, R. Seppelt (1), C. Dormann (1), F. Eppink (1), S. Lautenbach (1); *Helmholtz Centre for Environmental Research - UFZ, Germany (1)*

### **Restoration of Tropical Forest for Sustainable Development at Reserve Forest of Bandipur National Tiger Park, India**

S. Setty (1) presenting, R. Venkataraman (2), K. Anand (3), C-H. Sathisha (3); *Ashoka Trust for Research in Ecology and the Environment, Royal Enclave, Srirampura, Jakkure Post, Bangalore, India (1), Junglescapes Charitable Trust, C-3, Cedar Crest, I Cross Street, 10th Main Road, Indiranagar, Bangalore, India (2), GE India Technology Center, No. 122, John F. Welch Technology Center, Hoodi Village, Whitefield Road, Bangalore, India (3)*

## **Session: Urban Coasts**

### **Governing climate change risks in Brazilian coastal cities**

F. Barbi (1,2) presenting, L-C. Ferreira (3,4); *Unicamp, Brazil (1), Earth System Governance Project - Research Fellows, Brazil (2), Unicamp, Brazil (3), Earth System Governance Project - Faculty Member, Brazil (4)*

### **Tianjin of Northern China, newly-developed coastal megacity at the enclosed Bohai Bay: development and challenge**

Z. Chen (1) presenting; *East China Normal University, China (1)*

### **The State of Household-level Adaptation – A Comparison of Case Studies in Argentina and Germany**

J. Koerth (1) presenting, A.T. Vafeidis (1), J. Hinkel (2,3), H. Sterr (1); *Christian Albrechts-University of Kiel, Germany (1), Potsdam Institute for Climate Impact Research (PIK), Germany (2), European Climate Forum e.V. (ECF), Research Process: Adaptation and Social Learning, Germany (3)*

### **Seeking Opportunities from Adversity: Improving Adaptation of Coastal Communities through Self Initiated Bottom-Up Approaches**

S. Serrao-Neumann (1) presenting, F. Crick (1), D. Low Choy (1), S. Baum (1); *Griffith University, Australia (1)*

## **Session: Extreme Environments**

### **Critical subzero temperatures for photosynthetic processes in Antarctic lichens of the genus *Usnea* and their symbiotic algae of the genus *Trebouxia***

M. Bartak (1) presenting, J. Hajek (1), P. Vaczi (1), J. Hazdrova (1), K. Balarinova (1); *Masaryk University, Department of Experimental Biology, Division of Plant Physiology, Extreme Environments Laboratory, Kamenice 5, 62500 Brno, Czech Republic (1)*

### **Threats and opportunities for an endangered tree species living in extreme environmental conditions: the case of *Cupressus dupreziana* (Camus)**

S. Fineschi (1) presenting, F. Bagnoli (1), G. Della Rocca (1), P. Raddi (1), G.G. Vendramin (1); *CNR - IPP, Italy (1)*



**Resurrection plants with different mechanisms of desiccation resistance emit significant amount of isoprene in the atmosphere**

M. Beckett (1), C. Calfapietra (2), J.M. Farrant (1), C. Brunetti (3), V. Velikova (2), F. Loreto (3) presenting; *Department of Molecular and Cell Biology, University of Cape Town, South Africa (1), Consiglio Nazionale delle Ricerche-Istituto di Biologia Agroambientale e Forestale, Italy (2), Consiglio Nazionale delle Ricerche - Istituto per la Protezione delle Piante, Italy (3)*

**Climate change impacts in the Brazilian semi-arid region**

J-P. Ometto (1) presenting, R. Menezes (2), A. Antonino (2), V. Petrese (4), L. Accioly (3), J. Bustamante (1); *National Institute for Space Research (INPE), Brazil (1), Pernambuco Federal University (UFPE), Brazil (2), EMBRAPA Solos UEP, Brazil (3), EMBRAPA Semiarido, Brazil (4)*

**From ice to soil: colonization of forefronts of retreating glaciers in Svalbard by biological soil crusts (BSC)**

L. D'Acqui (1), R. De Philippis (2), C. Mascalchi (1), G. Mele (3), F. Rossi (2), S. Ventura (1) presenting; *CNR-ISE, Italy (1), University of Firenze, Italy (2), CNR-ISAFOM, Italy (3), Aarhus University, Denmark (4), BOKU, Vienna, Austria (5), Bioforsk, Tromsø, Norway (6)*

**Classification of *Pseudomonas* spp. isolated from Antarctic samples**

M. Kosina (1); *Masaryk University, Czech Collection of Microorganisms, Department of Experimental Biology, Faculty of Science, Tvrdeho 14, 602 00 Brno , Czech Republic; telephone: +420 549 49 1430, fax: +420 543 24 , Czech Republic (1)*

**Session: Urbanization**

**The urban resilience of coastal cities: a resource for meeting the challenge of climate change**

E. Alcântara (1) presenting, O. Bezerra (1), F. Furtado (1); *Federal University of Pernambuco, Brazil (1)*

**Social learning and place-making in urban gardens in Berlin and Stockholm: Lessons for urban planners for building capacity to promote ecosystem services**

P. Bendt (1), S. Barthel (1) presenting, J. Colding (1); *Stockholm University, Sweden (1)*

**Community gardens: an urban response to global environmental change**

K. Brookes (1) presenting; *University of Southampton, UK (1)*

**Participatory Public Management as a Solution to Environmental Challenges of the Favelas of Rio de Janeiro**

T. Ferreira (1), M. Cohen (1) presenting; *Pontifical Catholic University of Rio de Janeiro - PUC Rio, Brazil (1)*

**Analysis of environmental challenges and potential solutions for the traffic congestion situation in the state of Kuwait**

N. Al-Rifai (1), A. Elmi (1) presenting; *Kuwait University, Kuwait (1)*

**Thematic visualization of built environment using microclimatic coupled mapping methodology to support urban neighbourhood Design**

A. Elwan (1) presenting, C. Peng (1), M. Fahmy (1); *sheffield university, UK (1)*

**Urban futures: climate change and the smart city**

S. Hatty (1) presenting; *Ohio University, USA (1)*

**Modeling electric power consumption dynamics over mainland China Using DMS/OLS stable nighttime light time series data**

C. He (1) presenting, Q. Ma (1), T. Li (1), Z. Liu (1), Y. Yang (1); *State Key Laboratory of Earth Surface Processes and Resource Ecology, Beijing Normal University, Beijing 100875, China, China (1)*

#### **Modeling Sustainable Development of an Industrial City Using Delphi and Fuzzy Logic Techniques**

F. Jaderi (1) presenting, Z.Z. Ibrahim (1), N. Jaafarzadeh (2), M.N. Shamsudin (1), S.M.B. Nabavi (1), A.R. Yavari (3); *Universiti Putra Malaysia, Malaysia (1), Jondi Shapour Medical Sciences University, Iran (2), Khorramshahr University of Marine Science and Technology, Iran (3), University of Tehran, Iran (4)*

#### **Fear Free City**

J. karakiewicz (1) presenting, T. kvan (1), S. hatzellis (1); *the university of melbourne, Australia (1)*

#### **Suburban buildings and retrofitting: an opportunity to test eco- technologies and innovative solutions**

A. Boeri (1), D. Longo (1) presenting; *University of Bologna, DAPT, Faculty of Architecture, Italy (1)*

#### **Ecosystem Services Assessment in the New York City Urban Biosphere**

P.T. McPhearson (1) presenting; *Tishman Environment and Design Center, USA (1)*

#### **Peri-urbanisation in Europe - Towards sustainable urban-rural futures**

K.S.B. Nilsson (1) presenting; *University of Copenhagen, Denmark (1)*

#### **What does rural-urban migration mean for Amazonian people and forests?**

L. Parry (1) presenting, H. Correa (1,2), J. Barlow (1); *Lancaster University, UK (1), Museu Paraense Emilio Goeldi, Brazil (2)*

#### **Impacts of Regional Climate Change, Adaptation Measures and Mitigation Measures on the Urban Climate of Hamburg Metropolitan**

K.H. Schluenzen (1) presenting, D. Flagg (1), D. Grawe (1), P. Hoffmann (1), M. Linde (1), R. Schoetter (1); *Meteorol. Inst., KlimaCampus, Univ. Hamburg, Germany (1)*

#### **Asian coastal mega-urbanisation and climate change: Understanding real drivers and spatial patterns of future urban risk**

H. Storch (1) presenting, N.K. Downes (1); *Brandenburg University of Technology Cottbus, Germany (1)*

#### **The botanical city: The Botanical Garden of Roberto Burle Marx as a system of performances towards a sustainable urban landscape. Case of study: The Botanical Garden of Maracaibo (Venezuela).**

M. Villalobos (1) presenting, C. Urbina (2); *ENSP-Versailles, France (1), Fundacion Jardin Botanico de Maracaibo, Venezuela (2)*

### **Session: Methane**

#### **Cows to Kilowatts: Anaerobic Bio-digestion of Abattoir Waste turned to Sustainable Green Energy in Africa**

J. Adelegan (1) presenting; *Global Network for Environment and Economic Development Research, Nigeria (1)*

#### **Source attribution of the changes in atmospheric methane since 1990.**

P. Bousquet (1,6) presenting, B. Ringeval (1), I. Pison (1), E-J. Dlugokencky (2); *IPSL-LSCE, France (1), NOAA-ESRL, USA (2), SA-SAWS, South Africa (3), USA-JPL, USA (4), CSIRO-CAWSC, Australia (5), UVSQ, France (6)*

#### **Role of geochemical conditions and microbial processes on methane release to the atmosphere from permafrost soils in the Arctic**

B. Christgen (1) presenting, C. McCann (1), N-D. Gray (1), J-A. Roberts (2), D-W. Graham (1); *School of Civil Engineering and Geosciences, Newcastle University, UK (1), Department of Geology, University of Kansas, USA (2)*

#### **The present boreal and Arctic methane budget, and possible future changes**

R.E. Fisher (1) presenting, D. Lowry (1), M. Lanoisellé (1), S. Sriskantharajah (1), E.G. Nisbet (1); *Royal Holloway, University of London, UK (1)*

#### **New insight into wetland dynamics and methane emissions from the ESA ALANIS Methane project**

G. Hayman (1) presenting, E. Blyth (1), A. Bartsch (2), C. Prigent (3), M. Buchwitz (4), N. Gedney (5); *Centre for Ecology and Hydrology, UK (1), Technical University of Vienna, Austria (2), CNRS, Observatoire de Paris, France (3), University of Bremen, Germany (4), Hadley Centre, Met Office, UK (5)*

#### **Use and uncertainty evaluation of a process-based model for assessing the methane budgets of global terrestrial ecosystems**

A. Ito (1,2) presenting, M. Inatomi (2); *NIES, Japan (1), JAMSTEC, Japan (2)*

#### **A close-up of the methane global budget**

S. Kirschke (1) presenting, P. Bousquet (1), P. Ciais (1), J.G. Canadell (2), C. Le Quéré (3), S. Houweling (4); *LSCE – CEA-UVSQ-CNRS, France (1), GCP-CSIRO, Australia (2), Tyndall Centre for Climate Change Research, UK (3), SRON and University of Utrecht, The Netherlands (4), NOAA ESRL, USA (5), University of Bristol, UK (6), WSL, Switzerland (7), University of Bern, Switzerland (8), VU University, The Netherlands (9)*

#### **Strategies for Adaptation and Mitigation of Climate Change based on Solid Waste Management in Metropolitan Sao Paulo / Brazil**

T.M.C. Leite (1), M.A. Lombardo (1) presenting; *São Paulo State University, Brazil (1)*

#### **Methane in the Atlantic realm: isotopic links between source emissions and seasonality**

D. Lowry (1) presenting, R. Fisher (1), M. Lanoiselle (1), E.G. Nisbet (1); *Royal Holloway, University of London, UK (1)*

#### **Remote Sensing Of Palm Swamp Wetland Distribution And Flooding Status Over Regions In The Amazon Basin For Assessing Carbon Dioxide and Methane Release**

E. Podest (1) presenting, K. McDonald (2,1), R. Schroeder (2,1), N. Pinto (3), R. Zimmermann (4); *Jet Propulsion Laboratory, USA (1), City College of New York, USA (2), University of Maryland, USA (3), University of Hohenheim, Germany (4)*

#### **Global upper tropospheric distribution of methane measured by the CARIBIC observatory**

T.J. Schuck (1) presenting, C.A.M. Brenninkmeijer (1), A.K. Baker (1), P. Zimmermann (1); *Max Planck Institute for Chemistry, Germany (1)*

#### **Enteric Methane Emission from Livestock in Different Agroecological Regions of India**

S. Singh (1) presenting, B.P. Kushwaha (2), S.K. Nag (1), A. Singh (1), A.K. Mishra (1); *IGFRI, Jhansi, India (1), CIRB, Hisar, India (2)*

#### **Sources of uncertainty in local measurements of methane emissions from an arctic lake/wetland complex**

M. Wik (1) presenting, P.M. Crill (1), D. Bastviken (2); *Dept Geological Sciences, Stockholm University, Sweden (1), Dept of Thematic Studies, Water and Environmental Studies, Linköping University, Sweden (2)*

#### **Reanalysis of global CH<sub>4</sub> variations between 2000 and 2009**

J. Williams (1) presenting, M. van Wee (1), P. van Velthoven (1); *KNMI, The Netherlands (1)*

## Session: Geoengineering

### Volcanic eruptions as an analogue for solar radiation management

L. Gray (1), S. Driscoll (1) presenting, A. Bozzo (2), M. Joshi (3), S. Tett (2), A. Jones (4); *Oxford University, UK (1), Edinburgh University, UK (2), Reading University, UK (3), Met Office, UK (4)*

### Safe natural bio-engineering options for cooling regions and the planet

W. Jehne (1) presenting; *Outcomes Australia, Australia (1)*

### Ballistics for delivery of solar-radiation management particules and precursors - an engineering principles approach.

A.J. Lockley (1) presenting; *None, UK (1)*

### Evaluating carbon dioxide removal geoengineering techniques: assessing the CO<sub>2</sub> balance

A.S. Lubansky (1) presenting, C.J. Axon (2); *University of Oxford, UK (1), Brunel University, UK (2)*

### Bioenergy as a Form of Geoengineering

W. Lucht (1) presenting; *Potsdam Institute for Climate Impact Research, Germany (1), Department of Geography, Humboldt University Berlin, Germany (2)*

### Passive removal of atmospheric CO<sub>2</sub> by artificial silicate minerals: an analogue for enhanced weathering

C-L. Washbourne (1), P. Renforth (2), D.A.C. Manning (1) presenting; *Newcastle University, UK (1), University of Oxford, UK (2)*

### Mineral carbonation: geoengineering for the atmosphere, turning CO<sub>2</sub> into useful products

M. Maroto-Valer (1,2), M. Styles (1,3) presenting, M. Stephenson (1,3); *National Centre for Carbon Capture and Storage, UK (1), University of Nottingham, UK (2), British Geological Survey, UK (3)*

## Session: Oceanic Ecosystems

### Modeled impact of climate change on marine biogeochemistry and ecosystems

T. ARSOUZE (1), M. GEHLEN (1), L. BOPP (1) presenting, O. AUMONT (2), O. MAURY (3); *IPSL / LSCE, France (1), IRD / LPO, France (2), IRD / University of Cape Town, South Africa (3)*

### 'Magic Fish-bones'\* for Fisheries: The Small-Scale Fisheries Paradigm Charles Dickens, 1867

E. Papaioannou (1) presenting, A.T. Vafeidis (1), J.O. Schmidt (2), M.F. Quaas (2); *Coastal Risks and Sea-Level Rise Research Group, Cluster of Excellence 'The Future Ocean', Institute of Geography, Christian-Albrechts University of Kiel, Ludewig-Meyn Str. 14, 24098, Kiel, Germany (1), Living Resources and Overfishing Research Group, Cluster of Excellence 'The Future Ocean', Department of Economics, Christian-Albrechts University of Kiel, Wilhelm-Selig-Platz 1, 24118, Kiel, Germany (2)*

### Sustainable harvesting: learning from the whales

V. Smetacek (1) presenting; *Alfred Wegener Institute, Germany (1)*

## Session: Pathways to Sustainability

### Energy innovations: a focus on clean technologies for livelihood generation in India

M. Anand (1) presenting; *The Energy and Resources Institute, India (1)*

### Eco -innovation and green economy: the role of sustainability life cycle assessment

M.C. Lucchetti (1), P. Papetti (2), G. Arcese (3) presenting; *Università degli Studi Roma Tre, Italy (1), Università degli Studi di Cassino, Italy (2), Università La Sapienza, Italy (3)*

### **Biomimicry as a design tool to generate eco-innovation for both the technical fields and management practices**

G. Dartevelle (1) presenting, G. Chapelle (1), C. Zaoui (1), S. De Neubourg (1), P.-J. Valayer (1); *Biomim-Greenloop nv/sa, Aalststraat 7-11, 1000, Brussels, Belgium (1)*

### **Agent-Based Simulations of Energy Transitions**

E.J.L. Chappin (1), G.P.J. Dijkema (1) presenting; *Delft University of Technology, The Netherlands (1)*

### **Scenarios elicitation to identify current and future challenges for the transition to a green economy**

C. Guivarch (1) presenting, J. Rozenberg (1); *Cired, France (1)*

### **Neglected Diseases and Knowledge Transfer: Open Source and Proprietary Pathways to Drug Development**

P. Oldham (1) presenting, B. Wynne (1), S. Hall (1), O. Forero (1); *Lancaster University, UK (1)*

### **An agroecological pathway to sustainability for green economies**

N. Uphoff (1) presenting; *Cornell University, USA (1)*

## **Session: Infrastructure Systems**

### **Renewable energy based water purification technologies: a strategic means of alleviating water crisis and global warming**

C-N. Ibeto (1) presenting, C-G. Okpara (1), A-U. Ofoefule (1); *National Center for Energy Research and Development, University of Nigeria, Nsukka, Nigeria (1)*

## **Session: Infrastructure Systems**

### **Wetland System: A Cheaper and Efficient Treatment Option for the Food Processing Waste in Africa**

J. Adelegan (1) presenting; *Global Network for Environment and Economic Development Research, Nigeria (1)*

### **Critical infrastructure vulnerability assessments for sustainable development and disaster risk reduction**

C. Bach (1) presenting; *United Nations University, Institute for Environment and Human Security, Germany (1)*

### **A Proposed Global Infrastructure Initiative (GII) - A Social-Ecology Approach for a Global Civilization**

C. Beck (1) presenting, V. Carella (1); *Synthesis 3, USA (1)*

### **Implications of infrastructure interdependencies for their long term management and adaptation**

R. Dawson (1) presenting, G. Fu (1), S. Bullock (2), M. Khoury (2); *Newcastle University, UK (1), Southampton University, UK (2)*

### **Impacts Of Energy Carrier Availability On Poverty Reduction In Small Scale Dairy-Milk Industry (Case Study In Taruma Jaya Village, West Java Indonesia)**

H. Febriani (1) presenting; *Brawijaya University, Indonesia (1)*

### **Towards climate optimised flight trajectories - REACT4C**

S. Matthes (1), V. Grewe (1) presenting, R. Sausen (1); *DLR-Atmospheric Physics, Germany (1)*

### **Fleet-Wide Electricity Planning in Malaysia to Achieve a Low-Carbon Society**

W.S. Ho (1), H. Hashim (1) presenting; *Universiti Teknologi Malaysia, Malaysia (1)*

### **On-site Renewable Energy Systems: the Potential for Buildings in Brazil**

G.M. Jannuzzi (1) presenting, C.A. Melo (1), A. Tripodi (1); *University of Campinas, Brazil (1)*

### **Structural changes of industrial water reuse network in introduction of carbon capture processes**

H. Kim (1) presenting, M. Son (1), I-B. Lee (1); *Pohang University of Science and Engineering, Republic of Korea (1)*

### **A moderate scale testbed for assessment of the factors influencing energy usage behaviours in office environments**

I. Marshall (1) presenting, R. Whittle (1), R. Ellis (1), A. Mauthe (1), P. Alcock (1), D. Hutchison (1); *Lancaster University, UK (1)*

### **Euro-Solar Programme. Renewable Energy For Social Inclusion. (Study Case of Nicaragua)**

S. Mejia (1) presenting, A. Tellez (1,2); *European Union Delegation in Nicaragua, Nicaragua (1), Ministerio de Energía y Minas de Nicaragua, Nicaragua (2)*

### **Linking Ecosystem Services To Urban Infrastructure**

M. Olazabal (1) presenting, U. Pascual (2); *Tecnalia - Unit of Environment, Spain (1), BC3 - Basque Centre for Climate Change Research, Spain (2)*

### **Geoscience frameworks for the future sustainable use and management of the urban subsurface**

D. Peach (1) presenting, J. Ford (1), S. Campbell (1), S. Price (1); *British Geological Survey, UK (1)*

### **Life-Cycle Cost-Benefit Assessment of Sustainable Urban Development**

L. Zhang (1), C. Pearson (1) presenting, L. Aye (1), J. Lai (1); *The University of Melbourne, Australia (1)*

### **Integration of waste carbon dioxide emissions and energy use in sustainable urban infrastructure models**

S.B. Velasquez Orta (1) presenting, D. Graham (1); *Newcastle upon Tyne, UK (1)*

### **Smart and sustainable infrastructures for low carbon knowledge city development in China**

M. Weijnen (1) presenting, W. de Jong (1); *Delft Univ of Technology, The Netherlands (1)*

### **Leaning the Ladder for Human Socio-Economic Development on Better Walls: Sustainability Options and Opportunities for Developing Countries**

C. Zalengera (1,2) presenting, R-E. Blanchard (1,4), P-C. Eames (1,6); *Loughborough University, UK (1), Institute of Engineering and Technology, UK (2), Malawi Institution of Engineers, UK (3), Institute of Environmental Management and Assessments, UK (4), Higher Education Academy, UK (5), Centre for Renewable Energy Systems Technology, UK (6)*

## **Key Event: Land-Use**

### **Impact of Land Cover Change and Land Use Types on Surface Temperature Distribution: the Case of Chennai, India**

L.R. Amirtham (1) presenting, L. Jothi Venkatachalam (1); *Sathyabama University, India (1)*

### **Accuracy assessments of the GLOBCOVER2008 land cover dataset using statistical inventories and FLUXNET site data at global scale**

Y.M. An (1) presenting, W.W. Zhao (1); *Institute of land resources, College of Resources Science and Technology, Beijing Normal University, China (1)*

**Is africa able to leap over its energy gap? opportunities in bioenergy crops and implications for land use change, carbon dynamics and climate change**

A.O. Olaniyi (1) presenting, A.M. Abdullah (1), R.M. Firuz (1), A.M. Sood (1), W.A. Sulaiman (1); *Universiti Putra Malaysia, Malaysia (1)*

**Potential hydrologic impacts from deforestation in the southwestern Amazon**

L. Lima (1), M. Coe (2), B. Soares Filho (1) presenting, S. Cuadra (3,4), L. Dias (4), M. Costa (4); *Universidade Federal de Minas Gerais, Brazil (1), The Woods Hole Research Center, USA (2), Centro Federal de Educação Tecnológica Celso Suckow da Fonseca, Brazil (3), Universidade Federal de Viçosa, Brazil (4)*

**Cloud and terrestrial carbon uptake interactions in a mid-latitude hardwood forest**

S-Y. Wang (1) presenting, Q-L. Min (1); *Nanjing University, China (1), State University of New York at Albany, USA (2)*

## **Session: Land-Cover**

**Variables in environmental monitoring enables a multitude of classifications**

A. Allard (1) presenting; *Landscape Analysis, Swedish University for Agriculture, Umea, Sweden (1)*

**Land Cover Changes in the Himalayas - a Comparative Analysis from Nepal and Bhutan over Last Two Decades**

B. Bajracharya (1) presenting; *ICIMOD, Nepal (1)*

**The Role of Shelter Effect in Forestation in Arid Areas**

Z. Batjargal (1) presenting, B. Enkhjargal (1); *NAMHEM, Mongolia (1)*

**Tipitamba Project: Fire-free land preparation as an alternative to slash-and-burn agriculture in Amazon, Brazil.**

O.R. Kato (1), A.C.M.R. Borges (1) presenting, M.K. Shimizu (1), C.M.B.C. Azevedo (1), T.D.A. Sá (1), S.S. Vasconcelos (1); *Embrapa Eastern Amazon, Brazil (1)*

**How far oil price and diets drive regional land uses? First lessons from a global model articulating biophysical potentials and economic dynamics**

S. Souty (1,2), T. Brunelle (1) presenting, P. Dumas (1,3), B. Dorin (1,3), P. Ciais (2); *CIREN, France (1), LSCE, France (2), CIRAD, France (3)*

**Payment of Forest Ecosystem Services as an Incentive towards Climate Mitigation? Two Cases Studies from Los Tuxtlas Biosphere Reserve, Veracruz, Mexico**

A.C. de la Vega-Leinert (1), M. Weber (1), L. Brenner (1), V. Tekken (1) presenting; *Institute of Geography, University of Greifswald, Germany (1), Department of Sociology, Universidad Autónoma Metropolitana - Iztapalapa, Mexico (2)*

**The Role of Sustainable Land management in the Transition towards a Green Economy: From Smart Grids to Smart Grounds**

L. Gorissen (1) presenting; *Flemish Institute for Technological Research, Belgium (1)*

**Forest Governance: Results from a Global to Local Analysis**

J. Gupta (1,2) presenting, C. Haug (1), N. van der Grijp (1); *Institute for Environmental Studies (IVM), VU University Amsterdam, The Netherlands (1), UNESCO-IHE, The Netherlands (2)*

**Terrestrial Carbon Stocks in the Niger Delta, Nigeria: Impacts of Petroleum Exploitation Activities and Prospects for Multiple-Actor Management for Expanding Forest Carbon Abatement**

F-S. IKUPONISI (1) presenting; *Ecology and Sustainable Development Outreach (ECO-OUTREACH), Port Harcourt, Niger Delta, Nigeria (1)*

**Regenerating the Australian landscape to mitigate climate changes and impacts.**

W. Jehne (1) presenting; *Outcomes Australia, Australia (1)*

**Investigating the effect of land use and climate changes on runoff in the Victoria Nile Basin**

E. Jjunju (1) presenting, A. Killingtveit (1), K. Alfredsen (1); *Norwegian University of Science and Technology, Norway (1)*

**Evaluating global carbon emission and climate response for the land-use change scenarios of Representative Concentration Pathways (RCPs)**

E. Kato (1) presenting, M. Kawamiya (1); *RIGC, JAMSTEC, Japan (1)*

**Impact of forest fragmentation on population and conservation status of Eastern hoolock gibbon Hoolock leuconedys in low land tropical forest of Lower Dibang Valley district of Arunachal Pradesh, Northeast India.**

A. Kumar (1) presenting, K. Sharma (1), M. Krishna (1), O.P. Tripathi (1), P.R. Gajurel (1); *North Eastern Regional Institute of Science and Technology (Deemed University), India (1)*

**Does land use change foster economic development?**

M. Lange (1) presenting, G. Klepper (1); *Kiel Institute for the World Economy, Germany (1)*

**The function of the miombo woodlands of the westen of tanzania as carbon sinks**

P.Z. Matata (1) presenting, F.M. Bagarama (1), B.M. Gama (1); *Agricultural Research Institute - Tumbi, Tanzania (1)*

**The function of the miombo woodlands of the westen of tanzania as carbon sinks**

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**The function of miombo woodlands in westen tanzania as carbon sinks**

P.Z. Matata (1) presenting, F.M. Bagarama (1); *Tumbi Agricultural Research Institue Tabora, Tanzania (1)*

**Impacts of Land use/Land Cover Changes on Vegetation and Soil Carbon Stocks in Southern Spain (1956-2007)**

M. Muñoz-Rojas (1,2) presenting, A. Jordán (2), L-M. Zavala (2), M. Anaya-Romero (1); *Evenor-Tech, CSIC Spin-off, Instituto de Recursos Naturales y Agrobiología de Sevilla (CSIC), Avda. Reina Mercedes, 10, 41012, Sevilla, Spain, Spain (1), MED\_Soil Research Group. Dpto. de Cristalografía, Mineralogía y Química Agrícola, Facultad de Química (Universidad de Sevilla), C/Profesor García González, 1, 41012, Sevilla, Spain, Spain (2)*

**Investigation in the effect of agriculture in salnization of soil (case study Hassanabad Dameghan)**

M. Naeimi (1) presenting, G. Zehtabian (1), S. Feiznia (1), M. Jafari (1); *Tehran University, Iran (1)*

**Agroclimatic potential in central Siberia in a changing XXI century climate**

N.M. Tchebakova (1), E.I. Parfenova (1) presenting, G.I. Lysanova (2), A.J. Soja (3); *V.N. Sukachev Institute of Forest, Siberian Branch of the Russian Academy of Sciences., Russia (1), Institute of Geography, Siberian*



*Branch, Russian Academy of Sciences, Ulan-Batorskaya 1, Irkutsk,, Russia (2), National Institute of Aerospace (NIA), NASA Langley Research Center, Climate Sciences,, USA (3)*

**Land use/cover changes and local environmental management from a historic perspective: the case of Ipeúna, SP, Brazil.**

M. Piva-Silva (1) presenting, G-H. Lui (1), S-M. Molina (1); *Universidade de São Paulo, Brazil (1)*

**GLUES - Global assessment of land use dynamics, greenhouse gas emissions and ecosystem services - scientific coordination and synthesis of the BMBF-research programme on sustainable land management - module A**

R. Seppelt (1) presenting, F.V. Eppink (1), A. Werntze (1); *Helmholtz Centre for Environmental Research - UFZ, Germany (1)*

**Re-transforming the earth by human action: driving land-cover change through the use of economic instruments**

C.A. Sullivan (1) presenting; *Southern Cross University, Australia (1)*

**Modelling Surface Urban Heat Island In A Tropical City**

B-T. Tyubee (1) presenting, R-N. Anyadike (2); *Benue State University, Makurdi, Nigeria (1), University of Nigeria, Nsukka, Nigeria (2)*

**Session: Sustainable Society**

**Socio-Organic Transformations - Organic Agriculture as a Driving Force Towards a More Sustainable Society?**

V. Aversano-Dearborn (1) presenting, R. Paxton (1), S. Leipold (1,3), M. Klimek (1,2); *University of Natural Resources and Life Sciences, Austria (1), Institute of Social Ecology Vienna, Austria (2), University of Augsburg, Germany (3)*

**Responses to Environmental & Societal Challenges for our Unstable Earth (RESCUE) foresight initiative - towards a European response to grand challenges in sustainability research and learning**

B. Avril (1) presenting, L. Hordijk (2), G. Palsson (3), J. Jaeger (4); *European Science Foundation, France (1), IES, Joint Research Centre, Italy (2), Univ. Iceland, Iceland (3), -, Austria (4)*

**Multidisciplinary research efforts to connect knowledge to action for sustainable development in Canaima National Park, Venezuela**

B. Bilbao (1) presenting, H. Vessuri (2), I. Sanchez-Rose (3), I. Rodriguez (2), A. Leal (1), J. Rosales (4); *Universidad Simón Bolívar, Venezuela (1), Instituto venezolano de Investigaciones Científicas, Venezuela (2), Universidad Central de Venezuela, Venezuela (3), Universidad Experimental de Guayana, Venezuela (4), Estación Científica Parupa CVG, Venezuela (5), Technische Universität München, Venezuela (6), Indigenous community of Santa Teresita de Kavanayén, Gran Sabana, Parque Nacional Canaima, Edo. Bolívar., Venezuela (7)*

**Utility of fodder banks for reducing impacts of anthropogenic pressure and climatic changes from forests of Western Himalaya**

S. Dhyani (1) presenting, D. Dhyani (1); *G.B.Pant Institute of Himalayan Environment and Development, India (1)*

**Collective action for the transition to coastal sustainability**

B.C. Glavovic (1) presenting, V. Cummins (2), T. Stojanovic (3), S.B. Olsen (4); *Massey University, New Zealand (1), University College Cork, Ireland (2), University of St Andrews, UK (3), University of Rhode Island, USA (4)*

**Future cities visioning: systematizing the urban design process**

D. Gondhalekar (1) presenting, F. Contreras (2), R. Amirtahmasebi (3), T. Gadda (4), C. Costa (5), H. Kallmayer (6); *Center for Development Research (ZEF), Bonn University, Germany (1), Inter-American Development Bank, USA (2), World Bank, USA (3), Federal University of Technology Paraná, Brazil (4), Centre for Local Actors in Latin America (CIFAL), Brazil (5), Technical University Munich, Germany (6)*

**Peer-elicited values-based indicators as a strong catalyst for collective behaviour change through transformational learning**

M.K. HARDER (1) presenting, G. BURFORD (1), E. HOOVER (1), G. PIGGOT (1), D. PODGER (1); *university of brighton, UK (1)*

**Social engineering for sustainable development**

R. Jaishanker (1) presenting, V. Sarojkumar (1), C.S.P. Iyer (1); *Indian Institute of Information Technology and Management - Kerala, India (1)*

**Facilitation of paradigm switch in urban biodiversity and water management, through bridging LTSER and EU FP7 SWITCH experiences**

K. Krauze (1) presenting; *ERCE, Poland (1)*

**Environmental Education and Stewardship Through Direct Action, Civic Engagement and Community-Based Research in the Great Lakes Region**

E. Lioubimtseva (1) presenting, J. Vail (1), D. Koetje (2), T. Vanveelan (3), A. Stainman (4), K. Tindall (4); *Grand Valley State University, USA (1), Calvin College, USA (2), Muskegon Community College, USA (3), Blandford Nature Center, USA (4)*

**Contribution of Environmental Education in the Analysis of Vulnerability of Climate Change**

M. Magalhães (1), M. Lombardo (1) presenting, D. Leite (1), L. Volpe (1), J. Lourenco (1), S. Antonello (1); *São Paulo State University, Brazil (1)*

**Bellairs Research Institute - building a collective culture of sustainability**

S.D. Mahon (1) presenting; *Bellairs Research Institute, Barbados (1), McGill University, Canada (2)*

**Towards a collective awareness to tackle climate emergency**

E. Sautkina (1), R. Maiden (1) presenting; *Queen Mary University of London, UK (1)*

**Reconstructing sustainability science: from knowledge-first to a science of design**

T. Miller (1) presenting; *Portland State University, USA (1)*

**Learning to cope with complexity through thematic interdisciplinary projects**

S.E. Moraes (1) presenting; *Federal University of Ceará, Brazil (1)*

**You Can't Get There From Here: How Current Economic Structures and Institutions Ensure That There Will Be No "Prosperous Way Down".**

A-D. Park (1) presenting; *University of Winnipeg, Canada (1)*

**Assessing societal interventions to stay within safe socio-ecological boundaries**

D.E. Reusser (1) presenting, T. Grothmann (1), C. Pape (1), T. Lissner (1), A. Garcia Cantu Ros (1), J.P. Kropp (1); *Potsdam Institute for Climate Impact Research, Germany (1)*

**Why education still matters in processes of social learning and change for sustainable futures**

H.B. Sisitka (1) presenting; *Rhodes University, South Africa (1)*

## **FAPESP Bioenergy Research Program BIOEN: science for a bio-based society.**

G.M. Souza (1) presenting, H. Cantarella (2), R. Maciel (3), M.A. Van Sluys (4), A. Nassar (5), C.H. Brito Cruz (6); *Instituto de Química – Universidade de São Paulo, Brazil (1), Instituto Agrônomo de Campinas, Brazil (2), Faculdade de Engenharia Química – Universidade Estadual de Campinas, Brazil (3), Instituto de Biociências – Universidade de São Paulo, Brazil (4), ICONNE – Instituto de Estudos do Comércio e Negociações Internacionais, Brazil (5), Instituto de Física – Universidade Estadual de Campinas, Brazil (6)*

## **Session: Challenges**

### **Unlocking unsustainable business practices in ASEAN rice industry towards greener economy**

W. Aaltonen (1) presenting, P. King (1); *Institute for Global Environmental Strategies, Thailand (1)*

### **Developing the Cross-cutting Study in Monsoon Asia Region - MAIRS Progress Report**

L. AILIKUN (1) presenting; *MAIRS IPO, Institute of Atmospheric Physics, Chinese Academy of Sciences, China (1)*

### **Low-carbon life in hangzhou - citizen responses to climate change mitigation initiatives in a chinese city**

N.V. Blichfeldt (1) presenting; *University of Copenhagen, Denmark (1)*

### **The Transition to a Green Economy: A Roadmap**

M. Chowdhury (1) presenting; *IUBAT, Bangladesh (1)*

### **Sustainability and modernity of Mongolian pastoral nomadism**

N. Fujita (1) presenting; *Research Institute for Humanity and Nature, Japan (1)*

### **Reconciling climate policies and development- a case study on india**

S. MATHY (1), C. GUIVARCH (1) presenting; *Centre International de Recherche sur l'Environnement et le Développement, France (1)*

### **The potential of taxation policy in reducing transportation energy pressure and CO<sub>2</sub> emissions in a developing country context: a case study from China**

Y. Wang (1) presenting, L. Hansson (1), N. Sha (1), Y. Ding (1), R. Wang (1); *Shandong University, China (1)*

## **Key event: Youth Perspectives**

### **Cooperative decisions between farmers and rural households under CDM afforestation for the risk-sharing strategies**

U. Djanibekov (1) presenting, A. Bhaduri (1), A. Khamzina (1), J. von Braun (1); *Center for Development Research (ZEF), University of Bonn, Germany (1)*

## **Session: Earth Stewardship**

### **Engaging citizens to take action on biodiversity issues: a serious game...**

E. Balian (1) presenting, C. Deuil (1); *Positive Actions For Biodiversity, France (1)*

### **Defining regional boundaries for human activities through analysis of past records: examples from China.**

J.A. Dearing (1) presenting; *University of Southampton, UK (1)*

### **Vulnerability and Adaptive Capacity of Mongolian Herders to Extreme Weather Events: Challenges and Potential Solutions**

M.E. Fernandez-Gimenez (1) presenting, B. Batkhishig (1), B. Batbuyan (2); *Colorado State University, USA (1), Center for Nomadic Pastoralism Studies, Mongolia (2)*

### **International Year of Deltas 2013 (IYD-2013): A Proposal**

E. Foufoula-Georgiou (1) presenting, J. Syvitski (2), C. Paola (1), C-T. Hoanh (3), P. Tuong (4), C. Vörösmarty (5); *National Center for Earth-surface Dynamics, USA (1), Community Sediment Dynamics Modeling System, USA (2), International Water Management Institute, People's Democratic Republic of Lao (3), International Rice Research Institute, The Philippines (4), Global Water Systems Program, USA (5), Land Ocean Interactions in the Coastal Zone, Germany (6), Anthropological Center for Training and Research on Global Environmental Change, USA (7), Geological Survey of Japan, Japan (8)*

### **Human exchange programme: the future for our environment**

L.K. Gan (1) presenting, N.M.L. Chee (2); *University of Edinburgh, UK (1), Independent, UK (2)*

### **Bio-centric development: an alternative approach for planet and people**

E. Gish (1) presenting; *Nature Culture Consulting, USA (1)*

### **The regional nature of global challenges: an integrated Regional Earth System Model (iRESM)**

K.A. Hibbard (1) presenting, A. Janetos (2), L.Y. Leung (1), R.H. Moss (2), L. Clarke (2), A. Thomson (2); *Pacific Northwest National Laboratory, USA (1), Joint Global Change Research Institute, USA (2)*

### **Emerging Issues of East Asian Fisheries in Conjunction with Changes in Climate and Social Systems in the 21<sup>st</sup> Century**

S. Kim (1) presenting, L-L. Low (2); *Pukyong National University, Republic of Korea (1), Alaska Fisheries Science Center, USA (2)*

### **The environmental virtual observatory: A new vision for integrated decision support and communication and enhanced access and analysis of environmental information**

A.T. McDonald (1) presenting, B.A. Emmett (2), R.J. Gurney (3); *University of Leeds, UK (1), CEH Bangor, UK (2), University of Reading, UK (3)*

### **Food security and food systems: bringing diverse actors together to address the future of human development**

A. Misselhorn (1) presenting, P. Aggarwal (2), P. Ericksen (3), J. Ingram (4), P. Gregory (5), L. Horn-Phathanothai (6); *HEARD, University of KwaZulu-Natal, South Africa (1), Climate Change, Agriculture and Food Security, IWMI, India (2), People, Livestock and the Environment, International Livestock Research Institute, Kenya (3), Environmental Change Institute, Oxford University Centre for the Environment, UK (4), East Malling Research, University of Reading, UK (5), International Cooperation, World Resources Institute, USA (6), Agricultural Development Economics Division, Food and Agriculture Organization of the United Nations, Italy (7)*

### **Science for society in the Arctic and beyond.**

M-S. Murray (1) presenting, P. Schlosser (2), J-C. Gascard (3), B. Forbes (4), J. Wandel (5); *University of Alaska Fairbank, USA (1), Columbia University, USA (2), Univeriste Pierre et Marie Curie, France (3), Univeristy of Lapland, Finland (4), University of Waterloo, Canada (5)*

### **Operationalizing planetary boundaries: The European Sustainability Footprint**

N. Pelletier (1) presenting, A. Miola (1), M. Brandao (1), S. Sala (1), M. Goralczyk (1), E. Rosenbaum (1); *Institute for Environment and Sustainability, Joint Research Centre, Italy (1)*

**Socio-biogeochemical cascading and feedbacks of global and regional nitrogen cycles; ILTER research initiative for global sustainability**

H. Shibata (1) presenting; *Hokkaido University, Japan (1)*

**Do national-scale and municipality-scale sustainability assessments describe the same realities?**

C. Tonitto (1) presenting; *Cornell University, USA (1)*

**Scenarios for global sustainable development**

D.P. van Vuuren (1) presenting, M. Kok (1), P. Lucas (1), A. Prins (1); *PBL, The Netherlands (1)*

**Session: Water**

**An Integrated Approach to Water Quality Management in Densely Populated Catchments**

T.T. Arteaga-Reyes (1) presenting, S. Franco-Maass (1); *INSTITUTO DE CIENCIAS AGROPECUARIAS Y RURALES, UNIVERSIDAD AUTÓNOMA DEL ESTADO DE MÉXICO, Mexico (1)*

**Session: Water**

**GEOSS water cycle Integrator: blue water for green growth**

T. Koike (1) presenting, D. Cripe (2), R. Lawford (3); *The University of Tokyo, Japan (1), Group on Earth Observations (GEO) Secretariat, Swaziland (2), Group on Earth Observations (GEO), Canada (3)*

**Effects of human activities on the hydrological processes in arid regions of Central Eurasia - a transdisciplinary approach**

J. Kubota (1) presenting; *Research Institute for Humanity and Nature, Japan (1)*

**Drought management: a multi-level governance approach in China**

H. Li (1) presenting, J. Gupta (2); *Changjiang River Scientific Research Institute, China (1), UNESCO-IHE, The Netherlands (2)*

**The Impacts of Climate Change and LUCC on the Runoff Regulation of ecosystem in the Headwater areas of Changjiang River and Huanghe River in the Tibetan Plateau**

J. Liu (1) presenting, Q. Shao (1), J. Fan (1); *The Institute of Geographical Sciences and Natural Resource Research, China (1)*

**Groundwater resilience to climate change in Africa**

A-M. MacDonald (1) presenting, R-G. Taylor (2), R-C. Calow (3), H-C. Bonsor (1), D-J. Lapworth (1), L. Maurice (1); *British Geological Survey, UK (1), University College London, UK (2), Overseas Development Institute, UK (3)*

**An integrated scenario planning-real options planning framework for climate change adaptation in water management**

H. Malano (1) presenting, A. Davidson (1), A. Anshuman (2), B. George (1), B. Nawarathna (1), P. Pavelic (3); *University of Melbourne, Australia (1), The Energy and Resources Institute, India (2), International Water Management Institute, Sri Lanka (3)*

**Building capacity for integrated water management in cities under pressure - case studies from Indonesia and Vietnam**

M.P. Inman (1), S. Meharg (1) presenting, D.G.C. Kirono (1), M. Nguyen (1), N.H. Trung (2), R.A. Barkey (3); *Climate Adaptation Flagship, CSIRO, Australia (1), DRAGON Institute of Climate Change Research, Can Tho*

University, Viet Nam (2), Research Centre for Climate Change Impacts in Eastern Indonesia, Hasanuddin University, Indonesia (3)

#### **Integrated assessment toward trans-boundary solution and sustainable development**

T. Nakayama (1,2) presenting, D. Shankman (3); *National Institute for Environmental Studies (NIES), Japan (1), Centre for Ecology & Hydrology (CEH), UK (2), University of Alabama, USA (3)*

#### **Water Wars at the Third Pole: Understanding Climate Change and Resource Conflict in South Asia**

A.J. Nightingale (1) presenting, H.R. Ojha (2), K.K. Shrestha (3); *University of Edinburgh, UK (1), Southasian Institute of Advanced Studies, Nepal (2), University of Sydney, Australia (3)*

#### **Shared resources and controversial dams. The Mekong River case.**

S. Paladini (1) presenting; *Coventry University, UK (1)*

#### **Sustainability Governance: an integrated example of water, knowledge, policy and trade**

B. Avril (1) presenting; *ESF, France (1)*

#### **A mathematical model to simulate impacts of human interventions and climate change over Pantanal Wetland (South America) spatio-temporal inundation patterns**

A.R. Paz (1) presenting, W. Collischonn (2), C.E.M. Tucci (2); *Federal University of Paraiba, Brazil (1), Institute of Hydraulic Research, Brazil (2)*

#### **A Dynamic Information Framework: A Multi-Sector and Scale, Geospatial Gateway for Water Resources**

J.E. Richey (1) presenting, E.C.M. Fernandes (2); *University of Washington, USA (1), World Bank, USA (2)*

#### **Spatial Differentiated Impact Assessment of Chemicals in Freshwater Ecosystem at Multiple Scale**

S. Serenella (1) presenting, D. Marinov (1), M. Trombetti (1), D. Pennington (1); *European Commission- Joint Research Centre, Italy (1)*

#### **Water security and services in the coastal cities**

M. Taniguchi (1) presenting; *Research institute for Humanity and Nature, Japan (1)*

#### **Environmental trade-offs of food trade: deriving the opportunity cost of green water**

B.A. Willaarts (1,2) presenting, A. Garrido (1,2), I. Niemeyer (1,2); *RESEARCH CENTRE FOR THE MANAGEMENT OF AGRICULTURAL AND ENVIRONMENTAL RISKS (CEIGRAM). Technical University Madrid, Spain (1), Water Observatory-Botin Foundation, Spain (2)*

#### **Analysis of the current policy framework for water resources management in China and recommendations to further support integrated water resources management (IWRM)**

Q. Xia (1) presenting, S. Schulze (2); *UNEP-Tongji Institute of Environment for Sustainable Development, College of Environmental Sciences and Engineering, Tongji University, Shanghai, China (1), Department of Civil and Public Law with special references to Environmental and European Law, Brandenburg University of Technology, Cottbus, Germany (2)*

#### **Global irrigation water withdrawal estimation for sustainable water use**

S. YOSHIKAWA (1) presenting, H. Yamada (1), S. Endo (1), N. Hanasaki (2), S. Kanae (1); *Department of Mechanical and Environmental Informatics, Tokyo Institute of Technology, Japan (1), National Institute for Environmental Studies, Japan (2)*

#### **Governing the Water Resources Continuum in Malaysia: A Question of Mandate**

S. Aziz (1) presenting; *Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, Malaysia (1)*

**Dust emissions from drylands can affect regional hydrology of large rivers: how will this impact future water supplies, and what can be done about it?**

J. Belnap (1) presenting, S. Munson (2), T-H. Painter (2), J-S. Deems (3,4), R.R. Reynolds (5), M. Reheis (4), J.C. Neff (5); *USGS, Southwest Biological Science Center, Moab UT, USA (1), Jet Propulsion Laboratory, NASA, Pasadena, CA, USA (2), National Snow and Ice Data Center, University of Colorado, Boulder, CO, USA (3), NOAA Western Water Assessment, University of Colorado, Boulder, CO, USA (4), USGS, USA (5), University of Colorado, USA (6)*

**Climate change and conflict over water in the River Niger Basin**

M.C. Goulden (1,2) presenting, R. Few (2,1); *Tyndall Centre for Climate Change Research, UK (1), School of International Development, University of East Anglia, UK (2)*

**Water, watersheds and health: Integrating ecohealth and watershed management approaches for water governance**

M. Parkes (2,6), L.K. Hallstrom (1,6) presenting, K. Morrison (3,6), M. Bunch (4,6), H. Venema (5,6), C. Neudoerffer (6); *University of Alberta, Canada (1), University of Northern British Columbia, Canada (2), Guelph University, Canada (3), York University, Canada (4), International Institute for Sustainable Development, Canada (5), Network for Ecosystem Sustainability and Health, Canada (6)*

**From Coping to Adaptability: Navigating Complex Choices in Adaptive Capacity and Water Governance**

M.S. Hill (1) presenting; *University of Geneva, Switzerland (1)*

**Towards the understanding, simulation and management of multi-aquifer basins: The Thames Basin, UK.**

A.G. Hughes (1) presenting, D.W. Peach (1), C.R. Jackson (1), S.H. Bricker (1), M.M. Mansour (1), J.R. Ford (1); *British Geological Survey, UK (1)*

**Environmental flow requirements and their management**

S. Jain (1) presenting; *Indian Institute of Technology, Roorkee, India (1)*

**Session: Intensifying Agriculture**

**Impact of improved rice varieties adoption on income and poverty among rice farmers in cameroon: local average treatment effect (late) approach**

B-P. Anissa (1) presenting, A. Diagne (1), D. Malaa (1); *Sub-regional Institute for Statistics and Applied Economics (ISSEA-Yaounde), Cameroon (1)*

**Pockets of social-ecological memory-addressing food security and agro-biodiversity in landscapes of food production**

S. Barthel (1) presenting, C. Crumley (1), U. Svedin (1), C. Folke (1); *Stockholm University, Sweden (1)*

**Water wise – are we getting enough crop per drop?**

K.A. Brauman (1) presenting, S. Siebert (2), J.A. Foley (1); *University of Minnesota Institute on the Environment, USA (1), University of Bonn Institute of Crop Science and Resource Conservation, Germany (2)*

**Closing Science, Policy, and Governance Gaps to Achieve GHG Benefits from Land Sparing**

A-S. Cohn (1) presenting; *University of California, Berkeley, USA (1)*

**Does agricultural intensification reduce pressure on forests? Insights from two Amazon regions**

R. DeFries (1) presenting, M. Macedo (1), V. Gutiérrez-Vélez (1); *Columbia University, USA (1)*

**More fertiliser for more food? An analysis of future fertiliser use and resulting greenhouse gases emission using the global crop yield model PEGASUS**

D. Deryng (1) presenting, N. Ramankutty (2), R. Warren (1), M. Labriet (3); *Tyndall Centre, University of East Anglia, UK (1), McGill University, Canada (2), ENERIS Environment Energy Consultants s.l., Spain (3)*

**Adaptation of sheep breeds to tropical environments**

C. McManus (1), H. Louvandini (2), T.P. Paim (2), R.S. Martins (3), J.O.J. Barcellos (1), E.A. Dias (1) presenting; *Universidade Federal do Rio Grande do Sul, Brazil (1), Universidade de São Paulo, Brazil (2), Universidade de Brasília, Brazil (3)*

**A sustainable planet without farmers? Bifurcation issues in agricultural transitions under environmental challenges**

B. Dorin (1,2) presenting, J.C. Hourcade (2,3); *CIRAD, France (1), CIREN, France (2), CNRS, France (3)*

**Planetary boundaries and efficiencies in agriculture**

V. Gitz (1,2) presenting, A. Meybeck (1); *FAO, Italy (1), CIREN, France (2)*

**Getting REAL - intensification of coffee systems can increase the effectiveness of REDD mechanisms**

M.R.A. Noponen (1,2), J.P. Haggard (2,3) presenting, G. Edwards-Jones (1), J.R. Healey (1); *Bangor University, UK (1), CATIE, Costa Rica (2), University of Greenwich, UK (3)*

**Best practice on "climate smart" agriculture**

D.J.B. Howlett (1) presenting; *University of Leeds, UK (1)*

**Innovative Management of Legumes in the 21st Century**

H.H. Jensen (1) presenting; *Aarhus University, Denmark (1)*

**Examining the roles that changing harvested areas, closing yield-gaps, and increasing yield ceilings have had on crop production**

M. Johnston (1) presenting, D. Ray (1), N. Mueller (1), J-A. Foley (1), J. Gerber (1); *University of Minnesota, USA (1)*

**Low nitrous oxide emission from organic management results in efficient production**

A. Kasimir Klemetsson (1) presenting, M. Stenberg (2,3), J. Nylander (1); *Dept. of Earth Sciences University of Gothenburg, Sweden (1), Rural Economy and Agricultural Society of Skaraborg, Sweden (2), Dept. of Soil and Environment, Swedish University of Agricultural Sciences, Sweden (3)*

**Growing biomass in arid environments: using CO<sub>2</sub> to reduce water usage**

T. Kruger (1) presenting; *University of Oxford, UK (1)*

**Organic Agriculture - A Way Towards Climate Neutral Farming Through Enhanced Soil Carbon Sequestration?**

J. Leifeld (1) presenting, J. Fuhrer (1); *Agroscope Reckenholz-Tänikon Research Station ART, Air Pollution / Climate Group, Switzerland (1)*

**Environmental impacts of integrating biomass production into European agriculture**

J.P. Lesschen (1) presenting, M.P. de Wit (2), M.H.M. Londo (3), A.P.C. Faaij (2); *Alterra, Wageningen UR, The Netherlands (1), Copernicus Institute, Utrecht University, The Netherlands (2), Energy research Centre of the Netherlands, The Netherlands (3)*

**Improving Global Agricultural Production by Mitigating Ozone Damages to Crops via Methane Emission Controls and Ozone Resistant Cultivar Selection**



S. Avnery (1), D.L. Mauzerall (1) presenting, A.M. Fiore (2,3); *Princeton University, USA (1), Columbia University, USA (2), Geophysical Fluid Dynamics Laboratory, USA (3)*

#### **Climate Smart Agriculture**

A. Meybeck (1) presenting, P. Holmgren (1), V. Gitz (1,2); *FAO, Italy (1), CIREA, France (2)*

#### **Opportunities and tradeoffs for global agricultural intensification**

N.D. Mueller (1) presenting, J.S. Gerber (1), M. Johnston (1), D.K. Ray (1), N. Ramankutty (2), J.A. Foley (1); *Institute on the Environment, University of Minnesota, USA (1), Department of Geography and Global Environmental and Climate Change Center, McGill University, Canada (2)*

#### **Climate change and pathways for agricultural development in Africa: interrogating policy narratives, actors and interests**

L.O. Naess (1) presenting, J. Thompson (1); *Institute of Development Studies, UK (1)*

#### **Sensitivity analysis of estimated global N<sub>2</sub>O emission in cultivated areas**

A. Philibert (1) presenting, C. Loyce (2), D. Makowski (1); *INRA-UMR Agronomie, France (1), AgroParisTech-UMR Agronomie, France (2)*

#### **The potential for reduction of net carbon emissions through management of biomass flows in 2050**

T. Powell (1) presenting, T. Lenton (1); *University of Exeter, UK (1)*

#### **Rural aquaculture: way to poverty alleviation and livelihood security in Patiya, Bangladesh**

D. Sarker (1) presenting, M.S. Hossain (1); *Institute of Marine Sciences and Fisheries, University of Chittagong, Bangladesh (1)*

#### **Afforestation of degraded cropland as a water-saving and carbon sequestering land-use option in the dryland regions of the Aral Sea Basin, Central Asia**

T. Schachtsiek (1) presenting, J.P.A. Lamers (1), A. Khamzina (1); *Center for development research, Bonn, Germany (1)*

#### **Perspectives in regional agriculture to address global challenges of climate change**

M-T. Sebastia (1,2) presenting, R. Llorba (1), J. Plaixats (3), G. Dominguez (1), J. Lloveras (4); *Centre Tecnològic Forestal de Catalunya, Spain (1), Universitat de Lleida, Spain (2), Universitat Autònoma de Barcelona, Spain (3), Centre Universitat de Lleida –IRTA, Spain (4)*

#### **Agroecological opportunities for intensifying agriculture within planetary boundaries**

N. Uphoff (1) presenting, E. Styger (1), A. Kassam (2); *Cornell University, USA (1), University of Reading, UK (2)*

#### **Reconciling increasing food production with forest conservation: win-win opportunities in Brazil**

N.F. Walker (1,2) presenting, D.M.M. Mariuzzo (3,2); *National Wildlife Federation, USA (1), Brazilian Sustainable Beef Working Group, Brazil (2), Rabobank, Brazil (3)*

#### **Opportunities for reducing excess nitrogen in croplands while maintaining current crop yields.**

P.C. West (1) presenting, N.D. Mueller (1), J.S. Gerber (1), J.A. Foley (1); *University of Minnesota, USA (1)*

#### **Feeding the world with a climate friendly and resource conserving agriculture: no pressure!**

J. Wright (1,2) presenting; *Coventry University, UK (1), Garden Organic, UK (2)*

### **Session: Freshwater Ecosystems**

**Local Exploitation of Edible Oyster "Etheria elliptica" in Pendjari Protected Area in Benin (West Africa): Environmental Threats, Human Impact and Species Conservation Strategies**

G-D. AKELE (1) presenting, P. LALEYE (1), E-K. LINSÉNMAIR (2); *Hydrobiology and Aquaculture Laboratory, Faculty of Agriculture Science, University of Abomey-Calavi, Benin, Benin (1), Lehrstuhl für Tierökologie und Tropenbiologie, Theodor-Boveri-Institut, Universität Würzburg, Germany, Germany (2)*

**Diversity partitioning and conservation priorities in tropical river ecosystems**

A. Bhat (1) presenting, A. Magurran (2); *Indian Institute of Science Education and Research-Kolkata, India (1), University of St Andrews, UK (2)*

**Towards a virtual observatory for ecosystem services and poverty alleviation**

W. Buytaert (1) presenting, S. Baez (2), C. Veliz (3); *Imperial College London, UK (1), CONDESAN, Ecuador (2), Universidad Agraria de La Molina, Peru (3)*

**Detecting changes in the Esteros del Ibera wetland system**

R. Ferrati (1), F. Dukatz (1), L. Corrales (1), G. Canziani (1) presenting; *Instituto Multidisciplinario sobre Ecosistemas y Desarrollo Sustentable, Facultad de Ciencias Exactas, Universidad Nacional del Centro de la Provincia de Buenos Aires, Pinto 399, 7000 Tandil, Argentina (1)*

**Effects of Urbanization on Environmental Factors and Structure of Fish Assemblages in Streams of Southern Brazil**

A.M. Cunico (1,4) presenting, E.A. Ferreira (4), A.A. Agostinho (2), A.C. Beaumord (3); *Laboratory of Ecology, Fishing and Ichthyology, Federal University of Paraná, Brazil (1), Department of Biology/NUPELIA, Maringá State University, Brazil (2), Laboratory of Environmental Impact Studies, University of the Valley of Itajaí, Brazil (3), Graduate Course in Ecology of Inland Aquatic Ecosystems, Maringá State University, Brazil (4)*

**Long-term monitoring of the biodiversity of migratory aquatic birds in wetlands: a criterion to study environmental changes**

Y. Erfanfard (1), P. Goudarzian (1) presenting; *Dept. of Desert Region Management, College of Agriculture, Shiraz University, Shiraz, Iran (1)*

**Linking conservation of wetland resources with livelihood generation: Case study from Central India**

N.K. Heda (1) presenting; *SAMVARDHAN SAMAJ VIKAS SANSTHA, India (1)*

**A Comparative Study of Farmland Pond Ecosystem and Practical Conservation Activities between Great Britain and Japan**

T. Kizuka (1) presenting, J. Biggs (2), A. Rendell (3), P. Williams (2), C. Stoate (4); *National Institute for Environmental Studies, Japan (1), Pond Conservation, UK (2), Oxford Brookes University, UK (3), Game and Wildlife Conservation Trust, UK (4)*

**Understanding Temporal Change in Tropical Freshwater Fish Communities**

A.E. Magurran (1) presenting; *University of St Andrews, UK (1)*

**The ancient Lake Biwa as a biodiversity hot spot: how to detect drivers of biodiversity loss?**

J. Shibata (1), Z. Karube (2), Y. Satoh (3), S. Yachi (1), S. Nakano (1), N. Okuda (1) presenting; *Center for Ecological Research, Kyoto University, Japan (1), National Institute for Environmental Studies, Japan (2), Lake Biwa Research Institute, Japan (3)*

**Effects of Protected Areas on Freshwater Ecosystem Services in the Indo-Gangetic Basin**

B. Pandeya (1) presenting, M. Mulligan (1); *King's College London, UK (1)*

**Ecological functions of floating mats in management of freshwater ecosystems**

I. Paradi (1) presenting, A. Zold-Balogh (1), B. Berecz (1), Z. Bratek (1), M. Balogh (1); *Eotvos Lorand University, Department of Plant Physiology and Molecular Plant Biology, Hungary (1)*

### **Huge Tropical Floodplain Ecosystems Across Continents: Gaps of Knowledge**

P. Parolin (1) presenting; *University of Hamburg, Germany (1)*

### **Meeting the global challenges of water scarcity**

B.D. Richter (1) presenting; *The Nature Conservancy, USA (1)*

### **The Nature Index for Norway: an intergrated measure of freshwater biodiversity**

A.K. Schartau (1) presenting, T. Hesthagen (1), B.M. Larsen (1), M. Lindholm (2), G. Certain (1,3), S. Nybø (4,1); *Norwegian Institute for Nature Research (NINA), Norway (1), Norwegian Institute for Water Research (NIVA), Norway (2), Institute of Marine Research (MR), Norway (3), 4Norwegian Directorate for Nature Management, Norway (4)*

### **Development of a tool for setting comprehensive European freshwater wetland conservation priorities under climate change**

C. Schleupner (1) presenting, U.A. Schneider (1), T. Stacke (2); *University of Hamburg, Research Unit Sustainability and Global Change, KlimaCampus, Hamburg, Germany (1), Max Planck Institute of Meteorology, Hamburg, Germany (2)*

### **European freshwater biodiversity: patterns, stressors and conservation priorities at the catchment scale**

N. Sommerwerk (1,2) presenting, J. Freyhof (1), D. Hering (3), K. Tockner (1,2); *Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany (1), Institute of Biology, Free University Berlin, Germany (2), University of Duisburg-Essen, Germany (3)*

## **Session: Sea Level**

### **The effect of long range dependence on the sea-level trend error**

M.S. Bos (1) presenting, I.B. Araújo (1), L. Bastos (1,2); *CIMAR/CIIMAR – Centro Interdisciplinar de Investigação Marinha e Ambiental, Universidade do Porto, Rua dos Bragas, 289, 4050-123 Porto, Portugal (1), Departamento de Geociências, Ambiente e Ordenamento do Território, Faculdade de Ciências da Universidade do Porto, Rua Campo Alegre 687, 4169-007 Porto, Portugal (2)*

### **The reversibility of sea-level rise**

N. Bouttes (1) presenting, J.M. Gregory (1,2), J.A. Lowe (2), A.K. Pardaens (2); *NCAS-Climate, University of Reading, Reading, UK (1), Met Office Hadley Center, Exeter, UK (2)*

### **Ice-Sheet Sources of Sea-Level Variability during the Last Interglaciation**

A.E. Carlson (1) presenting; *University of Wisconsin-Madison, USA (1)*

### **A Bayesian reconstruction of sea level during the twentieth century**

P.G. Challenor (1) presenting, I. Andrianakis (1); *National Oceanography Centre, UK (1)*

### **How unique is mean sea level rise over the last twenty years?**

D. Chambers (1) presenting, R-S. Nerem (2,3), M. Merrifield (4), G. Mitchum (1); *College of Marine Science, University of South Florida, USA (1), Colorado Center for Astrodynamic Research, University of Colorado at Boulder, USA (2), CIRES, University of Colorado at Boulder, USA (3), Department of Oceanography, University of Hawai'i at Manoa, USA (4)*

### **When did recent rapid sea-level rise start?**

W.R. Gehrels (1) presenting, P.L. Woodworth (1); *Plymouth University, UK (1), National Oceanography Centre Liverpool, UK (2)*

#### **A 21st century challenge: extreme high sea levels and coastal flooding**

I.D. Haigh (1) presenting, R.J. Nicholls (1); *University of Western Australia, Australia (1), University of Southampton, UK (2)*

#### **The semiannual oscillation of southern ocean sea level**

A. Hibbert (1,2) presenting, H. Leach (2), P.L. Woodworth (1); *National Oceanography Centre, UK (1), University of Liverpool, UK (2)*

#### **Reconstruction of Regional Sea Level Variability Using Multi-Variate Regression Against Wind Stress**

S. Holgate (1) presenting, M. Karpytchev (2), G. Wöppelmann (2); *National Oceanography Centre, Liverpool, UK (1), UMR 6250 LIENSs, Université de la Rochelle -- CNRS, La Rochelle, France (2)*

#### **The Role of the Permanent Service for Mean Sea Level in the 21st Century**

S. Holgate (1) presenting, A. Matthews (1), K. Gordon (1), L. Rickards (1,2); *Permanent Service for Mean Sea Level, Liverpool, UK (1), British Oceanographic Data Centre, Liverpool, UK (2)*

#### **The anatomy of the worst possible extra-tropical storm surge: limiting factors for coastal hazards**

K. Horsburgh (1) presenting, J. Williams (1), C. Wilson (1), J. Maskell (1); *National Oceanography Centre, UK (1)*

#### **Millennial-scale records of sea-level change along the Atlantic coast of the United States**

B.P. Horton (1) presenting, J.P. Donnelly (2), A.D. Hawkes (2), A.C. Kemp (3); *University of Pennsylvania, USA (1), Woods Hole Oceanographic Institution, USA (2), Yale University, USA (3)*

#### **Trends in extreme high sea levels along the German North Sea coastline compared to regional mean sea level changes**

C. Mudersbach (1), T. Wahl (1), I.D. Haigh (2), J. Jensen (1) presenting; *Research Institute for Water and Environment, University of Siegen, Germany (1), School of Environmental Systems Engineering and the UWA Oceans Institute, University of Western Australia, Australia (2)*

#### **Sea level projections by 2500 with a new generation of climate change scenarios**

S. Jevrejeva (1,2) presenting, J. Moore (2,3), A. Grinsted (5); *National Oceanography Centre, UK (1), College of Global Change and Earth System Science, Beijing Normal University, China (2), Arctic Centre, University of Lapland, Finland (3), Department of Earth Sciences, Uppsala University, Sweden (4), Centre for Ice and Climate, Niels Bohr Institute, University of Copenhagen, Denmark (5)*

#### **The ESA Sea level CCI project: Improve the monitoring of the sea level rise**

G. Larnicol (1) presenting, A. Cazenave (2), J. Johannessen (3), D. Stammer (4), G. Timms (5), J. Benveniste (6); *CLS, France (1), LEGOS, France (2), NERSC, Norway (3), University of Hamburg, Germany (4), LOGICA, UK (5), ESA, Italy (6)*

#### **Antarctic ice sheet contribution to future sea level rise: reducing uncertainty through palaeo-ice sheet research**

R.D. Larter (1) presenting, M.J. Bentley (2,1), A.G.C. Graham (1), C-D. Hillenbrand (1), J.S. Johnson (1), J.A. Smith (1); *British Antarctic Survey, UK (1), Durham University, UK (2)*

#### **The Caspian Sea, a Laboratory for Investigating Impacts and Mitigations of Changes in Sea Levels**

S-A. Leroy (1) presenting, K. Arpe (1,2), H-A. Lahijani (3); *Brunel University, UK (1), Max Plank Institute, Germany (2), INIO, Iran (3)*

### **Impacts and Responses to Sea-Level Rise**

R.J. Nicholls (1) presenting, J. Hinkel (2), A.T. Vafeidis (3), S. Brown (1); *University of Southampton, UK (1), European Climate Forum, Germany (2), Christian-Albrechts University Kiel, Germany (3)*

### **Sea-level rise and impacts projections under a future scenario with large greenhouse gas emission reductions**

A.K. Pardaens (1) presenting, J.A. Lowe (1), S. Brown (2), R.J. Nicholls (2), D. de Gusmão (1); *Met Office, Hadley Centre, UK (1), School of Civil Engineering and the Environment and the Tyndall Centre for Climate Change Research, University of Southampton, UK (2)*

### **From seasonal to decadal variability of sea level in the Arctic Ocean**

A. Proshutinsky (1) presenting, I. Ashik (1); *Woods Hole Oceanographic Institution, USA (1), Arctic and Antarctic Research Institute, Russia (2)*

### **Regional patterns of ocean mass change from GRACE satellite data**

R.E.M. Riva (1) presenting, J.L. Bamber (2), D.A. Lavalée (1), B. Wouters (3), H. Hashemi Farahani (1), P. Ditmar (1); *Delft University of Technology, The Netherlands (1), University of Bristol, UK (2), Royal Netherlands Meteorologic Institute, The Netherlands (3)*

### **Sea level reconstruction using altimetry and tide gauges within the mediterranean basin for the period 1899-2009**

A. Shaw (1) presenting, M. Tsimplis (1), I. Andrianakis (1), P. Challenor (1); *National Oceanography Centre, UK (1)*

### **A Review of Measurements of Ice-Sheet Change**

D.G. Vaughan (1) presenting, G. Hiess (1); *British Antarctic Survey, UK (1)*

### **Recent changes in extreme sea levels and living with those of the future**

P.L. Woodworth (1) presenting, M. Menendez (2), J. Hunter (3); *National Oceanography Centre, UK (1), University of Cantabria, Spain (2), University of Tasmania, Australia (3)*

### **Understanding changes in sea level and the Earth's energy budgets for the 20th and 21st Century**

J.A. Church (1), N.J. White (1), J.M. Gregory (2), P.L. Woodworth (3) presenting; *Centre for Australian Weather and Climate Research, Australia (1), University of Reading, UK (2), National Oceanography Centre, UK (3)*

## **Session: Amazonia**

### **Aerial Rivers and Lakes: a Framework for the Study of Large Scale Moisture transport Over South America and its Relation to Amazonia**

J.M. Arraut (1) presenting, C. Nobre (2), H.M.J. Barbosa (1), J.A. Marengo (2); *Universidade de Sao Paulo, Brazil (1), Instituto Nacional de Pesquisas Espaciais, Brazil (2)*

### **Hydrological response of the Amazon basin to drought events of 1997/98, 2005 and 2010**

L.S. Borma (1) presenting, J. Tomasella (1), L.A. Cuartas (1), E.M. Arraut (1), T.S.F. Silva (1), D.A. Rodrigues (1); *INPE, Brazil (1)*

### **Droughts in Amazonia and Related Features- Observations, Simulations and Projections**

I.F.A. Cavalcanti (1) presenting, V.S. Piccinini (1), L. Alves (1); *National Institute for Space Research, Brazil (1)*

### **The Amazonian drought: an Atlantic influence in a changing pattern**

D. Costa (1) presenting; *University of Sussex, UK (1), Global Canopy Programme, UK (2)*

### **Simulating climate change impacts on Amazonian rainforests: moving beyond quantification of uncertainty**

D-R. Galbraith (1,6) presenting, C. Huntingford (2), P. Zelazowski (1), S. Sitch (3), P-E. Levy (4), P. Meir (5); *University of Oxford, UK (1), CEH Wallingford, UK (2), University of Exeter, UK (3), CEH Edinburgh, UK (4), University of Edinburgh, UK (5), University of Leeds, UK (6)*

### **Impact of Extreme Climatic Events on Inundation Patterns and Carbon Fluxes in the Amazon Basin**

F. Langerwisch (1) presenting, A. Rammig (1), K. Thonicke (1), A. Walz (1), W. Cramer (1); *Potsdam Institute for Climate Impact Research, Earth System Analysis, Germany (1)*

### **Synergistic impacts of climate change and the end of deforestation on land use in the Brazilian Legal Amazon.**

D.M. Lapola (1) presenting, R. Schaldach (2), J. Alcamo (2), A. Bondeau (3), S. Msangi (4), J.A. Priess (5); *Earth System Science Lab, Dep. Ecology, Universidade Estadual Paulista - UNESP at Rio Claro, Brazil (1), Center for Environmental Systems Research, University of Kassel, Germany (2), Potsdam Institute for Climate Impact Research, Germany (3), International Food Policy Research Institute, USA (4), Helmholtz Centre for Environmental Research, Germany (5)*

### **The Amazon floodplain ecosystem: large-scale dynamics, climate change impacts and implications for biodiversity**

E.M.A. Moraes Arraut (1) presenting, T.S.F.S. Silva (1), A.A. Affonso (1), V.F.R. Renó (1), E.M.L.M.N. Novo (1); *National Institute for Space Research, Brazil (1)*

### **Socio-ecological dynamics behind the impact of extreme events in the Amazon**

P. Pinho (1) presenting, J. Tomasella (1); *INPE, Brazil (1)*

## **Session: Ecosystem Services**

### **Beyond ecosystem assessment: integrating human, technological and natural capital in understanding and valuing ecosystem services**

R. Aspinall (1) presenting; *James Hutton Institute, UK (1)*

## **Session: Ecosystem Services**

### **Assessment of Ecosystem Services Change in a Tropical Forest Ecosystem: from Policy, Concept into Practice**

A. Ayanlade (1,2) presenting, N. Drake (2), M. Howard (3); *Dept. of Geography, Obafemi Awolowo university, Ife, Nigeria, Nigeria (1), Department of Geography, King's College London, UK (2), Environmental Health, School of Social Science and Public Policy, Kings College London., UK (3)*

## **Session: Ecosystem Services**

### **Putting ecosystem services science into practice: a global partnership on ecosystem services (ESP)**

R.S. de Groot (1) presenting; *Wageningen University, The Netherlands (1)*

### **Tipping points in systematic conservation planning: conservation of ecosystem services may be accompanied by a collapse in regional capacity for biodiversity conservation**

D.P. Faith (1) presenting; *The Australian Museum, Australia (1)*

**Putting the concept of ecosystem services into practice: a contribution from a TEEB-perspective**

J. Förster (1) presenting, H. Wittmer (1,2); *Helmholtz Centre for Environmental Research - UFZ, Germany (1), Head of TEEB Scientific Coordination, Germany (2)*

**Biofuels and ecosystem services: using the ecosystem services approach to assess biofuel sustainability**

A. Gasparatos (1,9) presenting, P. Stromberg (2,9), R. Costanza (3), M. Esteban (4), T. Gardner (5), J. Ghazoul (6); *Oxford University, UK (1), Swedish Environmental Protection Agency, Sweden (2), Portland State University, USA (3), Waseda University, Japan (4), Cambridge University, UK (5), ETH Zurich, Switzerland (6), Autonomous University of Barcelona, Spain (7), Autonomous University of Madrid, Spain (8), United Nations University, Japan (9), University of Tokyo, Japan (10)*

**How to alter monitoring schemes to let them better capture ecosystem services?**

I.R. Geijzenborffer (1) presenting, P.K.D. Roche (1); *Alterra Wageningen UR, The Netherlands (1), Cemagref, France (2)*

**An ecosystem approach methodological framework for planning and management of coastal wetlands**

S. Ghoneim H. (1) presenting; *PhD, Civic Design, University of Liverpool, UK (1), Lecturer assistant, FURP, Cairo University, Egypt (2)*

**An ecosystem approach methodological framework for Planning and Management of Coastal Wetlands: integrating ecosystem services as a main assessment technique**

S. Ghoneim H. (1) presenting; *Lecturer Assistant, FURP, Cairo University, Egypt (1), PhD, Civic Design, University of Liverpool, UK (2)*

**Ecosystem services evaluated using emergy methodology**

E. Grönlund (1), D. Hedin (1), M. Fröling (1) presenting; *Div. Ecotechnology, Dptm. Engineering and Sustainable Development, Mid Sweden University, Östersund, Sweden (1)*

**Making PES work for the coastal poor: a case study of payments for ecosystem services from African mangroves**

M-R. Huxham (1) presenting, S. Burgess (2), J-G. Kairo (3), M-W. Skov (4), M. Mencuccini (5); *Edinburgh Napier University, UK (1), Earthwatch Institute, UK (2), Kenya Marine and Fisheries Research Institute, Kenya (3), Bangor University, UK (4), Edinburgh University, UK (5)*

**Socio-economic Impacts of Group Organic Certification on Smallholder Coffee Farmers in Nepal**

R-R. Kattel (1) presenting, U. Grote (2); *Assistant Professor, Department of Agricultural Economics, Institute of Agriculture and Animal Science (IAAS), Rampur Campus, Rampur, Chitwan, Nepal (1), Professor, Institute for Environmental Economics and World Trade, Leibniz University of Hannover, Hannover, Germany (2)*

**Assessing the Impact of the SLCP Land Conversion Program on regional Sustainable Development in the District of Guyuan, Western China**

H-J. König (1) presenting, L. Zhen (1,2), K. Helming (1), S. Uthes (1), L. Yang (1,2), H. Wiggering (1); *Leibniz Centre for Agricultural Landscape Research, ZALF, Germany (1), Institute of Geographic Sciences and Natural Resources Research, IGSNRR-CAS, China (2)*

**A Participatory Approach to Model Ecosystem Services in the Future**

P. Lamarque (1) presenting, F. Quétier (1), A. Artaux (1), B. Nettier (2), L. Dobremez (2), S. Lavorel (1); *Laboratoire d'ECologie Alpine (LECA), CNRS (UMR 5553), Grenoble, France (1), CEMAGREF, UR Développement des territoires montagnards, Grenoble, France (2)*

**Harnessing Ecosystem Services in Brazil and Canada**

A. Kassam (1), I. Mello (2), H. Bartz (2), T. Goddard (3), T. Friedrich (4), F. Laurent (5) presenting; *University of Reading, UK (1), Federacao Brasileira de Plantio Direto na Palha (FEBRAPDP), Ponta Grossa, PR, Brazil (2), Alberta Agriculture and Rural Development, Edmonton, Alberta, Canada (3), Food and Agriculture Organization (FAO), Italy (4), Université du Maine, France (5), Cornell University, USA (6)*

**Landscape Planning for the Future: Using Fossil Records to Independently Validate Potential Threats, Opportunities and Likely Future Range-Shifts for Socio-Economically Valuable Plant Species in Europe and Sub-Saharan Africa**

M. Macias-Fauria (1) presenting, K.J. Willis (1); *University of Oxford, UK (1), University of Bergen, Norway (2)*

**Environmental cognitions, land change and social-ecological feedbacks: framework and application in the forest transition of Vietnam**

P. Meyfroidt (1) presenting; *Université catholique de Louvain, Belgium (1)*

**Ecological economics and ecosystem functions - a focus on actors and institutions in payments for ecosystem services**

M-C. Remig (1) presenting; *Institute for Advanced Sustainability Studies, Germany (1)*

**Using Bayesian belief networks for ecosystem services decision support**

R.I. Smith (1) presenting, J.M. Dick (1), E.M. Scott (2); *Centre of Ecology and Hydrology, UK (1), University of Glasgow, UK (2)*

**Potential contribution of environmental services in module 4 of Amapá State Forest (FLOTA/AP) for local and regional sustainable development**

E.D. Sotta (1,3) presenting, V.F. dos Santos (2,3), J.V. Guadalupe (3); *Embrapa Amapá, Brazil (1), Instituto de Pesquisas Científicas e Tecnológicas do Estado do Amapá, Brazil (2), Universidade Federal do Amapá, Brazil (3)*

**Modeling complex systems to guide conservation policy: monitoring the illegal ivory trade**

F.M. Underwood (1) presenting, R.W. Burn (1), T. Milliken (2); *University of Reading, UK (1), TRAFFIC East/Southern Africa, Zimbabwe (2)*

**Combining land use modelling and environmental psychology: Analysing the impact of global change on ecosystem services**

J. Volland (1) presenting, R. Schaldach (1); *Center for Environmental Systems Research, Germany (1)*

## **Session: SIDS States**

**Cultural and scientific challenges of community-based marine resource monitoring and management in Fiji**

A. Breckwoldt (1) presenting, H. Seidel (1); *Independent Researcher, Germany (1)*

**Changing Consumers' Behavior to Mitigate Climate Change Impacts in Mauritius**

L. Bullywon (1) presenting; *Ministry of Finance and Economic Development, Mauritius (1), Economics Web Institute, Italy (2)*

**Impacts Of Environmental Pressure On Jamaica - Responses In Terms Of Bioresources And Technology**

S.A. Mitchell (1) presenting; *University of the West Indies, Mona Campus, Jamaica (1)*

**Protecting the Caribbean Sea: International environmental law and governance challenges for Caribbean SIDS**



M. Scobie (1) presenting; *The University of the West Indies, Trinidad and Tobago (1)*

## **Session: Land-use change**

### **Pastoralist Adaptation to Rangeland Change on the Liben Plain, Southern Ethiopia**

J.E. Bennett (1) presenting; *Coventry University, UK (1)*

### **Land-use change, ecosystem services, and local livelihoods: an evaluation of compensation for ecosystem services programs in Ecuadorian páramo grasslands**

L.L. Bremer (1,2) presenting, K.A. Farley (1), W.G. Anderson (1), C.P. Harden (1); *San Diego State University, USA (1), University of California, Santa Barbara, USA (2), University of Tennessee, Knoxville, USA (3)*

### **Between “don’t” and “how to do it”: organization and conflicts related to land-use and natural resources management in Brazilian protected areas**

J. Calvimontes (1) presenting, L.C. Ferreira (1); *ENVIRONMENTAL RESEARCH CENTER – NEPAM, STATE UNIVERSITY OF CAMPINAS – UNICAMP, Brazil (1)*

### **Relations between fires and connection to markets in Amazonia**

M. Cardoso (1) presenting, L. Soler (1), A. Aguiar (1), G. Sampaio (1); *Instituto Nacional de Pesquisas Espaciais, Brazil (1)*

### **Analysis of vulnerabilities and possible adaptation strategies to environmental change in the northern coast of São Paulo (Brazil)**

R.C.S. Carnivale (1) presenting, J.F. Farinaci (1), M.B. Batistella (1); *Unicamp, Brazil (1)*

### **Food security, biodiversity and climate change: A sustainable landscape approach in the Kanchenjunga Himalayas**

P. Chaudhary (1,2) presenting, S. Kamal (2), S. Rai (2), S. Thomas (2), K.S. Bawa (1,2); *University of Massachusetts, USA (1), Ashoka Trust for Research in Ecology and the Environment (ATREE), India (2)*

### **Sustainability Impact Assessment of Land Use Changes for Sugarcane Expansion in Central Brazil**

H.L.C. Coutinho (1) presenting, S.S. Castro (2), A.P.D. Turetta (1), J.M. Monteiro (1), H.J. König (3), T.F. Malheiros (4); *Embrapa Soils, Brazil (1), LABOGEF, Federal University of Goiás (UFG), Brazil (2), Leibniz Centre for Agricultural Landscape Research (ZALF), Germany (3), EESC, University of São Paulo (USP), Brazil (4)*

### **Rebuilding Babel: Finding Common Development Solutions Using Cross-Contextual Comparisons of Multidimensional Wellbeing**

J.R. Hull (1) presenting, G.R. Guedes (1); *Brown University, USA (1), Vale do Rio Doce University, Brazil (2)*

### **Land under pressure: visualizing relationships between drivers of environmental change and pressures on land-based ecosystems**

C. Hunsberger (1), J. Jabbour (2) presenting; *Carleton University, Canada (1), United Nations Environment Programme, Kenya (2)*

### **The impact of human disturbances on land use/cover change in the Lord resistance army(LRA) affected areas of Northern Uganda.**

O. LAWRENCE (1) presenting; *MAKERERE UNIVERSITY/GREEN ALTERNATIVES AND PEACE MOVEMENT UGANDA, Uganda (1)*

### **Remotely sensed biome changes in and around protected areas in Marsabit (Northern Kenya) - developing baselines for mitigating impacts of droughts and resource overexploitation**

M. Pfeifer (1) presenting, A. Cuni-Sanchez (1), S. Rucina (2), R. Marchant (1); *University of York, UK (1), National Museums of Kenya, Kenya (2)*

**Ecosystem services, conflict and adaption in a changing environment: the case of Niger**

J. Snorek (1) presenting, T. Rosenfeld (1), F. Renaud (1), J. Kloos (1); *UNU-EHS, Germany (1)*

**Cultural models of wellbeing in relation to forest ecosystems, biomass energy, and sustainable development: lessons from northern indigenous frontiers**

T.F. Thornton (1) presenting, M. Sikka (1), R. Worl (2); *University of Oxford, UK (1), Sealaska Corporation, USA (2)*

**Land Use Change and Sustainability of Water Resources in Himalayan Headwaters: Emerging Threats to Indigenous Marginalized Mountain Communities**

P-C. Tiwari (1) presenting, B. Joshi (1); *Kumaon University, India (1), Government Post Graduate College Rudrapur, Uttarakhand, India (2)*

**Mediating the science-policy dialogue at different scales**

K. Vohland (1) presenting, E. Marquard (2), C. Paulsch (3), U. Heink (2), C.L. Häuser (1); *Museum für Naturkunde Leibniz-Institut für Evolutions- und Biodiversitätsforschung (MfN), Germany (1), Conservation Biology Helmholtz Centre for Environmental Research (UFZ), Germany (2), Institute for Biodiversity - Network (ibn), Germany (3)*

**International comparison of land use research**

W.W. Zhao (1) presenting; *Institute of Land Resources, College of Resources Science and Technology, Beijing Normal University, China (1)*

**Natural Environment, Land Use, Food Security and Armed Conflict in North Darfur State - Sudan**

A. Siam (1); *Department of Forestry and Range Sciences, Faculty of Environmental Sciences and Natural Resources, Sudan (1)*

**Session: Coastal Disasters**

**'Make or break': community discourse of resilience in response to natural disasters in Australian coastal communities**

A.M. Leitch (2,3), E.L. Bohensky (1) presenting; *CSIRO Ecosystem Sciences, Australia (1), ARC CoE Coral Reef Studies, James Cook University, Australia (2), CSIRO Adaptation Flagship, Australia (3)*

**Dynamic Assessment of Coastal Vulnerability and Adaptation to Sea Level Rise: An Integrated Spatial-Temporal Decision Making Approach**

O. Sahin (1), S. Mohamed (1), F. Crick (1) presenting; *Griffith University, Australia (1)*

**Perceptions of changes in the weather and the sea by artisanal fishermen of the Southeastern coast of Brazil and the use of local knowledge to deal with climate unpredictability**

L. Garuana (1,2) presenting, G. Hovelsrud (2), C.S. Seixas (1); *State University of Campinas, Brazil (1), Nordland Research Institute, Norway (2)*

**Public policy for managing coastal disaster**

N.A. Gillani (1) presenting; *Global water Partnership, Sweden (1), Institution of Engineers, Pakistan (2)*

**Awareness of and responses to 2011 flood warnings in vulnerable communities in Lagos, Nigeria**

F. Olorunfemi (1) presenting, F. Olokesusi (1), A. Onwuemele (1), O. Oke (1); *Nigerian Institute of Social and Economic Research, Nigeria (1)*

**Behind New Barrier Walls: Private Contribution for Embankment Conservation in Indian Sundarbans**  
P. Sarkhel (1) presenting; *University of Kalyani, India (1)*

**Global climate change impacts on small island cities: adaptation planning in the Tarakan Municipality, East Kalimantan, Indonesia**  
D. Suroso (1) presenting; *ITB, Indonesia (1)*

**Disaster-Development Linkages: Bangladesh Perspectives**  
M.R.A. Talukder (1) presenting; *Food Division, Bangladesh (1)*

**Building Resilience of Tsunami Affected Farm Households in Coastal Region of India**  
C. Umetsu (1) presenting, T. Lekprichakul (1), K. Palanisami (2), M. Shanthasheela (3), T. Kume (1); *Research Institute for Humanity and Nature, Japan (1), IWMI-TATA Water Policy Program, India (2), Tamil Nadu Agricultural University, India (3)*

**The 3.11 tsunami and resilience of tidal flat ecosystems: a sustainable monitoring program**  
J. Urabe (1) presenting, T. Suzuki (1), W. Makino (1); *Tohoku University, Japan (1)*

**Disaster Resilience in Bangladesh Agriculture: Stakeholders' Perceptions on Micro-insurance as a Development Tool**  
M.R.A. Talukder (1) presenting; *Jahangirnagar University, Bangladesh (1)*

## Other

**EcoHealth: How Changing Environment and Climate affect Health and Livelihood Security in the Philippines**

B.H.N. Razafindrabe (1), K. Yaota (1), S. Saito (1), T. Masuda (1), R. Kada (1) presenting; *Research Institute for Humanity and Nature, Japan (1)*

**Towards Sustainable Urbanization in Nigeria: Issues and Challenges for Effective Governance**

A-D. Jiboye (1) presenting; *Department of Architecture, Obafemi Awolowo University, Ile-Ife, Osun state, Nigeria (1)*

**Digital technologies applied to energy management : the case of an online social network**

L. MIGOT (2), J. LE CONTE (1,2) presenting, R. SALVAZET (1); *Veolia Environnement Research & Innovation, France (1), Paris Ouest Nanterre-La Défense University, France (2)*