Global Challenges: Achieving Sustainability
IARU Sustainability Science Congress
22-24 October 2014

ABSTRACTS

www.sustainability.ku.dk/iarucongress2014/
Table of contents

Plenary sessions:

Opening session ................................................................................................................................................. 4
Closing session ................................................................................................................................................... 4
Growing society sustainably

World Development on a Stable Planet: The scientific quest for a safe operating space within planetary boundaries. By Johan Rockström .............................................................................................................. 5
Carbon abatement, environment regulations and economic sustainable development in China. By Shiyi Chen ........................................................................................................................................................... 6
Business as the leading solution provider for sustainable development. By Peter Bakker ...................... 7

Life on earth: when the terms change

Climate, Development and Security in the Age of Adaptation. By Adil Najam ........................................... 8
Delivering on Science's Social Contract: Ocean biodiversity, threats and prioritized solutions. By Jane Lubchenco .................................................................................................................................................. 9

Infrastructure and capacity building

Historical Evolution of Infrastructures and Future Perspectives. By Nebojsa Nakicenovic ...................... 10
Education and Capacity Building for a Sustainable Future. By Kazuhiko Takeuchi ................................. 11

Changing the way we think

Just sustainabilities: re-imagining e/quality, living within limits. By Julian Agyeman ..................................... 14
Africa's Rainbow Revolution will feed Africa and the world – It can be done. By Lindiwe M. Sibanda.. 15
Innovations in arid land food production systems. By Nina Fedoroff ..................................................... 16

Parallel sessions:

Biodiversity – Putting biodiversity concerns into operation .............................................................................. 17
Biomass – The multiple demands on biomass .................................................................................................. 28
Economy – Transitioning to new types of economic growth .......................................................................... 44
Education in sustainability ............................................................................................................................... 57
Energy in a resource-constrained economy .................................................................................................... 73
Feeding future generations with limited resources .......................................................................................... 83
From “climate” to “sustainability” ..................................................................................................................... 104
From knowledge to action ................................................................................................................................. 132
Governance in light of planetary boundaries ................................................................. 155
Health – Elucidating sustainability-health interactions ............................................. 162
Human-earth relationship – Reconciling world views on the human-earth relationship ......................... 172
Nutrient management – Sustainable nutrient management in the Anthropocene .......................... 185
Social equity, development and global environment ...................................................... 194
Urbanisation ................................................................................................................. 204
Water for all .................................................................................................................... 221

Other:

Posters from Copenhagen Competition ........................................................................... 233
More info ........................................................................................................................ 234

More photos available at www.sustainability.ku.dk/iarucongress2014/
Bridging knowledge systems for sustainability – the case of the indigenous territory and biosphere reserve Pilón Lajas, Bolivia. By Helen Gambon

Presenter: Helen Gambon, Centre for Development and Environment CDE, University of Bern, Switzerland

Keywords: ontology, epistemology, Bolivia, human-earth relationship

There is growing consensus that ecosystems management and human well-being are too complex issues to be tackled by a single scientific discipline. Inter- and transdisciplinarity as well as including traditional ecological knowledge (TEK) in research settings are thus on the rise among scholars dealing with sustainability on the local to the global scale. Recognizing different values, practices, norms or institutions organizing and shaping human –earth system interaction as legitimate is the first step in bridging knowledge systems. But sustainability research has to go beyond the recognition of epistemological differences and take a closer look on questions regarding the underlying assumptions of knowledge – of what exists, of what can be known. This does not only apply to so-called traditional forms of knowledge, but also to natural sciences and the humanities. This paper’s aim is to bring out the different ontologies underlying the management of the Indigenous Territory and Biosphere Reserve Pilón Lajas in the Bolivian Amazon region. The researcher argues that remaining challenges concerning the (unsustainable) use of natural resources in the area is mainly based on diverging perceptions on the human-earth relationship. While park authorities and NGO’s represent a science-based worldview characterized by the dichotomy society-nature, the interaction of the Mosetene and Tsimane indigenous groups with their natural environment cannot be understood without the spiritual component that is shaping both the actions of individuals and communities, and the way nature presents itself to human beings. Different ontologies thus result in diverging ways of what is perceived by different actors as a “problem”, of the underlying causes, and what possible solutions to it exist. The focus is put on an analysis of the concept of sustainability in the empirical case of the Indigenous Territory and Biosphere Reserve Pilón Lajas.