



Our Common Future under Climate Change conference Parallel Session 4414:

Transformative solutions across scales: Social learning, science, policy and dialogues

Lead convenor: Shuzo Nishioka
Co-convenors: Penny Urquhart
Toshihiko Masui
Time of session: Thursday 9th July 2015, 17H30 – 19H00
Venue: Université Pierre et Marie Curie (UPMC) Jussieu Room 105
Session speakers: Stefan Lechtenboehmer, Mikiko Kainuma, Coleen Vogel, Jiang Kejun, Emilio Lebre La Rovere, Hugo Dayan, Blane Harvey, Sharon Pollard

The session in a nutshell: We focus on two components: firstly, we explore how social learning is a necessary and strong dynamic tool for transformation to a resilient low-carbon world; and secondly, we discuss a variety of concrete dialogue examples in which social learning in science and policy is indispensable to bring about transformation pathways to a low-carbon and climate-resilient world.

Session Summary:

The dialogue between science (IPCC) and policy (UNFCCC) is helping to drive transition pathways towards low carbon societies, with the ultimate aim of achieving 'zero emissions'. Although the IPCC pathway suggested a '2 tons per capita' emissions world in 2050, interpreting this in terms of the stakeholders' context is a big challenge. We are now entering the stage of worldwide action, in which knowledge is generated at different scales and in divergent ways. This session focuses on three aspects of importance for transformation pathways:

Social learning: At the grassroots level, we focus on the practice of understanding and enabling transitions to climate resilient development on the ground, particularly in the Southern / developing country context of high levels of poverty, inequality, and different framings of stakeholder perspectives. The session will explore social learning as a critical way to enable the large-scale behaviour change needed for transformation pathways, and explore lessons from the frontlines for scaling out to achieve broader institutional change.


Emerging economy and industrialized countries: In the major economic countries' context, as in China and Brazil, science-policy dialogues play a critical role in directing significant investment towards low carbon pathways. In industrialized countries, transformation of the energy system induces serious economic impact and conflict among local societies: e.g. in North-Rhine Westphalia. Also, changes in industrial structure and business environment force each economic entity to adapt to the new climate economy. (e.g. LCS-RNet knowledge sharing). Cities can be front-runners for managing infrastructure to enhance human wellbeing while integrating mitigation and adaptation on the ground.

N-S-S cooperation: Dialogue for cooperation between North-South-South to realize leapfrogging of rapidly growing countries is another key to the desired stabilization of the climate system. The session touches on the capacity that needs to be strengthened for developing countries to leapfrog while securing resiliency, with examples on the large potential in Asia (e.g. LoCARNet dialogue). In addition to the North-South-South relationship, inter-generational issues should also be considered.

Session Plan:

Time	Topics and Speakers
17:30-17:31 (1 min)	Welcome and self-introduction of Co-chairs Shuzo Nishioka and Penny Urquhart
17:31-17:34 (3 min)	Background and short introduction to the session Penny Urquhart
Part I: Social learning panel – chaired by Penny Urquhart	
17:34-17:43 (9 min)	Keynote speech: Learning for a change! The role and challenges of social learning for climate change adaptation Coleen Vogel
17:43-17:49 (6 min)	Systemic and social learning approaches for climate change adaptation: Experiences from transboundary work in Southern Africa Sharon Pollard
17:49-17:55 (6 min)	Doing much more with the same: Institutional change and social learning for sustainable development outcomes Blane Harvey
Part II: Broad applications panel – chaired by Shuzo Nishioka	
17:55-18:04 (9 min)	Keynote speech: Implementing the long term transition towards Low Carbon Societies Stefan Lechtenböhmer
18:04-18:11 (7 min)	Keynote speech: Realizing low-carbon Asia based on science-policy interaction through Low Carbon Asia Research Network (LoCARNet) Mikiko Kainuma
18:11-18:17 (6 min)	Science-policy-stakeholder dialogues about Low Carbon Society: Lessons from the Brazilian Case Emilio Lèbre La Rovere
18:17-18:23 (6 min)	China's Emission Pathway towards global 2 degree target: Policies and Scientific Support Kejun Jiang
18:23-18:29 (6 min)	A Transformative knowledge network of global youth for combating climate change: an intercultural perspective Hugo Dayan
Discussion from the floor	
18:29-18:49 (20 min)	Plenary discussion Invited from floor
18:49-18:57 (8 min)	Final remarks/responses from panellists – 1 min each All panellists
18:57-19:00 (3 min)	Concluding remarks Shuzo Nishioka

Speakers' profile (in presentation order):

 **Shuzo Nishioka** is a senior research advisor, Institute for Global Environmental Strategies (IGES). After 12 years engineering experience in Asahi Chemical Co. Ltd, he joined National Institute for Environmental Studies of Japan (NIES). His research areas were regional and global environmental assessment and environmental policy. He served as professor of Tokyo Institute of Technology and Keio University in 1997-2001 and as Executive Director of NIES in 2001-2007. From late 1980's, he devoted in climate change issues and engaged in IPCC from 1988 to 2007 mainly in impact assessment and adaptation methodology. In 2004 -2009, he led a strategic research of Japan Low Carbon Society Project of MOEJ, to explore the scenario of 70% GHG reduction in 2050 in Japan. This works was extended to Prime Minister Fukuda's Low Carbon Society policy (60-80% reduction in 2050) declared at Toyako G8 Summit. From 2007 to 2012 he served as a Co-leader of KAKUSHIN Climate modelling project of MEXT and chaired Sub-committee for Low Carbon Japan Scenario in Central Council of Environment Japan. His recent work focuses on international collaboration for supporting Asian countries' leap-fogging to low carbon world and collaboration with European climate research community.

-  **Penny Urquhart** is an independent analyst and researcher working on climate resilient development at strategic, policy and programmatic levels. She was a Lead Author for the Africa chapter of the IPCC AR5 Working Group II. Penny's international development work includes developing climate change adaptation programmes in Africa with UNDP for the GEF and the Adaptation Fund; global analytical reviews for IFAD and WFP to promote organisational mainstreaming of climate change; and developing a regional climate change research framework for the southern African region. Penny has managed participatory multi-stakeholder dialogue processes on conflict over natural resources, and recent work has included developing a southern African regional research framework on climate change. She is a member of the Scientific Committee for the Our Common Future under Climate Change Paris 2015 conference, and sits on the Expert Advisory Board for the GEF Adaptation review.
-  **Toshihiko Masui** is Head of Integrated Assessment Modeling Section, Center for Social and Environmental Systems Research, National Institute for Environmental Studies (NIES), and also Coordinate Professor of Department of Social Engineering, Graduate School of Decision Science and Technology, Tokyo Institute of Technology (Tokyo Tech). He received his doctorate degree (engineering) from the Graduate School of Engineering, Osaka University in 1997. He joined NIES in 1998. He assumed the post of Head of the Integrated Assessment Section, Social and Environmental Systems Division in NIES in 2006, and has been in his current position since 2011. He has engaged in the development of the Asia-Pacific Integrated Model (AIM), an integrated assessment model at NIES since 1998. By using the AIM/CGE [Japan], a computable general equilibrium model for Japan, he has assessed the greenhouse gas mitigation target in Japan. He also serves as a member of expert panel of the Post-2013 Mid-Term Policymaking Subcommittee, Central Environmental Council, the Ministry of the Environment, Japan. He has been teaching environmental and economic modelling at TokyoTech since 2000. He contributed to the Fifth Assessment Report of the IPCC (Intergovernmental Panel on Climate Change) Working Group II as a lead author.
-  **Coleen Vogel** has recently re-joined the University of the Witwatersand, Johannesburg as a distinguished professor after spending time at the University of Pretoria. Professor Vogel was also a 'visiting' Professor with the University of Stellenbosch working on climate change adaptation and transdisciplinary. She is a climatologist by training but has increasingly worked in the social dimensions of climate change, focusing particularly on climate change adaptation. She has chaired and been the vice chair of international global environmental change scientific committees (e.g. IHDP and LUCC and involved in the Earth System Science Programme), groups that preceded the current Future Earth developments. She currently serves on various international boards including the African science committee of Future Earth.
-  **Sharon Pollard** is the Executive Director of the Association for Water and Rural Development (AWARD), an action-research and development NGO working mainly in southern Africa. She specializes in systemic and social learning approaches principally within the field of integrated water resources management and links to human livelihoods. With a Ph.D. from the University of Cape Town in freshwater systems, she has worked in Brazil with dam-affected communities in the Amazon and similarly in South-East Asia. Equally her interests in praxis have led to a wide range of research that attempts to understand the role of theory (and science) in influencing and learning from the 'real world'. AWARD works across a number of scales from transboundary water-sharing agreements, national strategies for water resources management to local-level natural resources management approaches, particularly amongst the poor and vulnerable. She has led and participated in a number of international initiatives and currently heads a transboundary programme designed to build resilience to climate change through improved natural resources governance in the Limpopo Basin in southern Africa. The focus is to build adaptive capacity through the institutionalization of systemic and social learning governance approaches.
-  **Blane Harvey** is a Research Associate with the UK's Overseas Development Institute (ODI) and an Adjunct Research Professor at Carleton University's (Canada) Department of Geography and Environmental Studies. Until recently, Blane led work on program-based learning, strategic outreach and engagement with the IDRC's Collaborative Adaptation Research in Africa and Asia (CARIAA) programme. Blane studies how climate change knowledge is produced, validated and communicated, and how social learning and knowledge sharing can support action on climate change in the global South. He is also interested in how community-based media can use action research to influence policy and affect social change. Blane has been an active contributor to the UN climate change negotiations process since 2003 with a focus on strengthening action to support adaptation in developing countries and is a contributing author on indigenous knowledge and climate change in Africa for the Intergovernmental Panel on Climate Change's 5th Assessment Report (WG II).
-  **Stefan Lechtenböhmer** is Director of the Research Group Future Energy and Mobility Structures and holds an adjunct professorship in Environmental and Energy Systems with a special focus on future sustainable energy systems at Lund University. He acquired his PhD in energy and environmental management at the International

Institute for Management University of Flensburg (Germany). He holds a degree in geography, economy and political sciences from the University of Münster. Dr. Lechtenböhmer is responsible for the applied research in national and international energy and climate scenario analysis. He has conducted numerous studies on deep decarbonisation scenario modelling and analysis. His research topics include design and evaluation of policies and measures for Low Carbon Cities as well as Low Carbon Industries, energy efficiency, sustainable building and planning, and the coal and natural gas sectors. He is member of the UNFCCC Roster of Experts for GHG-Inventories, Policies & Measures, GHG-Projections as well as Member of the steering group of the G8 Low Carbon Society Research Network.

✚ **Mikiko Kainuma** is a senior research advisor of Institute for Global Environmental Strategies (IGES) and a fellow of the Center for Social and Environmental Systems Research in National Institute for Environmental Studies (NIES). She joined NIES in 1977, and since 1990, she has engaged in the development of Asia-Pacific Integrated Model (AIM), which assesses policy options for stabilizing the global climate, particularly in the Asian-Pacific region. She led the Low Carbon Asia Project from 2009 to 2014. She served as an adjunct professor at Japan Advanced Institute of Science and Technology from 2003 to 2014. She is engaged in Low Carbon Research Network (LCS-RNet) which focuses on low carbon strategies in G7 countries and Low Carbon Asia Research Network (LoCARNet), the aim of which aim is to formulate and better enable the implementation of science-based policies for low carbon development in Asia. She received Academic Award by the Society of Environmental Science, Japan (2011), Remarkable Contribution to Science and Technology 2010: NISTEP (2010), and Nikkei Global Environmental Technology Award (1994). She contributed to the Fourth and Fifth Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) Working Group III as a lead author.

✚ **Emilio Lèbre La Rovere**, Brazilian, is Full Professor of the Energy Planning Program, Coordinator of the Environmental Sciences Laboratory (LIMA) and of the Center for Integrated Studies on Climate Change and the Environment (CENTROCLIMA) at COPPE/UFRJ – Institute for Research and Graduate Studies of Engineering, Federal University of Rio de Janeiro. His background is in Engineering and Economics, holding a Ph.D from the School of High Studies in Social Sciences, University of Paris, France (1980). He worked in the Energy Department of FINEP - Agency for Financing Studies, Research and Development Projects of the Brazilian Federal Government, from 1975 to 1988; and as consultant of national and international bodies including assignments to different countries of Latin America, Africa and Asia, in the fields of Energy and Environmental Planning, Sustainable Development and Climate Change. He has contributed since 1992 to co-authoring several IPCC reports.

✚ **Kejun Jiang** is Senior Researcher, Energy Research Institute, China. From 1993, he began the research on climate change relative to energy policy analysis, which focus on energy technology policy assessment, energy supply policy assessment, renewable energy development and energy conservation. Started from 1994, have worked on Integrated Assessment Model(IAM) development for energy and GHG emission scenarios, policies, focusing on China and global analysis. At present He is mainly working on policy assessment for energy and environment policy assessment by leading Integrated Policy Assessment Model for China(IPAC) team. Major focus includes energy and emission scenarios, energy policy, energy system,. energy market analysis, and climate change, local environment policies and international negotiation. Started from 1997, worked with IPCC for Special Report on Emission Scenario and Working Group III Third Assessment Report, leader author for IPCC WGIII AR4 Chapter 3, and leader author for GEO-4 Chapter 2. Now he is CLA in WGIII of IPCC AR5, LA for IPCC AR5 Synthesis Report, and author for UNEP Emission Gaps. His recent research projects include energy and emission scenarios for 2030, low carbon emission scenarios up to 2050, roadmap for air pollution control, assessment on energy tax and fuel tax, potential for energy target in China, development of Integrated Policy Assessment model etc., He got his Ph.D in Social Engineering Department of Tokyo Institute of Technology.

✚ **Hugo Dayan**'s two scientific and technical cultures as researcher in climate sciences and engineer in environmental sciences combined with cross-disciplinary trainings in social sciences at the EHESS and economical sustainability at the CIRED and the APREIS. They were accompanied by quantitative economy teachings that he taught at Paris1-University and combined to applied research on the field in South America and in sub-Saharan Africa within international NGOS. They led him successively to a reflection on the example of the climatic phenomenon El Niño which he published in the magazine Communications then in a mission of training and research for the "Global Youth Climate Pact" set up by an international consortium within the framework of the COP21. Throughout his scientific training, he had the opportunity to develop a multidisciplinary approach of environmental issues. He understood that the patently clear weight of the anthropological component in the climate change imposes on the sciences of the climate to discuss with the economic and social disciplines.

