Earth System Governance Tokyo Conference
Complex Architectures, Multiple Agents

BOOK OF ABSTRACTS

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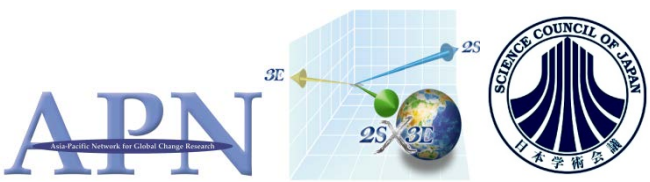

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Parallel Panel Sessions 1

Tuesday 29 January 2013
14:00-15:30 pm

Fragmented Governance 1

Environmental Governance in Regional Context

Adaptation 1

Soft and Hard Law

Private Sector 2

NGOs

Water Governance 1

Biodiversity 1

Forest Governance 1

Market & Trade

Fragmented Governance 1

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Frank Biermann (VU University Amsterdam)

Room: U Thant (3F)

Fragmented Governance 1	
Chair: Frank Biermann (VU University Amsterdam)	
Gupta (TC 188)	The split ladder of participation
van Asselt (TC 98)	Connect the Dots: Managing the Fragmentation of the Global Climate Governance Architecture
Swain (TC 368)	Building Climate Governance Architecture in a Post-War Fragile State, Afghanistan: Performance, Challenges and Opportunities
Heubaum (TC 335)	Agency and Architecture in Global Energy Governance: A Case Study of Institutional Fragmentation and Opportunities for Linkage

Tuesday 29 January 2013
14:00-15:30 pm
Fragmented Governance 1
Room: U Thant (3F)

TC 188

The split ladder of participation

Margot Hurlbert (1), Joyeeta Gupta (2) presenting

University of Regina, Saskatchewan, Canada (1), VU University Amsterdam, Amsterdam, The Netherlands (2)

The mainstream literature and discourse sees participation as critical to deepening democracy and solving global environmental problems. Aspects of participation permeate all facets of earth system governance: architecture, agency, accountability, access, and allocation. As a result, participatory processes are one nexus between architecture of earth system governance and the other "A"s. This paper will critique the participatory nexus of the problem of climate change.
There is increasing empirical critique of the expected role of participation. This paper addresses the question: Under what conditions is participation needed and under what conditions is it likely to work? To address this question, this paper presents a comprehensive review of the literature on participation, and discusses the conflict between those who see participation as the key route to addressing sustainability problems and those who deromanticize the concept of participation. The participation debate is linked to the problem structuring typology of climate change to identify the conditions under which participation is necessary. It then conceptualizes the analysis through developing the split ladder of participation, differentiating structured problems with low participation (technocratic policymaking and single loop learning) moderately structured problems with varying degrees of participation (where disagreement exists on such areas as values or science), and unstructured problems best suited to high participation (where science and values are disputed) necessitating triple loop learning. Perhaps reinvigorating the framing of climate change, the participation necessary to address it, and how it can be moved along the split ladder of participation, will refocus and redirect the climate change governance.

TC 98

Connect the Dots: Managing the Fragmentation of the Global Climate Governance Architecture

Harro van Asselt (1,3) presenting, Fariborz Zelli (2)

Stockholm Environment Institute, Stockholm, Sweden (1), Lund University, Lund, Sweden (2), University of Oxford, Oxford, UK (3)

The debate about post-2012 global climate governance has been framed largely by proponents and opponents of the policymaking process established by the United Nations Framework Convention on Climate Change (UNFCCC). In light of the proliferation of institutions governing aspects of climate change, analysts have asked whether a centralized or a polycentric global climate governance architecture will be more effective, efficient, equitable, or viable. While these are valid questions, they obscure the fact that global climate governance is already polycentric, or rather: fragmented. This paper argues that the more pertinent questions are how to sensibly link the different elements of global climate governance, and what the role of the UNFCCC could be in this regard. We examine these two questions for three aspects of global climate governance: international climate technology initiatives; emerging emissions trading systems; and unilateral trade measures. The paper shows that there are strong arguments for coordination in all of these cases, and illustrates the possible role of the UNFCCC as 'orchestrator' of non-UNFCCC initiatives. It concludes, however, that possibilities for coordination will eventually be limited by underlying tensions that will plague any future climate governance architecture related to ambition and the distribution of emission reduction burdens.

Tuesday 29 January 2013
14:00-15:30 pm
Fragmented Governance 1
Room: U Thant (3F)

TC 368

Building Climate Governance Architecture in a Post-War Fragile State, Afghanistan: Performance, Challenges and Opportunities

Ashwini Swain (1) presenting

QARA Consulting, Inc., Kabul, Afghanistan (1)

In light of decades of conflict, on-going instability, overall poverty, and rising population, the main priority for Afghanistan, during past one decade, has rightly been state-building. Climate change received little attention from the domestic policy-makers as well as international agencies working in the country. However, being heavily dependent on agriculture sector, that accommodates 70% of labour force and produces 40% of GDP, Afghanistan is extremely vulnerable to climate impacts, particularly rising temperature, droughts, and flash floods. The Government of Afghanistan fully recognises that failure to address environmental challenges will negatively affect the long-term growth of the country and meeting the country's MDGs. The Afghanistan National Development Strategy recognises environment as a major cross-cutting issue with ramifications for addressing it within a multi-sectoral, multi-coordinated approach. In recent years Afghanistan has also started dialogue with neighbouring countries on sustainable management of transboundary natural resources, and has started active participation in Multilateral Environmental Agreements. At the same time, several public institutions, like National Environmental Protection Agency, are being established and existing institutions are assigned with responsibilities to address environmental challenges caused by climate change. These developments are outcome of an emerging consensus among the domestic policy-makers and international donors that addressing climate change is a prerequisite for state-building in Afghanistan. In that context, the proposed paper aims to analyse the nascent climate governance architecture in Afghanistan, its performance, challenges and opportunities to understand the nexus between architecture and other A's (Agency, Adaptiveness, Allocation and Access) of earth system governance.

Tuesday 29 January 2013
14:00-15:30 pm
Fragmented Governance 1
Room: U Thant (3F)

TC 335

Agency and Architecture in Global Energy Governance: A Case Study of Institutional Fragmentation and Opportunities for Linkage

Harald Heubaum (1) presenting, Frank Biermann (2,3)

SOAS, University of London, London, UK (1), VU University Amsterdam, Amsterdam, The Netherlands (2), Lund University, Lund, Sweden (3)

Mitigating global climate change requires fundamental changes in the production and consumption of energy, making energy governance a key element of the emerging system of earth system governance. Yet despite its key relevance for global climate policies, energy policy has largely remained a national and subnational domain, with states often pursuing widely different agendas. At the international level, the energy governance architecture is highly fragmented, with the International Energy Agency working on behalf of OECD countries, the Organization of Petroleum Exporting Countries representing major oil producers in the South, and the Shanghai Cooperation Organization bringing together some Asian energy-producing and consuming countries. This paper provides an in-depth analysis of fragmentation in energy governance and elaborates in detail on interlinkages among key energy organizations as well as between these organizations and global climate governance architectures. We pay particular attention to the evolving role of the International Energy Agency, which has been intensifying cooperation with non-OECD countries such as China, India and Russia. In addition, the Agency has begun to incorporate climate change mitigation and adaptation into its operations, signalling a significant shift in focus. We also discuss whether such developments will lead to a greater integration of global energy and climate policy, filling remaining gaps and addressing conflicts between the governance architectures. Our paper contributes to several conference themes, combining research on two of the key themes of the Earth System Governance research program - 'Agency' (of international organizations) and 'Architecture' – with the empirical field of energy and climate governance.

Environmental Governance in Regional Context

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Atsushi Ishii (Tohoku University)

Room: Meeting Room (3F)

Environmental Governance in Regional Context	
Chair: Atsushi Ishii (Tohoku University)	
Balsiger (TC 33)	Comparative Analysis of European and East Asian Regional Environmental Governance
Farrell (TC 312)	Madison's Political Mandate and Today's World Government: exploring the future of Federalism as a tool for designing Earth System Governance Architectures
Mendle (TC 336)	Thinking globally, acting locally: The cooperation project between the cities of Tangshan and Malmö as a case of sub-national global governance for sustainability

Tuesday 29 January 2013
14:00-15:30 pm
Environmental Governance in Regional Context
Room: Meeting Room (3F)

TC 33

Comparative Analysis of European and East Asian Regional Environmental Governance

Jörg Balsiger (1) presenting, Aysun Uyar (2)

University of Geneva, Geneva, Switzerland (1), Research Institute for Humanity and Nature, Kyoto, Japan (2)

As East Asia emerges as one of the world's most dynamic regions, its countries are beginning to address the transboundary environmental consequences of recent economic growth. Although a number of regional cooperation initiatives were established in the 1990s, however, environmental multilateralism is a nascent phenomenon and much cooperation is carried out bilaterally. In Europe, by contrast, a varied and ever-growing portfolio of policy instruments, environmental institutions, and modes of cooperation operates under the auspices of the European Union and the UN Economic Commission for Europe. In light of ever denser relations between the two regions, this paper explores the similarities and differences in regional environmental governance as well as the politics of inter-regional diffusion. The comparison evolves around three themes. First, how the respective constituents understand and frame their region, both with respect to the main actors involved and the environmental problems they seek to address. Second, the challenges and opportunities of distinctively European and East Asian ways of crafting international cooperation. And third, how regional modes of environmental cooperation reverberate beyond the region, both in global and inter-regional fora where regional actors interact, and in respective relations with Central Asia, where the two regional visions come face to face.

Tuesday 29 January 2013
14:00-15:30 pm
Environmental Governance in Regional Context
Room: Meeting Room (3F)

TC 312

Madison's Political Mandate and Today's World Government: exploring the future of Federalism as a tool for designing Earth System Governance Architectures

Katharine N. Farrell (1,2) presenting

Humboldt-Universität zu Berlin, Berlin, Germany (1), Autonomous University of Barcelona, Barcelona, Spain (2)

While the idea of world government is not new, having first been raised at the close of World War I, with the League of Nations, the topic is particularly relevant to discussions concerning Earth System Governance Architectures. In recent years various ‚world-government-level' architectures for earth systems governance have come into being, some through painstakingly negotiated treaties, such as the Kyoto Protocol, some on a more ad hoc basis, in response to Real Politik and the pressing need to take action to address environmental problems, such as the REDD/REDD+ suite of United Nations, bi- and multi-lateral, state and private initiatives that have emerged around the *United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries*. The characteristics of these various architectures are, in many ways, as heterogeneous as the problems they aim to address. However, one thing common to them all is the delegation and/or deputizing of local political authority. In this paper it is argued that this is a basic feature of Earth System Governance Architectures, which are specifically concerned with linking local political action to global political concerns. Taking the recently established Intergovernmental Platform on Biodiversity and Ecosystem Services as a case in point, this paper will explore how James Madison's arguments for Federalism may be used to help design principles for the democratic delegation and deputizing of authority that could enhance both the political legitimacy and practical efficacy of the existing and soon to be established institutions that comprise these architectures.

TC 336

Thinking globally, acting locally: The cooperation project between the cities of Tangshan and Malmö as a case of sub-national global governance for sustainability

Roman Serdar Mendle (1) presenting

Lund University, Lund, Sweden (1)

Rio+20 left as an aftertaste a blend of confirmed pessimism and moderate hope. While successes and failures of the summit are debatable, its results reaffirmed a previously perceived need to strengthen governance for sustainability beyond the macroscopic level. This necessity led to an ongoing trend to focus attention on cities as centers and agents of change, manifested in a multitude of side events to the Rio+20 summit on eco-cities, urban sustainability and similar concepts. The obvious advantage of cities in fostering sustainability is the manageable scale and complexity of local sustainability challenges. The difficulty of city-level action for sustainability is, however, to keep the bigger global picture in mind and not to wear blinders of localism. In short, the challenge is "to think globally while acting locally". The paper argues that local action for sustainability needs to go hand in hand with a strengthening of global ties between municipal entities to bring global governance to the sub-national level. It features a case study of the Swedish-Chinese "TangMa Training Project for Cities of Tomorrow". Based on ongoing research, the paper explores if and how successfully the cooperation between Malmö and Tangshan contributes to a sub-national yet globally oriented form of sustainability governance.

Adaptation 1

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Louis Lebel (Chiang Mai University)

Room: Media Centre

Adaptation 1	
Chair: Louis Lebel (Chiang Mai University)	
Lindroth (TC 71)	Adapt or die? Indigenous peoples – from the civilising mission to the need of adaptation
Siebenhüner (TC 330)	Multilevel governance of adaptiveness: How to design effective multi-actor arrangements?
Grecksch (TC 142)	Potentials of Innovation Candidates for Governance of Adaptation
Meijerink (TC 172)	The role of leadership in shaping innovative practices of climate change adaptation

Tuesday 29 January 2013
14:00-15:30 pm
Adaptation 1
Room: Media Centre

TC 71

Adapt or die? Indigenous peoples – from the civilising mission to the need of adaptation

Marjo Lindroth (1) presenting, Heidi Sinevaara-Niskanen (1)

University of Lapland, Rovaniemi, Finland (1)

Historically, the role and position of indigenous peoples has been a target of civilising measures. In current political debates, especially on global and environmental changes, these measures have changed into a demand for adaptation. Drawing from the context of international politics (the United Nations and Arctic politics), the paper elucidates the ways in which the political agency of indigenous peoples and indigeneity are encircled by the vocabularies of adaptation. We argue that this need of adaptation is a form of biopower, a "vital politics" working as a biological and political technology that fosters indigenous life. Whether it entails indigenous peoples adapting to changes, being persistent or actively influencing development, ultimately, the question is of the survival of indigenous life.

Tuesday 29 January 2013
14:00-15:30 pm
Adaptation 1
Room: Media Centre

TC 330

Multilevel governance of adaptiveness: How to design effective multi-actor arrangements?

Bernd Siebenhüner (1) presenting

CvO University of Oldenburg, Oldenburg, Lower Saxony, Germany (1)

Adaptiveness implies novel substantial and structural challenges to multilevel governance systems. It affects many different existing policy fields with specific actor structures such as civil and coastal protection, water management, health, and agriculture. Different levels of decision making from global climate negotiations to national, regional and local legislation are concerned with developing adaptation strategies. Therefore, architecture and agency are central problems for this emerging policy field of earth system governance. The paper thus analyses how effective multi-actor arrangements could be designed for this field of governance of adaptiveness with a particular focus on local and regional levels. In doing so, the paper starts out by developing a conceptual framework that connects effectiveness of related governance outcomes negatively to three criteria to be avoided when devising adaptation policies namely the technocratic fix building pursuing an expert-driven command-and-control approach, thematic fixes such as the exclusive focus on flooding problems, and the attempt to develop a new and isolated policy field. Positively, effective governance of adaptiveness is defined by the integration and commitment of state and thematically relevant non-state actors. Second, three regional case studies will be analyzed that represent largely different societal and political contexts, namely, the Northwestern region of Germany, the Mkomazi River valley in Tanzania and the Keiskamma River Catchment in South Africa. In all case studies thematically relevant governance arrangements including local, regional, national and global levels as well as different actor groups will be studied with regard to their role in governance solutions for advancing adaptiveness.

Tuesday 29 January 2013
14:00-15:30 pm
Adaptation 1
Room: Media Centre

TC 142

Potentials of Innovation Candidates for Governance of Adaptation

Kevin Grecksch (1) presenting, Maik Winges (1)

University of Oldenburg, Oldenburg, Germany (1)

Enhancing the adaptive capacity of governance systems with regard to climate change requires not only the adjustment of existing structures, instruments and measures but also necessitates new governance modes and instruments. Hence, there is great potential for innovation. While innovations are frequently associated with products or the business sector in general this paper will draw from innovation potential analyses mainly used in business administration and ask whether this method can be used to identify and assess innovative modes of governance or governance instruments as well. Based on a framework to assess innovation potentials by Fichter and Hintemann (2010) the paper defines governance innovations as the development and implementation of novel organisational and institutional solutions to actual, perceived, or anticipated climate change. . Subsequently we will discuss if criteria such as innovation (e.g. innovation degree, novelty), climate adaptation (e.g. reducing vulnerability, increasing resilience), feasibility (e.g. resources, societal acceptance) and multiplicator effect (e.g. transferability, possible imitators) can also be applied to assess the innovation potential for governance instruments and where this framework needs further adjustment to be fair, equitable and applicable to governance innovations. Therefore, new, governance appropriate categories are being developed whenever those of the business approach are not applicable. In a second step the paper will assess possible governance innovation potentials in northwestern Germany in two policy fields. First of all ‘climate proofing' in the field of spatial planning and second of all ‘new modes of participation in water management'.

Tuesday 29 January 2013
14:00-15:30 pm
Adaptation 1
Room: Media Centre

TC 172

The role of leadership in shaping innovative practices of climate change adaptation

Sander Meijerink (1) presenting, Sabina Stiller (2)

Radboud University, Nijmegen, The Netherlands (1), Wageningen University, Wageningen, The Netherlands (2)

The literature mentions leadership as one of the factors that may enhance the resilience and adaptability of social-ecological systems. This paper aims to better understand the leadership factor by focusing on the role of leadership in shaping innovative practices of climate change adaptation. Inspired by Complexity Leadership Theory (Uhl-Bien 2007), we first present a framework distinguishing five functions of leadership within interorganizational networks: the political-administrative, adaptive, enabling, dissemination and connective functions. Next, we present the findings of case studies on adaptation to climate variability in water resources management in Germany, the UK and the Netherlands. In each case both positional leaders, such as regional or provincial delegates, and non-positional leaders, such as active citizens, have contributed to either one or more of the leadership functions hence leadership is highly fragmented. Non-positional leaders particularly invested time in establishing connectivity across policy sectors, levels of government and public and private actors, enabled interactions, and managed to attract resources for realizing adaptation pilot projects. Some positional leaders played an important enabling role by deliberately creating room for parties to develop alternatives to the policies in place, others were more reluctant and only started to support new initiatives once these had become successful. Finally, it is shown that both positional and non-positional leaders contributed to the dissemination of the newly developed adaptation concepts and their translation into governmental policies. The paper concludes by pointing out conditions under which these different types of actors may or may not effectively fulfil the different leadership functions.

Soft and Hard Law

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Sylvia Karlsson-Vinkhuzen (Wageningen University and Turku University)

Room: Committee Room 1 (5F)

Soft and Hard Law	
Chair: Sylvia Karlsson-Vinkhuzen (Wageningen University and Turku University)	
Verhoog (TC 365)	The Politics of Land Deals - A Comparative Analysis of Global Land Policies on Large-Scale Land Acquisition
Bartlett (TC 190)	Deliberative Norm Building through Juristic Democracy: Enhancing Governance Across Complex Architectures and Multiple Agents
Short (TC 82)	Environmental governance in and for the twenty-first century: Integrating scales, institutions, and approaches

Tuesday 29 January 2013
14:00-15:30 pm
Soft and Hard Law
Room: Committee Room 1 (5F)

TC 365

The Politics of Land Deals - A Comparative Analysis of Global Land Policies on Large-Scale Land Acquisition

Suzanne Verhoog (1) presenting

VU University Amsterdam, Amsterdam, The Netherlands (1)

Due to current crises, large-scale land acquisition is becoming a topic of growing concern. Data from the Land Matrix project demonstrates that since 2000, more than 1,000 land deals have been taken place, covering an area of almost 70 million hectares. Large-scale land acquisition often goes hand in hand with issues of displacement, weak governance structures, corruption, conflicts, and environmental damages.
Global land policies on large-scale land acquisition could be a solution to regulate the global land grab. Several international organizations have taken the initiative in developing ‘voluntary' principles and guidelines, also known as 'codes of conduct'. The effectiveness of these ‘soft law' instruments is however increasingly being questioned. This paper therefore offers an in-depth analysis on the effectiveness of global land policies on large-scale land acquisition, as developed by the European Union, the World Bank Group and consortium, The Food and Agriculture Organization, and the African Union.
An institutional framework forms the basis for the global land policy analysis. Based upon a theoretical analysis of soft and hard law, and interrelations with accountability and legitimacy, twelve hypotheses have been tested empirically on a 5-point scale. Subsequently patterns of effectiveness were identified qualitatively.
This paper critically analyzes whether 'codes of conduct', as established by international organizations as ‘agents of change', could be an effective solution in regulating the global land grab. In the context of changing patterns in current global climate governance architecture, this paper furthermore provides more detailed insight in the science-policy debate on ‘soft law' and ‘hard law'.

Tuesday 29 January 2013
14:00-15:30 pm
Soft and Hard Law
Room: Committee Room 1 (5F)

TC 190

Deliberative Norm Building through Juristic Democracy: Enhancing Governance Across Complex Architectures and Multiple Agents

Walter Baber (1), Robert Bartlett (2) presenting, Christopher Dennis (1)

California State University Long Beach, Long Beach, California, USA (1), University of Vermont, Burlington, Vermont, USA (2)

The Norms of Global Governance Initiative (NGGI) is an affiliated project of the Earth System Governance Project. The Initiative involves research employing dispute scenarios in the form of hypothetical legal cases that call upon citizen juries (panels of approximately 8-20 individuals) to deliberate and decide among the competing demands of parties who cast their arguments in highly concrete terms. The purpose is to identify and model the normative discourses that are fundamental to global environmental governance, to map areas of consensus and disagreement through scenario-based empirical research, and to aggregate the findings in a form that will allow for further progressive development of global environmental norms. This process of juristic democracy is an approach to improving and reforming global governance by establishing a fruitful means for creating and legitimizing transnational norms that can serve as the basis for a global common law (Baber and Bartlett, 2009, 2011).

We present and analyze results from citizen juries (in the United States, Italy, Russia, Sweden, the UK, Germany, New Zealand, and elsewhere) that were invited to adjudicate three hypothetical cases of potential normative conflict in global environmental governance: (1) responsibility for shared environmental impacts of development having vastly differential benefits; (2) the adequacy of informed consent as a regulative strategy for trade in hazardous materials; and (3) the appropriateness of alternative regulatory schemes for allocating risks and benefits from differential transboundary pollution. Patterns of consensus and dissent are emerging that allow us to map the normative terrain of global environmental governance.

Tuesday 29 January 2013
14:00-15:30 pm
Soft and Hard Law
Room: Committee Room 1 (5F)

TC 82

Environmental governance in and for the twenty-first century: Integrating scales, institutions, and approaches

Anne Short (1) presenting, James McCarthy (1,2), Henrik Selin (1)

Boston University, Boston, MA, USA (1), Clark University, Worcester, MA, USA (2)

This paper synthesizes insights from two of the most important research traditions focused on environmental governance: studies of formally designed and recognized multi-level governance and institutions and studies of informal, emergent, local relations of environmental governance. The former tradition draws largely from political science, law, and environmental economics; the latter from political ecology, geography, anthropology, and history. We argue that these research traditions have too often remained separate and that this gap is limiting long-term progress towards a more comprehensive understanding of environmental governance and the successful implementation of policy. Our thesis is that as the domain of formal environmental governance 'thickens' – that is, as treaties, laws, regulations, and other formal, legal, and mostly top-down approaches multiply in number, scope, and authority – it is bound to intersect increasingly with informal and 'bottom-up' relations that also constitute forms of environmental governance (e.g., illegal actions and informal institutions). The nature of these interactions between the formal and informal will shape social and environmental outcomes in the coming decades. In this paper, we examine the points of intersection between the different forms of environmental governance described above, highlight some of the methodological challenges associated with studying the intersection of formal and informal governance at multiple scales, and outline a research agenda that draws these research traditions together.

Private Sector 2

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Ben Cashore (Yale University)

Room: Multi-Purpose Room (3F)

Private Sector 2	
Chair: Ben Cashore (Yale University)	
Adelegan (TC 17)	Green Investment and Business Performance: Evidence from Africa
Iguchi (TC 113)	Governance of Sustainable Technological Innovations in Automobile Industry: regulatory convergence of fuel economy standards in Japan, Europe and the U.S.
Kentala-Lehtonen (TC 80)	Business's Discursive Power Use in the Struggle for the Pace of Climate Action

Tuesday 29 January 2013
14:00-15:30 pm
Private Sector 2
Room: Multi-Purpose Room (3F)

TC 17

Green Investment and Business Performance: Evidence from Africa

Joseph Adelegan (1) presenting

Global Network for Environment and Economic Development Research, Ibadan, Nigeria, Nigeria (1)

Addressing a paucity of research about industrial adoption of environmentally-benign technologies in Africa and, more generally, in tropical developing countries, we examined the Nigerian pulp and paper industry as a case study. Qualitative interviews with upper echelon executives of Nigerian firms challenge conventional expectations that energy intensive industries in developing markets operate amid highly pollution-intensive conditions, within weak or non-existent formal environmental regulatory frameworks, and with limited institutional capacity.
Our findings suggest a strong positive relationship between cleaner technology use and business performance of African industrial firms. Our study also suggests the adoption of classical ‘win-win' integrated preventive environmental strategy, eco-efficiency and green productivity which improves industrial efficiency and profitability. The firms are shown to have moved beyond end-of-pipe technologies and cleaner technologies and adopted industrial ecology and "zero emission" principles with appropriate reuse of the remaining waste streams turning the production system into a sustainable industrial ecosystem.

Tuesday 29 January 2013
14:00-15:30 pm
Private Sector 2
Room: Multi-Purpose Room (3F)

TC 113

Governance of Sustainable Technological Innovations in Automobile Industry: regulatory convergence of fuel economy standards in Japan, Europe and the U.S.

Masahiko Iguchi (1) presenting

Tokyo Institute of Technology, Tokyo, Japan (1)

Automobile industry is expected to play a one of the key roles as Agency in Earth System Governance. This is because, first, the road transport sector accounts for about 16% of the total global CO2 emissions, which is projected to grow rapidly. Second, the industry operates globally with its economic significance that could potentially affect changes towards more sustainable road transport sector on a global level thorough their technological innovations. Against these backgrounds, this paper aims to compare and analyse how public policies and business strategies have been influencing the developments of sustainable technologies in the automobile industry in Japan, Europe and the U.S. and explores how they seek to maximize their own technological strengths by shaping international standardizations. To do so, firstly, this paper analyses how governance arrangements for low-carbon technological innovation in automobile industries have been fostered in each society. Based on existing study done by Mikler (2009), it compares how patterns of governance of innovation in Coordinated Market Economy (Japan and Europe) and Liberal Market Economy (U.S) differ from each other. It then analyses how these governance arrangements in each society shape the diverging strategies and struggles of automobile industry over technological standardization. As a result, this paper reveals the automobile industries in each society are pursuing the goal to reflect their preferences over the future road transport climate governance together with their home governments, but by different strategies. By explaining the diverging strategies, this study will contribute to the further understandings of the global climate governance.

Tuesday 29 January 2013
14:00-15:30 pm
Private Sector 2
Room: Multi-Purpose Room (3F)

TC 80

Business's Discursive Power Use in the Struggle for the Pace of Climate Action

Johanna Kentala-Lehtonen (1) presenting

University of Tampere, Tampere, Finland (1)

Business and industry have a major effect on the success of climate change mitigation. In Finland, many big corporations from different industry sectors see climate change as an essential factor influencing their business strategies due to, among other things, the strict climate regulation in the EU. This paper investigates Finnish business and industry actors in climate governance and looks at the different political dynamics in work between private and public actors. The paper asks how are the interests of business and industry in Finland evolving in their relations with public actors and vice versa. With a constructivist starting point, the paper identifies the actors (agents) and structures (architectures) and their interdependence in these questions. Although the existing structure gives the actors their identities and roles, the actors can also shape those structures with their action. 18 interviews were conducted with representatives from eight large Finnish Corporations, five Finnish Industry Federations and five different Ministries in Finland. Together with public documents these were used for the analysis that aims to offer a small EU-state perspective to climate governance conducted together with public and private actors. The paper identifies both internal and external dynamics that influence public and private interests in climate governance. Among these are: external economical competitiveness pressures from outside of the EU, the pressure for public and private actors to co-operate on national level due to the common climate policy in the EU, and national characteristics in climate policy, including the lack of proactivity in the international climate politics.

NGOs

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Michele Betsill (Colorado State University)

Room: Committee Room 3 (5F)

NGOs	
Chair: Michele Betsill (Colorado State University)	
Hsu (TC 182)	Bridging the Gap? The Role of Non-States Actors in Global Intellectual Property and their influence toward Climate Governance
Duyck (TC 376)	Transparency and the role of civil society in the compliance processes of the climate change regime
Hoiberg Olsen (TC 49)	Non-state Actor Participation in Governance for SD
Mert (TC 74)	When Participation Instrumentalises the Civil Society: Transnational spaces in environmental governance and their influence on democratisation

Tuesday 29 January 2013
14:00-15:30 pm
NGOs
Room: Committee Room 3 (5F)

TC 182

Bridging the Gap? The Role of Non-States Actors in Global Intellectual Property and their influence toward Climate Governance

Hsiao-Fen Hsu (1) presenting

Faculty of Law Tunghai University, Taichung, Taiwan (1)

This paper aims to discuss the role of non-states actors (NSAs) in the intellectual property right (IPR) regime and to understand how these actors help to archive a balance between inventor's interest and the global public good in the context of climate change challenge.
A central issue in the IPR field is the optimization of the balance between incentivizing innovation and the equitable distribution of that knowledge. However, the current patent system may not be able to easily archive this goal, because the inherent complexity of the international IP framework.
NSAs have revolutionized the advocacy process in the national and international stage and play an important role in IPR reform, most dramatically with respect to access to medicine, biodiversity and environmental protection. The emergence of NSAs has brought with it new possibilities regarding forms of governance and policy instruments to balance the public interest with objectives of patent regimes. While NSAs can be a driving factor in the creation of new types of coordination mechanisms to facilitate the technology transfer, they can also be an impediment in the context of excessive rule-making in international or regional levels.
Examining the functions of NSAs in the IP field and analysing to what extent NSAs are capable of acting on their own and what advantages NSAs would have over states-based institutions, it proposes that NSAs might in some circumstances be more flexible and problem-solution oriented, and thereby better able to relieve the tension between different multiples agents in the governance global climate change.

Tuesday 29 January 2013
14:00-15:30 pm
NGOs
Room: Committee Room 3 (5F)

TC 376

Transparency and the role of civil society in the compliance processes of the climate change regime

Sébastien Duyck (1) presenting

Northern Institute of Environmental and Minority Law, Rovaniemi, Finland (1)

Compliance mechanisms play a key role in promoting the implementation of international agreements through transparency, facilitation and enforcement. This paper will analyze to which extent civil society can contribute to the effectiveness of the compliance processes established in the climate regime.
The Kyoto Protocol established a complex institutional mechanism to promote implementation of mitigation policies in annex-1 countries whereas compliance with mid-term mitigation pledges will only involve Monitoring, Reporting and Verification (MRV) for the majority of countries lacking a mitigation target under the protocol.
While the Kyoto compliance mechanisms as well as MRVs processes increase the transparency of the implementation by parties of their obligations under the UNFCCC, the role of civil society is limited in both cases. Other intergovernmental instruments rely however more heavily on non-governmental organizations to contribute to their compliance mechanisms and increase the effectiveness of these processes. The paper will highlight to which extent the current modalities for the Kyoto Protocol compliance mechanism and MRVs processes constraint the capacity for civil society to contribute to their effectiveness.
In the context of the negotiations towards a new climate agreement in 2015, this paper will provide a useful reflection on the limits currently imposed on the role played by NGOs in the compliance processes of the climate regime compared the modalities prevailing under other international agreements. The paper will conclude with concrete suggestions on how to reinforce the role of NGOs in the future compliance regime to be developed in relation to the climate agreement under negotiations.

Tuesday 29 January 2013
14:00-15:30 pm
NGOs
Room: Committee Room 3 (5F)

TC 49

Non-state Actor Participation in Governance for SD

Simon Hoiberg Olsen (1) presenting, Ruben Zondervan (2)

IGES, Kanagawa, Japan (1), Earth System Govenance Project; and Lund University, Lund, Sweden (2)

Ever since 1972, civil society organisations (CSOs) have been involved in intergovernmental decision-making process. Rio 1992 formalized CSO involvement though the Major Group (MG) system to accommodate nine different groups. Since then, governance has evolved, and it may be timely to propose a change to the current MG system.
Today, the MGs are not representative of civil society. For example, farmers are represented, but fishermen are not; there is a women's major group, but none for men; youth is represented, but aging populations are not. In terms of relevance of CSO involvement, there is a lack of overarching framework to clarify how any group relates to the overall SD vision.
This paper proposes a way forward to update the MG system in order to allow CSOs to become more effectively and efficiently involved in decision making processes - as advisors or (in the long term) with voting mandate.
The paper proposes an adapted version of the *Oxfam Donut* as a model for civil society involvement that can bring coherence to CSO involvement. Such a framework could help make CSO input to intergovernmental processes even more representative, effective and ensure its thematic relevance and expertise is clearly taken into account by decision makers. The paper uses examples from other processes ILO, CFS, in which CSOs are effectively involved and proposes a way forward for civil society involvement in future governance for sustainable development.

Tuesday 29 January 2013
14:00-15:30 pm
NGOs
Room: Committee Room 3 (5F)

TC 74

When Participation Instrumentalises the Civil Society: Transnational spaces in environmental governance and their influence on democratisation

Aysem Mert (1) presenting

AGCI, VU, Amsterdam, The Netherlands (1)

What does the last two decades of environmental governance tell us about participatory models in international relations? Do they reproduce the democratic patterns that they represent at the nation-state level? This paper focuses on participation and its potentials, problems, and side-effects on democracy at global, international and especially transnational levels. The specific background is environmental governance, both because of the insistence of many GEG institutions on their democratic qualities, and because environmental problems are often global and/or trans-border issues which necessitate global or transnational cooperation and decision-making.
After focusing on the problems of representation/participation, inclusion/exclusion, and *demos*/scale in democratic theory, the first section of this paper analyses the fantasmatic backgrounds: These are the debates on representation and participation during the French Revolution, as well as utopias of political philosophers that often focus on the issues of participation and scale. The second part of the article presents the global environmental governance background to this issue: NGO participation in the UN in general and to environmental conferences in particular, the post-Rio instrumentalisation of civil political action, and post-Johannesburg institutionalisation of major groups are studied in detail. The third and final part of the paper takes issue with development aid and participatory approaches to development projects: On the one hand it summarises the already existing literature on problems of development aid, particularly regarding its side-effects on democratisation. On the other, it reveals the place of participation in the semiotic network of global democratic imagery of our day.

Water Governance 1

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Dave Huitema (VU University, Amsterdam)

Room: Staff Room (5F)

Water Governance 1	
Chair: Dave Huitema (VU University, Amsterdam)	
Yasuda (TC 29)	Interaction of Architecture and Agency in the Governance of International Waters- Institutional influences on NGO Coalitions along the Mekong river
van Kerkhoff (TC 151)	Co-engineering co-production? Challenges and opportunities for improving Pacific island water governance
Onyenechere (TC 129)	Water Supply Governance in Owerri City, Nigeria: Who is Gaining Authority and Who is Losing it?

Tuesday 29 January 2013
14:00-15:30 pm
Water Governance 1
Room: Staff Room (5F)

TC 29

Interaction of Architecture and Agency in the Governance of International Waters- Institutional influences on NGO Coalitions along the Mekong river

Yumiko Yasuda (1) presenting

University of Dundee, Dundee, Scotland, UK (1)

Nongovernmental organizations (NGOs) are becoming one of the key agents in environmental governance (Florini and Simmons 2000; Betsill and Corell 2008). Various studies highlight how NGOs attempt to influence the institutions which compose the architecture of environmental governance; some suggest how NGOs attempt to influence society's norms (Finnemore and Sikkink 1998; Koh 1998); others examine how NGOs attempt to influence governments, organizations, and their decision-making and compliance processes on law and policy (Keck and Sikkink 1998; Betsill and Corell 2001; Elliott and Schlaepfer 2001; Eberlein et al. 2010; Raustiala 1997). However, only limited studies focus on how institutional contexts influence the actions and strategies of NGOs (Ho and Edmonds 2008; Brinkerhoff 1999).

This study aims to understand how institutions influence the NGOs working on the governance of international waters, and more specifically on the Mekong River. The paper analyses how the institutional differences within which NGOs operate may, or may not, impact on the way NGOs determine their actions. As an example which highlights these differences, the study conducts a comparative analysis of institutional influences on actions taken by NGO coalitions in Cambodia and Vietnam. The issue at stake is the riparian states' decision-making process towards the Xayaburi hydropower Dam on the Mekong River. The analysis will be conducted using an analytical framework based on the Institutional Analysis and Development Framework (Ostrom 1999). This paper will highlight preliminary findings from the study.

Tuesday 29 January 2013
14:00-15:30 pm
Water Governance 1
Room: Staff Room (5F)

TC 151

Co-engineering co-production? Challenges and opportunities for improving Pacific island water governance

Lorrae van Kerkhoff (1) presenting, Katherine Daniell (1), Ian White (1)

The Australian National University, Canberra ACT, Australia (1)

Co-production is increasingly presented as a way of relating science and governance for improved environmental outcomes. Yet co-production must accommodate complex politics and differences of capacity, context, issue, cultures and scale. We draw on experiences from Pacific island water governance to demonstrate the relationships between architecture and agency in politically dynamic settings, and to propose that co-production can be usefully considered as a product of "co-engineering" - the collective process through which decisions on how to bring stakeholders together occur. Remoteness, extreme climate events, fragility of water and land resources, urbanisation, cultural diversity, limited human capacity and resources, customary rights and practices and aid dependence all add to the political dynamics of water governance in the Pacific. We present case studies at two scales: first, national water policy planning in the Republics of Kiribati and Nauru; second, bi-regional dialogue on Pacific and European priorities on water-related research, innovation and development. The Kiribati and Nauru cases demonstrate that although their new national water policies were largely co-produced and accepted by government and community members-groups who typically do not work together in small island countries-co-production was not possible until local champions with sufficient political capital and capacity were engaged. At the international level, purposeful co-engineering of the European-Pacific co-production was more successful, but sustaining commitments over the longer term confronts competing priorities, mismatched scales and capacities and geopolitical tensions. We conclude with lessons for future water governance-related co-production in the Pacific and an agenda to extend this research into other contexts.

Tuesday 29 January 2013
14:00-15:30 pm
Water Governance 1
Room: Staff Room (5F)

TC 129

Water Supply Governance in Owerri City, Nigeria: Who is Gaining Authority and Who is Losing it?

Emmanuella Onyenechere (1) presenting

Imo State University, Owerri, Nigeria (1)

In the recent past, the water provisioning landscape in Owerri has displayed a multiplicity of governance forms. The approach ranged from state-run system to independent private operations. Currently there is an increased reliance on the informal private sector rather than the public sector, such that water deliveries to the great majority are almost totally in the hands of local entrepreneurs (water vendors). Public water supply is almost nonexistent in Owerri city. This is because the piped systems have been grounded to a halt, due to government's inability to provide electricity to pump water. With the promotion of water service privatization by global players, efforts are underway for a public – private partnership in Owerri city in order to make water more readily available. But to what extent is this new arrangement influenced by political affiliations, social relationships and cultural representations? Where does it put NGOs, international actors or the private water investors in the picture? Is there a popularly acceptable regulatory framework or water policy? Is the State Water Agency actually gaining authority in municipal water provision or losing it to informal private operators? This paper discusses the dynamics between international, national, state and local forces in the shaping of water governance in Owerri city. It recommends that the "informal private operators" be included in the shaping of water governance, and that the emerging partnerships in water service provision in Owerri city be strengthened to effectively tackle local water supply challenges.

Biodiversity 1

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Pamela Chasek (International Institute for Sustainable Development)

Room: Women's Plaza 1A (2F)

Biodiversity 1	
Chair: Pamela Chasek (International Institute for Sustainable Development)	
Bishop (TC 279)	The Sustainable Habitat Challenge - developing prototypes for transformative change in the New Zealand built environment
Moreno-Penaranda (TC 356)	Can bio-cultural diversity considerations facilitate stakeholder engagement in urban environmental policy? Lessons from Kanazawa city, Japan
Reid (TC 79)	The Biopolitics of Climate-Induced Migration

Tuesday 29 January 2013
14:00-15:30 pm
Biodiversity 1
Room: Women's Plaza 1A (2F)

TC 279

The Sustainable Habitat Challenge - developing prototypes for transformative change in the New Zealand built environment

Timothy Bishop (1,2) presenting

SHAC, Dunedin, New Zealand (1), Otago Polytechnic, Dunedin, New Zealand (2)

The Sustainable Habitat Challenge (SHAC) is a "doing" network of young designers, architects, engineers, builders who are picking up pencils and tools to create prototypes of the houses, buildings, and transport options needed for their future more sustainable built environment.
SHAC is a New Zealand NGO addressing representation and participation deficit in global governance by facilitating small groups' will to create. Using a combination of competitive and collaborative frameworks, groups of young people and their mentors are supported to exercise their combined agency to develop and implement design responses to the challenge of sustainability. Teams of young students, apprenticeships, and early career professionals design and build adaptations to our built environment they feel they need to meet their needs.
Prototypes include houses, buildings and transport options of the type needed by the western world for adapting to climate change and a lower rate of resource use. Prototypes can be much more communicative than a written submission, and help spark a wider understanding of the possible local responses to global challenges.
Key SHAC methods include: a club culture, competition and collaboration, and an environment that encourages meeting functional and design requirements with less regulatory requirement distractions. SHAC values include innovation, generosity, experimentation and learning. In the New Zealand context, the institution of the social, sporting, or artistic club or society still allows for experimentation, learning, and excellence.
How will we live well, with purpose, with less reliance on resources? This paper presents a case study of the SHAC network and outcomes.

Tuesday 29 January 2013
14:00-15:30 pm
Biodiversity 1
Room: Women's Plaza 1A (2F)

TC 356

Can bio-cultural diversity considerations facilitate stakeholder engagement in urban environmental policy? Lessons from Kanazawa city, Japan

Raquel Moreno-Penaranda (1) presenting

United Nations University-Institute of Advanced Studies, Yokohama, Japan (1)

The world is becoming increasingly urban, with cities consolidating as centers of socio-economic development at the expenses of consuming increasing shares of the world's natural resources, while two crucial urban environmental challenges remain unsolved. First, how to make cities more sustainable—that is, how to reduce urban ecological footprints and hence overturn urban drivers of global environmental change. Second, how to make cities more livable, so urban dwellers can fully enjoy the benefits of local ecosystems and biodiversity. This study looks at how the inclusion of bio-cultural diversity considerations in urban environmental policy making can facilitate the design and implementation of policies that are able to tackle both sustainability and wellbeing challenges in a synergic way. Interviews and secondary data from agricultural and forestry policies in the Japanese city of Kanazawa suggest that the concept of bio-cultural diversity can contribute to the operationalization of such instruments, as it connects preferences, values and practices relevant to the sustainable use of nature's goods and services at different scales – from local wellbeing to regional/global sustainability. For instance, food culture is linked to appreciation for some locally grown traditional varieties of vegetables, which in turns generates interest in revitalizing sustainable food production-consumption networks that preserve local agro-biodiversity. Likewise, stimulus for a renowned yet currently declining local crafts and traditional architecture industry implemented alongside native forest restoration programs are revitalizing local forestry while protecting valuable tree species and their ecosystems (and hence all the associated ecosystem services provided at the local, regional and global level).

Tuesday 29 January 2013
14:00-15:30 pm
Biodiversity 1
Room: Women's Plaza 1A (2F)

TC 79

The Biopolitics of Climate-Induced Migration

Julian Reid (1) presenting

University of Lapland, Lapland, Finland (1)

Population-thinking is resurgent in the context of concerns over relations between climate change, reproduction and migration. Influential narratives link population pressure to poverty and destruction of the environment leading to climate change. The assumption is that as the poor increase numerically so they destroy their environment in order to survive, and then, as the environment fails to sustain them, they migrate to more marginal environments, destroying them as well, creating a vicious cycle of poverty, environmental degradation, migration and conflict over natural resources. How to situate the contemporary problematization of relations between climate change, migration and the problem of 'populousness' in relation with historical regimes of what Michel Foucault and others have called Biopower? This paper explores the ways in which concerns over the nexus that binds climate change with migration and reproduction plays out differently in the human world when compared with those of the animal world. In essence there is a stark distinction between regimes of biopower concerned with the governance of human and non-human climate-induced migration. For while the problematization of climate-induced migration among non-human species is inspired largely by a concern with how to defend and increase their reproductive potentials, in the human world it is more about preventing populations endangered by climate change from reproducing. Why and how is it that human populations endangered by climate change come to be targeted with biopolitical programs of interventional control while animals are largely encouraged to prosper? This paper addresses that paradox of the biopolitics of climate-induced migration.

Forest Governance 1

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Oran Young (University of California, Santa Barbra)

Room: Rose Hall (5F)

Forest Governance 1	
Chair: Oran Young (University of California, Santa Barbra)	
Nielsen (TC 353)	REDD+ a Clumsy Solutions to a Complex problem: How Cultural Theory can Aid the Emerging REDD+ Governance Architecture
Catacutan (TC 88)	Turning Tensions into Synergies for Collective Actions in Philippine Forest Governance: Implications for REDD Readiness
Maraseni (TC 396)	A comparative analysis of global stakeholders' perceptions of the governance quality of the CDM and REDD+
Morita (TC 161)	Interplay Management for Effective REDD Governance

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14:00-15:30 pm
Forest Governance 1
Room: Rose Hall (5F)

TC 353

REDD+ a Clumsy Solutions to a Complex problem: How Cultural Theory can Aid the Emerging REDD+ Governance Architecture

Tobias Nielsen (1) presenting

Lund University, Lund, Sweden (1)

REDD+ (Reducing Emissions from Deforestation and forest Degradation) has been hailed as one of the most anticipated governance mechanism within the climate change regime. However, recent negotiations have reviled how REDD+ is having a hard time living up to this anticipation. In trying to devise a considerable step forward in tackling climate change, REDD+ has not been able to break away from the underlying tensions that embroil progress on the overall climate change negotiations. Cultural Theory claims that to secure an optimal outcome of a governance architecture, each of the four typologies need to be sufficiently represented in the final solution. This would incline that the current negotiations on REDD+ could benefit from including a more balanced account of each typology into the negotiations. Hence, it could be argued that REDD+ is being dominated by market (individualism) and technical (hierarch) solutions, but are suppressing egalitarianism and fatalism. This paper identifies the presence of the four different Cultural Theory typologies in the debate on REDD+. The aim would be to get an overview and understanding of the role of the underlying narratives in playing a central role in shaping the future architecture of REDD+. Furthermore, it will analyze what is the power of clumsy solutions. Is it the sense of fairness, legitimacy and/or democratic values that theoretically give clumsy solutions their hypothesized advantage to other solutions? In doing so it will link the Earth System Governance themes of governance architecture and legitimacy.

Tuesday 29 January 2013
14:00-15:30 pm
Forest Governance 1
Room: Rose Hall (5F)

TC 88

Turning Tensions into Synergies for Collective Actions in Philippine Forest Governance: Implications for REDD Readiness

Noelyn Dano (1), Delia Catacutan (2) presenting

Australian National University, Canberra, Australia (1), World Agroforestry Centre, Hanoi, Viet Nam (2)

Forest governance proceeds in the context of interdependent ecological and social systems. It becomes problematic when the actors' differing and often competing interests and values produce tensions and tradeoffs. This paper presents case studies of forest protected areas in the Philippines - a country shaped by its colonial and post-colonial past, intertwined with the complexity of its present local socio-ecological systems. It points out the dilemmas in the process of carrying out a conservation and development mechanism, elucidates the sources of tensions, and suggests how deliberation strategizes to counteract them and contribute to building synergies needed for collective actions. The local-national-global governance interactions shown in the cases, and the forest-poverty nexus in the country typify the social fabric in many other places in the developing world; the paper thus highlights lessons that can potentially inform forest governance decisions in other developing countries. This is highly important as interest on multi-scaled market-based mechanism such as REDD heightens, especially in light of a country's readiness to REDD or REDD+.

Tuesday 29 January 2013
14:00-15:30 pm
Forest Governance 1
Room: Rose Hall (5F)

TC 396

A comparative analysis of global stakeholders' perceptions of the governance quality of the CDM and REDD+

Tek Maraseni (1) presenting, Tim Cadman (2)

University of Southern Queensland, Queensland, Australia (1), Griffith University, Nathan, Australia (2)

The Clean Development Mechanism (CDM) and the nascent Reducing Emissions from Deforestation and Forest Degradation (REDD+) are two global market-based mechanisms that link developed and developing countries. This paper provides a quantitative and qualitative analysis of global level stakeholders' perceptions regarding the governance of the CDM, focusing on environmental, social, economic, governmental and institutional participants. The research conducted was by means of an anonymous online survey, using a normative framework of principles, criteria and indicators (PC&I). It compares these findings with the results of a similar survey conducted by the authors on REDD+. Stakeholders from both the global North (developed countries) and the global South (developing countries) were asked to rate the quality of these mechanisms against 11 performance indicators, using a scale from ‘very low' to ‘very high' (1-5). Overall, the results of CDM stakeholders from both the global North and global South were very similar, indicating a common perception. The highest and lowest total scores were obtained from the institutional social stakeholders, respectively. This demonstrates that these two groups have considerable differences in perceptions. CDM failed in two indicators, "equality" and "resources", and passed marginally in all other nine indicators. The performance of REDD+ was much higher than CDM in all aspects of governance surveyed. The major differences were in "equality" and "problem solving", followed by "transparency" and "democracy". If the CDM is to be continued in the post-Kyoto period, some major systemic changes in governance are necessary. Here, there are some lessons to be learnt from REDD.

Tuesday 29 January 2013
14:00-15:30 pm
Forest Governance 1
Room: Rose Hall (5F)

TC 161

Interplay Management for Effective REDD Governance

Kanako Morita (1) presenting

National Institute for Environmental Studies, Tsukuba, Ibaraki, Japan (1)

Reducing emissions from deforestation and forest degradation in developing countries (REDD) does not only contribute to the reduction of greenhouse gas emissions, but can provide other positive effects, such as biodiversity conservation.
This study explores effective institutional linkages between the field of climate change and biodiversity, with the aim of maximizing the effects of REDD with regard to both emissions reduction and biodiversity conservation. Although the international institutional framework of REDD is still under discussion, many developing countries have already implemented REDD pilot programs and projects, receiving financial and technical support from multiple aid agencies and international NGOs. This study focuses on analyzing the efforts of key actors in improving institutional linkages between the climate change and biodiversity domains. These key actors are aid agencies, international NGOs and national governments involved in the implementation of REDD pilot programs and projects. This research employs (1) an analytical framework based on the studies of interplay management and institutional interplay, and (2) case studies of developing countries in the Asia-Pacific region that are implementing REDD programs and projects (e.g. Cambodia and Laos).
The study reveals that multilateral aid agencies (e.g. the UN Development Programme and World Bank) and international NGOs that work with nature conservation have great opportunities to improve institutional linkages between the climate change and biodiversity domains for REDD implementation. However, with regard to national governments and bilateral aid agencies, their efforts and interests in enhancing the institutional links between the two domains vary depending on ministry, department and agency.

Market & Trade

Tuesday 29 January 2013

14:00-15:30 pm

Chair: Peter Haas (University of Massachusetts, Amherst)

Room: 12th Floor Meeting Room

Market & Trade	
Chair: Peter Haas (University of Massachusetts, Amherst)	
Scobie (TC 245)	Climate governance architecture and trade competitiveness- environmental justice and SIDS
Kok (TC 324)	Policies to increase market-share and impacts of sustainable supply chain systems: interplay between national and international policies
Gleckman (TC 300)	A critical evaluation of the proposals of the World Economic Forum for redesigning global governance
Gupta (TC 177)	Climate Change and the Global Recession

Tuesday 29 January 2013
14:00-15:30 pm
Market & Trade
Room: 12th Floor Meeting Room

TC 245

Climate governance architecture and trade competitiveness- environmental justice and SIDS

Michelle Scobie (1) presenting

The University of the West Indies, St. Augustine, Trinidad and Tobago (1)

The effort to reduce carbon emissions through the UNFCCC, while beneficial to SIDS vulnerable to the effects of climate change may have an unwanted effect on their economic competitiveness. The paper examines three aspects of climate governance- domestic measures such as border tax adjustments, global measures such as regulation of emissions through the International Maritime Organisation and the International Civil Aviation Organisation, regional measures such as the European Union's Emission Trading Scheme and non-state pressure through environmentally friendly certification schemes for goods and services. Manufacturers in some developed states argue for the application of border adjustment taxes for imports that are not subject to stringent emission reduction schemes in their country of export (as is the case with most SIDS). The legality of such measures is not yet decided at the WTO. If applied however to SIDS exports, they will reduce their ability to compete on an already difficult international market. Certification schemes that monitor and report on products and services that are environmentally friendly may also lead the environmentally sensitive consumer to shy away from remotely located SIDS' products and services. The international aviation and maritime transport sectors in the effort to reduce emissions are adopting measures that will increase international transport costs which will make exports from remote SIDS less competitive. This paper examines the architecture of carbon emissions reduction and the trade and development implications for Caribbean SIDS's from the perspective of environmental justice, fairness, equity and the principles of common but differentiated responsibilities.

Tuesday 29 January 2013
14:00-15:30 pm
Market & Trade
Room: 12th Floor Meeting Room

TC 324

Policies to increase market-share and impacts of sustainable supply chain systems: interplay between national and international policies

Marcel Kok (1) presenting

PBL Netherlands environmental assessment agency, Bilthoven, The Netherlands (1)

We present recent findings of an evaluation of market shares in The Netherlands and Europe of sustainable supply chain systems and their impacts in developing countries on improved natural resource management and development. This paper focuses on certified products in biotic supply chains, like coffee, tea, soy, palm and cotton. It identifies domestic and international policies that can contribute to increasing market share of certified products as well as policies that along the production chain in both consumption and production countries that can contribute to enhancing the benefits of sustainability initiatives.
The paper shows that market shares of certified products significantly increase when competition between certification schemes occurs. The question will be raised if the limits of voluntary certification may be reached here. It identifies with what type of policies these market shares can increase even further. Here European and international policies will increasingly have to play a role.
While the impacts of certified products on natural resources and development cannot be attributed directly to their market shares in Europe, we note that in general their intended impacts are not well researched. We therefore present the outcomes of a meta-evaluation of existing research. Based on this, we identify policy options that can help increasing the effectiveness of supply chain policies for regional development. Here, especially the role of international policies will be relevant to contribute to capacity building, norm setting and monitoring.

Tuesday 29 January 2013
14:00-15:30 pm
Market & Trade
Room: 12th Floor Meeting Room

TC 300

A critical evaluation of the proposals of the World Economic Forum for redesigning global governance

Harris Gleckman (1,2) presenting

University of Massachusetts-Boston, Boston, MA, USA (1), University of Maine Law School, Portland, ME, USA (2)

In 2010 the World Economic Forum issued the results of their project on Global Redesign Initiative (GRI) in a report entitled *Everyone's Business*. One of the premises of the GRI project is that multinational corporations, civil society, and governments now constitute the system of global governance, not just the UN system and other bilateral and multilateral arrangements. This view is not widely accepted by Governments, non-state actors themselves, the political science community, nor indeed the broader public. For WEF, MNCs have long been able to make key decisions in the international arena in areas where nation-states make public policy. As a practical matter, GRI recognizes that if MNCs are not involved in the process of negotiations, the outcome is unlikely to be accepted by these dominant actors. If MNCs just passively observer a UN system process, an intergovernmental declaration worked out with civil society participation may be just words on a piece of paper, further discrediting the existing intergovernmental system. GRI proposes that the current de facto corporate/stakeholder reality should become the accepted reality in the next system of global governance. This paper, drawing on research for a University of Massachusetts at Boston inter-active Readers Guide to the GRI, will examine this premise, its consequences, and the way in which WEF uses it to justify a potentially significant change in global governance.

Tuesday 29 January 2013
14:00-15:30 pm
Market & Trade
Room: 12th Floor Meeting Room

TC 177

Climate Change and the Global Recession

Joyeeta Gupta (1) presenting, Pedi Obani (2)

VU University, Amsterdam, The Netherlands (1), UNESCO-IHE Institute for Water Education, Delft, The Netherlands (2)

The recent global recession has caused a decline in economic and development activities producing greenhouse gases (GHG) emissions. On the other hand, a study conducted by Scruggs and Benegal shows the recession has also increased the level of public scepticism towards anthropogenic climate change because of the belief that combating climate change would hamper the much desired economic recovery. Furthermore, the recession has affected the enthusiasm of developed countries to deliver on their commitments to provide new, additional, adequate and predictable funding for addressing climate change in developing countries, in line with the principle of common but differentiated responsibility. This paper addresses the question: How can the climate change regime be further promoted in times of recession? It argues, on the one hand, that (a) there remains a continuing role for leadership on how the problem should be addressed, but that such leaders may eventually emerge from the Global South; (b) mainstreaming climate change in the national and corporate economic recovery plans is a critical part of achieving the long-term global objective of sustainable development; and (c) that the potential of litigation as a fall-back option if countries are unable to take action becomes increasingly more important. In addition, progress towards addressing climate change should be measured in terms of decarbonisation of the economy rather than mere reduction in GHG emissions which might be induced by short term causes such as the recession. A strategic combination of these options could reduce the aversion which global recession lends to climate change.

Parallel Panel Sessions 2

Tuesday 29 January 2013
16:00 – 17:30 pm

Fragmented Governance 2

Climate Adaptation 1

Private Sector 3

Energy Governance Architecture

Transnational Environmental Governance

Climate and Energy

Climate Architecture: Norms and Discourses

Global Climate Governance 1

Natural Resources

Fragmented Governance 2

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Harro van Asselt (Stockholm Environment Institute)

Room: U Thant (3F)

Fragmented Governance 2	
Chair: Harro van Asselt (Stockholm Environment Institute)	
Atiti (TC 351)	A Critical Realist Analysis of Networked Governance Architectures for Global Environmental Change
Siebenhüner (TC 332)	Regime Learning and Fragmentation in Global Environmental Governance
Greene (TC 122)	The Implications of the Fragmentation of Earth System Governance for Implementation Processes: The Significance of Systems for Implementation Review
Busscher (TC 372)	Instruments to enable coordination without central government control: finding a needle in a haystack?

Tuesday 29 January 2013
16:00 – 17:30 pm
Fragmented Governance 2
Room: U Thant (3F)

TC 351

A Critical Realist Analysis of Networked Governance Architectures for Global Environmental Change

Abel Barasa Atiti (1) presenting, Erin Kennedy (2)

United Nations University - Institute or Advanced Studies, Yokohama, Japan (1), Tokyo Institute of Technology, Tokyo, Japan (2)

In the current post-normal science period, facilitating and pursuing global environmental change can no longer be limited to only scientific and technical processes. The process also involves complex ethical, philosophical and political dimensions of enabling global change. Managing complex global change processes requires an embrace of networked governance architectures that allow integrative, unrestrained and open-ended approaches in addressing sustainable development challenges. Networking has become an important foundation of governance in addressing complex sustainable development challenges in times of accelerated change. The effectiveness of global environmental governance will depend on the strength and inclusiveness of the partnerships, networks and alliances developed among various stakeholders. This paper analyses the advantages of networked governance architectures in enhancing global environmental change through multi-stakeholder learning and policy development. The analysis is undertaken within a critical realist framework to argue for a relational social ontology that views agency, structure and culture as distinct strata of earth system governance. The case of the United Nations University Regional Centres of Expertise (RCE) on education for sustainable development network is used as a basis for the analysis. An RCE is a network of individuals, organisations and experts who are committed to using education as a tool for enabling global environmental change.

Tuesday 29 January 2013
16:00 – 17:30 pm
Fragmented Governance 2
Room: U Thant (3F)

TC 332

Regime Learning and Fragmentation in Global Environmental Governance

Bernd Hackmann (1), Bernd Siebenhüner (1) presenting

CvO University of Oldenburg, Oldenburg, Lower Saxony, Germany (1)

Due to their multifaceted and trans-boundary nature, many environmental issue areas are governed through multiple institutions, organizations, state and non-state actors. This complex nature of global environmental problems causes different degrees of fragmentation within the governance architecture that is designed to govern it. This paper seeks to understand the role of knowledge and collective learning processes in four of these complex environmental issue areas and fragmented governance architectures: When is it effective in solving environmental problems on which levels and when and why does fragmentation hinder learning?
The underlying hypothesis to be studied states that the degree of fragmentation affects regime learning processes. The analysis combines recent findings on collective learning processes in international environmental regimes with results from research on fragmentation in regime evolution processes in an attempt to analyse the impact of a regime's fragmentation on its learning capabilities. It shows that fragmented regimes in complex environments are generally able to enhance regime learning processes but that these learning processes differ in their form from regime learning processes in integrated regimes. Based on an analytical framework, this article assesses regime learning processes in four complex international environmental regimes: the biodiversity regime; the climate regime; the desertification regime; and the ozone regime. In this analysis, the paper employs four major categories to identify drivers and barriers of regime learning processes, namely the institutional dimension, the actor's dimension, the learning mechanisms employed, and the learning agents.

Tuesday 29 January 2013
16:00 – 17:30 pm
Fragmented Governance 2
Room: U Thant (3F)

TC 122

The Implications of the Fragmentation of Earth System Governance for Implementation Processes: The Significance of Systems for Implementation Review

Owen Greene (1) presenting

University of Bradford, Bradford, UK (1)

This paper examines the implications of complexity and fragmentation of Earth System governance (ESG) for the stage of policy implementation, and thus for key aspects of ESG effectiveness. Drawing on well-researched examples of environmental regime clusters, it establishes the argument that (i) 'horizontal' interplay between the different elements of fragmented ESG architectures, and (ii) 'vertical' interplay across scales between global, regional and national levels of governance, are both key factors for implementation processes. It then proceeds to examine the particular role of systems for implementation review (SIR) and associated transnational epistemic networks in a fragmented institutional setting. Examining existing research, it argues that the degree and type of SIR development, and associated transnational epistemic networks, can considerably alter how, and the extent to which, institutional fragmentation affects implementation processes. This argument is then developed through a detailed analysis of SIR in the multi-level governance architecture for climate change. The article finds that the SIR developed through the United Nations climate regime provide a relatively robust capacity to maintain coherent approaches and interactions – globally and across levels, in spite of the substantial fragmentation of the overall climate governance architecture. For example, these SIR support the maintenance and further development of relatively consistent global metrics for measuring states' performance for mitigating risks of climate change. Significantly, however, we show that the same cannot be said in relation to agreements to support climate change adaptation, where relevant SIR are less well-developed. The findings have implications for priority-setting in future negotiations.

Tuesday 29 January 2013
16:00 – 17:30 pm
Fragmented Governance 2
Room: U Thant (3F)

TC 372

Instruments to enable coordination without central government control: finding a needle in a haystack?

Tim Busscher (1) presenting, Taede Tillema (1), Jos Arts (1)

University of Groningen, Groningen, The Netherlands (1)

The contemporary pace and character of technological and social change has generated a climate of uncertainty in which the traditional mode of governance and ways of organizing governance arrangements have been fundamentally challenged. In response, an increasing amount of literature points towards the development of networks in which various levels of government among various policy sectors cooperate. The governance of such networks often takes place in different ways. First, a traditional 'predict and control' approach can be distinguished in which the center of the network is in control. Second, also an 'open and adaptive' governance approach can be identified in which the network is being governed by all organizations that comprise the network, resulting in a dense and highly decentralized mode of governance. Many governance theorists nowadays advocate the 'open and adaptive' governance approach. In this paper, we compare the 'open and adaptive' to the advantages of the traditional ´predict and control´ governance approach. Our objective is to investigate how and whether the two governance strategies can be applied complementary to each other in a network setting. To this end we investigate the case of the National Collaboration Programme on Air Quality through both lenses simultaneously. Our analysis reveals that the governance approach within this case has shifted from an 'open and adaptive' towards a 'predict and control' approach. We show that governance in such a network setting could merit from the application of both governance approaches simultaneously, rather than applying one approach over the other.

Climate Adaptation 1

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: tbd

Room: Media Centre

Climate Adaptation 1	
Chair:	
Tiwari (TC 94)	Trans-boundary Headwater Governance in Himalaya: A Geo-political Architecture for Climate Change Adaptation and Regional Security in South Asia
Aoki (TC 45)	How adaptive policies are in Japan and can adaptive policies mean effective policies? Some Implications for Governing Climate Change Adaptation
Lebel (TC 159)	Closing knowledge-action gaps in adaptation to climate change in the Asia-Pacific

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate Adaptation 1
Room: Media Centre

TC 94

Trans-boundary Headwater Governance in Himalaya: A Geo-political Architecture for Climate Change Adaptation and Regional Security in South Asia

Prakash Chandra Tiwari (1) presenting

Kumaun University, Nainital, Uttarakhand, India (1)

Himalaya constitutes headwaters of some of the largest trans-boundary basins of planet that sustain one-fourth global population in its lowland. Climate change has stressed hydrological regimes of Himalayan headwaters causing substantial decrease in water availability and increasing vulnerability of large population to water insecurity in South Asia. Simultaneously, growing power of major developing economies and political instability in South Asia is likely to change geo-political diplomacy, and thereby influence overall governance of water resources. This will have enormous regional implications for food and health security, poverty alleviation, climate change adaptation and even for human security. A geo-political architecture leading to regional cooperation framework is therefore imperative not only for water security, but also for regional security and peace in South Asia.

Paper investigates rationale for missing regional cooperation inter-linkages; explore obstructions in initiating effective water diplomacy; and outline geo-political architecture for trans-boundary headwater governance in South Asia. Comprehensive study of available literature and media reports, interpretation of people's responses obtained through interviews, interaction with political leadership and government officials across the region formed basis of this study. Study revealed, increasing power of some countries and political instability in some other countries, internal and external security threats, weak leadership, and long standing conflictual inter-state dynamics are important reasons for missing geo-political process in trans-boundary water governance. However, there is growing realization, demand and recommendations by scientific community, intellectuals, NGOs and civil society organizations for trans-boundary water governance architecture which would help in initiating geo-political dialogues for adaptive headwater governance in Himalaya.

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate Adaptation 1
Room: Media Centre

TC 45

How adaptive policies are in Japan and can adaptive policies mean effective policies? Some Implications for Governing Climate Change Adaptation

Prabhakar S.V.R.K. (1), Misa Aoki (2), presenting, Reina Mashimo (1)

Institute for Global Environmental Strategies, Hayama, Kanagawa, Japan (1), Kyoto University, Kyoto, Japan (2)

It has been widely regarded that policies and institutions that are adaptive in nature are better able to deal with the dynamic issues such as climate change adaptation. However, verifying the veracity of this hypothesis is difficult in absence of long experience in climate change adaptation. Hence, this study of agriculture policies in Japan reviews how various agriculture related policies have evolved over the years along with the evolving issues that they are designed to address and tries to answer questions such as how adaptive policies and institutions in Japan are, how adaptive policies and institutions relate to the effectiveness of policies and problem solving, and what are the political, institutional, economic and social enabling factors that may lead to effective policies. This paper is derived from a set of consultations and Delphi questionnaire surveys conducted in Japan. While addressing the above research questions, this study draws lessons for developing countries which often lookup towards developed countries for solutions. One of the interesting outcome of this study has been that indicators such as 'timeliness' of introduction of policies and 'regular amendment' of policies may not necessarily translate into effective policies since other factors such as how different stakeholders understand the issue that policy intends to address, understanding on the part of the governments and institutions on how a policy works on the ground after it is designed and implemented, information based on which policies were designed are the most important driving factors that determines the effectiveness of any policy.

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate Adaptation 1
Room: Media Centre

TC 159

Closing knowledge-action gaps in adaptation to climate change in the Asia-Pacific

Louis Lebel (1) presenting

Chiang Mai University, Chiang Mai, Thailand (1)

Major knowledge-action gaps remain with respect to adaptation, despite a rapidly growing body of research on potential impacts and vulnerabilities to climate change and increasing policy attention to mainstreaming adaptation. Knowledge-action gaps can arise because knowledge is missing, inaccessible or unused and therefore action is not taken or actions taken are uninformed. Gaps are caused by and significant for both knowledge producers and action takers. Past efforts at closing knowledge gaps in the Asia-Pacific include convening dialogues, conducting assessments, funding research programs, running training courses, launching information campaigns, creating information systems, and establishing coordination offices. The results have been mixed with some recurrent challenges related to the specific characteristics of climate change that make communication and identifying incentives difficult, for instance, significant uncertainties, heterogeneous impacts, and long-term changes. How knowledge systems are governed and how governance systems draw on different bodies of knowledge both influence the prospects of successful adaptation. Five strategies are suggested as likely to help address these challenges: strengthen the quality of stakeholder engagement; actively manage the boundaries between knowledge-holders and action-takers in a way that accountability to both is maintained; expect research and policy agendas will need to be updated so plan to learn; support and build scientific and policy networks; and, combine different kinds of initiatives so they are mutually reinforcing and help create learning knowledge systems.

Private Sector 3

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Naoko Matsumoto (Institute for Global Environmental Strategies)

Room: Committee Room 1 (5F)

Private Sector 3	
Chair: Naoko Matsumoto (Institute for Global Environmental Strategies)	
Inoue-Murayama (TC 246)	How to connect between global issue and local issues? : With the case study on climate change negotiation and governance of Japanese rural transportation
Jupesta (TC 384)	Stakeholder Analysis on Geothermal Development: A Case Study in Japan
Lu (TC 170)	Cross-sectoral coordination for sustainable solutions in China: The case of Mamize from a metagovernance perspective
Heubaum (TC 230)	Cities and public-private partnerships in multi-level climate governance: Identifying new approaches and opportunities

Tuesday 29 January 2013
16:00 – 17:30 pm
Private Sector 3
Room: Committee Room 1 (5F)

TC 246

How to connect between global issue and local issues? : With the case study on climate change negotiation and governance of Japanese rural transportation

Mai Inoue-Murayama (1) presenting

National Institute for Environmental Studies, Tsukuba City, Japan (1)

Although the importance of governance is recognized for the common weal, there is a large gap between global and local actors. Global issue as climate change issue, have made the local measurements, but there are another local issues that often separated from global issue actually. Why is there this gap? What is the barrier to connect between local and global? How to address this kind of impediments?
The objective of this research is to identify the barrier to frame of the low carbon society, with the governance aspect comparing the case studies of global negotiation on technology transfer under the United Nation Framework on climate change and rural transportation governance in specific area of Japan. To compare these different cases, I introduce three points of view: the range of discussion, the comprehensiveness of agenda and institutional rigidities. I indicated that the major different factors between global and local case studies are the bottleneck of particular agenda for general, the extent of participants and the way of incentive.
The barrier to low carbon society is assumed to be due to the lack of the local interests to global issue and consideration about risk allocation in local and inadequacy of sharing the vision and scenario for the future among the actors. Viewing issues from the perspective of the local governance and the whereabouts of global consensus formation in the same time can be the way to address a tenuous connection between climate change mitigation issues and the issues in the public domain.

Tuesday 29 January 2013
16:00 – 17:30 pm
Private Sector 3
Room: Committee Room 1 (5F)

TC 384

Stakeholder Analysis on Geothermal Development: A Case Study in Japan

Joni Jupesta (1) presenting, Aki Suwa (1,2), Govindan Parayil (1)

United Nations University-Institute of Advanced Studies, Yokohama, Japan (1), National Graduate Institute for Policy Studies, Tokyo, Japan (2)

The concept of 'earth system analysis' has a root in the complexities of global environmental change that requires the multiple academic disciplines to deliver a new paradigm for transition to sustainability (Biermann, 2006). The transition to sustainability is, however, not a singular process, but is a mixture of multi-faced practices, involving natural, social and political sciences. The greatest challenge lies where the policy makers to influence and shape the stakeholders' willingness to participate in and implement the policies relevant to transition. Because when the risks and uncertainty are great, the policy makers need an analytical and systematic process for stakeholder management strategies. The case of one significant energy technology (geothermal electricity) provides an illustrative context for demonstrating a stakeholder analysis.

In the recent years, there is a growing interest into geothermal energy both for electricity generation, especially in Japan, after the earthquake (March 2011). There has been, however, little academic attention paid for local stakeholder concerns as to geothermal energy development. It is therefore highly important to analyse stakeholders' view, and to establish local governance as to energy development. This paper is going to apply stakeholder analysis framework to a case in Japan. The result of the analysis will have strong implication to the future energy development by identifying the key driving forces for the emergence of effective local energy governance, which would be a crucial element for the transition to sustainability.

Tuesday 29 January 2013
16:00 – 17:30 pm
Private Sector 3
Room: Committee Room 1 (5F)

TC 170

Cross-sectoral coordination for sustainable solutions in China: The case of Mamize from a metagovernance perspective

Chang Lu (1) presenting, Stamatios Christopoulos (2), Michael Kull (3)

Uppsala University, Uppsala, Sweden (1), UNDP BRC, Bratislava, Slovakia (2), Tallinn University of Technology, Tallinn, Estonia (3)

As an interdisciplinary concept, Sustainable Development (SD) concerns not only environmental protection and economic growth, but also political stability, social inclusion, and cultural protection. The key to pursuit SD is seen in the balance of all these aspects. In 1994, the Chinese Agenda 21 was released. The objectives set concern the long term stable development of China's society, economy and environment. To fasten the SD process, efficient governance is needed in China. It is crucial that actors, other than government, can have access to information and participate in decision-making processes. Metagovernance, also known as the governance of governance, is focused on the different ways of interactions between government, public, private sector and civil society. Metagovernance is quite a new concept, but some elements indicative of metagovernance are already appearing also in China. In 2011, WWF launched the Firewood-Saving Cook Stove Project (FCS) in Mamize in SiChuan Province, which involves replacing old cook stoves with efficent ones. By cutting down the non-renewable wood combustion GHG emissions are reduced and the local forest resources are protected. The project is fostered by a Switzerland-based multi-national company, which can trade carbon credits through a Volunteer Carbon Trade scheme. The project involves both international and local NGOs, government and local people, and the multi-national company. This article will discuss the case of SD in China from a metagovernance perspective by analyzing the FCS project in Mamize, highlighting how metagovernance helps to develop successful SD solutions and what could be improved in China's governance approaches.

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16:00 – 17:30 pm
Private Sector 3
Room: Committee Room 1 (5F)

TC 230

Cities and public-private partnerships in multi-level climate governance: Identifying new approaches and opportunities

Harald Heubaum (1) presenting, Felicia Jackson (2), Robin Daniels (3)

SOAS, University of London, London, UK (1), Cleantech Investor, London, UK (2), Living PlanIt SA, London, UK (3)

Responsible for the consumption of two-thirds of global energy, and 70 per cent of global CO2 emissions, cities are increasingly promoted as key movers in the transition to a low-carbon future. At Rio+20 cities were formally recognised as being a major contributor to creating a sustainable future. Over the last two decades, a number of organisations have been created to support this transition, from C40 Cities to ICLEI (Local Governments for Sustainability). However, it can prove difficult to analyse the exact contribution made at the city level. For example, reductions in energy related emissions are often due to changes in energy production or energy efficiency regulation at the state, provincial and national level which can in turn be shaped by regional and international agreements. This paper offers a critical take on the role of cities within multi-level climate governance. Between cities there are significant differences in mayoral powers as well as substantial budgetary limitations imposed by state or national governments. We argue that rather than pushing for direct emissions reductions, cities can have a more significant impact through a focus on their role as clean-tech incubators, creating opportunities for low-carbon business and driving green industrial development. We draw on recent examples of public-private partnerships at the city level to show how corporate governance can be aligned with city governance in a multi-level and multi-actor governance framework.

Energy Governance Architecture

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Mans Nilsson (Stockholm Environment Institute)

Room: Multi-Purpose Room (3F)

Energy Governance Architecture	
Chair: Mans Nilsson (Stockholm Environment Institute)	
Swain (TC 347)	Emergent Energy Governance Architecture in India: Multi-Level Governance, Market-Plus Approach, PPP Model, and Limited Accountability
Meyer (TC 234)	Fragmentation and Systemic Governance Risk in International Energy
Bastos Lima (TC 275)	An Analysis of Allocation and Access in the food vs. fuel nexus: comparing architectures of biofuel programmes in Brazil, India and Indonesia

Tuesday 29 January 2013
16:00 – 17:30 pm
Energy Governance Architecture
Room: Multi-Purpose Room (3F)

TC 347

Emergent Energy Governance Architecture in India: Multi-Level Governance, Market-Plus Approach, PPP Model, and Limited Accountability

Ashwini Swain (1) presenting

QARA Consulting, Inc., Kabul, Afghanistan (1)

Since the early 2000s, India has claimed to be undertaking a transition to cleaner and more efficient electricity production, as well as use. This alleged shift comes as a response to a range of competing agendas and constraints - such as increasing energy access for the poor, enhancing domestic energy security, and meeting obligations of climate mitigation. This alleged transition, which is still underway, has been transforming the energy governance architecture in India. The emergent energy governance architecture in the country marks several shifts from the past; three of them are noteworthy. First, there is a shift from centralised state-led electrical development to a multi-level governance structure where state agencies at different level are engaged. Second, realising the failure of market-first approach, introduced in 1990s decade, India is following a market-plus approach, where the state is actively engaged in creating market players and setting rules for their operation. Finally, over time, as the limits of a hands-off and market-first approach to the sector have become clear, the government has sought to implement a partnership model, pairing the public sector with the private sector to smoothen the path to clean energy. Analysing these shifts, the proposed paper aims to find out in what ways the emerging state and non-state actors ('Agency') can be held accountable in the emergent energy governance architecture in India. The paper also aims to identify the global implications of the emerging energy governance architecture and scope for intervention of international actors or agents.

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16:00 – 17:30 pm
Energy Governance Architecture
Room: Multi-Purpose Room (3F)

TC 234

Fragmentation and Systemic Governance Risk in International Energy

Timothy Meyer (1) presenting

University of Georgia School of Law, Athens, GA, USA (1)

I use transaction costs economics to develop the concept of *systemic governance risk*: the risk that when two institutions are functionally linked, such as energy and climate change, cooperation in one institution can crowd out cooperation in the second institution. I focus on how institutions geared to energy production and energy security (e.g, IEA, OPEC) distort incentives to cooperate in climate change institutions (e.g, UNFCCC). One of the chief goals of the UNFCCC is to establish international rules incentivizing fuel switching from high carbon fuels to low carbon fuels or renewable energy. This incentive comes from adopting policy instruments that increase the price of carbon emissions regardless of what fuel they come from, thereby causing the price of high carbon fuels to rise by more than low carbon fuels. Yet fuel-specific policies adopted in institutions such as the IEA and OPEC can cause the price of one fuel to move in a way that swamps the "price wedge" created by climate policies. For example, in June 2011 with oil prices roughly 15% below their then-recent highs, IEA member states released 60 million barrels of oil from their strategic reserves pursuant to the IEA's founding treaty. The announcement induced a single-day drop of 7.4% in the benchmark price of oil, spurring consumption and deterring fuel switching. I conclude with some thoughts on how institutional design might ameliorate the negative effects of systemic governance risk.

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16:00 – 17:30 pm
Energy Governance Architecture
Room: Multi-Purpose Room (3F)

TC 275

An Analysis of Allocation and Access in the food vs. fuel nexus: comparing architectures of biofuel programmes in Brazil, India and Indonesia

Mairon G. Bastos Lima (1) presenting

Institute for Environmental Studies, VU University Amsterdam, Amsterdam, The Netherlands (1)

Biofuel production has expanded at fast rates worldwide, spurring much controversy around the impacts of land-use changes for cropland expansion, net climate benefits, and most contentiously the impacts on food security due to the diversion of crops and resources such as land and water from food to fuel production. Most assessments agree that biofuel production brings about as many risks as opportunities, such as the creation of jobs in poverty-stricken rural areas. In other words, although unfettered biofuel expansion may threaten valued ecosystems and food security, carefully planned biofuel production may help promote both conservation and poverty reduction. This confers an ultimate importance to the governance of biofuels. This research has thus set out to analyze in detail the architectures (primarily the policy frameworks, but also prevailing principles and norms) of biofuel programmes in Brazil, India and Indonesia, as well as the outcomes of expanded biofuel production in terms of allocation of benefits and burdens and access to food. The analysis builds on three years of research on those three cases, including field work and altogether more than 100 key-informant interviews with smallholders, local researchers, NGOs, industry representatives, and government policy-makers. The findings suggest that outcomes are inextricably linked to the specifics of each biofuel governance architecture. The comparative assessment thus identifies what access and allocation patterns are being created by biofuel promotion in these countries, the strengths and shortcomings of their policy frameworks, and what lessons can be generalized for supporting equitable and food-secure biofuel production.

Transnational Environmental Governance

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Takahiro Yamada (Tokyo Metropolitan University)

Room: Committee Room 3 (5F)

Transnational Environmental Governance	
Chair: Takahiro Yamada (Tokyo Metropolitan University)	
van de Grift (TC 283)	Global grassroots resource governance networks: opportunities and challenges for re-conceptualizing multi-level governance architectures
Azam (TC 260)	New Social Movements towards Climate Governance Regime: Case studies from Australia and Bangladesh
Kent (TC 254)	A role for grassroots social innovations in climate change governance?
Edwards (TC 320)	Transnational forest governance architecture and how agents and meta-agents gain access

Tuesday 29 January 2013
16:00 – 17:30 pm
Transnational Environmental Governance
Room: Committee Room 3 (5F)

TC 283

Global grassroots resource governance networks: opportunities and challenges for re-conceptualizing multi-level governance architectures

Elisabeth van de Grift (1) presenting, Joost Vervoort (2,3)

Utrecht University, Utrecht, The Netherlands (1), University of Oxford, Oxford, UK (2), CGIAR CRP7: Climate Change, Agriculture and Food Security, Copenhagen, Denmark (3)

Considering the many challenges faced by attempts to build architectures for environmental governance at the global level, academic and societal interests in decentralised forms of governance have grown. This paper explores how global networks of local grassroots sustainability initiatives, partly motivated by the lack of successful government action at higher levels, can offer new opportunities to reconceptualise environmental governance. We outline opportunities and challenges for actors at higher levels to interact with these initiatives. We use the Transition Network, a global grassroots-based network that supports local community-led responses to climate change and peak oil, as a case study, focusing on one of its longest running projects, Transition Town Lewes in the United Kingdom.

Based on an ethnographic study of this Transition Initiative and its context, we demonstrate the potential of such grassroots initiatives for reconceptualised architectures of environmental and resource governance. Such initiatives harness strong agency based on diverse ideologies of connectedness expressed through non-dominant discourses. They display a long-term dedication to change and lasting social capital. Grassroots networks attend to individual and community behaviours underlying consumerist economies. Their local focus allows them to lead and attract by example.

The challenges to the potential of grassroots movements that emerge are that they achieve local changes when system-wide transformation is urgently needed and that they are marginally involved in -and supported by- governance processes at higher levels. We suggest how the potential of grassroots governance networks could be harnessed and supported by multi-level governance architecture.

Tuesday 29 January 2013
16:00 – 17:30 pm
Transnational Environmental Governance
Room: Committee Room 3 (5F)

TC 260

New Social Movements towards Climate Governance Regime: Case studies from Australia and Bangladesh

Mehdi Azam (1) presenting

Macquarie Law School, Macquarie University, Sydney, NSW, Australia (1)

Given the continuing failure of governments and multilateral treaties to deliver effective climate outcomes reflected in the UNFCCC climate talks and current policy and practice, this paper investigates an emerging, but potentially powerful new 'actor' in climate governance regimes both in Australia and Bangladesh. These new actors take the form of climate change new social movements facilitated by different action groups campaigning for a sustainable climate solution around the world. This research currently analysing selected existing climate change governance regimes both globally and nationally, with focus on law making treaties, the actors or participants in the process of decision making, and the failure and success. Then it examines the circumstances under which these new movements can shape law, policy and practice (e.g. direct action mechanisms; lobbying and partnerships; networking; media engagement) to produce effective and legitimate climate outcomes. Specifically the research will conduct interviews with grassroots movement organizations and campaigners to measure the effectiveness of climate action movement. The final outcome of this research is expected to be the development of principles to guide new social movements to better influence climate law regimes and to deliver improved climate outcomes. Initial findings show that these new actors has played crucial role to raise awareness among people as well as lobbying with the politicians to the development of climate policies in Australia. However, country likes Bangladesh, where new social movements for climate action are in very early stage but emerging to be a potential actor to support climate change mitigation and adaptation.

Tuesday 29 January 2013
16:00 – 17:30 pm
Transnational Environmental Governance
Room: Committee Room 3 (5F)

TC 254

A role for grassroots social innovations in climate change governance?

Jennifer Kent (1) presenting

Institute for Sustainable Futures, University of Technology Sydney, Sydney, NSW, Australia (1)

Top-down governance of climate change mitigation is clearly failing given the recent disappointments of international summits and the rise of multilateral and state-centric positions. Whilst the discourse of climate governance remains focused on 'top-down' solutions, 'bottom-up' grassroots climate change movements are gaining traction, supported by a recent shift in political ideology to localism in some Western nations. The rhetoric of localism (revealed in the UK government's Big Society, for example) sees the transfer of power from the state to individual actors and local communities as a means of realizing societal objectives.

This paper proceeds from the question: what might a grassroots-led governance of climate change look like and how might it be achieved? It considers what forms of agency do grassroots actors require? How might grassroots actors influence the spatial governance of climate change? How can social innovations shift from the grassroots into mainstream practice? In considering these questions that sit at the intersection of agency and architecture in the earth systems governance framework, the paper draws on empirical research conducted with Australian climate action groups (CAGs). These non-partisan community-based collectives are engaged in voluntary action towards climate change mitigation and they present themselves as an alternate governance to mainstream political actors. I propose that CAGs are representative of an experimental, grassroots governance which unveils: the types of agency grassroots actors possess; and the alternate governance architectures formulating around the emergence of grassroots movements on climate change.

Tuesday 29 January 2013
16:00 – 17:30 pm
Transnational Environmental Governance
Room: Committee Room 3 (5F)

TC 320

Transnational forest governance architecture and how agents and meta-agents gain access

Peter Edwards (1) presenting

Swedish University of Agricultural Science, Uppsala, Sweden (1)

In a multi-level governance architecture, individual agents have great difficulty in getting their voices heard or included in these systems at the transnational or global levels. Often they are obstensibly represented by higher-level organizations (or meta-agents) to which they and many others belong. Individual agents, in attempting to exercise their agency may actually be denied, as their interests and positions are different from the consensus view of the meta-agent directly involved. The question then arises, how are agents able to exercise their agency in global governance, particularly in competition with many other agents and meta-agents? This paper explores how global governance architectures may be designed to allow both individual and meta-agents to access the global governance system in order to exercise their agency. Using transnational forest governance and the idea of transdisciplinarity, this paper proposes ways in which individual agents within nation states and in the non-governmental sector are able to have their voices heard. Cases include an analysis of the architecture involved in REDD+, Forest Europe and European Commission proposals. While each of these cases involve very different contexts, the nexus between agents and architecture primarily involves the mobilization of resources and the exercise of power.

Climate and Energy

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Aki Suwa (United Nations University - IAS)

Room: 12th Floor Meeting Room

Climate and Energy	
Chair: Aki Suwa (United Nations University - IAS)	
Betsill (TC 52)	Climate Protection through Energy Transitions: The Politics of Colorado's (USA) "New Energy Economy"
Inoue (TC 201)	Empirical analysis of the relationship between innovation activity and environmental management toward climate change
Kern (TC 251)	From Policy Diffusion to Policy Mobility? Relational urbanism in climate and energy governance

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate and Energy
Room: 12th Floor Meeting Room

TC 52

Climate Protection through Energy Transitions: The Politics of Colorado's (USA) "New Energy Economy"

Michele Betsill (1) presenting, Dimitris Stevis (1)

Colorado State University, Fort Collins, Colorado, USA (1)

It is clear that addressing the problem of global climate change requires a shift to a low-carbon society, which in turn requires a fundamental transformation in the energy sector away from reliance on fossil fuels. This paper examines the politics and dynamics of energy transitions through a case study of the State of Colorado's efforts to create a "New Energy Economy" through a series of legistlative and administrative actions between 2007 and 2010 under the leadership of Governor Bill Ritter. We begin with the assumption that energy transitions have significant social components (e.g. networks of scientists, consumer practices, public policies) and that transitioning from one dominant energy system to another will involve political conflict among powerful interests and stakeholders with beneficiaries of the dominant system pushing back against the transition process. At the same time, there may be contestation among stakeholders who are generally supportive of the transition process since its specific form may benefit some more than others. It it through this politics of transitions that societal goals are determined and decisions about allocating resources are made. We explore these dynamics in the case of Colorado's efforts to transition to an economy based on clean energy in order to understand how these political debates shape the nature and trajectory of the transition process. In particular, we are interested in how the goal of climate protection has been embedded in the transition process and the extent to which Colorado's energy transition serves the goal of moving to a low-carbon society.

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate and Energy
Room: 12th Floor Meeting Room

TC 201

Empirical analysis of the relationship between innovation activity and environmental management toward climate change

Emiko Inoue (1) presenting

Kyoto University, Kyoto, Japan (1)

The role of technological innovation has become essential more and more to deal with long term environmental problems, such as climate change. What may induce innovation? In previous studies (e.g. Milliman and Prince, 1989; Jaffe and Palmer, 1997), relationship between environmental regulation and innovation has been discussed, but there are few researches which focused on the influence of voluntary environmental management toward innovation activities. In this study, following questions are examined: (1) How does environmental management toward climate change which is done voluntarily by corporations influence innovation activities of corporations?; (2) Does EU-ETS, the EU emission trading scheme which launched in 2005, affect innovation activities? In order to analyze these questions, company-level panel data (2004-09) of European companies, which was constructed based on the data of corporate responses toward Carbon Disclosure Project, EU industrial R&D Investment data, and corporations' CSR reports, is used. Based on Hausman test, Fixed Effect Model has selected. Although the direct influence of EU-ETS cannot be recognized, the result shows that the corporations which have formal GHG reduction targets with clear timeline are likely to increase R&D investment. In addition, the corporations which allocate specific responsibility for managing climate change to executive and/or a Board Committee are inclined to invest in R&D activity. This result derives an implication that in order to enhance innovation activity, it is important to implement a policy which stimulates the corporations' incentives of setting clear targets and allocating specific responsibility.

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate and Energy
Room: 12th Floor Meeting Room

TC 251

From Policy Diffusion to Policy Mobility? Relational urbanism in climate and energy governance

Kristine Kern (1,2) presenting, Ross Beveridge (2)

University of Potsdam, Potsdam, Germany (1), Leibniz Institute for Regional Development, Berlin, Germany (2)

Given the acknowledged importance of cities to achieving sustainability, it is surprising that policy transfer and diffusion research has often overlooked the interdependencies between cities. This paper addresses this gap through assessing the benefits of the human geography literature on 'policy mobilities' and 'relational urbanism'. A relational and spatial perspective, its concern is for the relationships between cities and global processes: policy-making is viewed as the outcome of the specificities of a place (urban politics) and the possibilities of global flows (of ideas, expertise, etc.). The paper explores the potential to synthesize this approach with the policy transfer and diffusion literature which is more interested in transnational learning and the timing and sequence of policy adoptions. Policy diffusion is not always a self-sustaining process because context factors may determine the transferability of local experiments, and organizational cultures may be more important for developing new ideas than existing models. This paper argues that the policy mobilities literature can help us to understand why and how some ideas, policies, and institutional arrangements become mobile. The approach is then used to examine several cases in the area of climate and energy governance.

Climate Architecture: Norms and Discourses

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Sebastian Oberthür (Vrije Universiteit Brussels)

Room: Meeting Room (3F)

Climate Architecture: Norms and Discourses	
Chair: Sebastian Oberthür (Vrije Universiteit Brussels)	
Koga (TC 286)	From Crisis to Opportunity: Reconstruction of Climate Change Policy
Zusman (TC 392)	How China Warmed to Climate Change: Fitting Global Norms to National Institutions
Oh (TC 204)	Localized Norms in Asia, Brewing Normative Contestation to Global Climate Change Regime

TC 286

From Crisis to Opportunity: Reconstruction of Climate Change Policy

Maki Koga (1) presenting

Tokyo Institute of Technology, Tokyo, Japan (1)

In light of growing resource constraints and climate crisis, not only developed countries but also developing countries are required to shift urgently towards an alternative development paradigm. Under these circumstances, new conceptual ideas including Green Economy that aim to achieve both environment and economy have emerged and spread in the climate negotiations. In fact, many countries are already taking actions according to the concepts, despite most of them have opposed concrete measures to address climate change due to securing their national economic interests. Why and how did these countries change their preferences and actions towards this issue? This paper explores the factors and the processes of policy change by drawing on implications from the literature and the empirical study. Having reviewed the existing literature, the paper first establishes an analytical framework focusing on the roles of and the relationships between norms, discourses and interests. It then introduces several emerging conceptual ideas in the climate negotiations, such as Green Economy, Green Growth and Low Carbon. These concepts aim to create a win-win synergy between environment and economy and to present the environment as an opportunity for economic growth and private sector business. The following case studies, especially on Asian countries, demonstrate that the conceptual ideas turn policy makers into the policy change, by providing options for achieving a new development paradigm. Based on this theoretical and empirical analysis, this paper reveals that ideational factors facilitate the changes in actors' preferences and actions by issue-framing that serves their interests.

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate Architecture: Norms and Discourses
Room: Meeting Room (3F)

TC 392

How China Warmed to Climate Change: Fitting Global Norms to National Institutions

Eric Zusman (1) presenting, Kentaro Tamura (1)

Institute for Global Environmental Strategies (IGES), Kamiyamaguchi, Japan (1)

When China surpassed the United States as the world's largest emitter of greenhouse gases (GHGs) in 2007, many questioned "whether the climate change war could be won". Over the past five years, China has adopted a series of policy reforms bringing this once implausible victory within reach. These developments not only defy empirical expectations but challenge theoretical explanations for policy change. The standard international relations explanation maintains states weigh the merits of discrete proposals before arriving at internally consistent policies. The standard China studies explanation holds agencies bargain over competing alternatives before accepting ambiguous compromises. The standard constructivist explanation suggests broader changes to the ideational environment can facilitate a shift from the latter ambiguous outcome to the former consistent outcome. All three explanations, however, shed limited light on the actors enabling this shift. This paper contends elites and experts were pivotal agents of this policy change. Elites and experts enjoyed enough autonomy from the state to recognize climate change complemented domestic policy priorities while remaining proximate enough to the state to mainstream the issue into key institutions. By fitting global norms to national institutions, elites and experts accelerated the pace and sharpened the content of China's climate policy.

Tuesday 29 January 2013
16:00 – 17:30 pm
Climate Architecture: Norms and Discourses
Room: Meeting Room (3F)

TC 204

Localized Norms in Asia, Brewing Normative Contestation to Global Climate Change Regime

Chaewoon Oh (1) presenting, Shunji Matsuoka (1)

Waseda University, Tokyo, Japan (1)

Recent constructivism scholarship on Asian regional agents has developed the notion of localization that local agent reconstructs foreign transnational norms to be fitted with extant regional norms and practices. This top-down normative localization underwent theoretical expansion by bottom-up feedback loop that localized norms come to be in contestation with the transnational norms. Grounded on this norm dynamics, this research attempts to explicate the role of Asian regional organization in localizing the transnational norms of the UN-based climate change institutions and driving a feedback with localized norms to the global climate change negotiation table with the case of the Association of Southeast Asian Nations (ASEAN). This study shows that the ASEAN played a role in the global-regional interaction in climate change regime through localization and that the level of localization of the ASEAN on the transnational norms is divergent by the norms.

Global Climate Governance 1

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Jeffrey McGree (University of Newcastle)

Room: Staff Room (5F)

Global Climate Governance 1	
Chair: Jeffrey McGree (University of Newcastle)	
Hale (TC 127)	Domestic Politics and Transnational Climate Governance: Evidence from the Emerging Markets
Tamura (TC 240)	Interplay Management for Increasing the Level of Mitigation Ambition: Exploring Synergies between the Climate Regime and Other Regimes to Achieve the 2 Degrees Celsius Goal?
Rietig (TC 110)	The influence of academics on the political dynamics of international negotiations

Tuesday 29 January 2013
16:00 – 17:30 pm
Global Climate Governance 1
Room: Staff Room (5F)

TC 127

Domestic Politics and Transnational Climate Governance: Evidence from the Emerging Markets

Thomas Hale (1) presenting, Charles Roger (2)

Princeton University, Princeton, NJ, USA (1), University of British Columbia, Vancouver, BC, Canada (2)

As hopes fade for a substantial intergovernmental agreement committing countries to emissions reductions targets, practitioners and scholars have increasingly shifted attention to the efforts of sub- and non-state actors to govern climate change through voluntary regulation, project-oriented initiatives, peer networks, and other transnational governance strategies. These activities are currently concentrated in the developed world, but will only help to close the "governance gap" if they engage emerging economies, which will contribute the vast majority of future emissions. Unfortunately, existing work has yet to explain how domestic political circumstances condition local actors' participation in transnational governance. Indeed, existing theoretical approaches tend to assume, often implicitly, pluralistic political environments more consistent with Western liberal democracies than other states. We argue that actors arbitrage across domestic, intergovernmental, and transnational institutions to obtain their most preferred policy objectives, and specify the types of domestic political institutions that are likely to facilitate or impede participation in transnational climate governance. These ideas are tested against a unique database of transnational climate governance initiatives, and in three national cases: China, India, and Brazil. We find that domestic political institutions do indeed alter the nature of actors' participation in transnational climate governance, but also that non-pluralistic domestic institutions are not necessarily impediments.

Tuesday 29 January 2013
16:00 – 17:30 pm
Global Climate Governance 1
Room: Staff Room (5F)

TC 240

Interplay Management for Increasing the Level of Mitigation Ambition: Exploring Synergies between the Climate Regime and Other Regimes to Achieve the 2 Degrees Celsius Goal?

Kentaro Tamura (1) presenting

Institute for Global Environmental Strategies, Hayama, Kanagawa, Japan (1)

The purpose of this paper is to analyse institutional interactions between the climate change regime and other regimes (the ozone regime, international aviation, international maritime, the G20 for phasing out fossil fuel subsidies, and the Climate and Clean Air Coalition to Reduce Short Lived Climate Pollutants), and to discuss the way of improving the interplay management of such interactions with the aim of raising the level of mitigation ambition and meeting the 2 degrees Celsius goal. After the Durban Agreements of the UN Framework Convention on Climate Change, many Parties submitted their views on options for further increasing the level of mitigation ambition, such as addressing emissions from HFCs, addressing global emissions from international aviation and maritime transport, phasing out subsidies for fossil fuels, and reducing short-lived climate forcers. Since these issues have been addressed in other international regimes, they inherently require the interplay management between the climate regime and other regimes concerned. Drawing upon the existing literature on institutional interaction and interplay management, this paper identifies causal mechanisms of the institutional interactions between the climate regime and the others in terms of cognitive, normative, utilitarian, behavioural and impact-level interactions. The causal mechanisms identified lay foundations to discuss how the interplay management had been so far conducted in each case as well as their implications for improvement. The paper argues that diverse causal mechanisms have been at work and provides the way forward to improving interplay management for exploiting synergies, while minimizing conflicts.

Tuesday 29 January 2013
16:00 – 17:30 pm
Global Climate Governance 1
Room: Staff Room (5F)

TC 110

The influence of academics on the political dynamics of international negotiations

Katharina Rietig (1) presenting

London School of Economics and Political Science, London, UK (1)

How can academics influence the political dynamics of international negotiations towards effective outcomes and improve earth system governance? How can they communicate the policy implications of their research findings effectively to government representatives? Pointing with scientific evidence towards the negative consequences of global problems such as climate change is necessary, but not sufficient to influence international negotiations towards an effective agreement or improve earth system governance. Academics are nongovernmental actors who can influence negotiations by assuming advisory roles with insider-status towards government representatives by either advising government delegations or joining them as scientific advisors and negotiators. Most participating academics remain observers to the process or seek to provide input by presenting their research findings. Thus, their influence on negotiations is not homogenous across issues and negotiation sessions. It depends on the strategies academics use to gain access to the policy-makers on the national and international level. This paper examines the influence of academics on the international climate negotiations between 2009 and 2011. It presents research findings within an analytical framework useful for determining the influence of academics on international negotiations and improving their effectiveness in bringing their message across to policymakers. Academic influence depends on (1) when in the negotiation cycle academics provide input with the highest influence before the national position is formed, (2) on their personal capabilities like expertise and reputation, (3) on their policy-entrepreneurial activities and (4) their personal network to government delegates and especially their ability to become insiders with access to negotiation text.

Natural Resources

Tuesday 29 January 2013

16:00 – 17:30 pm

Chair: Takuya Takahashi (The University of Shiga Prefecture)

Room: Women's Plaza 1A (2F)

Natural Resources	
Chair: Takuya Takahashi (The University of Shiga Prefecture)	
McConney (TC 138)	Building a multi-level stakeholder network for transboundary fisheries governance in the Caribbean
Förch (TC 318)	Dynamics of Natural Resource Conflicts at Mt. Elgon, Uganda: Exploring socio-ecological systems management approaches
Yu (TC 237)	The Role of Community: Market-based Mechanism in Natural Resource Management

Tuesday 29 January 2013
16:00 – 17:30 pm
Natural Resources
Room: Women's Plaza 1A (2F)

TC 138

Building a multi-level stakeholder network for transboundary fisheries governance in the Caribbean

Patrick McConney (1) presenting, Terrence Phillips (2), Robin Mahon (1)

University of the West Indies, Bridgetown, Barbados (1), Caribbean Regional Fisheries Mechanism, Kingstown, Saint Vincent and the Grenadines (2)

Marine resource governance is a challenge of increasing magnitude and importance, especially for small island developing states (SIDS). Depletion of fisheries resources, coastal habitat degradation, climate change and variability, food security and energy costs are among the concerns. SIDS in the insular Caribbean are particularly vulnerable to both natural and anthropogenic threats. Fisheries enterprises, coastal communities and sectors such as tourism depend heavily on marine ecosystems. Cross-scale, multi-level, stakeholder networks for marine resource governance may provide means for enhancing resilience and adaptive capacity in these complex social-ecological systems. Countries in the Caribbean are examining and experimenting with transboundary governance structures for ecosystem based management (EBM) and the ecosystem approach to fisheries (EAF). Among the boldest of these experiments is an initiative in collaborative planning and governance architecture to strengthen and network fisherfolk organizations from local through national to regional level among the seventeen SIDS that are members of the Caribbean Regional Fisheries Mechanism (CRFM). This work-in-progress has resulted in the formation of the Caribbean Network of Fisherfolk Organisations (CNFO). Understanding how local, national and transboundary networks can link actors at various levels and scales across the region to use and manage shared marine resources is key to developing policies and practices that enable good governance and contribute to human well-being. Conceptual governance frameworks and results to date are shared in this paper, along with thoughts on how such applied research can be used to further improve marine resource governance in the Caribbean.

Tuesday 29 January 2013
16:00 – 17:30 pm
Natural Resources
Room: Women's Plaza 1A (2F)

TC 318

Dynamics of Natural Resource Conflicts at Mt. Elgon, Uganda: Exploring socio-ecological systems management approaches

Nele Förch (1) presenting, Yazidhi Bamutaze (2), Ruger Winnegge (1)

University of Siegen, Siegen, Germany (1), Makerere University, Kampala, Uganda (2)

Natural resource conflicts are becoming increasingly pronounced in East Africa's mountainous socio-ecological systems, threatening human security and ecosystem integrity.
This paper explores the role of multiple agents and governance levels, determining the dynamics of natural resource conflicts in selected communities at Mt. Elgon, Uganda. It looks at avenues for conflict transformation and adaptive resources management based on field surveys conducted in 2011 and 2012 organized as summer schools.
Using Integrated Watershed Management (IWM) approaches, including participatory problem analysis and planning, the local communities, experts, scientists and policy makers were incorporated in an analytical framework. Natural resource conflicts were analyzed and appeared as a confrontation between immediate community needs and long-term resource sustainability. Various techniques, including interviews, conflict mapping, conflict tree, conflict pyramid, conflict layer model, and the ABC Conflict Triangle, were used. PESTEL analysis of the effects fronted by stakeholders outlines dominant social and environmental challenges.
The results revealed that numerous actors on different governance levels directly influenced resources management as well as conflict dynamics over a period of 70 years, stretching from 1920 to the present. Governance structures changed drastically from the colonial period, post-independence period and more recent changes within the water and resources management sectors. Crucial shifts happened in the ownership of, access to and allocation of resources and appear to directly influence resilience levels of these social-ecological systems. Current governance structures are insufficient in addressing the conflicts and challenges faced. However promising participatory, transparent and integrative approaches are, a clearly enforced policy framework seems crucial.

Tuesday 29 January 2013
16:00 – 17:30 pm
Natural Resources
Room: Women's Plaza 1A (2F)

TC 237

The Role of Community: Market-based Mechanism in Natural Resource Management

Lu Yu (1) presenting, Xiaoxi Wang (1,2)

Humboldt University Berlin, Berlin, Germany (1), Potsdam Institute for Climate Impact Research, Potsdam, Germany (2)

Abstract: Grassland is a dominant terrestrial landscape, resource and ecosystem in China. Accelerating grassland degradation is widely perceived as a threat to the sustainability of Chinese grassland use and to poverty alleviation as grassland desertification and degradation are occurring mainly in the arid poverty-stricken areas in the northwest of China, where local people are highly dependent on natural resources for their livelihood. Two influential policies- grazing ban policy, and grazing quota pilot policy-are examined in terms of their influence on local's herding strategy individually and collectively. Based on the accumulated cases of self-organized market-oriented mechanism regarding herding and grassland leasing observed based on empirical studies on Inner Mongolia and Ningxia Autonomous Region, China, we argue that appropriate institutions will foster community-based market mechanism towards sustainable use of grassland. The skeptical of the capacity of locals in organizing themselves has widely ignored the perception of locals toward the bio-physical environment within which herders and their related action (i.e., herding) are embedded and their enthusiasm of sustaining the natural resource based on which their livelihood mentained. Furthermore, the paper tries to examine the potential of market-based mechanisms in solving environmental problems in terms of widely grassland degradation. The research shows the importance of community in grassland management regarding introducing market instruments.

Parallel Panel Sessions 3

Tuesday 29 January 2013
18:00 – 19:30 pm

Earth System Governance in 21st Century 1

Earth System Governance in 21st Century 6

Climate Adaptation 2

Environmental Governance 1

Carbon Markets

Energy Governance in Asia

Water Governance 2

Ocean Governance 1

Policy Diffusion

Global Climate Governance 2

Earth System Governance in 21st Century 1

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Joyeeta Gupta (VU University Amsterdam)

Room: Committee Room (3F)

Earth System Governance in 21st Century 1	
Chair: Joyeeta Gupta (VU University Amsterdam)	
Meskens (TC 361)	The human rights principle for sustainable development governance
Bernstein (TC 390)	Macroeconomic and Environmental Governance Incoherence: The Missing Links
Gale (TC 51)	Global Democratic Corporatism: A Feasible System for Sustainable Earth Governance?

Tuesday 29 January 2013
18:00 – 19:30 pm
Earth System Governance in 21st Century 1
Room: Committee Room (3F)

TC 361

The human rights principle for sustainable development governance

Gaston Meskens (1) presenting

Centre for Ethics and Value Inquiry, University of Ghent, Ghent, Belgium (1)

Sustainable development is impossible without a continuous care for the implementation of human rights as made explicit in the Universal Declaration of Human Rights and the human rights-related principles of the Rio and Rio+20 Declarations. However, a full implementation of human rights would not automatically lead to sustainable development. As an exercise in coordinating complex systems of interlinked socio-economic processes in a dynamic of increasing globalisation, fair and effective sustainable development governance will always be troubled by cognitive complexity and moral pluralism. Even if we would all agree on the knowledge base of a sustainable development related problem, then opinions could still differ about the acceptability of solutions. The natural and social sciences can inform us about the character of options, they cannot always clarify the choice to make.
Advancing from this rationale, the paper argues that, added to the fields of human rights concerning a fair socio-economic 'organisation' of our society, fair and effective sustainable development governance implies the right for every human 'to contribute to making sense of what is at stake'. In practice, this social justice based concern for human intellectual capacity building translates as a concern for free and pluralist advanced education, inclusive and transdisciplinary knowledge generation and inclusive, deliberative multi-level decision making.
The paper concludes with the argumentation that a rights-based approach to intellectual capacity building, supporting 'the right to be responsible' for every human, is the only way to enable the possibility of global sustainable development governance in a complex and pluralist world.

Tuesday 29 January 2013
18:00 – 19:30 pm
Earth System Governance in 21st Century 1
Room: Committee Room (3F)

TC 390

Macroeconomic and Environmental Governance Incoherence: The Missing Links

Steven Bernstein (1) presenting, Erin Norma Hannah (2)

University of Toronto, Toronto, Canada (1), The University of Western Ontario, London, Canada (2)

Incoherence in environmental and sustainable development governance has been a major driver of the institutional framework for sustainable development (IFSD) reform agenda. Despite lip-service to better integrating the Bretton Woods institutions and UN institutions focused on environment and development, substantive discussions and detailed scholarly analyses have focused almost exclusively on the latter. This gap is especially significant since the Bretton Woods institutions dwarf UN institutions by most measures in terms of their broader resources and influence on the economic system. Thus, improved coherence among the policies and goals of these two sets of institutions is essential to mainstreaming sustainable development in the broader development and macroeconmic system. We argue that one avenue to building coherence is to begin with the only existing institutional mandate to build macroeconomic coherence across finance, trade and development: the WTO coherence mandate. The paper analyzes the history of this mandate, its ironic success on development issues despite failures to promote wider macroeconmic coherence, and the necessity and challenges of expanding its mandate to include the environment and environmental institutions. These findings will then be assessed in light of lessons learned - and lacunae - in the latest round of attempted IFSD reform (Rio + 20), which had improved coherence as one of its major goals.
Note: the paper builds on two bodies of work: 1) an ongoing project on the WTO and institutional (in)coherence by the authors and 2) one author's work on IFSD reform for the Rio + 20 secretariat as well as his own ongoing work on global environmental governance reform and legitimacy.

TC 51

Global Democratic Corporatism: A Feasible System for Sustainable Earth Governance?

Fred Gale (1) presenting

University of Tasmania, Tasmania, Australia (1)

Global Democratic Corporatism (GDC) is a tripartite system of governance that brings together elected representatives from economic, social and environmental sectors--and from the North and South--to negotiate high-quality compromise outcomes. It is currently best operationalised in the structures of the Forest Stewardship Council, a global membership organisation that increasingly governs the forest sector utilising voluntary certification and labelling. In the FSC, individuals and organisations join one of six sub-chambers depending on whether they represent economic, social or environmental interests in the North or the South. Several studies have commented favourably on the strength, equity and quality of this governance form. This paper investigates the desirability and feasibility of scaling GDC up to the global level and embedding its architecture within national and global organisations. Building on a critical evaluation of the deficiencies of territorial representation via liberal democracy and intergovernmental organisations, the study examines current proposals for an Institutional Framework for Sustainable Development, especially those emerging from RIO+20, and compares and contrasts these with GDC to assess strengths, weaknesses and feasibility.

Earth System Governance in 21st Century 6

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Robin Mahon (University of the West Indies)

Room: U Thant (3F)

Earth System Governance in 21st Century 6	
Chair: Robin Mahon (University of the West Indies)	
Andrew (TC 143)	Fragmented Environmental Governance Architectures: Challenges and Implications for Environmental Performance in Nigeria
Reyes (TC 160)	Environmental Attitudes, Discourses, and Drivers of Environmental Politics: An International Longitudinal Study of ISSP Datasets
Odoemena (TC 344)	Earth system governance and the complexity of collective decision making
Zanetti (TC 146)	The Agricultural Climate Governance Policy - PGCA, the Agricultural Market for Emissions Reductions - MARE and the Platform for Environmental Services - PSA of the National Agricultural Confederation - CNA in Brazil

TC 143

Fragmented Environmental Governance Architectures: Challenges and Implications for Environmental Performance in Nigeria

Onwuemele Andrew (1) presenting

Nigerian Institute of Social and Economic Research, Ibadan, Oyo State, Nigeria (1)

Environmental governance has become a major instrument used by governments in addressing various environmental problems. This is achieved through the creation of appropriate institutional mechanisms for environmental monitoring, enforcement and compliance. Consequently, multiple agents play significant role in environmental governance generating fragmented environmental governance architectures. This scenario has elicited fundamental questions about the impacts of the fragmented governance architectures in environmental performance. Nigeria is a perfect scientific laboratory to test the effectiveness and impact of fragmented governance architectures on environmental performance. The diverse environmental resources in Nigeria coupled with its bourgeoning environmental problems have triggered the need for environmental sustainability and maintenance of environmental integrity. The corollaries of this are multiple agents for environmental governance in Nigeria. This paper appraises the impact of the fragmented governance architectures on the overall effectiveness of environmental governance and performance in Nigeria. The paper combines desk research with field data collection from interviews of environmental stakeholders in Nigeria. Analysis of data shows an uncoordinated and fragmented approach to environmental governance. It reveals lack of inter-sectoral linkages among the federal, state and local agencies charged with environmental governance leading to fragmentation and duplication of duties. The result also reveals poor environmental performance in terms of environmental sustainability and quality. The paper identifies challenges of environmental governance to include poor political will, frequent changes in government priorities, poor data availability and enforcement of environmental regulations by relevant agencies. The paper calls for cooperation, vertical integration and creation of integrated approach to environmental governance in Nigeria.

Tuesday 29 January 2013
18:00 – 19:30 pm
Earth System Governance in 21st Century 6
Room: U Thant (3F)

TC 160

Environmental Attitudes, Discourses, and Drivers of Environmental Politics: An International Longitudinal Study of ISSP Datasets

Joseph Anthony Lazareto Reyes (1) presenting

Tohoku University, Sendai, Miyagi Prefecture, Japan (1)

This paper explores the relationship between environmental attitudes, environmental governmental discourses, and drivers unique to the development of environmental policy. Data from the International Social Science Program (ISSP) environmental modules from 1993 and 2000 contain discernible patterns among countries for items dealing with ecocentric and pessimistic environmental attitudes broadly related to the DSP and NEP.

A proposed conceptual model is utilized to interpret the results of the ISSP datasets, through a bi-axial dimension scale - ecological consciousness and epistemological commitment, to indicate the environmental knowledge orientation of the respondents among four archetypes. Changes over time in environmental attitudes of people and movements within the typology are related to overarching environmental discourses, such as 'green governmentalism', 'ecological modernization', and 'civic environmentalism'. Moreover, drivers of environmental politics that include: Political opportunity structures, environmental NGOs, natural disasters and conditions, and cultural dynamics, may also be utilized to understand specific contexts of different regions and countries.

Initial findings show that majority of industrialized countries are clustered in the rational-ecologist categorization with respondents possessing strong ecological consciousness and optimism towards the role of modern institutions, science, and technology in solving environmental problems. Though certain countries such as Japan and those from the developing world seem to have varying propensities within their respective populations, the general disposition for most of the respondents in the ISSP datasets may be interpreted as conducive to principles and approaches of green governmentalism and ecological modernization.

TC 344

Earth system governance and the complexity of collective decision making

Anthony T. Odoemena (1) presenting, Joni Jupesta (2,3)

Department of International Studies, Graduate School of Frontier Sciences, University of Tokyo, Chiba, Japan (1), United Nations University-Institute of Advanced Studies, Yokohama, Japan (2), National Graduate Institute for Policy Studies, Tokyo, Japan (3)

As with any international cooperation endeavor that aims at steering multiple actors toward achieving a given goal, reaching a consensus on how to prevent and mitigate adverse global environmental changes can be complicated. With reference to the notion of differential responsibilities for instance, opposing views have emerged over what is right, fair and equitable. In addition, the procedures and criteria that will be used to aggregate the respective views on what is fair and acceptable in earth system governance is an issue that cannot be ignored. Based on the obvious differences in the temporal and spatial distribution of vulnerabilities to adverse changes in the global environment, the challenge of earth system governance can be modeled as decision problem among stakeholders with diverse payoffs and preferences. Generally, one of the main aims of this paper is to develop a model for analyzing this complexity. To achieve this goal, we have reviewed the experiences of comparable multilateral negotiations, with the aim of drawing some lessons and implications for earth system governance. In analyzing the complex interaction among diverse stakeholders, we observed that this challenge is further complicated by the uncertainty regarding an actor's expected utility in the scheme of earth system governance. Using theories on collective action and multi-agent decision making, we have identified some conditions that can enhance cooperation. We conclude with a set of recommendations that are applicable to some of the unique features that characterize earth system governance.

TC 146

The Agricultural Climate Governance Policy - PGCA, the Agricultural Market for Emissions Reductions - MARE and the Platform for Environmental Services - PSA of the National Agricultural Confederation - CNA in Brazil

Ederson A. Zanetti (1) presenting

Federal University of Parana, Curitiba, Parana, Brazil (1)

Green Economy signalizes major opportunities for products and services holding environmental and social benefits, being somehow approached by World Trade Organization and United Nations Conference on Trade and Development as Environmental Goods and Services. At the same time this creates a movement towards valorization of Ecosystem Services such as carbon cycling, water quality and quantity, biodiversity and many others. With the aim of mainstreaming ecosystem services at production and service chains and increasing overall competitiveness for this new era of sustainable development, the Mato Grosso Industry and Agriculture Federations inaugurated in 2010 a Unity for Environmental and Ecosystem Services. This unit has been responsible for developing the Verde Rio project into a Green Infrastructure proposal, with the inclusion of it as a ecosystem services supplier within the newly created Platform for Business with Environmental and Ecosystem Services, which is a form of establishing a governance system for accomplishing the above mentioned task. The Verde Rio Project has received financial support from World Cup 2014, became a partner of the International Platform for the Satoyma Initiative and also of the Mitigation of Climate Change in Agriculture of the Food and Agriculture Organization - MICCA/FAO. The latest visit the site on 2012 and declare it as an example for the world. Due to this results the National Confederation of Agriculture, which has been working on a Agricultural Climate Governance Policy and for establishing the Agricultural Market for Emissions Reductions, decided to support the creation of a national Platform for Environmental Services.

Climate Adaptation 2

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Robert Bartlett (University of Vermont)

Room: Media Centre

Climate Adaptation 2	
Chair: Robert Bartlett (University of Vermont)	
Mustelin (TC 253)	The limitations of climate adaptation as resource allocation problem: The need for equity and values approaches in robust adaptation governance
Hanger (TC 328)	Dimensions of distributive justice in regional discourses on climate change adaptation

Tuesday 29 January 2013
18:00 – 19:30 pm
Climate Adaptation 2
Room: Media Centre

TC 253

The limitations of climate adaptation as resource allocation problem: The need for equity and values approaches in robust adaptation governance

Daniel Ware (1,3), Johanna Mustelin (1,2) presenting

Griffith University, Queensland, Australia (1), Griffith Climate Change Response Program, Queensland, Australia (2), CSIRO Climate Adaptation Flagship, Canberra, Australia (3)

This paper introduces the concept of political risk as it applies to the evolution of climate change adaptation by Local/Municipal Governments in high-income democracies. While politics is frequently sighted in the literature as a significant constraint to adaptation, analysis of international examples of guidance materials designed to support and guide Local Government adaptation efforts ignores politics in favor of a techno rationalist discourse.

This techno rationalist discourse frames adaptation as a problem of efficient resource allocation to be addressed using traditional economic analysis or even risk assessment approaches. However, recent Local Government driven adaptation efforts are underpinned by these techno rationalist planning approaches and seek to explain increasing stakeholder resistance as a symptom of the construction of adaptation as an efficient resource allocation problem rather than as a question of equity and values.

We provide empirical evidence of the extent politics is in fact driving adaptation decisions among local governments and propose a model to advance efforts that consider issues of equity and values within political constraints. In doing so, we provide a complementary criticism of the techno rationalist risk, vulnerability and economics analysis approaches and argue for a more value-aware approach to institutional change.

Tuesday 29 January 2013
18:00 – 19:30 pm
Climate Adaptation 2
Room: Media Centre

TC 328

Dimensions of distributive justice in regional discourses on climate change adaptation

Susanne Hanger (1,2) presenting

International Institute for Applied Systems Analysis, Laxenburg, Austria (1), Institute for Environmental Studies (VU University Amsterdam), Amsterdam, The Netherlands (2), Amsterdam Global Change Institute, Amsterdam, The Netherlands (3)

Justice is a long-standing constant in global environmental governance, yet it has been marginalized in current governance structures, policy arrangements and their scientific analysis particularly in the case of climate change. This paper highlights the current over-emphasis of efficiency as core aspect in policy design and evaluation particularly at regional levels and explores the space that is given to other principles of distributive justice (equity) in different adaptation discourses. In particular the question will be addressed of how actors at different scales frame distributive justice in the case of adaptation, and whether alternative framings support centralized or decentralized public action. This is particularly relevant at a time when national and governance architectures for climate change and regional development are created and/or reformed to accommodate issues of adaptation. Based on the scientific literature on climate ethics and burden sharing and an analysis of existing climate policies and policy proposals I identified a set of normative principles of distributive justice, which are potentially relevant to national and regional adaptation policy. Against this background I present an analysis of expert focus groups and a pan-European survey targeting policy makers, researchers and third sector representatives at different jurisdictional scales. The results confirm the significance of utilitarian rationales in the adaptation discourse; however in questions concerning the distribution of benefits and burdens, several alternatives are highlighted, such as responsibility, capacity to pay and the need to help those with the least adaptive capacity.

Environmental Governance 1

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Stacy van Deever (University of New Hampshire)

Room: Committee Room 1 (5F)

Environmental Governance 1	
Chair: Stacy van Deever (University of New Hampshire)	
Kalfagianni (TC 165)	Private governance and the challenges for sustainability: exploring the role of TNCs in fostering sustainable transformations in the earth system
Matsumoto (TC 153)	Voluntary approaches in VOC emission reduction policy in Japan - architecture and participation
Adelegan (TC 18)	Electronic Waste Management in Africa: The Challenges and Opportunities with the Growing Telecommunication Industry

Tuesday 29 January 2013
18:00 – 19:30 pm
Environmental Governance 1
Room: Committee Room 1 (5F)

TC 165

Private governance and the challenges for sustainability: exploring the role of TNCs in fostering sustainable transformations in the earth system

Agni Kalfagianni (1) presenting

VU University Amsterdam, Amsterdam, The Netherlands (1)

In the past few decades, transnational corporations (TNCs) have become pivotal actors in earth system governance. Their remarkable growth in both number and size as well as their global reach have made them particularly attractive partners for governments and civil society organizations aiming to foster environmental and social goals by harnessing market forces. In this context, the development of standards and certification schemes that prescribe and monitor environmental and socially responsible behavior in global supply chains increasingly involves the participation of TNCs. While TNC involvement in earth system governance has the potential to achieve great benefits by transforming the market from within, it might also come at a cost. Adopting a neo-Gramscian perspective, this paper explores the hypothesis that TNC endorsement of private standards is more likely to facilitate capital accumulation and deflect challenges to the status quo rather than lead to sustainable market transformations. The paper explores this hypothesis in three prominent initiatives addressing global sustainability challenges, specifically GlobalGAP, the Marine Stewardship Council and Fairtrade. On the basis of in-depth analysis of primary and secondary sources, this contribution shows that while some positive consequences can be identified, e.g. a larger penetration of the mainstream market, the mechanisms with which sustainable development objectives are constituted and implemented by TNCs also leads to less stringent, comprehensive, inclusive and fair standards. With its analysis this paper contributes to the literature of earth system governance, by linking TNC agency with the broader transformations that are necessary for a sustainable earth system.

Tuesday 29 January 2013
18:00 – 19:30 pm
Environmental Governance 1
Room: Committee Room 1 (5F)

TC 153

Voluntary approaches in VOC emission reduction policy in Japan - architecture and participation

Naoko Matsumoto (1) presenting, Akira Ogihara (1)

Institute for Global Environmental Strategies, Hayama, Kanagawa, Japan (1)

Voluntary approaches to industry-wide pollution prevention programs have been implemented by many industrialised countries, as a part of policy trend away from a 'command and control' policy approach.
The Japanese government established in 2004 a 'best-mix' scheme of voluntary and regulatory approach to reduce emissions of volatile organic compounds (VOC). It aimed to reduce VOC by 30% by 2010 from the 2000 level, by ulitizing both direct regulations (10%) and voluntary efforts (20%). As a result, it is estimated that the VOC emissions were significantly reduced and the target was successfully achieved. A total of 43 industrial associations submitted voluntary action plans and the number of the companies participating in the plans reached 9,365.
To date, there are few studies on the policy assessment of the Japanese VOC emission reduction policy. This paper focuses on the participation by private companies ('Agency') in the voluntary action plans and addresses the question what factors facilitated their participation in the voluntary approach under the VOC reduction scheme ('Architecture'). It tests the existing hypotheses to explain participation in voluntary environmental programs including: businesses are motivated by both internal and external factors, and businesses facing stricter regulatory environments are likely to participate. Findings not only show some consistent results with the above hypotheses but also reveal that some designs of the 'Architecture' and policy-making process seems to have facilitated participation. Lessons are further drawn regarding the possibility of employing voluntary approach in the regional cooperation framework to address the transboundary air pollution.

Tuesday 29 January 2013
18:00 – 19:30 pm
Environmental Governance 1
Room: Committee Room 1 (5F)

TC 18

Electronic Waste Management in Africa: The Challenges and Opportunities with the Growing Telecommunication Industry

John Oluwafemi Adelegan (1) presenting, Joseph Adelegan (1)

Global Network for Environment and Economic Development Research, Ibadan, Oyo State, Nigeria (1)

Nigeria is often identified as the fastest moving economy and one of the most advanced ICT market sectors in Africa. In just a few years, Nigeria has become the telecommunication hotspot for both telecommunication operators and equipment suppliers. However, the growth was characterized with unprecedented release of electronic waste from the mobile phone companies into the environment and most of them highly toxic. This has implication for pollution with emission of heavy metals affecting trans-boundary water sources.

A number of studies have addressed environment-benign technologies and environmentally sound waste management in developed countries. We know little about their association in developing countries. The research was designed to illuminate benign environmental technology adoption in African economies - in one illustrative and growing industry - telecommunication. The research addressed the adoption of environmentally sound management of electronic waste as it relates to mobile phones in Africa. Qualitative interviews were held with upper echelon executives representing firms in Nigerian telecommunication industries with quantitative analysis using structural equation model.

The study suggests the absence of legislation dealing with electronic waste, inadequate infrastructure for waste management, absence of any framework for end-of-life product take-back. However, the generation of electronic waste from may turn out to be a win-win situation and clearly has inherent business opportunities for the developing countries if the adoption of environmental benign technologies and policy is embraced. Given the economic implications of recycling of electronic waste in developed world, the western nations will continue to look in the direction of Africa.

Carbon Markets

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Bernd Siebenhüner (CvO University of Oldenburg)

Room: Multi-Purpose Room (3F)

Carbon Markets	
Chair: Bernd Siebenhüner (CvO University of Oldenburg)	
Kayser (TC 203)	Fire the workers when building new houses? How proposed New Market Mechanisms would impact the value chain created in the Clean Development Mechanism
Kelly (TC 329)	The Governing of Emissions Trading: A Multi-Level Governance Perspective
Elges (TC 377)	Understanding and mitigating corruption risks in the governance of climate and carbon finance

Tuesday 29 January 2013
18:00 – 19:30 pm
Carbon Markets
Room: Multi-Purpose Room (3F)

TC 203

Fire the workers when building new houses? How proposed New Market Mechanisms would impact the value chain created in the Clean Development Mechanism

Dirk Kayser (1,2) presenting, Joern Huenteler (3), Tobias S. Schmidt (3)

Graduate University of the Chinese Academy of Sciences, Beijing, China (1), Research Center on Fictitious Economy & Data Science, Chinese Academy of Sciences, Beijing, China (2), Swiss Federal Institute of Technology Zurich (ETH Zürich), Department of Management, Technology, and Economics, Group of Sustainability and Technology, Zürich, Switzerland (3)

The Clean Development Mechanism (CDM), one key market mechanism of the current global climate governance architecture, faces an uncertain future. Policy actors across governance levels and regions are currently developing proposals for 'New Market Mechanisms' (NMMs) to complement, or even replace, the CDM after 2014. This re-design of the global carbon market will have substantial impact on the involved actors, often located in developing countries. Much of their knowledge, competences, and networks established in the CDM could be made obsolete. Building on the presumption that NMMs could benefit from utilizing what has been learned under the CDM, in this paper we assess to which extent and how the different NMM proposals would utilize the established structure of the CDM's value chain. The paper follows a two-step approach: First, we explore the current CDM market structure and how it evolved to its current state. We use 2012 data of the UNFCCC CDM Bazaar and compare the structural patterns to an earlier study from 2008. Based on this comparison, we identify the key competence clusters as well as structural trends in the CDM's value chain. Second, we analyze the current NMM proposals and identify the impact of key NMM design choices on the CDM's value chain structure. Our results show how the CDM value chain matured over the last 5 years and provide policy makers and the UNFCCC process with insights for NMM design and evaluation. For market participants, the results will provide meaningful input for strategy making and positioning.

Tuesday 29 January 2013
18:00 – 19:30 pm
Carbon Markets
Room: Multi-Purpose Room (3F)

TC 329

The Governing of Emissions Trading: A Multi-Level Governance Perspective

Gerard H. Kelly (1) presenting

University of Westminster, London, UK (1)

The Kyoto Protocol has encouraged the development of a complex multi-level governance structure. Climate law governance has been vertically and horizontally diversified resulting in a mosaic architecture where governance is occurring in multiple places simultaneously. As the European Commission continues to promote an ambitious vision of an OECD-wide carbon market by 2015, with the integration of trading systems in major emerging countries by 2020, a research agenda reveals itself with themes concentrated on the allocation of climate law governance functions across multiple levels and the methods by which cross-scale complementarity is maintained.
As WB Gallie might have put it, multi-level governance, remains something of an "essentially contested concept". However, a multi-level governance perspective can aid our understanding of the EU's Emissions Trading Scheme: it can also sharpen our analysis of envisaged linkages with external trading systems. Whilst the regulatory linking mechanisms required for effective governance need not be centralised, a certain minimum harmonisation threshold is critical to ensure design compatibility. As climate law represents a policy area characterised by dispersed decision-making competences and the involvement of state and non-state actors, the task today is to evaluate and take advantage of the complex synergies presented by this model of governance. It is clear that multi-level governance theories offer some descriptive purchase by providing a map to the evolving world of climate governance. However, a core question remains as to whether multi-level governance may also present a normatively superior model of governance in this field.

Tuesday 29 January 2013
18:00 – 19:30 pm
Carbon Markets
Room: Multi-Purpose Room (3F)

TC 377

Understanding and mitigating corruption risks in the governance of climate and carbon finance

Lisa Elges (1) presenting

Transparency International, Berlin, Germany (1)

Climate and carbon finance are public resources made available to help countries adapt to the impacts of climate change and mitigate the global warming causes. Governing both the generation and use of these funds remains a great challenge. In many cases, lack of transparency and accountability internationally and nationally leads to corruption risks. Getting governance right and addressing corruption risks can enable better assurances that public money achieves best value for money to achieve climate and environmental demands of our planet and future generations. This paper analyses the current governance architecture of climate and carbon finance at the global level. It also analyses climate governance structures in 3 countries: Bangladesh, Kenya and Mexico. The relationship between both global and national public financing schemes is explored. In both global and national studies, specific governance weaknesses are discussed, with a particular emphasis on institutions and relationships most vulnerable to corruption. In describing, real and potential corruption risk scenarios, the paper concludes with some solutions for policy level change.

Energy Governance in Asia

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Joni Jupesta (United Nations University - IAS)

Room: Women's Plaza 2A (2F)

Energy Governance in Asia	
Chair: Joni Jupesta (United Nations University - IAS)	
Liu (TC 199)	Regulatory Change and institutional rearrangement in China's Renewable Energy Development
Nair (TC 317)	Challenges in maintaining energy security through hydropower development in India under a changing climate

Tuesday 29 January 2013
18:00 – 19:30 pm
Energy Governance in Asia
Room: Women's Plaza 2A (2F)

TC 199

Regulatory Change and institutional rearrangement in China's Renewable Energy Development

Liguang Liu (1) presenting

Central Univeristy of Finance and Economics, Beijing, China (1)

The past decade has also seen tremendous growth in the Chinese renewable energy market. By adopting strong but flexible policies and measures, the Chinese government has strengthened its capacity to ensure institutional coherence and policy integration. Renewable energy now supplies nearly 10 percent of the nation's energy demand and leads in attracting more investment in the world. The related cleantech industry is gaining growing international competiveness, but also leads some international trade disputes resulting from uneven adoption of environmental measures.
This study will examine the historical evolution of China's renewable energy policy, identify main factors that have affected regulatory change and institutional rearrangement, and present lessons that may be learned. It will also discuss policy coordination challenges within the current system of economic and trade governance. Key research questions include: How have the renewable energy regulations and institutions been developed in China? What innovative policy instruments have been developed as a complement to regulations? What roles have the state and non-state actors played during the process? What lessons can we learn from China's experience and can the governance arrangements be replicated in other countries? Besides, will the current trade disputes impede the expanding Chinese cleantech and renewable energy industry?
This research will focus on the wind power industry and solar PV cell industry in China. This research provides useful insights to understand the complex Chinese energy governance architecture and reform in aspects of technology transfer, technical and funding support, policy coordination and integration, and international cleantech trade.

TC 317

Challenges in maintaining energy security through hydropower development in India under a changing climate

Shadananan Nair (1) presenting

Nansen Environmental Research Centre (India), Kochi, Kerala, India (1)

Maintaining energy security is a challenging issue in India under a changing climate. Demands in energy are escalating, whereas there is an increasing gap between production and consumption. Development of environment friendly, sustainable and relatively cheaper hydropower is one of the ideal sources of clean energy. In addition to minimising the impact of hydrological extremes, it also contributes to the securities if food and water. India is endowed with economically exploitable and viable hydropower potential, ranking 5th in global scenario. However, exploitation of hydropower potential is not up to the desired level. One of the major challenges in the hydropower generation is the changing rainfall characteristics. High seasonality and intensity of rainfall leads to wasteful runoff, as reservoir capacity is fast exceeded. Intense rainfall with large cloud drops causes more erosion and sedimentation, considerably reducing the reservoir capacity. Abnormal melting of the Himalayan glaciers is a threat to all hydropower projects in north India. However, the changes in climate can be beneficially utilized through proper adaptation strategies, such as more multipurpose reservoirs with major and minor power development schemes. Present study assesses the impact of climate change on hydropower generation, and changes in demand and production of energy in India and of the various socio-economic, environmental and political issues related to it. Current policies, management practices and adaptation strategies have been critically reviewed. Suggestions for the development of a better energy policy and management strategy and for the solutions to various issues related to hydropower development have been provided.

Water Governance 2

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: tbd

Room: Women's Plaza 2B (2F)

Water Governance 2	
Chair:	
Wang (TC 290)	Water Allocation Policy in China Revisited: Volitional Pragmatism and the Evolution of Institutions
Chan (TC 297)	The Impact of Global Environmental Mega-Conferences on Institution Building and Transnational Society in the Political Context of an Authoritarian State: International Influences on China's Environmental Governance Architecture
Khalild (TC 255)	Cooperative Federalism for Effective Water Governance – A Case Study of Malaysia

Tuesday 29 January 2013
18:00 – 19:30 pm
Water Governance 2
Room: Women's Plaza 2B (2F)

TC 290

Water Allocation Policy in China Revisited: Volitional Pragmatism and the Evolution of Institutions

Xiaoxi Wang (1) presenting, Lu Yu (2)

Potsdam Institute for Climate Impact Research, Potsdam, Germany (1), Humboldt University of Berlin, Belrin, Germany (2)

China is facing water scarcity due to increasing water demand and escalating climate change. In particular, in northern China, water scarcity is more drastic, with water availability around 650 m3/ capita year. Iinterregional water conflicts are arisen in the Yellow River Basin and the Hai River Basin. By employing volitional pragmatism theory from classical institutional economics, the paper revisits the change of interregional water allocation polices in China and answers the question how is the evolution of institutions related to water policy.
Compared to Public Choice Theory, assumptions of which are often not held in transitional countries such as China, volitional pragmatism endows more powerful analysis tools. An ex ante perspective is applied to examining why different types of water allocation policies are created and how they are created. As current institutions are representation of prior reasons, purposes and etc., we firstly document the consequence of each water allocation policy. Volitional pragmatism reminds us that all actions are a diagnostic undertaking in the quest for valuable belief that is the only category of belief providing sufficient reasons for human action. Conflicts associated with certain policies are analyzed as the reasons for the change of polices. Hence, institutional change of water policies is the ultimate adaptation to conflicts which are not resolved by previous water policies. We find that the reasons for change of water policy are embedded in interrelated physical, institutional, historical-cultural, and ideologically grounded contradictions in water sphere.

Tuesday 29 January 2013
18:00 – 19:30 pm
Water Governance 2
Room: Women's Plaza 2B (2F)

TC 297

The Impact of Global Environmental Mega-Conferences on Institution Building and Transnational Society in the Political Context of an Authoritarian State: International Influences on China's Environmental Governance Architecture

Sander Chan (1) presenting

VU University, Amsterdam, The Netherlands (1)

Environmental mega-conferences, such as the 1992 UNCED and the 2002 WSSD, have become a recurring feature of global environmental governance. Scholarly discussions of the conferences seem to concentrate on international level effects; whether or not these conferences have led to better global environmental governance, in terms of institutions, inclusiveness, accountability, et cetera. Literature on effects of megaconferences on particular countries is much scarcer. Even fewer scholars have discussed the broader impact of megaconferences on environmental governance in China. This paper focusses on the question how environmental megaconferences have impacted on China's environmental governance. It combines the theoretical viewpoints of regime-based functionalism and reversed transnationalism. The first concentrates on impacts in terms of the progressive institutionalization and legalization at the domestic level, while reversed transnationalism is a suitable perspective to assess the impact of transnational actors on civil society development in China. This study is based upon a review of Chinese and English language literature, complemented with observations and interviews at the China Association of NGOs (CANGO), the UN headquarters during two sessions of the Commission for Sustainable Development, and participants and organizers of Chinese NGO delegations. The paper presents new evidence on how China's environmental governance architecture has developed along with the growing role of transnational actors in global environmental governance in particular.

Tuesday 29 January 2013
18:00 – 19:30 pm
Water Governance 2
Room: Women's Plaza 2B (2F)

TC 255

Cooperative Federalism for Effective Water Governance – A Case Study of Malaysia

Rasyikah Md Khalild (1,2) presenting, Mazlin Bin Mokhtar (1), Faridah Jalil (1), Suhaimi Ab Rahman (3), Siti Nurain Zulkifli (1)

Universiti Kebangsaan Malaysia (National University of Malaysia), Bangi Selangor, Malaysia (1), Universiti Teknologi MARA, Shah Alam Selangor, Malaysia (2), Universiti Putra Malaysia, Serdang Selangor, Malaysia (3)

There are two major types of federalism namely dual federalism and cooperative federalism. While the former holds that the federal state governments are co-equals with specific powers granted by the Constitution, the latter denotes that although federal government is supreme over states, both acts cooperatively to solve common problem. Malaysia practices dual federalism where powers for federal and states government are specifically enumerated in the Federal Constitution. Rather than fostering cooperation, dual federalism in Malaysia has created tension between the two governments especially in water governance. The 2005 constitutional amendment for instance has transferred water services from the state list to the concurrent list. This enables the federal government to pass new laws and establish a water services commission to regulate and ensure efficient services from state water operators. This effort may be futile as it still need states' consents to be governed by the new regulation. It is important to revisit such approach as cooperation between the two governments is vital in dealing with increasing demand for water, river pollution and impacts from climate change. In this regard, American cooperative federalism is worth an analysis and it is contradictory to Malaysia only in the immense and diversity of the former. This doctrinal study employs content analysis of the Federal Constitution, water laws and related books and journal articles. The paper concludes that, with some customization, Malaysia should follow American cooperative federalism to improve water governance and adapt to climate change.

Ocean Governance 1

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Atsushi Ishii (Tohoku University)

Room: 12th Floor Meeting Room

Ocean Governance 1	
Chair: Atsushi Ishii (Tohoku University)	
Scobie (TC 339)	Regional marine governance architecture- towards environmental justice in the Caribbean
Valman (TC 136)	Actors and advocacy coalitions in the Baltic Sea: Variation, ideas and change 1980-2010

Tuesday 29 January 2013
18:00 – 19:30 pm
Ocean Governance 1
Room: 12th Floor Meeting Room

TC 339

Regional marine governance architecture- towards environmental justice in the Caribbean

Michelle Scobie (1) presenting

The University of the West Indies, St. Augustine, Trinidad and Tobago (1)

This paper looks at the architecture of marine environmental governance in the Caribbean. Has the decentralization of governance to the regional level allowed for greater participation of actors and more effective environmental outcomes? In particular the paper examines the Caribbean Sea Commission of the Association of Caribbean States and the Caribbean Environmental Program administered through the United Nations Environmental Program, to assess the extent to which the structure created is suited to promoting environmental justice and long term environmental sustainability. Both agencies are evidence that States of the Region are cognizant of the importance of shared governance of the world's second largest semi-enclosed sea. These institutions may be strengthened, however, by finding a balance between decentralizing governance to promote governance ownership through institutionalizing more participatory mechanisms while simultaneously increasing centralization (at the regional level) by the streamlining and sharing of national efforts to avoid duplication. These changes would help foster environmental justice. The paper highlights regional marine governance dynamics in developing SIDS.

Tuesday 29 January 2013
18:00 – 19:30 pm
Ocean Governance 1
Room: 12th Floor Meeting Room

TC 136

Actors and advocacy coalitions in the Baltic Sea: Variation, ideas and change 1980-2010

Matilda Valman (1,2,3) presenting

Baltic Nest Institute, Stockholm, Sweden (1), Stockholm Resilience Centre, Stockholm, Sweden (2), Department of Political Science, Stockholm, Sweden (3)

A shift from government to governance is commonly accepted as the new management form of common goods. The Baltic Sea has since 1974 been governed by the nine bordering states and the European Community. In addition to the contracting parties have several intergovernmental and nongovernmental organizations gained observer status over the years. However, whether the inclusion of observers in the governing of the Baltic Sea has affected the management remains unclear. This study show that no shift towards governance have occurred in the Baltic Sea region – in fact, NGOs and IGOs have played a remarkably small role in the cooperation. By studying actor coalitions in the Baltic Sea cooperation and how these have fluctuated over time the observers have been proven to be a stable but small actor that figures on the outskirts of the cooperation. This proves that the general belief that nation states are losing influence in favor of non-state actors in international policy making arenas needs to be questioned.

Policy Diffusion

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Asami Miyazaki (Kumamoto Gakuen University)

Room: Women's Plaza Audio Visual A (1F)

Policy Diffusion	
Chair: Asami Miyazaki (Kumamoto Gakuen University)	
Anderton (TC 187)	Transnational policy diffusion - examples of South-North and South-South knowledge-sharing from sustainable transport policy
Huitema (TC 379)	Climate policy innovation: sources, patterns, and effects
Yamagata (TC 32)	The Contingent Effect of Social Influence in Networks of Environmental Agreements
Biedenkopf (TC 50)	The Role of Formal Architectures and Informal Practices in the Diffusion of Environmental Policy – The Case of EU-Korea Cooperation on Chemicals Regulation

TC 187

Transnational policy diffusion - examples of South-North and South-South knowledge-sharing from sustainable transport policy

Karen Anderton (1) presenting, Heike Schroeder (1,2)

University of Oxford, Oxford, UK (1), University of East Anglia, Norwich, Norfolk, UK (2)

This paper examines examples of South-North and South-South policy diffusion occurring in the promotion of sustainable transport. Much has been written about policy diffusion over the past few decades, yet it has to a large extent focused on the knowledge that developed countries share between themselves, or impart to the developing world counterparts about how successful policies have been implemented and can be replicated. It has not examined the extent to which policy development in the global South can be shared amongst developing countries, and also does not discuss the knowledge derived from global South policy success which can inform future decisions in the global North. However, examples abound.

Drawing on the literature of policy diffusion from international relations and political science, this paper focuses on two areas of transport policy where such knowledge-sharing has occurred. Firstly the congestion charge - which was originally seen in Singapore and subsequently similar schemes were introduced in Copenhagen and London - as an example of South-North diffusion. Secondly the introduction of bus rapid transit in Mexican and Colombian cities and recent schemes developed in South Africa and China as a form of South-South diffusion.

This paper addresses the theme of Political Dynamics in the Interface of Agency and Architecture, through examining how the interactions of agents influence the future architecture of policy. It questions whether the sharing of experience in these examples has contributed to changes in strategic direction or if lessons learned across examples are not directly shared between respective policymakers.

Tuesday 29 January 2013
18:00 – 19:30 pm
Policy Diffusion
Room: Women's Plaza Audio Visual A (1F)

TC 379

Climate policy innovation: sources, patterns, and effects

Dave Huitema (1) presenting, Andrew Jordan (2)

VU University, Amsterdam, The Netherlands (1), University of East Anglia, Norwich, UK (2)

The current pace of climate policy development is widely regarded as inadequate and policy development needs to speed up. In this respect, 'policy invention' refers to the development of entirely new policies. 'Policy diffusion', on the other hand, encompasses the processes through which these inventions, which may emerge at a relatively small scale, circulate and gradually become embedded in a larger number of policy systems and start having greater impacts.
This paper presents the outcomes of a book project involving more than 20 colleagues who are interested in climate policy innovation. Somewhat against the trend of placing emphasis on transnational policy development, the emphasis here is on national (state) policies. Through a wealth of empirical analysis (both large n and single case studies) a clearer picture has emerged of climate policy innovation. We find that whilst innovations have been happening in many localities, the *invention* of approaches that are completely new is very rare. Instead, many inventions are combinations of solutions and problems that were previously not seen as connected. Regarding *diffusion*, many counterintuitive patterns can be found. Internal drivers at the national level were found to be more important than international drivers, and state/provincial authorities prefer innovations that are fitting with their circumstances (e.g. availability of natural resources, voter preferences, average income), while cues for the direction in which to innovate are mainly taken from jurisdictions that are culturally similar. We conclude our paper with an *evaluation* of the environmental benefits from climate policy innovation as achieved in the last decade.

Tuesday 29 January 2013
18:00 – 19:30 pm
Policy Diffusion
Room: Women's Plaza Audio Visual A (1F)

TC 32

The Contingent Effect of Social Influence in Networks of Environmental Agreements

Yoshiki Yamagata (1) presenting, Jue Yang (1), Joseph Galaskiewicz (2)

National Institute for Environmental Studie, Tsukuba, Ibaraki, Japan (1), The University of Arizona, Tucson, AZ, USA (2)

The paper tests theories that posit a role for social learning in the diffusion process by studying the ratification of eleven international environmental treaties by 166 countries between 1990 and 2008. The paper extends the literature on policy diffusion by showing that countries' economic and military power matters. Using event history analysis, the authors found that weaker countries were more likely to ratify a global environmental treaty if countries that they were linked to through common IGO memberships or diplomatic ties or that had similar economic status, religious traditions, or language traditions or that were geographical neighbors had ratified the treaty previously. In contrast, more powerful countries were, for the most part, immune to such influences and only ratified treaties if more of their geographical neighbors had ratified. Most countries engage in clustered policy making and seem to learn from their peers. Thus efforts to disseminate global environmental agreements should be cognizant of this structural pattern and find ways to bridge these clusters. Eliciting the participation of the superpowers is more problematic, because they seem less prone to follow the ratification behaviors of others and more likely to pursue their own strategic interests.

Tuesday 29 January 2013
18:00 – 19:30 pm
Policy Diffusion
Room: Women's Plaza Audio Visual A (1F)

TC 50

The Role of Formal Architectures and Informal Practices in the Diffusion of Environmental Policy – The Case of EU-Korea Cooperation on Chemicals Regulation

Katja Biedenkopf (1) presenting

University of Amsterdam, Amsterdam, The Netherlands (1)

This paper investigates the role of both formal architectures and informal practices of policy cooperation and the interaction between the two in the process of policy diffusion. Formal cooperation agreements can institutionalise the exchange between policy-makers of two or more jurisdictions and, through this, bring regularity and continuity into processes of information exchange, socialisation and policy diffusion. Such formal agreements can provide the political support fostering cooperation. Informal cooperation can complement formal architectures because they are more flexible and pragmatic. Individual actors can make a significant contribution. The paper first develops an analytical framework of how formal and informal cooperation architectures can foster the diffusion of environmental policy. It then investigates the case of EU-Korea chemicals cooperation. In 2006, the EU has introduced chemical regulation providing a high degree of environmental and consumer protection. Korea is in the process of following suit. The paper draws some conclusions for the design of effective regulatory cooperation.

Global Climate Governance 2

Tuesday 29 January 2013

18:00 – 19:30 pm

Chair: Steinar Andresen (FNI)

Room: Rose Hall (5F)

Global Climate Governance 2	
Chair: Steinar Andresen (FNI)	
Suzuki (TC 130)	Fragmentation of International Low-carbon Technology Governance: An Assessment in terms of Barriers to Technology Development
Delina (TC 134)	Contingency national governance arrangements for rapid climate mitigation
Bäckstrand (TC 176)	Pathways to Democratizing Global Climate Governance: Institutional, Participatory, Discursive and Radical
Iguchi (TC 241)	Towards an Effective Climate Architecture for Road Transport Sector: Lessons from Japan's Proposal for a Road Transport Task Force in the Asia-Pacific Partnership (APP)

Tuesday 29 January 2013
18:00 – 19:30 pm
Global Climate Governance 2
Room: Rose Hall (5F)

TC 130

Fragmentation of International Low-carbon Technology Governance: An Assessment in terms of Barriers to Technology Development

Norichika Kanie (1,2), Masachika Suzuki (3) presenting, Masahiko Iguchi (1)

Tokyo Institute of Technology, Tokyo, Japan (1), United Nations University, Tokyo, Japan (2), Kansai University, Osaka, Japan (3)

Architecture of governance in the field of climate change is characterized by an increasing diversity in arrangements. This is especially the case in the area of low-carbon technology initiatives, that seems to come under 'conflictive fragmentation' in typology proposed by Biermann et al. (2009). This paper aims to understand the degree of fragmentation of low-carbon technology institutions, and to identify issues that need to be addressed in order to make it to a cooperative fragmentation, if not synergistic one. In order to understand the functions of existing institutions, we first identify barriers of technology development for making low-carbon society in the world, with particular consideration to Asia. This inevitably requires international cooperation and transfer of technology. We do this by extensive literature review on low-carbon technology, technology innovation as well as insights from the result of case studies. After identifying barriers, we then analyze institutional characteristics of the existing low-carbon technology institutions, by looking into their main purposes, principles, activities and participants, and thereby identify the degree of fragmentation in the issue area. We chose the institutions from the database developed by Abbot (2011). Through this analysis, we will identify the directions we should follow in order to make more cooperative fragmentation regime in low-carbon technology. As a result, we argue that low-carbon technology governance may be best served through a fragmentation of governance architecture, but coordinated by a hub that is capable of quickly accessing usable information and transmitting it to the appropriate institutional nodes in the network.

TC 134

Contingency national governance arrangements for rapid climate mitigation

Laurence Delina (1,2) presenting

Institute of Environmental Studies, University of New South Wales, Sydney, NSW, Australia (1), Center for Governance and Sustainability, Boston, MA, USA (2)

Recent climate science studies reveal that limiting the world to 2ºC warming most likely requires peaking total global greenhouse gas emissions by 2020 followed by rapid reductions to near zero by 2050. Despite calls to immediately commence a rapid transformation of current fossil-fuelled energy into sustainable systems, responses from most governments remain weak and show no sense of urgency. In cases where transition plans are present, these assume that existing governance arrangements are sufficient for the transition. This paper argues that, for the transition to be rapid, inclusive, and efficient, a new governance paradigm is necessary. To elucidate such a paradigm, historical accounts of rapid institutional restructurings are examined. One of these comprises accounts of World War 2 mobilisations, where radical, rigorous and rapid institutional changes were conducted. While wartime experience suggests some potential strategies for rapid climate mitigation, the paper also argues that there are limitations in the use of this analogy.

Tuesday 29 January 2013
18:00 – 19:30 pm
Global Climate Governance 2
Room: Rose Hall (5F)

TC 176

Pathways to Democratizing Global Climate Governance: Institutional, Participatory, Discursive and Radical

Karin Bäckstrand (1) presenting

Lund University, Lund, Sweden (1)

The democratic legitimacy of global climate governance is receiving increased attention in the fields of democratic theory and International Relations. The polycentric, hybrid and transnational character of climate governance "beyond the state" pose challenges for theorizing democracy in climate politics. Different standards of democracy feature in empirical studies, such as cosmopolitan, liberal, participatory and deliberative democracy. Commonly, the democratization of climate governance is conceptualized as increased civil society participation in UN climate diplomacy. However, with the stagnant climate diplomacy, increased attention is turned to governance beyond the UN regime. Literature on climate governance as a "deliberative system" (Stevensen and Dryzek 2011) and "inclusive minilateralism" (Eckersley 2012)" signify this direction. This paper reviews the burgeoning scholarly literature on democracy and climate change It identifies four main paths to democratizing the global climate order: institutional, participatory, discursive and radical and examines the implications for the participation of non-state actors. Institutional democratization focuses on reforming intergovernmental procedures (accountability, transparency), participatory democracy highlights representation/inclusion of civil society actors, discursive democracy underlines the importance of a diversity of discourses in the transnational public sphere. Finally, radical accounts envisions "democratizing from below" by means of mobilizing new alliances of indigenous, feminist and socialist movement. The review paper generates a theoretical framework, which will be employed to critically assess the legitimacy of public, civil society and non-state actors participation and representation in the climate regime.

Tuesday 29 January 2013
18:00 – 19:30 pm
Global Climate Governance 2
Room: Rose Hall (5F)

TC 241

Towards an Effective Climate Architecture for Road Transport Sector: Lessons from Japan's Proposal for a Road Transport Task Force in the Asia-Pacific Partnership (APP)

Masahiko Iguchi (1) presenting

Tokyo Institute of Technology, Tokyo, Japan (1)

The road transport sector accounts for about 16% of the total amount of global carbon dioxide (CO_2), which is increasing rapidly. Due to its considerable economic growth, the Asia-Pacific region is among the most important areas when it comes to addressing greenhouse gas (GHG) mitigation in terms of the road transport sector. This paper sheds light on Japan's proposal for a road transport task force in the Asia-Pacific Partnership on Clean Development and Climate (APP). This paper asks why the proposal failed despite its importance, and identifies the lessons and implications that this proposal has in terms of the shape of future institutional frameworks in the road transport sector that will address GHG emissions. As a result of the examination, this paper points out that the proposal had resulted in failure due to limitations that are rooted in a shift of the Japanese government's preferences from APP to the United Nations Framework Convention on Climate Change (UNFCCC) when it comes to pursuing its international climate policy in the road transport sector. Lessons from the failure of Japan's proposal to be adopted by the APP lead us to anticipate that climate policy in the road transport sector should be addressed at various levels and gradually facilitate a network between these efforts.

Parallel Panel Sessions 4

Wednesday 30 January 2013
11:00 am – 12:30 pm

Earth System Governance in 21st Century 2

Network Governance

Adaptation: Resilience

Climate Governance 1

Energy Governance - Policy

Water Governance 3

Earth System Governance in 21st Century 2

Wednesday 30 January 2013

11:00 am – 12:30 pm

Chair: Maria Ivanova (University of Massachusetts Boston)

Room: U Thant (3F)

Earth System Governance in 21st Century 2	
Chair: Maria Ivanova (University of Massachusetts Boston)	
Elder (TC 215)	Multilevel Governance Architecture for the Implementation of Sustainable Development Goals: Design Considerations and Linkages between Levels in Asia
Persson (TC 325)	Using the DPSIR framework to assess how 'governable' the Planetary Boundaries are
Costa de Oliveira (TC 309)	International framework for sustainable development: incorporating a sector-by-sector Partnership within United Nations System

Wednesday 30 January 2013
11:00 am – 12:30 pm
Earth System Governance in 21st Century 2
Room: U Thant (3F)

TC 215

Multilevel Governance Architecture for the Implementation of Sustainable Development Goals: Design Considerations and Linkages between Levels in Asia

Mark Elder (1) presenting, Simon Olsen (1), Tetsuro Yoshida (1)

Institute for Global Environmental Strategies, Hayama, Kanagawa, Japan (1)

The Rio+20 meeting in Brazil in 2012 called for the creation of Sustainable Development Goals as well as a process for creating a high level political forum to provide leadership and coordination for sustainable development, including monitoring progress, replacing the Commission on Sustainable Development. Later, it might be decided to include Sustainable Development Goals in its mandate. Several proposals for a Sustainable Development Council already have been made, as well as analyses for how to improve implementation at the national level. However, little attention has been paid to the role of regional institutions, or how national institutions could be linked with global and regional ones. The purpose of this paper is to identify a range of possibilities for creating these linkages, including utilizing existing institutions as well as potentially creating new ones, and assess their strengths and weaknesses. The Rio+20 outcome document specifically mentioned that the regional commissions and other UN bodies should also be involved. Regional bodies such as UNESCAP, UNEP, and ADB have been particularly involved in promoting sustainable development in the Asian region, and it is important to consider how they could be incorporated into the governance architecture for Sustainable Development Goals. How to incorporate multistakeholder participation in these linkages is another important issue. Addressing the linkages between different levels of governance will be very important for improving the effectiveness of implementation of sustainable development goals.

TC 325

Using the DPSIR framework to assess how ‘governable' the Planetary Boundaries are

Asa Persson (1) presenting, Bjorn Nykvist (1)

Stockholm Environment Institute, Stockholm, Sweden (1)

In the Rio+20 process, the set of nine Planetary Boundaries, as proposed by Rockström et al. (2009), was referred to as a framework for defining governance needs. However, critique has been raised from scientists that the framework is inconsistent or inaccurate with regards to the geographical scale of parameters and processes included and the existence of thresholds and tipping points in all the systems included (. In addition, it was questioned whether all nine boundaries required international or global governance responses. Whereas it has already been argued that multi-level governance is required to address Planetary Boundaries effectively (e.g., Galaz et al., 2012; Nilsson and Persson, 2012), issues relating to scale and thresholds need clarification from a governance point of view. In this paper, we apply the commonly used environmental indicator framework DPSIR (driving force-pressure- state-impact-response) to the Planetary Boundaries proposed by Rockström et al. to determine whether the proposed boundary parameters are ‘governable' (i.e. anthropogenic driving forces or pressures, as opposed to changes in state and impacts) or whether assumptions and proxy indicators are required for governance purposes. The paper further uses the DPSIR framework to analyse how the boundaries are causally interrelated. Finally, the DPSIR framework is used to illustrate and discuss how first-order impacts at local scale may propagate to second-order impacts at larger scales. In conclusion, the DPSIR framework offers a useful tool for assessing the relevance of the Planetary Boundaries concept for environmental governance.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Earth System Governance in 21st Century 2
Room: U Thant (3F)

TC 309

International framework for sustainable development: incorporating a sector-by-sector Partnership within United Nations System

Carina Costa de Oliveira (1) presenting

Fundação Getúlio Vargas Law School, Rio de Janeiro, Brazil (1)

The institutional framework for sustainable development, especially the one of the United Nations, has shown some limitations to direct States to comply with national implementation of sustainable development standards. Two possible reasons can explain this: the limited participation of the civil society to the discussions during international and national negotiations and during the implementation of sustainable development measures; the peer review process of sustainable development standards can hardly be only international because they may have different regional and national applications.
In this context, other creative frameworks must be incorporated in the United Nations System to include civil society participation and national or regional standards for sustainable development. Considering that the Rio + 20 Declaration seeks to create a High level political forum as a framework for sustainable development, other frameworks such as sector-by sector Partnerships, like the Open Government Partnership and the Extractive Industries Transparency Initiative, should be integrated in this process.
For instance, the OGP is formed by a Steering Committee constituted by States and members of the civil society which gives the latter a voice to discuss at the same table and a means to influence any outcome. By this method, States will be able to focus on policies which are in a deeper relationship with their citizens. States shall be responsible for taking commitments and to implement them under the control and monitoring of the civil society. This method can be appropriate to connect to the national level where it is practically implemented.

Network Governance

Wednesday 30 January 2013

11:00 am – 12:30 pm

Chair: Steven Bernstein (University of Toronto)

Room: Meeting Room (3F)

Network Governance	
Chair: Steven Bernstein (University of Toronto)	
Miyazaki (TC 145)	Emerging Loose System in Regional Institutions - Networked Cooperation on Transboundary Air Pollution in East Asia
Dano (TC 91)	Networked Environmental Governance in a Deliberative System: *Polycentric, Collaborative, and Discursive*
Bixler (TC 248)	Viewing Environmental Governance Architecture Relationally: Networked Agents and Accountability

TC 145

Emerging Loose System in Regional Institutions - Networked Cooperation on Transboundary Air Pollution in East Asia

Asami Miyazaki (1) presenting

Kumamoto Gakuen University, Kumamoto, Japan (1)

East Asian cooperative frameworks on the environment have been analysed using interest-based theory and ideas of international regimes. However, their wide variety of cooperation models and institutional processes suggest that only a partial understanding has thus far been achieved. The subject of this case study, Acid Deposition Monitoring Network in East Asia (EANET), is a network focusing on acid rain and is not derived from any international pact. It has been expediting regional cooperation on transboundary atmospheric issues by forming networks and a "loose" system of institutions inductively. Exploration of various multilateral cooperative methods will offer us other approaches for a reconsideration of regional environmental governance, such as the nature of political actors and the constructive aspect of institutions.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Network Governance
Room: Meeting Room (3F)

TC 91

Networked Environmental Governance in a Deliberative System: *Polycentric, Collaborative, and Discursive*

Noelyn Dano (1) presenting

Australian National University, Canberra, Australia (1)

This paper is drawn from a research project that investigates what governance features best promote both ecological and human wellbeing. Employing a comparative case study of three forest protected areas in the Philippines, the findings show that legitimacy, accountability, cost-efficiency in decision-making, coordination, and resilience are mutually reinforcing in their performance as forest governance features promoting distributive justice, livelihood protection, ecosystem protection, and resilience – the core values for ecological and human wellbeing. When faced with tensions and trade-offs, the deliberative nature of a networked governance mechanism is instrumental in turning these tensions into synergies for collective actions. A legitimacy deficit that is more common in governance networks can be addressed by a system that is conceptualized to employ discursive engagements in both the public and the empowered spaces, aided by a bridging institution in terms of transmission and accountability; and substantiated by discursive representation in cases when descriptive representation proves to be infeasible, limiting, and/or unjust. The overall analyses of the findings suggest that effective networked governance involving state and non-state actors that works for both forests and people is one that is polycentric, collaborative, and discursive operating in a deliberative system. This system of environmental governance also creates an enabling setting for a just and sustainable society to thrive.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Network Governance
Room: Meeting Room (3F)

TC 248

Viewing Environmental Governance Architecture Relationally: Networked Agents and Accountability

R. Patrick Bixler (1) presenting

Colorado State University, Fort Collins, CO, USA (1)

The potential for social network research to inform the design of multiple-level architectures and earth system governance policy is underutilized. Previous research has indicated that the architecture of certain social networks is an important factor where private and public agents have come together for effective governance arrangements. However, problems arise when agents engage in responsibility floating, passing accountability off to other levels. This paper focuses on new considerations of environmental governance, conceptually characterized as "networked governance." Moving away from the formality of hierarchical architecture, this research empirically assesses the strength of weak ties for enhancing resilience and adaptive capacity in regional social-ecological systems. Using theoretical insights from relational sociology and the methodological tool of social network analysis, this paper assesses the network structures of the ties between community-based and regional landscape conservation initiatives in the Crown of the Continent region of North America. Relational sociology focuses on the ties, links, or transactions between agents involved in network governance and suggests that weak ties may be critical for embedding accountability in architecture. From this perspective, agency is viewed as a temporally embedded process of social engagement where agents can change their relationship to architecture. Social network analysis can map emergent network patterns and analyze how different types of networks establish, sustain, and grow ties with reference to a specific outcome. This paper addresses the relational patterns that promote accountability in networked environmental governance.

Adaptation: Resilience

Wednesday 30 January 2013

11:00 am – 12:30 pm

Chair: Lorrae Van Kerhoff (Australian National University)

Room: Media Centre

Adaptation: Resilience	
Chair: Lorrae Van Kerhoff (Australian National University)	
Mathur (TC 216)	The Myth of Resilience
Djalante (TC 48)	Transition Pathways for Adaptive and Integrated Disaster Resilience
Dieperink (TC 141)	Strengthening And Redesigning European FLOOD risk practices (STAR-FLOOD):Towards appropriate and resilient flood risk governance arrangements
Simmons (TC 210)	Climate Change Governance in Caribbean Jurisdictions

Wednesday 30 January 2013
11:00 am – 12:30 pm
Adaptation: Resilience
Room: Media Centre

TC 216

The Myth of Resilience

Vikrom Mathur (1) presenting

Mekong Environmental and Social Research Institute, Phnom Penh, Cambodia (1)

This paper attempts to retrofit the theory and concept of 'resilience' using anthropological insights from the study of religions. The eco-cycle or adaptive cycle is central to emergence of the resilience perspective. The eco-cycle might be however just another iteration of the popular myth of 'eternal return', 'creative destruction' and 'cyclical regeneration', found across religions, couched in the language of science – the dominant cultural and ideological framework of our times. By understanding the mythical basis of contemporary ecosystem resilience research, the paper seeks to interrogate the nature of the 'coupling' of social and ecological systems from the deeper foundations of social theory. These are patterns that we make rather than discover. The metaphor of the eco-cycle is often extrapolated to social systems to argue for flexibility, variability and change. Symbols and metaphors grounded in nature are used to express social preferences and theories about nature are seen to legitimate and justify theories about society. I argue that the 'folding-in' of all disciplinary (social science) perspectives under a macro conceptual schema might eclipse critical insights for policy and management. New ecologists posit that knowledge about ecosystems is incomplete and the system itself is moving target. So cultural readings of nature become even more valuable and the social authority of normal science more nebulous. The paper argues the need to move away from universalizing frameworks and calls for knowledge that focuses on the human, cultural and relational and emphasizes the significance of context and place.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Adaptation: Resilience
Room: Media Centre

TC 48

Transition Pathways for Adaptive and Integrated Disaster Resilience

Riyanti Djalante (1,2) presenting

Macquarie University, Sydney, Australia (1), Local Government of Kendari City, Kendari, Indonesia (2)

Disasters are becoming more frequent, intense and costly. The impacts to the environment and society are increasingly complex and uncertain. An integrated approach addressing the complexity and uncertainty is needed. The author proposes an adaptive and integrated disaster resilience framework (AIDRF). It is an interdisciplinary, conceptual and methodological framework, which supports the understanding for adaptive and integrated disaster resilience through integrating a range of concepts, disaster risk reduction (DRR), climate change adaptation (CCA), adaptive governance (AG), to develop a more coherent understanding of complexities in dealing with disasters, and future impacts from climate change.
Pathways for building adaptive and integrated disaster resilience are proposed, includes (1) Facilitate management as learning amongst key actors in DRR and CCA, (2) Strengthen polycentric governance system which can accelerate more support to reduce vulnerability and increase resilience at the local level, increase participation of multi-actors and encourage self-organisations and networks, (3) Strengthen sectoral integrations for analysis and implementation of DRR and CCA strategies, at the national and local level, (4) Advance trans-boundary risk assessments and hazard management, (5) Provide and consolidate data and information at different level, for different hazards and risks, and modelling of future risks, (6) Consider risks for key infrastructure planning, and (7) Risk finance. One foremost finding from these pathways is the need for more acknowledgement for managing resilience building as learning processes which has significant implications for restructuring of current DRR architectures and actors' adaptiveness.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Adaptation: Resilience
Room: Media Centre

TC 141

Strengthening And Redesigning European FLOOD risk practices (STAR-FLOOD):Towards appropriate and resilient flood risk governance arrangements

Carel Dieperink (1) presenting, Dries Hegger (1), Peter Driessen (1), Marleen Van Rijswick (1), Mark Wiering (2), Tom Raadgever (3)

Utrecht University, Utrecht, The Netherlands (1), Radboud University, Nijmegen, The Netherlands (2), Grontmij, De Bilt, The Netherlands (3)

Urban regions in the EU face increasing but uncertain flood risks due to urbanization and the effects of climate change. At different scale levels (e.g. EU Floods Directive, national and regional policies) efforts are made to achieve a shift towards more resilient Flood Risk Governance, entailing diversification and alignment of different Flood Risk Strategies (FRSs). Based on current literature and policy discourses, five such FRSs can be distinguished: risk prevention through pro-active spatial planning, flood defence (resistance based approach) flood mitigation, flood preparation and flood recovery. Vulnerable urban agglomerations will be more resilient if multiple FRSs are applied simultaneously, linked together and aligned. In the EU funded STARFLOOD-project we will compare Flood Risk Governance Arrangements (FRGAs) in six EU-Member States. In our proposed paper we will give an overview of the STAR-FLOOD research approach. Our assessment framework, based on the four dimensions of the policy arrangements approach (actors, discourses, rules, resources), enables us to combine insights from public administration and legal scholars. With the help of some empirical examples across Western Europe, we will illustrate how this approach can be used to achieve a fruitful integrated *analysis*, *explanation* and *evaluation* of FRGAs. The paper concludes with discussing next steps, including the development of an empirical basis. A broad and geographically well-spread and integrative empirical basis is needed to be able to derive policy design principles for FRGAs as well as concrete recommendations for policy and law at the level of the EU, its member states, regional authorities, and public-private partnerships.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Adaptation: Resilience
Room: Media Centre

TC 210

Climate Change Governance in Caribbean Jurisdictions

David Simmons (1) presenting

University of the West Indies, St. Augustine, Trinidad and Tobago (1)

Building climate resilient low carbon economies and adapting to climate change in the Caribbean will require transformational change in institutional arrangements and an unprecedented injection of technical and financial assistance from the developed world. While the financial challenges have received considerable attention and pledges, and wisely so, similar concerns in respect of capacity constraints facing Small Island Developing States (SIDS) as they seek to develop and implement local, national and regional adaptation strategies for climate change are not being adequately addressed.
Governance architecture in Caribbean SIDS is characterized by political systems which have their origin in an inherited Westminster parliamentary system. Though based on principles of democracy and transparency, the building blocks of good governance, this system has not ensured effectiveness either in creating the appropriate institutional architecture adequately suited to the management of shared resources or enabled greater involvement of the wider community and an appreciation for the severity of the problem.
The transformational changes envisaged will require a reconfiguration of the sectoral approach to resource management and the use of legislative instruments to ensure that the principles of sustainable development are at the centre of decision making. It will also require institutional reform which enables the creation of the ideal framework for fostering inter-agency coordinating of all planning and development programmes; an intensive and sustained injection of resources, the application of relevant technology; and, adequate training in generating, analysing, and utilising climate change data in decision-making.

Climate Governance 1

Wednesday 30 January 2013

11:00 am – 12:30 pm

Chair: Yasuko Kameyama (National Institute for Environmental Studies)

Room: Committee Room 1 (5F)

Climate Governance 1	
Chair: Yasuko Kameyama (National Institute for Environmental Studies)	
Boykoff (TC 100)	Emissions from the Fifth Estate: Examining climate change coverage in new/social media
Mert (TC 69)	Climate Games: Discourses of global warming in simulation games
Zhao (TC 305)	Climate Change Governance in China: The Central-Local Nexus
Saroar (TC 231)	Governing the adaptive responses against livelihood insecurity in coastal landscape

Wednesday 30 January 2013
11:00 am – 12:30 pm
Climate Governance 1
Room: Committee Room 1 (5F)

TC 100

Emissions from the Fifth Estate: Examining climate change coverage in new/social media

Maxwell Boykoff (1,2) presenting

University of Colorado, Boulder, CO, USA (1), University of Oxford, Oxford, UK (2)

In this paper, I deploy methods of new media analysis (in line with Benkler & Shaw, 2012) to analyze climate-related 'news' in new/social media. As part of this, I explore two related issues: (1) examinations of who are considered 'experts', authorized through media attention to speak on these issues; and (2) how these play out distinctly new/social media sources (in contrast with traditional/legacy/broadcast media). These twin considerations seek to (A) make sense of how and why particular climate-related discourses are finding traction new/social media, while others remain muffled or silenced, and (B) understand implications regarding climate policy prioritization therein. Furthermore, through examinations of media representational practices in new/social media, I get to examine how power flows through a shared culture, politics, and society, constructing knowledge, norms, conventions and (un)truths about variegated dimensions of climate change. By extension from this empirical work, I fortify an argument that media portrayals significantly meld our individual and collective 'ways of knowing' about climate change, and in turn, vitally shape our governance architectures, political dynamics and social practices in the 21st century. Through analysis of the cultural politics of climate change more widely, I further explore how (un)authorized voices shape negotiations of truth claims, and management of the conditions of our lives and livelihoods.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Climate Governance 1
Room: Committee Room 1 (5F)

TC 69

Climate Games: Discourses of global warming in simulation games

Sandra van der Hel (2), Aysem Mert (1) presenting

AGCI, Amsterdam, The Netherlands (1), Department of Political Science, Amsterdam, The Netherlands (2)

The ideological/political effects of virtual media are still largely unknown and un-researched (Lemke 2004), particularly in case of computer games (Gee 2003). This paper analyses climate discourses in three online games: Fate of the World, ClimCity, and CEO2. Through a discourse analytical approach, we highlight the meanings attributed to climate change in virtual media. Our assumption is that it is not the climate phenomenon, but how society makes sense of it that is critical to solve such a complex problem (Hajer and Versteeg 2005). Accordingly, our questions concern the five 'A's of governance: what actors are given agency, what is the architecture in these games (how climate games reflect social and natural structures), how much adaptive capacity is allowed for policies, as well as; how climate discourses are articulated; how political antagonism is narrated and how discourse institutionalisation is manifest?
To answer these questions we structure our data in three layers: The first layer highlights the relevant real-life structures: characteristics of the medium, and the subject positions of game designers/producers/distributors. The second layer focuses on the games' content, namely the logic of simplification (representation of real world situations); the logic of problematisation (conception of climate change); and goal attainment (how players win). The third layer consists of a finer analysis, such that symbols, tradeoffs between politics, economics and ecology, scientific 'facts' and uncertainties, regional/international conflict and cooperation can be examined.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Climate Governance 1
Room: Committee Room 1 (5F)

TC 305

Climate Change Governance in China: The Central-Local Nexus

Jimin Zhao (1) presenting

Hong Kong University of Science and Technology, Hong Kong, China (1)

There is great urgency to better understand China's ability to successfully address climate change in order to engage China in the future international climate change regime and support China's development of a low carbon economy. This paper aims to examine the effectiveness of multi-level climate governance architectures in China by investigating the partnerships combining actors of different scales and within and among different regions. To achieve this objective, the paper investigates the mitigating activities to promote low carbon development in four cities in two provinces with different city size and level of economic development. The four cities include Guiyang and Zunyi in Guizhou Province in underdeveloped, western China, and Jinan and Dongying in Shandong Province in richer, coastal China. The selection of these cities enables us to examine the nexus of central-provincial-city governments and interaction of different actors in two economic development regions. The paper assesses the roles and interplay of city governments, businesses, and NGOs and their relationship with the national government and provincial governments; evaluates the effectiveness of current governance and policies to achieve carbon reduction; and identifies key factors that determine the current carbon reduction actions taken by these actors.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Climate Governance 1
Room: Committee Room 1 (5F)

TC 231

Governing the adaptive responses against livelihood insecurity in coastal landscape

Md. Mustafa Saroar (1,2) presenting, Nuzhat Fatema (1,2)

Urban and Rural Planning Discipline, Khulna University, Khulna, Bangladesh (1), Development Studies Discipline, Khulna University, Khulna, Bangladesh (2)

This paper is aimed, first to identify whose livelihood is vulnerable to what specific causes of salinity intrusion and second, to identify the underlying factors that govern the adaptation preference for livelihood security of the coastal population. This study was conducted in a coastal district of south-west Bangladesh during March-May 2011 by interviewing a total of 225 respondents selected randomly.

Respondent's preferred livelihood adaptation strategy is predicted by using multinomial logistic regression (M-Logit) model. Here the reference category is "switching to shrimp farming" which is compared with other preferred adaptation strategies. Therefore, three models were developed. Among the structural characteristics, respondent's age, occupation, landholding and among dynamic contextual factors susceptibility to exposure to loss of crop agriculture and damage of settlements and housing appeared to be significant predictors of respondent's preference for saline water shrimp farming over crop agriculture (LR $\chi 2 = 67.18$, Pseudo $R^2 = 0.24$, $p<0.001$). In the same way, age, occupation, landholding, education, and exposure to loss of other on-farm employments and damage of settlements and housing appeared to have significant influence on respondent's preference for intensification of extraction of non-timber forest products from the *Sundarbans* mangrove swamp (LR $\chi 2 = 98.67$, Pseudo $R^2 = 0.32$, $p<0.001$).

The policy implication of the finding is, this would help designing separate sets of intervention for coastal population who have different structural characteristics and are susceptible to unique sets of dynamic impacts of salinity. Such measure would encounter the burgeoning impacts of salinity on coastal landscape and livelihood.

Energy Governance - Policy

Wednesday 30 January 2013

11:00 am – 12:30 pm

Chair: Manu Mathai (United Nations University - IAS)

Room: Multi-Purpose Room (3F)

Energy Governance - Policy	
Chair: Manu Mathai (United Nations University - IAS)	
Luta (TC 135)	Dealing with the German exemplar: The influence of dominant advocacy coalitions on renewable electricity policy in Japan, Finland and Norway
Bastos Lima (TC 179)	Emerging economies and environmental governance post-multilateralism: the case of the EU Renewable Energy Directive and biofuel production in Brazil, India and Indonesia
Atalay (TC 277)	Transition to Renewable Energies in Oil-Rich Countries? Explaining Policy Change in the Gulf Cooperation Council
Andrade (TC 164)	The role of the private sector in global climate and energy governance

Wednesday 30 January 2013
11:00 am – 12:30 pm
Energy Governance - Policy
Room: Multi-Purpose Room (3F)

TC 135

Dealing with the German exemplar: The influence of dominant advocacy coalitions on renewable electricity policy in Japan, Finland and Norway

Alexandru Luta (1) presenting

Tokyo Institute of Technology, Meguro, Tokyo, Japan (1)

The diffusion of policy instruments supporting electricity from renewable energy sources (RES-E) has spread beyond early pioneers. Now even jurisdictions that had previously been more cautious about intermittent sources, such as wind and solar, often have their own instruments supporting RES-E. Yet the development of these instruments has occurred relatiely independently in each jurisdiction, yielding radically different policy variants. Running counter to explanations of policy diffusion reliant on constructivist, coercion or competition theory, this suggests that socially-channeled learning is occurring instead. Advocacy coalitions instead of increasingly converging towards a globally sanctioned policy instrument, hotly contest the legitimacy of the instrument variants proposed by their opponents, drawing on policy exemplars from the options most in tune with their own identities and goals. Technology producers, utilities, consumer groups, green NGOs, regulators, etc. are acutely aware of the trade-offs and ramifications inherent to the different options, and judge their potential effectiveness in terms of individual, i.e. group-specific, criteria. Using Germany as a normative exemplar on grounds of rapid capacity deployment, and Japan, Finland and Norway as case studies, this paper proves that, unless exceptional circumstances prevail, it will be the instrument preferred by already dominant actors that will be selected and implemented, typically on grounds entirely unrelated to the ostensible goal of promoting RES-E.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Energy Governance - Policy
Room: Multi-Purpose Room (3F)

TC 179

Emerging economies and environmental governance post-multilateralism: the case of the EU Renewable Energy Directive and biofuel production in Brazil, India and Indonesia

Mairon Bastos Lima (1) presenting

Institute for Environmental Studies, VU University Amsterdam, Amsterdam, The Netherlands (1)

Multilateralism has been recently under fire, and the limited outcomes of major international conferences such as the climate COPs and Rio+20 only work to further undermine reliance on it. One consequence has been the increasing utilization of unilateral measures with extraterritorial implications, such as the recent EU emissions tax on international aviation and also its decision to adopt sustainability criteria for biofuel imports after failing to create an international regulatory framework on biofuels multilaterally. This latter decision builds, in part, on the assumption that EU biofuel demand is a major driver of production in the developing world, where land-use changes and crop-use changes for biofuel production can have negative social and environmental effects. However, the EU policy is just one among many possible drivers, and one could question the actual effectiveness of such unilateral regulations. This paper elaborates on three years of research on the contexts of Brazil, India and Indonesia to assess how and to what extent European biofuel policy has mattered to the expanding biofuel production in those three emerging economies, both as a driver and as a form of extraterritorial environmental regulation. The findings suggest that biofuel expansion in such emerging economies owe more to their own domestic policies than to EU demand, and therefore such unilateral regulation may have limited effectiveness. Yet, the study identifies other important (and often neglected) European influences other than as an export market, such as through policy discourses and the EU-led international emphasis on climate change amid other sustainable development concerns.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Energy Governance - Policy
Room: Multi-Purpose Room (3F)

TC 277

Transition to Renewable Energies in Oil-Rich Countries? Explaining Policy Change in the Gulf Cooperation Council

Yasemin Atalay (1) presenting, Frank Biermann (1,2)

VU University, Amsterdam, The Netherlands (1), Lund University, Lund, Sweden (2)

While the economies of the Gulf Cooperation Council have long been dominated by the exploitation of fossil fuels, recent years have seen an increasing uptake of renewable energy technologies as well. The reasons for this development, with its potentially far-reaching consequences for global environmental and climate policies, are not yet sufficiently understood. Our paper argues that the recent uptake of renewable energies in the Gulf can be largely explained by theories of policy transfer. Based on an extensive study of Arab-language primary and secondary sources and numerous interviews with key policy-makers and business leaders in the Gulf, our paper lays out in detail how transfers of renewable energy policies and technologies to the Gulf take place; the drivers of such transfers; and their impacts. We also explain variation in the uptake of policies and technologies among different members of the Gulf Cooperation Council. Our paper contributes to several analytical themes of the conference. With our focus on transnational policy transfers, we shed light on key elements of the architecture of earth system governance that have been overlooked by the often prevalent focus on intergovernmental regimes as main drivers of policy change. Our analysis also provides a differentiated assessment of political dynamics at the interface of agency and architecture, including detailed empirical research on private actors such as corporations and science institutions, and contributes to the conference theme of 'climate and energy governance architectures', adding important novel insights on a group of countries that have not been intensively studied so far.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Energy Governance - Policy
Room: Multi-Purpose Room (3F)

TC 164

The role of the private sector in global climate and energy governance

Celio Andrade (1) presenting, Jose Puppim de Oliveira (2)

Federal University of Bahia, Bahia, Brazil (1), United Nations University, Yokohama, Japan (2)

The private sector plays an active role in implementation of mechanisms concerning the mitigation of climate change, including the Kyoto Protocol. In spite of that, the corporate actors play a limited direct role in international arenas when it comes to negotiating the design of climate and energy regime. The climate and energy governance United Nations system remain state-centric, but the active participation of corporate actors in negotiation of climate and energy regimes is essential to increase the efficiency of the climate and energy governance. Business is not just a subject of a regulatory climate and energy imposed by the state; rather, business is an intrinsic part of the fabric of climate and energy governance, as "rule maker". This article analyses the role of the private sector has been played in the global climate and energy governance. The focus of this study is an analysis of the ways in which the private sector responds to the agenda of climate change and climate governance. The private sector does not only play a "rule taker" role in the climate change and energy regime, as it does not seem to act as passive observer. The results suggest that the private sector is able to play a key role in the changing architecture of global climate and energy governance based on the principle of multi-stakeholder participation in global decision-making.

Water Governance 3

Wednesday 30 January 2013

11:00 am – 12:30 pm

Chair: Sander Meijerink (Radboud University Nijmegen)

Room: Committee Room 3 (5F)

Water Governance 3	
Chair: Sander Meijerink (Radboud University Nijmegen)	
Gain (TC 46)	The gap between formulation and implementation of policies: the case of Bangladesh water governance
White (TC 152)	Centralised Approach to Co-production: Learning from the Development of Eco-compensation Policy and Practices in Water-Supply Catchments in China
Conrad (TC 242)	Learning through multi-level collaborative governance: Lessons from California's Integrated Regional Water Management Process
Meijerink (TC 167)	The institutional architecture and performance of River Basin Organizations, an international comparative perspective

Wednesday 30 January 2013
11:00 am – 12:30 pm
Water Governance 3
Room: Committee Room 3 (5F)

TC 46

The gap between formulation and implementation of policies: the case of Bangladesh water governance

Animesh Kumar Gain (1,2) presenting

Ca' Foscari University of Venice, Venice,, Italy (1), Bangladesh Unnayan Parishad, Dhaka, Bangladesh (2)

In this study, we apply a novel approach to investigate the gaps between policy formulation and implementation of various notions of past, present and future water governance in Bangladesh. Among the diverse notions of water governance, we consider seven indicators representing legal, political and administrative aspects. These are: centralization/decentralization tendency, user participation, spatial organization of water administration, project selection criteria, water rights, cost-recovery status, and water pricing mechanism. However, policy documents often advocate rather good water governance which is yet not seen in practice. We therefore analyze how the status of these indicators evolves according to existing policy documents and also how effectively policy is implemented over time. For this evaluation, structured interviews with ten experts specializing in the water policy of Bangladesh were undertaken. In order to evaluate the effectiveness of each indicator, we also interviewed local water user groups alongside the water policy experts. Our results show that, according to the policy documents, all notions of governance have significantly improved and will further improve. However, according to water user groups, the actual implementation of these policies seems to be far behind what the policy documents indicate and, moreover, this gap has even been increasing over time. Although only seven indicators might not do sufficient justice to the complexity of an issue such as governance, the results of the study allows us to identify whether drawbacks in water governance are a matter of the absence of appropriate policies or the ineffectiveness of their implementation.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Water Governance 3
Room: Committee Room 3 (5F)

TC 152

Centralised Approach to Co-production: Learning from the Development of Eco-compensation Policy and Practices in Water-Supply Catchments in China

Ian White (1) presenting, Guihuan Liu (2), Huiyuan Zhang (2), Leihua Geng (3), Yanei Dong (4)

Australian National University, Canberra ACT, Australia (1), Chinese Academy of Environmental Planning, Beijing, China (2), Nanjing Hydraulic Research Institute, Nanjing, China (3), Ministry of Water Resources, Beijing, China (4)

The dilemma of centralised versus de-centralised governance is exemplified in the complexity of addressing major challenges in water supply catchments, including water scarcity; water pollution, flooding, returning flows to the environment, rapid urbanisation, climate change impacts and the disparity between living standards of rural catchments and urban communities. Starting in the 1990's, China's Central Government has invested substantially in watershed services to protect and restore the environment in river basins. Environmental or ecological compensation, so-called "eco-compensation", E-C, has developed from these initial subsidies for environmental protection. Since the 1990's the Government has increasing called for practical, national E-C policies, regulations and mechanisms. There is also demands for a national, practical E-C system from upstream poorer rural communities who carry the costly burdens of providing eco-system services. The Central Government in 2009 initiated pilot E-C programs for grasslands, wetlands, water and soil conservation. Wide ranging, methodologically and geographically diverse pilot studies have been and are being conducted by Central government Ministries in collaboration with their affiliated Research Academies and Institutes and with multi-level agencies in catchments. The strategy is a centralised, experimental approach to scientific governance development. Global as well as local experience is analysed to identify strategies that may be more broadly applicable. The close affiliation of Central Ministries with their research agencies, the careful building up of experimental evidence from well-financed pilot studies and the drawing on global experience represent an example of the potential of a centralised measured approach to governance co-production in complex environments.

Wednesday 30 January 2013
11:00 am – 12:30 pm
Water Governance 3
Room: Committee Room 3 (5F)

TC 242

Learning through multi-level collaborative governance: Lessons from California's Integrated Regional Water Management Process

Esther Conrad (1) presenting

University of California Berkeley, Berkeley, CA, USA (1)

Multi-level, collaborative governance arrangements are often viewed as well suited for addressing complex, multi-scalar environmental problems in managing water and other natural resources. Collaborative governance may provide greater capacity for collective learning about emerging problems, and lead to more creative and integrated response strategies as compared to hierarchical arrangements. However, there has been limited research on how regional collaborations are nested within larger-scale governance structures.

My paper will explore these cross-scale issues in the context of California's Integrated Regional Water Management planning process. Established in 2002, this system is composed of 48 planning regions, largely self-organized by the diverse stakeholders involved. The California Department of Water Resources (DWR) sets broad guidelines for governance, and interacts with the regions to implement an over $1 billion grant program for integrated water management projects. DWR views this process as central to the future of water management in California, particularly in coping with emerging climate change risks. I will examine the architecture of this multi-level governance arrangement, including the selection of regional boundaries, the network of actors involved across the 48 regions, the nature of collaboration within and between regions, and how these elements have been shaped through state-region interactions. I focus on how this institutional structure supports learning across diverse stakeholders, particularly regarding anticipated impacts of climate change. This analysis enables reflection upon critical questions for the design of governance arrangements that support learning and action on multi-scalar problems arising in the context of global environmental change.

TC 167

The institutional architecture and performance of River Basin Organizations, an international comparative perspective

Sander Meijerink (1) presenting, Dave Huitema (2)

Radboud University, Nijmegen, The Netherlands (1), VU University, Amsterdam, The Netherlands (2)

In their book 'Embracing watershed politics', Schlager and Blomquist (2008) state that: "For the last 25 years, prescriptions of the water policy literature have centered upon two themes. The first is that 'the watershed' is the appropriate scale for organizing water resource management [...]. The second is that since watersheds are regions to which political jurisdictions almost never correspond, and watershed-scale decision making structures do not usually exist, they should be created." Founding River Basin Organizations (RBOs) is a complicated and political task as institutional design issues have to be addressed that are highly political in nature.
This paper summarizes the results of a research project involving 20 colleagues, which have undertaken an analysis of the global discussion on RBOs, and the foundation of RBOs in South Africa, Morocco, Thailand, Mongolia, Australia, Brazil, the USA, Canada, Ukraine and Portugal. Drawing on Ostrom's IAD-framework, we develop a typology of RBOs that distinguishes between autonomous, coordinating, partnership and agency type of RBOs. Next, we unravel the main controversies over this architecture by focusing on the strategies of key actors involved in either promoting or hindering RBO formation, globally and at the national level. Finally, we summarize how the performance of the RBOs can be evaluated in the ten countries in terms of coordination and accountability. The main conclusion is that the foundation of RBOs does not always enhance coordination across policy sectors, and often creates complex accountability relationships.

Wednesday 30 January 2013
16:00 – 17:30 pm
Water Governance 3
Room: Committee Room 3 (5F)

Parallel Panel Sessions 5

Wednesday 30 January 2013
16:00 – 17:30 pm

Earth System Governance in 21st Century 3

Environmental Aid, Financing 2

Methodology

Biodiversity 2

Food Governance

Ocean Governance 2

Earth System Governance in 21st Century 3

Wednesday 30 January 2013

16:00 – 17:30 pm

Chair: Walter Baber (California State University, Long Beach)

Room: Media Centre

Earth System Governance in 21st Century 3	
Chair: Walter Baber (California State University, Long Beach)	
Wyborn (TC 333)	Co-producing Earth System Governance: Examining the interplay between science and governance in multi-agent networks
Rietig (TC 103)	Learning among policymakers - the missing link to improve earth system governance
Mahon (TC 213)	A regional governance architecture framework for planning research and interventions
Muzenda (TC 285)	What Really Matters? Perceptions on Legitimacy and Effectiveness of Global Environmental Initiatives: A Case Study of Zaka District

TC 333

Co-producing Earth System Governance: Examining the interplay between science and governance in multi-agent networks

Carina Wyborn (1) presenting

Australian National University, Canberra, ACT, Australia (1)

Effective architectures for Earth Systems Governance will be built through strong connections between science, governance and practice. However these domains are often conceptually segregated both in theory and practice. Moving beyond polarizing notions of an unbridgeable divide, Jasanoff's 'idom of co-production' provides a lens to examine the dialectic relationships between science and society (2004). This view proposes that science and governance are 'co-produced' through the interaction of cultural, social and political norms. When used as a guiding heuristic, co-production highlights the importance of grounding institutional architectures in the socio-political context of practice. Through two case studies of large-landscape conservation, this paper will show how a co-productive heuristic can provide traction into the challenge of coherence and coordination in multi-agent network governance.

Large-landscape conservation is an attempt to overcome the problem of fit between social and ecological systems. In a classic case of co-production, shifting understandings of landscape function inspired the creation of innovative models of governance. Practical and theoretical challenges of multi-agent governance will be explored through two regional cases in Australia and North America. These cases draw similar science-based narratives of global change to legitimise calls for cross-scale governance. However the tight coupling of science and governance was undermined when both cases faced early challenges to their legitimacy from actors at the local scale. As the dynamics of science and governance vary across scales and contexts, these cases demonstrate the multifaceted and often inconsistent relationships between agents at the nexus of science, governance and practice.

Wednesday 30 January 2013
16:00 – 17:30 pm
Earth System Governance in 21st Century 3
Room: Media Centre

TC 103

Learning among policymakers - the missing link to improve earth system governance

Katharina Rietig (1) presenting

London School of Economics and Political Science, London, UK (1)

The RIO+20 summit and international climate negotiations are examples for the incrementalism embedded in the earth system governance architecture. Innovative solutions and reforms require political will, which points towards policymakers as central actors and their ability act upon the scientific evidence through learning processes. Learning among policymakers is considered to be a relevant factor in policy-making as it can lead to self-sustaining and self-reinforcing dynamics. Thereby learning potentially improves the quality of policies. Learning can occur at the heart of policy innovation or within a wider process that diffuses policies across multiple levels of governance, thus making it easier for policymakers to agree to ambitious climate targets or UN reforms. This paper examines if and under what conditions policymakers learn. It opens the existing 'black box' of learning in policy-making by illuminating when, how and under what conditions in the process of policy-making within European multilevel governance the different learning types of Factual, Experiential, Constructivist and Non-Learning occur. The paper contributes a theoretical framework that allows determining if and how decision-makers learn in the process of policy-making. Learning among decision makers only occurs if these reflect upon new information provided to them through an experience or increase in knowledge and if they, as a consequence, change their underlying assumptions, beliefs or values and come to a different view of the situation. Networks, policy entrepreneurs and the leadership style within a governmental institution are decisive conditioning factors that determine which type of learning occurs in a given policy-making process.

TC 213

A regional governance architecture framework for planning research and interventions

Robin Mahon (1) presenting, Lucia Fanning (2), Patrick McConney (1)

Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill Campus, Barbados (1), Marine Affairs Program, Dalhousie University, Halifax, Nova Scotia, Canada (2)

The Large Marine Ecosystem Governance Framework was developed to operationalise the many recent conceptual advances relating to regional governance architecture. The concepts incorporated include scale, nestedness, interplay of organisations, regime complexes, fit and subsidiarity. The LME Governance Framework is a multi-scale-level framework based on the view that (a) the basis for governance action is actual or potential issues, (b) each issue must have an arrangement, (c) architecture for the arrangement must provide for policy processes that are complete and (d) when there are several arrangements in the framework they must be linked. The framework approach has several functional benefits when dealing with regional governance arrangements: (1) It facilitates the dissection of the regional governance architecture into components that can be researched and/or assessed; (2) It allows stakeholders in the framework to see where they or their organisations fit into the governance architecture; (3) it can be used to develop interventions aimed at strengthening or building the framework; and (4) components can be prioritized for interventions. It has been applied to ocean governance in the Wider Caribbean Region through a suite of projects and case studies. These include: the national-regional interface; the development of a bottom-up component for stakeholder input by fishers; an analysis of the interplay among regional organisations in the framework; as well as several assessments of components of the framework that are for management of specific resources; the development of an overarching regional science-policy interface.

Wednesday 30 January 2013
16:00 – 17:30 pm
Earth System Governance in 21st Century 3
Room: Media Centre

TC 285

What Really Matters? Perceptions on Legitimacy and Effectiveness of Global Environmental Initiatives: A Case Study of Zaka District

Archimedes Muzenda (1) presenting

University of Zimbabwe, Harare, Zimbabwe (1)

This paper explores the perceptions of local communities in Zaka district, Zimbabwe in regard to legitimacy and effectiveness of global environmental initiatives. Its focus is the evolution of global environmental discourse where acceptance of global initiatives has been a question of legitimacy at local levels due to various forces. It explains that legitimacy of global environmental initiatives has been the main concern of the local communities and since legitimacy has been the main concern of local communities effectiveness of global initiatives receive less apprehension where they regard no point to enhance effectiveness of a less than fully legitimate initiative. The notion of sustainable development has cushioned the perceptions but there is speculation of persistence in the future and a hindering factor to implementation. This stimulates questions on which scale is legitimacy and effectiveness being measured? What is really behind the scrutiny? Are local communities enemies of global environmental initiatives? What is the effect of local perceptions and how can they be cushioned towards global consensus? A study on implementation of global initiatives in Zaka district, collection of community and local authorities perceptions on global environmental initiatives underpins the factors as political struggles, blind obedience rather than rationality, differentials in mandates and development stages, historical inclinations and the paper suggests a participatory decentralized architecture to enhance local acceptance, promote knowledge about global initiatives relevance, striking balance between environment and development. It hereby concludes that global initiatives should enclose strategies that local communities award legitimacy for their effectiveness to be fully realized.

Environmental Aid, Financing 2

Wednesday 30 January 2013

16:00 – 17:30 pm

Chair: Jakob Skovgaard (Lund University)

Room: Committee Room 1 (5F)

Environmental Aid, Financing 2	
Chair: Jakob Skovgaard (Lund University)	
Tonami (TC 37)	Japanese and Korean Environmental Aid: What are their life stories?
Lambino (TC 267)	Translating Ideas into sustained action: challenges of foreign-assisted environmental programs in the Philippines
Hanne (TC 209)	Mainstreamed Donor Policy Dialogue on Climate Change Risks in Vietnam

TC 37

Japanese and Korean Environmental Aid: What are their life stories?

Aki Tonami (1) presenting, Anders Riel Müller (1,2)

Nordic Institute of Asian Studies, University of Copenhagen, Copenhagen, Denmark (1), Roskilde University, Roskilde, Denmark (2)

Environmental aid has become a major component of foreign aid as environmental degradation and climate change have emerged as a global concern. Japan contends it has committed itself to the protection of the global environment since the 90s and environmental aid has been an important part of that effort. Korea has recently become an emerging actor in the development aid community. Korea, said to be following the footsteps of Japan in designing and managing its aid, has also started to market its green diplomacy through programs such as the Global Green Growth Institute. Meanwhile, both Japanese aid and Korean aid have been criticized for being driven by their economic interests rather than altruism and that they focus too strongly on infrastructure projects.

Against this background, we aim to analyze and compare Japanese and Korean environmental aid to shed light on the influence that emerging agents of aid such as Korea can bring to the political dynamics and the overall governance of environmental aid. In our analysis, we refer to the definition of Williams (2002), which regards aid policy as an 'autobiography' of donor countries. Using an 'autobiography' approach we examine five elements of Japanese and Korean environmental aid: The bureaucratic and institutional imperatives, the internal procedures and processes, the stated policies, the practices and particular attitude that underlie them, and the broader impulse behind aid. By moving away from an altruistic/self-interest dichotomy this analysis seeks to understand autobiographic trajectories of Japanese and Korean environmental aid rather than to evaluate them.

Wednesday 30 January 2013
16:00 – 17:30 pm
Environmental Aid, Financing 2
Room: Committee Room 1 (5F)

TC 267

Translating Ideas into sustained action: challenges of foreign-assisted environmental programs in the Philippines

Ria Adoracion Lambino (1) presenting

Kyoto University Graduate School of Global Environmental Studies, Kyoto City, Japan (1)

The global environmental regime calls for concerted efforts to address environmental issues faced by an increasingly multiple-connected world. The international sphere is a rich source of solutions to environmental problems which have been consequently shared, tested and popularized. Governments and environmental institutions in developing countries have lapped up these ideas and strategies and institutionalized them as policies or programs in their respective localities, often with the assistance of foreign aid or funding. Given the diversity of local governance structures and capacity, challenges in embedding the externally crafted ideas into the local context and sustaining their implementation abound and in many cases, policy outcomes remain imaginary. This paper looks into the diffusion of innovative environmental strategies and ideas into the context of developing countries and analyzes the structures and agents responsible for their subsequent adoption and institutionalization. The role of development organizations, aid agencies and research institutions as brokers and facilitators of these idea transfers are investigated. Case studies of information-based environmental programs for pollution control implemented in the Philippines provide helpful lessons in identifying motivations for adoption and clarifying modes of implementation. Comparative analysis leads to identification of elements necessary in improved chances of success which are used to develop a conceptual framework on how to bridge the policy-to-action-outcome disjunct. The study posits the need for better translation processes, "fitting" into existing architectures or retro-fitting new ones, contextualization and discourse of ideas in order to sustain action and generate outcomes.

Wednesday 30 January 2013
16:00 – 17:30 pm
Environmental Aid, Financing 2
Room: Committee Room 1 (5F)

TC 209

Mainstreamed Donor Policy Dialogue on Climate Change Risks in Vietnam

Knaepen Hanne (1) presenting

Kyoto University, Kyoto, Japan (1)

Mainstreaming climate change risks into development, or the screening of development decision-making and implementation through a climate change risk lens, has become a key policy in development practices in Vietnam. However, dealing with climate change risks is relatively new to Vietnam and the country's institutionally fragmented political system is an important impediment to effective mainstreaming.

This study addresses how donors can assist Vietnam in effectively mainstreaming climate change risks into sector-ministries. We used a theoretical exploration of key concepts of *discursive institutionalism*, which explains how ideas can create change through discourse. Moreover, a review of an emerging body of literature on mainstreaming and field observations were included. This way, the study has coined the four step-layered process of 'mainstreamed policy dialogue'. Utilizing this method, donors, as 'disguised' change agents, can gradually alleviate fragmentation issues and create better mainstreaming.

The study finds, however, that donors, such as the UNDP, the EU and JICA are not fully using their coordinative potential and are, for several reasons, reluctant to push for institutional change. JICA's ongoing *Support Program to Respond to Climate Change*, for instance, reveals the current achievements of the 'mainstreamed policy dialogue'. However, several challenges, such as the active involvement of NGOs, still lay ahead. Moreover, the program does not fully bring in local experiences, which is highly required for bridging the local-national implementation gap in the area of climate change risks.

Finally, immediate further research will strengthen the dialogue process mentioned above through psychological persuasion theories and theories of diplomatic negotiation.

Methodology

Wednesday 30 January 2013

16:00 – 17:30 pm

Chair: Yoshiki Yamagata (National Institute for Environmental Studies)

Room: Multi-Purpose Room (3F)

Methodology	
Chair: Yoshiki Yamagata (National Institute for Environmental Studies)	
Zia (TC 315)	Agent Based Modeling of Intergovernmental Networks: A Complex Systems Approach to Analyze Transportation Policy Implementation Processes
Takahashi (TC 118)	Global diffusion of forest certification in the long run: An agent-based modeling approach
Kok (TC 327)	Strengthening the international relations dimension of global environmental change scenarios
Happaerts (TC 119)	Upscaling transitions for earth system governance: An exploration of the transnational applicability of transition theory

TC 315

Agent Based Modeling of Intergovernmental Networks: A Complex Systems Approach to Analyze Transportation Policy Implementation Processes

Asim Zia (1) presenting, Christopher Koliba (1)

University of Vermont, Burlington, VT, USA (1)

A pattern-oriented, Agent Based Model (ABM) of a transportation governance network in the state of Vermont is presented to demonstrate an application of complex systems modeling in real world public policy implementation processes. This ABM simulates the dynamics of transportation project prioritization processes under alternate inter-governmental institutional rule structures and assesses their impacts on financial investment flows from federal to state, regional and local scale governments. The current version of the ABM is limited to simulating roadway projects that are primarily funded through US Surface Transportation Program and Interstate Maintenance Program. Multiple focus groups, individual interviews, and analysis of federal, state and regional scale transportation project and program data informed the development of this pattern-oriented ABM. This paper presents the results from experimental simulations to test system-wide effects of alternate institutional designs on the differential *emergence* of roadway project prioritization patterns and funding allocations across regions and local towns. Implications are drawn for the application of complex systems based public policy analysis to study alternate institutional designs of policy implementation networks.

TC 118

Global diffusion of forest certification in the long run: An agent-based modeling approach

Takuya Takahashi (1) presenting

University of Shiga Prefecture, Hikone, Japan (1)

Forest certification is a voluntary and market-based policy instrument that was introduced to address the challenges of sustainable forest management the world over. While the target was originally tropical forests, in practice, forest certification is more common in temperate and boreal forests. Several empirical studies have been conducted on the diffusion of forest certification. Takahashi et al. (2003) examined which types of firms are more likely to seek certification. van Kooten et al. (2005) indicated that the diffusion rates of forest certification in different countries are also influenced by the socio-economic factors of those countries. However, theoretical examination of the diffusion of forest certification appears to have been undertaken only by Sedjo and Swallow (2002).

In the present study, the authors employ agent-based modeling to examine the long-term influence of the varying parameters and structures on voluntary certification patterns worldwide. Some of the findings are as follows: If we assume that forest managers with lower production costs are inclined to be certified first, a price premium for certified forest products may not be very effective. Certified forests may be more widespread in higher production cost regions than in lower production cost regions, which would indicate the potential effectiveness of forest certification on a global scale. A potential behavioral change of forest managers may lead to a 100% conversion of production forests to certified forests even with limited green markets.

TC 327

Strengthening the international relations dimension of global environmental change scenarios

Marcel Kok (1) presenting

PBL Netherlands Environmental Assessment Agency, Bilthoven, The Netherlands (1)

There is a long tradition in exploring possible future environmental changes through the use of (contrasting) scenarios. Insights from social sciences have usually not been very influential in scenario exercises. This paper addresses the question if and how scenario exercises can be improved by a stronger con-tribution from International Relations (IR) theory. However, scenario development, has also not received much attention within IR until now. Strengthening IR in scenarios can contribute to a plurality of approaches to improve coherence and strengthen imagination. We focus on how IR theory and political science can help to improve scenario development. Normative positions of what will be the most desirable strategies for international cooperation will strongly differ, hence we advocate to make these positions explicit through elaborating alternative futures, and to combine insight from available scenarios with insights from the discipline IR. To be able to relate different scenarios to IR theory, we first categorize existing scenarios of global environmental change. This shows that while the number of global environmental scenario exercises is burgeoning, in fact they can be grouped into a relatively small number of categories of scenarios ("scenario-families"). We then elaborate on the dominant IR meta-theories and their views on the environment. Together these sections provide the basis for systematically addressing ways how these IR perspectives can help to further develop exploring the international relations component of scenario-families. The paper concludes with a number of observations how this analysis can contribute to making scenario-analysis more relevant.

TC 119

Upscaling transitions for earth system governance: An exploration of the transnational applicability of transition theory

Sander Happaerts (1) presenting, Hans Bruyninckx (1)

KU Leuven, Leuven, Belgium (1)

In the search for new methods and frameworks to analyze the complex problems related to earth system governance, this paper turns to transition theory. Developed in the Netherlands as an innovative form of governance for sustainable development, transition theory focuses upon the fundamental changes that are required in the main societal systems, in order to tackle the persistent problems of sustainability. We join a growing group of scholars who acknowledge the potential of transition research, but who believe that further theory-building is needed in a number of areas. Our critique specifically addresses the theory's lack of an international level of analysis. Although the persistent problems of sustainability are intrinsically linked to global patterns of production and consumption, transition theory has a natural bias towards those architecture elements that represent niche-level innovations or bottom-up processes.
The paper first reviews the main heuristics of the transition literature that deal with the analysis of agents and dynamics at different levels. Those frameworks are subsequently applied to an international governance process aimed at long-term change. The case selected is the EU's Roadmap towards a Resource Efficient Europe. The aim of the exploratory case study is to investigate whether a study with an international level of analysis can offer new insights into how transition theory could contribute to the analysis of complex architectures and multiple agents in earth system governance.

Biodiversity 2

Wednesday 30 January 2013

16:00 – 17:30 pm

Chair: Peter Bridgewater (United Nations University - IAS)

Room: Committee Room 3 (5F)

Biodiversity 2	
Chair: Peter Bridgewater (United Nations University - IAS)	
Rabitz (TC 293)	Institutional Proliferation and Change in Access and Benefit-Sharing – the role of property regimes
Coolsaet (TC 14)	Fair and equitable governance? Procedural justice in the negotiations on the Nagoya Protocol
Ros-Tonen (TC 220)	Earth system governance and access to natural resources - Implications of hybrid multi-level environmental governance for forest-based livelihoods

Wednesday 30 January 2013
16:00 – 17:30 pm
Biodiversity 2
Room: Committee Room 3 (5F)

TC 293

Institutional Proliferation and Change in Access and Benefit-Sharing – the role of property regimes

Florian Rabitz (1) presenting

Institute for European Studies, Brussels, Belgium (1)

Global Environmental Governance (GEG) is increasingly characterized by a clustering of international institutions around certain issues. Such so-called "regime-" or "institutional complexes" can currently be found in issue areas as diverse as climate change, forest governance, chemical risk regulation, biosafety and others. The so-called institutional complex for Access to and Benefit-Sharing from Genetic Resources (ABS) is generally acknowledged as the most developed complex in terms of formal and informal inter-institutional relations. While scholars have grappled with the *implications* of complexity, the empirical origin(s) of this new phenomenon are currently under-researched. Building on earlier work by the applicant, the paper is to take a political economy perspective on ABS. The paper will attempt to explain the continuous process of institutional proliferation and adaption within the ABS complex since 1992. I will explain this development in terms of competing property concepts that are upheld in international negotiations by different stakeholders. For example, while the genetic resources patent agenda is mainly represented by OECD states and industry interest groups, issues like genetic resources linked to indigenous peoples' Traditional Knowledge, or farmers rights in genetic resources, are each upheld by different coalitions of NGOs and governmental stakeholders from the global South. I will argue that different actors in the ABS complex interact with each other on the basis of such property concepts; and that it is their continuous and repeated interaction that explains institutional proliferation and change in the ABS complex.

Wednesday 30 January 2013
16:00 – 17:30 pm
Biodiversity 2
Room: Committee Room 3 (5F)

TC 14

Fair and equitable governance? Procedural justice in the negotiations on the Nagoya Protocol

Brendan Coolsaet (1) presenting

Université catholique de Louvain, Louvain-la-Neuve, Belgium (1)

The participation of *weak* states in international biodiversity negotiations faces significant challenges. The complexity of the process and the distribution of resources and (bargaining) power among states generate unequal participation opportunities, fostering distrust and threatening the effectiveness of global efforts to halt the erosion of biodiversity.
In 2010, at the tenth Conference of the Parties to the Convention on Biological Diversity, Parties established the legal foundations of an international regime aiming to facilitate access to genetic resources and share the benefits arising from their utilization in a *fair and equitable* way. Given the unbalanced participation opportunities between Parties, the question arises as to the necessary conditions to allow for the latter to actually take place. A first obvious condition lies in a decision-making process that is similarly fair and equitable, or in other words, a process governed by a principle of procedural justice.
Building on existing knowledge, this article proposes a consolidated triangulation technique to assess the participation and influence of states in international environmental negotiations and applies this framework to the 49 Least Developed Countries in the negotiations on the Nagoya Protocol. The results show that despite significant barriers to their participation, these countries manage to have a certain impact on the debate and its outcome, although not sufficient to guarantee a fair and equitable outcome. By identifying the strength and weaknesses of their participation, this paper fosters our understanding on possible measures to ensure procedural fairness when negotiating new environmental regimes.

Wednesday 30 January 2013
16:00 – 17:30 pm
Biodiversity 2
Room: Committee Room 3 (5F)

TC 220

Earth system governance and access to natural resources - Implications of hybrid multi-level environmental governance for forest-based livelihoods

Mirjam A.F. Ros-Tonen (1) presenting, Mercy Derkyi (1,2), Verina Ingram (3,4), Joyeeta Gupta (1,6)

University of Amsterdam, Amsterdam, The Netherlands (1), Tropenbos International Ghana, Kumasi, Ghana (2), Wageningen University, Wageningen, The Netherlands (3), CIFOR Cameroon, Yaounde, Cameroon (4), VU University Amsterdam, Amsterdam, The Netherlands (5), UNESCO-IHE Institute for Water Education, Delft, The Netherlands (6)

Policies, institutions and associated processes (PIPs) have been acknowledged as being fundamental to livelihoods (Hussein 2002). In that sense, the link between governance and livelihoods is well-established, with studies focusing on the effects on livelihoods of decentralisation and devolution processes; of statutory policies and regulations regarding tenure and access rights; of community-based conservation and natural resource management; and of multi-level partnerships. More recently, a rapidly expanding body of literature addresses the impacts of global governance processes such as REDD+ and FLEGT processes and the Voluntary Partnership Agreements (VPAs) to combat illegal logging and enhance good forest governance between the EU and tropical forest countries like Ghana and Indonesia on forest fringe communities' access to forest resources and the livelihood effects of voluntary governance (e.g. forest certification). Although value chain approaches aim to address the combined effects of hybrid multi-level governance along the value chain of specific products, theoretical frameworks for the integrated analysis of interlinkages between hybrid multi-level environmental governance and forest-based livelihoods are still in their infancy. This paper aims to fill this gap. Drawing from research in Ghana, Cameroon, Peru, Indonesia and Vietnam on the combined effects on forest-based livelihoods of evolving governance patterns (i.e. the shift to administrative, pluralist and voluntary systems of governance), it addresses the question of how evolving hybrid multi-level governance hinders and creates opportunities for sustainable forest-based livelihoods and their potential for poverty alleviation, and what this implies for future research on the matter.

Food Governance

Wednesday 30 January 2013

16:00 – 17:30 pm

Chair: Susana Vieira (Universidade de Itaúna)

Room: Staff Room (5F)

Food Governance	
Chair: Susana Vieira (Universidade de Itaúna)	
Matsuo (TC 214)	The Complex Risk Governance Issues Posed by Radionuclides in Food After the Fukushima Disaster
Vervoort (TC 269)	Linking multi-actor foresight for connected governance challenges: food systems and global environmental change
Ham (TC 389)	Climate Change and Resilience: Land use and Rainfall Changes and Water Governance Affecting Food Security and Livelihoods

Wednesday 30 January 2013
16:00 – 17:30 pm
Food Governance
Room: Staff Room (5F)

TC 214

The Complex Risk Governance Issues Posed by Radionuclides in Food After the Fukushima Disaster

Makiko Matsuo (1,2) presenting

The University of Tokyo Policy Alternative Research Institute, Tokyo, Japan (1), The University of Tokyo Graduate School of Public Policy, Tokyo, Japan (2)

Food safety concern raised by the radioactive substances in the aftermath of the Fukushima disaster is a major issue in Japan.
The issue of Radionuclides in food represents a complex risk issue which is in urgent need of governance considerations. In contrast to a routine type of simple risk, risk posed by radionuclides cannot be considered in terms of "food safety" alone. Radiation exposure must be considered in total of both internal (through food intake and inhalation) and external (through skin absorption from sources such as air, water and land). Moreover, "safety considerations" are not enough in taking risk management measure since the standard of radionuclides in food can affect other socio-economic factors such as food availability/supply, compensation for the affected farmers, international food trade and the life of the affected area. However, the issue of radionuclides in food was addressed with poor coordination of relevant jurisdictions under the traditional stove-piped architecture.
The objective of this paper is to identify the governance issues from the detailed analysis of standard setting process of radionuclides in food in Japan. It explores governance issues; how the issue was framed, which agency was responsible for what, who did the overall coordination under what institutional architecture, whose interest was considered to be legitimate and how the relevant factors were balanced in taking measures. It draws lessons for the establishment of resilient risk governance architecture in coping with future disturbances.

TC 269

Linking multi-actor foresight for connected governance challenges: food systems and global environmental change

Joost Vervoort (1,2) presenting, Robin Bourgeois (3), Polly Ericksen (4), Kasper Kok (5,2), Patti Kristjanson (2), Philip Thornton (2), Moushumi Chaudhury (2), Wiebke Foerch (2)

University of Oxford, Oxford, UK (1), CGIAR CRP7: Climate Change, Agriculture and Food Security, Copenhagen, Denmark (2), Global Forum on Agricultural Research, Rome, Italy (3), International Livestock Research Institute, Nairobi, Kenya (4), Wageningen University, Wageningen, The Netherlands (5)

The food systems/global environmental change nexus is a key area of research that links two major interconnected challenges humanity faces in the 21st century. This paper discusses the role of strategic foresight for tackling these challenges in spaces that aim to facilitate deliberative, multi-actor governance. First, we reflect on the role of foresight in the domains of global food futures and global environmental change and its impacts on governance in these domains. Then, we explore how lessons from both domains can be integrated by examining an on-going international foresight program: the CGIAR program on Climate Change, Agriculture and Food Security (CCAFS). Using multi-stakeholder scenarios interacting with global market/water/land cover models, this program explores trade-offs, synergies and other relationships between food security and environmental governance in the developing world. The CCAFS foresight process takes a complex systems approach, exploring the inter-connectedness of food systems and environmental systems. This systems approach includes the acknowledgement that diverse sources of knowledge and experience are crucial both to systems understanding and to concerted action toward sustainable and accepted change. Key to the CCAFS foresight process is the ambition to go beyond a disconnected futures process and to integrate foresight into the daily realities of multi-actor governance. We discuss how well the CCAFS foresight program connects food systems and environmental change futures and whether it succeeds in integrating strategic foresight in both governance dimensions. Based on this case we outline challenges and opportunities for foresight in the food systems/environments nexus.

Wednesday 30 January 2013
16:00 – 17:30 pm
Food Governance
Room: Staff Room (5F)

TC 389

Climate Change and Resilience: Land use and Rainfall Changes and Water Governance Affecting Food Security and Livelihoods

Kimkong Ham (1) presenting

Royal University of Phnom Penh (RUPP), Phnom Penh, Cambodia (1)

The climate change has occurred in every part of the world and it impacts both the developing and developed countries. As agrarian and poor country, Cambodia is vulnerable to climate change and as a consequence, agriculture is mostly affected due to flood and long drought. The Royal University of Phnom Penh (RUPP) conducts research on Climate Change and Resilience: Land Use and Rainfall Changes and water Governance affecting Food Security and Livelihoods, in Stung Chrey Bak, Tonlesap Catchment in Kampong Chhnang Province. The objective of this study is 1) to investigate the degree of climate change impacts on the communities in Stung Chrey Bak Catch, 2) explore the coping strategies of the communities, 3) understanding the impacts of land cover change, rainfall amount and pattern changes on stream's water and how the existing governance arrangement could respond to those impacts. The research methods includes the field observation, key informant interview and observation are applied. It is expected that the research will contribute to improve the water resources management system at local levels. Livelihood strategies of local community addressing adaptation to climate change and food security will be studied and understood clearly. The Intervention for improvement of adaptation to climate change and food security will be identified and in adapting to climate change and ensuring food security.

Ocean Governance 2

Wednesday 30 January 2013

16:00 – 17:30 pm

Chair: tbd

Room: Meeting Room (3F)

Ocean Governance 2	
Chair:	
Valman (TC 137)	Institutional stability and change in the Baltic Sea
Segawa (TC 197)	Case study on the interplay in the formation of plural environmental regimes - case of regional sea programmes and carbon capture and sequestration in sub-sea geological formations
Cooke (TC 343)	Interplay among regional organisations for ocean governance in the Wider Caribbean Region?
Fanning (TC 185)	Demonstrating the practical application of the LME Governance Framework in the Wider Caribbean

Wednesday 30 January 2013
16:00 – 17:30 pm
Ocean Governance 2
Room: Meeting Room (3F)

TC 137

Institutional stability and change in the Baltic Sea

Matilda Valman (1,2,3) presenting

Baltic Nest Institute, Stockholm, Sweden (1), Stockholm Resilience Centre, Stockholm, Sweden (2), Department of Political Science, Stockholm, Sweden (3)

The shift from a classic sector-by-sector management system to an operational ecosystem approach is perceived as the way forward towards sustainable use of marine systems. The states bordering the Baltic Sea and the European Community signed the Baltic Sea Action Plan (BSAP) in 2007, intended to provide practical means for implementing the ecosystem approach in the region. However, whether this shift towards a new governance approach also constitutes a case of institutional change remains unclear. This study evaluates institutional change over 30 years in order to understand the emergence of the ecosystem approach for this international institution and adds to the otherwise largely theoretical debate on institutional change by testing two models of institutional change - gradualist versus punctuated equilibrium - against data from the Helsinki Commission. Relying on a novel methodology involving quantitative text analyses of 574 documents this study suggests that the signing of the BSAP did not cause abrupt change in the institution. Overall, findings support a gradualist model of institutional change where the BSAP is layered upon preexisting institutional structures. Results also indicate that institutional change has occurred in some parts of the institution, whereas other parts remain remarkably stable. It proves that in order to intentionally change an institution it is vital that the change processes cohere at all levels of the institution. The study also underlines the mismatch between ecosystems and institutions. Given the relatively slow dynamics identified here, it is unclear whether institutions are able to adapt to rapid and unpredictable ecosystem shifts.

Wednesday 30 January 2013
16:00 – 17:30 pm
Ocean Governance 2
Room: Meeting Room (3F)

TC 197

Case study on the interplay in the formation of plural environmental regimes - case of regional sea programmes and carbon capture and sequestration in sub-sea geological formations

Keiko Segawa (1) presenting

Tokyo Institute of Technology, Tokyo, Japan (1)

While various regimes are seen in many fields, plural environmental regimes which deal with the same environmental issues coexist, and "ideational interplay" is seen in the formation of regimes that involve a preceding regime's learning processes. This study analysed published academic papers and reports by international organisations. This showed cases of interplay observed in the negotiation of regime or program formation, namely carbon capture and storage (CCS) in the conventions for the protection of the marine environment of the North-East Atlantic, and the prevention of marine pollution by dumping wastes and other matter in 1972 and 1996. In addition, the United Nations Environment Programme's regional sea action plans were also examined. Countries consenting to imposing the environmental impact assessment on CCS in international law negotiated for compatibility of two regimes, and took leadership in legal and technical discussions. The interaction with contents and a strong examination process was seen, such as securing the schedule which can feed back the contents of examination in two regimes which emerge. However, a country dissatisfied with the contents of the regime tried to re-examine the appropriateness of revision to incorporate the CCS into the regime. Under the UNEP plan, learning as interplay in planning the process of activities of each plan was observed, but the interaction could be regarded as weak, since participating states determined activity and a fund. UNEP functioned as an actor promoting interaction through global meetings for information exchange between participating states of different regional seas.

Wednesday 30 January 2013
16:00 – 17:30 pm
Ocean Governance 2
Room: Meeting Room (3F)

TC 343

Interplay among regional organisations for ocean governance in the Wider Caribbean Region?

Alexcia Cooke (1) presenting, Lucia Fanning (2), Robin Mahon (1), Patrick McConney (1)

Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill Campus, Barbados (1), Marine Affairs Program, Dalhousie University, Halifax, Nova Scotia, Canada (2)

Three key ocean governance issues that have been highlighted in assessments conducted under the Caribbean Large Marine Ecosystem (CLME) Project are over-exploitation of living marine resources, pollution and habitat degradation. Twenty-five organisations were identified as contributing to ocean governance in the Wider Caribbean Region. These organisations were largely inter-governmental with a few non-governmental and private sector organisations. The organisations contribute to addressing one or more of the key transboundary issues that affect the sustainability of living marine resources and the health of the marine environment. Over time, their scope of work and policy roles that have been defined at their establishment may change.

The Large Marine Ecosystem Governance Framework was used as the conceptual basis for analysing the interactions among the regional organisations. For each of the transboundary issues, the research examined the interplay at each of five policy cycle stages - data and information, analysis and advice, decision-making, implementation and review and evaluation for each of the three transboundary issues. Data were analysed using thematic content analysis based on the mandates and actual work of the organisations. Interviews were conducted with senior personnel at the organisations to identify the existing interactions. These interactions were compared with the interactions that would be expected in a functional system, taking into account stated roles and geographical considerations. Recommendations are provided for the improved effectiveness of the ocean governance arrangements in the WCR from the perspective of interactions among organisations.

Wednesday 30 January 2013
16:00 – 17:30 pm
Ocean Governance 2
Room: Meeting Room (3F)

TC 185

Demonstrating the practical application of the LME Governance Framework in the Wider Caribbean

Lucia Fanning (1) presenting, Robin Mahon (2), Patrick McConney (2)

Dalhousie University, Halifax, Nova Scotia, Canada (1), University of the West Indies, Cavehill, Barbados (2)

The Large Marine Ecosystem (LME) Governance Framework is considered to be general enough that it can be adapted to all multiscale living marine resource situations. These include arrangements that encompass all possible governance modes, be they hierarchical, one in which there is extensive consultation among stakeholders, a shared responsibility regime or one in which the regime is distributed. The Framework provides a guide for incremental implementation of interventions that are designed to improve policy cycles and linkages among them. Parts of the overall framework for an LME can be selected and targeted for sub-framework development and strengthening through institutional reforms and capacity building. In this paper we provide examples of how the framework can be applied for three resource management situations in the Caribbean region: marine protected area management, collaborative management of the eastern Caribbean flyingfish fishery, and fisheries for large pelagics. The examples illustrate the applicability of the framework across this spectrum of governance regimes. In the case of MPAs, local level management can be largely effective, but there are benefits from regional harmonisation of policy. In the case of flyingfish, the resource is common to all participating countries and failure to manage collectively could lead to fishery depletion with economic consequences for all countries. In this case, decision-making must be at a level that binds all countries. In the case of large pelagic, there are extra-regional governance constraints that must be included as part of the policy cycle for decision-making.

Parallel Panel Sessions 6

Wednesday 30 January 2013
18:00 – 19:30 pm

Earth System Governance in 21st Century 4

Environmental Aid, Financing 1

Climate Governance 2

Forest Governance 2

Biodiversity 3

Climate Governance 3

Earth System Governance in 21st Century 4

Wednesday 30 January 2013

18:00 – 19:30 pm

Chair: Hiroshi Ohta (Waseda University)

Room: Staff Room (5F)

Earth System Governance in 21st century 4	
Chair: Hiroshi Ohta (Waseda University)	
Guarin (TC 274)	The behavioral dimensions of international cooperation
Hasegawa (TC 264)	Two Different Evacuations from Fukushima Nuclear Accident

Wednesday 30 January 2013
18:00 – 19:30 pm
Earth System Governance in 21st Century 4
Room: Staff Room (5F)

TC 274

The behavioral dimensions of international cooperation

Alejandro Guarin (1) presenting, Dirk Messner (1,3), Daniel Haun (2)

German Development Institute / Deutsches Institut für Entwicklungspolitik, Bonn, Germany (1), Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany (2), Centre for Global Cooperation Research, Duisburg, Germany (3)

The creative potential of globalization is matched by the scale and complexity of its challenges. Overcoming these challenges, including averting climate change, requires unprecedented cooperation among nations. Yet the failure to reach substantive agreement-most recently in Rio-reflects the widening gap between the current status and the action needed to tackle common problems. This under-provisioning of global cooperation contrasts with a growing body of evidence from disciplines such as evolutionary psychology and behavioral economics: individual human beings are astonishingly cooperative.

Our argument is that current theories of international relationships that assume a model of human behavior based solely on competition and self-interest are inadequate to account for the nature of the global cooperation crisis. Cross-cultural, interdisciplinary research suggests that cooperation is shaped by a few key factors: information, communication and reputation; group size; rules and mechanisms for punishing cheaters; degree of similarity; and the structure of group's hierarchy. What does this knowledge about cooperation at the interpersonal level imply for international cooperation, and how can we study these implications?

First, we discuss what a new paradigm of human behavior not based on narrow rational choice means for the theory of international relations. Second, we focus on cooperation at the meso dimension-the relatively small network of representatives and experts who negotiate international agreements-as a point of confluence of international and interpersonal scales and a key site for empirical research. Finally, we address the scaling properties of the factors shaping interpersonal cooperation, and their implications for the structure and dynamics of global governance.

TC 264

Two Different Evacuations from Fukushima Nuclear Accident

Reiko Hasegawa (1) presenting

Institute for Sustainable Development and Internaitonal Relations (IDDRI), Paris, France (1)

The Fukushima nuclear accident has displaced tens of thousands of persons over all Japan. Currently there are 163,400 persons displaced from Fukushima prefecture, which represent the half of all the evacuees induced by the Great East Japan Earthquake and the Fukushima accident. One year after the Disaster, the number of these evacuees continues to increase as more people living outside of the official evacuation zone decide to evacuate voluntarily. These recent evacuees are not from the evacuation zone designated by the authority (Hamadori region), but from the surrounding area (Nakadori region) which was heavily affected by the radiation diffused from the Fukushima Daiichi Nuclear Power Plant and yet not part of the official evacuation zone. The paper looks at these two regions of Fukushima, Hamadori and Nakadori, and examines how the nuclear accident affected them differently in terms of disaster evacuation. The nuclear accident forced the residents in Hamadori to evacuate, while the population in Nakadori was obliged to stay as the authority did not instruct nor assist them to evacuate despite the elevated radiation level in the air equivalent to some parts of the evacuation zone. As a result, many of them in Hamadori decided to evacuate by themselves. The paper addresses the difference in the governance of radiation risk by the authority for these two areas and seek to understand what issues are at stake behind their decisions. Finally, based on the above analysis, the paper strives to make policy recommendations for two areas to help create solutions to their plights respectively.

Environmental Aid, Financing 1

Wednesday 30 January 2013

18:00 – 19:30 pm

Chair: Mark Elder (Institute for Global Environmental Strategies)

Room: Committee Room 1 (5F)

Environmental Aid, Financing 1	
Chair: Mark Elder (Institute for Global Environmental Strategies)	
Skovgaard (TC 186)	Allocating International Climate Finance: Understanding Contributor Government Beliefs and Processes—Case Studies from the Australia, Denmark, Germany, Japan, Switzerland, the UK and the US
Pickering (TC 270)	Fulfilling climate finance commitments: scope for unilateral and coordinated approaches
Lebel (TC 158)	The governance of adaptation financing: legitimacy at multiple levels

TC 186

Allocating International Climate Finance: Understanding Contributor Government Beliefs and Processes—Case Studies from the Australia, Denmark, Germany, Japan, Switzerland, the UK and the US

J. Timmons Roberts (1), Jakob Skovgaard (2) presenting, Hendrikje Reich, David Rossati (3), Martin Stadelmann (4), Jonathan Pickering (5), Soyeun Kim (6)

Brown University, Providence, USA (1), Lund University, Lund, Sweden (2), University of Edinburgh, Edinburgh, UK (3), University of Zurich, Zurich, Switzerland (4), Australian National University, Canberra, Australia (5), University of Leeds, Leeds, UK (6)

Climate finance--the financing of climate measures (both mitigation and adaptation) in developing countries–now constituting one of the most important issues in the global climate negotiations. However, little attention has been given to climate finance in the academic literature. An important research gap is the lack of knowledge about how donor countries reach decisions regarding how to allocate public climate finance, and what lessons can be learnt from the development literature. In order to contribute to the understanding of the factors which influence the decisions regarding climate finance, the paper analyses the cases of seven developed donor countries: Australia, Denmark, Germany, Japan, Switzerland, the UK and the US. The analysis concerns the role of different agencies in the decision-making process and the respective beliefs of these actors about finance allocation. Such actors include implementing agencies, development cooperation ministries, environment and finance ministries. The paper gauges the influence of the different actors and their beliefs on a set of different parameters: how much the country's fair share of the climate finance is; what the relationship is between climate finance and development assistance; how the finance should be allocated between different types of countries, between bi- and multilateral funding and between adaptation, mitigation and forestry; and whether the provision of finance should come before or after the policies have been adopted.

TC 270

Fulfilling climate finance commitments: scope for unilateral and coordinated approaches

Jonathan Pickering (1) presenting, Frank Jotzo (1), Peter J. Wood (1)

Australian National University, Canberra, Australia (1)

Developed countries have pledged as a group to mobilise climate finance for developing countries reaching US$100 billion a year by 2020. Meeting this commitment will require contributing countries to arrive at an acceptable approach to effort-sharing and to harness innovative financing sources beyond national budgets, which have provided the bulk of funding to date. In this paper we compare policy options for developing the global architecture for generating long-term climate finance against criteria of effectiveness and legitimacy. We apply these criteria to evaluating the relative merits of unilateral and coordinated approaches to: (i) calculating individual country shares; (ii) developing criteria for the eligibility of public and private sources of climate finance; and (iii) designing innovative sources of finance. Overall, unilateral approaches offer flexibility and the ability to scale up rapidly but may face limitations in ensuring accountability, efficiency and equitable allocation. Coordinated approaches may address some of these concerns, but achieving timely agreement will be challenging. We conclude that an appropriately sequenced mix of unilateral and internationally coordinated approaches will be necessary for countries to achieve their commitments.

Wednesday 30 January 2013
18:00 – 19:30 pm
Environmental Aid, Financing 1
Room: Committee Room 1 (5F)

TC 158

The governance of adaptation financing: legitimacy at multiple levels

Louis Lebel (1) presenting, Albert Salamanca (2)

Chiang Mai University, Chiang Mai, Thailand (1), Stockholm Environment Institute, Bangkok, Thailand (2)

The design of international and national institutions that govern the financing of adaptation has complex implications for the allocation of benefits and burdens. This paper analyzes legitimacy issues in 6 international and 4 national financing institutions in Asia. Four key observations are made. First, adaptation financing institutions draw on sources of legitimacy that reflect the characteristics of key authorities involved – both donors and recipients. Multilateral banks, for example, argue about achieving results; critics question the accountability and transparency of decision-making. Second, international financing itself has helped legitimize adaptation as an important development and policy objective even as procedures and criteria continue to be challenged by both donors and potential recipients. Third, governance problems at national levels and additionality requirements in financing rules together make it difficult to design and implement projects that would best enhance the well-being of low-income groups most vulnerable to climate change, ultimately undermining legitimacy. Fourth, at local level adaptation projects are legitimized by donors, non-state actors and even national governments as being action 'on-the-ground' and thus more likely to produce results which serve the interests of vulnerable communities. In practice many projects remain difficult to scale-up and sustain beyond pilot project areas and durations. Multiple sources of finance will continue to be necessary to match large and growing needs of developing countries. Experiences with building institutional legitimacy should be taken into consideration in design of new financing institutions include mechanisms for coordination with existing funds.

Climate Governance 2

Wednesday 30 January 2013

18:00 – 19:30 pm

Chair: Kentaro Tamura (Institute for Global Environmental Strategies)

Room: Multi-Purpose Room (3F)

Climate Governance 2	
Chair: Kentaro Tamura (Institute for Global Environmental Strategies)	
Burch (TC 250)	Accelerating sustainability in British Columbia: Enablers of transformative multi-level governance in eleven case study communities
Azam (TC 268)	Governance of Climate Induced Migration in the Coastal regions of Bangladesh: New Transformation Required?
McGregor (TC 174)	Overcoming the Failure to Develop Effective Global Climate Change Policy

Wednesday 30 January 2013
18:00 – 19:30 pm
Climate Governance 2
Room: Multi-Purpose Room (3F)

TC 250

Accelerating sustainability in British Columbia: Enablers of transformative multi-level governance in eleven case study communities

Sarah Burch (1) presenting, Alison Shaw (1,2), Ann Dale (1,2), John Robinson (1)

University of British Columbia, Vancouver, BC, Canada (1), Royal Roads University, Victoria, BC, Canada (2)

The Canadian province of British Columbia (BC) is taking significant steps towards climate change mitigation, including a carbon tax on fossil fuels and legislation that mandates greenhouse gas reductions within public sector organizations and greenhouse gas reduction targets for municipalities. Communities are responding to these signals with the tools available to them (such as land use and transportation planning, waste management, and public engagement campaigns) but also face a range of barriers to innovation on climate change.

This paper presents the results from qualitative empirical work carried out in eleven case studies throughout BC. These case studies were chosen to represent examples of significant innovation and leadership on climate change, ranging from the neighbourhood scale to multi-municipality regional districts in both urban and rural communities. We examine the key actors who have designed and implemented climate change and sustainability initiatives (whether individuals or organizations), their participation in, and influence on, networks, and the ways in which various levels of government ranging from the local to the federal may build capacity, supporting key enablers of climate change innovation. We investigate how are these various governance architectures shaped by the agents at play, the relationships amongst them, and the capacities they provide. Ultimately we explore the potential for the strategies undertaken in these case study communities to trigger a fundamental shift towards sustainable, resilient, and low carbon development paths.

Wednesday 30 January 2013
18:00 – 19:30 pm
Climate Governance 2
Room: Multi-Purpose Room (3F)

TC 268

Governance of Climate Induced Migration in the Coastal regions of Bangladesh: New Transformation Required?

Mehdi Azam (1) presenting, Gregor C. Falk (2)

Macquarie Law School, Macquarie University, Sydney, NSW, Australia (1), Institute of Geography, University of Education Freiburg, Freiburg, Germany (2)

This study explores and examines various internal and external factors influencing environmental and socio-economic change and thereby people's displacement and migration in the coastal region of Bangladesh in the changing climatic system. Based on field surveys and focus group discussion with local people, the study identifies that the transformation of traditional land use pattern from rice farming to shrimp culture has caused serious environmental and socio-economic and threats to local resilience. Reduction of household resilience has shifted away vulnerable people to move outside their origin territory ranging from one week to a maximum of six months. The study also finds that people have little understanding of whether or not such environmental and socio-economic changes are linked to climate change however they perceived that man-made interventions and traditional land use changes are the main causes of the displacement and migration. And climate change exacerbates the already existing problems. So far governance of migration has not been effectively mainstreamed in the current policy regimes and considered as threats. The study suggests new transformation of an integrated land use governance mechanism that can bring people back to the self-sustaining agriculture systems.

Wednesday 30 January 2013
18:00 – 19:30 pm
Climate Governance 2
Room: Multi-Purpose Room (3F)

TC 174

Overcoming the Failure to Develop Effective Global Climate Change Policy

Ian McGregor (1) presenting

University of Technology, Sydney (UTS), Sydney, NSW, Australia (1)

Dangerous climate change is the greatest threat to sustainability that humanity has ever faced. This paper reviews the global climate change public policy development process, using both governmentality and neo-Gramscian perspectives. It particularly focuses on the failure of that process to agree an effective international agreement to address climate change at the 15th Conference of the Parties (COP15) of the UN Framework Convention on Climate Change in Copenhagen in December 2009 and the subsequent extremely limited progress made towards effective global climate policy.
Within the failure of that process, it highlights the major challenge to the hegemonic power of market globalism that occurred in the lead-up and during COP15. This counter-hegemonic movement based around ideologies of ecologism and justice globalism was supported by many developing countries as well as environmental and social justice organisations. The counter-hegemonic challenge was not successfully accommodated at COP15 or in the subsequent climate change negotiations in Bonn, Cancun and Durban.
It identifies major difficulties which need to be overcome to successfully conclude an effective global agreement to move the world's energy systems rapidly away from fossil fuels to low and zero emission energy sources. Using a governmentality perspective, the research focuses on major problems with our current global climate change governance processes under the UNFCCC. It concludes by identifying major issues that an effective global climate change agreement needs to address and some of the major barriers that need to be overcome to achieve such an agreement.

Forest Governance 2

Wednesday 30 January 2013

18:00 – 19:30 pm

Chair: Kanako Morita (National Institute for Environmental Studies)

Room: Committee Room 3 (5F)

Forest Governance 2	
Chair: Kanako Morita (National Institute for Environmental Studies)	
Hakim (TC 68)	Political Dynamics of REDD+ in Indonesia
Jodoin (TC 38)	International Pathways of Influence and Domestic Policy Change in Transnational Environmental Governance: Evidence from the REDD+ Readiness Phase in Tanzania and Panama
Kasay (TC 66)	Global Environmental Governance Architecture, Local Government and Forest Resources abuse: Case of Democratic Republic of Congo

Wednesday 30 January 2013
18:00 – 19:30 pm
Forest Governance 2
Room: Committee Room 3 (5F)

TC 68

Political Dynamics of REDD+ in Indonesia

Stepi Hakim (1) presenting

Clinton Foundation, Jakarta, Indonesia (1)

National moratorium on natural forest concession and peat land licenses has been issued. The moratorium maps that are reviewed each 6 months are issued widely through the Internet. The scope of REDD+ Program has been spelt out into national strategy. The Provincial Government of Central Kalimantan established its regional commission on REDD+ in 2010. The commission is headed by Governor. However, why is the field implementation of REDD+ program so slow? Does really REDD+ Program exist in Indonesia? This article found that the political dynamics occurred at national level affects the field implementation REDD+. The conflict interest between and within Agencies at national level on responsibility to run REDD+ has not been solved yet. Forestry Ministry is developing System Information Safeguards (SIS), whereas REDD+ Task Force is developing its National Safeguard called as PRISAI. Synchronization of between SIS and PRISAI has not been finished since those systems are used for different purpose. In addition, the unclear definition of REDD+ created confusion for stakeholders (local governments, farmers, and NGOs). REDD+ is perceived as a carbon sale, not as an effort to avoid forest degradation and deforestation. Community perceives that REDD+ is an opportunity to trade their land with the project proponent. Since National Government has not provided formal publication widely guidance on how to implement REDD+, definition of REDD+ become unclear. Since the moratorium is only for two years (until May 2013) and if the Government cannot solve the issues by that time, then it would confirm that REDD+ would fail.

Wednesday 30 January 2013
18:00 – 19:30 pm
Forest Governance 2
Room: Committee Room 3 (5F)

TC 38

International Pathways of Influence and Domestic Policy Change in Transnational Environmental Governance: Evidence from the REDD+ Readiness Phase in Tanzania and Panama

Sebastien Jodoin (1) presenting

Yale University, New Haven, Ct., USA (1)

I examine the architecture and effectiveness of the emerging global regime for reducing emissions from deforestation and forest degradation and through the sustainable management of carbon stocks (REDD+) in developing countries. I focus on the ability of the on-going REDD+ readiness phase to induce domestic policy changes for operationalizing REDD+ in developing countries. At the international level, a range of public and private actors, including developed country governments, international organisations, multilateral development banks, NGOs, and market actors, are actively supporting the transnational development of REDD+ through multiple interventions such as public and private finance, multilateral rule-setting, knowledge-sharing, and technical assistance. Domestically, close to fifty developing countries are undertaking multi-year national REDD+ readiness efforts, involving some combination of research, capacity-building, institutional reform, stakeholder engagement, and demonstration projects. I argue that the REDD+ readiness phase thus represents a compelling example of what Bernstein and Cashore call a complex arrangement in global governance. This sort of arrangement differs from standard multilateral regimes because it brings together a powerful combination of formal and informal, public and private, and material and ideational mechanisms which they aggregate into four principal pathways of influence: international rules, international norms, markets, and direct access to domestic policy-making processes. Through case studies of the REDD+ readiness phase in Tanzania and Panama, I will present new findings on how fragmented governance architectures like the one that characterises the REDD+ regime may exert influence on domestic policy change and how this contrasts with the potency of other, more formal and centralised architectures.

TC 66

Global Environmental Governance Architecture, Local Government and Forest Resources abuse: Case of Democratic Republic of Congo

Sentime Kasay (1) presenting

University of South Africa, Pretoria, South Africa (1)

This paper seeks to critically examine the impact of global environmental governance architecture, policies and interventions on the local government and ultimately on the Forest resources that constitute the basic for livelihood of the Congolese population. In the last past decade, the discourse of global environmental governance has gained public spheres and become the key term in the politic and management of natural resources. Yet, these kinds of system, there are recurrent treats to the natural environment and subsequently to the livelihood of poor community. The focus is on the decolonial epistemic perspective that seeks to unmask the global environmental governance discourse that is informed by modernity and capitalism system and to reveal the major threats to the local environment, which in themselves are contributing to the ecological crisis in the region. This perspective also seeks to provide new and innovative means for voicing the needs of forest-dependent communities in the Democratic Republic of Congo which are currently being misrepresented through neoliberal hegemonic discourses, international treaties, and conventions as well as local elites. In their turn, each of the aforementioned influences the management of forest resources and is ultimately responsible for the formulation of policies and the establishment of the institutions that govern these resources. It indicates that the manner by which forests are defined is governed by Universal modes of constructing knowledge which offers no solution for the environmental crisis at this stage. This paper therefore explores other alternatives which might act as possible substitutes to the international governance.

Biodiversity 3

Wednesday 30 January 2013

18:00 – 19:30 pm

Chair: Raquel Moreno-Penaranda (United Nations University - IAS)

Room: Media Centre

Biodiversity 3	
Chair: Raquel Moreno-Penaranda (United Nations University - IAS)	
Bridgewater (TC 101)	Avoiding dead parrots, diseased forests and acidic oceans – developing a new global adaptive architecture for biodiversity governance
Measham (TC 157)	Agency and alliance: public and private interests in biodiversity stewardship programs
Chan (TC 6)	Accomodating global environmental governance to new drivers: The case of governance partnerships and China's biodiversity governance
Pietrzyk-Kaszynska (TC 321)	The performance of sub-national biodiversity governance - insight from practitioners in Małopolska region, Poland

Wednesday 30 January 2013
18:00 – 19:30 pm
Biodiversity 3
Room: Media Centre

TC 101

Avoiding dead parrots, diseased forests and acidic oceans – developing a new global adaptive architecture for biodiversity governance

Peter Bridgewater (1) presenting, Ian Cresswell (2)

UNU-IAS, Yokohama, Japan (1), CSIRO, Hobart, Tasmania, Australia (2)

The current global architecture for biodiversity governance is broken. Attempts to repair it have largely failed, even at the recent 2012 Rio+20 meting. Failure is due largely to conflation of the objectives of the biodiversity-related conventions, resulting *inter alia* in poor implementation of all such conventions. Discussions on biodiversity at the UN General Assembly in 2010, designed to improve matters, provided little new thinking.

In both terrestrial and marine environments this lack of effective governance has led to a more intensive focus on conservation, avoiding or ignoring the other important aspects of sustainable use, management, benefit sharing and importance of new technologies. In turn this has contributed to rapid spread of invasive alien species (including disease organisms), species and genetic diversity loss, and rapid change in ecosystem structure, function, and service delivery. All of these effects derive from lack of effective *architecture*, too many *agents*, poor *adaptiveness*- and ultimately a lack of *accountability*. In particular, lack of an effective global architecture has mitigated against effective implementation of the many ideas and guidelines discussed and adopted by the biodiversity-related conventions.

A solution is to create better architecture and adaptiveness through developing a leaner and more adaptive Convention on Biological Diversity as well as reducing the number of agents. This invigorated convention would act as a framework convention, interacting with the Climate Change and Combatting Desertification conventions to ensure the vital nexus between biodiversity management, climate change adaptation/mitigation, and land degradation; ultimately thus reducing negative aspects of biodiversity change.

Wednesday 30 January 2013
18:00 – 19:30 pm
Biodiversity 3
Room: Media Centre

TC 157

Agency and alliance: public and private interests in biodiversity stewardship programs

Thomas Measham (1) presenting

CSIRO Ecosystem Sciences, Canberra, Australia (1), Australian National University, Canberra, Australia (2)

Alliances of public and private interests play a key role in the governance of multiple environmental challenges including biodiversity management and Reducing Emissions from Deforestation and Forest Degradation (REDD). For governance arrangements to be developed in the first place, and to function effectively, it is important that private and public interests are compatible. To complicate this alliance, neither public nor private interests necessarily represent singular, cohesive positions, so much as the convergence of multiple factors, which may themselves be contradictory. These factors lead to multiple challenges for the successful functioning of private-public alliances. Private actors have a range of motivations for environmental actions, which may be differentially impacted by governance interventions. For example, voluntary actions may not sit well with mandatory compliance requirements. There can also be tensions between economic efficiency and equity considerations, with efficiency concerned with the greatest impact, while equity concerned with more even access to participating in the initiatives concerned. In this paper, a case study is presented of a national ecosystem stewardship program in Australia which involves paying private landholders for public biodiversity management. The focus is on the motivations and the experience of participating in such a scheme. We consider the dual public objectives of 'purchasing outcomes' compared with fostering particular attitudes and behaviours. Furthermore, we consider the multiple and potentially competing drivers of private sector agency. We conclude by considering the implications of this analysis for understanding the relationship between public and private sector interests in environmental governance.

Wednesday 30 January 2013
18:00 – 19:30 pm
Biodiversity 3
Room: Media Centre

TC 6

Accomodating global environmental governance to new drivers: The case of governance partnerships and China's biodiversity governance

Sander Chan (1) presenting

VU University, Amsterdam, The Netherlands (1)

In the 21st century global environmental governance will need to accomodate new players. Countries like China and India are emerging as new drivers of global governance. Before, these countries have been characterized as 'second-movers': their political power was limited and they had little leverage over the definition of norms and institutions of global governance. As their role changes from second-movers to 'drivers', they exert more influence, and they can oppose and adapt global governance institutions according to their own norms and institutions.
Governance architectures that take the form networks and public-private partnerships are often seen as carriers of Western liberal democratic norms of governance. When they are applied to the Chinese authoritarian context a gap becomes manifest between norms and institutions of global governance and those in China.
The empirical focus is on the Critical Ecosystem Partnership Fund (CEPF), a global biodiversity conservation program supported by international organizations, NGOs and some governments. The CEPF challenges established political norms and institutions in China. It promotes independent civil society partnerships as the backbone of biodiversity governance architecture; even when the monopoly of the party-state over governance persists. Quantitive and qualitative data (obtained from the CEPF, documents and observers of the CEPF) are analyzed to consider whether the CEPF changed China's biodiversity governance; and to which extent the global methodology of the CEPF and has been adapted to the Chinese context and what implications such adaptation and redefinition has for global biodiversity governance partnerships as the CEPF.

Wednesday 30 January 2013
18:00 – 19:30 pm
Biodiversity 3
Room: Media Centre

TC 321

The performance of sub-national biodiversity governance - insight from practitioners in Małopolska region, Poland

Agata Pietrzyk-Kaszynska (1) presenting, Malgorzata Grodzinska-Jurczak (1)

Jagiellonian University, Institute of Environmental Sciences, Kraków, Poland (1)

The following paper explores sub-national interactions in biodiversity governance from the perspective of practitioners and experts from local and regional administrative levels. The research takes Małopolska region in Poland as its case study area. Poland itself is an interesting country to analyze international influences on governance at lower levels - mostly due to its accession to European Union and emerging multi-level governance. Małopolska is a particular region of Poland with valuable biodiversity and high proportion (60%) of territory under some form of protection.
The paper presents the results of quantitative research conducted among representatives of local authorities and of regional nature conservation and environmental institutions. The overall objective of the study was to compare perspectives of various practitioners on nature conservation system and its performance at sub-national level. The main research goals referred to (1) differences of various stakeholders' opinions on the performance of nature conservation institutions within Małopolska and (2) perceived legitimacy of biodiversity governance mechanisms. To analyze the prior we asked a set of questions concerning the cooperation of institutions at various levels, division of responsibilities, public participation, effectiveness of undertaken actions, accuracy of law and procedures etc. To investigate the latter, we asked about respondents' opinion on site selection and management processes of Natura 2000 (types of knowledge used, inclusion of stakeholders and result of the process, to name a few).
We described and specified the similarities and differences in opinions of practitioners from local and regional level and we strived to assess the legitimacy of chosen governance mechanisms.

Climate Governance 3

Wednesday 30 January 2013

18:00 – 19:30 pm

Chair: Maxwell Boykoff (University of Colorado)

Room: Meeting Room (3F)

Climate Governance 3	
Chair: Maxwell Boykoff (University of Colorado)	
Mathai (TC 385)	Developing Governance Indicators for a Low Carbon Societies Context in Asia
Jiang (TC 386)	Study of governance indicators to the low carbon society in China
Barau (TC 206)	An X-Ray of Iskandar Malaysia Low Carbon Society in the Context of Earth System Governance Architectures
Olorunfemi (TC 123)	Attitudes and Socio-Cultural Practices as Determinants of Sustainable Adaptation to Climate Change: Case Studies from Nigeria

Wednesday 30 January 2013
18:00 – 19:30 pm
Climate Governance 3
Room: Meeting Room (3F)

TC 385

Developing Governance Indicators for a Low Carbon Societies Context in Asia

Manu Mathai (1) presenting, Govindan Parayil (1), Aki Suwa (1)

United Nations University Institute of Advanced Studies, Yokohama, Japan (1)

Many Asian societies are central to the future of a successful global climate governance regime. Not least because of their size and rapidly growing economies, environmental governance in countries such as China, India and Indonesia will continue to qualitatively shape the global climate. In addition, and unlike the OECD economies, much of Asia are already low carbon societies. The challenge then is not one of transitioning toward a low carbon society. It is one of enabling hundreds of millions of people to live lives of greater well-being and far greater dignity, while simultaneously maintaining a globally sustainable and equitable carbon footprint. This reality reorients the governance problematic. The suite of tools and technological means that populate climate governance prioritize instrumentalities such as carbon intensity, technology transfer or cost of carbon. This regime does not deeply engage notions of human well-being and dignity and place them front and center, as it should. Nor does this approach recognize the climate as a global commons. Instead it adopts an approach built on further commodification. This approach might serve the interests of the high emitting OECD economies, but it cannot be justified in the context of rapidly changing countries in Asia that are already low carbon societies. It has also been ineffective. This paper develops a conceptual framework for developing governance indicators in the context of low carbon societies in Asia. It focuses on well-being in the language of human capabilities, and on discourse, power and process in the governance of a global commons.

TC 386

Study of governance indicators to the low carbon society in China

Ping Jiang (1) presenting, Bin Xu (1)

UNU-IAS, Yokohama, Japan (1)

The average 10% of annual GDP growth in recent years makes China's energy and other sources consumption constantly increasing. Since about 70% of total primary energy consumption is from coal, China has more serious situation of carbon emissions and pollutions which lead to climate change and environment degraded. Facing the great challenges of climate change, environment protection and energy security in the process of development, the low carbon sustainability has become a core objective in China's most important national five-year plan. Under the national plan, the National Development and Reform Commission of China has issued a programme in July 2010 for choosing several pilot provinces and cities for promoting the development of low carbon society at province and city levels. A comprehensive set of governance indictors which contains the aspects related to decision making process, implementation capacity, economic development and socio-ecological system mainly at the province level is explored by this study through analysing a case study from Yunnan Province. This study also assesses the effectiveness and efficiency, equity, participation, transparency and accountability of the governance in building low carbon societies at national and local levels in China by using the indicators. The governance indicators formed in this research could be a good and practical guide for decision makers in government, academia, and industry for well promoting the low carbon sustainable development in a wider range in China.

TC 206

An X-Ray of Iskandar Malaysia Low Carbon Society in the Context of Earth System Governance Architectures

Aliyu Salisu Barau (1) presenting, A.N.M Ludin (1)

Universiti Teknologi Malaysia, Johor, Malaysia (1)

The Iskandar Malaysia Low Carbon society is one of the most ambitious decarbonising projects in Asia. It is designed for Malaysia's new emerging economic city - Iskandar Malaysia. The low carbon project covers four focus areas: integration and land use planning; consensus building and education; solid waste management; energy system and air quality and transport. The project runs on a dozen actions. The main challenge to achieving the objectives of the Iskandar Malaysia low carbon project is duplication of responsibilities or uncertainties between the institutional stakeholders in realising the dozen actions. The project bestrides the statutory functions of the federal, state and local governments, private sector, civil society and general public. Most of the ideas of the Iskandar decarbonising project reflect the five A's of ESG-earth system governance (architecture, agency, adaptiveness, accountability, allocation and access) though not completely. The main challenge is the architecture of the project in terms of who does what. This paper illustrates how the ESG concept of architecture can improve the Iskandar Malaysia low carbon project. We analysed the Iskandar Malaysia dozen action areas and evaluated their compatibility to the ESG framework. We found that Iskandar Malaysia could be better off by adopting the ESG Architecture as a framework for resolving implementation gaps. The paper concludes that the integration of Iskandar Malaysia decarbonising project with the earth system governance concept could provide a good example of design and implementation of decarbonisation project in Asian cities.

TC 123

Attitudes and Socio-Cultural Practices as Determinants of Sustainable Adaptation to Climate Change: Case Studies from Nigeria

Felix Olorunfemi (1) presenting, Usman Raheem (3), Andrew Onwuemele (1), Mayowa Fasona (2)

Nigerian Institute of Social and Economic Research, Ibadan, Nigeria (1), University of Lagos, Lagos, Nigeria (2), University of Ilorin, Ilorin, Nigeria (3)

In Nigeria, climate-related risks come not only from direct exposure to natural hazards such as floods or droughts, but also from the vulnerability of social and economic systems to the effects of these hazards. This paper derives from case studies conducted within the past five years focusing on climate change vulnerability and adaptation and disaster risk management. Particular emphasis has been on vulnerability analysis, community experiences, responses and coping with extreme weather events especially floods under a changing climate in the urban areas. The thrust of these studies is that strategies to reduce vulnerability as a first step to successful adaptation should be rooted in vulnerability analysis and greater understanding of both household-level and macro-response options that are available to decrease the poor's exposure to climate risk. A major issue emanating from these studies is the fact that little attention has been paid to the consequences of adaptation policies and practices for sustainability. Given the fact that there are multiple factors that generate vulnerability in these areas, the indigenous coping mechanisms employed by the poor are becoming less effective as increasingly fragile livelihood systems struggle to withstand disaster shocks. Poverty, conflict, environmental degradation and disasters as some outcomes of unsustainable man-environment interaction are mediated by culture, believe and practices. Sustainable adaptation should, therefore, recognize the context of vulnerability including multiple stressors, acknowledge that different interests, values, culture and practices affect adaptation outcomes, integrate local knowledge into adaptation responses and consider potential feedbacks between local and global processes.

Parallel Panel Sessions 7

Thursday 31 January 2013
11:00 am - 12:30 pm

Nuclear Governance 1

Nuclear Governance 2

Earth System Governance in 21st Century 5

Private Sector 1

Adaptation 2

Forest Governance 3

Improving Global Environmental Governance

Environmental Management 1

Environmental Management 2

Environmental Governance 2

Nuclear Governance 1

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Laurence Tubiana (IDDRI)

Room: U Thant (3F)

Nuclear Governance 1	
Chair: Laurence Tubiana (IDDRI)	
Shiroyama (TC 202)	Regulatory Failures of Nuclear Safety in Japan- The Case of Fukushima Accident
Gemenne (TC 364)	How Democracies Deal With Disasters: A comparison between the 3.11 disaster in Japan and the Katrina disaster in the US

Thursday 31 January 2013
11:00 am - 12:30 pm
Nuclear Governance 1
Room: U Thant (3F)

TC 202

Regulatory Failures of Nuclear Safety in Japan- The Case of Fukushima Accident

Hideaki Shiroyama (1) presenting

The University of Tokyo, Tokyo, Japan (1)

The Fukushima nuclear accident in Japan reveals two failures in nuclear safety regulation, which typically shows the difficulties of managing multiple inter-related risks by multiple actors. First is the failure of interdisciplinary communication. The Fukushima accident has made it clear that there has been a severe delay in implementing countermeasures toward earthquake and tsunami which caused inter-related complex risks on nuclear reactors. As to the tsunami issues, Japan has responded in incremental ways. However, Japanese nuclear community couldn't catch up accurately with the rapid progress in understanding tsunami. Some tsunami experts estimated possible tsunami heights in Fukushima coastal area which can be higher than its earlier predictions. Such advances in tsunami research have made the uncertainty of tsunami predictions obvious in the tsunami experts' community. Nevertheless, their recognition of uncertainty was not transmitted to the nuclear safety community. Second is the failure of voluntary safety efforts of private nuclear utilities. The nuclear safety regulation in Japan has had a tendency toward relying heavily on operator's voluntary safety efforts. Behind other countries, Japan also introduced the severe accident management in 1992. However, under the regulatory scheme of voluntary safety efforts, accident management measures were been basically regarded as voluntary efforts by operators, not legal requirements. Moreover, in Japan, it was decided in keeping with the intention of operators that the PSA (Probability Safety Assessment), which provides the basis of accident management, limited the subject to internal events, and excluded external events including earthquakes in the meantime.

Thursday 31 January 2013
11:00 am - 12:30 pm
Nuclear Governance 1
Room: U Thant (3F)

TC 364

How Democracies Deal With Disasters: A comparison between the 3.11 disaster in Japan and the Katrina disaster in the US

Francois Gemenne (1) presenting

IDDRI - Sciences Po, Paris, France (1)

In the wake of hurricane Katrina in August 2005, more than one million people were evacuated along the Gulf Coast of the US. The American government was severely blamed for its poor response to the disaster, leading to a parliamentary inquiry. Six years later, a massive tsunami struck to Tohoku region of Japan, inducing a major nuclear accident. Here again, major failures of post-disaster management were pointed. This contribution aims to reflect on the reasons why modern democracies seem to have a hard time dealing with disasters. Building on a comparison between the governmental responses to the 3.11 disaster and the Katrina disaster, the paper examines the patterns of evacuation, the perspectives of return and the long-term impacts of the disasters in both democracies.
How are democracies affected by disasters, and what are their long-term impacts? After an assessment of the key patterns of disaster response in both cases, the paper ponders on the reasons that account for the failures of post-disaster management in democracies, and suggests ways for improvement. Doing so, it draws upon examples from the global South and challenges the common view that the North is better adapted to deal with disasters.

Nuclear Governance 2

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Shunji Matsuoka (Waseda University)

Room: Rose Hall (5F)

Nuclear Governance 2	
Chair: Shunji Matsuoka (Waseda University)	
van den Hove (TC 360)	Nuclear Governance: lock-ins and precaution
Larssen (TC 225)	How should nuclear be governed? The Aarhus Convention's participatory system: strengths and weaknesses relevant to nuclear governance
Hasegawa (TC 373)	The « Chain of impacts » of the 3.11 triple disaster in Japan

Thursday 31 January 2013
11:00 am - 12:30 pm
Nuclear Governance 2
Room: Rose Hall (5F)

TC 360

Nuclear Governance: lock-ins and precaution

Sybille van den Hove (1,2) presenting, Marc Le Menestrel (3,4)

Median SCP, Valldoreix (Barcelona), Spain (1), Institut de Ciència i Tecnologia Ambientals (ICTA), Universtitat Autònoma de Barcelona, Barcelona, Spain (2), Universitat Pompeu Fabra, Barcelona, Spain (3), INSEAD, Fontaibebleau, France (4)

A series of risks are associated with nuclear energy: risks of major accidents triggered by anthropogenic factors such as human errors and terrorism, by technological failures, by natural disasters, or by a combination of these; but also risks associated with the production, transport and disposal of high-level radioactive waste, the proliferation of fissile material or the uncontrolled spreading of expertise required for non-peaceful applications of nuclear technologies. These risks pose major threats to human well-being, societies and the environment, as materialised by the Chernobyl and Fukushima catastrophes which have demonstrated the considerable impacts that nuclear accidents can have on people and socio-ecological systems. Such accidents, and the lessons learned (and still being learned) from their (mis-)management, raise the questions of past, current and future uses of nuclear energy and of governance frameworks to deal with the long term legacy of nuclear systems.
Nuclear governance is an issue characterised by scientific (but also technological and social) complexity; uncertainty and ignorance; high economic, social and environmental stakes; and irreversibility. These are typical conditions under which a precautionary approach may be rationally justified.
This paper discusses the specificities of nuclear systems and the associated stakes and challenges of their governance. It addresses the tensions between technological, ideological and strategic choices and the effects of both choices and non-choices, as well as the various lock-ins at play. It explores whether and how the discussion, design and operationalization of future civil nuclear governance can benefit from a reflection in terms of the precautionary principle.

Thursday 31 January 2013
11:00 am - 12:30 pm
Nuclear Governance 2
Room: Rose Hall (5F)

TC 225

How should nuclear be governed? The Aarhus Convention's participatory system: strengths and weaknesses relevant to nuclear governance

Christine Larssen (1) presenting

Université Libre de Bruxelles, Bruxelles, Belgium (1)

The Rio+20 Declaration on Justice, Governance and Law for Environmental Sustainability proclaims that "[e]nvironmental sustainability can only be achieved [*via*] public participation in decision-making, and access to justice and information […]"[1], thereby reiterating a "participatory discourse" – globally expressed in Principle 10 of the 1992 Rio Declaration, meticulously explored in the regional 1998 Aarhus Convention, and abundantly repeated in more recent global instruments – inspired, in turn, by the Aarhus Convention. According to this "participatory discourse", the participatory model contributes, *per se*, to environmental sustainability – while addressing both the analytical problems and crosscutting themes of Earth System Governance (ESG).
Critically testing the Aarhus Convention's participatory system against the analytical problems and crosscutting themes of ESG – with a particular emphasis on the complex architectures of participatory regimes, and the multiple agents (theoretically and practically) included in the system – the paper will take a fresh legal and policy look at this "participatory discourse", and suggest strategies for a durable strengthening of nuclear governance.
[1]II., (b) of the Declaration, adopted at the World Congress on Justice, Governance and Law for Environmental Sustainability, Rio de Janeiro (Brazil) 20 June 2012.

Thursday 31 January 2013
11:00 am - 12:30 pm
Nuclear Governance 2
Room: Rose Hall (5F)

TC 373

The « Chain of impacts » of the 3.11 triple disaster in Japan

Reiko Hasegawa (1) presenting

IDDRI, Paris, France (1)

Based upon fieldwork done in Tohoku and Fukushima Prefectures from March to June 2012, this communication will emphasize the “chain of impacts” that was triggered by the earthquake throughout Japan, from the immediate aftermath to the long-lasting impacts in the Japanese society and abroad. The triple disaster (earthquake/tsunami/nuclear accident) indeed had a wide range of consequences on ecological, social, economic, political and cultural features. Although these impacts were relatively separated at the beginning, one year after the event we start to understand that they actually influence each other and thus generate second-generation impacts, and thus are ramifying. Dominos effects are playing a crucial role and explain why this triple event will probably be considered in the Future as a major turning point in Japan’s History.
In this communication, we will detail this chain of impacts, based upon concrete results collected on the field. This will also allow us to bring first answers to major questions such as: to what extend are industrialized countries vulnerable to environmental disruptions? To what extend could a local/national event affect other countries? Consequently, what should be the role of the international arena in mitigating local/national environmental risks? In this way, we will build a parallel with the adaptation to climate change issue.

Earth System Governance in 21st Century 5

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Heike Schroeder (University of Oxford)

Room: Women's Plaza Audio Visual Room C (1F)

Earth System Governance in 21st Century 5	
Chair: Heike Schroeder (University of Oxford)	
Ivanova (TC 326)	Closing the Implementation Gap in Global Environmental Governance: Understanding Country Needs and Obligations under Multilateral Environmental Agreements
Saroar (TC 227)	The new architecture of global governance of "environmental migrants" and "climate refugees": Beyond semantic differences
Petersen (TC 218)	Building an Architecture for Geoengineering Research
Kim (TC 183)	The Emergent Network Structure of the Multilateral Environmental Agreement System

Thursday 31 January 2013
11:00 am - 12:30 pm
Earth System Governance in 21st Century 5
Room: Women's Plaza Audio Visual Room C (1F)

TC 326

Closing the Implementation Gap in Global Environmental Governance: Understanding Country Needs and Obligations under Multilateral Environmental Agreements

Maria Ivanova (1) presenting, Natalia Escobar-Pemberthy (1), Marija Bingulac (1)

University of Massachusetts Boston, Boston, MA, USA (1)

Multilateral Environmental Agreements (MEAs) are an integral part of the international environmental governance system as they lay out a framework of obligations, principles and targets to which states have committed. The extent to which MEAs have been implemented, however, varies widely not only from country to country, but also among agreements, and is largely unknown in the aggregate. This paper seeks to bring empirical evidence to the conceptual discussions about the factors that facilitate and hinder effective implementation of MEAs. It analyses the extent to which MEAs are being executed at the country level and identifies gaps and needs for improved implementation using a dataset of nine global MEAs in six countries, Colombia, Mozambique, the Netherlands, Serbia, Switzerland, and Vietnam.
The paper assesses the existence and extent of implementation gaps for each MEA and possible ways for countries and international organizations to address them. Traditionally, the literature has classified MEA obligations into two main types: substantive and procedural, which does not reflect the full range of obligations. This paper defines implementation in a more holistic way based on close analysis of the content of the obligations. We also analyze the role of international organizations in the implementation of the agreements at the national level. Finally, we seek to produce a set of options for closing the implementation gap. To this end, we develop an original set of codes, employ content analysis of official document texts, and carry out in-depth interviews with key informants from secretariats, and international organizations.

Thursday 31 January 2013
11:00 am - 12:30 pm
Earth System Governance in 21st Century 5
Room: Women's Plaza Audio Visual Room C (1F)

TC 227

The new architecture of global governance of "environmental migrants" and "climate refugees": Beyond semantic differences

Md. Mustafa Saroar (1,2) presenting, Nuzhat Fatema (1,2)

Urban and Rural Planning Discipline, Khulna University, Khulna, Bangladesh (1), Development Studies Discipline, Khulna University, Khulna, Bangladesh (2)

This paper has threefold objective. Firstly, it presents existing conceptual unclarities about "climate refugees", among institutions which govern migration issues at nation, regional, and global level. Secondly, it discusses how such unclearities have downplayed the rights of the climate victims. Finally, it proposes a new architecture of a global climate governance to deal with the "climate refugees".
Environmentally induced migration is as old as human civilization, yet the issue of "climate refugees" got global attention after Professor Myers' (Oxford University) estimation of 200 million climate migrants by 2050 from global south. Despite urgency, the affected countries of the global south hardly address this issue in adaptation planning primarily because "environmental migration" is often seen as failure to adaptation; not a way of adaptation. Conversely, in this regards developed countries give very cursory focus due to fundamental flaws in conceptualization of the term "climate refugees" as this term does not have any politico-legal ground in UN Convention on "refugees". Only New Zealand accepts 75 Tuvaluans each year through Pacific Access Category. Sweden considers environmental migrants as a special category. Switzerland, Canada, and Malaysia temporarily suspended involuntary returns of failed asylum seekers to affected areas of 2004's Tsunami. However, none of these countries make explicit reference to "climate refugees" for such liberal treatment.
Finally, this paper concluded that there is no "home" for "climate refugees", either literally or figuratively. Therefore, this paper has drawn a new architecture of the global governance of "climate refugees" by nesting institutions and policies at various levels.

Thursday 31 January 2013
11:00 am - 12:30 pm
Earth System Governance in 21st Century 5
Room: Women's Plaza Audio Visual Room C (1F)

TC 218

Building an Architecture for Geoengineering Research

Eleftheria Vasileiadou (1), Arthur Petersen (1) presenting, Frank Biermann (1)

VU University Amsterdam, Amsterdam, The Netherlands (1)

Numerous proposals for 'geo-engineering' have been put forward in recent years to mitigate climate change through large-scale interference in planetary systems. Many ask for further research on geoengineering schemes, but this research also entails great uncertainties, and potential dangers for ecosystems and humans alike. The governance implications of such geo-engineering research remain thus uncertain and are widely contested.

Our paper presents a detailed, extensive study of the governance dimensions of geo-engineering research, drawing on the key insights and core questions of the Earth System Governance science and implementation plan. Our analysis provides, first, fresh insights into possible governance architectures for geo-engineering research, focusing on strategic conflicts between governance fragmentation and integration and discussing whether decentralized or centralized organizations and institutions for research governance promise higher degrees of performance. Second, our research addresses questions of global allocation and access by showing that while most (unintended) consequences of geo-engineering research will affect developing countries, it is richer industrialized countries that have most scientific and technological capacity for related research. We discuss extensively whether this requires a stronger, subsidized involvement of developing countries in research governance, and how this could be organized. Thirdly, we contribute to the debate on agency in the earth system governance program, providing detailed and novel insights into the complex networks of scientists, governments, corporations, and international organizations in this field.

Our research is built on an extensive study program that draws on interviews with geoengineering scientists, framing analysis of geoengineering newspaper articles, and scientometric analyses of geo-engineering schemes.

Thursday 31 January 2013
11:00 am - 12:30 pm
Earth System Governance in 21st Century 5
Room: Women's Plaza Audio Visual Room C (1F)

TC 183

The Emergent Network Structure of the Multilateral Environmental Agreement System

Rakhyun Kim (1) presenting

Australian National University, Canberra, ACT, Australia (1)

This research unveils, for the first time, the emergent complex network structure of the multilateral environmental agreement (MEA) system. The structure of the system was approximated by 962 cross-references found in 738 MEAs concluded between 1868 and 2011. The cross-references, to some extent, extend the legal effect of MEAs to states that have not ratified them but which ratify the texts that cite them, effectively creating a web of MEAs. This paper presents some key findings from network analysis in response to the following questions. Has a complex system of MEAs emerged? If so when, and what does it look like? What are its topological properties? Have MEAs formed clusters? To what extent is it (de)fragmented? What are the most structurally central or authoritative MEAs? The network approach revealed, among others, that MEAs have self-organized into an interlocking system with a complex network structure in the absence of an authority. International environmental law is neither a fragmented system nor a completely connected unity. The MEA network as at 2011 displays the small-world and scale-free properties with a hierarchical and modular organization. This study demonstrates the need to approach MEAs in the context of a complex networked system and warrants caution against simple dismissal of international environmental law as 'fragmented'. Any reform options for global environmental governance should pay attention to the emergent polycentric order and complexity and what they imply for the function of the MEA system.

Private Sector 1

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Masachika Suzuki (Kansai University)

Room: Committee Room 1 (5F)

Private Sector 1	
Chair: Masachika Suzuki (Kansai University)	
Romppanen (TC 163)	Private Climate Ordering and EU's Biofuel Governance
Huenteler (TC 81)	Considering technological characteristics in bottom-up climate governance - A framework to inform green growth strategies and technology transfer institutions
Jackson (TC 232)	Leveraging private capital through the Green Climate Fund: The mitigation of investment risk

Thursday 31 January 2013
11:00 am - 12:30 pm
Private Sector 1
Room: Committee Room 1 (5F)

TC 163

Private Climate Ordering and EU's Biofuel Governance

Seita Romppanen (1) presenting

University of Eastern Finland, Joensuu, Finland (1)

Regulatory approaches to *climate change*, the pursuit to govern our finite natural resources and to generate secure but sustainable energy for all are the topics of the day. The complex nature of the overarching challenge of climate change requires multiple regulatory frameworks to function on different levels of governance. The European Union (EU) framework for *sustainable biofuels* has the possibility to contribute to these interlinked challenges, but only if sustainable policy solutions are chosen, implemented and enforced.

There is no global scheme in place that would fully answer the sustainability concerns raised by biofuels. While the EU's sustainability scheme for biofuels is a step forward, it is not able to guarantee that sustainable biofuels reach EU engines. Due to the ambitious targets set for biofuels, various biofuels governance regimes are under development. The issue of biofuels sustainability is however surrounded with persistent uncertainty; both as regards the performance of biofuels against the ultimate objective of reducing GHG emissions as well as towards the best regulatory approach or policy solution for sustainable biofuels.

How should we approach the regulatory challenge presented to us by biofuels? The difficulty of not knowing what to do creates room for arguments. Climate change law as such, as well as the effort to govern biofuels comes with inherent complexity that cannot be tackled with traditional approaches. Traditional rules on sustainability are too uncertain to work effectively, and also law needs to develop new mechanisms. Thus we need to embrace the challenge to handle these new conflicts.

Thursday 31 January 2013
11:00 am - 12:30 pm
Private Sector 1
Room: Committee Room 1 (5F)

TC 81

Considering technological characteristics in bottom-up climate governance - A framework to inform green growth strategies and technology transfer institutions

Joern Huenteler (1), Tobias Schmidt (1) presenting

ETH Zurich, Zurich, Switzerland (1)

The UNFCCC conferences in Cancun and Durban have paved the way for the integration of unilateral initiatives into the global climate governance architecture. National 'green growth' strategies have since become a catch phrase for policymakers. Aiming to decouple economic development from environmental degradation, such initiatives hold the promise of overcoming the grid-lock in international negotiations from the bottom up.
Building on the field of innovation studies, this paper contributes to the green growth debate by taking a technology-centered perspective. Evidence suggests that development strategies aiming to leverage technological innovation have to consider characteristics of the targeted technology. Based on this notion, this paper informs strategic policy decisions by proposing a framework to differentiate four distinct types of technologies. Each type features specific forms of technological learning, value chain constellations, and modes of technology transfer. We illustrate the four types with the cases of small hydro, wind turbines, electric vehicles, and solar cells, and discuss methodologies to classify further technologies ex-ante. We argue that the classification captures the essential technological characteristics that green growth policies need to consider. Differences in technological learning and value chain constellations can inform a country's choice of technological priorities, while the modes of technology transfer can inform strategies for implementation and international cooperation. Going beyond national strategies, we then discuss how international institutions – such as the TEC, the CTC&N, and the new Technology Mechanisms under the UNFCCC – can facilitate the vertical integration of national strategies into the global climate governance architecture.

Thursday 31 January 2013
11:00 am - 12:30 pm
Private Sector 1
Room: Committee Room 1 (5F)

TC 232

Leveraging private capital through the Green Climate Fund: The mitigation of investment risk

Felicia Jackson (1) presenting, Harald Heubaum (2)

Cleantech Investor, London, UK (1), SOAS, University of London, London, UK (2)

Both the effective mitigation of climate change and the adaptation to its impacts require the mobilisation of large amounts of capital. With many economies around the world in economic straits and sparse public funds available, private finance is more important than ever in delivering on mitigation targets and building more resilience to climate change, particularly in developing countries. There are multiple agents involved in the successful deployment of capital, but political, regulatory and financial risks are slowing private sector engagement. A key outcome of COP-15 in Copenhagen and one of the main instruments to assist the much needed transfer of funds to developing countries, the Green Climate Fund (GCF), is poorly designed to meet the challenge. Institutions such as the European Investment Bank (EIB) and the German government's development bank KfW have proved enormously successful to date, both in investing in mitigation and adaptation projects, and in leveraging significant private finance – up to 20 times the original investment. In this paper we argue that the current global climate finance architecture could be greatly improved by using public funds to reduce investment risk. Drawing on an in-depth analysis of EIB and KfW case studies we identify key institutional characteristics the GCF should adopt in order to leverage the necessary capital required to fill the gap between existing funds and targets. The paper speaks to several conference themes by addressing financial gaps and the need to reform current governance architectures together with the critical role of private actors within climate finance.

Adaptation 2

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Asim Zia (University of Vermont, Burlington)

Room: Multi-Purpose Room (3F)

Adaptation 2	
Chair: Asim Zia (University of Vermont, Burlington)	
Mathur (TC 212)	Resilience through diversity: adapting to climate change around the Tonle Sap Lake in Cambodia
Kauneckis (TC 102)	A Framework for Assessing Institutional Resilience to Climate Change Impacts: A comparison of two urban water systems in the American West.
Van Herk (TC 358)	Adaptive multi-level governance of River Basin Management in the Netherlands through social learning
Dieperink (TC 139)	Towards design principles for successful joint knowledge production, a reflection on climate change adaptation projects

Thursday 31 January 2013
11:00 am - 12:30 pm
Adaptation 2
Room: Multi-Purpose Room (3F)

TC 212

Resilience through diversity: adapting to climate change around the Tonle Sap Lake in Cambodia

Vikrom Mathur (1) presenting

Mekong Environmental and Social Research Institute, Phnom Penh, Cambodia (1)

There is recognition in dominant resilience research, that static indicators of wealth, information, skills, environment and infrastructure are not sufficient measures of adaptive capacities. Social conditions that might be predictive of societal resilience remain less explored. My research on climate adaptation decision-making, in Tonle Sap Lake region in Cambodia shows that resilience is plurally perceived and pursued by resource management institutions. Moreover, complex power dynamics are inherent in the cultural processes by which particular framings come to dominate knowledge over 'resilience'. I use Cultural Theory to elaborate four different sets of strategies for resilience, which are in turn related to plural models of social collapse and myths about nature characteristic of different social solidarities. These strategies are: stability and safety (hierarchical strategies); self-sufficiency (egalitarian strategies); survival and sufficing (fatalist strategies) and strength in networks (individualist strategies). I argue that adapting to ecological changes that are yet to occur and hard to predict will require institutional frameworks that can incorporate new knowledge and draw from a wide pool of strategies to deal with inconsistencies between expectations and experiences. Adaptiveness' will have to embody a minimum requisite diversity of social strategies and a governance architecture that allows for complex strategy switching. Societal resilience, I propose emerges from the constructive interaction of all social solidarities, each promoting their own characterization of ecological dynamics, boundaries and functions and accompanying prescriptions of adaptive strategies. This requires opening up what constitutes as authoritative knowledge about nature in current governance architectures and allowing for epistemic contestations.

Thursday 31 January 2013
11:00 am - 12:30 pm
Adaptation 2
Room: Multi-Purpose Room (3F)

TC 102

A Framework for Assessing Institutional Resilience to Climate Change Impacts: A comparison of two urban water systems in the American West.

Derek Kauneckis (1) presenting

University of Nevada, Reno, NV, USA (1)

The current array of tools for evaluating the vulnerability of human/ecological systems to climate change impacts has focused heavily on poverty as a proxy for capacity, and planning and infrastructure as the key to improved resilience. This paper proposes that a better approach for highlighting where the greatest vulnerability exists, as well as the potential for policy interventions to improve resilience, would be to focus on the ability of institutional arrangements to adapt to changing circumstances. Using a comparative case study of the Las Vegas and Reno, Nevada urban water systems the paper outlines an approach for assessing the institutional vulnerability of human/ecological systems. It bases the framework on research in institutional analysis and collective action to develop metrics for evaluating the ability of decision-making structures to react to new circumstances and adapt to unforeseen conditions. Institutions are understood as the rules and norms that structure decision-making and lead to collective outcomes. The framework is applied to two urban water systems in the arid American West to examine institutional capacity to address potential climatic stresses. While regional empirical cases are used to highlight the utility of the framework, it is designed to be applicable across a wide variety of setting and toward different types of human/ecological systems.

Thursday 31 January 2013
11:00 am - 12:30 pm
Adaptation 2
Room: Multi-Purpose Room (3F)

TC 358

Adaptive multi-level governance of River Basin Management in the Netherlands through social learning

Sebastian van Herk (1,2) presenting, Jeroen Rijke (1,2), Chris Zevenbergen (1,2), Richard Ashley (1)

UNESCO-IHE, Delft, The Netherlands (1), Delft University of Technology, Delft, The Netherlands (2)

This paper presents a case study of a new adaptive, multi-level governance approach for river basin management designed to stimulate social learning and to be adjusted based on lessons learnt and changing political and economical context. The floods of 1993 and 1995 in the Netherlands and climate change triggered a paradigm shift in flood management. The 2.3 billion Euro flood safety programme Room for the River was launched to increase flood safety by giving the rivers more room instead of merely enforcing the defence systems. This programme is studied as a major stepping stone in the transition to integrated flood risk management and spatial planning and stimulating multi-level governance and multi stakeholder decision making. This research analysed how the programme was organised to draw lessons on adaptive multi-level governance. It comprised: 55 qualitative interviews, a survey amongst professionals and politicians (m=151) and extensive document analysis. First results indicate that the governance architectures of Room for the River were designed with flexibility to accommodate these new approaches finding a balance between short term project delivery and a long term process of adaptation. A flexible framework was adopted based on social learning that stimulated adjusting collaborative working and decision-making processes based on lessons learnt. Moreover the governance approach could adapt to the changed economic situation and changing political views on integrated flood risk management, climate change, and management of large-scale infrastructure projects. The social learning approach proofed effective in programme delivery and especially in stimulating these broader transitions.

Thursday 31 January 2013
11:00 am - 12:30 pm
Adaptation 2
Room: Multi-Purpose Room (3F)

TC 139

Towards design principles for successful joint knowledge production, a reflection on climate change adaptation projects

Carel Dieperink (1) presenting, Dries Hegger (1)

Utrecht University, Utrecht, The Netherlands (1)

Matching knowledge supply and demand in global change adaptation and sustainability projects is a daunting task. Science and policy tend to have different time frames, goals, process cycles and epistemologies, while the issues at stake involve value pluralities and huge uncertainties. Joint knowledge production could be a way to better match knowledge supply and demand. However, empirical studies addressing this phenomenon are scarce as most of the literature is conceptual. This paper aims to fill in this gap by deriving design principles for successful joint knowledge production projects which are empirically validated. We define successful joint knowledge production as "processes in which the actors involved find the knowledge produced salient and credible, and see the knowledge production process as legitimate". Following a literature review we introduce seven conditions that might contribute to the success of these processes. These theoretical success conditions are subsequently validated in a retrospective analysis of six Dutch regional climate change adaptation projects (all part of the 'Climate Changes Spatial Planning' and 'Living with Water' programs). Data for the validation was found by conducting 30 semi-structured interviews with scientists, civil servants and program managers involved and by organizing a multi stakeholder workshop on "Critical events in joint knowledge production projects". Based on the empirical evidence, our initial success conditions are refined and nuanced, and the relationship between them detailed. The paper concludes with some design principles architects should follow in order to enhance the chance that science-policy cooperation will provide opportunities for transformative cross-boundary learning.

Forest Governance 3

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Tek Maraseni (University of Southern Queensland)

Room: 12th Floor Meeting Room

Forest Governance 3	
Chair: Tek Maraseni (University of Southern Queensland)	
Mukul (TC 349)	Efficacy of forest law enforcement and incentive based conservation to prevent illegal logging in developing countries: lessons learned from two conservation area of Bangladesh
Jedd (TC 350)	International Forest Conservation: Are Networked Governance Architectures Rich in Accountability?
Kylsäter (TC 175)	How to Govern Forests Toward Climate Change Mitigation, Biodiversity Protection *and* Increased Timber Production? – Exploring Swedish Forest Policies in a Multilevel Governance Context

Thursday 31 January 2013
11:00 am - 12:30 pm
Forest Governance 3
Room: 12th Floor Meeting Room

TC 349

Efficacy of forest law enforcement and incentive based conservation to prevent illegal logging in developing countries: lessons learned from two conservation area of Bangladesh

Sharif Ahmed Mukul (1,2) presenting, A.Z.M. Manzoor Rashid (3,4), Mohammad Belal Uddin (3), John Herbohn (1)

The University of Queensland, Brisbane Qld 4072, Australia (1), Centre for Research on Land-use Sustainability, Maijdii, Noakhali 3800, Bangladesh (2), Shahajalal University of Science and Technology, Sylhet 3114, Bangladesh (3), University of Western Sydney, Sydney, Australia (4)

Forest law enforcement has long been considered as the most useful strategy to prevent illegal logging and practiced across tropics. However, their efficacy and role to prevent illegal logging has questioned very often, particularly in developing countries, where a complex socio-political context exist favored by chronic poverty and unemployment. Rehabilitating illegal loggers through securing better access to alternative income generating (AIG) opportunities is quite a recent and unique approach that has been adopted in some forests of Bangladesh. An exploratory study was conducted to understand the effect of law enforcement and economic incentives in forms of different AIG schemes to prevent illegal logging in two conservation areas in north-eastern Bangladesh, where government brought some illegal loggers under such unique approach. Thirty illegal loggers were interviewed between 2007 to 2009 following a semi-structured questionnaire. Additionally, informal interviews were undertaken from local forest officials and political persons. Both qualitative and quantitative data were collected. Enforcement of customary law has no or very little impact on overall situation. In contrast, economic incentives in forms of different AIG options seems very effective to tackle this adverse situation as the frequency and amount of illegal timber harvesting were considerably reduced compared to earlier. Most interestingly illegal loggers responded most positively to AIG schemes where they found themselves much closer to forest, with clearly defined rights and responsibilities. Ensure greater benefits to illegal forest users with tenure rights and AIG options, and revision of existing forest law could secure the sustainability of forest resource in country.

Thursday 31 January 2013
11:00 am - 12:30 pm
Forest Governance 3
Room: 12th Floor Meeting Room

TC 350

International Forest Conservation: Are Networked Governance Architectures Rich in Accountability?

Theresa Jedd (1) presenting

Colorado State University, Fort Collins, CO, USA (1)

Much is understood about the basic form and function of networked architectures, namely the ways in which they overcome weaknesses of traditional hierarchical structures, but less is known about the effects on accountability. Proponents of networked global governance claim these architectures--often referred to as "horizontal"-- are more flexible, adaptive, and more inclusive. Whereas hierarchical governance architectures are often untenable at the international level, dependant on levels of agreement and enforcement that are often lacking, networked arrangements can offer more flexibility, inclusiveness, and adaptiveness. Especially in the case of international forest governance, networked arrangements comprise the most substantial governance developments, given the lack of agreement for binding international law regarding forests. The paper examines the promise and pitfalls of networked governance, employing two cases in international forest governance: the Roundtable on the Crown of the Continent Ecosystem, a “network of networks” with government, industry, and civil society organizations on a landscape spanning Montana, British Columbia, and Alberta; and the Montreal Process Criteria and Indicators for Sustainable Forest Management, an international initiative in which state-based reporting on forest conditions is generated and used by both public and private actors. While there is much evidence to bolster the claim that networked arrangements can overcome challenges facing the broader international forest governance landscape, because they are more flexible and adaptive, it is also important, especially if we are to solve the problems of global deforestation and forest degradation in an equitable and sustainable way, that we critically examine how these architectures can remain accountable.

Thursday 31 January 2013
11:00 am - 12:30 pm
Forest Governance 3
Room: 12th Floor Meeting Room

TC 175

How to Govern Forests Toward Climate Change Mitigation, Biodiversity Protection *and* Increased Timber Production? – Exploring Swedish Forest Policies in a Multilevel Governance Context

Mikael Kylsäter (1) presenting

Lund University/Dept. of Political Science, Lund, Sweden (1)

The legitimacy and effectiveness of environmental politics is increasingly tied to calls for integrated policy strategies that effectively can tackle the multiple problems of climate change, deforestation and biodiversity loss, this at a time when the global demand for natural resources steadily increases. However, governance arrangements for forestry, agriculture, land use, climate change and ecosystem services are fragmented across national, EU and global levels. The aim of this paper is to critically examine the synergies and trade-offs between Swedish forest governance and other sectoral policy areas addressing climate change, agriculture, biodiversity protection and ecosystem services. As a leading forest nation, Sweden represents a critical case for analyzing the alignment of forest governance with other policy areas. This paper analyzes the degree to which Swedish forest governance is integrated with other policy areas such as agriculture, biodiversity and climate change. It also places Sweden's efforts toward a coherent integrated forest policy within the emerging European forest strategy and the UN forest principles. This paper is based on a review of recent research literature on integrated forest governance as well as primary sources such as Swedish forestry legislation and European forest policy.

Improving Global Environmental Governance

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Norichika Kanie (Tokyo Institute of Technology, UNU-IAS)

Room: Committee Room 3 (5F)

Improving Global Environmental Governance	
Chair: Norichika Kanie (Tokyo Institute of Technology, UNU-IAS)	
VanDeveer (TC 223)	Agenda Setting at Sea and in the Air
Kanie (TC 147)	Improving Global Environmental Governance: Best Practices for architecture and agency
Chasek (TC 233)	Lessons Learned from Multilateral Environmental Negotiations
Stokke (TC 181)	Actor Configurations and Compliance Tasks in International Environmental Governance
Cashore (TC 319)	Governance by learning; a learning architecture for forest governance

Thursday 31 January 2013
11:00 am - 12:30 pm
Improving Global Environmental Governance
Room: Committee Room 3 (5F)

TC 223

Agenda Setting at Sea and in the Air

Stacy VanDeveer (1) presenting

University of New Hampshire, Durham, NH, USA (1)

Agenda setting in international environmental politics involves a complex set actors and institutions shaping both issue-specific items and structural items on the international agenda. In other words, actors seek to frame specific air or water pollution issues on the political agenda, for example, even as they work to get more structurally-related concerns such as implementation and compliance review mechanisms on negotiation/political agenda. Two long-standing cooperation regimes -- those around marine pollution reduction in the Baltic Sea region and the UNECE-based Long-Range Transboudary Air Pollution (LRTAP) -- have much to teach us about the changing nature of transnationl and international agenda setting over time, and the relationship of these processes to institutional change. In both, the set of enviroment-related issues has expanded substantially over time, even as compliance, implementation and programmatic effectiveness have been elivated as agenda items in their own right. The paper divides the two regimes into eras, examining these changing dynamics in each time frame.

Thursday 31 January 2013
11:00 am - 12:30 pm
Improving Global Environmental Governance
Room: Committee Room 3 (5F)

TC 147

Improving Global Environmental Governance: Best Practices for architecture and agency

Norichika Kanie (1,4) presenting, Steinar Andresen (3), Peter Haas (2)

Tokyo Institute of Technology, Tokyo, Japan (1), University of Massachusetts, Amherst, Amherst, MA, USA (2), Fridtjof Nansen Institute, Oslo, Norway (3), United Nations University Institute of Advanced Studies, Yokohama, Japan (4)

This paper focuses on configurations of political actor groups in the performance of components of international environmental governance namely agenda setting, negotiation, compliance, implementation, and resilience. We will look at existing Multilateral Environmental Agreements (MEAs) and the broader constellation of partially networked institutions to better understand the involvement of individual actors and how to deepen the networks that include them to generate more effective governance.

Literature on global governance has recognized that one of the core reasons for stalled performance lies in the problem of agency. Traditional state-based structures face limits when it comes to responding to global change. By better understanding the process of international environmental governance from a comparative focused study of the wide array of MEAs and regimes to date, we may be able to derive some best governance practices, in terms of actor configurations. In this paper we address some key questions. What configuration of actors should make up networks in order to generate better performance of those governance components? Which actors and combinations of actors are best at performing which governance components, and under what circumstance are they best able to perform those functions?

This paper presents the conclusion of a three year project. Our conclusion on best and worst practices in terms of actor configuration is drawn from case studies of different governance components and dealing with selected international regimes such as LRTAP, Ozone, Desertification, Biodiversity, BALTIC, CITES and MARPOL.

TC 233

Lessons Learned from Multilateral Environmental Negotiations

Pamela Chasek (1) presenting

Manhattan College, Bronx, New York, USA (1)

Negotiations represent the process by which parties create collective arrangements for environmental management, be they hard law, soft law or voluntary commitments. Although various types of public-private partnerships and other new approaches are becoming increasingly important, the traditional "hard law" multilateral environmental agreement (MEA) is still the dominant form of international environmental governance. But this is no easy feat. Global environmental issues, which combine scientific uncertainty, citizen and industry activism, politics and economics, may be among the most complicated and challenging to resolve. What determines the nature of the outcomes of these negotiations? Good settlements are those that mobilize political commitments of will and resources to dealing with the problems in a successful way. Bad ones are likely to inhibit subsequent progress, or reward opponents of meaningful cooperation. What determines one or the other? What role do different actors play in this regard? What configurations of actors improve or inhibit the outcome? If actors are organized as a network, does it significantly affect the course of the negotiations? This paper examines these questions to determine any correlations between roles of actors and outcomes of multilateral environmental negotiations through three different case studies: the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, the 1994 UN Convention to Combat Desertification and the 2000 Cartagena Protocol on Biosafety. The paper then analyzes the configurations and networks of actors and elaborate some lessons learned.

Thursday 31 January 2013
11:00 am - 12:30 pm
Improving Global Environmental Governance
Room: Committee Room 3 (5F)

TC 181

Actor Configurations and Compliance Tasks in International Environmental Governance

Olav Schram Stokke (1) presenting

Fridtjof Nansen Institute, Oslo, Norway (1)

This paper has been developed within a broader transnational project on best and worst practices in international environmental governance, and focuses on compliance systems for improving the implementation of international commitments. It examines how different patterns of involvement of actors such as states, IOs, NGOs, and multinational corporations affect compliance-system performance. Central concepts here are transnational enforcement networks, domestic compliance constituencies, and interplay within larger complexes of institutions. The paper first identifies ways in which various categories of actors can improve compliance performance by supporting or obstructing certain compliance tasks of international environmental governance: verification, review, assistance, and sanction. Then I describe the configurations of actor groups involved in the three international regimes under study: those for managing nuclear dumping (a global regime), fisheries (a globally nested regime for the Northeast Atlantic), and shipping (a global regime with regional compliance structures). The paper thereafter offers a narrative account of best and worst practices among them with respect to compliance performance, linked to certain hypotheses as to capacity-building, industry involvement, independent scientific networks, and systems for verification, review, and response. The concluding section summarizes the findings and derives implications for the design of compliance systems and their relationship to broader institutional architectures.

Thursday 31 January 2013
11:00 am - 12:30 pm
Improving Global Environmental Governance
Room: Committee Room 3 (5F)

TC 319

Governance by learning; a learning architecture for forest governance

Benjamin Cashore (1) presenting, Daniela Goehler (2), Jeremy Rayner (3)

Yale University, New Haven, USA (1), Bundesministerium fuer Umwelt, Berlin, Germany (2), University of Saskatchewan, Saskatchewan, Canada (3)

Global efforts to reverse forest loss and to improve forest conditions and livelihoods are now coordinated by an extensive "regime complex" composed of a wide variety of instruments, institutions and actors. While the architecture of a regime complex is in principle a good match for the complexity of the issues and drivers surrounding deforestation and degradation, in practice poor performance has been linked to a general failure to connect international efforts with regional, national and local initiatives.

This paper draws on and develops existing studies of policy learning to offer a design for a new learning architecture. We describe a combination of instrumental and political learning that we call "cross-coalition learning" and show that this kind of learning is currently emerging at regional levels. We argue that cross coalition learning needs to be institutionalized and describe the creation of a promising learning architecture amongst the ASEAN countries that could perform this architectural function in the larger governance arrangements.

Studies of policy learning in the field of international politics remain dominated by single case studies in tradition of the epistemic community approach developed by Haas or by large-n diffusion studies, which continue to suffer from poorly specified dependent variables and other problems. This paper will show how policy learning theories can be applied in comparative case studies to produce policy relevant recommendations for an improved governance architecture.

Environmental Management 1

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Csaba Pusztai (United Nations University – IAS)

Room: Women's Plaza Audio Visual Room A (1F)

Environmental Management 1	
Chair: Csaba Pusztai (United Nations University – IAS)	
Styczynski (TC 288)	Managing the urban rectangle of climate, energy, land-use, and transport
Bobylev (TC 395)	Contemporary Challenges in Urban Development and Physical Infrastructure Governance
Ahmad (TC 374)	Household energy equity and human well-being: A case of India
Akenji (TC 59)	(Un)Governable consumers?:Emerging approaches to achieving sustainable consumption and production

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Management 1
Room: Women's Plaza Audio Visual Room A (1F)

TC 288

Managing the urban rectangle of climate, energy, land-use, and transport

Annika Styczynski (1) presenting

Environmental Policy Research Center, Free University Berlin, Berlin, Germany (1)

This paper examines and critically discusses the political path toward and various impediments to the widespread diffusion of electromobility in Germany and Japan.
A substantial and growing share of energy usage and related pollutants is generated within the transport sector and road transport in particular. Petroleum being its major fuel, the transport sector's GHG emissions have increased at a faster rate than any other energy end use sector over the last decades. The non-braked global growth of passenger car fleets, trucking, and air transport, threaten to undermine all efficiency increases and successes achieved in other sectors. Every serious sustainability strategy, thus must integrate the transport sector into efforts for an effective and accountable climate and energy governance architecture.
"The road to sustainability runs through the world's towns and cities." Ban Ki-moon
Two main factors impede urban transport from performing sustainable. Those are a fragmented institutional set up and a typically weak coordination mechanism. Both Tokyo and Berlin are ranked in the Millennium Cities Database as top performer in providing comparatively most sustainable transport systems. The hypothesis derived from this result is, that transport authorities and land-use related institutions in both metropolises are better integrated and coordinated than elsewhere. Why is that and how does the promotion of renewable energies as a necessary prerequisite for a sustainable transport system add on to the coordination challenge, is of central concern to this paper.

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Management 1
Room: Women's Plaza Audio Visual Room A (1F)

TC 395

Contemporary Challenges in Urban Development and Physical Infrastructure Governance

Nikolai Bobylev (1,2) presenting

University of Birmingham, Birmingham, UK (1), St. Petersburg State University, St. Petersburg, Russia (2)

The paper will address governance and governance architecture issues related to Urban Physical Infrastructure (UPI). UPI is one of the major assets of a city in terms of capital investment, critical services provision, and sustainable and resilient development. UPI includes physical objects like roads, bridges, sewerage, flood protection schemes, energy networks. Globally UPI is facing increasing challenges in sustaining its services provision associated with urbanization and climate change; yet UPI itself can be used as an effective policy tool to govern inevitable urban expansion. Situation appears to be even more complex given need to urban adaptation to climate change and UPI vulnerabilities in many regions, as well as climate change mitigation opportunities (e.g. by increasing efficiency of energy supply networks). UPI has not been comprehensively studied in the context of governance - a gape which this research and presentation hope to bridge. Governance of UPI is a multi-level and multi-actor task. Actually drawing on world wide experience it can be concluded that there has been not much UPI governance, even quite sizable and replicable projects has been managed as ad-hock process, legislation and tools like e.g. Strategic Environmental Assessment appeared just in the last decade. Recognizing a need for analysis of existing and ideal UPI and urban development governance architectures, research investigates goals, targets, actors, needs, indicators, and processes involved. In conclusion interdisciplinarity and complexity of the UPI governance research is discussed, as well as interlinkages with contemporary development agenda.

TC 374

Household energy equity and human well-being: A case of India

Sohail Ahmad (1,2,3) presenting, Manu V. Mathai (1)

United Nations University - Institute of Advanced Studies, Yokohama, Japan (1), Tokyo Institute of Technology, Tokyo, Japan (2), School of Planning and Architecture, Delhi, India (3)

About 377 million persons (31.2% of total population) lived in urban India in 2011 and were spread across 7,935 towns, including 53 Urban Agglomerations (UAs)/Cities with over a million people. This urban sector remains the engine of economic growth in the country and contributed 62-63% of GDP in the eleventh five year plan (2007-12) period. This contribution is expected to increase to 70-75% by 2030. However, the urban sector is the major contributor of GHG emissions.

This study reviews urban governance in the context of GHG emissions, particularly focused on household energy use. This study examines policies, programs and recent initiatives to examine low carbon human development in line with a framework for governance indicators being developed by UNU-IAS that focuses on human well-being, discourse, power and process in climate governance. The analysis highlights appropriate niches where policy interventions can further well-being and dignity (e.g. energy security, accessibility and equitable distribution of the resources and alleviation of urban poverty) while realizing sustainable and equitable GHG emissions.

Findings suggest that it is critical to improve urban governance mechanism to deliberate low carbon cities in India. Broadly, governance niches are identified: exploring use of modern non-solid fuels and enhancing efficiency in household energy use. The preliminary results suggest that small and medium size towns need special attention especially regarding access to clean energy. Our hypothesis is that such interventions will enable inclusive human development in India while staying within the requirements of an equitable and sustainable carbon footprint.

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Management 1
Room: Women's Plaza Audio Visual Room A (1F)

TC 59

(Un)Governable consumers?:Emerging approaches to achieving sustainable consumption and production

Lewis Akenji (1) presenting

Institute for Global Environmental Strategies, Hayama, Japan (1)

World leaders have situated the need to achieve sustainable consumption and production (SCP) at the heart of sustainability, declaring it one of the "overarching objectives of, and essential requirements for, sustainable development" at the UN World Summit for Sustainable Development in 2002. Yet SCP patterns have only gotten worse, with an implementation gap between commitments made and actions taken. At the international level, governance for SCP has evolved around the so-called Marackech process, with very modest results so far; at national level governments have focused on technical efficiency measures, and encouraged green consumerism - with personal consumption choices still perceived as sovereign domain beyond the jurisdiction of national governments. Governments continue to perceive consumption as a means of promoting economic growth, and place responsibility on individual consumer actions.
This paper presents results of a study assessing government capacity to implement SCP policies in developing Asian economies, conducted under the European Commission's SWITCH-Asia programme. It examines why current SCP governance is weak, at odds with traditional modes of governance and challenged by emerging consumption and production practices. It argues that promoting green consumerism only leads to increased consumption, and current efficiency approaches will not lead to a decoupling of economic growth from environmental consequences. The paper proposes a new policy framework based on interventions at systemic level, including modifying the social and physical infrastructure that enables or constrains consumption. For fast-developing countries, there is imperative before long-term infrastructure is ossified with lock-ins characteristics that inhibit SCP patterns.

Environmental Management 2

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Katherine Farrell (Humboldt University Berlin)

Room: Women's Plaza Audio Visual Room B (1F)

Environmental Management 2	
Chair: Katherine Farrell (Humboldt University Berlin)	
Vieira (TC 338)	Solid Waste Management: From unruled to legally sustainable management... but how to address the social consequences? A case study
Musakwa (TC 180)	How can earth observation data on informal settlements add value to sustainable urban development planning? A case study of Stellenbosch, South Africa
Raheem (TC 238)	Global Environmental Change and Urban Health Analysis: Some Emerging Complexities for Interdisciplinary Discourse

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Management 2
Room: Women's Plaza Audio Visual Room B (1F)

TC 338

Solid Waste Management: From unruled to legally sustainable management... but how to address the social consequences? A case study

Susana Vieira (1) presenting, Ana Luiza R.Melo (1), Paula Oliveira (1), Maria Cecilia Luna (1)

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What has become known as the biggest sanitary solid waste landfill in Latin America, in which catadores (persons who make a living collecting recyclable waste) have scavenged circa 7,000 tons of solid waste (a day) for about 30 years, has been shut down June 1st., 2012. This a welcome result of the implementation of the National Policy on Solid Wastes, consequent to international treaties to which Brazil is a party, and addresses causes of climate change. Exploitation will now resort to modern practices and should generate ecologically correct energy. Law has been followed; move has been announced since 2007; financial compensation is being offered. Yet this does not solve the social problem of roughly 3,000 people living their lives, raising families and counting on income (now no longer available, given lack of education and training) that (horrible) reality. This paper approaches the subject from a legal perspective, centering on the human rights component of sustainable development - what were the legal requirements; how were (are being) they met; what has been the conduct of public powers and civil society; What to do to help the affected population to qualify/readapt/find new ways of living? The great challenge (by no means exclusive to Brazil, therefore the proposal to this global conference) is to help people - who for years lived off an unsustainable job, to enjoy their right to a dignified and sustainable life.

TC 180

How can earth observation data on informal settlements add value to sustainable urban development planning? A case study of Stellenbosch, South Africa

Walter Musakwa (1) presenting, Adriaan Van Niekerk (2)

Stellenbosch University, Department of Geography and Environmental Studies, Stellenbosch, Western Cape, South Africa (1), Stellenbosch University, Centre for Geographical Analyis, Stellenbosch, Western Cape, South Africa (2)

Data to monitor urban growth is often lacking, particularly in developing countries which are experiencing rapid urbanisation. Informal settlements are a common feature of most urban areas in developing countries yet, information on the nature and structure of informal settlements is often unavailable, inadequate or out-of-date. It is often difficult, cumbersome and expensive to collect area-wide and up-to-date data on informal settlements. This situation often inhibits local authorities and other stakeholder's capacity to leverage resources to implement sustainable urban development policies.
This paper investigates the use of earth observation data to obtain area-wide and up-to-date data on informal settlements. Accordingly, very high spatial resolution (0.5m) GeoEye satellite imagery and aerial photography was obtained. Geographical object-based image analysis (GEOBIA) was used to extract informal settlement structures. This was used to derive the building count, building density, population estimates and impervious surface concentration in ArcGIS 10 software. The study demonstrates that earth observation data on informal settlements facilitates evidence based decision making and ultimately sustainable urban development planning. However, the spectral heterogeneity of informal settlement structures poses difficulties in extracting useful information. Nonetheless, when compared with other research methods, earth observation with its synoptic view, capacity for routine, periodic and unobtrusive updating is an invaluable source for obtaining area-wide and up-to-date data on informal settlements in rapidly urbanising cities.

TC 238

Global Environmental Change and Urban Health Analysis: Some Emerging Complexities for Interdisciplinary Discourse

Usman Raheem (1) presenting, Felix Olorunfemi (2), Gbenga Awotayo (3)

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African cities suffer the combined assaults from urbanization, industrialization and deforestation, though at different degree depending on the structural composition of the population per unit of time and urban space. One possible shock from the assault is the threat from poverty, deprivation and inequality. Environmental change is also critical to the emerging health status. The reality of changes in climate also means that human beings are exposed to the changes produced in weather patterns or through the changes in several ecosystem functions. The challenge for urban health analysis is to determine the disparities in health outcomes resulting from differential vulnerability, resilience and adaptive capacities. The effects are unequally distributed and are particularly severe in marginal populations with low adaptive capacity. These effects are complex and require a number of processes, developments, sectors and activities 'played out' in a trans-disciplinary milieu. This paper raises a number of puzzles that are yet to be tackled or largely scantly answered. It underscores the conceptual and methodological complexities that may occur in the course of analyses of the health impact of climate and environmental change. The paper posits that the challenges of identifying, qualifying and predicting the health impact of climate change entails issues such as a scale, exposure specification and the elaboration of often complex and indirect causal pathways which makes interdisciplinary efforts inevitable. The study suggests increased funding for multidisciplinary studies and a deliberate effort to establish collaborative centres for the discussion of research challenges

Environmental Governance 2

Thursday 31 January 2013

11:00 am - 12:30 pm

Chair: Katja Biedenkopf (University of Amsterdam)

Room: Meeting Room (3F)

Environmental Governance 2	
Chair: Katja Biedenkopf (University of Amsterdam)	
Koga (TC 247)	Designing Science-Policy Interface in Environmental Regime in East Asia: A Case for Transboundary Air Pollution
Edixhoven (TC 166)	The Challenges in Governing Phosphorus
Persson (TC 323)	Evaluating the Strategic Approach to International Chemicals Management: strengths and weaknesses of a soft regime
Vervoort (TC 266)	Future speak: organising discourses in strategic deliberative arenas for food systems governance

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Governance 2
Room: Meeting Room (3F)

TC 247

Designing Science-Policy Interface in Environmental Regime in East Asia: A Case for Transboundary Air Pollution

Norichika Kanie (1,2), Maki Koga (1) presenting

Tokyo Institute of Technology, Tokyo, Japan (1), United Nations University Institute of Advanced Studies, Yokohama, Japan (2)

The increase in emissions of air pollutants along with rapid economic growth and industrialization has turned the issue of air pollution into a growing concern in the East Asian region. Air pollution causes various impacts beyond national boundaries, and therefore cooperation at various levels is required in order to effectively address this problem. If no efficient measures are taken, East Asian countries will face a serious threat from transboundary air pollution further down the road. However, the region has neither an international regime for controlling and reducing the damage to human health and the environment, nor does it have an epistemic community that would tackle this issue in a comprehensive manner. Drawing on implications from the science-policy interface literature, and also in light of the characteristics of regional political culture, this paper presents options for establishing scientific institutions dealing with air pollution in East Asia. Having reviewed the existing literature, we first raise credibility, legitimacy and saliency as relevant criteria for evaluating science-policy institutions. We then apply them to the cases of existing scientific bodies and epistemic communities in selected environmental regimes and frameworks, such as the Scientific Advisory Committee of EANET, IPCC and IPBES. Based on this empirical analysis, we explore options and ways to establish an effective scientific institution handling transboundary air pollution in East Asia. We conclude that, given the powerful bureaucratic traditions that characterize the region, Asian institutions acting at the science-policy interface require government participation as well.

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Governance 2
Room: Meeting Room (3F)

TC 166

The Challenges in Governing Phosphorus

Joost Edixhoven (1) presenting, Joyeeta Gupta (2)

Delft Technical University, Delft, The Netherlands (1), IVM Institute for Environmental Studies, VU University, Amsterdam, The Netherlands (2)

Phosphorus is a critical plant nutrient required in large quantities for food production, as well as a major pollutant. Mineral reserves are becoming depleted, estimates ranging between 370 and 50 years. Many parts of the developing world, notably sub-Saharan Africa, already lack access to phosphorus and have increasingly nutrient deficient soils. Phosphorus is used inefficiently and pollutes the environment, causing large scale freshwater and marine eutrophication. While Rockström *et al.* (2009) argue that phosphorus is nearing its planetary boundary of global marine eutrophication, this may need reconsideration given the global pervasiveness of freshwater eutrophication. An integrated governance of phosphorus woud offer significant benefits, including in the field of sanitation and health.
While literature exists on the physical problem, analysis on the governance side is lacking. Building on a multidisciplinary review on the physical problem, this paper analyses the current state of global phosphorus governance. It investigates the (lack of) governance architecture on the areas identified above; the roles of the agents involved in the distribution and disposal of phosphorus; the accountability of key actors, and issues of access and allocation resulting from current practices for current and future generations. The paper concludes that current phosphorus governance is diffuse and spread through different bodies, no actor takes an integrated approach to managing phosphorus, the focus is mostly on eutrophication and not so much on scarcity management. The paper then identifies a series of research questions about how the future architecture of phosphorus can be fine-tuned in order to address the problem.

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Governance 2
Room: Meeting Room (3F)

TC 323

Evaluating the Strategic Approach to International Chemicals Management: strengths and weaknesses of a soft regime

Asa Persson (1) presenting, Linn Persson (1)

Stockholm Environment Institute, Stockholm, Sweden (1)

In 2006 the Strategic Approach to International Chemicals Management (SAICM) was adopted to better integrate existing international regimes on chemical management and to ensure coherence between public and private governance initiatives, as well as to increase capacity in developing countries to bridge the gap in exposure to chemical risks. The SAICM has an ambitious objective; to ensure that, by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health. In this paper, we aim to provide an initial evaluation of the SAICM regime, drawing on interviews with key officials and national focal points involved in SAICM implementation as well as a case study of implementation in Cambodia. Using regime effectiveness theory and policy evaluation methodology, we distinguish between output, process and cognitive effects. Across all these dimensions, effects to date have been weak to moderate, in light of the objective. From a top-down perspective, the legally non-binding nature of SAICM and the lack of compliance mechanisms provide weak incentives; the comprehensiveness of SAICM actions lead to diffusion of responsbility; and support of the funding mechanism (QuickStart programme) by developed countries has been weak. From a bottom-up perspective, the Cambodian case study suggests that basic implementation structures for chemical management are a prerequisite, national ownership at the highest political level is required, and donor interests must not divert attention and priorities. However, SAICM is still in early days and has a unique role in the overall international chemicals management regime.

Thursday 31 January 2013
11:00 am - 12:30 pm
Environmental Governance 2
Room: Meeting Room (3F)

TC 266

Future speak: organising discourses in strategic deliberative arenas for food systems governance

Joost Vervoort (1,2) presenting, Greetje Schouten (3), Angela Wilkinson (1), Frans Hermans (4), Erik Mathijs (6), Kasper Kok (4,2), Ariella Helfgott (5,1)

University of Oxford, Oxford, UK (1), CGIAR CRP7: Climate Change, Agriculture and Food Security, Kopenhagen, Denmark (2), Utrecht University, Utrecht, The Netherlands (3), Wageningen University, Wageningen, The Netherlands (4), University of Adelaide, Adelaide, Australia (5), KU Leuven, Leuven, Belgium (6)

This paper presents an interdisciplinary dialogue exploring the role of discourse in global strategic futures arenas. We use global food systems as a discussion case. Food systems are increasingly associated with a variety of global governance issues including the political economics of food insecurity and global environmental change. Collaborative efforts are needed to build capacity for strategic and deliberative food systems governance. A method to organize these efforts is the use of multi-actor futures processes such as scenarios. Strategic futures processes are, ideally, frame-breaking processes that help actors re-perceive their positions and contexts and explore previously unrecognized opportunities and challenges. However, in practice these processes often explore futures within a single, often dominant discourse. This limits the ability of actors involved to consider truly diverse futures. It also limits futures processes in their ability to include various societal actors and perspectives and generate new shared discourses. The role of discourses is largely unexplored within futures studies and practice. We argue that explicit attention to discourses in representation and engagement in multi-actor futures processes will lead to more strategic, inclusive and equitable governance. This paper outlines challenges and proposes methodology that can be used to organize different discourses in deliberative strategic futures arenas.