

Linking the 5As
(*Linking across Scale*)

Presenter: Tran Thi Thu Ha

Author(s): *Tran Thi Thu Ha*

CAN CERTIFICATION PROPERLY WORK AND PROMOTE SUSTAINABLE SHRIMP FARMING? CASE OF NATURLAND ORGANIC SHRIMP IN THE MEKONG DELTA, VIETNAM

Shrimp aquaculture is considered a great development opportunity in many developing countries, which has been seen as the basis for poverty alleviation, main source of income, employment and creation of livelihood opportunities for local people. However, since the early 1990s, numerous academics and NGOs have voiced serious concerns about the environmental and social impacts that shrimp farming has caused in coastal areas. It provides a striking example of unsustainable use of natural resources for export markets and undermines food security and reduces prospects for development and poverty alleviation at local level. The emergence of market-based governance arrangements, such as certification, which has moved from using for food and safety standards for international market to regulating environmental and social performance of aquaculture production, is widely seen as a positive move to overcome this challenge. However, despite increasing acceptance of certification there is considerable debate about whether certification provides an adequate tool for improving market promotion while also for achieving environmental and social objectives and how certification work in developing countries where the most producers are small-scale. Moreover, there are also obstacles to practice modern auditing and traceability in developing countries where rules, norms, values and control over production are neither clear nor easily amenable. The paper aims to address the questions: How does certification implement and support/or hinder the small scale farmers and how can certification promote sustainable shrimp farming in the context of local-level acts by using the case of Naturland organic shrimp certification in the Mekong Delta, Vietnam.

Linking the 5As
(*Linking across Scale*)

Presenter: Jeffrey Broadbent

Author(s): *Jeffrey Broadbent, all Compon case teams all Compon case team members*

Discourse, Mobilization and Networks: Interim Results from a Comparative Research Program on the Global/National Dynamics of Response to Climate Change

Comparing Climate Change Policy Networks (Compon) is an international research project on the factors that determine the capacity and success of nations and global agreements to reduce levels of atmospheric greenhouse gasses. Countries and their policy actors have developed a range of responses to GCC from some positive action to outright denial with crucial effects upon global agreements. The Compon project currently includes research teams in 13 countries and at the international level, with more in formation, including largest emitters as well as other significant cases. The information network of climate change information from the IPCC constitutes a common golden thread. How each socio-political field processes this information determines its response. The Compon project focuses on the interactions among domestic and international organizations in this field. The teams use common methods to collect data on national discourse networks and action networks. This data allows empirical tests on hypothesized effects: stakeholder participation on diffusion of scientific acceptance; formation, membership and orientations of advocacy coalitions; bridging and bonding ties among groups; cultural evaluation of science and nature; intensity of dominant interest group defense of carbon-based economy; legitimacy and activism of domestic scientific establishment; political institutions; activism of civil society. The Compon project is establishing a global social science research and data network on climate change as a panel study that will monitor national and global reactions into the future as climate change effects intensify. The data will be put into a public use dataset. The project welcomes new teams and collaborators.

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(Linking the Social and Natural Sciences)

Presenter: Albinus Makalle

Author(s): *Albinus Makalle, Matern Victor*

Effects of Gender Struggles over Natural Resources in Coastal Regions of Tanzania

Whereas in inland areas in Tanzania employment in non-natural resource based activities is becoming increasingly important, coastal natural resources remain untapped for economic development but experiencing problems of habitat loss, pollution, declining and gender use competitions. A diverse range of people also inhabits the coastal regions by culture, religion and socio-economic status, all of which have significant influence on environmental entitlements and empowerment. A study was therefore conducted to explore how men and women access, own and control the coastal natural resources so that explicit steps are taken to achieve greater equity. A combination of data collection techniques was used, which included Participatory Rapid Appraisal (PRA), in depth household interviews, focus group discussions, participant observations, and documentary review. The findings of the study indicated that while the coastal natural resources remain the main livelihood source of the community, women do not have equal place with men through ownership and control over the resources. The bigger share of income generated from access to the resources is under the custodian of men. This gender-based utilisation of the resources has inhibited socio-economic growth. On the basis of this analysis, implications for explicit measures were drawn in the form of strategies to promote access to resources, participation in decision making, and control over resources at micro and macro level so that greater equity could be achieved.

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Presenter: Phung Ha Tran Thi

Author(s): *Phung Ha Tran Thi, Roel Bosma, Han van Dijk*

Livelihood opportunity and fishery management in Ca Mau, a coastal province of Vietnam

Fishery in Ca Mau, Vietnam's most southern province, plays locally an important role for human nutrition and has great potentials for export earnings. To assess issues on livelihood sustainability and fishery management we conducted a study from Sep. 2008 to Jun. 2009 using both quantitative and qualitative methods in 41 structured and 14 in-depth interviews of fishermen households selected from communities both inside and outside the fishing resettlement zone. We used the sustainable livelihood approach to identify people's capabilities to cope with uncertainties, to accumulate financial capital and to multiply livelihood opportunities, in the context of fishery regulations and of marine resource co-management policy. Fisheries faced several external and internal constraints effecting livelihoods of households in both type of communities. The main external factor is the reduction of fish stocks caused by overfishing and degradation of the marine environment. The main internal factors are non-compliance to fishery laws and regulations, fishing with destructive methods damaging the marine resources, insufficient capital for investment, and lack of alternative employments for adult and educational opportunities for children. The results show that (1) people diversified and adapted their livelihood activities to overcome uncertainties without undermining the marine resource, and (2) people's non-compliance to fishery regulations confirms the unfeasibility of fisheries management in open access waters. The contemporary status of compliance to fishery regulations shows that to reconcile livelihood sustainability and fishery management, resource conservation and social-economic goals should become compatible.

Keywords: livelihood, fishing, small-scale fishery, management, Mekong Delta, Vietnam

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Presenter: Stefania Munaretto

Author(s): *Stefania Munaretto, Dave Huitema*

Adaptive co-management in the Venice lagoon? An analysis of current water and environmental management practices and prospects for change

Adaptive co-management is often suggested as a way of handling the modern challenges of environmental governance, which include uncertainty and complexity. It is a novel combination of the learning dimension of adaptive management and the linkage dimension of co-management. There is a great need for more insight on enabling policy environments and conditions of adaptive co-management success and failure (Armitage et al., 2007). Picking up on this agenda our paper will provide a case study of the world famous Venice lagoon in Italy. We address the following questions:

To which extent is adaptive co-management currently practiced in the Venice system?

To which extent is learning taking place in the Venice system? How is learning related to the implementation or non-implementation of adaptive co-management in the Venice system?

Our analysis will be based on participatory observation, interviews with stakeholders, archive analysis, and secondary literature review. The paper will show that even though the prescriptions of adaptive co-management are hardly followed in the Venice lagoon, some learning takes place. Explanation for this will be searched in the relation between learning and the implementation of the adaptive co-management prescriptions. Finally, the paper will build on the analysis to suggest avenues for improvement.

Linking the 5As
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Presenter: Marcela Velasco

Author(s): *Marcela Velasco*

Collective Action Failure and Environmental Degradation in Colombia's Pacific Coast: The Case of the Naya River Basin

This paper analyzes collective action failure in a remote resource system located in Colombia's Pacific littoral. The multiethnic residents of the Naya River basin are failing to manage land and natural resources as guerrillas, paramilitaries and cocaleros invade their land, uproot communities, change production strategies and create divisions. Meanwhile, the government fails to offer security and has postponed the land titling process of black and peasant territories in the area. To improve environmental governability and address issues of social justice, the 1991 Constitution reconfigured Colombia's territorial regimes and legalized the rights of ethnic communities to ancestral territories, thereby moving large tracts of national lands from open access to common property regime. However, low implementation of the rule of law means that ethnic politico-territorial autonomy and environmental governance depends on the organizational capacities of local users and their ability to hold the government accountable. Organizational capacities in the Naya are debilitated by armed conflict, government malfeasance and violent economic insertion into national and international markets, but also by rent-seeking and overlapping jurisdictions that accentuate divisions between ethnic groups. The paper adds to the study of inter-ethnic relations in Latin America and collective action failure in the management natural resources.

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(Linking the Social and Natural Sciences)

Presenter: Harro van Asselt

Author(s): *Harro van Asselt*

Exploring Synergies in a Fragmented Global Governance Architecture: Forests at the Intersection of the Biodiversity and Climate Change Regimes

Whereas the problems of biodiversity and climate change are inextricably intertwined, the global governance architecture related to these issues is still fragmented. This situation could lead to conflictive or synergetic interactions between the Convention on Biological Diversity and the UN climate regime. Although the climate and biodiversity treaties are not fundamentally in discord, there is potential for conflict between the regimes, particularly following decisions on carbon sinks in the Kyoto Protocol's Clean Development Mechanism (CDM). Against this backdrop, this paper assesses ways to enhance synergies between the climate and biodiversity regimes, focusing on forest biodiversity. The paper examines the methods offered by international law for mitigating conflicts between the two treaties, including the use of conflict clauses, treaty interpretation, and the rules on conflict resolution. This is followed by an assessment of the activities initiated by actors in both regimes aimed at ensuring mutual supportiveness, including information exchange and joint scientific assessments. The paper concludes that the usefulness of international law for resolving conflicts is limited given the overlapping objectives of the regimes. Furthermore, it argues that while parties to the biodiversity convention have sought to enhance synergies, these efforts have not yet managed to adequately accommodate biodiversity considerations in the CDM rules on sinks. The paper ends with an outlook for integrating biodiversity concerns in a future climate regime in light of current discussions on reducing carbon emissions from avoided deforestation and forest degradation.

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Presenter: Gilberto Sarfati

Author(s): *Nara Nanae Sano, Gilberto Sarfati*

The quest for governance of antarctic tourism

The main objective of this work is to discuss the need of an international regulation of tourism at the Antarctic continent. Accordingly to the theory of public goods the continent can be understood as a non-excludible common resource. On other words, the more tourists come to the region and affect the ecosystems the less is probable to sustain its preservation. On other words, without regulation, on the long run, the tourism in the Antarctic is not ecological sustainable. In state context is quite easy to regulate the public space but this not the case of the Antarctic. So far, the Antarctic Treaty as well as the Madrid Protocol does not address the problem. Therefore, the main question that should be addressed is how to regulate, if at all, public visitation at the continent. After a field trip and interviews with stakeholders we reached the conclusion that the precautionary principle should be applied freezing the expansion of tourism in the Continent.

Linking the 5As
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Presenter: Anna Stetter

Author(s): *Anna Stetter*

Is there an Institutional Design for Success? Global Standards and Certification Schemes for Social and Environmental Sustainability

The paper offers an analytical framework for studying the conditions for success (and failure) of global standards and certification schemes (GSCS) such as the Forest Stewardship Council, the Marine Stewardship Council, the Kimberley Process Certification Scheme or the Fairtrade Labeling Organizations International.

The pivotal research question of the paper is:

What institutional characteristics condition the success of GSCSs?

I will seek the answers to this question in an empirical approach building on institutionalist theories in political science, in particular on international environmental regime theory. The paper is based on the proposition that the institutional setup matters for successful operation of GSCSs. However, while institutionalist analyses of international regimes have offered significant empirical and theoretical insights into the study of the emergence, operation and effectiveness of international environmental regimes, three aspects of this paper comprise novelties. One, so far no institutionalist analysis has been carried out on transnational arrangements such as GSCSs which operate locally and globally at the same time and include stakeholders from public agencies, corporate business and civil society. Two, the comprehensiveness of the multi-layered framework of the various institutional patterns and conditions for success which make up the complex regulatory cycle of GSCSs exceeds former research on similar issues. And three, while focusing on specific types of transnational governance such as GSCSs the paper has the ambition to encompass schemes operating across a wide scale of sectors (such as minerals, fish, forestry, or agricultural products) with the common objective of enhancing social and environmental sustainability.

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Presenter: Geoffrey Nwaka

Author(s): *Geoffrey Nwaka*

THE URBAN POOR AND ENVIRONMENTAL HEALTH POLICY IN NIGERIA: STRATEGIES TOWARDS SOCIAL HARMONY

Poverty and rapid urbanization are two of the greatest challenges facing Africa today. UN-Habitat estimates that Sub-Saharan African cities have over 166 million slum dwellers, most of who work in the informal sector where they simply do not earn enough to afford decent shelter and services. What does sustainability mean for such cities and such townspeople? Agenda 21 of the Earth Summit emphasized that sustainable development has to be socially just and ecologically stable, and that the creation of sustainable human settlements is integral to the achievement of sustainable development.

The paper examines how urban poverty and the informal city have developed in Nigeria and other African countries over the past 50 years, the extent to which government policies have helped or constrained the poor, and how poverty which leads to slum conditions can be reversed in order to reduce social tensions and worsening disparities in access to basic urban services. While some governments have adopted the misguided policy that tries to repress the informal sector by forcibly evicting hundreds of thousands of so called to upgrade slums, others have tried to upgrade slums, to establish micro-finance banks for the urban poor, and to promote training and financial support for unemployed youths. Current research suggests that the path to urban peace and sustainability in Africa lies in building more inclusive and socially equitable cities. The paper argues that to achieve sustainable urbanization in Africa greater priority should be given to the health and development concerns of the poor.

Linking the 5As
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Presenter: Klaus Eisenack

Author(s): *Klaus Eisenack, Anna Pechan*

Linking adaptation financing for developing countries with mitigation targets – a wise choice to reach a global agreement on climate change?

Financing adaptation in developing countries has become a cornerstone of a (potential) global agreement on climate change. Under the Kyoto Protocol, adaptation is financed by the adaptation levy (AL): a 2% share of the certificates from the clean development mechanism (CDM) is used as revenues for the adaptation fund to finance adaptation projects. This is factually a tax on the CDM, thereby reducing emission trading. This increases global mitigation costs: more expensive abatement options are used due to the CDM being less attractive.

Is the excess burden of a tax on emission trading low?

Are revenues from the AL sufficient to stabilize a global agreement?

Should other institutions, e.g. based on permission auctioning, be preferred?

Should adaptation and mitigation be less closely interlinked?

I address these questions with an emission trade model including different instruments (flexible AL and auctioning). I determine the expected total transfers to developing countries for different scenarios about countries' participation in the regime and the level of AL. The influence on coalition stability is assessed.

I find that the market distortions of the 2% AL are very low. A very high AL maximizes total transfers, thereby increasing global mitigation costs by about 1/3. In any case, revenues are far from being sufficient. Financing through auctioning avoids additional mitigation costs. In general, revenues strongly depend on emission reduction commitments. Mechanisms that do not link adaptation and mitigation are likely to be preferable.

Linking the 5As
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Presenter: Andrea Gerlak

Author(s): *Andrea Gerlak, Tanya Heikkila*

International Waters and Institutions: A Study in Adaptability and Governance

The adaptability of institutions is a critical factor supporting the resilience of social-ecological systems, but it is unclear what types of institutional design features facilitate adaptation. Institutional adaptation involves the new strategies, policies, or operational actions that actors in the institutional setting undertake in response to changing circumstances. International river basins are prime examples of social-ecological systems, yet despite the proliferation of institutional arrangements, including treaties and river basin organizations in Basins, few scholars have explored their design features and capacity for adaptation. In this paper, we integrate across multiple streams of research on adaptation, international waters, and social-ecological systems to examine the following design features: 1) monitoring and information sharing; 2) conflict resolution, 3) linkages across scales; and 4) transparency and participation. We also recognize the degree of social, economic, and political change in a basin (i.e., the “need” for adaptation), as well as the presence of conflict or cooperation among actors (i.e., the capacity for adaptation) may mitigate the effects of the design factors. We explore these features in the context of the Mekong River basin. This basin has faced a number of changes to the ecosystem through population growth, and increasing demands from irrigation and hydropower. To conduct this analysis we use document analysis from the Commission reports and historical records, as well as interviews, and event and treaty data.

Linking the 5As
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Presenter: Melinda Laituri

Author(s): *Melinda Laituri, Faith Sternlieb*

Designing Global Water Governance through a Spatial Lens

The Paul Simon Water for the World Act 2009, the UN Millennium Development Goals, and Water as a Human Right are all mechanisms for enhancing access to water for the world's poorest populations. However, these water policies are not integrated into a holistic framework. They are fragmented between multiple governing agencies, founded on competing ideologies for water management, and enforced through confusing regulatory structures for land tenure tenuously linked to water rights. Alternatively, this is the governing landscape which provides the basis for innovative approaches to water solutions: integrated water resource management, collaborative partnerships, and adaptive management strategies focused on place-based solutions.

This paper outlines a methodology to assess these international strategies by analyzing the linkages between Access and Allocation, Architecture, and Adaptiveness. Three key strategies underlie these policies: 1) tracking access to safe water and sanitation to improve human health (Access and Allocation), 2) identifying water resources governance and management efforts that have aided water for human livelihoods and the environment (Architecture), and 3) strengthening efforts to improve water security through increased cooperation on shared waters (Adaptiveness). Geographic information system (GIS) can help analyze water policy in that it spatially tracks policy outcomes classified by geographic extent, scale (eg., country, regional, or community), and community attributes that reflect measureable results and emphasize marginalized populations. This study poses the questions: what are the impacts of policies on the physical landscape and can they inform future policy-making, fortifying future water governance initiatives at a global scale?

Linking the 5As
(*Linking across Scale*)

Presenter: Manjana Milkoreit

Author(s): *Manjana Milkoreit*

Hot Air and Cool Calculations – How the Spotlight on Science obstructs a Climate Deal

After 20 years of diplomatic efforts, an effective international climate regime remains elusive. This paper identifies three sets of knowledge-related obstacles to moving climate politics into more productive terrain: structural, individual and attention barriers. (1) Combining realist and constructivist theories of the role of scientific knowledge in international affairs, the paper explores how structural-material forces in the international political and economic system have so far successfully prevented the development of an effective climate regime, because it would challenge their interest in system preservation. The essay offers an explanation for the failure of discursive power to remove these structural obstacles. (2) Borrowing from psychology and cognitive studies the paper provides an overview of a number of factors that cause political apathy, inaction or even climate change denial at the individual level. (3) Most importantly the paper argues that the strategic focus of the public debate on climate science is a skillful but unproductive distraction from more important and more difficult debates about values, interests and policy choices in the context of climate change. Using these insights about the misperceived role of scientific knowledge for international regime creation, the paper concludes with recommendation for paths out of the current diplomatic deadlock. The analysis links theories about agency, architecture, allocation and access, as well as process concerns based on realist and constructivist theories.

Linking the 5As
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Presenter: Derek Meyers

Author(s): *Derek Meyers*

Discourse and Information: The Transformative Potential of the Carbon Disclosure Project

This paper examines the Carbon Disclosure Project (CDP) through a discourse analysis lens in order to fill certain gaps in the literature on what has variously been termed transparency, governance by disclosure and informational governance. The CDP serves as a means for transnational corporations to voluntarily make public various data concerning their approach to and impact on climate change. This includes corporate greenhouse gas emissions. As such, the paper inspects a number of CDP corporate reports and other relevant texts produced by the CDP throughout its ten year history in order to determine the various discourses which have contributed to the production of CDP data. Additionally, the paper seeks to determine how CDP data gets reemployed in further discursive activity which orders climate governance in particular ways. That is, CDP data may serve as a resource for discursive practices of the same discourse which begot that data or it may be taken up by a different and possibly opposing discourse. This will be determined through interviews with officials at the CDP and CDP data users and will also analyze specific usages of CDP data and the particular contexts of those usages. Finally, the paper will make use of the concept of accountability to show more accurately how both CDP data and the discourse(s) which produced it structure climate governance in concrete ways by either allowing or preventing certain actors from holding CDP reporting companies accountable for their greenhouse gas emissions.

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Presenter: Nina Hagemann

Author(s): *Nina Hagemann*

Water service provision in Ukraine – A discussion of governance options for sustainable resource management

For decades, Ukraine – one of the former Soviet republics – did not take care of its deteriorating urban water infrastructure and as a result, the whole supply system is close to a collapse. Furthermore the drinking water quality is insufficient, economic efficiency is low and the environmental implications are alarming. Ownership and responsibility for the enterprises (water supply and sanitation) lie with the municipalities; however, they miss the respective legal, financial as well as personnel capacities to govern water services in a more sustainable way.

An institutional analysis shows that the current governance approach and business models for water service provision in Ukraine do not provide for sustainable resource management and neglect fundamental economic and social requirements. For water infrastructure management a broad range of governance approaches exist. However, they differ widely especially concerning the different business models.

The aim of the paper is to explore what governance approaches provide the best alternative solution by taking into account both the circumstances caused by transition and factors such as environmental, social and economic needs. Therefore different governance approaches and business models will be analysed regarding their ability to tackle ecological, economic and social aspects as well as their applicability to the Ukrainian circumstances.

The paper is based on literature review as well as expert interviews with different actors from enterprises, authorities and NGOs.

Linking the 5As
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Presenter: Marilyn Averill

Author(s): *Marilyn Averill*

Debating Accountability Requirements

International agreements typically specify some sort of accountability provisions to ensure that funding is spent appropriately and to provide information about the effectiveness of the agreement. International environmental agreements (IEAs) increasingly talk about monitoring, reporting, and verification (MRV) requirements that track compliance with agreements as well as effects of implemented actions. Accountability provisions manage and track the flow of funding and information from the international to the local level and back again.

Accountability provisions play an important role but also may have negative impacts. All parties to an agreement have a stake in ensuring that the intended effects are achieved. Nations that provide funding have an interest in ensuring that funds are spent wisely. But accountability provisions can be overly burdensome and/or perceived as a way for wealthy countries to maintain inappropriate control over, and even profit from, national and sub-national programs. These provisions can stifle creativity and divert a significant portion of funding from on the ground activities to fulfilling accountability requirements. Such requirements often restrict local control over projects and can affect stakeholder involvement.

What levels and measures of accountability are fair and equitable, and allow for the experimentation needed to establish effective programs while still providing adequate information about program impacts? This paper will explore the trade offs made in establishing different types of accountability requirements in international environmental agreements and some of the disputes associated with particular requirements.

Linking the 5As
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Presenter: Mostafa Mahmud Naser

Author(s): *Mostafa Mahmud Naser, Tanzim Afroz*

Climate Change Migration and International Migration Governance Architecture: Challenges and Responses

Human migration, forced or otherwise, will undoubtedly be one of the most significant consequences of environmental degradation and climate change in decades to come. Academics and international agencies confirm that large numbers of people are already on the move, with millions more expected to follow as the evidence of climate change accelerates. In this context, climate change migration can be seen to represent a rapidly emerging problem demanding effective protection and support from the international community. To date there has been no coordinated and coherent response from the international community to address the situation of populations displaced due to the impacts of climate change. Still no internationally accepted term exists for persons moving for environmental reasons. There is also no authoritative international institution responsible for governing environmental migration. The status, treatment and protection of these people are thus uncertain as a matter of international law. It is therefore imperative to identify and analyse the obligations of States under international law to promote a principled protection response to people at risk of climate-induced displacement. In this milieu, this paper explores the link between climate change and consequent human displacement. Then it highlights current gaps or limitations within the current international environmental migration governance for effective recognition and protection of climate change migrants. Finally, it considers possible law and policy alternatives for addressing the existing limitations and outlines a blueprint for global governance architecture for the protection of climate induced displacement.

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(Linking Research to Practice)

Presenter: Robert Bartlett

Author(s): *Walter Baber, Robert Bartlett***Rethinking the Limits of Global Democracy and International Law**

Lijphart (1991) advanced the argument that majoritarian democracy had become a Kuhnian paradigm, the flaws of which were blinding people to the potential advantages of other forms of democracy. A similar circumstance exists with respect to the Westphalian nation-state and its theoretical hegemony. The tenacity of these two paradigms, despite their evident flaws, has hamstrung theorists of international governance and contributed to the view that a democratic deficit in transnational law and politics is unavoidable. These two paradigms, in concert with one another, obstruct conceiving of forms of global governance that have to do with something other than merely giving effect to majority preferences while providing at least some protection to the rights of minorities.

The work of deliberative theory offers a coherent approach to mapping nonmajoritarian democratic techniques onto human dimensions of environmental change. Actors whose primary concern is the protection of the environment are well situated to develop alternative forms of democratic practice. Experience in this arena can then feed its insights back into the core concerns of security and economic development that dominate the international stage. We analyze the limits of global democracy and international law as revealed by a series of citizen juries facing concrete (but hypothetical) problems who were asked to identify the normative, political, and social consensus necessary for managing a society-environment linkage in ways that are both ecologically sustainable and just. As such, this research directly addresses three of the four conference themes: linking across scale, research to practice, and the five "A's."

Linking the 5As

(Linking Research to Practice)

Presenter: Alexander Thompson

Author(s): *Alexander Thompson*

Efficiency and Distribution: The Role of Flexibility in Global Climate Institutions

My proposed paper links the "5 As" by looking at the role of Adaptation and Allocation at the domestic level in the design of international institutions (Architecture) for climate change. International cooperation over climate change is plagued by two key political obstacles: uncertainty and distributive concerns. Uncertainty regarding science and policy options creates a need for flexible institutions that allow rules to be adjusted over time and that offer governments--at the national and more local levels--the opportunity to experiment with different approaches in an adaptive way. An excessively rigid regime, in contrast, stifles adaptation and diminishes participation. At the same time, flexibility allows governments to accommodate distributive concerns when it comes to the political and economic costs of tackling climate change over time. I thus argue that flexibility is a vital feature for any successful climate regime at the international level, as it is both an efficient response to uncertainty and a politically appealing response to distribution problems. In the paper I will show empirically that flexibility has been used in these ways in global climate negotiations, and I will argue that the future of the climate regime will--and should--include an important "soft law" element that affords governments substantial flexibility. A key policy issue raised by my project is whether it is possible to design international institutions that are flexible without being excessively shallow and weak.

Linking the 5As
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Presenter: H. Carolyn Peach Brown

Author(s): *H. Carolyn Peach Brown*

Gender and REDD+ in the Congo Basin Forest of Central Africa

Six countries of the Congo Basin region of Central Africa contain the second largest contiguous tropical rainforest in the world. Recognition of the vast carbon stores of its abundant vegetation has raised its profile for a new climate change mitigation policy – Reduced Emissions for Deforestation and Degradation (REDD+). The forest is home to 30 million people who depend on it as a source of livelihood from shifting cultivation and the harvesting of non-timber forest products. Since REDD+ may adversely affect access to these activities in which women play a dominant role, it is important that women are involved at all stages of decision making. Additionally, as stewards and managers of forest resources women's leadership is critical in addressing all aspects of sustainable development and natural resource management. Investigations in Congo Basin countries revealed that women have had very limited participation in discussions on issues of climate change in general, and for the most part have not been involved in discussions on REDD+. New global financing of the UN-REDD program to support REDD+ readiness efforts has pledged to increase efforts on women's empowerment and gender equality. The Readiness Preparation Plan (R-PP) of the DRC has highlighted that as part of its national REDD+ strategy, it will constitute a thematic coordination group to analyse issues of gender. Strategies to foster the effective participation of women are key to making sure gender dimensions are addressed in issues of forest access, forest management and the distribution of carbon benefits.

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(Linking the Social and Natural Sciences)

Presenter: William Burns

Author(s): *William Burns***Climate Geoengineering: Toward an Architecture for Governance of Research and Potential Deployment**

According to several recent analyses, the pledges made by parties to the United Nations Framework Convention on Climate Change (UNFCCC) pursuant to the Copenhagen Accord put the world on course for temperature increases of 3–3.9°C above pre-industrial levels by 2100. This could have disastrous consequences for human institutions and natural ecosystems. As a consequence, increasing attention has been devoted to a series of potential responses that were once considered “forbidden territory,” climate geoengineering. Climate geoengineering methods include ocean iron fertilization, stratospheric sulfate injection, marine cloud seeding, air capture, planetary “sunshades.” While of these technologies have the potential to substantially ameliorate, or reverse, current warming trends, they could also have serious negative ramifications, including adverse regional impacts with momentous equitable implications, e.g. shutting down monsoons in Southeast Asia, depletion of the ozone layer, and reduction of agricultural production in many regions of the global South.

The purpose of this paper will be to set forth a proposed protocol to the United Nations Framework Convention on Climate Change to govern research and development and potential deployment of climate geoengineering technologies. The focus will be on linkage of several of the 5 As in the proposed framework, including how to ensure equity and fairness in regulatory architecture in the face of potential regional differences in benefits and negative impacts, including the potential role of transboundary environmental assessment and liability, as well as how to regulate private actors’ who may seek carbon credits under the CDM of the Kyoto Protocol or through voluntary systems.

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Presenter: Nicole Detraz

Author(s): *Nicole Detraz*

Gendering Climate Security Debates: Are We All In It Together?

Environmental security is a concept that has impacts across multiple disciplines and policy arenas. Connections between security and environment have ranged from concerns about potential conflict over natural resources, to alarm about the potential security impacts that natural disasters can have for human beings. To date, there has been little systematic work done that examines the intersection between approaches to environmental security and gender. This paper addresses the inclusion of gender into this debate. The paper will discuss the theoretical and practical implications of ignoring the gendered aspects of security and the environment through an examination of climate change as a security issue with unique gender connections. This paper addresses the linkages between Allocation/Access and Adaptiveness as outlined in the Earth System Governance project's science plan. The central concerns are what are the unique security needs of men and women as a result of a changing climate (allocation and access), and how can we expect these unique needs to be incorporated in climate policy (adaptiveness)? It is hoped that climate policy can be made that takes gender equity and justice issues into account. However, a better understanding of these issues, particularly how they intersect with security, is a necessary starting point.

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(Linking the Social and Natural Sciences)

Presenter: Patricia Romero Lankao

Author(s): *Patricia Romero Lankao, Georgelina Hardoy, Mercy Bobor Cordova, Griselda Gunther*

Actors and factors shaping responses to climate change in three Latin American cities

Cities are already responding to climate change. A small but growing literature exists on cities from the North and on cities which have been leaders' or first-movers on climate change issues (e.g., London, New York, Durban). Less attention, however, has been paid to cities from the South. This paper explores how three cities from Latin America: Buenos Aires, Mexico City and Quito are responding to climate change both on the mitigation and adaptation domains. Based on a review of official documents and on semi-structured interviews with senior city-decision makers, experts and nongovernmental actors across the 3 cities, the paper addresses three questions related to the five A's around which the Global Ecosystem Governance Project is organized: Who are the key players both at the sectoral - climate - and city level? How is their power organized? And what kind of discourses and framings of the issue can be deduced from their actions? It sheds light on how such issues as political architecture play out in developing country contexts, characterized by centralized control by the national governments and institutional fragmentation of local structures and political participation.

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(Linking Research to Practice)

Presenter: Axel Michaelowa

Author(s): *Axel Michaelowa, Sonja Butzengeiger-Geyer, Michel Köhler***Universal parameters to compare effectiveness of climate change adaptation projects**

Adaptation to climate change is increasingly supported through international financing. In contrast to mitigation, where the effectiveness of policy action can be measured through the parameter "tonnes of CO₂ equivalent reduced", no universally accepted parameter for assessment of adaptation effectiveness exists. Without such a parameter, adaptation finance vehicles such as the Adaptation Fund under the Kyoto Protocol encounter the challenge of determining the adaptive effect of ongoing or planned/proposed projects in order to achieve an efficient allocation of their funds. The first experiences with adaptation funding thus show a tendency to converge towards generic development funding. This might lead to a backlash against adaptation funding by electorates in the North if the funding cannot show concrete results. We assess two possible candidates for generic adaptation effectiveness parameters: 1) disability-adjusted life years saved (DALYs), which are widely used in public health policy analysis. 2) net present value of property saved from destruction through climate change impacts. In our assessment, we differentiate between adaptation to current climate variability, as it is likely that many human societies are not optimally adapted to current climate conditions, and adaptation to climate change expected at a certain future date. We discuss uncertainties encountered in estimating the parameters and whether these uncertainties should lead to a rejection of the attempt to define universal parameters. In this analysis we take into account the misallocation likely to occur if choice of adaptation projects is based on very generic criteria, as currently used by the Adaptation Fund.

Linking the 5As

(Linking Research to Practice)

Presenter: Axel Michaelowa

Author(s): *Sonja Butzengeiger-Geyer, Axel Michaelowa, Michel Köhler***Market mechanisms for climate change adaptation – lessons from mitigation**

Adaptation to climate change impacts can be proactive or reactive. Adaptation actions can have the character of a private good, a club good or a public good depending on the nature of the action. This complicates the analysis compared to the analysis of economic instruments that promote mitigation of climate change, where the public good character is without doubt. So far, there is almost no experience with market mechanisms for adaptation – such as taxation, tradable project-based offsets or tradable allowances –, whereas climate change mitigation has been a field where market-based instruments have been widely applied. Therefore, a large body of experience has accumulated. While generally, market-based instruments for mitigation can be seen as successful, several key lessons have been learned, such as – pilot phases are important to test the instrument – distortions by lobbies can lead to adverse distributional effects – regulatory uncertainty reduces the efficiency gains – transaction costs can form a significant barrier – monitoring and verification are key to prevent fraud. These lessons should be taken into account in the design of market mechanisms for adaptation. After an extensive analysis of barriers for the implementation of potential economic instruments for adaptation, we discuss concrete measures to remove the barriers and improve the instruments. We conclude with a prioritisation of market mechanisms for further research and possible pilot implementation, differentiating by types of adaptation.

Linking the 5As
(*Linking across Scale*)

Presenter: Steve Vanderheiden

Author(s): *Steve Vanderheiden, Brian Bernhardt*

'Private' Agents in Public Roles: The Challenges of Accountability, Equity and Coordination in Nonstate Governance

Nonstate agents, such as NGOs, are adopting governance functions over a variety of the common earth systems that humans share. To the extent that nonstate agents are acting as authorities – that is, making decisions, allocating resources, developing rules and taking actions – over common or public issues, they are filling a role that has typically been assigned to states. Accordingly, nonstate agents ought to be evaluated on similar terms as state-based governance regimes in terms of both their effectiveness and their legitimacy. We suggest that nonstate actors, such as NGOs, have important advantages over states in responding to many of the boundary-crossing challenges of earth systems governance. They tend to be more flexible, innovative and capable of responding to new issues and emergent problems. As a result of these characteristics, nonstate actors are often able to operate across scales and tackle challenges that cross territorial state boundaries. However, because of the ad hoc and decentralized nature of NGOs they may be more open to problems with coordination and accountability than their state-based counterparts. A key question, then, is how to preserve the advantages of nonstate forms of organization and action, while improving the ability of decentralized agents to coordinate their activities and ensure accountable and equitable governance. We examine these questions at both the local project level and at the systemic or architectural level. Finally, we apply this theoretical framework to the challenge of climate change adaptation work, an area in which NGOs are particularly active.

Linking the 5As

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Presenter: Michelle Lueck

Author(s): *Michelle Lueck*

Vulnerability, Resilience, and Policy: The Challenge of Environmental Migration and Internal Displacement in the United States

Climate change is predicted to increase migration throughout the world as natural disaster impacts increase, agricultural changes occur, and sea levels rise. Yet, policymakers have been slow or even averse to addressing the governance challenges resulting from increased population movement. While the greatest disaster impacts will affect populations in poorer nations, internal migration has regularly resulted from environmental change in the United States. Disasters, such as Hurricane Katrina, clearly highlight a gap in governance of population displacement and migration. Drawing on evidence from previous disasters and predicted climate change impacts, I show that internal environmental migration is an emergent challenge to US disaster policy. To discuss this challenge, I adapt the model of population displacement from Cernea (1997) to reflect the barriers to resilience, related to housing, finances, health, and discrimination, facing populations displaced in the US. Since environmental changes are filtered through social structures to force the most vulnerable populations to permanently migrate, I apply a social vulnerability perspective in my model and use it to evaluate the governance architecture needed to increase the resilience of these populations following displacement. Specifically, I analyze federal disaster, social service, environmental, and discrimination policy to determine how displaced populations' resilience or adaptiveness is or could be addressed. Although current policies show potential in this area, I conclude that incorporation of international standards for internally displaced populations is necessary to address this increasingly salient governance issue.

Linking the 5As
(*Linking across Scale*)

Presenter: Peter Edwards

Author(s): *Peter Edwards*

Architecture and Adaptiveness: How Engagement and Trust Improve Resilience in Social–Ecological Systems – Water Planning on the Gold Coast, Australia.

Architecture has highlighted the issue of how the inclusion of stakeholders and stakeholder groups may not lead to a harmonized approach to governance. However, it has been shown that using a participatory approach to governance improves governance outcomes. While harmonization is a considerable problem considering the numbers of groups and the contexts in which they operate (at national, regional and international levels), it is even evident at the local level, in two separate community engagement exercises around water on the Gold Coast, Australia. Different representatives from the same group had different views on water and planning. This paper explores some of the difficulty in harmonizing any inclusive approach to governance and then goes on to explore how a networked society and networked governance may contribute to a high level harmonization while leaving space for local, contextual inputs. Networks may provide a broad framework for groups to approach governance, while allowing context to be added at the local level. Some participants in the Gold Coast Water planning exercises were members of networks or communities of practice based on larger networks. Their experiences will also be discussed. Networked society and networked governance, however, do raise questions of agency – who are the agents in networks and how are they determined?

Linking the 5As
(*Linking across Scale*)

Presenter: Wen–chen Shih

Author(s): *Wen–chen Shih*

FINANCIAL MECHANISMS FOR CLIMATE CHANGE MITIGATION AND ADAPTATION: WHAT LESSONS CAN BE LEARNED FROM THE REFORM EXPERIENCES OF THE IMF?

The "Copenhagen Accord" published after COP 15 to the UN FCCC, albeit not unanimously adopted, is nevertheless an important decision relating to further development of the climate change regime. In this 12–paragraph document, there are seven paragraphs that touch upon issues relating to financial resource and financial mechanism. This illustrates the importance of financial mechanisms in adopting and implementing policies on climate change mitigation and adaptation. The design and effectiveness of such financial mechanisms (Architecture), especially their governance structure (Agency) in ensuring the democratic quality (Accountability) of producing a fair and equitable resources generating and allocation process (Allocation) will determine whether any financial mechanism can achieve its goal of assisting developing countries to implement mitigation and adaptation policies.

International financial mechanisms for development assistance have been in operation since the establishment of the Bretton Woods institutions –the International Monetary Fund (IMF) and the World Bank Group in 1947. The governance structure and *modus operandi*–in particular the practices of conditionality–of the IMF have been under constant scrutiny for the past five decades and have resulted in a series reforms in the IMF on the practices of conditionality in 2002 (the new "Guidelines on Conditionality") and on governance in 2008 (the adoption of "Resolution on Quota and Voice Reform").

Can the reform experiences in the IMF provide valuable input on the four As of the existing or new financial mechanisms for climate change mitigation and adaptation? This will be the main research question this article seeks to answer.

Linking the 5As
(*Linking across Scale*)

Presenter: Greetje Schouten

Author(s): *Greetje Schouten, Pieter Glasbergen, Pieter Leroy*

The deliberative capacity of private multi-stakeholder governance: assessing equity and fairness

Recent decades have witnessed the rise of private governance initiatives addressing sustainability problems that link a variety of stakeholders around the world. Roundtables are examples of such initiatives. A roundtable is a private arrangement with the aim to improve the sustainability of a specific global commodity chain. It is a multi-stakeholder platform where only private actors – businesses and non-governmental organizations (NGOs) – have decision-making power.

Roundtables are oftentimes Western-initiated, while addressing issues in developing countries and based on deliberation between a large variety of stakeholders. Some authors have suggested that governance initiatives –such as roundtables– copy existing power relations into their practices, while others have stressed their deliberative qualities. That is why we ask the question: To what extent do roundtables succeed in bridging the interests of different types of stakeholders? We aim to answer this question concerning equity and fairness by assessing the deliberative capacity of several roundtables. John Dryzek (2009) defines deliberative capacity as the extent to which systems possess structures to host deliberation that is authentic, inclusive, and consequential.

We assess these three aspects by means of a combination of methods, including discourse analyses (discourse quality indexing). We test the deliberative capacity of three roundtables: the roundtable on sustainable palm oil, the roundtable on responsible soy and the roundtable on sustainable biofuels. By doing this we aim to get deeper insights in how equity and fairness concerns can be better addressed in the design of private governance initiatives, such as roundtables.

Linking the 5As
(*Linking across Scale*)

Presenter: Agni Kalfagianni

Author(s): *Agni Kalfagianni*

Agency and Accountability in Global Food Governance

The global food system faces major sustainability challenges that threaten the well-being of societies worldwide: food insecurity remains a fundamental concern for millions of people, particularly in the South; repeated food scandals pose significant risks for human health and safety; hazardous environmental practices and global environmental challenges, such as climate change, further constrain the capacity of the food system to provide adequate amounts of nutritious and safe food. Simultaneously, capacities and functions in global food governance have shifted. Private actors, in particular transnational corporations and civil society organizations, are powerful emerging agents as manifested by their increasing ability to design, implement and monitor rules and standards that guide and prescribe sustainable behavior in the global food system. Which are the effects of such private rule-setting activities and in what ways can private actors be held accountable for their decisions? The paper pursues this question by examining three prominent examples of private food governance, namely GlobalGAP, the Marine Stewardship Council and the Common Code for the Coffee Community. Drawing on global governance literature and organisational theory, the paper theoretically advances our understanding of the interlinkages between agency and accountability in one of the core elements of earth system governance, i.e. the global governance of food, and empirically contributes to political science research by making available new data on a highly relevant and currently understudied issue.

Linking the 5As

(Linking Research to Practice)

Presenter: Lu XING

Author(s): *Lu XING, Baoguo SHAN, Yunzhou ZhANG, Zhaoguang HU, Liping JIANG*

Burden Differentiation Design for China's Carbon Intensity Reduction Target

China has pledged to cut its carbon emissions per unit of GDP by 40–45% by 2020 from 2005 levels. Currently, the Chinese government is faced with the challenge of making an acceptable design on burden sharing among provinces. EU took sectoral approach to distribute carbon reduction burden among member states based on their widespread homogeneity in economic structures and output. However, China's regional imbalances appear significantly in economic, social and environmental aspects, which means burden differentiation design in China should take more elements into consideration to realize fairness in target decomposition.

These general fairness indicators include but are not limited to: emission need to present future economic and social development, endowment of fossil fuel and renewable energy to indicate the energy structure update potential, cross–regional power transportation to correct the comparable carbon intensity, GDP per capita and energy intensity to illustrate financial and technical support for carbon cut. This paper aims to develop a method that would take into account the differences in development stage and orientation across regions in China. It will not only determines the distribution of commitments but also the aggregate level of emissions from provinces.

Linking the 5As

(Linking Research to Practice)

Presenter: Norichika Kanie

Author(s): *Norichika Kanie, Steinar Andresen, Peter Haas***Improving Climate Change Governance: Applying Lessons from Best and Worst Practices of Environmental Governance**

This paper deals with climate change governance architecture with the focus on configurations of political actor groups and networks in performance of international environmental governance components. The underlying notion of the paper is that effective governance rests on the performance of five components, namely, agenda setting, negotiated settlements, compliance and implementation, resilience, and partnerships. In the performance of each component, the paper identifies best and worst governance practices, in terms of improving environmental quality, based on the configurations of actor groups involved (i.e. NGOs, epistemic communities, IOs, MNCs, and the states). Political assessment of climate change governance from this perspective makes it possible to provide with prescriptions for designing more robust institutional architecture based upon networks of actors that persist over time. Major characteristics of international environmental governance that we consider significant are the followings: (1) Governance occurs through networks of actors; (2) The networks are multilevel/multi-scale: some are hierarchical-going up and down the political scales-and others at the same level of scales (polycentric/multipolar); (3) Networks generate emergent properties; and (4) collective management forms and dynamics cannot be understood reductionistically through studies of individual actors in isolation. This paper constitutes a concluding part of a book project. From analyzing the process of environmental governance by a comparative study of a series of multilateral environmental agreements and regimes, we attempt to derive policy prescriptions to ongoing problems on climate change governance architecture.

Linking the 5As
(*Linking across Scale*)

Presenter: Heike Schroeder

Author(s): *Heike Schroeder, Max Boykoff*

Analysing the makeup and discourse of UNFCCC national delegations through 15 years of COPs

Over the past 15 years, national delegations at UNFCCC meetings have grown significantly in size and diversified in composition, mainly due to the negotiations shifting and expanding in content and complexity. From the emergence of the Clean Development Mechanism to the construction of an Adaptation Fund, a predilection for market-based mechanisms has emerged to address climate change.

Delegations have traditionally been composed of civil servants, but they may also include civil society representatives and international advisors. So far there have been no rules on size and composition of delegations: this has led certain countries to send large delegations and include a diverse mix of stakeholders. This development has two significant effects: (1) the numbers of national and observer organisation delegates are exceeding the capacity of conference venues; and (2) observer organisation delegations are being capped, leading to national delegations inviting observers to attend meetings as part of their delegation. By implication, this continues to blur boundaries between national delegations and observer organisations.

This paper addresses questions of agency and accountability by analyzing two key dimensions – size/composition and discursive shifts – in twenty selected delegations from Annex I and non-Annex I countries. In so doing, this paper seeks to provide insights regarding perils and possibilities in ongoing negotiations, to assess how these shifts may be democratizing and/or confusing negotiations through the incorporation of more varied non-state actors, and to appraise to what extent these changes will help or hinder efforts to significantly address climate change and its effects.

Linking the 5As
(*Linking across Scale*)

Presenter: Asim Zia

Author(s): *Asim Zia*

Post-Kyoto Climate Governance and REDD Policy Design: Confronting the Politics of Scale and Knowledge in Managing Trade-Offs

This paper assesses REDD (Reduced Emissions from Deforestation and Forest Degradation) policy mechanism that is being negotiated for a post-Kyoto climate governance regime among the Conference of Parties. The mainstream discourse on Global Climate Change has portrayed REDD as a “win-win” policy for both the proponents of sustainable climate and biodiversity conservation. While REDD aims at compensating developing countries for sustaining tropical forests, policy actors do not necessarily agree on how REDD policy should be designed and whether REDD is a politically feasible approach to induce green house gas (GHG) reductions in developed countries. Instead of a win-win, REDD policy would be an intervention in a highly complex system, involving trade-offs that will be mediated through the politics of scale and knowledge in international negotiations. Using a mixed methodological approach, which includes quantitative analysis of GHG emission data, multiple stakeholder interviews and discourse analysis of international negotiations, this paper illuminates critical trade-offs in designing REDD policy and analyzes these trade-offs from the policy analytical lenses of politics of scale and politics of knowledge:

1. The baseline issue: Use historical baselines or future projections for allocating REDD funds;
2. The permanence issue: Ignore or incorporate the uncertainty of carbon density measures;
3. The leakage issue: Assign project- or national-level REDD credits;
4. The additionality issue: Evaluate REDD credits as market offsets or voluntary/project credits.

Linking the 5As

(Linking Research to Practice)

Presenter: Joyeeta Gupta

Author(s): *Joyeeta Gupta, Rhodante Ahlers*

The Human Right to Water: Moving Towards Consensus in a Fragmented World

The problem of unmet water and sanitation service needs of one sixth to one third of humanity has been accepted by the UN General Assembly's 2010 Resolution on the human right to water. However, this raises a number of questions. First, does the consensus within the General Assembly imply that all critical and relevant governance actors accept the right and the accompanying responsibilities; does it override other governance discourses dominant in the global arena regarding access issues? Second, why and under what conditions, is a human rights discourse superior to other discourses in order to address the above problem? Third, what are the challenges in implementing such a discourse and what are potential solutions? This paper argues that there are three main arenas in which water access issues have been dealt with – the UN water governance arena, the beyond UN arena, and the arena of human rights discussions. The water access discourses in these three arenas have focused on equitable utilization, water as an economic good, and the human right to water respectively. The human rights discourse is emerging as the most appropriate discourse for dealing with water access, but the consensus is fragile in the fragmented legal world and it is difficult to implement. The paper suggests that if the human rights movement collaborates with social movements there may be a greater likelihood of creating the institutional context within which access to water and sanitation services for the poorest are met.

Linking the 5As

(Linking Research to Practice)

Presenter: Bishawjit Mallick

Author(s): *Bishawjit Mallick, Md. Taibur Rahman*

Vulnerability to Tidal Surges and Politics of Disaster Mitigation Infrastructure Planning in Coastal Bangladesh

An important and wide acceptable adaptation measures to cyclone and tidal surges disaster in Bangladesh is the construction of cyclone shelters. It is widely presumed that those cyclone shelters are either underutilized or restricted only for social and economic elites. This paper assumes that this problem of accessibility has not been emerged due to social regulations rather due to inappropriate location of those shelters. This paper attempts to analyse the locational-suitability of those cyclone shelters in a sampled study area of southwest coastal belt as well as the background planning considerations on the determination of the location of those cyclone shelters.

Firstly, the areas that are vulnerable to tidal surge are identified in the study area using the historical tidal-surges data and digital elevation model. Secondly, it is examined whether the cyclone shelters are optimally located within the studied villages using spatial analysis function of GIS. These spatial analysis has been integrated with socio-political complexities in taking location decision of those shelters which covers possible external or local influences on determination of the location of cyclone shelters. Vulnerability, from this perspective, has been interpreted in this study as a result of socio-political supremacy of establishing cyclone shelters. It shows how the location of a cyclone shelter can determine the social power structure and spatial distribution of social classes in coastal Bangladesh, which is operationally defined here as 'social supremacy' based on some socio-economic indicators of the empirical survey during March – August 2009.

Linking the 5As

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Presenter: Travis Lowder

Author(s): *Travis Lowder*

Beyond Kyoto: Policies and Architecture for the Global Energy New Deal

With the multitude and diversity of stakeholders involved in the UN-sponsored climate change negotiations, it has become a virtual impossibility to reach a workable, meaningful, and comprehensive “global deal” for climate change mitigation and adaptation. However, though the breakdown at the COP 15 in Copenhagen last December has sounded a death-knell for a post-Kyoto consensus, the opportunity now exists to reframe and restructure the hitherto hegemonic UN approach. This paper proposes that climate change policy should steer away from mandatory emissions targets and carbon markets, and embrace an expansion of global energy services with a concomitant “big push” in renewable energy capacity development. This big push can be delivered via several policy pathways, e.g. strong subsidies, national renewable energy portfolio standards, RD&D tax credits, and specially designed financial instruments that use public money to soften risk in renewable energy investment. In general, the argument is that a polycentric, national energy policy approach supplemented (and not dictated by) the UN has more political appeal, will address the gap in energy access between the global North and South, and has a greater potential for delivering on climate change goals besides.

Linking the 5As
(*Linking across Scale*)

Presenter: Anastasia Telesetsky

Author(s): *Anastasia Telesetsky*

Generating International Corporate Accountability Using Domestic Legal Approaches

This paper addresses the conference's question: In what ways can private actors be held accountable for the social and ecological effects of their decisions? States have an international legal obligation to control the activities of entities constituted under their law that directly or indirectly contribute to negative social or ecological impacts in other States. Starting from this premise, the paper explores the international norm of States requiring social and environmental accountability from large private economic actors by analyzing the current State implementation of the Organisation of Economic Cooperation and Development's Guidelines for Multinational Enterprises. This paper proposes two domestic policy approaches which could enhance both directly and indirectly the social and environmental accountability of private actors. 1) States can systematically enlarge the existing jurisdiction of domestic laws designed to protect human rights and environmental interests in order to regulate the negative extraterritorial effects of national private actors. Where the State undertakes prosecution of violations, this would provide for direct accountability of private actors who fail to meet domestic standards in their international activities. 2) States can require enhanced reporting in investment prospectuses to reflect the current social and ecological record of private market-based actors. Each private actor would be assigned a comparable "credit rating" for measurable social and ecological impacts of their business practices. This would provide indirect accountability through market reputation.

Linking the 5As

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Presenter: Jeffrey McGee

Author(s): *Jeffrey McGee*

The Copenhagen Accord: The Rise of Pledge and Review and the End of Redistributive Multilateralism?

This paper seeks to draw linkages between the architecture of international climate governance and issues of allocation of climate change risk and access to future emissions of greenhouse gases. The central claim of this paper is that the Copenhagen Accord represents a significant shift in the architecture of the international climate governance towards a voluntary pledge and review model. This voluntary pledge and review model was developed and advocated in particular by the United States and Australia through a number of non-UN climate change agreements over the course of the last decade, including the Asia Pacific Partnership on Clean Development and Climate, APEC Sydney Leaders Declaration and US Major Economies Process. The redistributive multilateral model of the Kyoto Protocol, based on formal differentiation of obligations between developed and developing countries, is in its death throes. The shift to a voluntary pledge and review model for international climate governance has been applauded by some commentators as representing an opportunity for greater bottom-up experimentation. However, the shift to a voluntary pledge and review model, as embodied in the Copenhagen Accord, also carries a significant prospect that the risks of human induced climate change will be re-allocated towards the poorer developing countries and that access to future emission patterns will be dictated by power-based concerns rather than principles of equity previously agreed in the UNFCCC.

Linking the 5As
(*Linking across Scale*)

Presenter: Hans Bruyninckx

Author(s): *Hans Bruyninckx, Simon Schunz*

The democratic legitimacy of the contemporary global climate governance architecture

The architecture of global climate governance has undergone significant changes in the recent past. The rise of the emerging economies and the relative decline of actors that were traditionally central to global climate politics (the US, the EU, Japan) have resulted in a proliferation and diversification of governance fora in the field (Major Economies Forum, G-8+5, G-20) as well as in a transformation of the structures and decision-making processes within the – still central – multilateral regime itself. The contribution investigates what these apparent manifestations of a power shift in global (climate) politics mean for the democratic legitimacy of contemporary global climate governance. To do so, the paper engages in a three-step analysis. To begin with, it scrutinizes the relevant literature to come to a set of normative criteria regarding the democratic legitimacy of global governance. Subsequently, it develops an understanding of the most significant expressions of power relations in the formal and informal institutions and procedures of the ever more complex global climate governance architecture. In a final step, the criteria are applied to the multilateral regime and selected key fora of global climate governance. In joining questions of governance architecture, power and accountability regarding global climate politics, the contribution ultimately attempts to provide a comprehensive reflection on whether and to what extent eventual solutions to the problem of climate change produced by contemporary global climate governance fora can be considered as legitimate.

Linking the 5As

(Linking the Social and Natural Sciences)

Presenter: Joana Bezerra

Author(s): *Joana Bezerra*

Why has the architecture of the biodiversity governance for Amazonia not succeeded?

The richness and diversity of the Amazon rainforest are widely known. Its key role in the regulation of ecological services is also notorious. All this knowledge, however, has not translated itself into the construction of a governance architecture that efficiently protects the rainforest or creates the means to a development in the region that is more sustainable, which are, at least in the discourse, key for its future and consequently all of ours. If there is a governance in place, is it a problem with the architecture itself? What is it promoting? Is it a problem with political willingness? This article will look at the reason why, in the context of the Brazilian Amazon, the governance framework in place has not delivered more protection and alternatives to the development of the region, focusing on the architecture and on the actors involved. The paper is divided in three sections. First of all, I will briefly discuss the governance framework for that region, looking both at the international and the national levels. Secondly, I will analyse the main problems within this architecture that lead to the current scenario. I will also look at the actors that take part in the governance, looking at who are involved and who benefits the most from the current structure. The third section will be dedicated to how these issues can be addressed so the objective of achieving the sustainable use and the protection of the forest can be met.

Linking the 5As
(Linking across Scale)

Presenter: Maria Noelyn Dano

Author(s): *Maria Noelyn Dano*

Polycentric and Collaborative Governance for Philippines Forests and People

Drawn from a research that investigates environmental governance in three forest protected areas in the Philippines, this paper endeavours to elucidate what governance features best promote both ecological and human wellbeing. It suggests that a polycentric, collaborative approach is the most effective means to good environmental performance while enhancing distributive justice. It highlights how coordination among actors within and beyond the state relates with other criteria of good environmental governance in facilitating better ecosystem protection without undermining allocation and access to local livelihoods among forest dependent communities. These questions become additionally important in the context of efforts to respond to climate change through REDD (Reduced Emissions from Deforestation and Forest Degradation).

Linking the 5As
(*Linking across Scale*)

Presenter: Åsa Persson

Author(s): *Åsa Persson*

Climate adaptation financing under the UNFCCC and beyond: signs of commodification?

A new international regime on finance for climate change adaptation is currently unfolding, with the UNFCCC Adaptation Fund now operational and dialogue on post-2012 arrangements under the UNFCCC and beyond underway. In addition, some donor countries are already channelling conventional ODA through designated adaptation funds, although this has caused intense debates on accountability and additionality. These developments call for an analysis of how the provision of adaptation finance is institutionalised as a public good and an issue of public policy, through the definition of funding eligibility and selection criteria. There is also a need to examine whether adaptation is undergoing a process of commodification and a market for adaptation projects will emerge, in a similar way as has happened with mitigation and the carbon market. More specifically, how will the multifaceted and strongly locally-contextualised issue of adaptation be packaged into fundable projects, in terms of demonstrating benefits and measuring outcomes? What role may private actors take in brokering and administering adaptation projects? Are there profit margins to exploit? This paper provides a first exploration of these issues, by reviewing the early experiences of the Adaptation Fund and the first round of submitted project proposals in the light of commodification theory, as well as contrasting them with findings on the mitigation side. In doing so, the paper addresses linkages between architecture and allocation, by examining how rules of the Adaptation Fund and other significant funds shape the adaptation project marketplace and the economic opportunities it may provide to different actors.

Linking the 5As
(*Linking the 5As*)

Presenter: Aurbindo Ogra

Author(s): *Neha Rai, Aurbindo Ogra*

Are SMEs the forgotten links in our efforts to make the 'businesses' accountable?

In the current times of global environmental governance, the private sector has come under serious scrutiny for its environmental and social accountability. Corporate responsibility, Corporate accountability, and Corporate governance are the resonating terms being used repetitively and interchangeably in the sustainable governance arena. However, this blanket usage of the term 'Corporate' gets diluted, when all firms are considered accountable. Whilst large corporation responsibility is gaining attention, the small businesses are often neglected as agents of socio-environmental consequence. Even if recognised, they often lack incentive, the need, or recognize the importance to look into their own socio-environmental impact. Their smaller size hides the fact that globally, SMEs account for approximately 95% of the firms and 60%–70% of employment in major developing and developed economies (OECD, 2000). Additionally, they contribute significantly to the ecological footprint of the world economy, closely competing with the large corporations in total impact. Given their significance, why are SMEs missing from the global accountability architectures? The central discussion of this paper highlights the various forms of governance architecture (voluntary initiatives, regulations, partnerships, etc.) designed to motivate or engage SMEs for responsible actions. It also draws attention to the erroneous belief that what works well for the large industries also works well for the small businesses. It attempts to assess the discrepancies in the way SMEs are encouraged to meet their social and environmental responsibilities, and concludes with lessons that can be used to design a new innovative architecture ensuring the greater accountability of SMEs towards sustainable development.

Linking the 5As
(*Linking across Scale*)

Presenter: Adolphine Kateka

Author(s): *Adolphine Kateka*

Participatory Approaches To Governance of Common-pool Resources: Space and Cross-Scale linkages

After the perceived failure of top-down approaches to managing common-pool resources (CPRs), participatory approaches (PAs) became a hallmark of projects aiming at sustainable exploitation of CPRs. Participation in the management of these resources by communities living closest to them was supposed to lead to equity in access, economic growth, and in turn to socio-ecological sustainability. However and in spite of more than three decades of implementation of PAs, it is acknowledged that in a good number of instances, PAs have yet to fully deliver on their promises. This has led many to question their efficacy in governing CPRs. This paper draws on the case of the Lake Victoria fisheries as a common pool resource, and uses the concepts of space and scale as lenses through which to view how practices of participation at the local level are closely linked to space-scale related-complexities. Particularly, the paper explores the linkage between international discourses and practices in as far as CPRs are concerned and the intricate local socio-ecological dynamics. Focus is on how this linkage produces and shapes different kinds of spaces (institutionalized or invited spaces and non-institutionalized or home-grown spaces) in which participation takes place. The paper concludes that the realization of PAs as tools for governing CPRs calls for a greater understanding of the interlinked relationship between macro- and micro-politics of CPRs, which in turn calls for approaches that locate participation in spaces found at the interface where the global and the local intersect.

Linking the 5As

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Presenter: Maria Zita Butardo–Toribio

Author(s): *Maria Zita Butardo–Toribio, Marie Antonette Meñez*

"Challenges and lessons learned in the evolution of a multilevel environmental governance system: the case of the Illana Bay Regional Alliance 9 (IBRA 9) in the Philippines".

Illana Bay is one of the most important but threatened fishing grounds in southwestern Mindanao, Philippines due to illegal and overfishing, land and coastal pollution, coastal development, and climate change. The Illana Bay Regional Alliance 9 is a network formed by eight municipalities and the provincial government of Zamboanga del Sur, together with representatives from national government agencies and local stakeholders to address threats and conserve, develop and manage on sustainable basis their shared coastal and marine resources, which are their primary sources of income and livelihood. Despite many limitations and setbacks at both the individual local government unit (LGU) and network level, this alliance was able to make significant progress in law enforcement, conflict management, fisheries resource management, and marine protected areas establishment that benefited the area's biophysical and social environments. This study analyzes the transformation of the alliance's institutional arrangements and organizational structure and their effectiveness in response to changing institutional, governance (e.g. need for greater transparency, accountability) and political challenges and ecosystem needs (resource destruction, new threats). Pressing governance issues and threats that constrain scaling up and institutional strengthening are discussed. The study provides important insights on the dynamic process of development of sustainable and functional environmental governance systems, on institutionalization of governance networks and alliances, and scaling up of good practices through multilevel institutional arrangements, which are the emerging trends and strategies in coastal and marine resource management in the Philippines.

Linking the 5As

(Linking Research to Practice)

Presenter: Peter Edwards

Author(s): *Peter Edwards***Determination of Agency in Networks and Networked Governance – Implications for Architecture.**

This paper examines how the agency of networks, a potential way to harmonize civil society participation in Earth System Governance, can be determined. This is a crucial aspect, especially with the diffuse and far-reaching nature of networks. One of the paradoxes is that some networks, used in participatory engagement are spawned from the traditional expert-driven system that they have been designed to improve upon. With some of these networks derived from the 'expert' paradigm, do civil society groups trust the information that may be provided? There are also questions of authority – if experts, who are often seen as authority figures, are not trusted, how do other networks gain the authority to be agents in earth system governance? This paper will provide some theoretical insights into how networks may gain the authority to act as agents to achieve a more harmonized governance architecture. Insights will also be drawn from several participatory policy and planning exercises in Queensland, Australia.

Linking the 5As
(*Linking across Scale*)

Presenter: Stijn Brouwer

Author(s): *Stijn Brouwer, Dave Huitema, Frank Biermann*

Effective transitioning towards adaptive management

The capacity to initiate policy change in terms of both mitigation and adaptation to global environmental change becomes more and more vital. However, given the amorphous and complex nature of policy change, it remains in many respects a puzzle how policy change can be explained, let alone directed. This paper analyzes policy-making processes at the micro-level, focusing on the behavior of "policy entrepreneurs", that is, highly talented individual change agents who are constantly on the alert for policy opportunities. We analyze the different strategies that policy entrepreneurs employ and assess the (contextual) effectiveness of these strategies. Our empirical research is based on an in-depth four-year research project that entailed more than 60 in-depth interviews along with an extensive mail survey of over 450 local governmental bodies concerned with water governance. The research context is the Netherlands, a country with a diverse institutional context that is known for its expertise in water governance. Theoretically we build on the emerging line of literature on adaptive (water) management, policy change and the role of individual agents. We identified five entrepreneurial styles: (1) engineering, (2) linking, (3) fixing, (4) pacesetting, and (5) adapting. Our research showed that, depending on style and specific context, policy entrepreneurs effectively place emphasis on particular strategies and strategy combinations. In contrast to what is suggested in many theories on policy change, we conclude that by operating strategically, individual agents are indeed to a large extent able to direct policy change.

Linking the 5As
(*Linking across Scale*)

Presenter: Kevin Grecksch

Author(s): *Kevin Grecksch*

Adaptive Capacity and Governance of Regional Water Management in North-western Germany

While climate change is a global phenomenon, regions differ both in their contribution to the problem and in their vulnerability to its impacts. Coastal zones are considered to be significantly vulnerable to climate change impacts, in particular as far as metropolitan areas are concerned. Sea level rise, floods, changes in the water cycles pose severe challenges to cities and communities in coastal zones. Hence, multiple and flexible adaptation measures and solutions are needed that take into account regional ecologic, economic and social circumstances. With other words, is it possible to create tailor-made regional governance that fosters desired development towards a climate change adaptive region. The empirical part of the paper is based on an assessment of the water-management in the metropolitan region Bremen & Oldenburg, Germany. Given the predicted impacts of climate change in the region such as rising sea level, salt water intrusion, temporary ground water scarcity in the summer and increased (heavy) rainfalls, it is necessary to find new modes of water governance. Based on a set of criteria to assess the adaptive capacity of institutions (Gupta et al. 2008) I will add two more indicators – the motivation to adapt and the conviction of adaptation (based on Grothmann 2005 and Grothmann & Patt 2006). Stakeholder/expert interviews, literature research as well as document analysis were used to measure and analyse the adaptive capacity of water-management in the region.

Linking the 5As

(Linking Research to Practice)

Presenter: Usman Raheem

Author(s): *Usman Raheem, Olorunfemi Felix, Afolabi Tunde*

Urban Governance and Disaster Management: Gender Based Differentials in Relief administration for Flood Victims in Ilorin, Nigeria.

The vulnerability of the population to climate change varies however; areas of differentials in the vulnerability are poorly explored. One of these is the differences in the vulnerability to the impact based on gender and how this is related to the adaptive capacities of the weaker groups. 42 flood events occurred in Ilorin city, Nigeria between 2002 and 2009. About 480 houses and 1061 households were devastated. Relief materials were distributed to the house owners for the repair of their houses. This paper examines the differentials that existed in the administration of relief materials between male and female households during the disaster. The survey involved a purposive sampling of 300 households who were victims of the disaster, it included 120 female headed households (40% of all households sampled). Data were obtained from both secondary and primary sources. The information was related to the livelihood characteristics and how these were affected by the disasters. The data obtained were analyzed using parametric and non-parametric statistics. The result shows that female heads combined more one activity to earn sustenance. Relief materials were distributed specifically to enable owners of houses repair them. There are no safety nets designed to reconstruct livelihoods systems and only 5% of female headed households benefitted from the relief materials distributed through government intervention. The study proposes a paradigm shift in urban disaster management from house renovation to livelihood reconstruction. It also draws implications for social justice and equity in disaster administration in developing countries.

Linking the 5As

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Presenter: Agni Kalfagianni

Author(s): *Philipp Pattberg, Agni Kalfagianni*

The Effectiveness of Private Governance Organisations in Global Sustainability Politics: Analytical Framework

Private governance, the institutional arrangements emerging from the interaction among private actors or between private actors, civil society and state actors, that structure and direct actors' behaviour in an issue-specific area, has mushroomed in recent years. Proponents of this privatization trend argue that private actors foster the pursuit of public objectives in the face of limited state resources and lack of political will. In the case of sustainability, private regulation can be seen as contributing to public policy objectives embodied in international treaties, "soft" declaratory international law, action programs or statements by leaders. In contrast, critics draw our attention to the danger that private institutions may circumvent or undermine public national and international law and underline the potentially pre-emptive character of private standards, especially in the absence of effective monitoring. In practice, however, little systematic research has taken place that examines in more detail the actual effects of private governance in general and sustainability governance in particular. Much of our knowledge is based on few case studies and corporate self-reporting. From a sustainability perspective, we need to know to what extent private transnational institutions actually bring environmental and social benefits. From a normative perspective, we are interested in the broader political and economic effects such initiatives have as they gain prominence in global sustainability governance. This paper aims to provide the conceptual basis for assessing such effects and consequently explaining variation thereby across and within private transnational rule-setting organisations operating in different areas of sustainability governance.

Linking the 5As
(*Linking across Scale*)

Presenter: Frank Biermann

Author(s): *Frank Biermann, Man-san Chan, Aysem Mert, Philipp Pattberg*

Multi-stakeholder Partnerships for Sustainable Development: More Smoke than Fire?

Transnational multi-stakeholder partnerships are often hailed as a vital new element of earth system governance. Partnerships are promoted as solution to deadlocked inter-governmental negotiations, to ineffective treaties and overly bureaucratic international organizations, to power-based state policies, corrupt elites and many other real or perceived problems of earth system governance. And yet, the role and relevance of these partnerships remains contested. While some view the new emphasis on partnerships as problematic, others see them as an innovative form of governance that addresses deficits of inter-state politics by bringing together key actors of civil society, governments and business. These conflicting expectations are at the centre of our paper. We provide a large-n assessment of whether the entire system of partnerships tends to live up to the positive expectations of their proponents, or whether the evidence supports the critics. We focus on three governance deficits that are repeatedly mentioned in the literature and that partnerships are meant to address: a regulatory deficit in earth system governance; an implementation deficit; and a participation deficit. Our large-n study draws on three data sources: a meta-analysis of empirical studies of the performance of partnerships; the United Nations Commission on Sustainable Development database on partnerships; and data from our own comprehensive Global Sustainability Partnership Database that we have developed based on extensive data on about 330 partnerships. We conclude that while partnerships fulfil several useful functions, the entire system of partnerships does not fulfil the high expectations of their supporters in filling regulatory, implementation, and participation gaps.

Linking the 5As
(*Linking across Scale*)

Presenter: Frank Biermann

Author(s): *Frank Biermann, Ingrid Boas*

World Politics in Emergency Mode. Exploring the Earth System Governance Implications of Drastic Climate Change

The current stalemate in international climate negotiations gives rise to an increasingly alarmist discourse about the need to prepare for a global warming that exceeds 2 degrees Celsius above pre-industrial levels. This paper addresses this challenge of adapting to possibly drastic climate change from the perspective of international relations and global governance. A substantial body of literature exists on local and national adaptation to climate change and on the resilience of (local) social-ecological systems to change and crisis. Yet hardly any literature is available that explores the likely consequences for international relations and the overall architecture of international institutions and governance mechanisms. The paper first frames the emerging research area of global adaptation governance by assessing adaptive governance capacities in six domains of world politics--water, food, health, economy, migration, and security--with a view to potentially drastic climate change. We then identify three governance dilemmas of global adaptation governance that complicate international political responses to drastic climate change, namely adaptability versus stability, effectiveness versus legitimacy, and effectiveness versus fairness. Third, we outline several institutional mechanisms and instruments that could assist in resolving these three dilemmas of global adaptation governance. The paper addresses several analytical problems identified in the Earth System Governance science plan. We focus on the problem of adaptiveness, while addressing at the same time important questions of governance architectures, modes of allocation, and mechanisms to ensure accountability and legitimacy. Thus, our paper offers important contributions to linking the analytical themes as well as to linking across scale.

Linking the 5As
(*Linking across Scale*)

Presenter: Frank Biermann

Author(s): *Frank Biermann, Aarti Gupta*

Accountability and Legitimacy in Earth System Governance. Taking Stock and Moving Forward

Earth system governance is not only a question of institutional performance and effectiveness, but increasingly also of the accountability and legitimacy of decision-making. This relates to all levels of governance from the local to the global. It involves the accountability and legitimacy of public regulation, but also of novel types of private governance arrangements within and beyond the confines of the nation state. This paper explores how and why securing more accountable and legitimate governance is increasingly important in its own right, in light of debates over more democratic forms of global governance; but also whether and how it contributes to institutional effectiveness. Our paper proceeds in four steps. First, we conceptualize accountability and legitimacy in earth system governance. Second, we place questions of accountability and legitimacy within the larger context of earth system transformation, which poses, we argue, a number of special challenges to the quest for accountability and legitimacy of governance. Third, we analyze the effects of different sources and mechanisms of accountability and legitimacy, as evident within a variety of governance arrangements, on both the democratic potential and the overall performance of governance systems. Fourth, in concluding, we outline several reform options that might help alleviate long-persisting and newly emerging deficits in the accountability, legitimacy and democratic potential of earth system governance. Our paper studies the problem of accountability and legitimacy as identified in the Earth System Governance science plan in its links with other analytical problems and across scales, hence contributing to two major conference themes.

Linking the 5As
(*Linking across Scale*)

Presenter: Magnus Boström

Author(s): *Magnus Boström, Anna Maria Jönsson, Marion Dreyer*

Challenges for stakeholder participation and communication within regional environmental governance. Comparing five environmental risks in the Baltic Sea.

This paper focuses on challenges for stakeholder participation and communication within regional environmental risk governance (international in a regional context). We focus on environmental risks in the Baltic Sea. Our point of departure is the theoretical and normative assumption that the inclusion of a broad range of actors has the potential to facilitate environmental risk governance in both substantive (inclusion of more knowledge and viewpoints) and democratic (inclusion of different values; improved accountability) dimensions. Yet, research so far has done little to investigate the actual potential and challenges for such broad stakeholder participation and communication in a regional context. Such challenges are substantial, because the countries among the Baltic Sea differ considerably in terms of power relations, cultures, and political histories. The paper focuses on how organizers of stakeholder participation and communication can deal with such and other challenges by comparing such processes (e.g. public hearings, scenario workshops) in five key risk issues concerning the Baltic Sea – marine oil transportations, chemicals, over-fishing, eutrophication and alien species. The analysis is based on case studies undertaken within each issue–area in the international research project RISKGOV – Risk governance of the Baltic Sea. To investigate the content (what is defined as relevant to communicate about) and form (who can take part, when and in what ways) of stakeholder participation and communication processes, we make use framing theory and theories of risk communication.

Linking the 5As
(*Linking across Scale*)

Presenter: Christopher Koliba

Author(s): *Christopher Koliba, Asim Zia*

Using Agent-Based Models to Ascertain Accountability Systems Within Complex Watershed Governance Networks

As noted in the Earth System Governance Project's science plan, one of the major challenges to making and implementing sustainable environmental policy concerns how governance systems can be designed to hold policy actors accountable, particularly when their relationships to each other are carried out through complex governance network arrangements that cross geographic and social scale, as well as the public, private and nonprofit sectors. This paper will present an ongoing effort by researchers from the University of Vermont to integrate the "5As" into an agent-based model (ABM) of a regional watershed governance network. This watershed spans two US states and one international border. Governance network analysis encompasses multi-scale interactions, emergent behavior, pattern formation, and self-organization. Governance networks possess nonlinear couplings, lags, inertia and foresight/situational awareness, and feedbacks across multiple processes and scales. They often emerge through a series of incremental policy actions that are undertaken simultaneously at the local, regional, state, provincial, national and international levels. The regional watershed governance network ABM presented in this paper utilizes a conceptual framework of accountability that is organized around the democratic (elected representatives, citizens, and the legal system), market (owners and consumers), and administrative (bureaucratic, professional and collaborative) ties found in governance networks (Koliba, Meek, and Zia, 2010). The authors discuss how accountability ties are integrated into an ABM that also includes agent characteristics, other facets of agent ties, and whole network characteristics. Implications for the theoretical development and empirical examination of accountability across earth systems governance networks over time will be drawn.

Linking the 5As
(*Linking the 5As*)

Presenter: Sujan Saha

Author(s): *Sujan Saha*

Protecting Climate Refugee: A Proposal of Justice and Resettlement

Since climate change is redrawing the coastlines, a large number of people would likely to move from their homelands. Some studies estimated that 200 millions people will force to leave their homes by 2050. Most climate refugees are expected to become internally displaced, but many could cross international borders. Despite this looming climate migration crisis, current refugee protection regime of UNHCR does not recognize climate refugees' right to relocate internationally.

On this backstage of vacuum, this paper argues for a principle that could build on the political and moral support from all to protect climate refugees. Firstly, the paper outlines the principle as a separate, independent legal and political regime based on principle of justice for recognition, protection and resettlement of climate refugees. The starting point is John Rawls' work on distributive justice in *A Theory of Justice* (1971). The context to which, we relate Rawls principle of justice is that of protect climate refugee in a liberal society. Secondly, the paper makes use of the Joint EU Resettlement Programme, proposed by Swedish Presidency of EU 2009 for European Union countries. The proposal is a burden and cost sharing mechanism of protecting political refugees from coastal and small EU countries. On the basis of the proposal, the paper outlines a blueprint of the protection principle as a common but differentiated responsibilities, and the mechanism of full incremental funds.

Linking the 5As

(Linking Research to Practice)

Presenter: Laura Drivdal

Author(s): *Laura Drivdal, Suzall Timm***Local polycentric environmental governance and agency beyond the state: Two case studies of networks in informal communities in Cape Town**

Theories on polycentric governance are increasingly promoted for better adaptation and mitigation to climate change. Scholars have argued that these aspects are too complex to solve in a top-down manner, and that increased collaboration including actors from different spheres is essential. However, if such collaboration is going to be effective, a better understanding of contextual and local governance mechanisms is necessary.

Therefore, we will look at two empirical issues that literature on environmental governance does not deal with adequately. First, as many of the case studies are conducted on state-initiated projects, agency and initiatives beyond the State needs more attention. Secondly, most cases are conducted in a western context with strong states and robust bureaucracies. Consequently, our case studies examine the governance of adaptation and mitigation strategies within Cape Town.

The first case will highlight the complexities of actors influencing the governance of adaptation to flooding in informal settlements. The second case will look at the rules that shape governance strategies in informal recycling networks. These cases will examine, (a) how informal networks govern on a local scale, (b) how problems of architecture, adaptiveness, accountability, allocation and access impacts on the agency of actors. The main assumption that guides our case studies is that the complexity of actors within the South African context affects collaboration that shape governance processes.

Through testing this assumption, we will identify complications of agency beyond the State and establishing collaboration at a local scale. Awareness of these complexities is critical for improving adaptation and mitigation.

Linking the 5As
(*Linking across Scale*)

Presenter: Farhad Mukhtarov

Author(s): *Farhad Mukhtarov, Dave Huitema*

Agency and Adaptiveness: Local Communities in the Face of Conservation Policies in the Northern Vietnam

Policy change in the Ba Be and Na Hang Protected Areas in the Northern Vietnam towards introduction and enforcement of conservation goals may have a tremendous impact on local communities' livelihoods. Nonetheless, the involvement of local actors in decision making around protected areas has not been straightforward. There are considerable frictions between global biodiversity values, national interests and local livelihood needs in this area (Zingerli 2005; McElwee 2010). This paper, being based on an in-depth empirical analysis of decision-making process around the Ba Be National Park and Na Hang Nature Reserve in Vietnam, offers insights into the extent to which local communities may cope with the environmental and policy change linked to conservation. Conceptualized as "policy entrepreneurs", local actors are studied in an attempt to identify various strategies at their disposal to influence decision-making around protected areas. The framework suggested by Huitema and Meijerink (2009) is used to provide conceptual guidance to this exploration in terms of strategies at policy entrepreneurs' disposal. This analysis, therefore, spans multiple levels as the framework maintains the focus on local actors, while allowing linkages with other levels (regional, national and international) through the concepts of "networking" and "coalition-building". The study will result in important conceptual insights into the relationship between agency and adaptive capacity of local communities in a centralized state-dominated society as in Vietnam. It will also result in useful policy-relevant recommendations to local actors in making sure that their voice is heard in the decision-making process around park management.

Linking the 5As
(*Linking across Scale*)

Presenter: Marjanneke Vijge

Author(s): *Marjanneke Vijge, Aarti Gupta*

Carbonizing forest governance in India? Analyzing the consequences of REDD for accountability and agency

Given the global governance challenge posed by climate change, increased attention is placed on the value of forests to store carbon. The global initiative of Reduced Emissions from Deforestation and Degradation (REDD), endorsed by the United Nations Framework Convention on Climate Change, is the dominant site wherein multilevel climate and forest governance come together and potentially clash. India is at the forefront of international debates on REDD in pushing for REDD+, which includes afforestation and reforestation. Though REDD+ has not yet been implemented in India, the government recently announced the Green India Mission (GIM) as part of the National Action Plan on Climate Change, which seeks to leverage the link between climate mitigation and forests as carbon sinks.

In our paper, we analyze potential clashes and synergies between newly articulated Indian climate governance goals (including support for REDD+) and long-standing forest governance policies and practices, viewing GIM as an important site in which these clashes and synergies manifest themselves. Our central motivation is to analyze how such clashes/synergies change accountability relationships between key actors in Indian forest governance, in particular those between the central state, local forest authorities and local communities. In terms of the Colorado conference themes, our paper explores changing accountability relationships in Indian forest governance flowing from the evolving nature of architecture and agency in this domain. While the changing agency shapes who is (now) accountable to whom, evolving forest governance architectures, reflected in GIM, influence mechanisms by which accountability can be exercised and at which level.

Linking the 5As

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Presenter: Annica Kronsell

Author(s): *Annica Kronsell*

Gender and climate politics: the case of Sweden

This paper takes a starting point in the climate strategies proposed recently in Sweden. Gender analysis often ask about gender parity, i.e. if men and women are equally represented. It's been argued that the lack of gender in climate governance is because women have been absent from international climate negotiation. The Swedish case does not support this. In Swedish climate governance there is gender parity in committees and expert groups instrumental in proposing national, regional and local climate strategies. Women have been present yet the climate strategies formulated pay no attention to gender aspects or effects on women. Concerns about gender and social reproduction is effectively marginalized from the climate agenda. Using feminist theory it can be explained by the gender order with a propensity for technical solutions, infrastructural development and lack of concern for gender and social aspects of climate politics. As an example, the paper argues that gender and social relations are seldom discussed among scholars and policy makers. This is the case when different scenarios and visions for the future are proposed. Method that visualize futures, a tool in long-term climate governance, are often used to set the agenda, and becomes the base for plans, measures and ways to reach specific goals and set policy directions. The way the climate problem is articulated and the visualization of possibilities for a low-carbon future most often lack a vision on gender relations or even social relations in general. Usually it is left out of the discussion all together.

Linking the 5As
(*Linking across Scale*)

Presenter: Blake Ratner

Author(s): *Blake Ratner*

Accountability across scales: Strengthening responses to transnational environmental resource conflict

Most countries in the global South have opened their borders to global markets for environmental goods & services, but mechanisms to ensure accountability and equity in allocating access to these resources and the benefits that flow from them are still poorly developed and fragmented. This paper surveys international experiences in building such mechanisms of accountability, focused in particular on approaches that link local community mobilization with international civil society networks and the media, often with reference to the emerging body of international law in the fields of environment, development, trade and human rights. A comparative case study analysis examines successful experiences of civil society mobilization focused on the mining sector in Peru, forest resources in Indonesia, agricultural land in Madagascar, plant biodiversity in Costa Rica, and gems in Sierra Leone. A synthesis of lessons from these cases demonstrates that the effectiveness of “informal” mechanisms for accountability rooted in civil society activism and advocacy depends heavily on more “formal” mechanisms of domestic rule of law, intergovernmental relations, and the role of international organizations. These formal mechanisms in turn depend on civil society activism to maintain their relevancy in response to rapidly changing sources of risk. In short, the “new” agenda of earth systems governance will not progress without integrating and building upon the more established but unfinished work of human rights, livelihood security, and social justice.

Linking the 5As
(*Linking across Scale*)

Presenter: Diana Gildea

Author(s): *Diana Gildea*

"Surviving the World Food System: producing & consuming food in the modern era"

There is one food system in the modern era. The idea of national or regional food security, while much discussed since the food crisis of 2002 and the financial crisis of 2008, is only possible through an engagement with the world food system. This paper examines the embodied experiences of food producers and consumers in the differentiated parts of the global world. Examining these elements as a whole allows us to address issues of agency, accountability, access and allocation. I argue that the modern world food system is a socio-ecological phenomenon that transforms social practices as thoroughly as land tenure and production in the field. The Green Revolution (I & II), farm debt cycles, increased chemical fertilizers and pesticides, the advent of superweeds and superpests serve to reshape the lives of food producers in the spheres of work and home, not only, but especially in the global south. Genetically modified organisms, transfat, high fructose corn syrup, product innovation, and sophisticated marketing campaigns have changed how food is consumed, most notably in the global north where health issues (diabetes, heart disease, eating disorders) are rampant. These are two sides of the same coin, the productive and consumptive spheres of the world food system. Taking these as dialectically related, rather than contrasting elements, we can see the connections between the factory field and the high tech laboratory, Wall Street and obesity, State interventions and the production of knowledge, corporate control and capital accumulation.

Linking the 5As
(*Linking across Scale*)

Presenter: Ravi Baghel

Author(s): *Ravi Baghel*

Dissenting governmentalities: Expert opposition to the large scale transformation of river systems in India.

Large scale river control projects, aggressively promoted by many governments as part of development, have transformed river systems up to the planetary scale. Such a mentality of governing nature through domination and control, ignores fundamental, necessary social and ecological functions of river systems, however this continues to be the prevalent way of thinking amongst Indian “experts”. This paper looks at the activism of three dissenting experts—two engineers and a retired senior bureaucrat—who attempt to challenge this prevalent orthodoxy. The activists do so by questioning the state of expert knowledge of rivers in India, and proposing alternative mentalities of governing rivers that are sustainable and are sensitive to local socio-ecological context. I argue that whereas their status as experts lends credence to the efforts of these activists, it also constrains the extent to which they can challenge the prevailing orthodoxies of river control. In spite of this, the efforts of these dissenting experts point the way towards the changes necessary in expert knowledge practices, to make them more sustainable and to increase their accountability.

Linking the 5As
(*Linking across Scale*)

Presenter: Harriet Bulkeley

Author(s): *Harriet Bulkeley, JoAnn Carmin, Vanesa Castan Broto*

Experimenting with climate justice in global cities: understanding of the roles of public and private actors

While the global environmental governance community is beginning to build a picture of how and why cities are responding to the twin issues of climate mitigation and adaptation, the social and environmental justice challenges that they raise are often overlooked. In this paper, we seek to address this gap in our current knowledge. Responding to climate change involves allocating responsibilities across a diverse range of actors, with implications for how the burdens, opportunities and risks are shared, and entails issues of procedural justice – who is included and on what terms – as well as distributive justice – who wins and who loses from the policies and initiatives put in place. Drawing on two internationally comparative research projects, we will explore where and how issues of social and environmental justice are being addressed as global cities respond to climate change. While conventional wisdom might suggest that public authorities and civil society actors lead in advancing justice concerns, initial results suggest that private sector actors are also playing a critical role. The paper will examine the different roles played by actors in the mitigation and adaptation domains, and investigate the ways in which what experiments with climate justice are taking place through policy, planning and the development of specific projects. In so doing, we hope to contribute to the conference aim to understand of the dynamics of 'allocation' and the ways in which this is structured through the different forms of 'authority' at work.

Linking the 5As

(Linking Research to Practice)

Presenter: Seth Shames

Author(s): *Seth Shames, Lini Wollenberg, Sara Scherr*

Institutional innovations to reduce transaction costs in smallholder agricultural carbon projects

If there is a silver lining to the storm cloud of climate change for smallholder farmers throughout the world, it is the potential for them to participate in international climate change mitigation markets that have emerged in recent years. With supportive policies and skillful project development, these markets have the potential to catalyze climate-friendly and resilient smallholder agricultural development. This paper will examine the ways in which agricultural carbon projects can be organized so that they limit transactions costs and provide the greatest possible benefit farmers. First we will diagram the institutional anatomy of an agricultural carbon project and identify key transactions costs. We will then draw on cases from throughout the world, with a particular focus on Africa, to discuss models for reducing these costs. We will examine the potential of various agricultural credit aggregation mechanisms, farmer payment arrangements, innovations for streamlining carbon measurement and certification costs, and project financing opportunities. We will conclude by offering recommendations for various sectors and organizations to support the development of pro-farmer innovations in these projects and by identifying priority areas for further research.

Linking the 5As
(*Linking across Scale*)

Presenter: Edward Cameron

Author(s): *Edward Cameron*

Equity and Climate Change: Expanding opportunities, choices and capacity

This submission would assess the interface between allocation, access and architecture in leading a transition to low carbon climate resilient development. The core argument is that pursuing a strategy based on equity and improved governance can build a new climate change discourse with implications for diagnosis, process, institutions, policies and interventions. These in turn can shape climate responses on mitigation, adaptation, technology and finance and in so doing enhance substantive outcomes for vulnerable populations.

Equity was defined by the World Development Report in 2006 as expanding opportunities, choices and capacity to build assets and resources. This means that communities at the forefront of climate change should have equal opportunities to pursue strategies that reduce vulnerability, build resilience, promote sustainable development and are spared from extreme deprivation in outcomes resulting from climate change. In addition, responses to climate change should not exacerbate the existing development challenges faced by marginalized and poor groups.

This paper will assess whether the current global climate change architecture provides adequate opportunities for vulnerable populations to build assets and resources and explore avenues for enhancing equity and outcomes across scales of governance.

Linking the 5As
(*Linking across Scale*)

Presenter: Adam Henne

Author(s): *Adam Henne*

Producing and Consuming the Global Forest: Agency and Knowledge Across the Certified Forest Product Value Chain

Timber companies, international environmental NGOs, trade unions, and indigenous advocates are all part of the social ecology that shapes the world's forests. The regulatory regimes in which these actors collaborate, struggle, or miscommunicate are productive of ideas as well as timber. International bodies like the Forest Stewardship Council promote a form of voluntary environmental regulation or 'soft law' through third-party certification of sustainable forestry. In this paper, I explore how this emerging form of neoliberal environmental governance works as a site for the production of new environmental knowledge; that is, new definitions of key concepts such as sustainability, scientific credibility, and even forest. I consider forest certification in terms of "friction," the gaps and overlaps between ways of understanding sustainability and sustainable forestry at different points along the value chain of certified wood. Drawing on ethnographic fieldwork with producers and activists in Chile and North America, as well as critical analysis of FSC materials, I argue that the process of setting standards tends to compress spatial and temporal scales and reinscribe hierarchies of knowledge. The analytical framework of poststructural political ecology shows how these frictions shape complex challenges, and perhaps opportunities, for forest protection and earth system governance.

Linking the 5As
(*Linking across Scale*)

Presenter: Emily Anderson

Author(s): *Emily Anderson, Hisham Zerriffi*

Should we plant trees? Knowledge and equitable participation in smallholder carbon tree planting in Uganda

The equity of mitigating climate change in developing countries has been questioned because responsibility for mitigation is seen to be transferred from those primarily responsible for causing climate change to those who have contributed little to greenhouse gas emissions. Consequently, having adequate knowledge and understanding is especially important in the case of mitigation activities conducted in developing countries. One category of mitigation activities that is gaining attention and acceptance under many carbon schemes is tree planting with rural smallholders. There is hope that planting initiatives could deliver both carbon mitigation and rural development benefits. A qualitative study of tree planting initiatives with smallholders in rural Uganda suggests that farmers widely perceive inequality in mitigation activities and in the relationships between international buyers and local producers. Perceived inequality is connected to understanding about responsibility for climate change and carbon prices. Although farmers were appreciative of the opportunity to access carbon income, their knowledge about climate change and carbon credit generation through tree planting was often inaccurate or incomplete. This brings into question whether farmers are making informed decisions to participate in carbon planting. This study highlights the need for further research into how to effectively transfer knowledge about carbon markets and climate change to rural people in order to ensure that they have the information necessary to choose to participate in mitigation schemes.

Linking the 5As
(*Linking across Scale*)

Presenter: Shiv Someshwar

Author(s): *Shiv Someshwar, Esther Conrad, Rizaldi Boer*

Governing for the “Global” and “Local” Good: Agency, Equity and Resilience in Managing Peatlands in Indonesia

A changing climate presents increasing development risks and new governance challenges in agriculture and land management contexts. Improving capacity to manage current climate variability is important for building resilience to longer-term climate impacts. This is particularly crucial in places where land use change, climate, and ecology are linked with environmental problems at a global scale, while also placing local livelihoods at risk. Peatland forests in Kalimantan, Sumatra, and Papua regions of Indonesia are an example of such a system. Land clearing by fire for agriculture and palm oil plantations contributes significantly to global carbon emissions, while impacting local livelihoods and regional well-being.

Over the past several years, our research has explored the utility of seasonal fire risk forecasts in Central Kalimantan to reduce peatland fires, while supporting local livelihoods. The paper will draw upon engagement with local, provincial and national actors in Indonesia to interlocate issues around the design of decision and policy structures across scales (Architecture), engagement of state, private and civil society actors (Agency), and the sustainability of livelihoods in a fair and equitable manner (Allocation and Access). We seek to unpack and critically examine the elements of “earth system governance” expected to fulfill sustainability across leading dimensions (social, political, economic and ecological), while satisfying local and non-local/global aspirations. Our findings will be of interest not only to the design of REDD programs, but more broadly to the generation and governance of public good, when “good” is layered and contested, having appeal to different “publics.”

Linking the 5As

(Linking Research to Practice)

Presenter: Kyle Hartfield

*Author(s): Kyle Hartfield, Diana Liverman, Jamie McEvoy, Jesse Minor, Claude Peloquin, Andrea Prichard, Matt Skroch, Tabitha Spence, David Tecklin***A '5-A' Assessment of the Role of Non-nation State Actors in the Copenhagen Climate Change Negotiations**

This paper links the 5As of the Earth System Governance (ESG) framework to assess the role played by non-nation state actors (NNSA) within the Copenhagen round of climate change negotiations (COP15) and to understand how these actors influence power, knowledge and norms within the United Nations Framework Convention on Climate Change (UNFCCC). We focus on NNSAs because they occupy a curious, and still poorly understood role within the international climate regime. Some of the most aggressive climate actions have been taken by NNSAs, which express diverse forms of agency from commitments to reduce emissions to shaping climate discourses and contributing to the flow of information. However, they justify themselves differently than state actors and must appeal to constituencies for funding and ongoing legitimation. Because they may have narrower objectives than some state actors, it is important to consider which particular interests NNSAs speak for, and the ways in which they use power and knowledge to advance their claims and objectives within the climate governance debate. In this paper, we analyze seven NNSAs that participated in COP15 and are major actors within business, environment and humanitarian sectors. Using discourse analysis, interviews and participant observation, we examine the degree of Agency of each NNSA and how their participation in COP15 potentially affects Architecture, Adaptiveness, Accountability, and Allocation & Access within the UNFCCC Framework. This analysis answers recent calls for analysis that moves beyond state-centered approaches and gives greater consideration to the full range of actors that influence global environmental governance.

Linking the 5As
(*Linking across Scale*)

Presenter: Kristine Kern

Author(s): *Douglas Macdonald, Kristine Kern, David Gordon*

The challenge of allocating greenhouse gas emission reductions

As climate change is a truly global collective-action problem, no one country can solve this problem alone. States must agree on both an over-all goal and sharing of the total effort. This challenge exists at both the international level and within federated political systems. Examples of such agreements are the 1997 Kyoto Protocol, the 1998 EU Burden Sharing Agreement and the 2008 EU Effort Sharing Agreement. In contrast, no such agreement has been reached at the Copenhagen Conference and within the federal systems of the United States, Canada and Australia. There is general agreement that two principles should be used to guide allocation – equity, including historical responsibility and capacity to act; and efficiency, in terms of minimizing cost per unit of emission reduction. The paper asks how and in what way these two considerations are reconciled (through institutional architecture, through adaptive mechanisms) and considers the implications (positive and negative) of the cases of success and failure.

The proposed paper has four objectives. First, it will provide comprehensive examination of the challenge described above. Second, it will give a critical review of the various proposals which address this challenge. Third, the paper will offer insights on factors which facilitated agreement in the two instances of EU allocation. Fourth, the paper will thus contribute to a better understanding of the linkages between equity and fairness concerns (allocation and access), the adaptiveness of political systems, and institutional arrangements (architecture) that facilitate effective action on climate change.

Linking the 5As
(*Linking across Scale*)

Presenter: Camille Washington-Ottombre

Author(s): *Camille Washington-Ottombre, Bryan Pijanowski*

Institutions for Coping and Adapting to Climate Variability and Change on Mt. Kenya (Kenya), 1910–2030

This work explores coping and adaptation strategies to climate change and variability in the Mt. Kenya area (Kenya). In particular, this research provides an in depth look at both the nature and evolution of the institutions that frames coping and adaptation strategies in the region. We first define and differentiate between coping and adaptation strategies, before explaining how theoretical frameworks from resilience and vulnerability thinking can be mobilized to think about the dynamic processes of adaptation on Mount Kenya and move beyond a static view of coping strategies. This work next moves to the lived experiences of coping and adaptation, combining the local institutional and land-use history of the region with life-stories interviews that provide thorough knowledge of past and present responses to climate change and variability. Finally, drawing from a number of interviews and role-playing simulations conducted with local men and women in the Mt. Kenya area, this work explores paths for future adaptation to climate change. Through the analysis of empirical and simulated data, this paper explains how various institutional contexts result in changing types of organizations that support local responses to climate change and variability. In a local context of presumed high vulnerability, this work suggests that the recurring and frequent turnover of the local institutions and organizations that support local coping strategies greatly enhances local resilience.

Linking the 5As

(Linking Research to Practice)

Presenter: Esther Duke

*Author(s): Esther Duke, Joshua Goldstein, Ryan Finchum, Heidi Huber-Stearns, Jorge Pitty, Gladys Beatriz Rodríguez P., Samuel Rodríguez, Luis Olmedo Sánchez***Informing the Design and Governance of a Pro-Poor Payment for Ecosystem Services Program in Western Panama**

Payments for ecosystem services (PES) have emerged as an incentive-based tool to protect and restore ecosystem-service flows, which are being degraded at regional and global scales. This study examines the potential for PES to address conservation and livelihood issues in the buffer-zone of La Amistad Bi-national World Heritage Site in Western Panama, and provides insights for the equitable architecture of such a program.

We conducted a survey of 344 farmers regarding their interest in a hypothetical PES program. Many expressed interest in participating; interest was greatest for agroforestry and forest conservation scenarios. Using logistic regression analysis, we identified explanatory factors which predict willingness to participate in a PES program. Several factors were related to household socioeconomic status.

We also investigated equity and fairness concerns including how potential PES program design factors related to minimum enrolled area, land tenure, and land characteristics (e.g., slope) might affect eligibility of low-income households. In relation to allocation and access, respondents who ranked lower on our constructed socioeconomic scale were less likely to be eligible to enroll in a PES program despite the fact that many are willing to participate.

Our research contributes to a key piece of the PES design puzzle by proactively exploring ways to ensure that landowners across the socioeconomic spectrum (particularly the poor) are able to participate. Understanding trade-offs is important for guiding PES program architecture to achieve rural development and poverty alleviation goals in tandem with conservation outcomes.

Linking the 5As
(*Linking across Scale*)

Presenter: Matt Luizza

Author(s): *Matt Luizza*

Defining First World Community Forestry: Examining its Typology and Geo-Spatially Mapping the Arrangement of Community Forestry Ventures in Canada and the U.S.

Community forestry (CF) is argued to be an environmental governance strategy that promotes democratic practices through extensive stakeholder inclusion and control of management processes by local communities, leading to a more resilient social-ecological system. CF has increased in much of the developing world and although having a long history in North America it constitutes a small portion of the developed region's existing forests; yet discussions continue at the national level of expanding CF tenure in Canada and the U.S. In this article I explore a typology of community forestry prevalent in Canada and the U.S. by clarifying the problematic nature of the concept, creating a set of indicators to differentiate amongst the types of CF ventures, based on the characteristics and priorities of each CF type, the certifiers, the principles for attaining certification, as well as the nested government arrangements, and by geo-spatially mapping their distribution across the region. Sharpening the conceptual foundation of the broader theoretical discussion of CF in addition to increasing methods for distinguishing and mapping their different versions will assist in addressing the most promising explanations for the prevalence of particular CF forms in Canada and the U.S. and hopefully add to the explanation of what conditions give rise to community involvement in CF ventures in developed states more generally, what types of CF ventures are most effective in these states and what conditions are needed for them to flourish.

Linking the 5As
(*Linking across Scale*)

Presenter: Hannah Gosnell

Author(s): *Hannah Gosnell, Nicole Robinson*

Toward a Sustainability Transition on Ranchlands in the American West

Rangeland managers are positioned to play an important role in a global sustainability transition since their management practices have bearing on, among other things, efforts to mitigate climate change through increased soil carbon sequestration. In many parts of the world, however, rangelands are being managed in a way that exacerbates soil erosion and carbon emissions; thus there is a need to identify governance mechanisms for incentivizing “best management practices.” Drawing on findings from research on US ranchers’ experiences with the voluntary carbon market, this paper will identify barriers faced by ranchers seeking to transition to carbon-friendly range management; then consider architectural innovations that will need to take place in a coordinated fashion at multiple scales if such transitions are to occur. We identify “levers of change” – forces that both control the rate of positive change and that are subject to policy intervention (Parris and Kates 2003). Key levers at the local and regional scale are mostly social in nature and include the cultivation of support structures that effectively engage actors in new approaches to range management and enhance local capacity for self-organization and adaptive co-management (e.g. “rancher collaboratives”). At the national/international level, new types of financial levers (compliant carbon offset market, Farm Bill programs) must be developed to incentivize carbon-friendly range management. A central goal of this research is to cultivate better linkages between local actors responsible for the provision of ecosystem services like carbon sequestration and the national decisionmakers experimenting with different policy instruments for mitigating climate change.

Linking the 5As

(Linking Research to Practice)

Presenter: Thi Kim Phung Dang

Author(s): *Thi Kim Phung Dang*

The legitimacy of forest devolution policy: the case of forest land allocation in Vietnam

Abstract

Governance has been a policy subject for the last two decades. However, the role of governance in forest devolution practices, a major trend of forest management in developing countries, is still ambiguous and contested. Given this consideration, the case of Vietnam's forest land allocation is worth examining. Vietnam used to follow a strong state forestry, which engaged in serious conflicts with local people and resulted in severe deforestation and an alarming erosion of biodiversity. To cope with the problem, since 1992, the country has carried out the policy of forest land allocation to allocate forest lands to individuals, households and organization for protection and rehabilitation. However, recent evaluations recognize the limited success of the policy. Basing on the perspectives of the Policy Arrangement Approach and the Governance Capacity Approach, a research is carried out to shed light into the questions of how the design and implementation of the new policy is capable to provide enabling conditions to such a changing forest governance and how these conditions determine its performance, regarding the shifting controls of forest resources from state to new actors after decades of exclusion. As there are evidences of increasingly conflicts between forestry sectors and local people in some forested areas, a part of the research investigates how and why such a well-intended policy still suffers from the low local support. The paper for the conference will deal with this issue.

Keywords: forest devolution, forest land allocation, forest policy, governance, governance capacity, Vietnam

Linking the 5As

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Presenter: KK Kaushal

Author(s): *KK Kaushal*

India : Achieving The Millennium Development Goals through the Forests

In spite of rapid strides in the recent decades, India has a long way to go in achieving Millennium Development Goals. With quite low per capita forest area, the challenge is to improve the life of 178 million forest inhabitants who are the poorest of the poor without impinging on the environmental and watershed functions of the forests. Sustainable Non Timber Forest Products Management supplemented by prudent promotion of ecotourism and bioprospecting can help in achieving all the eight Millennium Development Goals through non-destructive use of forests in contrast to the partial fulfillment of Goals 1 and 7 presently.

Key words Millennium Development Goals, Non Timber Forest Products, Ecotourism, Bioprospecting