

# Resource Politics: Transforming Pathways to Sustainability



7-9 September 2015, Institute of Development Studies, University of Sussex

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# About the conference

## Why now? Contexts and debates

In the build up to the confirmation of the post-2015 sustainable development goals, the politics of resource access, allocation and distribution are high on global policy agendas. The limits to economic activity in the face of 'planetary boundaries' are being fiercely debated, and even humanity's survival in the age of the Anthropocene is questioned. Some suggest a 'perfect storm' of factors is combining to present ever growing threats, often assumed to be at the 'nexus' of food, water, energy and climate change issues. Among the responses are advocates of 'green economy' strategies, seeking transformations to more sustainable economies.

But the 'sustainability' framing of these issues needs interrogating. How do these debates draw on earlier neo-Malthusian visions of 'Limits to Growth', blind to social difference, distributional implications, and failing to disaggregate local users and politics concerning resource use, consumption and production? What politics and power relations are hidden by the apocalyptic framings of environmental disaster? What interests are supported by particular framings of 'scarcity' or 'limits', justifying appropriation of resources by some to the exclusion of others?

Food, water, fuel and minerals have become the focus of global and local political contests. Land, water and green 'grabs' have re-allocated existing resources to so called 'efficient' and economically productive users, causing local resource scarcities and dispossessions, damaging livelihoods and infringing basic rights. Resources have become valued, marketised and commodified, with a range of unforeseen consequences. At the same time, activism has flourished, contesting dominant perspectives. As we seek pathways to sustainability that assure both environmental integrity and social justice, now is a critical time to ask tough questions about the politics of resources.

## Why a conference?

The STEPS Centre and its partners hope this conference can help unpack assumptions, question simplistic prescriptions and debate alternatives about the politics of resources and pathways to sustainability. The conference will present research evidence from varied locations revealing multiple pathways of change, linking conceptual challenges of understanding 'resource politics' with institutional and practical dimensions, from an interdisciplinary perspective. It is hoped this debate – with academics, practitioners, policymakers and activists taking part – can provide the basis for open and balanced debate about future options.

## Research challenges

In conceptual terms, the focus on political ecology, long concerned with understanding the politics of access to, and control over, resources from local to global, is increasingly combined with a concern with the politics of knowledge, emerging from fields such as science and technology studies. Resource politics should be seen in relation to complex combinations of artefacts, people and knowledges. Resource control and 'grabbing' debates have reinvigorated a concern for earlier Marxist concerns with accumulation and dispossession, while new perspectives are required to understand the commodification and financialisation of nature. Pathways to sustainability are thus constructed through this complex interplay, with analysis of power dynamics at the core. This means engaging critically with questions of environmental and social justice and what these mean to different people in diverse contexts in both the global South and North. Increasingly a conceptual perspective on 'pathways' combining an understanding of material and structural forces, the politics that underpin them and the discursive knowledge politics that frame such dynamics, is essential.

## The STEPS Centre's work on resource politics

The STEPS Centre's 'pathways approach' has been developed as a way of understanding contending and conflicting pathways of change, in complex, highly contested settings. Building on earlier work on 'scarcity' and the politics of allocation, we have highlighted the multiple framings of and responses to climate uncertainty. Similarly, an earlier focus on 'institutions' for resource control and access, has been extended to looking at resource access in diverse settings from peri-urban India to rural China. Historical work on the politics of landscapes, including forests or rangeland areas, has been built on to investigate the commodification of carbon in African forests. Work on water resources has linked issues of access to notions of security, highlighting political contestation, for example, dam construction in Southeast Asia. And we have highlighted the variegated consequences of land, water and green grabbing in different sites across the world.

## Conference themes

Five themes will run throughout the conference, with panels clustered within each theme. This will allow delegates to take part in fulsome discussions around particular themes.

- A** Scarcity, politics and securitisation
- B** The politics of the Anthropocene and resilience
- C** Science, democracy and sustainability
- D** Commodification, grabs and dispossession
- E** Social justice and citizenship

# Conference plan

## Monday 7 September

Time	Event	IDS Location
10.00	Registration opens	IDS Reception
10.00	Poster presentations	Upper and Staff Common Rooms
13.00	Conference welcome – conference organising committee and explanation of process – Ian Scoones (STEPS Centre/IDS)	Convening Space
13.30	Plenary – <i>Conceptual perspectives on resource politics and pathways to sustainability</i> Chair: Lyla Mehta (STEPS Centre/IDS) Speakers: Betsy Hartmann (Hampshire College) <i>Shrinking spaces and resource races</i> Rohan D’Souza (Kyoto University) <i>‘Historical responsibility’ and the problems of writing South Asian environmental history in the epoch of the Anthropocene</i> Michael J. Watts (University of California, Berkeley) <i>Resource politics, institutions and doing development differently</i>	Convening Space
15.30	Tea and coffee	120/121
16.00	Parallel sessions 1	
	Panel A1 <i>Militarisation and resource politics</i>	221
	Jeremy Allouche (STEPS Centre/IDS) (convenor)	
	Mathias Finger (ETH Lausanne) <i>Militarization and resources politics: The case of the Arctic</i>	
	Betsy Hartmann (Hampshire College) <i>A militarisation approach to population, environment and climate change</i>	
	Jan Selby (University of Sussex) (convenor) <i>Decolonising environmental security (part 1): A bifurcated world?</i>	
	Patrick Zadi (EIRENE) <i>The military and land/mining governance in the West of Cote d’Ivoire</i>	
	Panel B1 <i>The politics of socio-ecological resilience</i>	Convening Space
	Katrina Brown (Exeter University) (convenor) <i>Everyday forms of resilience: Resistance, rootedness and resourcefulness</i>	
	Diana Calvo-Boyeró (Universitat Autònoma de Barcelona) <i>How do biosphere reserves influence local vulnerability and adaptation?</i>	
	Louisa Evans – (Exeter University) (convenor) <i>Environmental leadership in discourses of ecological crisis and resilience</i>	
	Matt Fortnam (UCL) <i>The politics of transforming to ecosystem-based fisheries management in the Philippines</i>	
	Panel C1 <i>Patterns, platforms, and pathways: Collaboration for transformative innovation</i>	119
	Ed Hackett (Arizona State University) <i>Transforming science: The process and performance of scientific synthesis</i>	
	Per Olsson (Stockholm Resilience Centre) <i>Social-ecological innovations: A framework for analyzing collaborative efforts to initiate transformations to sustainability</i>	
	Dagmar Simon and Anna Froese (WZB Wissenschaftszentrum Berlin für Sozialforschung) <i>From knowledge transfer to co-creation in the social sciences: Conceptualizing and constructing ‘social innovation co-labs’</i>	

	Panel D1 <i>Motivation crowding in incentive-based conservation</i>	220
	Esteve Corbera (Universitat Autònoma de Barcelona) (convenor) and Driss Ezzine de Blas (CIRAD) <i>Crowding-in or crowding-out? A conceptual framework to understand motivations in payments for ecosystem services</i>	
	Øyvind Nystad Handberg (Norwegian University of Life Sciences) <i>PES and crowding-out effects: A framed forest experiment in Tanzania</i>	
	Bhaskar Vira (Cambridge University) <i>Mottled motivations, direct incentives: Understanding peoples' engagement with incentives for shade-grown coffee in the Western Ghats, India</i>	
	Colas Chervier (CIRAD) <i>The influence of positive incentives on the perception of use values of forest conservation: The case of a payment for environmental services program in Cambodia</i>	
	Panel E1 <i>Interrogating the Pathways of Water Justice</i>	SC3&4
	Maria Teresa Armijos (UEA) (convenor)	
	Shilpi Srivastava (IDS) <i>Water justice in the era of reforms: The case of water regulation in Maharashtra, India</i>	
	Synne Movik (Norwegian Institute for Water Research ) (convenor) <i>Scales of justice: Interrogating the politics of local, national and global water allocation discourses</i>	
	Esben Leifsen (Noragric) <i>Struggle for water rights in a future wasteland: Big-scale mineral extraction and local responses in the Southern Ecuadorian Amazon</i>	
	Bill Derman (Noragric) <i>Visions of water justice in the former settler colonies in southern Africa</i>	
	Tim Karpouzoglou (Wageningen University) <i>The politics of water quality decline in the peri-urban interface: The case of Ghaziabad, Delhi, India</i>	
17.30	Drinks reception and poster session with posters displayed in the ground floor common rooms	IDS bar; ground floor common rooms
18.00	Optional event: Political Ecology Network (POLLEN) discussion and launch Tor Benjaminsen (Norwegian University of Life Sciences); Connor Joseph Cavanagh (Norwegian University of Life Sciences); Hanne Svarstad (Oslo and Akershus University College); Bram Büscher (Wageningen University); John Childs; Ben Neimark (Lancaster Environment Centre); Saskia Vermeylen (Lancaster University)	SC3&SC4
19.00	Conference dinner	120/121

## Tuesday 8 September

Time	Event	IDS Location
9.00	Plenary – <i>Resource politics and social justice: Key challenges for policy and practice</i> Chair: Suman Sahai (Gene Campaign, India) Speakers: Jenny Franco (TNI), Nick Hildyard (The Corner House), Ravi Agarwal (Toxics Link), Myint Zaw (Crawford School of Public Policy), Maxime Combes (Attac France)	Convening Space
10.30	Tea and coffee	120/121
11.00	Parallel sessions 2	
	Panel A2 <i>The new politics of scarcity</i>	221
	Lyla Mehta & Amber Huff (STEPS Centre) <i>The new politics of scarcity</i>	
	Ian Scoones (STEPS Centre/IDS) <i>Narratives of scarcity: Understanding the 'global resource grab'</i>	
	Rohan D'Souza (Kyoto University) <i>Have Limits turned into boundaries? Scarcity as a wicked problem for Anthropocene politics</i>	

	Betsy Hartmann (Hampshire College) <i>Who's mixing the drinks? The retro population and scarcity cocktail</i>	
	Nick Hildyard (The Corner House) <i>Scarcity, "polite society" and activism</i>	
	Dipak Gyawali (RONAST) (chair)	
Panel B2	Beyond people vs. parks: <i>Exploring the complexity of conservation governance in the 'Anthropocene'</i>	Convening Space
	Marja Spierenburg (VU Amsterdam) (convenor) <i>Private wildlife production and land rights in the Eastern Cape, South Africa</i>	
	Robert Fletcher (Utrecht University) (convenor) <i>The end of the wild? Debating the nature of nature in the 'Anthropocene'</i>	
	Christine Noe (University of Dar Es Salaam) and Maano Ramutsindela (University of Capetown) <i>Investing in the wild: Business models in national parks in southern and eastern Africa</i>	
	George Holmes (Leeds University) <i>Something old, something new: How conservationists are characterised by recent literature</i>	
	Chris Sandbrook (Cambridge University) <i>Dimensions of difference: Towards an empirical analysis of views held by actually existing conservationists</i>	
Panel C2	<i>The digital economy: An emerging approach to sustainable development</i>	SC3&4
	Samir Doshi (USAID) (convenor) <i>Real-time data to transform adaptive learning</i>	
	Ken Banks (kiwanja.net) <i>Technology and innovation for socio-environmental change</i>	
	Duncan Edwards (IDS) (tbc)	
	Amy O'Donnell (Oxfam UK) (tbc)	
Panel D2	<i>The how and who of financialisation of nature</i>	119
	Andrea Brock (Sussex University) (convenor)	
	Richard Lane (Sussex University) <i>The costs and benefits of nature</i>	
	Louise Carver (Birkbeck, University of London) <i>In search of "a good biodiversity yield per hectare": Producing value in English Biodiversity Offsetting Markets</i>	
	Kelly Kay (Clark University) <i>A hostile takeover of nature? Placing value in conservation finance</i>	
Panel E2	Local representation in carbon forestry	220
	Jesse Ribot (Geography at University of Illinois & CODESRIA) (convenor)	
	Papa Faye (Geography at University of Illinois) <i>From better representation to subordination in participatory forest management in Senegal</i>	
	Jens Friis Lund (University of Copenhagen) <i>Waiting for REDD+ in Tanzania</i>	
	Melis Ece <i>"The project has failed here": Carbon enclosures and challenges to democratic representation in REDD+ pilot projects in Tanzania</i>	
	Susan Chomba (University of Copenhagen) <i>The carbon woman: Rethinking representation in relation to gender in the implementation of REDD+</i>	
12.30	Lunch	120/121
14.00	Parallel Sessions 3	
	Panel A3 <i>Water resources: Big dams and geopolitics</i>	SC3/4
	Carl Middleton (Chulalongkorn University) (convenor) <i>Transboundary justice on transboundary rivers: A rights-based approach to the food-water-energy nexus in Southeast Asia</i>	
	Dipak Gyawali (RONAST) (convenor) <i>Tombstones of water development paradigms: Reflecting on the political economy behind shifts in foreign aid, investments and recipient reactions</i>	
	David Blake (independent scholar) <i>Irrigation development and 'the nexus': Ideology, politics and practices of Mekong Region Hydraulic Control Paradigm</i>	

	Myint Zaw (Crawford School of Public Policy) <i>Exploring identity of place: A case study of Myitsone village and the “Save the Ayarwaddy Movement” against a mega-dam project in northern Myanmar</i>	
	Jeremy Allouche (STEPS Centre/IDS) – panel chair	
Panel B3	<i>The Locality in the Anthropocene</i>	221
	Vinita Damodaran (Sussex University) (convenor) <i>The Locality in the Anthropocene: Perspectives on environment and development in Eastern India</i>	
	Maurizio Marinelli (Sussex University) (convenor) <i>‘Beautiful China’ in the Anthropocene: Ecological civilisation building and its challenges</i>	
	Rohan D’Souza (Kyoto University) <i>The politics of water in the Anthropocene</i>	
	Anshu Ogra (Jawaharlal Nehru University) <i>“Decision-making” in the Anthropocene: Adaptation, coffee growers and climate change in South India</i>	
	George Adamson (King’s College London) <i>Historical reflections on the Anthropocene</i>	
Panel C3	<i>Assessing global sustainability assessments: The challenge of creating international knowledge in the face of divergent framings</i>	220
	John Thompson (STEPS Centre/IDS) (convenor) and Erik Millstone (STEPS Centre/SPRU, University of Sussex) (convenor) <i>An assessment of global agricultural assessments</i>	
	Clark Miller (Arizona State University) <i>Rethinking the framing and organization of knowledge-making for global sustainability: The challenge of unsustainable systems</i>	
	Silke Beck (Helmholtz Centre for Environmental Research – UFZ) <i>“Policy-relevant and yet policy-neutral, never policy-prescriptive”:</i> <i>What role(s) for experts in global governance?</i>	
	Martin Mahony (King’s College London) <i>Somewhere between everywhere and nowhere: IPBES, IPCC and the geographies of knowledge</i>	
Panel D3	<i>Mining and movements for social justice in Sub-Saharan Africa</i>	119
	Sam Spiegel (Edinburgh University) (convenor) <i>Political ecology and artisanal mining: Understanding ‘modernisation’ struggles and advocacies in Zimbabwe</i>	
	Eleanor Fisher (Reading University) (convenor) <i>Bio-power, bio-gold: Reflections on the politics of social justice in East African fair trade gold mining</i>	
	John Childs (Lancaster University) <i>‘Taking the bull by the horns’: Cultural resource nationalism in sub-Saharan Africa</i>	
	Patrik Oskarsson (Swedish Agricultural University) <i>Public debate and the uncertain benefits of coal projects in Mozambique</i>	
Panel E3i	<i>Green Economy and its others: Challenges to scarcity and green economy – Buen vivir, abundance, affective ecologies, degrowth</i>	Convening Space
	Kathleen McAfee (San Francisco State University) (convenor) <i>Green economy and its others: Scarcity, degrowth, buen vivir</i>	
	Larry Lohmann (The Corner House) <i>What is the “Green” in “Green Economy”?</i> <i>An historical perspective on the ecosystem services debate</i>	
	Filke Sekulova (Universitat Autònoma de Barcelona) <i>Sustainable degrowth: Context, definitions and proposals</i>	
Panel E3ii	<i>Environmental justice movements: New rights, new Politics?</i>	SC1&2
	Iokiñe Rodríguez (University of East Anglia) (convenor) and Mirna Liz Inturias (NUR University of Bolivia) <i>Indigenous environmental justice movements in Bolivia before and after the Morales Era: State control of nature, unfettered market and the struggle for autonomy of the Monkosh peoples of Lomerio</i>	

	Carlos Crespo (CESU Universidad Mayor de San Simon) <i>State control over nature in Bolivia and the politics of demand in the social resistances: An anarcho-ecologist view</i>	
	Brendan Coolsaet (Center for Philosophy of Law, UCLouvain) <i>Transformative agroecology in Europe? Learning from environmental justice movements</i>	
	Saskia Vermeulen (University of Lancaster) <i>Institutional conservation practices and rhizomatic contestations in the Kalahari Desert, Namibia</i>	
15.30	Tea and coffee	120/121
16.00	Plenary – <i>Contextualised politics of sustainability</i> Speakers: The STEPS Global Consortium: Per Olsson (Stockholm Resilience Centre); Ed Hackett (ASU); Xiulan Zhang (BNU); Valeria Arza (CENIT); Dinesh Abrol (JNU); Cosmas Ochieng (ACTS) Chair: Andy Stirling (STEPS Centre/SPRU, Sussex University)	Convening Space
17.30	Drinks and book fair: a series of 1-minute book, report and special issue journal launches over drinks, and publication displays from different participating organisations.	120/121

## Wednesday 9 September

Time	Event	IDS Location
9.00	Plenary – <i>Planetary boundaries and the politics of resources</i> Debate with Johan Rockström (Stockholm Resilience Centre) and Melissa Leach (Institute of Development Studies) Chair: Mike Hulme (King's College London)	Convening Space
10.30	Tea and coffee	120/121
11.00	Parallel Sessions 4	
	Panel A4 <i>'Extractive regimes' at the margins: Resource extractions and development in eastern Africa</i> Chris Huggins (LANDac) (convenor) Jeremy Lind (IDS) (convenor) and Mutuma Ruteere (Centre for Human Rights and Policy Studies) <i>Perilous prospects? Security and oil exploration after Kenya's devolution</i> Cosmas Ochieng (ACTS) <i>Extractive governance: Oil and gas exploration along the Western Indian Ocean basin</i> James Van Alstine (Leeds University) <i>Bringing order to disorder: Transparency and accountability politics in Uganda's oil bearing regions</i> Jason Mosley (Chatham House) <i>Productive landscapes: Projection and risk in the state's vision for the Ethiopian and Kenyan frontiers</i>	119
	Panel B4 <i>Pathways to sustainable urbanisation: Waste and the circular economy in South Asia</i> Fiona Marshall (STEPS Centre/SPRU, Sussex University) (convenor) Pritpal Randhawa (Jawaharlal Nehru University) (convenor) Ravi Agarwal (Toxics Link) <i>Re-thinking urban waste management in India</i> Dieter Mutz (GIZ) <i>Circular economy and informal waste management – a contradiction?</i> Lakshmi Narayan (KKPKP) <i>Full circle: mapping circuits of informal labour and waste materials</i> Ritu Priya (Jawaharlal Nehru University) <i>In the name of public health: Delhi's environmental nemesis</i>	SC3&4
	Panel C4 <i>Open science and sustainability</i>	221

	Valeria Arza (CENIT) (convenor)	
	Cindy Regalado (UCL) <i>The tools of open science: lessons learnt from the use of technologies in the co-production of knowledge</i>	
	James Wilsdon (Sussex University) <i>Open season: What does all this talk of openness mean for science, democracy and sustainability?</i>	
	Ross Mounce <i>Levelling the playing field: Open source and open data in science</i>	
	Cameron Neylon (Public Library of Science) <i>Who's in my club? Knowledge creation, sharing and dissemination in the context of peripheral communities</i>	
	Panel D4 <i>Political ecologies of conservation, violence and resistance in East Africa</i>	220
	Tor Benjaminsen (Norwegian University of Life Sciences) (convenor)	
	Ian Bryceson (Norwegian University of Life Sciences) (convenor), Chris Maina Peter (University of Dar es Salaam) and Betsy Beymer-Farris (University of Kentucky) <i>Rights, resistance and resilience in coastal Tanzania</i>	
	ConnorCavanagh (Norwegian University of Life Sciences) <i>Killing to make human? Civilising violence, scientific forestry, and the 'Dorobo question' in Kenya Colony</i>	
	Kristen Lyons (University of Queensland) <i>Carbon markets and the new carbon violence: A case study of Uganda's expanding plantation forestry industry</i>	
	Panel E4 <i>Feminist visions for sustainability</i>	Convening Space
	Wendy Harcourt (ISS Erasmus University) (convenor)	
	Giovanna Di Chiro (Swarthmore College) <i>A new spelling of sustainability: Engaging feminist-environmental justice theory and practice</i>	
	AndreaNightingale (Swedish University for Agricultural Sciences) <i>Challenging the romance with resilience: Communities, scale and climate change</i>	
	Ingrid Nelson (University of Vermont) <i>Feminist political ecology and the (un)making of the 'hero': Encounters in Mozambique</i>	
	Dianne Rocheleau (Clark University) <i>A situated view of feminist political ecology from my networks, roots and territories</i>	
	Angelica Maria Ocampo Talero (ISS Erasmus University) <i>Knowledge about, knowledge with: Dilemmas of researching lives, nature and genders otherwise</i>	
12.30	Lunch	120/121
14.00	Parallel Sessions 5	
	Panel A5 <i>Resource politics/resource states: The political economy of energy in Africa</i>	SC3&4
	Peter Newell (STEPS Centre/Sussex University) (convenor)	
	Jesse Ovadia (Newcastle University) <i>Petro-developmental states in Africa: An introduction</i>	
	HelenaPerez-Nino and Philippe Le Billon <i>Angola and Mozambique: Comparing extractive trajectories and political settlements</i>	
	Lucy Baker (Sussex University) <i>The evolving role of finance in South Africa's renewable energy sector</i>	
	Jonathan Phillips (King's College London) <i>Territories and materialities of offshore oil production</i>	
	Brian Chirambo (Reading University) <i>What should REDD+ be about? Forest governance incentives or energy investment?</i>	
	Panel B5 <i>Sustainability transitions and wider transformative change</i>	119
	Johan Schot (SPRU, Sussex University) (convenor)	
	Frans Berkhout (King's College London)	
	Florian Kern (SPRU, Sussex University)	

	Panel C5 <i>The global politics of the commodification of science, knowledge and nature</i>	221
	Peter Wilshusen (Bucknell University) <i>Business of biodiversity: Corporate enactment, conservation governance, and the politics of articulation</i>	
	Noella Gray (University of Guelph) <i>Ocean grabbing or defending the commons? International efforts to conserve the high seas</i>	
	Lisa Campbell (Duke University) <i>Seeing like a scientist: Global representations of biodiversity</i>	
	Catherine Corson (Mount Holyoke College) (convenor) <i>Capturing the dynamics of global conservation governance: Reflections on Collaborative Event Ethnography</i>	
	Panel D5 <i>Green economies and resource politics in sub-Saharan Africa: Critiques from below</i>	220
	Amber Huff (STEPS Centre/IDS) (convenor)	
	Benjamin Neimark (Lancaster Environment Centre) <i>Against biopiracy? Investigating the human right to benefit from science and bioprospecting in the bioeconomy</i>	
	Maarten Onneweer (Leiden University and RAIN Foundation) <i>How to live on a resource base but to have no water: Politics, parodies and rumours in the mobilization of value and the materiality of water resources in the Kitui district of Kenya</i>	
	Andreas Scheba (Human Sciences Research Council) <i>The politics of inclusion/exclusion of REDD+ in Tanzania</i>	
	Panel E5 <i>Political interactions between social justice movements: Changes and challenges, tensions and synergies</i>	Convening Space
	Jennifer C. Franco (Transnational Institute) (convenor) <i>Political interconnections in agrarian, food and environmental spheres – from context to main unit of inquiry: Implications for political mobilizations</i>	
	Zoe Brent (ISS Erasmus University) <i>Food sovereignty movement and the broader social justice movements</i>	
	Salena Tramel (ISS Erasmus University) <i>Climate justice movements and agrarian and food sovereignty movements</i>	
	Alberto Alonso-Fradejas (ISS Erasmus University) <i>Transnational agrarian justice and environmental justice movements: Convergence and divergence, synergies and tensions</i>	
	Ben McKay (ISS Erasmus University) <i>Broad social justice movements (agrarian, food, environmental, anti-extractive industries, water, women's, and indigenous peoples) and the political dynamics of their interactions seen in one country: Bolivia</i>	
15.30	Tea and coffee	120/121
16.00	Plenary – <i>Synthesis and conclusions: Highlights and controversies from the five themes</i> <i>Chair: Ian Scoones</i> A Scarcity, politics and securitization – Jeremy Allouche B The politics of the Anthropocene and resilience – Vinita Damodaran C Science, democracy and sustainability – John Thompson D Commodification, grabs and dispossession – Dianne Rocheleau E Social justice and citizenship – Kathleen McAfee	Convening Space
17.00	Closing remarks and thanks – Lyla Mehta (STEPS Centre/IDS)	

# Abstracts of papers

**Monday 7 September**

## Plenary 1

### **Conceptual perspectives on resource politics and pathways to sustainability**

Chair: **Lyla Mehta** (STEPS Centre/IDS/NMBU)

**Betsy Hartmann** (Hampshire College) *Shrinking spaces and resource races*

We are in an odd moment, alternately at a loss for words or having too many of them, to analyse resource politics in ways that could break through the binding and bounded concepts of Scarcity, Sustainability, the Anthropocene, Planetary Boundaries, Overpopulation, Limits to Growth, Environmental Apocalypse... The obsession with shrinking spaces and resource races common to these core concepts can extend to the radical political imagination as well. It can cause a sort of mental claustrophobia and even agoraphobia, as when people seek “safe spaces” in which to engage in identity politics. Is it only a semantic similarity that the notion of Planetary Boundaries calls for humanity to find “a safe operating space?” This talk aims to open up a conversation about how to resist the hold shrinking space has on our imaginations, but at the same time challenge its opposite: never-ending Capitalist Cornucopia. We need new words and we need new framings and we need new and expanded spaces to come together and cross-fertilise ideas and strategies. The stakes are high, especially for those who suffer the most from the policing and militarisation of actual boundaries and borders.

**Rohan D’Souza** (Kyoto University) *‘Historical responsibility’ and the problems of writing South Asian environmental history in the epoch of the Anthropocene*

Environmental history has acquired a rare and critical political urgency in the contemporary context of climate change and anxieties about global warming. Two ingredients have been central to most environmental history writings. First, is the much fortified claim that Nature has not been a passive backdrop to the drama of human life. And second has been the effort to relate the tangible currents of ecological change to the complicated twists and turns of political economy, cultural politics and social transformation. In brief, it could be argued that an intertwined nature and culture have co-produced, shaped and determined historical possibility. Environmental history is not dismal documentation nor offers a simple logistic outlier to meaningful historical explanation. Credible and compelling environmental narratives are, in fact, expected to abhor vacuous quantification and by foregrounding the idea of ecological change they become profound exercises in ideological work and efforts in the study of power. Small wonder then, climate change and global warming – the mother of all discourses on ecological change – have never quite escaped the taint of politics, the pull of sectional interests or the allure of hope through emancipatory imaginations. Drawn from the above reflections, my keynote address will draw on the political compass of South Asian environmental history writings in order to suggest a new set of bearings with regard to climate change negotiations in the epoch of the Anthropocene.

**Michael J. Watts** (University of California, Berkeley) *Resource politics, institutions and doing development differently*

The purpose of this address is to link two broad sets of debates. One speaks to systemic “governance failures”- a euphemism for the chronic crises of legitimacy confronting predatory and extractive public authorities largely unresponsive to the demands of full citizenship and incapable of fulfilling the most basic human and developmental needs – remain the norm rather than the exception. A second body of work is the vast literature on resource politics and the purported “curse”-like qualities of resource dependency, particularly commodities such as oil. My point of departure is to place the institutional reform field in conversation with a now substantial body of work on resource politics, and most especially the debate over the politico-institutional character and reform landscape of resource-dependent states. On the one side, recent ‘institution reform’ policy writing seemingly has little to say about the political and economic conditions of possibility in which crises and institutional disjunctures might authorise, and thereby enable, agents to embark on the reform logics they prefer. In other words, it is quite evident that public authorities, and the state at large, must develop what Michael Mann (1988) calls infrastructural power and that this in turn requires capabilities to enrol political and economic actors, and modalities to grasp and convert rents into politically significant assets. Less well understood is how this might occur in particular contexts of history, geography and political economy: in other words contexts where particular orderings of power, particular path-dependencies, and particular political settlements prevail. Using some examples drawn from work in West Africa conducted with Doug Porter, I will try and raise some questions about how institutional change is dialectically shaped (constrained and enabled) by, and in turn can impact upon, the nature of underlying political and material conditions. The dialectical relations between institutions and the ordering of power explains the emergence of ‘asymmetric capabilities’ even in contexts otherwise condemned by the institutional traps of the resource curse.

## Parallel sessions 1

### **Panel A1 Militarisation and resource politics**

**Jeremy Allouche** (STEPS Centre/IDS) (convenor)

**Mathias Finger** (ETH Lausanne) *Militarisation and resources politics: The case of the Arctic*

This paper is about how the geo-physical (and socio-economic) dynamics in the Arctic affects the Earth System, on the one hand, and how military-industrial civilisation, on the other hand, affects the Arctic. As such, this paper is part of a larger „GlobalArctic project”. In it,

we study precisely this dual dynamics between bio-physical and socio-economic global change on the one hand and between the Earth System and the Arctic on the other. As such, the Arctic – defined here in geographical terms as the territories North of the Arctic Circle – constitutes a unique laboratory of the Anthropocene. In this sense, the current dynamics perfectly illustrates the link – or rather the vicious circle – between global environmental change (in particular global warming) and the rush for resources. The paper will conclude with some future scenarios, all of which will involve some form of geo-engineering.

**Betsy Hartmann** (Hampshire College) *A militarisation approach to population, environment and climate change*

Delivering a graduation address to the U.S. Coast Guard Academy this past May, President Obama warned that climate change posed a “serious threat” to national security and even linked it to the rise of Boko Haram in Nigeria and civil war in Syria. In this presentation I will discuss the ongoing militarisation of climate change through the deployment of scarcity scenarios about climate, conflict, and migration. Why do these scenarios persist despite a wealth of critical scholarship calling them into question? Whose interests do they serve? Why do they play so well to environmentalists, even on the left? What will it take to challenge them more effectively?

**Jan Selby** (University of Sussex) (convenor) *Decolonising environmental security (part 1): A bifurcated world?*

Debates on the links between environment, conflict and security are usually organised around the claimed existence of two schools of thought on the subject: a pessimistic eco-determinist tradition on the one hand, and a liberal optimist tradition on the other. This paper casts doubt on this understanding of the environmental security problematique. Focusing especially on the eco-determinist tradition, the paper argues that this is not a distinct school of thought but a contradictory amalgam of liberal progressivist and eco-pessimist ideas; and that this tradition only resolves its internal contradictions by positing a ‘bifurcated world’ – a model of global history and geography according to which some spaces (and classes) are governed by natural constraints, whilst others are liberated from them. Drawing upon work in post-colonial theory and critical geopolitics, the paper argues that this dualistic understanding of the world is a legacy of European colonialism, is inherently racist in its underpinnings, and also provides a poor guide to current and future environment-related conflict challenges. The paper thus calls for a decolonisation of environmental security discourse – including through more politicised interpretations of environment-conflict linkages in the global South, and through greater attention to both the conflict implications of environmental change in the global North, and the shaping of supposedly ‘local’ environment-conflict dynamics by global political and economic relations. This is the first of a two-part paper, the second of which will argue that the notions of ‘scarcity’ and ‘abundance’, which are so central to environmental security debates, are likewise in need of intellectual decolonisation.

**Patrick Zadi** (EIRENE) *Militarisation and land control in Western Côte d’Ivoire: The ‘Dozo phenomenon’*

There have been many debates around the privatisation of security, mostly around private western corporations. A number of studies are now highlighting the role of informal private providers in post-colonial wars. In the Ivory Coast crisis, the Dozos, which are traditional hunters, have been the focus of attention. Arrived in Western Cote d’Ivoire, the most forested zone of the country, in the beginning of the 90s the Dozos were first private watchmen to counter the increasing insecurity and robberies. Due to their success, they have been “formally” involved in community security by government officials from the mid of 90s. In Western Cote d’Ivoire where most of them settled, Dozos are farmers without being legal or customary owners of the land. Following the debate of 1999 on the ownership of the land in Cote d’Ivoire, Dozos, who were suspecting Bedie’s and Gbagbo’s regimes of trying to chase them and other non natives of Western Cote, became military actors and fought alongside the rebels against Gbagbo’s regime in the armed crisis the country experienced in 2002. With the victory of Allasane Ouattara against Laurent Gbagbo, the militarised Dozos are now prominent security actors in Western Cote d’Ivoire by offering successful security services to local population, obliging formal security forces have to work. This article will firstly examine how Dozos from a traditional hunting group became a militarised group. Secondly it will also analyse the role of the land in the militarisation process of the Dozos starting in 2002.

**Panel B1 The politics of socio-ecological resilience**

**Katrina Brown** (Exeter University) (convenor) *Everyday forms of resilience: Resistance, rootedness and resourcefulness*

This paper proposes a re-visioning of resilience that puts human agency at the core. It develops a perspective of situated, ‘everyday forms of resilience’, that uses insights from empirical analysis of how people are able to respond to change. It develops resilience around three themes: resistance, rootedness, and resourcefulness. This re-orientation results in a more socially informed understanding of resilience, which acknowledges multiple meanings and understandings, as well as the multi-layered politics and process of dealing with, negotiating and actively shaping change. Notions of resilience and resistance are related, although usually understood as quite distinct, often antonymic. In practice they are interwoven, and a political ecology approach understands resilience and resistance as potentially allied. Rootedness is about place, identity, and belonging, and it might act in different ways to both constrain and support capacities to adapt and transform. I discuss the ways in which factors of place and identity in particular are important in fostering resilience and managing and directing change. Resourcefulness is not only about the need for people to have access to resources to draw on, but also their capacity to utilise them in the right place and at the right time. Thus, it questions how everyday forms of resilience can be actuated or made to work with different types of change, and their implications of how decisions are made.

**Diana Calvo-Boyero** (Universitat Autònoma de Barcelona) *How do biosphere reserves influence local vulnerability and adaptation?*

Resource management regulations, such as those associated with the establishment of protected areas, can increase vulnerability and compromise individual and collective agency for adaptation. In this article, we comparatively analyse how four rural communities located within two biosphere reserves in Mexico and Bolivia experience vulnerability and adaptation to global change. We use focus

groups, interviews and scoring exercises to analyse the influence of reserve management practices on locally perceived changes and stresses on livelihoods, and to discuss communities' coping and adaptation strategies. We show that both reserves are perceived as a source of stress but somewhat differently. In Mexico, communities feel vulnerable to the reserve's regulations but less to climatic and economic stresses, whereas in Bolivia communities perceive the insufficient enforcement of the reserve's rules as the most relevant stress to their livelihoods. Most of household-based and collective adaptations to environmental change have been adopted without the support of the biosphere reserves. We discuss how and why the biosphere reserves contribute to local vulnerability and why their role in enhancing local adaptation is limited.

**Louisa Evans** (Exeter University) (convenor) *Environmental leadership in discourses of ecological crisis and resilience*

Leadership is heralded as being critical to addressing the "crisis of governance" facing the Earth's natural systems. While political, economic, and corporate discourses of leadership have been widely and critically interrogated, narratives of environmental leadership remain relatively neglected in the academic literature. The aims of this paper are twofold. First, to highlight the centrality and importance of environmental science's construction and mobilisation of leadership discourse. Second, to offer a critical analysis of environmental sciences' deployment of leadership theory and constructs. The authors build on a review of leadership research in environmental science that reveals how leadership is conceptualised and analysed in this field of study. It is argued that environmental leadership research reflects rather narrow framings of leadership. An analytical typology proposed by Keith Grint is employed to demonstrate how any singular framing of environmental leadership as person, position, process, result, or purpose is problematic and needs to be supplanted by a pluralistic view. The paper concludes by highlighting key areas for improvement in environmental leadership research, with emphasis on how a political ecology of environmental crisis narratives contributes to a more critical body of research on leadership in environmental science.

**Matt Fortnam** (UCL) *The politics of transforming to ecosystem-based fisheries management in the Philippines*

Coastal tropical developing societies commonly experience persistent poverty linked to declining fisheries resources and degraded marine ecosystems. Eroding the resilience of such 'undesirable' social-ecological systems (SES), and navigating to and sustaining shifts to more sustainable trajectories has proven extremely challenging. An empirical study of ecosystem-based fisheries management in the Philippines explores the role of power and politics in processes of SES transformation. It reveals how 'agents of resistance' draw upon incumbent social structures to destabilise or divert a governance innovation before 'agents of change' can fully institutionalise a SES transformation.

**Panel C1 Patterns, platforms, and pathways: Collaboration for transformative innovation**

**Ed Hackett** (Arizona State University) (convenor) *Transforming science: The process and performance of scientific synthesis*

Transforming science is a term meant to be understood in two senses. In one sense it means changing the way science is organised and done; in another sense it means producing science that may transform what we know and can do. Achieving transformative solutions to sustainability challenges will require transforming science in both senses of the term: we will need new forms of scientific knowledge and inquiry, and will need scientists to organise and collaborate in new ways to produce such knowledge. Synthesis centers offer promising possibilities for transformations of both sorts, achieved through intense and focused collaboration across academic fields and across the sectors of science and public policy. This talk describes the inner workings of two organisations that promote scientific synthesis, analysing their structures and consequent patterns of interaction to understand why they work well and to draw lessons for the design and operation of other such centers. To do so we measure collaborative process in new ways – using sociometric sensors – and analyse substantive output using a topic models of publications from synthesis centers and a reference corpus of articles from cognate fields. We summarise our findings in a model of intellectual fusion that captures the principal dynamics of the process.

**Per Olsson** (Stockholm Resilience Centre) (convenor) *Social-ecological innovations: A framework for analysing collaborative efforts to initiate transformations to sustainability*

A key challenge for navigating transformations to sustainability and achieving UN's new Sustainable Development Goals is to solve societal problems and create opportunities for a good life for people today and in the future, while strengthening the Earth life support systems. This requires fundamental shifts in people-planet interactions and relationships and there is a need to understand how collaborative innovation platforms, such as co-labs or social change labs, can play a role in such shifts. We introduce the concept of social-ecological innovations to explore how new ideas and initiatives can contribute to such transformations. A social-ecological innovation is any initiative, product, process, program or design that challenges and over time changes the defining routines, resource and authority flows or beliefs of the broader social-ecological system in which it is introduced. It fundamentally changes human-environmental interactions and help humans become a positive force on the planet and enhance the capacity of Earth's ecosystems to generate essential services. Successful social-ecological innovations have durability, scalability and transformative impact. We draw on a number of case studies to show how this concept has been used to understand social and ecological systems' reconfigurations and transformative impact. We also discuss how feedback mapping can be a tool for analysing the performance of collaborative platforms and initiatives aimed at achieving such change. Finally, we discuss the role of agency and specifically the role of change makers and networks of system entrepreneurs, and the strategies used, in creating collaborative innovation platforms and scaling innovations for transformative impact.

**Dagmar Simon and Anna Froese** (WZB Wissenschaftszentrum Berlin für Sozialforschung) *From knowledge transfer to co-creation in the social sciences: Conceptualising and constructing 'social innovation co-labs'*

Most research in the field of STS and innovation studies has been looking at the challenges of knowledge transfer and how to bridge the gap between science and practice as a problem of incompatible rationalities, cognitive structures, communicative codes and

career paths. More recent approaches to innovation and science studies recommend 'co-creation'/'integrated innovation' that promises to conceptually open up a new path to reducing the science-practice divide. This approach enables joint knowledge generation and iterative feedback loops as well as (re)combination and integration of a wide range of knowledge stores. In arguing that much is to be gained from adopting this perspective, this article explores how Social Innovation Co-Labs could be put together and implemented so as to support "transformative innovation" in the field of sustainability. We pose three central research questions based on the example case of 'renewable energy transformation' taking place in a specific region in Germany: 1. What added value does a collaborative setting (co-creation between science and practice) promise when compared with "classic" knowledge transfer constellations? 2. How can such heterogeneous research collaborations be built up and organised? 3. What challenges exist in such heterogeneous research collaborations and how can they be met effectively?

### **Panel D1 Motivation crowding in incentive-based conservation**

**Esteve Corbera** (Universitat Autònoma de Barcelona) (convenor) and **Driss Ezzine de Blas** (CIRAD) *Crowding-in or crowding-out? A conceptual framework to understand motivations in payments for ecosystem services*

Payments for Ecosystem Services (PES) are economic incentives to foster conservation while providing a source of local development through direct cash payments. Existing literature underlining the pros and cons of implementing PES for nature conservation have overlooked the issue of motivation crowding-out, i.e. the loss of intrinsic motivations in payments' beneficiaries. The very nature of PES that seek to enhance environmental conservation efforts through externally imposed regulations and monetary payments is predicted by evidence stemming from social psychology studies as highly detrimental for intrinsic motivations and therefore a potential cause of long term failure of PES environmental outcomes. The Self-determination Theory (SDT) posits that any externally imposed economic incentive presents a risk of decreasing intrinsic motivations and increasing external motivations—a phenomenon called motivation crowding-out. A loss in intrinsic motivation means a less internally motivated individual and a potential decrease in performance in achieving a task, aggravated once the external incentive disappears. Avoiding or minimising such potential detrimental effects calls for a better understanding of the internal psychological factors that trigger motivation crowding-in and crowding-out. We discuss existing empirical evidence from social psychology and behavioural economics on the impacts of economic incentives on internal motivations. Drawing from SDT we propose a conceptual framework to understand the causal path from PES implementation to motivation crowding-in and crowding-out. The conceptual framework explains that changes in motivations are caused by how a person's need-satisfaction is modified, through the activation of four psychological factors or moderators by PES implementation: competence, autonomy, social relatedness and environmental relatedness. We discuss the contribution of the Special Issue into developing the conceptual framework and explain how PES implementation, such as payment type, verbal rewards, monitoring and sanctioning, participatory design, might harm or enhance intrinsic motivations.

**Øyvind Nystad Handberg** (Norwegian University of Life Sciences) *PES and crowding-out effects: A framed forest experiment in Tanzania*

Do small payments crowd out intrinsic motivations for natural resource conservation? This paper presents findings from framed field experiments (FFE) conducted with local forest users in Tanzania. The experiment has field context in sample, task, commodity and setting, and is thus aiming to capture also other factors that influence forest use than strict material concerns. The pay-off structure represents a common-pool resource situation (public goods game with negative contributions), where participants' payoffs depend on the number of trees harvested. Four levels of individual payment for environmental services (PES) are tested in a between-group design: no (0%), low (20%), medium (60%) and full (100%) PES, where the level is relative to the value of a harvested tree. Under both no and low PES, payoff-maximizers should maximise harvest. Under medium PES, the prediction depends on other players' harvesting decisions. Under full PES, the prediction is to not harvest. We observe lower than theoretically predicted harvest rates at no, low and medium PES, while the opposite is true at full PES. Low PES possibly has a weak negative effect on harvest rates (c. 16% lower harvest rates than no PES), while medium and full PES give a strong reduction in harvest rates (c. -43% and -75%). The results do not support the "crowding-out of intrinsic motivation hypothesis". Increasing payments have a negative effect on harvest rates, lending support to the intuitive conclusion: pay little, get little; pay more, get more.

**Bhaskar Vira** (Cambridge University) *Mottled motivations, direct incentives: Understanding peoples' engagement with incentives for shade-grown coffee in the Western Ghats, India*

Market-based instruments (MBIs) have proliferated to address environmental degradation, including biodiversity loss in biodiversity-rich landscapes outside Protected Areas (PAs). In the case of coffee, third-party certifications oriented towards traceability, environmental sustainability, fair treatment of workers, quality and price security aim to make it economically possible for farmers to adopt sustainable coffee production and/or compensate the loss in yields that may arise from adopting such practices. The key assumption underpinning these approaches is that extrinsic monetary benefits (through certification or direct payments) present stronger incentives to modify land-use and livelihood practices than intrinsic motivations. The history of direct payments for conservation in India has thus far been very limited. This study was carried out in Kodagu district within the Western Ghats, one of 34 global 'biodiversity hotspots'. Our evidence shows that perceptions of coffee growers differ considerably from inbuilt assumptions in policy and theoretical discourses on market incentives. In Kodagu, coffee growers adhere to the rules of certification not for economic reasons but rather for capacity-building and increased knowledge. They believe that economic security should be achieved through long-term mechanisms, such as enhanced quality, elevated status geographically exclusive specialty coffees, rather than short-term, immediate financial arrangements in the form of a price premium or one-off conservation payments.

**Colas Chervier** (CIRAD) *The influence of positive incentives on the perception of use values of forest conservation: The case of a payment for environmental services program in Cambodia*

In contexts of close interlinkages between poverty and biodiversity conservation, high dependency on the use of biodiversity for livelihoods might constitute a motivation to enforce conservation practices. Besides, changes in the institutional framework can lead to mutually reinforcing social and environmental consequences. We conceptualise motivation crowding as an illustration of such effect in the sense that the implementation of Payments for Environmental Service (PES) would either strengthen or undermine at least partially intrinsic motivations to conserve. This paper explores the effect of a PES scheme in Cambodia on the perception of use values of forest conservation. This scheme aims at halting slash-and-burn practices by providing a mix of in-kind and in-cash benefits to forest communities. We conducted a household survey with project participants (N=205) and non-participants (N=120) and find three significant results. First, the program emphasised externally regulated values i.e. linked to market demand (ER) and reduced the prevalence of values with a higher degree of autonomy i.e. closely linked to key subsistence goals (ID). Second, increased exposure to PES and its benefits changed the decision-situation frame regarding forest use by emphasising “segregation” between livelihoods and forest use, and the role of forest resources in contributing to family income. Third, this switch may have implications for scheme effectiveness in the long run, as ER individuals reported that they would break conservation rules significantly more than other people if the payment stopped.

**Panel E1 Interrogating the Pathways of Water Justice**

**Maria Teresa Armijos** (UEA) (convenor)

**Shilpi Srivastava** (IDS) *Water justice in the era of reforms: The case of water regulation in Maharashtra, India*

For the last three decades, water reforms have become the defining lexicon for widespread institutional and policy changes in the water sector in several countries across the globe. These institutional changes are often dovetailed with the ambition that such changes would ultimately achieve the goals of water justice en route to efficiency, and would thus achieve fairness and equity in distribution of water to different user groups. Through the recent case of Maharashtra water regulation reform in India, this paper asks what justice means in these reformist prescriptions, and analyses how these ideas are stabilised in the policy process. It looks at the discursive construction of justice through the concept of entitlements and water trading, and asks if, one could find pathways for articulating water justice for the poor and marginalised sections of the society? This paper will develop on the conceptual dimensions of water justice in policy processes and underline how spaces of articulation of and for justice may emerge through the reform process.

**Synne Movik** (Norwegian Institute for Water Research) (convenor) *Scales of justice: Interrogating the politics of local, national and global water allocation discourses*

Work on water justice issues have often concentrated on either local case studies of irrigation water sharing, or on global discourses of the human right to potable water, or on benefit sharing in transboundary rivers. Moreover, over the last couple of decades there has been a swathe of reforms of water rights systems, moving from doctrines of riparianism and prior appropriation towards systems of administrative rights, which have prompted a discussion on the justice dimensions of allocation. In parallel, increasing work is also being done on exploring the issue of scale in water governance. This paper seeks to bring together insights from these avenues of work on the conceptions of justice and the politics of scale, and to draw up a broader framework for exploring issues of justice in water resources governance. The allocation of water is fraught with power plays- who has a right to how much, of what quality, and why? The paper will explore to what extent perceptions of justice are linked to considerations of scale. It will draw on the concept of the hydrosocial cycle, which acknowledges the pivotal role played by geographical conditions, technical solutions and political and legal arrangements to understand how water inequalities are perceived at different levels. It will review existing studies on water justice and explore their scalar dimensions. The main argument that the paper makes is that the idea of justice is fluid and is linked to scalar dynamics – the perception of what is just hinges on how the spaces within which these issues are explored are bounded.

**Esben Leifsen** (Noragric) *Struggle for water rights in a future wasteland: Big-scale mineral extraction and local responses in the Southern Ecuadorian Amazon*

Currently in a late pre-extractive phase, the Mirador copper mine, located in the Amazon lowlands, is the first big-scale mining project in Ecuador and considered to be of strategic economic national importance. Based on research on the Mirador project, I will discuss water justice in relation to resource grabbing. In central critical studies water grabbing in Latin America first and foremost focuses on unequal distribution of water resources and on the issue of access to water. But located in a humid tropical environment, transformation rather than concentration of water is the central issue concerning this open-cut mining project. The company's new uses and its redesign of hydric flows and waste handling alter the composition of water – it becomes a carrier of contaminating substances that are redistributed into down-stream human and natural environments. Mining on this scale implies a type of water use that displaces or externalises the problem it causes, and generates an ‘ecological-distributive’ problem and conflict. At the same time this water use is based on the control and accumulation of other vital resources – land and sub-soil. In the Mirador case, this access has been secured through the company's purchase of land and the State's provision of legal resources (concession, contract, environmental licence) and the expropriation of land. Responses from organised rights activists based in the zone of direct influence target the complex of resource capturing taking place. Looking at some of their social justice concerns and rights claims I intend in this paper to reflect on conditions for water justice in the case of big-scale extractivism.

**Bill Derman** (Noragric) *Visions of water justice in the former settler colonies in southern Africa*

Discussions of environmental justice have expanded in recent years to include the siting of polluting factories, the siting of waste dumps, exposure to environmentally induced illnesses, flood vulnerability, gender access to natural resources, the absence of marginalised communities on water management committees, payment for environmental services, among others. This paper will address how an environmental justice framework can be applied to water laws and policies in southern Africa. As has been extensively documented access to water reflects the long-standing and profound inequalities in land ownership and access which have been highly racialised. The range of new water laws and policies – from Kenya to South Africa – have partly attempted to increase access to water through the implementation in varying ways of integrated water resources management. Specifically, in this paper, we explore if and how a water justice framework might be useful to examine how issues of justice are, or are not included in water laws and policies. The paper begins with Zimbabwe to examine if and how such a framework can be applied across catchments as well as across nations. Zimbabwe is of particular interest because its waterscapes and landscapes have been transformed in recent years due to a radical land reform program and the lack of integration with the water reform of the 1990s. Simultaneously the cities of Zimbabwe, including its capital Harare, suffer from a profound water and sanitation crisis with its citizens trapped between the ruling party and opposition ones. The older systems of water supply and sewage have crumbled under increasing populations, the ongoing economic crises resulting in the lack of maintenance, and failing electrical systems. Increasingly citizen groups are demanding forms of water justice which will be briefly discussed.

**Tim Karpouzoglou** (Wageningen University) *The politics of water quality decline in the peri-urban interface: The case of Ghaziabad, Delhi, India*

In recent years, an expanding body of peri-urban scholarship has brought attention to environmental degradation in peri-urban areas. However, the politics of water quality generally lack sufficient emphasis in both peri-urban and critical water scholarship. Deteriorating water quality in particular, is one of the main drivers of environmental degradation in peri-urban areas exacerbated by the disposal of untreated domestic sewage as well as the transfer of industrial pollutants in rivers and the groundwater. In this paper, we ask what makes the current peri-urban development trajectory so strikingly oblivious of the realities of water quality decline in peri-urban areas? To answer this question, the article draws on empirical evidence from Ghaziabad, a peri-urban satellite town of Delhi. The paper argues that a major reason for the decline of water quality in peri-urban Ghaziabad is linked to a complex interplay of politics and power under a neoliberal urban development paradigm that has radically re-constituted the relationship between urban and peri-urban territories. As a consequence, peri-urban areas are becoming rapidly transformed into new sites of social exclusion environmental and water injustice.

**Optional event****Political Ecology Network (POLLEN) discussion and launch**

**Tor Benjaminsen** (Norwegian University of Life Sciences); **Connor Joseph Cavanagh** (Norwegian University of Life Sciences); **Hanne Svarstad** (Oslo and Akershus University College); **Bram Büscher** (Wageningen University); **John Childs**; **Ben Neimark** (Lancaster Environment Centre); **Saskia Vermeulen** (Lancaster University)

POLLEN is an umbrella organisation of political ecology researchers, groups, projects, networks and 'nodes' within Europe. As the name suggests, POLLEN seeks to provide a platform for the 'cross-fertilisation' of ideas and where Europe's many rich, diverse traditions can come together, discuss, and debate the latest developments in the field. Historically, the term 'political ecology' in Europe has not been confined only to an analytical approach and research program, but also to the theories and narratives that mobilise social and political movements with an ecological agenda. We, therefore, aim to function as a vehicle to promote, encourage and facilitate political ecological research with other academic fields and disciplines, as well as civil society. Hence, while POLLEN seeks to foster a certain 'strength in numbers' for political ecology researchers in Europe, it also highlights our common 'strength in diversity', acknowledging that it is the interaction between many and varied traditions of theorisation on social-environmental relations that continues to make this field so vibrant. The members of POLLEN are both individuals and 'nodes'. These nodes are really what POLLEN is all about: autonomous groups of political ecologists working in and on different traditions. It is established mainly to coordinate between but also to support the various nodes in ensuring that political ecology messages, lessons and insights are shared, broadcasted and heard more widely. We hope to use the meeting in Sussex to kick-start the initiative and get more political ecologists and PE nodes involved.

**Tuesday 8 September****Plenary 2****Resource politics and social justice: Key challenges for policy and practice**

Chair: Suman Sahai (Gene Campaign, India)

Speakers: **Jenny Franco** (TNI), **Nick Hildyard** (The Corner House), **Ravi Agarwal** (Toxics Link), **Myint Zaw** (Crawford School of Public Policy), **Maxime Combes** (Attac France)

**Parallel sessions 2****Panel A2 The new politics of scarcity**

**Lyla Mehta** (STEPS Centre/IDS/NMBU) (convenor) *The new politics of scarcity*

Scarcity is a dangerous idea. It has long been a totalising discourse in resource politics in both the global North and South. Much of modern economics is premised on the scarcity postulate, namely the notion of ever-expanding human needs and wants and limited

means to realise them. It has been ten years since the conference *The Limits to Scarcity* took place at IDS. The book published in 2010 examined how scarcity has emerged as a political strategy for powerful groups to imagine and colonise the future in particular ways, be it around water, food or energy strategies and solutions. This work and other critical research has demonstrated that scarcity is not a natural condition; the problem lies instead in how we see scarcity and the way it is socially generated. Still, scarcity continues to and be deployed in a host of contemporary debates. This paper looks at how it is being deployed and re-deployed in various contemporary debates such as the 'nexus' between water, food, climate change and energy; the so-called food, energy and fuel crisis of 2007-2008 and the accompanying resource grab; planetary boundaries; the green economy and the epoch of the Anthropocene. It shows how scarcity politics have assumed a new twist in current times and simplistic portrayals of scarcity avoid addressing questions the more thorny questions concerning (re)distribution, mis-appropriation, dispossession and social justice.

**Ian Scoones** (STEPS Centre/IDS) *Narratives of scarcity: Understanding the 'global resource grab'*

Global resource scarcity has become a central policy concern, with predictions of rising populations, natural resource depletion and hunger. Resulting narratives of scarcity justify actions to harness resources considered 'under-utilised', leading to contestations over rights and entitlements and producing new scarcities. Yet scarcity is contingent, contextual and above all political. We present an analysis of three framings – absolute scarcity, relative scarcity and political scarcity – associated with the intellectual traditions of Malthus, Ricardo and Marx, respectively. A review of 134 global and Africa-specific policy and related sources demonstrates how diverse framings of scarcity – what it is, its causes and what is to be done – are evident in competing narratives that animate debates about the future of food and farming in Africa and globally. We argue that current mainstream narratives emphasise absolute and relative scarcity, while ignoring political scarcity. We suggest a more political framing of scarcity requires paying attention to how resources are distributed between different needs and uses, and so different people and social classes. This requires, we argue, a policy emphasis for land and resource issues on rights and access, and distributional issues, centred on equity and justice.

**Rohan D'Souza** (Kyoto University) *Have limits turned into boundaries? Scarcity as a wicked problem for Anthropocene politics*

The Club of Rome – the group that published the much-celebrated *Limits to Growth* in 1972 – announced a particularly strident and dramatic environmental message. The central claim was that much of the earth's resources were soon going to be rapidly outstripped by exploding human populations and unsustainable industrial activity. *Limits to Growth's* ominous pronouncements, notably, were assembled by drawing upon game theory, conflict resolution strategies, computer-generated models, statistical projections and scenario-building exercises. To speak of shortages and scarcities amidst the triumph of developmentalism meant that the Club of Rome was not only running against the tide on the question of the need for 'universal improvement' and progress but linked the idea of human scarcity with the notion of a natural/environmental limit. In striking contrast, the now much-cited and celebrated paper published in *Nature* titled 'A safe operating space for humanity' (Rockstrom et al., 2009) attempts to re-situate the entire approach to environmental crises at the planetary scale. Instead of scarcity brought on as a problem of natural limit what we have is the seemingly more compelling case for negotiating environmental crises through the notion of 'planetary boundaries'. In effect, adopting environmental 'no go' zones which if respected and adhered to enable and allow a range of possibilities for economic growth and the unending efforts to meet human need and want. But in moving from scarcity as limit to now having to embrace planetary boundaries does environmentalism get positioned for a new kind of politics in the epoch of the Anthropocene?

**Betsy Hartmann** (Hampshire College) *Who's mixing the drinks? The retro population and scarcity cocktail*

One step forward, two steps back? The dominant discourse of Cold War population policy is with us again, with high rates of population growth viewed as a source of economic and environmental scarcities as well as a major driver of political conflict. The policy prescription that follows is that investments in family planning, especially the promotion of long-acting female contraceptive methods, are more cost-effective than other health and development interventions. Female contraception is a magic bullet, win-win technical fix that at once empowers women, modernises the economy, and saves the planet. This talk analyses why this particular population and scarcity cocktail is so popular again. Who are the major players mixing the elixir? How do they interpret current demographic dynamics so as to obscure the role of political economy and reinforce race, gender and class biases? How does this retro discourse intersect with current population narratives about age, such as rising proportions of old people as an economic burden, or large youthful workforces as a potential "demographic dividend?" How can we resist demographic determinism and re-frame the complex relationship between population and resources?

**Nick Hildyard** (The Corner House) *Scarcity, "polite society" and activism*

Scarcity has a stranglehold grip on much of the discourse of polite society, to the point where it is simply taken for granted that just about every social "problem" is, at root, a problem that arises from scarcity. Numerous conflicts result. And the dominant perspective is constantly being challenged by unpolite society. But the stranglehold remains. Does the problem lie in a failure of activist to shout loudly enough? Or to expose the ways in which scarcity is generated by unequal power relations? Or does the continuing appeal of scarcity reflect a more fundamental problem, rooted as much in the ways that progressive activists are themselves organising as in the well-documented power of today's elites? Understanding how elites have constructed and maintained the scarcity discourse is an essential element of any political resistance to scarcity-as-elite-strategy, and rightly so. But exposing the successful activism of the rich surely also requires an understanding of the unsuccessful activism of those who would resist elite power: for the current and future trajectory of society is ultimately an outcome of such resistance. What forms of resistance are failing? What ways of social and political organising are proving more promising in building or strengthening ways of living that respect the collective right of all (not just the few) to decent livelihoods? What oppositional strategies assist elite power? And what strategies unsettle it? Is the persistence of scarcity as an explanation for social ills an outcome of the hollowing out of many of the social institutions, such as trade unions, through which elite power has historically been challenged? Or of the often depoliticised organising that has emerged in many countries to fill the vacuum?

**Dipak Gyawali** (RONAST) (chair)

## **Panel B2 *Beyond people vs. parks: Exploring the complexity of conservation governance in the 'Anthropocene'***

**Marja Spierenburg** (VU Amsterdam) (convenor) *Private wildlife production and land rights in the Eastern Cape, South Africa*

Robert Fletcher (Utrecht University) (convenor) – *The end of the wild? Debating the nature of nature in the 'Anthropocene'*

Recently, debate concerning appropriate strategies for environmental conservation have become caught up in growing discussion of the "Anthropocene," with newfound assertions that the advent of this new phase of world history demands that humans take their pervasive domination of nonhuman processes seriously and manage them to maximise both their long-term sustainability and economic benefit to human populations. This position, however, have been met by resurgence of a neoprotectionist position calling again for a return to strict protected area expansion and enforcement in the face of this growing emphasis on human-centered conservation management. At the center of this ostensibly "new" version of a longstanding "People vs. Parks" debate is the idea of "nature" itself. Anthropocene conservationists draw on critiques of a characteristically western nature-culture dichotomy to argue that if nature does not exist as a distinct realm then there is no need to preserve spaces free from human use. Neoprotectionists, by contrast, assert that nature is indeed a distinct "self-willed" force that deserves its autonomous space and, furthermore, that the very idea of the Anthropocene is a fiction of human hubris. In this presentation, I explore the terms of debate in this new form of an old discussion, asking what exactly is new here, what is fundamentally at stake, and what might be done to overcome this age-old divide in pursuit of a brighter future for a conservation under increasingly seen as under siege by manifold forces.

**Christine Noe** (University of Dar Es Salaam) and **Maano Ramutsindela** (University of Capetown) *Investing in the wild: Business models in national parks in southern and eastern Africa*

The renewal of scholarly interest in the connections between business and nature conservation has been ascribed to the intensity of capitalist penetration into nature, an increase in the diversity of forms of capitalist conservation, the mushrooming of sponsored environmental non-governmental organisations, and the belief in market-driven solutions to environmental problems. The ways in which capitalism penetrates nature conservation are increasingly understood through the lens of neoliberalism: an economic project that profoundly reconfigures the relations between nature, society, the market and the state. While we have a better grasp of the links between capitalism and nature conservation, much is still to be learnt about the evolution of business models in nature conservation areas. In this paper we engage the following questions: what business models are in operation in nature conservation areas? Once developed, how and under what conditions do companies adapt their business models from one country to another or from one conservation type to another? Understanding the operation of these models in protected areas is crucial if we are to properly assess the impact of business on the marginalised sectors of society. The humanity and wellbeing of these sectors are tied to the green spaces that are now firmly under the influence of mushrooming business enterprises.

**George Holmes** (Leeds University) *Something old, something new: How conservationists are characterised by recent literature*

In the last few years, there has been a contentious and heated debate in the pages of biodiversity conservation journals about the merits of the "new" conservation, a set of proposals for new priorities, tools and ethical standpoints in conservation in response to the challenges of a human-dominated Anthropocene era. The "new" conservation advocates a focus on human dominated ecosystems over wilderness, close relationships between conservation organisations and businesses, a greater use of market tool such as payments for ecosystem services in conservation, a greater integration of human wellbeing goals into conservation, amongst other changes. This is not just about biodiversity in itself, but about how people interact with conservation, about power and who gets to benefit from the resource of biodiversity, and how. The purpose of this paper is to outline and analyse the controversy over the "new" conservation in light of wider debates within conservation, particularly about how conservation should relate to humans, issues of access to resources and justice, and the role of capitalist processes within conservation. It explores some of the implications and consequences of both the "new" conservation and alternative positions put forwards by its critics for both biodiversity and human wellbeing. This paper is the first of two on the subject of the "new" conservation.

**Chris Sandbrook** (Cambridge University) *Dimensions of difference: Towards an empirical analysis of views held by actually existing conservationists*

In the last few years, there has been a contentious and heated debate in the pages of biodiversity conservation journals about the merits of the "new" conservation, a set of proposals for new priorities, tools and ethical standpoints in conservation in response to the challenges of a human-dominated Anthropocene era. Protagonists in the debate have made various claims about the beliefs of conservationists, assigning them to two categories – 'new conservation' and 'traditional conservation'. However, there has been no empirical evidence provided to establish the extent to which actually existing conservationists fit into these two groups, or indeed form other groups not currently described by the debate. This paper will provide initial findings from the first attempt to collect and analyse data on the views of conservationists, collected from respondents at the International Congress on Conservation Biology (ICCB) to be held in Montpellier, France in early August 2015. This paper is the second of two on the subject of the "new" conservation.

## **Panel C2 *The digital economy: An emerging approach to sustainable development***

**Samir Doshi** (USAID) (convenor) *Real-time data to transform adaptive learning*

**Ken Banks** (kiwanja.net) *Technology and innovation for socio-environmental change*

Classes in social innovation, social entrepreneurship and design thinking have become increasingly popular in recent years. On the one hand, this might be seen as a good thing. After all, the world needs as many smart, engaged citizens as it can get, particularly when you consider the multitude of challenges we face as a planet. But does a career in social change really begin in the classroom, or

out in the real world? How much social change is planned, and how much accidental? And which approach tends to lead to the most meaningful, lasting or impactful solutions? During this panel discussion, Ken Banks will talk about the rise of innovation 'outside the system', and how this is beginning to challenge conventional thinking around social innovation.

**Duncan Edwards** (IDS) (tbc)

**Amy O'Donnell** (Oxfam UK) (tbc)

### **Panel D2 *The how and who of financialisation of nature***

Carbon markets in China, fishery bycatch offsetting in Canada, catastrophe bonds in the US, weather derivatives in Ethiopia, betting on species extinction such as Norwegian sharks... These are just a few examples of the commodification, marketisation and financialisation of nature. In what ways can we best make sense of these developments? What practical, political and theoretical innovations allow us to better understand them, engage with them and contest them? In this panel, we will be trying to shed some light on the "how" and the "who" of financialisation of nature, as well as the processes that are underlying the setup of these new markets for nature. We will explore the role of the co-development of ecosystems services, benefit-cost analysis and economic valuation – including the practical and contested reconceptualisation of the economic concept of externalities – for the development of pricing mechanisms. Marketisation further requires commensuration and proof of additionality, hotly contested in academia and the policy arena both in relation to carbon market but also biodiversity conservation. Conservation finance involves the production of nature as an asset class and raises interesting questions about the types of nature that are being produced, about the material basis for the value created and about who profits from these values. How are values rendered knowable and translated into economic exchange values in the development of new markets? To answer these questions requires understanding the emergent knowledges, practices and alliances at the intersection of ecology, business, accounting and policy, which are being formed, negotiated and resisted.

**Andrea Brock** (Sussex University) (convenor)

**Richard Lane** (Sussex University) *The costs and benefits of nature*

Within the critical political economy literature, the co-development of ecosystems services and benefit-cost analysis is often understood under the rubric of the neoliberalisation of nature. Here, the impact of neoliberalism on environmental policy is understood in terms of the expansion of economic valuation into spheres that were previously not subject to monetary values, via the development of pricing mechanisms within the ecosystems services approach. Following this making visible of the formerly economically invisible, the subsequent development of environmental commodities or proxy commodities can be undertaken through the application of the broad technique of benefit-cost analysis as part of a drive towards a market environmentalism (Anderson & Leal 2001) whose conceptual parameters were laid down in 1960 by the Chicago economist Ronald Coase. But as Larry Lohmann (2009:500) has argued, this focus on the territorial expansion of the economy into the natural world is a metaphor shared between both the received wisdom of the economics profession and the standard critique. Here the difference lies simply in the reversed normative polarity with which this expansion is greeted. And this belies the much more interesting relationship between environmental valuation and benefit-cost analysis that is lost if these are understood simply as part of the application of neoliberalism to nature. The postwar, largely US history of this relationship is the focus of this paper.

**Louise Carver** (Birkbeck, University of London) *In search of "a good biodiversity yield per hectare": Producing value in English Biodiversity Offsetting Markets*

Biodiversity offsetting and the new 'valuation' discourse of conservation is recognised as the commodification of biotic life through the entangled logics of capitalism and conservation. But what does it actually mean to value nature using biodiversity offsetting and through what specific practices is biodiversity offsetting a commodification process? Significantly, what material effects can we expect such commodification practices to have? Drawing from detailed comparative empirical research from two sites in the English biodiversity offsetting pilot study that operated between 2012-2014, and yet still roles on awaiting formal policy direction, this paper charts the iterative layers of value creation wherein biodiversity value is constructed as a new conceptual category, stabilised as a commodity and thereby transformed into a unit of exchange. It demonstrates the techniques through which this ecological value is first rendered knowable with nascent quantification practices and subsequently translated into economic exchange value by way of constructed commensuration between new value entities vis-à-vis its calculative device (Callon 2007) known as the 'DEFRA biodiversity metric'. The paper's emphasis is to illustrate the function of these calculative devices in combination with individual agency in the construction of biodiversity value. Through a distilled case study it presents a short tale of the 'what' and the 'who' of the production value from nature in the English biodiversity offsetting context.

**Kelly Kay** (Clark University) *A hostile takeover of nature? Placing value in conservation finance*

Conservation finance is an emerging field self-describes as aiming to "deliver maximum conservation impacts while, at the same time, generating returns for investors" (Huwyler et al. 2014a). Driven partially by the tremendous growth in so-called impact investing, big players like JP Chase Morgan, Goldman Sachs, and Credit Suisse are collaborating with land trusts and other non-profit environmental groups in hopes of finding ways of making conservation pay; eventually aspiring to scale up existing projects and to produce conservation as a standardised and recognisable asset class of its own. Much of the necessary groundwork for testing the viability of conservation finance programs is happening within vast and resource-rich landscapes of the United States. In this paper, I aim to

explain how conservation finance is produced as an asset class and how that asset comes to circulate as a financial product. Drawing from a Marxian understanding of finance as fundamentally redistributive, rather than productive, I ask: how is conservation finance producing value, and in turn, shareholder returns? This paper looks at the Northern Forests of Maine and ranching lands in Colorado as two illustrative cases, and draws upon semi-structured interviews conducted with conservation-oriented timber investment management organisations, farm and ranch land investors, restoration ecologists, land trusts, and conservation financiers.

## **Panel E2 Local representation in carbon forestry**

Carbon forestry involves the storage of carbon in trees. The idea is to control global warming by sequestering atmospheric carbon via reduced deforestation or increased afforestation. The largest carbon forestry scheme is the UN and World Bank's Reduced Emissions from Deforestation and forest Degradation (REDD), in which the UN and carbon markets pay national governments to reduce deforestation or increase afforestation. The promoters of these programs recognise that local forest-dependent people can be harmed when their forests are cordoned off from every day or from commercial uses. The UN has required the use of Free Prior and Informed Consent (FPIC) as a means of protecting local people from the un-compensated enclosure of their forested lands (or agricultural lands put back under tree cover). The World Bank changed the 'C' to Consultation – since consent seems to be too much of a bother. But participation and representation is not new in any forestry schemes – almost all governments and donors require some degree of local input. The papers in this panel examine how local people are represented in forestry (carbon and not) policies and projects where local participants are said to be represented in the forestry schemes – from design to the implementation and monitoring.

**Jesse Ribot** (Geography at University of Illinois & CODESRIA) (convenor and chair)

### **Papa Faye** (Geography at University of Illinois) *From better representation to subordination in participatory forest management in Senegal*

Senegal's democratic decentralisation reform dates to 1996. Rural communes gained the right to define local policies over nine domains of power including natural resources management and environment. In 1998, decentralisation reform reached the forest sector with the promulgation of the so-called 'decentralised forestry code'. The 1996 and 1998 laws recognised the communes (elected local governments that regroup 30-60 villagers) as the rightful institution to organise the management and use of commercial forestry resources, mainly wood and charcoal. However, the 1998 forestry code imposed the establishment of forest management plans as a pre-condition for the transfer of the power over communal forests to be effective. To expand forest management plans throughout the forestry regions, Senegal's government called upon donors to finance some management projects. One of the largest projects, however, decided to 'depoliticise' the sector for better representation of village interests, creating village-based institutions. These participatory institutions, because of the Forest Service's technical claims over forestry decision making, ended up being subordinate to the forest service offices and to the project as far as charcoal production is concerned. Forest services and PROGEDE staffs have made the committees' leaders dependent on them through the allocation of undue privileges allocated through mechanisms such as permits to market charcoal to Dakar. These local elites, now dependent on the forest service, also have their own dependents to whom they also reallocate privileges. These networks of dependency have constrained the consolidation of local (democratic) representation – since allocation bypasses the democratic process. Patronage replaces representation.

### **Jens Friis Lund** (University of Copenhagen) *Waiting for REDD+ in Tanzania*

REDD+ is an ambition to reduce carbon emissions from deforestation and forest degradation. Yet, it is also a policy model that has created great expectations of possibilities and benefits among actors from global to local levels, and which drives a host of processes and activities among donors, consultants, experts, bureaucrats, researchers, and forest-adjacent communities. In Tanzania, REDD+ processes has been supported by some 100 million USD to finance REDD+ readiness activities and a set of pilot projects. These activities and processes under the banner of REDD+ are reminiscent of those that occurred in the country during the early days of Participatory Forest Management a decade earlier. Both ostensibly seek to achieve sustainable forest management through greater involvement of forest adjacent communities in forest management. The PFM process drove similar processes and activities involving many of the same institutions and people who are now involved in the REDD+ process. Being inspired by ethnographic accounts of the development industry, we are interested in understanding REDD+ as policy model and the processes and activities done in its name. We explore this empirically by describing REDD+ activities and expectations in Tanzania and comparing these to the activities and expectations surrounding the prior PFM policy. In doing so, we wish to call attention to the problematics of changing policy models within the development sector that appear to sustain careers and financial flows within relatively narrow institutional circles, while being less effective at fostering greater involvement of forest adjacent communities and changes to actual forest management beyond a few pilot sites.

### **Susan Chomba** (University of Copenhagen) *The carbon woman: Rethinking representation in relation to gender in the implementation of REDD+*

The role of gender, and particularly women, in climate change discourse and project implementation now sits center stage. Nancy Fraser proposes representation as the third act of feminist emancipation, following redistribution and recognition: but whether representation can deliver women's access to resources and economic benefits, as well as challenging the androcentric order of society, remains hotly contested. This paper applies the concept of representation, encompassing descriptive and substantive forms, to examine the policy and implementation of a prominent REDD+ project in Kenya. It addresses two research questions: (i) how are women represented descriptively (numerically and in terms of the process of selecting women representatives) and, (ii) how are

women represented substantively (to what extent are issues that concern women raised and resolved)? Empirical data are drawn from review of project documents, analysis of financial records and key informant interviews. Results indicate a deficit in achieving a critical mass of female descriptive representation, owing to lack of clarity in policies on the numbers and processes for selecting women to leadership roles. Substantive representation, while championed by a few representatives, is stymied by structural factors, including ownership of property and cultural influences that reinforce the exclusion of women in access to decision-making and carbon benefits. The paper discusses the findings in the light of feminist theory and suggests how to facilitate gender transformative outcomes from carbon payments through appropriately representative institutions.

### Parallel Sessions 3

#### Panel A3 *Water resources: Big dams and geopolitics*

The large dam industry has witnessed a resurgence since the mid-2000s. It is buoyed by industry lobbying for a favorable framing in climate change and development discourses, new finance and global-scale developers including from emerging economies, new governance initiatives led by the industry itself and its allies, and continued interest by many riparian governments. Water resources are placed centrally within the Sustainable Development Goals, including the recently coined concept of water's "nexus" relationship with food and energy production. This nexus concept has been promoted by diverse actors, including the World Economic Forum, various UN agencies, research institutes, and international NGOs towards divergent ends. Meanwhile, in 2014, the long-delayed UN International Watercourse convention was adopted, affirming the principle of international cooperation on transboundary rivers. Access to and control over water has been long contested, at scales ranging from the local to the transnational. These contestations are ridden with power asymmetries and framed by various politics, including of scarcity, scale, uncertainty, technology and knowledge. With a focus on Asia, this panel will discuss the implications of the above significant landscape shifts in the (geo)politics of water resources, the role of big dams within them, and the consequences for local communities most at risk of resource dispossession. Drawing insights from the politics of water resources and the evolving concept of water-food-energy nexus, the panel will propose alternative pathways for water resources that decentralise and democratise decision-making, leave space for local solutions and small-scale technologies, and ultimately better facilitate justice.

#### **Carl Middleton** (Chulalongkorn University) (convenor) *Transboundary justice on transboundary rivers: A rights-based approach to the food-water-energy nexus in Southeast Asia*

Mainland Southeast Asia's two major international rivers – the Mekong and Salween – are central to the food security, livelihoods and culture of millions of people. Increasingly fulfilled plans for hydropower dams place environmental and social costs onto communities whose rights are often violated. Alongside well-entrenched challenges in holding to account how hydropower projects are planned, built and operated, new challenges are also emerging related to the industry's partial privatisation, increasingly financialisation, and regionally-integration. Globally, there is growing recognition of the relationship between the environment and human rights, as well as the principles of extra territorial obligations (ETOs). Both are relevant to cross-border investments in hydropower projects in Southeast Asia. Reflecting these trends, the National Human Rights Commissions of Thailand and Malaysia have accepted cases on hydropower projects in Laos (Xayaburi/ Don Sahong) and Myanmar (Hat Gyi) involving companies from their own countries. Furthermore, in 2014, the International Watercourse Law entered into force, although its relationship to international human rights law remains poorly defined. Meanwhile, the "food-water-energy nexus" has emerged as a potentially useful research and policy agenda, but remains contested including over how it addresses issues of justice. This paper asks: Can a "nexused rights-based approach" to transboundary rivers further the protection of the rights of riparian communities and contribute towards the re-regulation of the hydropower industry in Southeast Asia? The paper identifies the various national and transnational arenas that exist to seek justice utilising a nexused rights-based approach, and evaluates their use to date, and the politics surrounding them.

#### **Dipak Gyawali** (RONAST) (convenor) *Tombstones of water development paradigms: Reflecting on the political economy behind shifts in foreign aid, investments and recipient reactions*

Foreign-aided development in general and its water component in particular, has seen shifts in development fads over the last half century. And Nepal has been a perfect test case where, ever since the end of the Second World War varied development philosophies – from import-substituted to export-led, from basic needs to structural adjustment etc. – have passed over the lands like the seasonal monsoon rains. While in the mid-century the thrust was on development bringing about modernisation for the people and the country, it has now stagnated to effectively mean the well-being of the international market and the financing community. The result, as the case of Nepal demonstrates, has been a focus on developing the country's hydropower potential for export to the external market instead of meeting domestic needs wherein the country's national grid currently faces shortages that result in some twelve to fifteen hours of power cuts a day. This particular paper will examine the disjuncture between an unbridled market and an unhappy domestic consumer base that forebodes conflicts and political insecurity, and will argue why a risk-resilience approach that puts social justice at the center stage has a better chance of achieving social harmony and avoiding exacerbating conflict.

#### **David Blake** (independent scholar) *Irrigation development and 'the nexus': Ideology, politics and practices of Mekong Region Hydraulic Control Paradigm*

Reforming and modernising approaches to irrigation development appears to be a central part of the rapid emergence of the "Water-Food-Energy Nexus" concept, in maintaining a managerial and technocentric thematic focus of the lead sectoral institutions, albeit wrapped up in newer narratives such as an ecosystem services approach or enabling a green economy. Yet historically, irrigation

development practices supported by donors have consistently applied instrumental approaches that have helped to centralise power in the hydraulic bureaucracies and elites. These were often implemented alongside a strongly normative rhetoric of sustainability, participation, decentralisation, integration with other sectors, multi-use systems, etc, that pepper the Nexus lexicon. In the fast-changing and increasingly contested Mekong Region, there is evidence to suggest that international development organisations promoting normative “WFE Nexus” approaches to regional and national stakeholders still tend to deliver relatively depoliticised and technocentric approaches to irrigation development (some bordering on utopian) that maintain the status quo and discourage institutional adaptation, as this would perhaps mitigate against the fundamental implicit need to develop hydraulic infrastructure by powerful centralised sovereign states and risk alienation. Using examples from Thailand, Lao PDR and Cambodia this paper explores some of the modern ideological drivers and politics of irrigation development to illustrate the replication of governance (mal)practice and unequal access to resources. This paper argues that unless there is more open, critical and applied evaluation of the irrigation sector which implicitly acknowledges the contested politics of domestic and regional water management by advocates of the “Nexus” approach, it is likely that the present development paradigm will continue largely unchallenged.

**Myint Zaw** (Crawford School of Public Policy) *Exploring identity of place: A case study of Myitsone village and the “Save the Ayarwaddy Movement” against a mega-dam project in northern Myanmar*

The number of population affected by displacement is in many cases taken as a key indicator measuring the negative impacts of a mega project or natural resource extraction. This paper argues that cultural significance, identity of place, and horizontal dimensions of place-relations to people beyond immediate geography are also important. These considerations, however, are not reflected in the number of people resettled, making the impact look lower than it actually is. This paper looks at the case of Myitsone village that is located in a crucial watershed area of the Ayarwaddy River in Myanmar, and which is also the cultural heartland of the Kachin ethnic group. When the Myitsone mega-dam project was initiated in this area with Chinese investment, alongside concerns over the project’s downstream impacts, identity and integrity of place was one of the main issues for local people and that needs to be understood in the context of a long running ethnic resentment. This paper explores how cultural geography and sensitivity emerging from conflict have contributed to popular opposition to the Myitsone dam project, and how intangible values of place need to be placed central to the notion of multi-dimensional sustainability for any ‘development’ project.

**Jeremy Allouche** (STEPS Centre/IDS) – panel chair

**Panel B3 *The Locality in the Anthropocene***

Scientists globally today are talking about what they see as the Anthropocene, a geological and chronological term that is gradually being formalised and that marks the evidence and extent of human activities that have had a significant global impact on the earth’s eco systems. It has no precise start date but based on atmospheric evidence there is an emerging consensus among earth system scientists to designate the last several hundred years, particularly since the industrial revolution as the Anthropocene in view of anthropogenic change. Scientists now are being described as the historians of the future. By ceding the terrain of history to scientists in this debate on the Anthropocene and foregrounding planetary narratives on the fate of humanity, locality, class, gender and race risk being glossed over. This panel emphasises the importance of looking the impact of the Anthropocene in the locality by developing a more pointillist approach to the impact of climate and environmental change in particular locales and on specific communities and calls for targeted research that enables this

**Vinita Damodaran** (Sussex University) (convenor) *The Locality in the Anthropocene: Perspectives on environment and development in Eastern India*

How do we then revisit the idea of Sustainable Development in the Anthropocene? In a recent article, this idea is redefined as ‘development that meets the needs of the present whilst safeguarding earth’s life support system on which the welfare of current and future generations depends’. (Griggs, et.al, Nature, 21st March, 2013). It has been argued that discounting the future and valuing the present is much easier to do in materially poor societies in the global south where survival itself is at stake but, this argument is certainly not true for indigenous societies, for example, in Eastern India whose attitudes towards the environment are intergenerational and conservationist. These sustainability debates are at the heart of traditions in India’s tribal heartland. These are communities whose values and ways of co-existing with nature in the past help us learn useful lessons. Research that explores the environmental history and anthropology of particular communities and localities will help uncover alternative ways of living on this earth, detail the impact of the Anthropocene in the locality and allow us to re-imagine how we live on this earth.

**Maurizio Marinelli** (Sussex University) (convenor) *‘Beautiful China’ in the Anthropocene: Ecological civilisation building and its challenges*

The aim of this panel is to analyse the impact of the Anthropocene on the locality. In line with our primary intention, this paper will first assess the national and international implications of assuming that China as a whole is a ‘locality’, and then will focus on one of the most significant political and intellectual debates in Chinese studies today, namely the social and environmental challenges for China’s political and socio-economic development. Since the beginning of the ‘reform and opening up’ era in 1979, rapid industrialisation, extensive land development and full-scale urbanisation have been a priority of the Chinese Government’s economic policy. In 2012, however, it has become clear that China is ‘a speeding train at a turning point’ (Wan Junren, 2012), since the Chinese society is experiencing unprecedented ecological pressures and environmental constraints. Therefore, in the last few years, we have witnessed a growing political emphasis on the importance of re-balancing the economy, promoting sustainable growth, and accepting the ‘new

normal': a vision of a qualitatively different development pattern within the context of a softer (and perhaps more sustainable) pace of growth. In this light, I will analyse the historical, political and discursive dimensions of the debate initiated by a few prominent Chinese intellectuals on 'ecological civilisation', challenging old and new ways to conceptualise humanity's relationship with nature. The final aim of this paper is to offer a more nuanced analysis of the Chinese Government's imperative to 'Advance Ecological Civilisation and Build a Beautiful China', evaluating, from a historical perspective, the necessity to move away from a dominant pattern of full-scale urbanisation which has often seemed to prioritise the building of grandiose cities of spectacle as opposed to liveable cities where human beings want to live.

**Rohan D'Souza** (Kyoto University) *The politics of water in the Anthropocene*

**Anshu Ogra** (Jawaharlal Nehru University) *"Decision-making" in the Anthropocene: Adaptation, coffee growers and climate change in South India*

In this paper we discuss three different perspectives that attempt to explain a single weather event that occurs over a particular ecological-geographical patch. The weather event we are specifically looking at is the South-West monsoons and the defined ecological-geographical patch in focus is the coffee plantation belt that runs across a portion of the Western Ghats region in Southern India. This exercise is not only to document the differences within narrative designs about a single weather event but is also aimed at examining how such experiences are expressed in often times contending and contradictory ways amongst different groups situated in the same ecological-geographical patch. The three different groups whose perspectives about monsoonal impacts in the tropical evergreen forests of the Western Ghats that is being looked at are: a) coffee planters, b) climatologists and meteorologists and c) weather insurance assessors. The paper argues that in case of climate change adaptation strategies there is a need to integrate the natural sciences and the social sciences; meteorology and sociology; the predictive capacity of abstract numbers and the non-linear speculation of economic and political markets and finally why adaptation strategies must help us get the theory laden social world to negotiate with hypothetico-deductive reasoning for policy purposes.

**George Adamson** (King's College London) *Historical reflections on the Anthropocene*

There is a growing move within environmental social science towards a positivist model of human-environment dynamics. Central to this is the idea that social-ecological systems can be simulated within complex nonlinear models. The Anthropocene is the ultimate manifestation of this framing, whereby humans and 'the environment' are both seen as equal constituents of a world system. This has led to the development of a new approach to historical data: history as the temporal dimension in complex social-ecological systems. This approach sees the past as key to the future, in allowing fast and slow processes, steady states and tipping points to be identified and ultimately identifying a safe space in which humans can exist in the future. Yet this Anthropocene approach has been heavily critiqued. It downplays human agency and ignores power relations. It can lead to deterministic and neo-Malthusian approaches to governance. It gives prominence to the global over the local. Finally it ignores culture, particularly the acknowledgement that humans exist within their landscape and the 'weather world', both of which both shape and are shaped by human activity. Such issues have long been understood by humanities scholars, yet this new domain of history is being populated by researchers emerging from a different tradition. Communication between disciplines has been minimal. This paper will argue that traditional approaches to environmental history and historical climatology are insufficient to address current challenges. It will argue for a new approach that speaks across disciplinary boundaries and breaks down the barrier between past and present, and objective and subjective.

### **Panel C3 Assessing global sustainability assessments: The challenge of creating international knowledge in the face of divergent framings**

**John Thompson** (STEPS Centre/IDS) (convenor) and **Erik Millstone** (STEPS Centre/SPRU, University of Sussex) (convenor) *An assessment of global agricultural assessments*

In response to renewed interest in the governance of the global agri-food system, following the economic crises of 2008, we aimed to appraise competing assessments of agricultural and food policies and technologies. The assessments were selected to capture widely contrasting perspectives, while each had to provide a diagnoses of problems, offer prescriptions for addressing them, and explicitly consider choices about the directions in which agricultural and food science and technology are being developed and should be developed. The research aimed at identifying, and critically examining, the framing assumptions underpinning those documents, to establish the extent to which diverging conclusions could be explained by reference to the underlying framing assumptions, as well as to inform a critical engagement with agricultural technology policy debates. We focussed on three assessments of agricultural technologies, and three sets of policy prescriptions. The analysis aimed to explain why the initiatives reached such divergent conclusions, and to test the hypothesis that the difference in outcomes could be explained by reference to competing starting points, as encapsulated in their framing assumptions? Secondly, the competing assumptions, diagnoses and prescriptions were benchmarked against empirical evidence and an explicit set of normative and methodological criteria.

**Clark Miller** (Arizona State University) *Rethinking the framing and organisation of knowledge-making for global sustainability: The challenge of unsustainable systems*

To date, knowledge-making for global sustainability has been framed and organised primarily around facets of the natural environment put at risk by human affairs. The naming of organisations like the Intergovernmental Panel on Climate Change and the Intergovernmental Panel on Biodiversity and Ecosystem Services reflect the dominance of an environmental paradigm in shaping not

just policy responses but also the foundational knowledge arrangements in global society. As a result, for example, climate scientists rather than energy engineers have played the principle roles in organising and prioritising knowledge to address climate change, even as energy sector emissions of carbon dioxide dominate the driving processes that contribute to the problem. In this paper, I examine the consequences of this design choice for global sustainability assessments and offer suggestions for how an alternative framework for assessment, designed around the core systems whose practices and arrangements are unsustainable, might offer a more fruitful approach. The rationales for such a shift are multiple: it would better focus attention on the causal drivers of unsustainability; it would enable a targeted focus on the systems dynamics at work in unsustainability; it would facilitate cross-problem coordination of policy responses, e.g., on the multitude of sustainability challenges driven by existing energy, water, food, and transportation systems; etc.

**Silke Beck** (Helmholtz Centre for Environmental Research – UFZ) *“Policy-relevant and yet policy-neutral, never policy-prescriptive”*: What role(s) for experts in global governance?

This paper explores the role of expert organisations in global environmental governance and combines constructivist approaches to explore how and with what effects they act as a politically powerful agent in politics even if they claim to be neutral and not policy prescriptive. These analytical considerations are now illustrated empirically with special reference to the IPCC which has served as a pioneer in global assessments. Due to its achievements, the IPCC has also become a role model and trendsetter for the Millennium Ecosystem Assessment (MEA) and the newly established Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). Finally, the chapter asks what lessons can be learnt from these empirical findings to inform the debate about the future role of expert organisations. It also suggests a number of questions arising from the analysis that need to be addressed by future research and invite to a closer dialog between different social science traditions such as IR, science and technology studies and deliberative theory

**Martin Mahony** (King’s College London) *Somewhere between everywhere and nowhere: IPBES, IPCC and the geographies of knowledge* (paper written with **Maud Borie** (University of East Anglia) and **Mike Hulme** (King’s College London))

In this paper we draw on science and technology studies (STS) approaches to develop the first comparative analytical account of the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Platform for Biodiversity & Ecosystem Services (IPBES). The establishment of both of these organisations, in 1988 and 2012 respectively, represented important ‘constitutional moments’ in the global arrangement of scientific assessment and its relationship to environmental policymaking and, in many aspects IPBES aspires to re-interpret the experience of the IPCC. Comparing their two histories to date, we focus on the role of consensus, argumentation, participation and authoritative conceptual frameworks in the production of knowledges about climate change and biodiversity. This enables us to explore the geographies which produce these knowledges (the socio-spatial constitution of different sites of knowledge production) and the geographies which these knowledges enact (through diverse representations of space). We argue that, broadly speaking, the IPCC has aimed to produce a ‘view from nowhere’, through a reliance on mathematical modelling to produce a consensual picture of global climate change, which is then ‘downscaled’ to considerations of local impacts and responses. By contrast IPBES, through its contrasting conceptual framework and practices of argumentation, appears to seek a ‘view from everywhere’, inclusive of epistemic plurality, and through which a global picture emerges through an aggregation of more placed-based knowledges. We conclude that, despite these aspirations, both organisations offer ‘views from somewhere’ – situated sets of knowledge marked by politico-epistemic struggles and by the interests, priorities and voices of certain powerful actors.

### **Panel D3 Mining and movements for social justice in Sub-Saharan Africa**

Over the past decade, environmental and social injustices in mining sectors in Africa have been the subject of growing debate in research and policy communities. This panel will reflect on a selection of case studies to explore the ways in which mining sector power dynamics are being conceptualised and contested in Africa. The panel will explore how various kinds of mineral extraction activities are shaped by changing power relations, and it will critically explore the complex relation between sustainable development agendas and mining development agendas on local and national scales. Challenging top-down policy perspectives, the panel will focus especially on movements for social justice that have been seeking to create ‘space’ for rural livelihoods in the artisanal and small-scale mining sector and/or re-align the influences of large-scale corporate mining development models in rural communities. The papers in this panel draw on empirical research in contexts where different types of commodities are being mined and aim to contribute to pressing global debates about ‘resistance’ in the mining sector and the roles of political ecology researchers in tackling extractive sector contestations.

**Sam Spiegel** (Edinburgh University) (convenor) *Political ecology and artisanal mining: Understanding ‘modernisation’ struggles and advocacies in Zimbabwe*

This paper engages current debates within political ecology scholarship on the extractive sector, examining different kinds of power, agency and advocacy in the artisanal mining sub-sector in Zimbabwe. Based on experiences of fieldwork with artisanal and small-scale miners’ associations between 2005 and 2013, the paper analyses how associations have sought to contest and challenge national government policies for “modernising” the mining sector. It focuses especially on different kinds of political ecology framings of power in relation to the enforcement of requirements to conduct environmental impact assessments (EIAs), approaching EIA enforcement as a contested form of modernisation. In recent years, the cost of hiring a consultant to complete an EIA has been prohibitive for many artisanal and small-scale miners in Zimbabwe; and the link between completing EIA reports and improving environmental performance has often been contested. Miners associations have protested the one-size-fits-all policy model for EIAs in the mining sector, highlighting the need for a more nuanced approach to regulating artisanal mining, small-scale mining and large-scale mining. By exploring the advocacies of artisanal and small-scale miners associations, the paper draws attention to the power dynamics involved in re-conceptualising alternatives to the existing EIA model and associated dilemmas for political ecology researchers.

**Eleanor Fisher** (Reading University) (convenor) *Bio-power, bio-gold: Reflections on the politics of social justice in East African fair trade gold mining*

Gold produced by artisanal and small-scale (AS) miners in East Africa has entered the range of Fairtrade certified products available to western consumers. In effect Fairtrade gold becomes part of a trading system seeking to strengthen the position of AS gold producers through the application of agri-food standards and third party certification to gold value chains. Mechanisms to develop miners' capacity to produce Fairtrade gold include the creation of Artisanal and Small-Scale Miners Organisations, a significant departure from existing forms of AS organisation, and the implementation of core labour standards relating to child labour, health and safety, employment practice, and environmental impact, with particular emphasis on mercury elimination. Within the context of the highly politicised policy practice of contemporary extractive industries development in East Africa, and of the power disparities and socio-economic inequalities present in mining communities, the instrumental approach to AS development and market access taken by Fairtrade organisations makes the pragmatics of social justice appear strangely de-politicised and de-contextualised. This paper reflects on this attempt to regulate mining life in the name of social justice and fair markets.

**John Childs** (Lancaster University) *'Taking the bull by the horns': Cultural resource nationalism in sub-Saharan Africa*

According to various political commentators, resource nationalism is 'back' and 'on the rise' across the globe. It is a paragon of the ways in which the state is (re)gaining primacy in the analysis of natural resource extraction and is just as apparent in Africa as in the more widely studied Latin American context. From Zambia to Tanzania, DRC to Ghana, an increasing number of contemporary examples articulate the governance of natural resources in a shifting language of control, national identity, of distributive justice and the self-determination of pathways to development. Describing national government's efforts to secure greater benefits from its resource stocks, studies of resource nationalism tend to be set up in narrowly geopolitical terms, a trend which has largely failed to engage critically with the constructed nature of the discourse of the 'nation'. Indeed, it is argued that a more cultural reading of resource nationalism should emphasise the 'performance' of politics where language is more prominent (Wodak 2011). In doing so, it begins to highlight the ways in which the imagined geographies of resources (based, inter alia, around articulations of 'hope' and 'opportunity') intersect with political notions of rights, identity and citizenship. Indeed an investigation of this national imaginary, can be seen to be at odds with alternative political imaginaries of resource claims made by other actors at different scales and in different places over resources that are often 'out of sight' (either underground' or 'over the horizon').

**Patrik Oskarsson** (Swedish Agricultural University) *Public debate and the uncertain benefits of coal projects in Mozambique*

This paper discusses the efforts of a national civil society platform in Mozambique to open up for wider debate on crucial policy matters over how mineral resources should be used and their benefits distributed. 'The Civil Society Platform on Natural Resources and Extractive Industry' in Mozambique encompasses more than 30 organisations and has a nationwide reach from policy and research-oriented organisations in Maputo to those working on outreach, advocacy and development practice across the country. And as new resource controversies arise it strategically looks to expand to ensure local presence. One key concern for the Platform at present are the coal investments in Tete Province, part of a history of large-scale, foreign investments on resources which have overall failed to provide improvements for the population. Debating core economic matters is however far from easy when the state is only beginning to open up to policy deliberations outside close party circles. The Platform is thus not only needed to gain voice and legitimacy for its policy suggestions but also to deflect attention from individual organisations and people who in the past have experienced negative repercussions when criticising the state.

**Panel E3i Green Economy and its others: Challenges to scarcity and green economy – Buen vivir, abundance, affective ecologies, degrowth**

Nature, represented as under siege by humans, has entered global politics. In international green-economy narratives and conservationist accounts of the Anthropocene, 'humanity' is the cause of biophysical degradation and putative resource scarcity. Scarcity pits undifferentiated society against generic nature, demoting questions of distribution and inequality to a lower realm of uncouth politics. Scarcity requires that nature's components be disaggregated by science; quantified and priced; regulated and rented out by states; and in many versions, privatised and subjected to market exchange. This panel aims to consider: What kind of 'nature' supports construction of a neoliberal, planetary ecosystem-service economy? How does it build on or break with past 'natures'? What assumptions about human needs, social relations, and non-human nature are implicit in the deployment of scarcity in green-economy discourse and policy? What presumptions inhere in the dating of the origins of 'the Anthropocene' and environmental crisis from late 18th century 'industrialism' and coal/steam technologies? By what logic and in whose interests do narratives of 'planetary boundaries' arrive at ecomodernist calls for intensified technology and economic growth? How do critiques from the left and 'below' challenge scarcity discourse and the growth imperative? Can concepts of buen vivir, abundance, reciprocity, and affective ecologies help to decolonise people-versus nature imaginaries? Can the movements for degrowth and global environmental justice bridge radical ecology and revolutionary class theory? What kinds of 'nature' and human-nature relations are immanent in indigenous and feminist ontologies and ecological and economic practices articulated in resistance to commodification of nature and green-grabbing for conservation?

**Kathleen McAfee** (San Francisco State University) (convenor) *Green economy and its others: Scarcity, degrowth, buen vivir*

Green economy aims to use market logic to save capitalism by muting its worst ecological effects, reviving economic growth, stimulating green-technology investments, and decoupling growth from environment decline. Its advocates see monetary valuation and commodification of nature (e.g. carbon and biodiversity markets) as 'efficient' strategies for sustainability in an age of putative scarcity and as a way to surmount North-South political conflicts rooted in inequalities. Keynesian and poverty-sensitive and versions

of green economy are no less wedded to assumptions of resource scarcity and definitions of development that depend upon growth. Emerging critiques from left and 'below' challenge scarcity discourse and the growth imperative. In the global North, social movements for 'degrowth' and 'commoning' are enriched by feminist insights and 'post-capitalist' practices. In the South, movements inspired by *buen vivir*, *sumak kawsay*, *lek'il kuxlejal*, *lok swaraj*, *ubuntu*, etc. are resisting dispossessions, demanding food and territorial rights, and pursuing endogenous strategies aimed at reduced dependence on resource extraction and external capital. They reject the construction of ecological limits as absolute scarcity, focusing less on the finitude of resources and carbon sinks than on the anti-entropic, life-giving relationships among human labor, water, soil, sun, and the activities of other species. While some contend that 'degrowth' has little relevance for the South and that *buen vivir* cannot address the crises of urban, industrial societies, both approaches are raising questions about natural and social limits to growth, human-nature synergies, the purpose of 'the economy', and the sources of sustenance, value, and meaning in diverse ecosocial systems.

**Larry Lohmann** (The Corner House) *What is the "Green" in "Green Economy"? An historical perspective on the ecosystem services debate*

What is the "nature" being co-constructed in and through the "ecosystem services" component of today's purportedly green economy? This presentation will argue that this nature is deeply novel, yet also multiply dependent on the ways in which nature has been co-constructed in earlier eras of imperialism and regulated industrial capitalism. Just as important musical eras have each reconstructed what music is in terms of, for example, its tonal organisation or social embeddedness, so the era of neoliberal capitalism has creatively reworked the nature practices it has inherited. Conversely, the construction of a planetary ecosystem service economy has itself played a part in constituting neoliberalism and the struggles that it accentuates and reshapes. This tale of continuity in change will touch on several older natures that have been incorporated into, and modified by, the nature of ecosystem services, including the older natures of "conservation" (age: approximately 500 years), "natural resources" (about 200 years); "natural limits" (over 200 years), the Laws of Thermodynamics (~175 years); and "ecosystems" (~100 years). How were these various natures seen to do their work in previous capitalist eras, how did they persist and develop, and how are they now being enlisted as material for some of the characteristic operations and outlooks of neoliberal capitalism? What happens when such natures are transformed into questions of priced service units, when the role of the state expands in creating and distributing new natural rents to assorted elites, and when burdens of coping with destruction are shifted in new ways onto the shoulders of individuals?

**Filke Sekulova** (Universitat Autònoma de Barcelona) *Sustainable degrowth: Context, definitions and proposals*

One can hardly find an area of life which is not ridden by the growth imperative. The need for ever increasing wealth underpins most functions of society, including these which do not exist to serve productivity per se. It is the highest measure of success, reflected in modern architecture as much as in the length, width and need of/for high-ways. Growth of gross domestic product, of natural resource extraction, of needs, of infrastructure capacity and throughput is furthermore used as an anti-crisis tool. The failure of growth is normally cured by more growth, in a context of a 60% decline in ecosystem services, unabated climate change, biodiversity loss and a growing absolute material requirement of the economy. This is the stage on which the degrowth slogan acts upon. It rose as a call for physical downscaling voiced by activists in France and Southern Europe and gradually evolved into a frame taken by scientists embracing a wide set of meanings and significations. Among the primary aims of this slogan has been to decolonise imaginaries and confront productivism as an utter cultural, social and economic meta. While it bangs at the theoretical heart of neoclassical economic theory, degrowth should not be taken as a technical term (in economics). The movement and theory behind it attempt to bridge radical ecology with and revolutionary class theory thus moving beyond the never-ending tension between the two, embracing both principles as equally valuable building blocks.

**Panel E3ii Environmental justice movements: New rights, new politics?**

Is environmental justice possible within current Nation-State politics? Are environmental justice movements about claiming rights to participation, distribution and recognition within the structure of the State, or about something else? This panel brings together scholars from the global south and north to examine how social movements, resistances and day to day environmental and territorial practices across the globe are confronting state control politics over nature by reclaiming local control and autonomy over natural resource use systems; in other words by moving away from, rather than trying to work from within, the State structure. This involves using a variety of strategies: political mobilisation, revaluation of local and traditional knowledge systems and culture, reclaiming control over the production-chain, strengthening collective resource natural governance systems, rebuilding bargaining power, negotiation skills and political influence, and reproducing social reciprocity exchange networks, among others. We will discuss how this push towards greater local control and autonomy being set in motion by environmental justice movements in Latin America, Europe and Africa, plays an important part in the search for more just pathways to sustainability.

**Iokiñe Rodríguez** (University of East Anglia) (convenor) and **Mirna Liz Inturias** (NUR University of Bolivia) –

*Indigenous environmental justice movements in Bolivia before and after the Morales Era: State control of nature, unfettered market and the struggle for autonomy of the Monkosh peoples of Lomerio*

In the 90s the lowland indigenous peoples of Bolivia initiated a movement in demand for the recognition of collective rights. Coupled to this, in 2000 the country started experiencing a cycle of environmental protests that began with the water war in Cochabamba and was followed by indigenous mobilisations in the altiplano and the gas war, a crisis that disrupted the basic foundations of the political and economic hegemonic model. The role played by different social and environmental justice

movements in the country was key in the foundation of a new Plurinational Nation State in 2006. Since then indigenous people in Bolivia count with a national constitution that has an “indigenous face”, which grants them the right to their autonomy, territory, intercultural education and to Free, Prior, Informed Consent. However, the extractive economic model promoted by Morales’s government, combined with an unfettered market, has put the lowland indigenous peoples in a no win situation with regards to the intensification of natural resource exploitation in their territories. Through an analysis of the struggle for autonomy of the Monkosh indigenous people in the Indigenous Territory of Lomerio, this paper poses that the acknowledgement and exercise of new rights, together with the achievement of environmental justice will only be possible in so far as indigenous peoples movements move away, rather than work within, the formal State institutional structure. This is crucial in order to recover their independence and freedom of movement against dominant economic and political forces that persist in the Morales Era.

**Carlos Crespo** (CESU Universidad Mayor de San Simon) *State control over nature in Bolivia and the politics of demand in the social resistances: An anarcho-ecologist view*

Since 2006, as part of the “process of change” initiated by the government of Evo Morales, Bolivia is undergoing a process of nationalisation of nature, this is the increasing state intervention in the management of nature and its services through the deployment of governmentality devices and control oriented at industrialising the country at top speed, based on the intensive exploitation of natural resources, at the expense of serious environmental impacts and liabilities. This path does not exclude private participation, on the contrary, it promotes and facilitates it. State control is expanding across territories and spaces that previous state experiments had failed to achieve, such as indigenous territories and protected areas, affecting the autonomy of these peoples and societies, thus promoting the emergence of various social resistances. A common pattern can be seen in these collective practices, particularly in indigenous collective practices: the politics of demand, that is, collective action whose horizon is the state, demanding the implementation of rights, citizenship, compensation, co-management in extractive companies, without questioning the relations of domination and exploitation behind the nationalisation of nature and its services. But the indigenous struggle against the construction of the highway through TIPNIS (Territorio Indigenas y Parque Nacional Isidoro Secure) has broken the politics of demand; this paper demonstrates the anti-statist and autonomist content of indigenous resistance in Bolivia, despite the flaws in leadership. Finally, from the experience of TIPNIS and other local social struggles, some challenges are posed to better structure resistance and autonomous practices in the country.

**Brendan Coolsaet** (Center for Philosophy of Law, UCLouvain) *Transformative agroecology in Europe? Learning from environmental justice movements*

Since the turn of the century, a growing number of European farmers have shown interest for a transformative approach to agroecology. Moving beyond the sole inclusion of ecological concerns in food production, both practitioners and researchers have increasingly considered agroecology a multi-dimensional approach to rural development, offering a potential alternative to conventional agriculture. However, agroecology is not only a social movement anymore. It is becoming a policy principle guiding public and private initiatives. While this could be a major opportunity to challenge agro-industrial methods, it also is at risk of cooption by both the market and the state. This paper analyses a series of agroecological initiatives in Europe through an environmental justice lens. It argues that notions commonly employed by environmental justice movements around the world (economic redistribution, socio-cultural recognition, political representation), can provide the building blocks for an agroecological movement with a genuine transformational potential. Organized collectively, farmers’ communities increasingly reclaim control over the production-chain, regain autonomy from externally produced inputs, grow their socio-cultural status, reacquire local and traditional knowledge systems, and rebuild bargaining power and political influence.

**Saskia Vermeylen** (University of Lancaster) *Institutional conservation practices and rhizomatic contestations in the Kalahari Desert, Namibia*

To stand a chance of reclaiming their pre-colonial rights, indigenous peoples often have to deploy the tools and logic of the colonial state. Despite documentation of indigenous peoples’ territoriality, the image of rootlessness has historically been used to justify widespread dispossession. Ironically, using the example of the San in Namibia, the only way now for the San to get access to land and natural resources is to claim roots to a bounded space. Conservancies are used as spatio-legal tools and mechanisms that discipline the movement and relational pathways that have sustained the San’s survival in the Kalahari for hundreds of years. In this paper, I reflect upon the creation of a non-place where the encounter with the Other is guided by Derrida’s concept of unconditional hospitality and a Levinasian ethics of alterity. Both theories emphasise the need for a placelessness, a non-place of dwelling; a rhizomatic space that can still be encountered in the Kalahari through the praxis of xharo.

### Plenary 3

#### **Contextualised politics of sustainability**

Speakers: The STEPS Global Consortium: **Per Olsson** (Stockholm Resilience Centre); **Ed Hackett** (ASU); **Xiulan Zhang** (BNU); **Valeria Arza** (CENIT); **Dinesh Abrol** (JNU); **Cosmas Ochieng** (ACTS)

Chair: **Andy Stirling** (STEPS Centre/SPRU, Sussex University)

## Wednesday 9 September

### Plenary 4

#### **Planetary boundaries and the politics of resources**

Debate with **Johan Rockström** (Stockholm Resilience Centre) and **Melissa Leach** (Institute of Development Studies)  
Chair: **Mike Hulme** (King's College London)

### Parallel Sessions 4

#### **Panel A4 'Extractive regimes' at the margins: Resource extractions and development in eastern Africa**

**Chris Huggins** (LANDac) (convenor)

**Jeremy Lind** (IDS) (convenor) and **Mutuma Ruteere** (Centre for Human Rights and Policy Studies) *Perilous prospects? Security and oil exploration after Kenya's devolution*

Over the past ten years, a number of oil finds in Kenya's northwest Turkana County have raised the prospect of transformation of this long-neglected corner of the country. Oil exploration in Turkana is emblematic of wider transformations happening at the rural margins in the Horn of Africa, which are unfolding against a backdrop of chronic violent insecurity and a legacy of state neglect. An influx of national and global investment to develop oil and geo-thermal potential in Turkana has engendered a whole host of new tensions arising from people's expectations for jobs, contracts and greater economic opportunities. These developments are happening as Turkana's new county-level government benefits from a windfall of public resources that have poured into the region under Kenya's nascent political devolution. The country's 2010 constitutional reforms that laid the ground for political devolution as a way to redress regional inequalities and historic marginalisation, particularly of Kenya's north. Yet, violence has flared in several northern counties including Turkana, Marsabit, Wajir, Isiolo, and Tana River, precipitating deployments of Kenya's military and threatening the country's early implementation with political devolution. In fact, devolution has raised the stakes for county-level political-administrative positions and access to state and investor largesse, and at least some of the violence seen relates to contestations for local supremacy and power. This paper examines how shifting centre-periphery relationships characterised by devolution and creeping militarisation are giving rise to recent forms and patterns of violence at Kenya's margins. It argues that much of Turkana's recent violence is rooted in structures, relations and change in pastoral economies that are undergoing rapid transformation as the region is increasingly penetrated by various forms of capital and subsumed in ever complicated governance and security arrangements.

**Cosmas Ochieng** (ACTS) *Extractive governance: Oil and gas exploration along the Western Indian Ocean basin*

**James Van Alstine** (Leeds University) *Bringing order to disorder: Transparency and accountability politics in Uganda's oil bearing regions*

An international agenda has evolved which seeks to institutionalise key good governance norms such as transparency and accountability in relation to the extractive industries. Transparency in resource governance has been rising up the political agenda, and was a key theme of the June 2013 G8 summit, hosted by the UK government. In the context of East Africa, the overriding political economy context is that of resource-led development, that energy and non-energy minerals will catalyse national development towards middle-income country status. It is assumed that if social and environmental issues are well managed then the extractive industries can contribute to sustainable development and poverty reduction within extractive regions. However, there is a gap in the literature on the take up, implementation and impact of transparency and accountability initiatives at the subnational level. From the euphoria of discovering commercially viable oil in 2006 to the demoralisingly slow progress towards 'first oil', Uganda's nascent oil sector provides fascinating insight into the politics of transparency at the subnational level. Informed by extensive field work over the past five years, we explore the emergence of transparency and accountability initiatives and the extent to which these interventions can bring 'order to disorder' within Uganda's oil bearing regions. Empirically, we analyse initiatives that have emerged 'from above' through the proliferation of international norms and standards, and those which have emerged 'from below' through community-driven processes. We evaluate the extent to which transparency and accountability initiatives at the subnational level depoliticise or (re) politicise resource politics and contribute to more inclusive modes of development.

**Jason Mosley** (Chatham House) *Productive landscapes: Projection and risk in the state's vision for the Ethiopian and Kenyan frontiers*

In eastern Africa, as elsewhere, there is a new phase of state consolidation, underpinned by emerging regional stabilisation and economic growth. This entails an extension of state authority over peripheral areas into which until recently they had little reach. Some of the reasons for this new era of state-building are endogenous. Long-term demographic change and slowly improving educational standards have made the projection of state power easier than in the past. Improved tax collection and economic growth have provided some of the funds. Prolonged political stability has meant those in power have had the time and ability to consider the long-term future and not simply worry about survival. Several factors for the expansion of state power are exogenous and closely (but not exclusively) linked to foreign interests (both private sector capital investment and governmental ODA) -- including foreign investment in

infrastructure development, and in exploitation of natural resources. Pursuit of national security agendas, such as Ethiopian and Kenyan involvement in Somalia, can also be linked to their peripheries. Previous government efforts to exploit the potential of the periphery tended to be short-lived and unsuccessful. These are frontier zones populated by citizens who have long considered themselves to be politically and economically marginalised. Moreover, the inhabitants of these regions have practiced livelihoods rooted in practices that helped them evade state control, exploited the absence of state authority or which were considered by the state's agents to be only marginally productive. Many of the most serious challenges to the state's authority in each country have emanated from the frontier zones. Shifts in this long-standing pattern in the last decade raise three sets of risks, including domestic political instability and increased vulnerability; the prospect of interstate territorial disputes; and foreign investment and general economic risk perceptions.

## **Panel B4 Pathways to sustainable urbanisation: Waste and the circular economy in South Asia**

**Fiona Marshall** (STEPS Centre/SPRU, Sussex University) (convenor)

**Pritpal Randhawa** (Jawaharlal Nehru University) (convenor)

**Ravi Agarwal** (Toxics Link) *Re-thinking urban waste management in India*

The presentation will, at its core, outline the policy recommendations of the recent research (2013-2015) carried out by the partnership between Toxics Link, The STEPS centre and JNU, New Delhi on identifying the policy gaps in urban waste management in India. The authors of this research are Fiona Marshall (STEPS), Ravi Agarwal (TL), and Pritpal Randhawa (JNU). Waste Management in India has been on the policy and legislative radar in India since 1994. A series of laws have been drawn up dealing with different types of waste stream, and these also incorporate minimum national standards for technologies. Traditionally urban waste in India has been managed through municipalities and the informal sector, while toxic waste has been dumped in waste dumps or water bodies. Certain types of waste stream, which have economic recovery value, such as plastics, metals, electronic waste have been collected and recycled by the informal sector. The regulations have attempted to carve systems which minimise environmental and health risks. However they have been only partially successful given the complex nature of waste flows in India. The paper analysis the reasons for failure, pointing out to basic gaps in policy thinking and suggests a way ahead. The presentation will contextualises the above in the cluster of waste regulations, the proposed new changes therein (2015), and emerging concerns related to exclusions of communities, environmental impacts and regulations and funding mechanisms raised through an overriding focus on waste technologies as part of the Swatch Bharat campaign of the Govt. of India.

**Dieter Mutz** (GIZ) *Circular economy and informal waste management – a contradiction?*

India's economic growth, combined with rapid urbanisation and population increase is changing the consumption pattern of resources at an unprecedented level. The amount of waste produced is increasing constantly but recycling quotas and recycling effectiveness do not develop at the same pace. The use of secondary raw materials remains low (close to 20-30%), and downcycling is still the most common approach. The most relevant group in waste management in India is the informal sector. About 80% of the waste is handled by informal workers. To set the agenda towards developing a framework in the automotive sector, GIZ jointly with the Ministry of Environment (MoEFCC), and other partners evaluated the still untouched area of end-of-life vehicles (ELV) in India. First results show that in 2015, the total number of vehicles estimated to turn into ELVs is 8.7 million vehicles. Recycling activities are again dominated by the informal sector but recycling quota are not yet fully exploited. As a first conclusion it can be stated that only a further strengthening of the capacities of the informal sector and access to financial schemes will allow India to make use of its enormous human resources presently employed in the waste sector and to increase the use of secondary raw materials. It is still a long way to go to close the loop in material consumption in India and to direct its fast growing economy towards a circular one.

**Lakshmi Narayan** (KKPKP) *Full circle: mapping circuits of informal labour and waste materials*

Full circle documents the story of scrap collectors, as they move from one experience of dispossession to another in the sphere of informal scrap collection in the city of Pune. Much like the materials that they collect and despatch for recycling, each end is a new beginning. The processes of resistance and accommodation that lead to changes in the nature of work are not linear. The authors attempt to map the changes in the nature of work and relationships through individual and collective responses to perceived challenges and threats to livelihoods, within an evolving neoliberal economy. They draw upon their experience of organising, strategising and researching informal waste workers and municipal solid waste management.

**Ritu Priya** (Jawaharlal Nehru University) *In the name of public health: Delhi's environmental nemesis*

## **Panel C4 Open science and sustainability**

Open and Collaborative Science (OCS) can potentially enhance the democratisation of knowledge production by opening up to broader societal input in the definition of research agendas, methods, and the use of research outputs. Given this potential, this panel will discuss whether and how OCS practices are contributing to (and how they could better contribute to) the production of knowledge for sustainable development in the Global South. Our panel invites speakers to discuss the potential for OCS practices to enhance the democratisation of knowledge production, foster broader citizen participation and promote public interest in science. Questions such as what is democratisation of knowledge, what kind of knowledge is and can be produced, how it is produced, who produces it, who is not involved, and who benefits from that knowledge will be at the core of the discussion. We would like to critically reflect on whether the adoption of OCS can effectively contribute towards furthering the democratisation of knowledge for sustainable development or whether it will be concerned primarily with increasing the efficiency of existing scientific practices.

**Valeria Arza** (CENIT) (convenor)

**Cindy Regalado** (UCL) *The tools of open science: lessons learnt from the use of technologies in the co-production of knowledge*

An understanding the role of technologies, especially community-led and DIY tools and techniques (sometimes referred to as frugal innovation), in the co-production of knowledge is key to addressing local social and environmental issues. In this presentation I will talk about the work of the Public Laboratory for Open Technology and Science (Public Lab), a grassroots organisation that aims at democratising technologies for social and environmental justice. The nature of the group's approach means that people from all around the world have been taking initiative to investigate and redress issues around them; by doing so, they contribute to a growing community and body of knowledge, which in turn build a network of support – on- and off-line. I will also share brief examples from the Extreme Citizen Science research group at University College London and further explore the lessons learnt in the use of technologies for the co-production of knowledge. I will end with a few key recommendations from our experiences in combining open innovation and Participatory Action Research and a few questions that will hopefully incite discussion on current and future challenges for our societies.

**James Wilsdon** (Sussex University) *Open season: What does all this talk of openness mean for science, democracy and sustainability?*

**Ross Mounce** *Levelling the playing field: Open source and open data in science*

**Cameron Neylon** (Public Library of Science) *Who's in my club? Knowledge creation, sharing and dissemination in the context of peripheral communities*

**Panel D4 Political ecologies of conservation, violence and resistance in East Africa**

**Tor Benjaminsen** (Norwegian University of Life Sciences) (convenor)

**Ian Bryceson** (Norwegian University of Life Sciences) (convenor), **Chris Maina Peter** (University of Dar es Salaam) and **Betsy Beymer-Farris** (University of Kentucky) *Rights, resistance and resilience in coastal Tanzania*

"Resilience" and "rights-based" rhetoric abounds in conservation policy. The reality, however, is that the urgency to conserve these resources is resulting in the loss of many local people's rights to their land, livelihoods, and resources through the militarisation of conservation and green (or in this case blue) violence in coastal Tanzania. In this interdisciplinary endeavour, we draw upon Marxist political economy and ecological resilience theories to explore the history of how human rights discourses at the international, regional, and national level in Tanzania are conceptualised, enacted, and utilised. We articulate the complex and contested ways in which seemingly disempowered people resist against oppression, marginalisation, and denial of their means of subsistence through various forms of class struggle. We situate these struggles in the context of the larger political economic history of Tanzania and in relation to human rights discourses and constitutional changes. We incorporate ecological resilience theories to understand how peasants and fishers understand and utilise natural resources in ways and practices align with the ecological theory. These ecological understandings and livelihood practices are also an important explanatory basis and rationale for their struggle against environmental resource policies they see as being "unjust". We further demonstrate how Holling's (1973; 1986) original theoretical and non-normative understandings of ecological resilience directly contrast to the use of resilience that has been adopted and co-opted as a "buzzword" in conservation policy.

**Connor Cavanagh** (Norwegian University of Life Sciences) *Killing to make human? Civilising violence, scientific forestry, and the 'Dorobo question' in Kenya Colony*

Early interactions between European colonisers and hunter-gatherers in East Africa yield fascinating insights into the political anthropology of British imperialism, as well as into its attendant political geographies and ecologies. Accordingly, the focus of this paper is less on the ostensible 'impacts' of colonialism on hunter-gatherers in what is now Kenya, as it is on what the colonial state's policies toward these communities tell us about the 'culture' of British administrators and their corresponding technologies of government. In engaging these foci, we gain insight into British attempts to grapple with difference across hierarchically conceptualised 'races', classes, tribes, and radically alternative livelihoods, which gave rise to practices and policies fraught with uncertainty and subject to continuous re-examination. In particular, uncertainties related to the governance of hunter-gatherers resulted in a problematic known as the 'Dorobo question' in Kenya Colony, the former word being a corruption of the Maasai term for the poor, the sinful – and hence – the cattleless. Drawing upon both ethnographic and archival research, I argue that these halting attempts to govern hunter-gatherers reveal the subtle yet fundamental violence of Britain's 'civilising mission', which was ultimately predicated on the elimination of livelihoods, ontologies, and sustainabilities that were of little use to both the colonial state and metropolitan capital. Not least, such enduring 'dark matter' in the region's contemporary institutions of environmental governance continues to inform struggles over the 'purification' of East African forests in the context of REDD+ and other forest-based 'green economy' initiatives.

**Kristen Lyons** (University of Queensland) *Carbon markets and the new carbon violence: A case study of Uganda's expanding plantation forestry industry*

Carbon markets have emerged globally as one of a number of market based strategies to address the climate crisis, garnering support amongst governments, international institutions and financial investors. By putting a price on carbon, proponents argue carbon markets represent a win-win-win; delivering benefits to local communities where ecosystem services occur, as well as conferring benefits to investors and the environment. Plantation forestry represents a rapidly expanding sector in the broader carbon economy, with plantations representing one of a number of 'flex crops' able to be sold on the basis of their value as fuel, timber and carbon

storage. In this paper we examine the impacts of expanding plantation forestry carbon markets. We take the case of Green Resources, reportedly the largest plantation forestry operator on the African continent. Drawing from in-depth research in 2012-2013 with affected communities in Uganda, we examine the diverse historical and contemporary structural violence on which expansion of plantation forestry relies. Building upon earlier literature on violence, we introduce the term 'carbon violence' to frame the distinctive forms of violence occurring alongside burgeoning plantation forestry and carbon offset markets.

### **Panel E4 Feminist visions for sustainability**

The panel will speak about contributor's chapters in just published 'Practicing Feminist Political Ecologies; moving beyond the green economy' edited by Wendy Harcourt and Ingrid L. Nelson (Zed Books 2015). The core set of questions to be debated by the panellists will be: What are our imagined desired future worlds of environmental and social being? How is research contributing to these future worlds? Who within particular environmental, feminist and justice movements asserts which imagined futures? Whose voices are silent or silenced in these visions and goals? In a lively and candid conversation, the panel will map out the different spaces where FPE is creating pluriversal feminist visions for sustainability.

**Wendy Harcourt** (ISS Erasmus University) (convenor)

**Giovanna Di Chiro** (Swarthmore College) *A new spelling of sustainability: Engaging feminist-environmental justice theory and practice*

Discusses feminist political ecologies in relation to co-creating a wider community and home, drawing on her experiences in institutions, homes and communities in and around Philadelphia, USA. She reflects how emotions and practices are shaping the politics and praxis of climate change activism in inspiring ways.

**Andrea Nightingale** (Swedish University for Agricultural Sciences) *Challenging the romance with resilience: Communities, scale and climate change*

Explores the questions of resilience as it is connected to livelihoods and rural economies in the face of climate change. She illuminates some of the connections that link people across the globe, as well as the limitations to even being able to speak about (let alone 'for') other people.

**Ingrid Nelson** (University of Vermont) *Feminist political ecology and the (un)making of the 'hero': Encounters in Mozambique*

Explores how logging bosses, log haulers, local leaders, environmentalists and others become and make heroes amidst an intensifying illegal logging trade linking Mozambique, China and beyond. She looks at the nuanced cultural and political contexts of making heroes in environmental interventions and the challenges that these practices pose for and within feminist political ecology work more broadly.

**Dianne Rocheleau** (Clark University) *A situated view of feminist political ecology from my networks, roots and territories*

Revisits feminist political ecologies and sketches out pathways to decolonise the field, inspired by the work of indigenous and other activists and scholars in diverse social movements and directing readings to key texts written by actors within these movements. She asks how do FPE approaches differ from the approach of green economies in terms of their premises, politics and practices.

**Angelica Maria Ocampo Talero** (ISS Erasmus University) *Knowledge about, knowledge with: Dilemmas of researching lives, nature and genders otherwise*

Examines the roles of academia in social movements when thinking of alternatives to ecological and epistemological violence. She reflects on conversations with two other colleagues working in Latin American contexts.

## **Parallel Sessions 5**

### **Panel A5 Resource politics/resource states: The political economy of energy in Africa**

**Peter Newell** (STEPS Centre/Sussex University) (convenor)

**Jesse Ovidia** (Newcastle University) *Petro-developmental states in Africa: An introduction*

In *The Petro-Developmental State in Africa* (Hurst, 2015), I consider newly emerging potential for state-led development in petroleum-rich developing states by examining trends in sub-Saharan Africa's biggest oil producers, Angola and Nigeria. Since the industrial revolution, capitalist development has always been nurtured by protectionism and other forms of state intervention. Recently, the model of East Asian 'developmental states' has been applied to South Africa (Edigheji, Chang, Evans, Fine, Mkandawire), Botswana (Mbabazi, Taylor) and elsewhere in Africa. While the specific historical conditions for replicating the East Asian experience no longer exist, new international political and economic realities offer a new possibility for petro-states. Previously, revenues from mineral rents were considered the main developmental benefit of natural resources. The 'petro-developmental state' represents an avenue for reversing the historical experience of natural resources as a curse. Through local content policies, backward and forward linkages can be made between resource extraction, domestic manufacturing and service provision at various points in the value chain. This paper expands upon the concept of the petro-development state, suggesting ways to build a more robust conceptual model for its application by identifying key characteristics and suggesting what kind of data and evidence would support its emergence in other countries.

**Helena Perez-Nino and Philippe Le Billon** *Angola and Mozambique: Comparing extractive trajectories and political settlements*

**Lucy Baker** (Sussex University) *The evolving role of finance in South Africa's renewable energy sector*

In the last four years, carbon-intensive, coal-dependent South Africa has become one of the leading global destinations for renewable energy investment. This investment can be attributed to the unprecedented take off of the country's Renewable Energy Independent Power Producers' Programme (RE IPPPP), a bidding process for the procurement of privately generated, utility scale renewable energy, launched in August 2011. Asserting that energy must be studied within the broader economic, political and social forces in which it is embedded, I explore the fundamental role that different modes of finance have played in shaping South Africa's emerging renewable energy sector within the context of the country's unique system of accumulation characterised by its minerals-energy complex (MEC) (Fine and Rustomjee 1996). I focus on finance and financialisation as growing features within the MEC. I further examine the tension or incompatibility between commercial demands for 'bankability', short-term shareholder value and impatient finance and RE IPPPP's unique requirements for community ownership of projects and the realisation of economic development criteria. I find that a reconfiguration of long-standing MEC actors, particularly in the realms of finance is taking place as they merge with new sources of foreign capital.

**Jonathan Phillips** (King's College London) *Territories and materialities of offshore oil production*

This paper considers the role of the Ghanaian state in creating spaces for offshore petroleum extraction and transportation. Offshore oil activities might escape the need to directly displace people from land, but they bring increased competition for particular columns and corridors of marine space. Moreover the materiality of these oceans spaces complicate the practice of territory and the winners and losers that are created. I will consider the establishment of two offshore zones for the protection of oil industry assets in Ghana: (i) The West Africa Gas Pipeline and (ii) an oil production vessel. Both zones have been created by states for transnational capital. But closer inspection reveals the implications of the requirements that states and capital place on one another in order to maintain a profitable extractive regime in offshore space. By disaggregating the African state and relations with citizens and capital, the paper seeks to explain where offshore territorialisation has been contested, where it has not, and why.

**Brian Chirambo** (Reading University) *What should REDD+ be about? Forest governance incentives or energy investment?*

After realising that deforestation and Forest degradation mostly from tropical developing countries was contributing about 20% to global GHG emissions, a global strategy called Reducing Emissions from deforestation and forest degradation (REDD) was developed. The strategy is basically designed as an incentive based forest governance strategy that seeks to motivate poor forest communities to stop cutting down trees and engage more in forest protection and conservation efforts. But the question as to whether this strategy would meet the intended global normative objectives of climate change abatement and sustainable development for the REDD+ implementing countries, remain a daunting task. This is because firstly, the framing of the REDD+ global policy itself limits and obscures the interventions away from the main driver of deforestation in sub-Saharan Africa. Secondly, the idea of providing incentives without a corresponding programme of investment in clean and affordable energy supply cannot and will not guarantee an end to, or reduction in energy led deforestation. With these perspectives, therefore, this paper addresses itself to the following four questions: Why is energy security not the main issue in the climate change mitigation discourse for developing countries? Can a forest governance based strategy of providing incentives to charcoal burners and subsistence farmers reduce deforestation and significantly contribute to sustainable development efforts in developing countries? Should it be incentives alone or incentives and investment?

**Panel B5 Sustainability transitions and wider transformative change**

The 6th International Sustainability Transitions Conference hosted by SPRU (the Science Policy Research Unit) at the University of Sussex August 25th-28th 2015 provides opportunities for scholars to share theoretical, empirical and practical advances in the field of sustainability transitions. The conference is part of the activities of the STRN network and is linked to the journal *Environmental Innovation and Societal Transitions*. *Sustainability transitions* are transformations of major socio-technical systems of provision and use in areas such as energy, water, mobility, and food, towards more sustainable ways of production and consumption. This is a multi-disciplinary field with inputs from economics, science and technology studies, geography, political science, management, sociology and history. This year's theme 'Sustainability Transitions in the Long Run' seeks to place sustainability transitions in a long term perspective, considering its historical roots and future pathways. The conference will not only explore transitions in individual systems, but also investigate broader transformations of entire economies, societies and political systems. It will seek to develop a new research agenda for sustainability transitions. Drawing on and summarising this agenda and the conference results, the proposed panel, consisting of Florian Kern (SPRU), Frans Berkhout (King's College) and Johan Schot (SPRU) will discuss how insights from sustainability transitions can help to rethink resource politics.

**Johan Schot** (SPRU, Sussex University) (convenor)

**Frans Berkhout** (King's College London)

**Florian Kern** (SPRU, Sussex University)

**Panel C5 The global politics of the commodification of science, knowledge and nature**

Drawing upon collaborative ethnographic research, the papers in this panel examine how dynamic actor-networks produce, and continually reproduce, fields of global conservation governance. They analyse how international conferences—such as the 2008 World Conservation Congress, the 2010 Conference of the Parties to the Convention on Biological Diversity, the 2012 United Nations

Conference on Sustainable Development (Rio+20) and associated Corporate Sustainability Forum, and the 2014 World Parks Congress—serve as nodes of interconnection, which bring together diverse groups of actors. As these actors embrace, contest and disseminate the ideas and narratives circulated at these events, they reshape the political and ideological organisation of conservation, reconfiguring fields of governance. Focusing on framings such as business and biodiversity, conservation site prioritisation, and high seas conservation, the first three papers illustrate how certain discourses, organisations, techniques and practices enrol new actors, privilege particular forms of knowledge and bring into being new commodities, markets and institutions. The final paper self-critically reflects on different applications of the methodology. Collectively, these papers reveal how the ‘scaling up’ of conservation priority setting, together with the privatisation and financialisation of both nature and knowledge, is transforming relations of power and authority in conservation governance.

**Peter Wilshusen** (Bucknell University) *Business of biodiversity: Corporate enactment, conservation governance, and the politics of articulation*

“Business and biodiversity” constitutes a relational field joining private sector actors with NGOs, multilateral organisations, UN agencies, governments and academics that has reconfigured power relationships in transnational environmental governance. The continuing dominance of market-centered approaches raises important questions regarding the ways in which diverse actor-networks enact and co-produce dynamic governance assemblages at the intersection of discourses, organisational forms, and practices. While political ecology and related domains of inquiry have contributed insights regarding market-based programs, they have focused less attention on the emergence, dynamics, and relative durability of transnational, market-centered governance assemblages over time. This paper first characterises the “business and biodiversity” field relative to a broader governance assemblage labelled “the Green Economy.” Interconnected fields constitute relational arenas featuring particular logics, dynamic actor positions, and organisational forms that form governance assemblages. Second, the paper explores the extent to which “corporate social technologies”—frameworks, partnerships, tool kits, platforms, and initiatives—help constitute the business and biodiversity field’s relational tapestry, producing nodes of interaction that enroll a range of actors, establish new vocabularies, enable new productive practices, and spawn new organisational forms. We illustrate these processes with three examples: the UNEP-IUCN Framework for Corporate Action on Biodiversity and Ecosystem Services, the Business and Biodiversity Offsets Programme (BBOP), and the WAVES Partnership for natural capital accounting. In examining the discursive, organisational, and performative aspects of market-centered field dynamics, the paper’s third section explores the ways in which conservation governance activities produce a “politics of articulation” that perpetuates the “social life of corporate forms.”

**Noella Gray** (University of Guelph) *Ocean grabbing or defending the commons? International efforts to conserve the high seas*

From efforts to promote a ‘blue economy’ to resistance against ‘ocean grabs’, marine commons are deeply embroiled in contemporary struggles to reshape environmental governance. Marine protected areas (MPAs) are at the heart of these struggles, as total ocean area under protected status has increased more than fivefold in the past ten years. This paper examines the international effort to establish MPAs and remake conservation governance on the high seas. Although the establishment of MPAs on the high seas has been limited to date, a coordinated network of scientists, non-governmental organisations, and international institutions continues to work to advance the effort both scientifically and politically. Drawing on the results of collaborative event ethnography conducted at four international environmental meetings over the past six years, this paper considers the ways in which knowledge about the high seas is generated and communicated in order to advance international conservation efforts. I examine how knowledge about the high seas was represented, communicated, debated, and linked to MPAs as governance tools. The analysis reveals some familiar results, including the role of scientific experts in making ocean space legible in particular ways and the ‘scaling up’ of environmental governance. However, it also raises questions about the potential for science-based conservation territories to assist in the defense of the largest global commons—the high seas. There are both opportunities and limitations associated with how international institutions ‘see’ the high seas, which will play an important role in how their governance evolves.

**Lisa Campbell** (Duke University) *Seeing like a scientist: Global representations of biodiversity*

At the 10th Conference of the Parties to the Convention on Biological Diversity, science was put to work on behalf of biodiversity conservation. Scientists from non-governmental organisations and research institutes highlighted technological and scientific advances to better know, locate and protect biodiversity. Biodiversity was represented via maps, models, and other visuals designed to make biodiversity and threats to it legible, and representations ranged from the global to the molecular. Regardless of scale, representations almost always obscured people and the cultural, economic, and political context of biodiversity use and conservation. As a result, biodiversity conservation was rendered a technical and scientific exercise. Though much has been written about the need to engage those living with biodiversity in efforts to govern it, the various scalar visions promoted by a network of scientific and technical experts and conservation NGOs reinforces the continued and problematic disconnect between biodiversity conservation and human development.

**Catherine Corson** (Mount Holyoke College) (convenor) *Capturing the dynamics of global conservation governance: Reflections on collaborative event ethnography*

Collaborative event ethnography (CEE) adapts traditional ethnographic methods to study how diverse actors—normally dispersed in time and space—come together at global conferences to enable, structure, and disseminate conservation paradigm shifts. It entails intensive collaboration in reflexive and synergistic ways throughout the research process—from research design to data collection to analysis and writing. In the process, each researcher creates an individual field of study, while multiple researchers’ collaborative engagement both within and across events create a collective ethnographic field. As they challenge others’ assumptions and analyses, a creative tension emerges, which forms an exciting intellectual arena, leading to a more nuanced and comprehensive methodology,

analysis, and theoretical engagement. Nonetheless the disciplinary diversity of collaborators leads to conflicting approaches to theoretical advancement and empirical grounding. Since its first use, researchers have adapted and extended CEE in a variety of ways in order to benefit from collaborative data collection and analysis, while also recognising that ethnography is an individual experience, embedded in situated knowledge and informed by theoretical training. They have also modified it to address the practical challenges of working with evolving, multidisciplinary teams, comprised of undergraduate and graduate students, postdoctoral researchers, and professors. In this paper, we self-critically reflect on different applications of the method. We compare their relative ability to understand transformations in global conservation governance over time and space and to capture the benefits of collaboration.

## **Panel D5 Green economies and resource politics in sub-Saharan Africa: Critiques from below**

**Amber Huff** (STEPS Centre/IDS) (convenor)

**Benjamin Neimark** (Lancaster Environment Centre) *Against biopiracy? Investigating the human right to benefit from science and bioprospecting in the bioeconomy*

Does everyone have the right to benefit from science? If so, what shape should benefits take? This paper exposes the social inequalities coalescing bioprospecting in Madagascar through a relatively neglected and underexplored human right, the right to benefit from science. This human right is found in Article 15 of the International Covenant on Economic, Social and Cultural Rights (ICESCR). We explore unique perspectives from often less-heard peasant voices in the bioprospecting commodity chain. In this paper we question whether the critique of biopiracy and the subsequent protocols developed (Nagoya Protocol) myopic focus on distribution of benefits (getting the prices right) has caused the relative neglect of the rights of source-country participants who have expressed the desire to participate in bioprospecting. We look to refocus the debate to other less-examined rights which may be more relevant, such as a labour, education and housing for those workers participating in bioprospecting and the overall larger bioeconomy. Ultimately, this raises questions about the role of 'third party' bioprospecting actors (companies, research institutions and environmental NGOs) in ensuring that human rights to science and other livelihood needs (access to food and water) are recognised and addressed.

**Maarten Onneweer** (Leiden University and RAIN Foundation) *How to live on a resource base but to have no water: Politics, parodies and rumours in the mobilisation of value and the materiality of water resources in the Kitui district of Kenya*

The problem I want to address in this presentation is simple: what kind of a thing (materiality) is a resource in rural development? More specifically, what kind of a thing is a resource for people at the receiving end of projects that aim to harness resources (such as water) in the Kitui district of Kenya? How do these projects frame water as a resource and what does it mean to live in places where such a particular narrative of economic progress pervades ones social and cultural world and yet it is a struggle to become a part of it? What responses does this generate? The question around resource mobilisation for economic development in poorer communities has often been framed either as instrumental means towards value creation or as a misinterpretation of people's cultural rights and interests in this process. In the presentation I provide examples that demonstrate how the historical development encounter relied on the materiality of resources: on materials that are often physically absent and still need to be harnessed to generate value. Such an economy of resources in project based development has become entrenched in Kitui society through more than 60 years of projects. I show how critique on these programs expresses itself not in outright rejection but in parody or rumours that allows people to remain part of the economy of resources at the same time are able to question the social implications of the development encounter.

**Alberto Alonso-Fradejas** (ISS Erasmus University) *Transnational agrarian justice and environmental justice movements: Convergence and divergence, synergies and tensions*

**Ben McKay** (ISS Erasmus University) *Broad social justice movements (agrarian, food, environmental, anti-extractive industries, water, women's, and indigenous peoples) and the political dynamics of their interactions seen in one country: Bolivia*

## **Plenary 5**

### **Synthesis and conclusions: Highlights and controversies from the five themes**

Chair: **Ian Scoones**

- A** Scarcity, politics and securitisation – Jeremy Allouche
- B** The politics of the Anthropocene and resilience – Vinita Damodaran
- C** Science, democracy and sustainability – John Thompson
- D** Commodification, grabs and dispossession – Dianne Rocheleau
- E** Social justice and citizenship – Kathleen McAfee

Closing remarks and thanks **Lyla Mehta** (STEPS Centre/IDS/NMBU)

# Poster programme

Posters will be displayed throughout the Conference in the IDS Upper Common Room and Staff Common Room (ground floor)

**André Krom** and **Arnoud Van Waes** (Rathenau Instituut, The Netherlands) *Sustainable economic zones – Towards a European geopolitical resource strategy*

**Adeniyi Asiyanni** (King's College London) *Governmentality and markets-in-the-making: assembling a REDD+ regime in Nigeria's Cross River*

**Ed Atkins** (University of Bristol) *Explaining the 'opportunistisation' of water grabs*

**Diana Calvo-Boyer** (Institut de Ciència i Tecnologia Ambientals, Universitat Autònoma de Barcelona) *Governance, power and social differentiation in conservation initiatives in two rural communities, Calakmul, Mexico*

**Rebecca Elmhirst** (Brighton University) and **Carl Middleton** (Chulalongkorn University) *Living with floods in a mobile Southeast Asia: A political ecology of vulnerability, migration and environmental change*

**Elizabeth P. Harrison** (University of Leeds) *The future of community-based natural resource management in Zimbabwe: The politics, political economy and policy landscape*

**Robert Ahearne** (University of East London) and **John Childs** (Lancaster University) *The imagined geographies of resource nationalism: Towards a cultural political economy*

**Kaysara Khatun** (Centro de Prospectiva Estratégica (CEPROEC), Instituto de Altos Estudios Nacionales) *The impact of invasive species: a case study for the Galapagos Islands*

**Peci Lyons** (CSIRO, Land and Water, Australia) *Narratives for climate adaptation and response and indigenous peoples on The Great Barrier Reef catchments*

**Steven Matema** (Wageningen University) *Reading the script upside-down: Boundary mismatches and land-use conflicts in the lower Zambezi-Mana Pools Transfrontier conservation area, Mid-Zambezi Valley*

**Ruth Segal** (SPRU, University of Sussex) *Contested framings of agricultural research for development*

**Laura Smith** (University of Leeds) *Inclusive Development in extractives contexts? An analysis of corporate responsibility practices in Uganda's Albertine Graben*

**Bruno Ubiali** (University of Kent) and **Daniel Belluci** (University of Cumbria) *The potential of polycentric environmental governance for extractive reserves in the Brazilian Amazon*

# About the STEPS Centre

The STEPS Centre (Social, Technological and Environmental Pathways to Sustainability) is an interdisciplinary global research and policy engagement centre uniting development studies with science and technology studies.

In an era of unprecedented change, we are using a new 'pathways approach' to understanding and action on sustainability and development, providing new thinking and practical solutions.

Our work addresses two vital global challenges: linking environmental sustainability with better livelihoods and health for poor people; and helping science and technology work for poverty reduction and social justice.

The STEPS Centre launched in 2006 and is based at the Institute of Development Studies (IDS) and the Science Policy Research Unit (SPRU) at the University of Sussex in the UK.

We work with a network of partners in Asia, Africa, Latin America and Europe and are funded by the Economic and Social Research Council. In 2015 and 2016, we are launching six regional Sustainability Hubs in Africa, South Asia, China, Europe, Latin and North America. The hubs will work on research, communications and engagement in their regions and in collaboration with each other.

**Website: [steps-centre.org](http://steps-centre.org)**