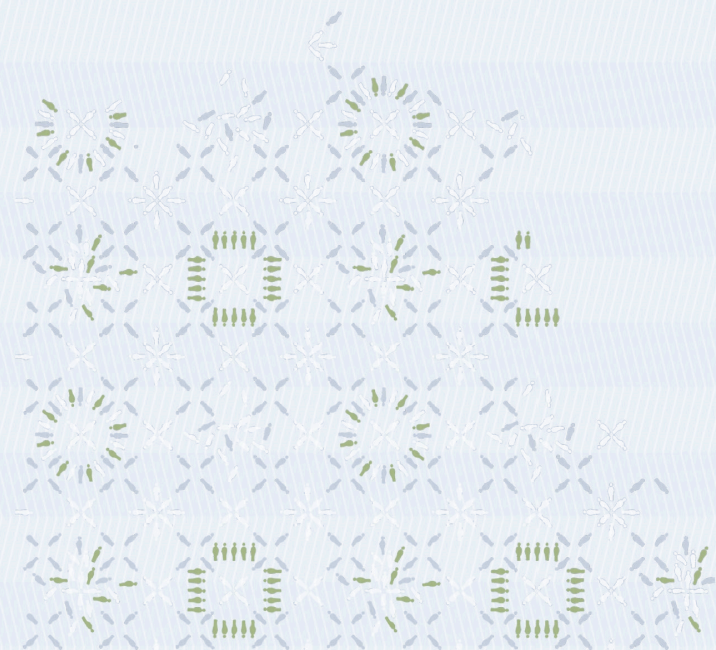


Earth
System
Governance

2016 Nairobi Conference on Earth System Governance

Confronting Complexity and Inequality

7-9 December



The Earth System Governance Project gratefully acknowledges the generous support and valuable academic input to the 2016 Nairobi Conference on Earth System Governance by the co-hosting institutions and their staff:



The Earth System Governance Project thanks the supporting and endorsing organisations of the conference.



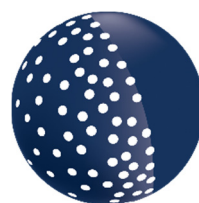
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About the Conference

The 2016 Conference on Earth System Governance will address the overarching theme of *'Confronting Complexity and Inequality'*. This conference – the seventh in our conference series – is held in Nairobi, the 'Green City in the Sun' that is not only one of East Africa's major centres but also home to the United Nations

Environment Programme and a number of leading public and non-state organisations in the field of sustainable development.



Earth
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In this central hub of global environmental governance, the 2016 Earth System Governance conference will focus on the persistent question of how we can manage the increasing complexity of institutions, actors, interests and discourses in a just and effective manner. In analysing this central question, we will place special emphasis on global and national inequalities, for instance by analysing local inequalities in sustainable development policies or by asking to what extent traditional divisions between North and South are still relevant in earth system governance or whether new divides, and goal conflicts, exist that deserve our attention.

At the 2016 Nairobi Conference on Earth System Governance, we will also place particular emphasis on Africa, and, eight years into the Earth System Governance Project we now invite

all members of our community to join in identifying the new and exciting directions that could guide earth system governance research in the next decade.

For all of these questions, the Nairobi Conference has been designed to provide a lively forum of scholars for joint discussions, the exchange of new insights, and the examination of the core ideas that underlie earth system governance and global sustainability.

The conference will be organised into four conference streams:

- Complexity in Earth System Governance
- Inequality in Earth System Governance
- Africa and Earth System Governance
- New Directions in Earth System Governance Research

About the Host

The 2016 Nairobi Conference on Earth System Governance will be held at the University of Nairobi's College of Agriculture and Veterinary Sciences on the Upper Kabete Campus. The local host of the conference is the Wangari Maathai Institute for Peace and Environmental Studies.

The *Wangari Maathai Institute for Peace and Environmental Studies* (WMI) is part of the College of Agriculture and Veterinary Sciences (CAVS) at the University of Nairobi.

WMI has been established to honor, recognize, celebrate, advance, and immortalize the ideals and works of one of its alumni, the 2004 Peace Nobel Laureate Prof. Wangari Muta Maathai. Thus, the institute promotes good environmental practices and cultivates cultures of peace by shaping values, ethics and attitudes of its graduates through experiential learning, mentoring and transformational leadership.

The overall aim of the institute is to promote better environmental stewardship and management of resources and ultimately a reduction in related conflicts. WMI operates like a “finishing school” for university students, researchers, policy makers, the private sector, community leaders and groups interested in good practices in environmental management and peace building.



UNIVERSITY OF NAIROBI
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES
WANGARI MAATHAI INSTITUTE
FOR PEACE AND ENVIRONMENTAL STUDIES

Words of Welcome

Conference Chair

Dear friends and colleagues,

Karibu - welcome to Nairobi! And welcome to the 2016 Nairobi Conference on Earth System Governance, the seventh in the series, in this hub city of global environmental politics.

Thank you for coming from all over the world to present your cutting edge research and to provide valuable feedback on colleagues' works. We all are about to experience an exciting premiere: The annual conference is coming to Africa for the first time. And we want you to feel and cherish this novelty and opportunity as much as possible.

Our venue is the University of Nairobi's Upper Kabete campus, a site of flourishing environmental research across many disciplines. It is also the home of our local host, the Wangari Maathai Institute for Peace and Environmental Studies. We are immensely proud to collaborate with this institution that carries Professor Maathai's unique work and vision into our times and beyond.

In various formats, the conference will present environmental governance research in and about Africa. This begins with one of the four thematic streams of the conference, and also includes spotlight sessions where local research institutions present their exciting projects and ideas. Moreover, in a series of local-early-career researcher panels, young African scholars will talk about their work, expertise and visions.

We invite you to join these and other sessions, and to let yourself be impressed and inspired. In short: Enjoy the Nairobi Conference!

Fariborz Zelli

Lund University



Conference Co-Chair

Dear distinguished participants,

We are delighted to welcome you to the Wangari Maathai Institute for Peace and Environmental Studies and to the College of Agriculture and Veterinary Sciences, University of Nairobi. We also extend to you our warm welcome to the 2016 Earth System Governance Conference which is being held in Africa for the first time! We thank you for making it to Nairobi to attend and actively participate in this high-level conference on earth system governance.

We at the Wangari Maathai Institute are immensely grateful to the management of the Earth System Governance Project for selecting our Institute as the local host of this conference and the support we have received from the Vice-Chancellor of the University of Nairobi, the Principal, College of Agriculture and Veterinary Sciences as well as staff in the College. The conference venue has many facilities and I hope you will have time to visit those that might be of interest to you. We shall be at hand to take you around.



We wish you a rewarding experience of sharing knowledge and networking during the conference and a pleasant stay in Nairobi.

David N. Mungai

Wangari Maathai Institute for Peace and Environmental Studies, University of Nairobi.

Chair of the Earth System Governance Project

Dear participants,

A warm welcome to Nairobi for the 2016 open science conference of the Earth System Governance research alliance! Each year, our conferences bring together the earth system governance research community as well as policy makers and stakeholders to exchange the most recent findings and plan further cooperation.



We are glad to see that after our conferences in Amsterdam (2009), Fort Collins (2011), Lund (2012), Tokyo (2013), Norwich (2014) and Canberra (2015), this event is now our first conference in Africa. While all our conferences follow a similar format and use well-established practices like the rigorous double-blind peer review of abstracts, each meeting also adds new elements to the conference series. At the Nairobi Conference, we will start developing a new Science and Implementation Plan that will guide our community from 2018 onwards - all members of our community are invited to join this activity and suggest new topics or research questions! Also, the conference will have a major impact on the further development of our current science programme, with a particular focus on how to advance effective, equitable and accountable earth system governance in times of increasing complexities and inequalities.

Many thanks to all our hosting and co-hosting organizations and to all of you for joining the conference, for presenting your research, and for participating in the many interesting

discussions that will lead, we hope, to new thinking and exciting collaboration in earth system governance research.

Frank Biermann

Chair, Scientific Steering Committee of the Earth System Governance Project

Copernicus Institute of Sustainable Development, Utrecht University

The Conference Team

Conference chair:

Fariborz Zelli, Lund University, and Academic Advisor to the Earth System Governance International Project Office

Conference co-chair:

David N. Mungai, Deputy Director, Wangari Maathai Institute for Peace and Environmental Studies, University of Nairobi

Conference manager:

Ruben Zondervan, Executive Director, Earth System Governance Project, and Lund University

Coordinators:

Charlotta Kjällerström, Network Coordinator & Administrative Assistant, Earth System Governance International Project Office, and Lund University
Lilian Sarah Namuma Kong'ani, Administrative Assistant, Wangari Maathai Institute for Peace and Environmental Studies, University of Nairobi

Earth System Governance International Project Office:

Juergen Bartel, Pedro Glatz, Frans Libertson

Communication:

Vicky Fenwick-Sehl, University of Waterloo

Volunteers:

Sylvia Rotich, Samuel Kiti Lewa, Stephen Tirop, Henry Kahi, Virginia Ng'endo, Grace Nyamweru Kinyori, Sainepo Bernice Mereina, Oduor Collins Ouma, Ndungu Patricia Luiza Njeri, Kamau Hannah Nyakio, Omollo Eric Ouma, Gitau Angela Nduta, Samuel Otieno, Fridah Moraa, Douglas Blaize, Doreen Munini

6 December 2016		
09:00-16:00	Early Career Researchers Event	Authors Meeting
	<i>African Centre for Technology Studies (ACTS)</i> <i>“Developing a Career in Earth System Governance – Confronting Challenges and Charting New Directions”</i> Pre-registration required	<i>Jacaranda Hotel, Westlands</i> <i>“New Directions in Earth System Governance”</i> On invitation
16:00-18:00	Conference Pre-Registration <i>Kenya School of Government, Kobe Lobby</i>	

7 December 2016					
08:00-09:00	Registration & Coffee / Tea				
09:00-10:30	Opening Plenary				
	<i>8:4:4 Auditorium</i> Words of Welcome Opening Keynote: <i>Leveraging Governance for Sustainable Development</i> , Prof. Winnie V. Mitullah Oran R. Young Prize 2016				
10:30-11:00	Coffee / Tea Break <i>10:30 - Spotlight Nairobi 1: The African Technology Policy Studies Network (ATPS)</i>				
11:00-12:30	Parallel Sessions 1				
	<i>Large Pathology Lecture Theater</i> Inequality 1 <i>“Towards Climate and Food Justice”</i>	<i>Small Pathology Lecture Theater</i> Inequality 2 <i>“Conceptualizing Planetary Justice”</i>	<i>PHPT Lecture Theater</i> Complexity 1 <i>“Governing Climate Complexity I: Risk”</i>	<i>CSD Seminar Room</i> New Directions 1 <i>“New Earth System Transformations I: Theories”</i>	<i>8:4:4 Auditorium</i> Africa 1 <i>“Aligning Climate Policy & Sustainable Development Agendas”</i>
12:30-13:30	Lunch <i>13:00 - Launch Event: Earth System Governance Research Centre Yale</i>				

13:30-14:50	Parallel Sessions 2				
	<i>Large Pathology Lecture Theater</i> Complexity 2 <i>“Governing Climate Complexity II: Adaptation”</i>	<i>Small Pathology Lecture Theater</i> Complexity 3 <i>“Governing Water Complexity”</i>	<i>PHPT Lecture Theater</i> New Directions 2 <i>“New Perspectives in Earth System Governance I: Norms and Discourses Revisited”</i>	<i>CSD Seminar Room</i> Inequality 3 <i>“Inequalities and Injustice in Ocean and Water Governance”</i>	<i>8:4:4 Auditorium</i> Africa 2 <i>“Implementing International Environmental Agreements in Africa”</i>
15:00-16:30	Early Career Researcher Sessions 1			Semi-Plenary I	
	<i>Large Pathology Lecture Theater</i> Early Career Researcher 1 <i>“Community Engagement and Ownership”</i>	<i>PHPT Lecture Theater</i> Early Career Researcher 2 <i>“Confronting Inequalities: Corruption, Discrimination & Ignorance”</i>	<i>CSD Seminar Room</i> Early Career Researcher 3 <i>“Sustainable Land Use and Forestry Management in Africa”</i>	<i>8:4:4 Auditorium</i> Hosted by Yale’s Governance, Environment, and Markets Initiative (GEM) <i>“Does Land Equality Reduce Environmental Degradation? Lessons for the Future”</i>	
16:30-17:00	Coffee / Tea Break				
17:00-18:00	New Directions Plenary				
	<i>8:4:4 Auditorium</i> <i>“Earth System Governance - The New Directions”</i>				

8 December 2016				
08:00-09:00	Coffee / Tea			
09:00-10:30	High Level Plenary			Side Event
	8:4:4 Auditorium Hosted by the Wangari Maathai Institute for Peace and Environmental Studies, University of Nairobi. Presentations Words of Welcome Policy Keynote			CSD Seminar Room GOVSEA Special Seminar, 09:00-12:00 (see page 46) “Who Governs East African Drylands? Economy, Conflict and Public Authority”
				Special Session
10:30-10:50	Coffee / Tea			PHPT Lecture Theater 11:00-16:00 (see page 40) “The East Africa Earth System Governance Game Jam”
10:50-12:20	Semi-Plenary II		Semi-Plenary III	
	8:4:4 Auditorium Hosted by the German Development Institute (DIE) “Coherence and Equity in a Post-Paris Climate Governance Landscape: A Research and Action Agenda”		Large Pathology Lecture Theater Hosted by the Copernicus Institute of Sustainable Development at Utrecht University “Environmental Policy Integration”	
12:20-13:10	Lunch			
13:10-14:30	Parallel Sessions 3			Special Session
	Large Pathology Lecture Theater New Directions 3 “New Perspectives in Earth System Governance II: Emotions, Spaces and Movements”	Small Pathology Lecture Theater Complexity 4 “Legitimacy in Complex Environmental Governance”	8:4:4 Auditorium Inequality 4 “Inequalities in Forest, Wildlife and Regional Governance”	CSD Seminar Room Africa 3 “Governing Energy Transitions in Sub-Saharan Africa”
				PHPT Lecture Theater (continued) “The East Africa Earth System Governance Game Jam”

14:40-16:00	Parallel Sessions 4				
	<i>Large Pathology Lecture Theater</i> New Directions 4 "New Earth System Transformations II: Case Studies"	<i>Small Pathology Lecture Theater</i> Complexity 5 "Mapping Complex Environmental Governance I: Networks and Triads"	<i>PHPT Lecture Theater</i> Complexity 6 "Concepts and Theories of Complexity I: Systemic and Reflexive Perspectives"	<i>CSD Seminar Room</i> New Directions 5 "New Directions for Scientific and Indigenous Knowledge"	<i>8:4:4 Auditorium</i> Africa 4 "Governing Agriculture and Land Use in Sub-Saharan Africa"
16:00-18:00	Transfer to Dinner – See transportation information for details				
Evening	<div>Conference Dinner</div> <div>Nairobi National Park, Kenya Wildlife Service Officer's Mess</div>				

9 December 2016					
08:00-08:30	Coffee / Tea				
08:30-10:00	Parallel Sessions 5				
	<i>Large Pathology Lecture Theater</i> Africa 5 "Legitimacy and Accountability in African Environmental Governance"	<i>Small Pathology Lecture Theater</i> Complexity 7 "Mapping Complex Environmental Governance II: Adaptation, Land Use and Minerals"	<i>PHPT Lecture Theater</i> Complexity 8 "Concepts and Theories of Complexity II: Agent-based Perspectives"	<i>CSD Seminar Room</i> New Directions 6 "New Directions for Adaptive and Anticipatory Governance"	<i>8:4:4 Auditorium</i> Africa 6 "Improving Livelihoods & Enhancing Resilience in Sub-Saharan Africa I"
10:00-10:30	<div>Coffee / Tea</div> <div>10:00 - Spotlight Nairobi II: The Africa Sand Dam Foundation (ASDF) / archenoVa</div>				

10:30-12:00	Semi-Plenary IV			Semi-Plenary V	
	8:4:4 Auditorium Hosted by the Institute for Sustainable Development and International Relations (IDDRI) “Multi-Stakeholder Initiatives in Global Environmental Governance: Between Pragmatism and Social Inclusion”			Large Pathology Lecture Theater Hosted by the Stockholm Environment Institute – Africa Centre “The Role of Science, Technology and Innovation in the Implementation of the Sustainable Development Goals”	
12:00-13:00	Lunch				
13:00-14:20	Early Career Researcher Sessions 2			Parallel Sessions 6	
	Large Pathology Lecture Theater Early Career Researcher 4 “Confronting Complexities: Institutional Fragmentation and Interplay”	Small Pathology Lecture Theater Early Career Researcher 5 “Sustainable Water Management in East Africa”		CSD Seminar Room Complexity 9 “Concepts and Theories of Complexity III: Institutional Perspectives”	8:4:4 Auditorium Complexity 10 “Responses to Complexity I: Orchestration and Integration”
14:30-16:00	Special Session	Parallel Sessions 7			
	Large Pathology Lecture Theater Thematic Session by Yale/GEM “Land Use, Rights, and Equity: Institutional Logics in the Globalized Era”	Small Pathology Lecture Theater Africa 7 “Improving Livelihoods & Enhancing Resilience in Sub-Saharan Africa II”	PHPT Lecture Theater Complexity 11 “Responses to Complexity II: Building Resilience”	CSD Seminar Room Africa 8 “Integrated Environmental Management and Planning in Sub-Saharan Africa”	8:4:4 Auditorium Africa 9 “Bottom-up Environmental Governance and Stakeholder Engagement in Sub-Saharan Africa”
16:00-16:30	Coffee / Tea				
16:30-18:00	Closing Plenary				
	8:4:4 Auditorium Roundtable Announcement 2017 Conference on Earth System Governance Vote of Thanks				

Practical Information

Registration

Please register as soon as possible upon arrival.

Venue: Kenya School of Government, Lobby, Margret Kobe Hostel

Tuesday, 6 December 2016

16:00 – 18:00

Venue: The Tent, CAVS, Upper Kabete Campus

Wednesday, 7 December 2016

08:00 – 09:00

All other times: Please register at the information desk in The Tent.

For security reasons, all participants are kindly requested to wear their name badge clearly visible at all times on the CAVS campus and at the Kenya School of Government (KSG) campus.

Venue

The 2016 Nairobi Conference on Earth System Governance will be held at the University of Nairobi's College of Agriculture and Veterinary Sciences on the Upper Kabete Campus. This Campus is just northwest of Nairobi city center. Located in the urban-rural periphery of Nairobi, the campus is easily accessible from the city center while being surrounded by small scale agriculture, away from the noise, pollution, and turbulence of the city.

The main gate is on the west side of the campus on *Loresho Ridge Road* off *Kapenguria Road*. A second gate is at the eastern border of the campus, also *Loresho Ridge Road*. A map of the campus is available on the inside back-cover of this programme.

Transportation

A separate information sheet with details on transportation between the conference venue and selected hotels is available for download on the conference website and in hard-copy at the registration desk as well as at the reception of the KSG accommodation.

Contact Information

Conference Manager: +254 (0)775928846

Plenary Sessions

Opening Plenary

Venue: 8:4:4 Auditorium

Wednesday, 7 December 2016

09:00 – 10:30

Chair:

Dr. Fariborz Zelli, Conference Chair, Lund University

Words of Welcome

Dr. Fariborz Zelli, Conference Chair, Lund University

Prof. Frank Biermann, chair of the Earth System Governance Project, and Utrecht University

Prof. David N. Mungai, Conference co-chair, deputy director of the Wangari Maathai Institute

Keynote Presentation

Leveraging Governance for Sustainable Development

Prof. Winnie V. Mitullah, Director, Institute for Development Studies (IDS), and the Director of Gender Affairs, University of Nairobi, Kenya

Awarding of the 2016 Oran R. Young Prize

Dr. Michelle Scobie, The University of the West Indies, Trinidad and Tobago

Word of Welcome and Housekeeping Announcements

Ruben Zondervan, Executive Director, Earth System Governance Project, and Lund University

New Directions Plenary

Venue: 8:4:4 Auditorium

Wednesday, 7 December 2016

17:00 – 18:00

Earth System Governance - The New Directions

Panelists: Representatives of the Earth System Governance New Directions team, introduced by Frank Biermann.

The current Science and Implementation Plan of the Earth System Governance Project, first published in 2009, will be replaced in 2018 by a new comprehensive research agenda. In this



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plenary session, the Earth System Governance New Directions team will present their first ideas on the post-2018 Science and Implementation Plan, and engage with the broader community in discussing the new cutting-edge research questions and approaches in earth system governance research.

High-Level Plenary

Venue: 8:4:4 Auditorium

Thursday, 8 December 2016

09:00 – 10:30

Chair:

Prof. David N. Mungai, Conference co-chair, deputy director of the Wangari Maathai Institute

09:00

Presentations – details will be communicated in a special separate announcement.

09:50

Words of Welcome

Prof. Henry Mutembei, Director of the Wangari Maathai Institute

Prof. Stephen G. Kiama, Principal of the College of Agriculture and Veterinary Sciences

Prof. Peter M.F. Mbithi, Vice-Chancellor, University of Nairobi

Policy Keynote

Prof. Judi Wangalwa Wakhungu, Cabinet Secretary for Environment and Regional Development Authorities (t.b.c.)

Closing Plenary

Venue: 8:4:4 Auditorium

Friday, 9 December 2016

16:30-18:00

Chair:

Dr. Fariborz Zelli, Conference Chair, Lund University, Sweden

Roundtable

Impressions, Inspirations and Lessons

Panelists:

Maria H. Ivanova, University of Massachusetts, USA

Agni Agni Kalfagianni, Utrecht University, The Netherlands

Kennedy Mbeva, Africa Centre for Technology Studies (ACTS), Kenya

David N. Mungai, Wangari Maathai Institute, Kenya

Lennart Olsson, Lund University Centre for Sustainability Studies, Sweden

Joost Vervoort, Utrecht University, The Netherlands

2017 Lund Conference on Earth System Governance – Announcement

Lennart Olsson, Lund University Centre for Sustainability Studies, Sweden

Vote of Thanks & Closing

Semi-Plenary Sessions

Semi Plenary I

Does Land Equality Reduce Environmental Degradation? Lessons for the Future

Hosted by Yale's Governance, Environment, and Markets Initiative

Venue: 8:4:4 Auditorium

Wednesday, 7 December 2016

15:00-16:30

Chair:

Ben Cashore, Yale University, USA

Speakers:

Milka Chepkorir, Forest Peoples Programme, Kenya

Grace Mwaura, African Centre for Technology Studies (ACTS), Kenya

N.N.

For decades, a great number of scholars including political scientists and economists have engaged in debates about whether economic development is contrary to, or reinforces, environmental stewardship and poverty alleviation. Some scholars argue that economic development results in a zero-sum game, in which some degree

of environmental degradation will result from efforts to catalyze development and ultimately improve social welfare. Others argue that development efforts tend to reinforce the demands largely of foreign capital, which comes at the expense of local communities. This disparity between local needs and global market demand brings a larger question of inequality into the implementation of the development agenda. How economic reforms influence on-the-ground environmental and social equity in the developing context is not a new question for scholars or practitioners, but continues to endure as we strive to achieve “redistribution through growth”. Further, many of these development initiatives also produce environmental consequences, especially when designed to grow economies through the extraction of natural resources. This session will focus on exploring these questions, especially whether or how an equilibrium can be found in stimulating economic development in the Africa context, without disenfranchising local communities or devastating the environment.



Semi Plenary II

*Coherence and equity in a post-Paris climate governance landscape:
A research and action agenda*

Hosted by the German Development Institute (DIE)

Venue: 8:4:4 Auditorium

Thursday, 8 December 2016

10:50-12:20

Chair:

Clara Brandi, Klimalog-Project, German Development Institute, Germany

Speakers:

Sander Chan, Klimalog-Project, German Development Institute (DIE), Germany

Cosmas M. O. Ochieng, African Centre for Technology Studies (ACTS), Kenya

Maria H. Ivanova, University of Massachusetts, USA

With the Paris Agreement coming into force, the landscape of global climate governance is set to change. This raises a number of questions: How should climate governance retain coherence at multiple levels and across different sectors? What institutions, procedures and policies are required to ensure delivery 'on the ground' and to increase ambition? Moreover, global climate governance also needs to be responsive to sustainable development needs. A crucial question therefore is whether and how climate governance can produce fair and equitable outcomes.

The Earth System Governance project has typically been dedicated to provide applicable solutions to this kind of questions. This semi-plenary focuses on the post-Paris climate governance landscape, in particular to consider equity and coherence in the context of the wider 2030 Agenda for Sustainable Development. In addition to the primarily normative question how an equitable and coherent climate governance architecture should look like, the aim of the semi-plenary is also to identify research priorities to advance understandings of coherence across a wider sustainable development agenda at all levels and between multilateral and transnational cooperation.



Semi Plenary III

Environmental Policy Integration

Hosted by the Copernicus Institute of Sustainable Development, Utrecht University

Venue: Large Pathology Lecture Theater

Thursday, 8 December 2016

10:50 – 12:20

Chair:

Frank Biermann, Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands

Speakers:

Åsa Persson, Stockholm Environment Institute, Sweden

Sara Namirembe, Independent consultant, Uganda

Barney Dickson, Climate Change Adaptation Unit, UNEP-DEPI, Kenya

Environmental Policy Integration (EPI) refers to the incorporation of environmental objectives into non-environmental policy sectors, such as transport, agriculture and transport. EPI is generally considered as a promising strategy for dealing with complexities in environmental governance related to



institutional fragmentation and the variety of actors and interests involved. EPI can not only remove contradictions between governance efforts, but is also considered more effective, efficient and feasible than stand-alone environmental governance. EPI however does not emerge spontaneously, and hence differences across countries, sectors and policy levels are observed.

This semi-plenary aims to take stock of experiences with EPI. First, Åsa Persson will give an overview of the conceptual foundations of EPI and lessons learned about 'what works' based on international and inter-sectoral comparative research. Second, more in-depth analyses will be provided by Sara Namirembe and Barney Dickson about two specific forms of EPI: ecosystem services as a vehicle for mainstreaming biodiversity, approached from an African perspective, and climate adaptation mainstreaming, particularly in the context of developing countries.

Semi Plenary IV

Multi-Stakeholder Initiatives in Global Environmental Governance: Between Pragmatism and Social Inclusion

**Hosted by the Institute for Sustainable Development and International Relations
(IDDRI, Sciences Po)**

Venue: 8:4:4 Auditorium

Friday, 9 December 2016

10:30-12:00

Chair:

Sébastien Treyer, IDDRI, Sciences Po, France

Speakers:

Benjamin Cashore, Yale School of Forestry and Environmental Studies, USA

Joanes Atela, African Centre for Technology Studies (ACTS), Kenya

Alexander Juras, UNEP, Major groups and stakeholders office, Kenya

Lucy Mungai, UNEP, Major groups and stakeholders office, Kenya

Global environmental governance arenas have multiplied over the last ten years. They also have diversified, ranging from "classical" multilateral negotiations, in which more actors try to have a voice, to structured multi-stakeholder platforms (e.g. the type 2 partnerships of Johannesburg or Rio+20) or more informal transnational partnerships (e.g. the commitment to remove commodity-driven deforestation from all supply chains).



These new arrangements gather a variety of stakeholders and are considered critical for the transformation required to achieve the SDGs. Pragmatism is often considered as the priority approach to make this achievement. Concrete action indeed needs to happen urgently to prove that the Paris Agreement and the SDGs are not just rhetoric. In this perspective, the concept of inclusiveness undergoes a considerable reinterpretation: it is less about giving a voice to those who are generally excluded from decision making, and more about ensuring that those who have the most leverage for transformation are on board.

It is now widely acknowledged that access to, and concrete participation in these new arrangements is highly inequitable and that the most resourced actors are the best positioned to influence the negotiation process and outputs. Starting from this diagnosis, the semi-plenary session will explore power asymmetries and access inequalities in two connected ways.

On the one hand, it will examine the extent to which economic actors, in particular transnational corporations, are involved in those negotiations, the objectives they pursue and the strategies they adopt to influence the negotiation process and outputs. It will elaborate on scholarly work carried out on that topic in different fields such as climate change (Levy, Egan, Newell), food and agriculture (Clapp, Fuchs, André), and biodiversity (Orsini, Falkner, Compagnon).

On the other hand, the session will look at how civil society organizations and other "minorities" participate in global environmental governance arenas. In particular, it will explore the different means they mobilize for their participation, and whether and how they forge strategic coalitions to increase their influence.

Finally, transversal to those two axes, speakers will consider the role of domestic authorities and policies in shaping the institutional settings through which negotiations take place, and the extent to which economic actors, civil society organizations and state actors participate and build coalitions.

Semi Plenary V

The role of Science, Technology and Innovation in the Implementation of the Sustainable Development Goals

Hosted by the Stockholm Environment Institute – Africa Centre

Venue: Large Pathology Lecture Theater

Friday, 9 December 2016

10:30-12:00

Chair:

Philip Osano, Stockholm Environment Institute, Kenya

Speakers:

Måns Nilsson, Stockholm Environment Institute, Sweden

Hon. Njogu Barua, Member of National Assembly of Kenya, and Vice-President, Pan African Parliamentary Network on Sustainable Development, Kenya

Flora Ismail Tibazarwa, Tanzania Commission for Science and Technology, Tanzania



The semi-plenary provides a platform for conference participants to reflect on the role of ST&I in the implementation of SDGs at sub-national, national, regional and international levels. It further discusses the mechanisms that are required to facilitate the involvement and participation of the ST&I community in the decision making, planning and implementation

of SDGs. In addition to specific national, regional and global examples, the panel will focus on the operationalization of the Technology Facilitation Mechanism (TFM) established by the United Nations, to facilitate Technology in the SDGs implementation.

The core questions to be addressed by the panel session are;

- Is there a demand for the scientific enterprise in implementation of SDGs?
- What is the current involvement of the STI community in the implementation of SDGs, and what opportunities exist for potential north-south and south-south collaboration?
- How can scientists help ‘unpack’ the complexities of the SDGs with regard to policy coherence and trade-offs?
- What examples exist at country, regional or international levels of ‘successful’ science-policy mechanisms?

The panel will be highly interactive starting with a background presentation on ST&I and the SDGs. This will be followed by statements by leading scholars from major scientific institutions and the Kenyan national parliament. A highly interactive “hard talk” session involving the audience will then follow. The semi-plenary will conclude with a synthesis of key recommendations.

Parallel Sessions

Parallel Paper Sessions 1

Wednesday, 7 December 2016

11:00 – 12:30

Inequality 1 - Towards Climate and Food Justice

Venue: Large Pathology Lecture Theater

How Equitable are CO₂ Emissions Entitlements in the Paris Agreement? Evaluation of “Intended Nationally Determined Contributions” Versus CO₂ Per Capita for a 2C Global Carbon Budget and Global Carbon Trading Mechanism

Asim Zia

Mapping Spatial Carbon inequality in China: Stakeholder Views on Fair Effort Sharing

Sabine Dauth

Private Sector’s Involvement in the Global Governance of Food & Nutrition Security: Accountability Issues and Transformative Potential

Pierre-Marie Aubert, Maria Gabriela Diaz

Inequality 2 - Conceptualizing Planetary Justice

Venue: Small Pathology Lecture Theater

Conceptualizing ‘Planetary Justice’ in Global Sustainability Governance: A Framework for Analysis

Frank Biermann, Agni Kalfagianni

Diversity Among Epistemic Communities Conducting Environmental Justice Research

Paulita A. Bennett-Martin, Christopher H.S. Broecker, Alexandra K. Cavanaugh, Savannah P. Crowl, Amy Hou, Virginia M. Loeffler, Aspen Ono, Siyue Zong, Murray A. Rudd

Rich Man’s Solution? Geoengineering Discourses, Structural Power, and the Marginalization of the Global Poor

Frank Biermann, Ina Möller

Complexity 1 - Governing Climate Complexity I: Risk

Venue: PHPT

Risk-Reward Nexus in Geoengineering: Implications for Governance

Turaj Faran, Lennart Olsson, Ruben Zondervan

Why Govern Climate Engineering? Assessing Functional, Strategic and Normative Rationales for Governance

Sikina Jinnah, Aarti Gupta

Climate change contagion? A networked view of transnational climate risk

Magnus Benzie, Henrik Carlsen, Asa Persson

New Directions 1 - New Earth System Transformations I: Theories

Venue: CSD Seminar Room

The Economics behind Transformation – A transdisciplinary theory of economic development and earth system transformation

Josue Manuel Quintana Diaz

The Green Decarbonized State and Industrial Governance: How to render transformation of the energy-intensive industry possible?

Roger Hildingsson, Annica Kronsell, Jamil Khan

Insights for sustainability transformations from emerging theory on gradual institutional change

James Patterson

An innovative governance model for transformation towards sustainable energy futures

Marcus Lange, Valerie Cummins

Africa 1 – Aligning climate policy and sustainable development agendas: a complex challenge for effective multilevel governance

Venue: 8:4:4 Auditorium

Conveners:

Steffen Bauer, German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), Germany; Kennedy Mbeva, Africa Centre for Technology Studies, Kenya; Lindsay Stringer, University of Leeds, United Kingdom.

Reconsidering Climate Compatible Development as a New Development Landscape in advancing towards the SDGs in Southern Africa

Lindsay C. Stringer, Susannah M. Sallu, Lisa M. Ficklin, Andrew J. Dougill, Benjamin Wood

Aligning national climate policy and sustainable development as a challenge of multilevel governance: the case of Kenya

Steffen Bauer, Kennedy Liti Mbeva

Multilateral objectives and national implementation: private adaptation finance in Kenya and Rwanda

Pieter Pauw, Adis Dzebo

Operationalizing land degradation neutrality: unraveling the semantics to support synergy between the Rio Conventions and action towards SDG 15

Mariam Akhtar-Schuster, Lindsay C. Stringer, Alexander Erlewein, Graciela Metternicht, Sara Minelli, Uriel Safriel, Stefan Sommer

Parallel Paper Sessions 2

Wednesday, 7 December 2016

13:30 – 14:50

Complexity 2 - Governing Climate Complexity II: Adaptation

Venue: Large Pathology Lecture Theater

Beyond Mitigation and bypassing the 'Firewall': how INDCs Advance the Global Climate Agenda

Pieter Pauw, Kennedy Mbeva

Co-ordinating climate change adaptation decision-making in South Australian Natural Resource Management: Building an adaptive governance framework for strengthening the roles of institutional actors

Barry Lincoln

Are we adapting to climate change? The case of Chile, barriers and enablers

Paulina Aldunce, Gloria Lillo, Roxana Bórquez, Katherine Indvik

Complexity 3 - Governing Water Complexity

Venue: Small Pathology Lecture Theater

The politicisation of transboundary water governance—towards a conceptual approach

Carel Dieperink, Kevin Oosterloo

Can Water Diplomacy Enable a New Future for the Urmia Lake?

Mahdi Zarghami, Seyed Hamed Alemohammad, Shafiqul Islam

Institutional innovation for adapting to climate change in water governance in cities

James Patterson

Conducting socioecological research for social transformations: Evidence from the urban water sector in Accra, Ghana

Antje Bruns, Karsten Schulz

New Directions 2 - New Perspectives in Earth System Governance I: Norms and Discourses Revisited

Venue: PHPT

The influence of deep structure on global environmental governance: norms, ideas and cultural narratives

Christopher Orr

A Basic Norm for Earth System Law

Dona Barirani

Setting a framework for earth system law: Norms in the planetary boundaries concept

Dona Barirani

Enough is enough: understanding limits in contemporary environmental argument

James Meadowcroft

Inequality 3 - Inequalities and Injustice in Ocean and Water Governance

Venue: CSD Seminar Room

Cruise Tourism and the Rights of Coastal States: A Developing World Perspective

David A. Simmons, Michelle Scobie

Supporting Poor Communities in Environmental Complex Problems: A new Approach of Water Parliament

Mahdi Zarghami

Fluid Governance: Scalar Politics in the South African Waterscape

Vasna Ramasar

Africa 2 - Implementing International Environmental Agreements in Africa

Venue: 8:4:4 Auditorium

Africa's path in global environmental governance: How African countries are implementing global environmental conventions

Maria Ivanova, Natalia Escobar-Pemberthy

The Complexities of Cooperation and Equitable utilization of the River Nile

Winnie Khaemba

Promoting EU Rules and Norms beyond its Borders: The Case of the EU's Voluntary Partnership Agreements in Africa and the Rise of China

Christine Hackenesch

Parallel Paper Sessions 3

Thursday, 8 December 2016

13:10 – 14:30

New Directions 3 - New Perspectives in Earth System Governance II: Emotions, Spaces and Movements

Venue: Large Pathology Lecture Theater

Earth System Governance: Knowledge is Not Enough

Ariella Helfgott, Heike Schroeder, Monika Zurek, Joost Vervoort, Sherie van den Wijngaard

Local perceptions of land use change in the Kilombero Valley, Tanzania: Using participatory art to reveal socio-environmental effects of large-scale land acquisitions

Emma Johansson, Ellinor Isgren

A Mobilities Lens to Earth System Governance

Ingrid Boas, Machiel Lamers, Judith van Leeuwen

Sharing our Earth: Elaborating on Ecospace, Technospace, and Sociospace

Joyeeta Gupta

Complexity 4 - Legitimacy in Complex Environmental Governance

Venue: Small Pathology Lecture Theater

Assessing the Legitimacy of the Groundswell of Climate Action: Transnational Climate Change Governance and the Global South

Harro van Asselt, Sander Chan

Climate Clubs and their Potentials and Pitfalls for enhancing Legitimacy in Global Governance

Steffen Bauer, Clara Brandi, Lutz Weischer

Access and Accountability: Complex Interactions between Inequality, Conservation, and Legitimacy

D.G. Webster

Deliberating a Just Future: The Role and Impact of Youth on Climate Governance

Grace Mwaura, Kennedy Mbeva

Inequality 4 - Inequalities in Forest, Wildlife and Regional Governance

Venue: 8:4:4 Auditorium

Forest Governance, Conservation and Livelihood in Zimbabwe: Shift Needed Away from a Long History of Exclusion

Vurayai Mutekwa

Differentiated Dispossession: Hunter-Gather Responses to Violent Eviction from Embobut Forest Reserve, Western Kenya

Connor Joseph Cavanagh, Milka Chepkorir Kuto

Does Transparency Mobilize Citizens and Decrease Corruption? A Randomized Field Experiment with Revenue-Sharing Funds in Bwindi National Park, Uganda

Mark Buntaine, Brigham Daniels

Multi-Level Governance versus Spatial Control: Global Conservation Targets, Grassroots Agency, and Sustainability in State-Based Protected Areas

Alejandra Orozco-Quintero, Catie Burlando, Lance W. Robinson

Protected Areas and Poverty Reduction: A Canada-Africa Research and Learning Alliance (PAPR): Synthesis of Findings

Leslie King, Grant Murray, Baker Masuruli, Enoch Makupa, Alejandra Orozco-Quintero, Lance Robinson, Bruce Downie, Phil Deaden, Alex Kisingo, Rick Rollins, Emmanuel Acquah, Andrew Agyare

Africa 3 - Governing Energy Transitions in Sub-Saharan Africa

Venue: CSD Seminar Room

Energy and Political Transformations in East Africa

Christopher Gore

East Africa's Energy Futures: the politics of hydrocarbon extraction and climate compatible development in Kenya and Uganda

James Van Alstine, Ross Gillard

The politics of norms in Earth Systems Governance: contesting transparency and accountability in Uganda's oil bearing regions

James Van Alstine

Parallel Paper Sessions 4

Thursday 8 December 2016

14:40 – 16:00

New Directions 4 - New Earth System Transformations II: Case Studies

Venue: Large Pathology Lecture Theater

Explaining Variation in Fossil Fuel Subsidy Reforms between Countries

Kennedy Mbeva

Globalizing Strategies for Clean-Energy Technology Acquisition: A Case of India's Wind Power Industry

Daisuke Hayashi

Transformative change through collaborative foresight: scenario-guided design of Costa Rica's INDC

Marieke Veeger, Franklin Paniagua, Felipe de León Denegri, Pascal Girot, Joost Vervoort, Deissy Martinez Baron, Ana Maria Loboguerrero Rodriguez

Complexity 5 - Mapping Complex Environmental Governance I: Networks and Triads

Venue: Small Pathology Lecture Theater

Confronting complexity in Earth System Governance using network analysis

Oscar Widerberg, Eduardo Gallo-Cajio, Rakhyun E. Kim, Ina Möller

Unravelling Institutional Complexity: A Mesoscopic Analysis of Triads in the Network of Multilateral Environmental Agreements

Rakhyun E. Kim

Mapping the actor network of coastal carbon governance

Jennifer Bansard

Complexity 6 - Concepts and Theories of Complexity I: Systemic and Reflexive Perspectives

Venue: PHPT

Social Fields and Natural Systems: suggesting an approach for interdisciplinary knowledge integration - exemplified by climate induced migration

Lennart Olsson, Anne Jerneck

Complexity, Self-Organisation and Self-Governance

Henrik Thorén, Lennart Olsson

Environmental Norms in the Trade Complex Adaptive System: From Innovation to Diffusion

Jean Frederic Morin

New Directions 5 - New Directions for Scientific and Indigenous Knowledge

Venue: CSD Seminar Room

The political authority of science in governance for sustainability: A structured comparison of six scientific institutions engaged in the Sustainable Development Goals

Sandra van der Hel, Frank Biermann

How do scientists navigate the hybrid space between science and politics? An empirical analysis

Sandra van der Hel

Indigenous knowledge systems and the Earth System governance project's epistemological dimension: moving beyond the nature-society gap.

Cristina Inoue, Paula Moreira

Africa 4 - Governing Agriculture and Land Use in Sub-Saharan Africa

Venue: 8:4:4 Auditorium

Land, Industrial Policy and Earth Systems Governance in sub-Saharan Africa: The Relationship between Land Tenure and Foreign Investment Regime in Uganda and Tanzania

Mark Purdon

Effectiveness of the Governance Arrangements in Promoting uptake of Sustainable Agricultural Practices in the Semi-Arid Areas of Ghana and the Low Lands of Malawi

Grace Timanyechi Munthali, Adelina Mensah, Christopher Gordon, Elaine Lawson, Rahinatu Sidiki Alare, Prosper Adiku

Outlining a Global Research Agenda for Enabling Effective Rangeland Governance

Lance W. Robinson, Fiona Flintan

Parallel Paper Sessions 5

Friday, 9 December 2016

08:30 – 10:00

Africa 5 - Legitimacy and Accountability in African Environmental Governance

Venue: Large Pathology Lecture Theater

The questions of legitimacy and effectiveness of transnational partnerships for sustainable development in sub-Saharan Africa: Building a conceptual framework.

Okechukwu Enechi

For the Benefit of All: Explaining the Adoption, Diffusion and Implementation of Free, Prior and Informed Consent in Environmental Governance

Judy Ndichu, Kennedy Mbeva

Assessment of governance principles application in protected forests: The case of six state forests in western Zimbabwe

Vurayai Mutekwa

Complexity 7 - Mapping Complex Environmental Governance II: Adaptation, Land Use and Minerals

Venue: Small Pathology Lecture Theater

A (super-)wide regime complex? Mapping the fragmentation of global governance of climate change adaptation

Asa Persson, Nina Weitz

Mapping the Transnational Governance Landscape for Hard Rock Minerals

Michele Betsill, Graeme Auld, Stacy VanDeveer

Multi-Scale Modeling of Land-Use Land Cover Change (LULCC) in Social Ecological Systems: An Agent Based Model of Missisquoi Watershed in the Lake Champlain Basin, 2000-2100

Asim Zia, Yu-Shiou Tsai, Scott Turnbull, Christopher Koliba

Complexity 8 - Concepts and Theories of Complexity II: Agent-based Perspectives

Venue: PHPT

Strategizing of policy entrepreneurs across multiple boundaries: the case of climate-smart agriculture

Marijn Faling

The role of 'Goals' and the private sector in confronting complexity in Earth System Governance: Understanding private sector advocacy for the UN Global Goals for Sustainable Development

Matthew Gitsham, Ajit Nayak, Jonathan Gosling

Power, authority and its implications in governance of complex socio-ecological problems: The case of the food system in South Africa

Farai Kapfudzaruwa

Why Engage with Stakeholders in Global Environmental Assessments?

Jennifer Garard, Martin Kowarsch

New Directions 6 - New Directions for Adaptive and Anticipatory Governance

Venue: CSD Seminar Room

The ACID (Adaptive Capacity and Inclusive Development) Institutional Analysis Method

Margot Hurlbert, Joyeeta Guupta

The Governance of Anticipation in the Anthropocene: A State of the Art Review

Joost Vervoort, Aarti Gupta

Evaluating adaptation practices through co-production of knowledge: a transdisciplinarity approach

Paulina Aldunce, Gloria Lillo, Marcela Vidal, Maria Eloisa Rojas, Carolina Adler

Africa 6 - Improving Livelihoods & Enhancing Resilience in Sub-Saharan Africa I

Venue: 8:4:4 Auditorium

Understanding multiple drivers of behaviour change: how better designed household interventions can lead to improved livelihoods in Kenya

Marie Jürisoo, Fiona Lambe, Henrik Carlsen

Tackling the sanitation enigma: addressing barriers to change sanitation practices and hygiene behaviors in sub-Saharan Africa

Nelson Ekane, Marianne Kjellén, Hans Westlund

Livelihood Vulnerability and Time Budgeting for Water and Fuelwood in Rural Nigeria: Some Governance Imperatives

Usman Raheem

Parallel Paper Sessions 6

Friday, 9 December 2016

13:00 – 14:20

Complexity 9 - Concepts and Theories of Complexity III: Institutional Perspectives

Venue: CSD Seminar Room

Navigating Institutional Complexity in Global Climate Governance: the Cases of Climate Engineering, REDD+, and Short-lived Climate Pollutants

Fariborz Zelli, Ina Möller, Harro van Asselt

Regional environmental governance beyond Europe: frameworks and concepts

Karen Siegel

Towards an integration of power and practice into conceptual frameworks used in the governance of Social-Ecological Systems (SES): Case study of Canadian oil sands

Akhshy Thiagarajan

Institutionalization of the REDD+ MRV discourse in Indonesia, Peru and Tanzania: Options for cross-country learning

Complexity 10 - Responses to Complexity I: Orchestration and Integration

Venue: 8:4:4 Auditorium

Strengthening transnational governance – Effectively aligning non-state actor capacity for sustainable and low-carbon development

Sander Chan, Robert Falkner

Theorising about feasible and effective Environmental Policy Integration: a meta-analysis of climate adaptation mainstreaming research

Carel Dieperink, Hannelore Mees, Sally Priest, Kristina Ek, Corinne Larue, Silvia Bruzonne, Pjotr Matczak

Interaction, Coordination and Competition in the Capacity Building Project Complex: The Case of Greenhouse Gas Emissions Trading in China

Katja Biedenkopf

Parallel Paper Sessions 7

Friday, 9 December 2016

14:30 – 16:00

Africa 7 - Improving Livelihoods & Enhancing Resilience in Sub-Saharan Africa II

Venue: Small Pathology Lecture Theater

Investigating institutions for effective rainwater harvesting: addressing vulnerabilities and enhancing resilience in semi-arid Kenya

Leslie King, Janet Mang'era

Performance of households in rural and peri urban settings with regard to improving sanitation and hygiene practices.

Amans Ntakarutimana, Nelson Ekane

Exploring the complexities surrounding sanitation provision and hygiene promotion in sub-Saharan Africa: A theoretical perspective

Nelson Ekane

Complexity 11 - Responses to Complexity II: Building Resilience

Venue: PHPT

Who, how and why 'must' participate in building resilience to disasters in a changing climate

Paulina Aldunce, Ruth Beilin, John Handmer, Mark Howden

Towards design principles for enhancing urban flood resilience: A reflection on adaptive capacity in 18 European areas

Carel Dieperink, Ann Crabbe, Meghan Alexander, Kristina Ek, Corinne Larue, Piotr Matczak, Duncan Liefferink

Recurrent governance challenges in the implementation and alignment of flood risk management strategies: a review

Carel Dieperink, Dries Hegger, Marloes Bakker, Peter Driessen

The adaptive capacity of institutions in Canada, Argentina and Chile to droughts and floods

Margot Hurlbert, Joyeeta Gupta

Africa 8 - Integrated Environmental Management and Planning in Sub-Saharan Africa

Venue: CSD Seminar Room

Mapping of Ecosystem Services in a Marine Reserve in Kenya: An Initial Step to Integrated Natural Resource Management

Margaret Awuor Owuor, John Icely, Alice Newton, Judith Nyunja, Philip Otieno, Arthur Omondi Tuda, Nancy Oduor

Using foresight as a process for policy harmonization in the face of transboundary governance challenges in East Africa

Lucas Rutting, Joost Vervoort, Martin Tumuhereze

Multiple-levels, Multiple worlds: Integrated Adaptation Planning and Implementation in Ghana

Ariella Helfgott, Abrar Chaudhury, Joost Vervoort

Africa 9 - Bottom-up Environmental Governance and Stakeholder Engagement in Sub-Saharan Africa

Venue: 8:4:4 Auditorium

Harnessing the Crowd to Improve Accountability for the Delivery of Solid Waste Services: A Randomized Field Experiment in Kampala, Uganda

Mark Buntaine, Daniel Nielson

Inclusiveness development for sustainable value chains: a conceptual framework for assessing the contributions of partnerships

Greetje Schouten, Sietze Vellema, Rob van Tulder

National Policy Change from Below? Understanding conditions when African cities lead

Christopher Gore, Diana Lee-Smith

Local Early Career Researchers Sessions

We have invited about 20 early-career researchers from African universities and research institutes to the 2016 Nairobi Conference on Earth System Governance. In a series of panel sessions, they will exchange their research results, visions and experiences with the earth system governance community. These sessions will provide a great opportunity for both sides to learn about new perspectives, urgent research gaps, and options for collaboration on key environmental governance questions in Africa and beyond.

The panelists will briefly present both their research and the context thereof, and then engage in a moderated and discussion with the audience.

In addition to the early-career researchers presenting in these sessions, the conference also welcomes a group of local high-school students who will attend for one day.

The conference participation of the regional early-career researchers has been made possible through financial support from the Earth System Governance Foundation.



Early Career Researcher Sessions 1

Wednesday, 7 December 2016

15:00 – 16:30

Early Career Researcher Panel 1 – Community Engagement and Ownership: New Incentives, Old Limitations?

Venue: Large Pathology Lecture Theater

Moderator:

Lennart Olsson, Lund University Centre for Sustainability Studies, Sweden

Community rights for investments in the extractive sector (oil) in northern Kenya

Brian Olick

Community Based Forest Management: Participation, Well-being and Attitude towards Sustainable Forest Management in Mt. Kenya Forest

Agatha Nthenge

Promoting urban trees for climate change adaptation and mitigation; exploring the possibility of 'a house, a tree strategy' from Ashaiman Municipality, Ghana

Mathias Edetor

Analysing Performance Deposit Bonds: Lessons and Policy Options for the Extractives Industry in Kenya

Geoffrey Omedo

Early Career Researcher Panel 2 – Confronting Inequalities: Corruption, Discrimination and Ignorance

Venue: PHPT

Moderator:

James Meadowcroft, Carleton University, Canada

Clean energy and gender

Hannah Wanjiru

Corruption in ecological fund management for climate change mitigation in Nigeria under the broad theme of climate change financing and policy.

Olushola Samuel Fadairo

Climate change, food security and gender

Catherine Mungai

Public Perception of Climate Change Risk: Understanding the Influence of Extreme Weather (flooding) Experience on Climate Change Perceptions in Ghana.

Thomas Addoah

Early Career Researcher Panel 3 – Sustainable Land Use and Forestry Management in Africa

Venue: CSD Seminar Room

Moderator:

Leslie King, Royal Roads University, Canada

Indigenous knowledge and climate change impact mitigation in relation to small-scale agriculture in Africa: a comparative study of South Africa and Kenya.

Amos Apraku

LandInfo Mobile Technology for improving agricultural productivity, land-use management and climate change resilience

Ernest Acheampong

An Assessment of the Sustainability of Livestock Food System in Isiolo County

Steve N. Machan

Governance Dilemma and Socioecological Factors Influencing Sustainable Provision of Ecosystem Services in Mt. Marsabit Forest

Carolyne Ouko

Early Career Researcher Sessions 2

Friday, 9 December 2016

13:00 – 14:20

Early Career Researcher Panel 4 – Confronting Complexities: Institutional Fragmentation and Interplay

Venue: Large Pathology Lecture Theater

Moderator:

Bernd Siebenhüner, Carl von Ossietzky University of Oldenburg, Germany

Analysing Regulatory fragmentation in Kenya's Municipal Solid Waste Management Sector

Wambua Kituku

Energy for All: rethinking roles in energy's institutional architecture

Rudo Matsheza

Institutional Interplay: Explaining the institutional Interactions that Happen at the Local Level to Influence Uptake of Adaptation Actions

Nancy Phoebe Rapando

Climate governance in Kenya

Linda Opiyo

Early Career Researcher Panel 5 – Sustainable Water Management in East Africa

Venue: Small Pathology Lecture Theater

Moderator:

Joyeeta Gupta, University of Amsterdam, The Netherlands

Assessing the Role of Stakeholder Participation in Watershed Management in Weiwei Valley, Pokot, Kenya

Lorna Muthanje Nyaga

Water Resources' Protection Policy and Regulation for environmental flows in the East Africa Countries

Joel Onyango

Integrating Ecosystem Services and Economic Incentives in Landscape Planning and Governance - A Watershed Conservation Policy Approach for Lake Naivasha Basin, Kenya.

Sammy Marathi Weru

Catchment Conservation and Management in Community Water Supply in Kenya: The Case of Mbumbuni Water Scheme

Frida Nyiva Mutui

Special Sessions

Spotlight Nairobi I

Venue: The Tent

Wednesday, 7 December 2016

10:30 – 11:00

About the African Technology Policy Studies Network (ATPS) and its New Vision

Nicholas Ozor, Executive Director, ATPS, Kenya

Launch of Earth System Governance Research Centre Yale

Venue: The Tent

Wednesday, 7 December 2016

13:00 – 13:15

Ben Cashore, Yale University, United States

introduced by

Ruben Zondervan, Earth System Governance Project, Sweden

The East Africa Earth System Governance Game Jam

Venue PHPT 11:00-14:40; and The Tent 14:40-16:00

Thursday, 8 December 2016

11:00-16:00

Pre-registration required.

Hosted by:

Joost Vervoort, Copernicus Institute of Sustainable Development at Utrecht University, and University of Oxford

Jake Manion, Leti Arts, Ghana

Lucas Rutting, University of Oxford, UK

Marieke Veeger University for International Cooperation, Costa Rica

Ariella Helfgott, Copernicus Institute of Sustainable Development at Utrecht University, and University of Oxford

We will run a live, interactive game design event, a ‘game jam’, with East Africa-focused researchers and game designers, as well as other actors, on governance challenges for the region. In a game jam, participants work in teams to design game prototypes around a certain theme. The game jam is co-hosted by Jake Manion, creative director of *Leti Arts*, one of the foremost game design companies in East Africa, and a team of earth system governance researchers from the Universities of Oxford, Utrecht and the University of International Cooperation (San Jose). Leti Arts will invite a diverse group of around 20 Nairobi-based game designers, visual designers and storytellers to the event.

The interactive co-design of games by diverse actors in collaboration with game designers has many potential benefits as a tool for the investigation of earth system governance challenges and strategies. Games can create interactive experiences that allow for the simulation of governance processes and institutions and the exploration of potential futures in ways that allow for experiential engagement as well as analytical depth. Beyond just playing pre-designed games, designing games together with actors in environmental governance allows for an explicit exploration of how different actors translate their understandings of systems into game rules. This way, game co-design offers the benefits of participatory modelling, but offers more freedom in the conceptualization of game worlds while focusing more strongly on actor roles and interactions, and the limitations and opportunities afforded by different institutional contexts. The format of the ‘game jam’ offers particular potential – game jams are events where many different games are created around a given topic by different groups, creating room for a pluralistic exploration of the issue that can incorporate radically different conceptualisations of the system(s) in question. Recently, methods have been developed specifically for running game jams that explore policy and governance challenges and strategies.

The aim is to create a range of earth system governance game prototypes and concepts for the East African region, in order to provide game designers and conference participants alike the possibility to experiment with a collaborative design approach to earth system governance challenges – leading to concepts and prototypes that can potentially be developed fully. Game design teams in the session are created from small groups of 3-4 individuals, always in a mix of backgrounds in governance and game design. We will frame the exercise by focusing on the twin challenges of climate adaptation and the environmental impacts of development in East Africa. A number of guiding questions will be provided – but the most important of these questions focus around the imagined purpose, impact and user group. Without unduly restricting their efforts, we will encourage teams to create games for a range of purposes (policy experimentation, education, networking) and user groups (policy makers, the private sector, children). Using guidelines from a Horizon 2020 project, JamToday, we will conduct two rounds of game conceptualisation, with a round of feedback across groups halfway through the session. The game co-creation will be followed by a reflection and comparison of how the games’ designs relate to their purposes and user groups. We will finish by identifying practical possibilities for further development and applications of the most feasible concepts.

Researchers attending the session who are interested in using games in their research/policy/engagement projects are encouraged to bring these to the session as case studies for game design.

Conference Dinner

Venue: Nairobi National Park

Thursday, 8 December 2016

18:00 –

Just outside of Nairobi's central business district is the Nairobi National Park. Wide open grass plains and backdrop of the city scrapers, scattered acacia bush play host to a wide variety of wildlife including the endangered black rhino, lions, leopards, cheetahs, hyenas, buffaloes, giraffes and diverse birdlife with over 400 species recorded.

The conference dinner of the 2016 Nairobi Conference on Earth System Governance will be served outdoors in this unique environment.

Immediately after the last session, busses will bring all participants from the conference venue to the National Park and back from the National Park to the Jacaranda Hotel and the Kenya School of Government. Please see the transportation information sheet for more details.

After the US Presidential Election: Implications for Global and US Environmental Politics

During the conference dinner, we invite you to a discussion on potential consequences of the results of US presidential elections for domestic and international environmental governance.

Kick-off statements:

Mark Buntaine, University California at Santa Barbara, USA

Michele Betsill, Colorado State University, USA

Michaela Foster, Yale University, USA

Spotlight Nairobi II

Venue: The Tent

Friday, 9 December 2016

10:00 – 10:30

The Africa Sand Dam Foundation (ASDF) / archenoVa

Cornelius Kyalo, Executive Director, ASDF, Kenya

Africa Sand Dam Foundation (ASDF) is a registered Kenyan NGO founded in 2010. ASDF's principal mandate is to implement income security projects that empower rural communities to transform arid and semi-arid lands of Sub-Saharan Africa. ASDF supports registered Self-Help Groups (SHGs) to harvest and conserve water through construction of sand dams, rock catchments and water tanks in schools, promote climate smart agriculture and soil conservation. ASDF provides knowledge and capacity building to small scale farmers in

collaboration with Kenyan research organizations and international NGOs like arche noVa. Currently ASDF's interventions are spread out in three dry land counties of South Eastern Kenya: Makueni, Machakos and Kitui.

archenoVa – Initiative for People in Need is a German non-governmental organization currently working in 14 countries worldwide. *archenoVa*'s primary expertise is in the WASH sector with a wide range of activities to support local communities and civil society organizations. *archenoVa* follows a multi-sectoral approach and most projects include other components such as livelihood, food security, health promotion, education, and disaster preparedness.

Thematic Panel

Land Use, Rights, and Equity: Institutional Logics in the Globalized Era

Venue: Large Pathology Lecture Theater

Friday, 9 December 2016

14:30 – 16:00

A thematic session by the Governance, Environment, and Markets Initiative, Yale School of Forestry and Environmental Studies.

Speakers:

Ben Cashore, Michaela Foster, Chelsea Judy, and Philile Mbatha

How indigenous and natural resource-dependent communities might participate in and benefit from local resource governance remains a significant and contested theme of research in both academia and amongst policy practitioners. Some argue that best practices for managing local resources stem from local governing institutions and that the strengthening of these institutions will result in both the realization of sustainable management goals and indigenous land tenure claims.

Other scholars, however, find that the increasing complexity of resource governance arrangements and their interactions with transnational product supply chains requires analysis that looks both backwards historically and forwards predictively across multiple levels of governance to fully understand institutional durability and land use impacts. We propose to lead a panel session that tends to these issues, looking specifically at the emergence of community forestry institutions in Latin America and Ghana, agricultural expansion and investment arrangements in Ethiopia, and local coastal management in South Africa to shed light on how these institutions can improve domestic resource governance and propagate local land rights and tenure.

This panel will feature two papers that examine the historical emergence and current arrangements of community forestry institutions: one with case studies from Peru, Mexico, Costa Rica, and another from Ghana. The third paper will explore how land tenure institutions and income from land-based extractive activities in Ethiopia affect systemic

inequalities across the land user base, with a focus on contemporary trends of inequality. The fourth paper will explore the livelihood strategies employed by rural coastal communities living in the conservation areas of Kosi Bay, South Africa, describe the complex governance systems relevant to coastal resource use, and seek to understand how people's livelihood strategies and choices have been influenced by changing plural governance systems. We aim to shed further light on how local resource governing institutions may not only create durable policies capable of promoting environmental stewardship in the face of increasing economic globalization, but also foster greater equity for communities.

Side-Events / Meetings

Early Career Researchers Event

Developing a career in earth system governance – confronting challenges and charting new directions

Venue: African Centre for Technology Studies (ACTS), Nairobi, Kenya

Tuesday, 06 December 2016

09:00 – 16:00

In conjunction with the Earth System Governance annual conference a pre-conference event for early career researchers interested in earth system governance will be held. The event is hosted by the African Centre for Technology Studies (ACTS).

This one day event will explore the challenges and opportunities for developing a career in earth system governance research, addressing complex topics and societal inequalities. In this context, we will also discuss the contributions that early career researchers make to new directions in Earth System Governance.

The session will include keynote addresses from thought leaders in the field of earth system governance and discussion sessions to discuss challenges and opportunities moving forward as individual researchers and as a community. The format is focused on creating interactive opportunities for early career researchers to engage with each other and with senior faculty within the Earth System Governance network.



Organizers:

Kennedy Mbeva, ACTS, Kenya

Sandra van der Hel, Copernicus Institute, Utrecht University, The Netherlands

Vasna Ramasar, Lund University Centre for Sustainability Studies, Sweden

New Directions in Earth System Governance – Authors Meeting

Venue: Jacaranda Hotel, Westlands

Tuesday, 06 December 2016

09:00 – 16:00

On invitation

GOVSEA Special Seminar

Who governs East African drylands? Economy, conflict and public authority

Venue: CSD Seminar Room

Thursday, 8 December 2016

09:00 – 12:00

We invite participants of the Nairobi Conference on Earth System Governance, faculty, students and other interested parties to join us for a half-day seminar and panel discussion focusing on the roles of business, conflict and public authority in the governance of East African drylands. The seminar features presentations on current cross-border trade dynamics in the region's Somali territories. It offers an opportunity to discuss the everyday governance of drylands at the intersection of formal and informal rules, local and international influences and political and economic drivers. The seminar is organized by the GOVSEA project, a collaborative research programme involving East African and Danish researchers who study the nexus between everyday economics and dynamics of state formation across the Somali territories (govsea.tumblr.com). The seminar is interdisciplinary and hosted by the African Drylands Institute for Sustainability (ADIS), College of Agriculture and Veterinary Sciences (CAVS), University of Nairobi.

Attendance is free. Earth System Governance conference participants can join the entire seminar or a specific segment.

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| 9.00 | Welcome and introduction, Prof. Jesse Njoka, University of Nairobi |
| 9.10 | The GOVSEA approach: studying the political life of trade corridors in Somali East Africa, Dr. Finn Stepputat, Danish Institute for International Studies |
| 9.30 | Guardians of peace? The role of the business community in Somaliland's contested state formation, Ahmed Musa, University of Nairobi |
| 9.50 | Sugar smuggling between Kenya and Somalia: recent insights, Dr. Jacob Rasmussen, Roskilde University |
| 10.10 | Q & A and discussion |
| 10.40 | Coffee break |
| 11.00-12:00 | Moderated panel discussion 'Governing East African drylands: what works and what doesn't?'

Dr. Asnake Kefale, Addis Ababa University, Ethiopia
Prof. Jesse Njoka, University of Nairobi, Kenya
Dr. Jonathan Nzuma, University of Nairobi, Kenya
Kirstine S. Varming, Roskilde University, Denmark
Dr. Tobias Hagmann, Roskilde University (moderator), Denmark |

Field Trip

Venue: Makueni County

Saturday, 10 December 2016

07:00 – 18:00

Conference participants are invited to join a field trip to two community projects in Makueni County, southeast of Nairobi, operated by the African Sand Dam Foundation (ASDF).

Sand dam building is an innovative and highly efficient method to create water, food and income secure communities in arid and semi-arid lands. By capturing rain water where it falls, sand dams allow communities to gain access to clean water close to their farms, even during the dry season. The communities gain more time to tend their farms and can invest in sustainable agriculture. Sand dams also transform the local environment by raising the water table, thus allowing the natural regeneration of vegetation.

With this role model of integrated environmental management, ASDF facilitates climate-smart agriculture by communities, improving harvests and food production as well as water access and availability.

Pre-registration required. The realization of the field trip is subject to a sufficient number of participants. Details and logistical information will be communicated to confirmed participants.

The Earth System Governance Project's "Harvesting Initiative" - Agency Meeting

Venue: Kenya School of Government, Conference Centre

Saturday, 10 December 2016

09:00 – 16:00

Convener:

Michele M. Betsill, Earth System Governance Scientific Steering Committee; Colorado State University, USA

A team of currently about 30 members of the Earth System Governance Project will be part of our Earth System Governance harvesting initiative on the analytical problem of Agency. Members of this group will meet at the 2016 Nairobi Conference for an initial planning session. The team will systematically review earth system governance publications on Agency to see what we have learned about the four questions originally proposed in the 2009 science plan, and to identify any additional questions or themes that have emerged and suggest areas for future research.

The Earth System Governance Project's "Harvesting Initiative" - *Architecture Meeting*

Venue: Kenya School of Government, Conference Centre

Saturday, 10 December 2016

09:00 – 13:00

Conveners:

Frank Biermann, Utrecht University, The Netherlands

Rakhyun Kim, Utrecht University, The Netherlands

As part of the "harvesting Initiative" of the Earth System Governance Project, this meeting on *Global Governance for the Earth: Transforming Institutional Architectures in the Anthropocene* will start efforts towards an edited volume of short and accessible 'synthesis' chapters that bring together earth system governance scholarship on the analytical problem of architecture and, at the same time, propose new reform options as well as future research directions.

International Review Panel

We thank the members of our International Review Panel for their efforts.

Prof. Steinar Andresen, Fridtjof Nansen
Institute, Norway

Prof. Christina Yumie Aoki Inoue,
University of Brasilia, Brazil

Prof. Walter F. Baber, California State
University, Long Beach, United States of
America

Prof. Robert V. Bartlett, University of
Vermont, United States of America

Prof. Steven Bernstein, University of
Toronto, Canada

Prof. Michele M. Betsill, Colorado State
University, United States of America

Prof. Frank Biermann, Utrecht University,
The Netherlands

Prof. Jennifer Clapp, University of
Waterloo, Canada

Prof. Ken Conca, American University,
United States of America

Prof. Peter P.J. Driessen, Utrecht
University, The Netherlands

Dr. Claire Dupont, Vrije Universiteit
Brussel, Belgium

Dr. Timothy Ehresman, Belmont
University, United States of America

Prof. Lorraine Elliott, The Australian
National University, Australia

Prof. Octavian Gakuru, University of
Nairobi, Kenya

Dr. Leopoldo Cavaleri Gerhardinger,
Regional University of Joinville, Brazil

Dr. Andrea Gerlak, University of Arizona,
United States

Dr. Kalpana Giri, Stockholm Environment
Institute, Thailand

Prof. Aarti Gupta, Wageningen University,
The Netherlands

Prof. Peter M. Haas, University of
Massachusetts at Amherst, United States
of America

Dr. Dries Hegger, Utrecht University, The
Netherlands

Prof. Matthew J. Hoffmann, University of
Toronto, Canada

Prof. Margot Hurlbert, University of
Regina, Canada

Dr. Anne Jerneck LUCSUS, Lund
University, Sweden

Prof. Sikina Jinnah, American University,
United States

Dr. Francis Johnson, Stockholm
Environment Institute, Kenya

Dr. Agni Kalfagianni, Utrecht University,
Netherlands

Dr. Sylvia I. Karlsson-Vinkhuyzen,
Wageningen University, The Netherlands

Dr. Rakhyun E Kim, Griffith University,
Australia

Dr. Tatiana Kluvánková-Oravská, Slovak
Academy of Sciences, Slovakia

Dr. Teresa Kramarz, University of
Toronto, Canada

Dr. Louis Lebel, Chiang Mai University,
Thailand

Dr. Elizabeth L. Malone, Joint Global
Change Research Institute, United States
of America

Prof. François Mancebo, Reims University,
France

Dr. Kennedy Mbeva, African Centre for
Technology Studies, Kenya

Dr. Jeffrey McGee, University of
Tasmania, Australia

- Dr. Aysem Mert, University Duisburg-Essen, Germany
- Dr. Manjana Milkoreit, Arizona State University, United States of America
- Prof. Jean-Frédéric Morin, Laval University, Canada
- Prof. David Mungai, University of Nairobi, Kenya
- Dr. Barry Ness, Lund University, Sweden
- Prof. Peter Newell, University of Sussex, United Kingdom
- Prof. Sebastian Oberthür, Vrije Universiteit Brussel, Belgium
- Prof. Nicholas Ogue, University of Nairobi, Kenya
- Prof. Amandine Orsini, Université Saint-Louis – Bruxelles, Belgium
- Dr. Philip Osano, Stockholm Environment Institute, Kenya
- Dr. Susan Park, University of Sydney, Australia
- Prof. Philipp Pattberg, VU University Amsterdam, The Netherlands
- Dr. James Patterson, VU University Amsterdam, The Netherlands
- Dr. Åsa Persson, Stockholm Environment Institute, Sweden
- Prof. Arthur Petersen, University College London, United Kingdom
- Dr. Jonathan Pickering, University of Canberra, Australia
- Dr. Vasna Ramasar, Lund University, Sweden
- Dr. Chris Riedy, University of Technology Sydney, Australia
- Dr. Hens Runhaar, Wageningen University, and Utrecht University, The Netherlands
- Dr. Heike Schroeder, University of East Anglia, United Kingdom
- Dr. Michelle Scobie, University of the West Indies, St. Augustine, Trinidad
- Prof. Tim Stephens, University of Sydney, Australia
- Dr. Kyla Tienhaara, Australian National University, Australia
- Prof. Prakash C. Tiwari, Kumaun University, India
- Dr. Diarmuid Torney, Dublin City University, Ireland
- Prof. Harro van Asselt, University of Eastern Finland, Finland
- Prof. Thijs Van de Graaf, Ghent University, Belgium
- Dr. Judith van Leeuwen, Wageningen University, The Netherlands
- Prof. Canfa Wang, China University of Political Science and Law, China
- Prof. Eduardo Viola, University of Brasilia, Brazil
- Dr. Fariborz Zelli, Lund University, Sweden
- Prof. Asim Zia, University of Vermont, United States

A Lasting Impact

The 2016 Nairobi Conference on Earth System Governance is the seventh annual conference hosted by the Earth System Governance Project. After our conferences in Amsterdam (2009), Fort Collins (2011), Lund (2012), Tokyo (2013), Norwich (2014) and Canberra (2015), this is our first conference on the African continent.

The Nairobi Conference follows the successful and by now well-established format of our conference series, which has proven effective for exchanging research findings, discussing new ideas and building a truly global community of researchers, including in particular early career researchers. As our previous conferences, also the Nairobi Conference is fully embedded in the regional academic context, involving a diverse set of partners from academia, policy and civil society, and is hosted by a leading university institution with outstanding research record in the broader field of earth system governance.

Unique to this conference has been our effort to not just prepare the conference venue and implement the conference there, but also to ensure that the conference will leave a lasting local impact. In addition to capacity-building through the involvement of many local early career researchers, we are happy that we could also support the long-term strengthening of the infrastructure at the venue. This includes among others the purchase of audio-systems for the Faculty of Veterinary Medicine's Large Lecture Theatre and the Public Health Pharmacology and Toxicology's lecture theater, and the purchase of wireless internet infrastructure in all areas of the College of Agriculture and Veterinary Sciences campus that we use for this conference.

These efforts have been made possible because of the generous support to the conference by the co-hosting institutions, and the many conference participants from all over the world. Thank you!



Map



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| 1 | CAVS College Principal's Office |
| 2 | Faculty of Veterinary Medicine (Large Pathology Lecture Theater and Small Pathology Lecture Theater) |
| 3 | 8.4.4 Building (8:4:4 Auditorium) |
| 4 | Public Health Pharmacology and Toxicology (PHPT) |
| 5 | The Tent |
| 6 | Small Animal Clinical Studies (CSD Seminar Room) |
| A | Main Gate |

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Conference Co-Hosts



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Deutsches Institut für
Entwicklungspolitik



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