

NEGOTIATING ENVIRONMENTAL KNOWLEDGES: AGENDA

INSTITUTE FOR SCIENCE, INNOVATION AND SOCIETY | 64 BANBURY RD | OXFORD OX2 6PN

Wednesday 12th December

- 10.30-11.00 Registration, tea & coffee
- 11.00-11.30 Welcome & opening remarks: *Javier Lezaun & Sophie Haines (InSIS, Oxford)*
- 11.30-13.00 EVIDENCE AND EXPERIMENT (Chair: Stephanie Postar, Oxford)
Air's re-compositions: the unfolding of data and evidence in the science-policy archive
Emma Garnett (KCL)
Surrendering to the pull, sensing subterranean water worlds
Andrea Ballesterio (Rice)
- 13.00-14.00 Lunch
- 14.00-15.30 HUMAN/NON-HUMAN ENTANGLEMENTS (Chair: Javier Lezaun, Oxford)
Performative knowledge in/is the multiverse: ethnographic speculations
Renzo Taddei (UNIFESP) – via skype
The task of the climate translator
Nayanika Mathur (Oxford)
- 15.30-16.00 Tea & coffee
- 16.00-17.45 WORKING ACROSS DISCIPLINES AND DOMAINS (Chair: Sophie Haines, Oxford)
Roundtable panellists: *Rachael Carrie (Leeds), Kevin Collins (Open), Patrick Bresnihan (Trinity)*
- 17.45-18.45 Drinks reception
- 19.00 Workshop dinner for speakers (Branca, Walton Street)

Thursday 13th December

- 9.00-9.15 Tea & coffee
- 9.15-11.30 FLUID KNOWLEDGES (Chair: Laura Rival, Oxford)
Water from the Moral High Ground: the performance of agency & identity in the co-management of the Mitchell River
Veronica Strang (Durham)
Watersheds within and without: negotiating environmental health and citizenship in Belize
Sophie Haines (Oxford)
‘There must be a scientific reason’: Different water-knowledges & partially connected worlds in the Peruvian Andes
Astrid Stensrud (Oslo)
- 11.30-12.00 Tea & coffee
- 12.00-13.30 TRANSLATIONS IN PRACTICE (Chair: James Palmer, Bristol)
The irony of embankments: translating climate change in Bangladeshi development aid projects
Camelia Dewan (Oslo) – via skype
On the other side of the crystal: on water, solidarity and the hereafter in Madagascar
Sara de Wit (Oxford)
- 13.30-14.30 Lunch
- 14.30-15.30 Reflection / next steps / close (*Sophie, Javier*)

SPEAKERS & CHAIRS

Name	Affiliation
Andrea Ballestero	Rice University
Patrick Bresnihan	Trinity College Dublin
Rachael Carrie	Leeds University
Kevin Collins	Open University
Sara de Wit	University of Oxford
Camelia Dewan*	University of Oslo
Emma Garnett	King's College London
Sophie Haines	University of Oxford
Javier Lezaun	University of Oxford
Nayanika Mathur	University of Oxford
James Palmer	University of Bristol
Stephanie Postar	University of Oxford
Laura Rival	University of Oxford
Astrid Stensrud	University of Oslo
Veronica Strang	Durham University
Renzo Taddei*	Federal University of São Paulo

*remote participation

PRESENTATION ABSTRACTS

1. Evidence and Experiment

Air's re-compositions: the unfolding of data and evidence in the science-policy archive

Emma Garnett (KCL)

Air pollution is a public health crisis and global health challenge. Proliferating science and policy reports, and citizen and community led claims document the effects of contemporary atmospheres on human health. This paper emerges from a study of publicly available documents produced by a medical and scientific committee that advises government policy on air pollution in the UK (1995 - present). The author pays attention to the ways in which these documents articulate changing socio-technical and material configurations of air pollution and health in research and policy. The archive documents the challenges involved in making scientific data and evidence actionable, thereby presenting an opportunity to explore the negotiation of environmental knowledges and the material politics of governing air and atmospheres over time. By recording processes of inclusion and exclusion, uncertainty and error, the archive produces in-between spaces of knowing and doing in science and policy. By keeping open the problem of air pollution, these spaces pose different questions and therefore generate potentially different solutions. For instance, tracing how airborne particles resist measurement or disrupt policy interventions over time invites us to look at the entanglements of methods as much as their object of analysis. The paper presents three 'air re-compositions' that foreground disruptions, discrepancies and 'evidence gaps'. Rather than proposing more and different data, analytically resituating the documents opens-up air pollution to new expressions, practices and determinations.

Surrendering to the pull, sensing subterranean water worlds

Andrea Ballesterio (Rice)

Water movement has been used to produce analogies and metaphors of social relations, exchange processes, planetary warming and the global circulation of capital, people and nature. Under the guise of flows, an apparently unfettered movement of substances and beings has captured much creative and analytic energy. But a crucial flow which requires alternative thinking coordinates has been mostly left unexplored: the underground movement of water. Here I am not referring to the circulation of water through human-made infrastructures but to its dislocation across the dense time-space of underground geologic formations. This is not movement across space, but through rock, clay, and stone in time.

In this paper I explore the qualities of that peculiar type of movement; one that resists dreams of infrastructural direction and discretion, and is, from the get go, caught up in the architectural density of its geologic substrate. To do so, I explore a particular ethnographic moment: the initiation of the layperson in hydrogeological thinking, that is, the invitation to inhabit subterranean worlds. I analyze the work of hydro-geologists from the National Water and Irrigation Service in Costa Rica and think sympathetically with their modest, and somewhat dated experimental methods, to imagine and communicate the existence of active flows in subsurface formations. More broadly, I query what are the politics of making the subsurface fluid at a time when fears of water crisis hover over our imaginaries of the future?

2. Human/Non-human entanglements

Performative knowledge in/is the multiverse: ethnographic speculations

Renzo Taddei (Federal University of São Paulo - UNIFESP) – via skype

The paper examines the concept of “conflict” in its association to environmental knowledge, through a speculative crossing of Amazonian Amerindian ideas about how conflict is a key dimension in the composition of realities, with insights on the relationship between alterity and performative action from philosophy of science authors W.V.O. Quine and G. Simondon.

The task of the climate translator

Nayanika Mathur (Oxford)

This paper studies the negotiation of environmental knowledges through a focus on what it terms ‘climate translations’ or stories that move between different registers to imaginatively engage with and express life in the Anthropocene. Climate translators are required for four broadly interlinked reasons. In the first, it remains important to challenge the conceit of much (Eurocentric) climate science that assumes there is only one modality –the supposedly-rationalized work of legitimized Science – that can illuminate the crisis that faces humanity. Beyond the elitism and hegemony of climate science, climate translations are important to confront climate skeptics, denialists, and conspiracists who continue to dispute the facticity of climate change. Perhaps most importantly, climate translations are required in order to better conceptualise what climate change is actually about; to build up a richer array of climate imaginaries. Finally, climate translations can help overcome problems intrinsic to the concept of the Anthropocene: its domination by the Natural Sciences and the neglect/lower position of the Humanities, as well as the lack of awareness of the sharp power distinctions within the Anthropos. An instance of the form potential climate translations might assume is provided through an ethnographic account of human-animal relations in the Indian Himalaya. This climate translation compares and contrasts mainstream scientific accounts of animal endangerment/extinction and conflict to embedded but distinct Himalayan stories of multispecies relationality. I suggest that these seemingly different accounts share a recognisably similar consciousness of human impact, inter-species entanglements, and climatic change. The task I set myself here as a climate translator is of being attuned to distinct stories; giving them an expressive form that doesn’t reproduce existing hierarchies of knowledge; and, therein, bringing out diverse imaginaries of the Indian Anthropocene.

3. Fluid Knowledges

Water from the Moral High Ground: the performance of agency and identity in the co-management of the Mitchell River

Veronica Strang (Durham)

The Mitchell River in Far North Queensland is co-managed by the Mitchell River Watershed Management Group, a not-for-profit organisation bringing together the 'stakeholders' in the catchment area. The Aboriginal people living near the estuary established the group in 1990 to increase their involvement in the management of the river, and to ensure that their voices were heard in decisions affecting the land and waters of their traditional 'country'. Other participants include a powerful network of local cattle station owners; mining companies; commercial and recreational fishers; tourist industry representatives; the Queensland Parks and Wildlife Service; the Environment Agency; non-governmental agencies oriented towards resource development in Cape York; and a few conservation organisations. The group also has regular input from scientists – mostly hydrologists and biologists – conducting research in the area. The stated aims of the MRWVG are to achieve 'a balanced approach to the use of catchment resources' and to assure the 'sustainable and integrated management of the Mitchell River catchment area'. Naturally the participating groups have very different ideas about what this means, and there is also some hefty historical baggage which is usually (but not always) left outside the door in favour of a politically careful focus on practical matters. This paper considers how the different groups represent and perform their identity and agency in the meetings of the MRWVG, aiming to occupy the moral high ground, and thus to promote their interests in relation to water allocations and decisions about the management of the river.

Watersheds within & without: negotiating environmental health & citizenship in Belize

Sophie Haines (Oxford)

This paper explores knowledge negotiations among rural residents, NGO practitioners, and scientists - and the 'brokers' who inhabit and traverse multiple roles - engaged in community watershed management in rural Belize. Tracing water practices and water quality assessments, I examine how knowledge and authority are patterned and contended in a situation where a sub-watershed is being co-managed by a community group in partnership with government. The complicated and partial relationships that emerge at and across the 'edges' of designated units of organisation (such as protected areas, or administrative jurisdictions) are productive spaces for exploring questions of environmental citizenship and political practice. As well as revealing the troubled boundaries of hydrogeological watersheds and organisational mandates, the ethnography has pushed me to also consider the 'watershed within': a way to envision material, affective and imaginative entanglements of environmental and human health, and the work that goes into producing and contesting them through sensing bodies, scientific instruments, circulating standards, and bureaucratic plans.

'There must be a scientific reason': Different water-knowledges and partially connected worlds in the Peruvian Andes

Astrid B. Stensrud (Oslo)

The management of water and watersheds in the Peruvian Andes involves a plurality of different institutions and practices, as well as the negotiation of different water-related knowledges. The Peruvian government's water policies are based on modern hydrological science and an extractivist view of water as primarily an economic resource, and export-oriented agribusiness is given priority over small-scale farming. In Colca Valley, the work of the water user associations involve not only the distribution of water as resource (measured quantitatively in litres per second), but also ritual work and offerings given to mountains and springs that are seen as living and responsive earth- and water-beings, with whom farmers maintain relationships of mutual respect and reciprocity. This paper is based on 13 months of ethnographic fieldwork in the Majes-Colca watershed in southern Peru, where farmers experience decreasing water supplies because of climate change and because of a large-scale irrigation project in the desert. I will discuss different kinds of work that make the water flow, and the negotiation of water-related knowledges and practices that often diverge, yet sometimes overlap. Focusing on engineers and bureaucrats with rural backgrounds who find themselves working as mediators between farmers' relational logic and the state's extractivist logic, I argue that different practices enact diverse and partially connected water-worlds.

4. Translations in practice

The irony of embankments: translating climate change in Bangladeshi development aid projects

Camelia Dewan (Oslo) – via skype

This paper investigates why widespread and longstanding local environmental knowledge of the negative ecological effects of 'flood-protection' embankments in Bangladesh is actively marginalised in development aid projects funded through climate change streams. The paper shows how climate change has become the main development paradigm in Bangladesh and how this skews funding towards those actors and organisations able to link their activities to climate change. It argues that such a reproduction of the climate change narrative may exacerbate environmental and social vulnerability in the long-term. The paper first shows how climate change is actively translated into a variety of different development projects. It then problematizes the translation of embankments as a form of 'climate change adaptation' and the tensions between different segments of Bangladeshi society. Lastly, it discusses why such climate reductive (See Hulme, 2011) narratives persist nevertheless and argues that different translations of climate change run this risk of misreading the coastal landscape and, ironically, increase climatic risk.

On the other side of the crystal: on water, solidarity and the hereafter in Madagascar

Sara de Wit (Oxford)

This paper explores how the Malagasy bush pump is made to work (or not) through the eyes of its users. Based on ethnographic fieldwork carried out in southeast Madagascar I explore the cultural practices surrounding the pumps and ask whether there are ways to translate the idiosyncratic notions of fihavanana (caring, sharing, giving, solidarity, reciprocity and/ or social bonds) and adidy (moral obligation to pay, everyone contributes to the obligation to share wealth, contribution fee to upkeep and maintain the pumps) meaningfully. The notion of fihavanana (which encapsulates, but is not limited to, the idea of care) is an imbricative concept that belongs both to the cultural as well as to the spiritual realm. By shining light on the manifold translations that these notions invoke by the pumps' users, it will be demonstrated that caring for water essentially means caring for each other, in the here and in the hereafter. But what does caring really mean in practice when it seeks to bridge the gap between the past and the present, the rich and the poor, the dead and the living?

SPEAKER BIOGRAPHIES

Dr Andrea Ballester is Assistant Professor of Anthropology at Rice University where she also runs the Ethnography Studio. She is interested in spaces where the law, economics and techno-science are so fused that they appear as one another. She is the author of *A Future History of Water* (Duke, 2019) and is now researching the re-invention of subterranean space and its volumetric politics in Costa Rica.

Dr Patrick Bresnihan is a Lecturer in the Geography Department Trinity College Dublin. His work explores the politics that surround questions of environmental access, governance, and transformation. He has carried out research on the Irish and European fisheries, wind energy, water infrastructures and catchments, and urban commons. He has published widely in the form of peer-reviewed journals, Government reports, edited collections, and his book, *Transforming the Fisheries: Neoliberalism, Nature, and the Commons* (University of Nebraska Press, 2016).

Dr Rachael Carrie is an interdisciplinary environmental researcher with interests that draw on the natural and social sciences to focus broadly on the relationships between aquatic systems and society. She joined the University of Leeds in 2017 as Postdoctoral Research Fellow to work on the Newton (ESRC) funded project: *Harnessing multiple benefits from resilient mangrove systems*. She gained her PhD from the Environment Centre at the University of Lancaster in 2014, before conducting postdoctoral research at the University of Worcester. Prior to working in academia, she gained broad experience of sustainability issues from work with the Environment Agency, as an environmental consultant, and with local and international NGOs.

Dr Kevin Collins is a Senior Lecturer in Systems and Environment, and a member of the Applied Systems Thinking in Practice (ASTiP) group at the Open University, UK. His research interests focus on combining systems concepts and practices and ideas of social learning to enable transformations in environmental managing, particularly water governance. Working with colleagues, he is an experienced designer and facilitator of systemic inquiries involving many different types of stakeholders in varied governance contexts and scales from catchments to national and international policy and practice. He also writes and teaches undergraduate and postgraduate modules on systems and the environment.

Dr Camelia Dewan is an environmental anthropologist focusing on the anthropology of development. She obtained her PhD in Social Anthropology and Environment from the University of London (Birkbeck & SOAS) in 2017 and lectured in Environmental Anthropology and Political Ecology as well as Development studies at Stockholm University. She is currently a Postdoctoral Fellow at the Department of Social Anthropology, University of Oslo working on the Norwegian Research Council-funded project (Dis)Assembling the Life Cycle of Containerships where she will examine the final stage of containerships through shipbreaking.

Dr Sara de Wit joined the Institute of Science Innovation and Society as a research fellow in February 2017. She is currently part of the Forecasts for Anticipatory Humanitarian Action (FATHUM) project. Trained in anthropology and African Studies Sara has a strong empirical orientation, with long-term fieldwork experience in southeast Madagascar, the Bamenda Grassfields in Cameroon and Maasailand in northern Tanzania. She has carried out “ethnographies of aid” – at the intersection of STS, development theories, environmental anthropology and postcolonial studies – in which she broadly focused on how globally circulating ideas, such as climate change and notions of development, travel, and what happens when they are translated by varying actors along the translation chain.

Dr Emma Garnett is a Research Fellow in the School of Population Health & Environmental Sciences at King’s College London. Her ethnographic work explores the socio-material practices of environmental public health research. She has researched the ways in which less visible, emergent phenomena like air pollution become apparent in science and policy and how these relate to action. More broadly, she is interested in interdisciplinary approaches to urban health and critical approaches to data practices.

Dr Sophie Haines is a postdoctoral research fellow in the Institute for Science, Innovation and Society at the University of Oxford, where she also teaches environmental anthropology. An anthropologist, also informed by science studies, she specialises in social and environmental change, and has research experience in Belize, Kenya and the UK. Her research interests include infrastructure planning; watershed interventions; and the production and use of scientific predictions and other forms of foreknowledge for environmental decision-making. Her current project *Envisioning Emergent Environments* (ESRC-funded) examines knowledge negotiations for watershed assessment/management projects in Belize, Central America.

Dr Nayanika Mathur is Associate Professor in the Anthropology of South Asia at the University of Oxford. She is currently working on multispecies ethnography, the politics of climate change, and the deployment of the Anthropocene as method.

Dr Astrid B. Stensrud holds a PhD in social anthropology from the University of Oslo and is currently a postdoctoral fellow at the Department of Social Anthropology, University of Oslo. Her research interests focus on human-environmental relations, animistic practices, water, climate change, neoliberalism and informal economy in the Peruvian Andes. She has published various articles and book chapters on water, climate change and world-making practices.

Professor Veronica Strang is an environmental anthropologist and Director of Durham University's Institute of Advanced Study. Her research focuses on human-environmental relations and, in particular, people's engagements with water. She has conducted research in Australia, the UK and New Zealand. She has held posts at the University of Oxford, the University of Wales, Goldsmiths University and the University of Auckland. In 2000 she received a Royal Anthropological Institute Urgent Anthropology Fellowship, and in 2007 she was awarded an international water prize by UNESCO. Key publications include *Uncommon Ground: cultural landscapes and environmental values* (Berg 1997); *The Meaning of Water* (Berg 2004); *Gardening the World: agency, identity and the ownership of water* (Berghahn 2009); *Ownership and Appropriation* (Berg 2010); and *Water: nature and culture* (Reaktion 2015). From 2013-2017 she was the Chair of the Association of Social Anthropologists of the UK and the Commonwealth. She is currently working on a major comparative text examining historical and contemporary ideas about water deities.

Dr Renzo Taddei is currently the Mellon Visiting professor at the Center for Latin American and Caribbean Studies at Duke University. He is Professor of Anthropology at the Federal University of São Paulo, Brazil. Dr. Taddei specializes in the anthropology of environment and climate. His current research project addresses how indigenous South American ways of manipulating the atmosphere contrast with Western geoengineering schemes. He is affiliated with the Center for Research on Environmental Decisions at Columbia University's Earth Institute. He received his Ph.D. in anthropology at Columbia University.