

# Climate Change and Human Mobility

International Conference  
University of Copenhagen  
April 12-14 2010

## Programme and abstracts

### *Monday April 12*

#### **Afternoon Session - Environmental Change and Human Migration: Conceptual and political challenges**

12:00-13:00 Lunch for keynote speakers and paper presenters

12:00-13:00 Arrival and registration of participants

13:00-13:20 Welcome and introduction by Kirsten Hastrup and Karen Fog Olwig

13:15-14:00 Keynote by James Morrissey: *Contextualising the environmental migrant: What it means for 'migration' and for policy*

14:00-14:30 Discussion

14:30-14:45 Coffee break

14:45-16:25 Paper presentations

- *Dehumanizing the Uprooted - Lessons from Iceland in the Little Ice Age.* Kirsten Hastrup, University of Copenhagen, Director, Waterworlds
- *International migration and climate change: conceptual pitfalls and empirical evidence.* Gunvor Jonsson, University of Oxford
- *Saving "climate refugees" as bare lives?* Angela Oels, University of Hamburg
- *Negotiations of a protection regime for people displaced by climate change - the case of COP15.* Cecilia Vejby Andersen, Roskilde University
- *Environmentally Induced Migration (EIM) and Sustainable Development.* Sami Areikat and Andrea Milan, UN Division for Sustainable Development

16:30-17:15 General discussion

18:00 - Dinner for keynote speakers and paper presenters

## ***Tuesday April 13***

### **Morning session - Social and Environmental Histories: Lessons of intertwinement**

8:30-9:00 Arrival, coffee and tea

9:00-9:45 Keynote by Carole Crumley: *Leaving Home: How Can Historic Human Movements Inform the Future?*

9:45-10:15 Coffee break

10:15-11:50 Paper presentations

- *Inuit and changes in climate and environment in northeast Greenland, 1400-1850 AD.* Mikkel Sørensen, SAXO-institute - Archaeology, Ethnology, Greek & Latin, History
- *Ancient forager and herder mobility patterns during Mid Holocene climatic changes; Insights from Lake Turkana Basin, Kenya.* Emmanuel Ndiema, Rutgers University
- *Environmental and economic change in the Lake Turkana Basin, Northern Kenya: the local impact on the modern landscape of Dams, National Parks and increasingly sedentary populations.* Prof. Jack Harris, Rutgers University

11:50-12:20 General discussion

12:20-13:15 Lunch break

### **Afternoon session - Societies on the Move: Responses to new waterscapes**

13:15-14:00 Keynote by Jon Barnett: *Draining the Backwaters: On The Social Consequences of Engineering Mobility to Reduce Vulnerability*

14:00-14:30 Discussion

14:30-14:45 Coffee break

14:45-15:45 Paper presentations

- *Last Day on Earth: The Politics of Climate Change, Everyday Life and Catastrophism in the Republic of Maldives.* Anthony Marcus, John Jay College of Criminal Justice City University of New York
- *Impact of Climate Change and Human Movement: A Case Study of Coastal Bangladesh.* Mehdi Azam, Albert-Ludwigs-Universität Freiburg

- *The Climate Change and Responses of Indigenous People: A Case Study of the Surels of Dolakha District of Nepal.* Hari Prasad Bhattarai, Tribhuvan University, Kathmandu

15:45-16:00 Coffee break

16:00-17:00 Paper Presentations

- *Challenges of Livelihood among some climate-refugee communities within the lake Chad bassin, and the socio-ecological impacts of their resettlement.* Iyiola O. Tella, Federal University of Technology, Yola, Nigeria
- *Mobility, Social Dynamics and Climate Change in the Arctic. The creation of new horizons of expectations and possibilities in Greenland.* Frank Sejersen, University of Copenhagen
- *NOUAKCHOTT. An anthropological investigation of the interface between adaptation to sedentary politics and reinvention of nomad strategies in the urban slum of Nouakchott, Mauritania.* Christian Vium, University of Copenhagen

17:00-17:45 General discussion

19:00 –Dinner for keynotes speakers and paper presenters

### ***Wednesday April 14***

#### **Morning session - Representations of Movements: Near or distant sites of attraction**

8:30-9:00 Arrival, coffee and tea

9:00-9:45 Keynote by Ben Orlove: *Recognitions and Responsibilities: How the World Has Come to Care about the Far North, Small Islands and High Mountains*

9:45-10:15 Discussion

10:15-10:30 Coffee break

10:30-11:50 Paper presentations

- *Climate Change, Migration, and Christianity in Oceania.* Wolfgang Kempf, University of Göttingen
- *Climate-induced migration and conflict: What are the links.* Christian Webersik, University of Adger
- *Avoiding the inevitable: adaptation versus migration in Pacific atoll provinces.* Thomas Birk, University of Copenhagen

- *Land purchase in Africa: resilience for whom?* Michael Whyte and Quentin Gausset, University of Copenhagen

11:50-12:20 General discussion

12:20-13:20 Lunch and departure

**Posters** by Javier Gonzalez-Soria, Durham University: *Adapting alleviation. More People, more pumps?*

## Abstracts

### April 12 – Afternoon session

#### **James Morrissey: Contextualising the environmental migrant: What it means for 'migration' and for policy**

This presentation will briefly outline the evolution of the debate on environmental refugees with the intention of showing how the political construction of the 'environmental refugee' has skewed research to focus on a depoliticised and ahistorical view of the relationship between environmental change and human mobility. The presentation will then attempt to provide an account of how environmental change in northern Ethiopia is interacting with historically generated socio-political conditions to generate particular migratory imperatives. In doing so the paper will argue that the relationship between environmental change and migration is better understood as a specific strategy enacted in the face of specific circumstances, than as a strategy enacted as the end point of vulnerability. In addition to this the presentation will discuss the implications for policy of acknowledging the important modifying role played by the socio-political context in determining the degree to which different migratory responses are enacted in response to environmental change.

#### *Biography*

James Morrissey completed his undergraduate studies in Ocean and Atmosphere Science at the University of Cape Town. After this he went on to work as a researcher at the Disaster Mitigation for Sustainable Livelihoods Programme (DiMP) also located in Cape Town. At DiMP James' work focussed mainly on risk reduction initiatives focussed on fires and flooding in Cape Town's informal settlements. From DiMP James moved to Mozambique where he worked with an environmental NGO, Justiça Ambiental (JA!), exploring the risks to which rural, subsistence farmers would be exposed through the construction of a large dam (Mphanda Nkuwa) proposed for the lower Zambezi River. After this James registered for, and then completed, his MPhil in Development Studies at Oxford University. From his MPhil James has gone onto undertake his DPhil, on which he is currently working. The focus of James's current research is using a political ecology lens to explore the discourse of 'environmental refugees' through a comparative study of human migration within different federal states in the highlands of northern Ethiopia. Although still registered in Oxford's Department of International Development, James is currently on an eight month long Yggdrasil mobility grant at the Norwegian University of Life Sciences (UMB), located in eastern Norway.

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#### **Kirsten Hastrup: Dehumanizing the Uprooted: Lessons from Iceland in the Little Ice Age**

The North Atlantic island communities were hit particularly hard when the Little Ice Age encroached upon them in the 16<sup>th</sup> to 18<sup>th</sup> centuries. The islanders had settled during the warm medieval period and had established well-functioning societies. In Iceland this had resulted also in the creation of a remarkable literary canon.

When the climate changed, Icelandic society became unsettled – literally and metaphorically. The original pattern of independent farmsteads, containing both owners and farmhands, broke asunder. With decreasing production, the farms could support fewer people, and an increasing number of Icelanders became pauperized vagrants in a landscape of scarce opportunities. Within Icelandic society, as established since the settlements, and as enforced through consecutive laws, vagrancy

was illegal, however. The uprooted were victims of hard times, but they were also increasingly seen as a threat to the social order. History shows how the vagrants (*flakkarar*) were gradually dehumanized, sometimes even demonized, as they struggled to find foothold in a hostile environment. The general idea of the presentation is to discuss how categorization infiltrates and possibly aggravates the plight of people who are uprooted in the wake of climate change. This also calls for a careful reconsideration of causality in history.

#### *Biography*

*Kirsten Hastrup* is leader of the Waterworlds research project at the University of Copenhagen, professor of Anthropology, University of Copenhagen. D.Phil. (Oxford), and dr.scient.soc. (Copenhagen).

Kirsten Hastrup has done substantial research on Icelandic history and society; on human rights and legal language; on theatre and social action; and on the beginnings of Danish anthropology in early polar expedition. In addition to these more specialised fields, she has published critical explorations of the philosophical and epistemological foundations of anthropology, text-books in anthropology, and general introductions to the history of the human sciences and their contributions to society. The Icelandic work spans the entire history of the island society and traces the intricate links between environmental changes - notably the warm middle ages and the later 'little ice age' - and historical and social developments. In recent years, Kirsten Hastrup's research interest has centred on the environmental and social changes in the Arctic, notably in Greenland, where she has started a series of fieldworks in a small hunting community with the aim of studying local perceptions of threats and opportunities over a five-year period.

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#### **Gunvor Jonsson: International migration and climate change: conceptual pitfalls and empirical evidence**

Claims that climate change will shape the future of global migration are continuously being made in academia as well as popular and policy circles. This paper questions the empirical basis for such claims, drawing on a critical review of 13 case studies of environmentally induced migration in the Sahel and the wider migration and development literature. It highlights some of the conceptual and methodological flaws that recur in many of these studies. First, their terminology is often confused, with concepts such as environment and climate, change and variability being conflated. Second, some do not acknowledge the extreme climate variability and unstable environments that are the norm for many Sahelian people; in this context, mobility can be a successful coping mechanism, potentially reducing environmental stress. Third, the paper criticises the use of static push-pull frameworks which suggest that migrants are being 'pushed out' of marginal and degraded environments, neglecting the intertwined environmental, political, economic and cultural factors. Fourth, the paper highlights flaws in the sampling and questionnaires used, particularly in some of the more recent studies. In conclusion, the paper calls for more open research that explores the complex inter-relationship between environmental factors and mobility rather than starting from the assumption of a simplistic causal relationship.

#### *Biography*

*Gunvor Jonsson* has a cand.scient.anth degree from the Institute of Anthropology, University of Copenhagen. Her thesis dealt with migration aspirations and involuntary immobility in a Soninke village in Mali. Since 2008, Gunvor has been working as a Research Assistant at the international Migration Institute, University of Oxford.

### **Angela Oels: Saving "climate refugees" as bare lives?**

It is estimated that 250 million people will lose their livelihood by 2050 due to climate change and will have to relocate. Non-governmental organisations and scientists have demanded refugee status for those fleeing the impacts of climate change. This paper problematises the construction of the "climate refugee", drawing on the political theories of Giorgio Agamben, Michel Foucault and Jacques Rancière. First, I take up Agamben's argument that the distinction between "genuine refugees" and non-deserving others is problematic, not least because there is no such thing as a "genuine refugee". I review the beginning scientific debate about possible "climate refugee" definitions from a Foucaultian perspective, in order to demonstrate how regimes of power/knowledge are involved in "making up" the "climate refugee" as a form-of-life worthy of protection. Second, I take up Agamben's claim that the refugee rights are of limited use to "climate refugees" as long as industrialised countries use a state of exception as a regular technology of government in their refugee policy. The case of Australia's Pacific Solution policy from 2001-2008 will be analysed from a Foucaultian perspective in search of the historical conditions of possibility that enabled and later constrained the Australian government's scope for denying refugee rights to asylum seekers arriving by boat. Third, this paper discusses Agamben's argument that a denial of juridical status translates into a reduction to helpless bare lives at the mercy of sovereign power. From a Foucaultian perspective, humanitarian discourse addresses refugees as apolitical "bare" lives whose survival needs must be met while silencing refugees as political subjects. By contrast, many of the affected populations and their governments are getting organised politically to prevent ending up as "climate refugees". The small-island state of Tuvalu is demanding appropriate compensation payments from the main greenhouse gas polluters for damages caused by climate change. I conclude that refugee status for those threatened by climate change is not an adequate response to the challenges posed by climate change.

#### *Biography*

*Angela Oels* works as postdoctoral researcher in the Excellence Cluster on Climate Change CliSAP at the University of Hamburg, Germany. She leads an empirical project on "The Securitization of Climate Change in Science and Politics? The example of climate-induced migration". She holds a PhD in Environmental Sciences from the University of East Anglia, Norwich/UK and worked as lecturer at the Institute of Political Science, University of Hamburg from 2002-2009.

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### **Sami Areikat and Andrea Milan: Environmentally Induced Migration (EIM) and Sustainable Development**

The impact of environmentally induced migration (EIM) on sustainable development and on the achievement of the Millennium Development Goals is an emerging and relatively unexplored issue. This paper analyses the nexus between environment change and migration from the angle of sustainable development at national, regional and international levels with focus on migration induced by environmental degradation and exacerbated by climate change. In the first part, the authors review the science of EIM and analyze its connections to sustainable development and the impacts on the progress in meeting the MDGs in vulnerable countries, mainly the poorest in the world that lack the means to deal with EIM. The second part addresses the relative policy implications, exploring the adaptation and other policy options and recommends policies and actions for the policymakers. The study emphasizes that countries include EIM into their National Sustainable Development Strategies and National Adaptation Action Plans. As EIM is a complex and interdisciplinary issue; sustainable development can be an effective and comprehensive way to

deal with it through slowing down environmental degradation, adaptation to climate change, food security, water availability, conservation of biodiversity, reduction of vulnerability, early warning systems and risk management.

#### *Biography*

*Sami Areikat* (PE, PEng., MSc.) is an environmental engineer and sustainable development officer with the United Nations' Sustainable Development Division. Current responsibilities include working on enhancing international cooperation in addressing emerging issues on sustainable development and support countries in meeting the challenges posed by these issues. Areas of focus include conflict-sensitive development and environmentally induced migration.

*Andrea Milan* (BIE, M App Sc) is an intern at the United Nations' Sustainable Development Division and Masters Degree Candidate in Applied Economics and Economic Policies at University of Ferrara, he has been a scholarship-awarded exchange student at University of Birmingham (UK) and Middlebury College. His areas of research include sustainable development and environmentally induced migration.

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#### **Cecilia Vejby Andersen: Negotiations of a protection regime for people displaced by climate change - the case of COP15**

Leading up to and during COP15, the issue of *climate migrants* or *climate refugees* received a lot of attention, in particular as a potential trigger of conflict and as a symbol of the catastrophic consequences if no binding agreement is reached on global emissions of greenhouse gases. The notion of protection of people who are displaced by climatic changes was in general less present at the conference even though most actors within the field find that migration induced by climate change challenges existing legal categories for human mobility, which renders their applicability and potential for granting protection questionable. The issue of a new protection regime was raised by actors such as UNHCR and IOM as well as Bangladesh, who stressed that the country is already experiencing climate induced displacements, both internally and across international borders. The proposed paper will explore the possibilities for the development of an international framework for protection of people displaced by climate change in light of recent negotiations in Copenhagen. The paper focuses on how key actors identify migration induced by climate change as an international concern and which barriers this identification in turn may pose for the protection of these populations.

#### *Biography*

*Cecilia Vejby Andersen* hands in her Masters thesis on Climate Change Induced Displacement early April 2010, ending her studies at International Development Studies at Roskilde University with 1,5 years of external studies at the Faculty of Law at Copenhagen University. She is currently situated as a Masters student at the Migration Unit at DIIS.

#### **April 13 – morning session**

#### **Carole Crumley: Leaving Home: How Can Historic Human Movements Inform the Future?**

The paper offers an overview of the history of human migration, conditions pertaining to past migrations, and the types of evidence that allow their study. The importance of scales of time and space is illustrated by 'standing still' for a thousand years at a busy crossroads in Europe, and

observing the emergence of new social forms.

How can these observations help to anticipate and formulate responses to contemporary population movements?

### *Biography*

*Carole Crumley* is professor of Anthropology at the University of North Carolina, Chapel Hill. Currently she is professor (social sciences) at the Stockholm Resilience Centre, Stockholm University, Stockholm. She holds a doctorate in anthropology from the University of Wisconsin Madison USA), an M.A. in archaeology from the University of Calgary Alberta, Canada), and a B.A. in anthropology from the University of Michigan (Ann Arbor USA). She has specialized training in environmental science (geology, ecology, climatology), and in classical studies. One of her main interests lies in "regime changes" in the historical record. Within her discipline, she is a pioneer in the practice of historical ecology and landscape archaeology; her theoretical contributions include the introduction of the concept of "heterarchy" and the advancement of complex systems research in the social sciences. She is active in IGBP, having served on the PAGES SSC (2000-2006), and is currently a member of the SSCs of AIMES and IHOPE.

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### **Mikkel Sørensen: Inuit and changes in climate and environment in northeast Greenland, 1400-1850 AD**

This paper will explore and discuss Inuit responses to climatic and environmental changes in Northeast Greenland from, they arrived in the area (15 century AD), till their disappearance (1850 AD). Results from the interdisciplinary GeoArk project (2003-2008) accounts a surprising lack of Inuit response to the cooling of the Little Ice Age within the researched area around Clavering Island. When the entire northeast Greenland is considered only one major response can be found: i.e. migration. However this response is not restricted to the management of climate change, but is a basal part of traditional Inuit life. The climatic and the archaeological data analysed in relation to the Inuit society's destiny is rewarding, but do not produce any simple explanations. The study infer, that Inuit, and probably humans in general, react to social problems that (might) relate to changes in environment and climate. It is further argued that even though political and economical processes today are changing the Greenlandic society drastically, migration is, and will be, a most important part of Inuit resilience.

### *Biography*

Mikkel Sørensen is post.doc., Saxo Institute, Faculty of the Humanities, University of Copenhagen. Mikkel Sørensen is doing research within the field of "Climate and Culture": Climate change in the Greenlandic Thule culture 1200-1900

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### **Ndiema, K. E.' Harris, J. W. K., Dibble L., and Kiura P: Ancient forager and herder mobility patterns during Mid Holocene climatic changes; Insights from Lake Turkana Basin, Kenya**

This paper aims to illuminate archaeological relationships forager/header mobility patterns and climate change, specifically raw materials sourcing and subsistence systems. In Eastern Africa trajectories of food production, change in subsistence and resource intensification differ from global patterns; people used aquatic fauna and developed or adopted the use of ceramics before managed food production. Later, at about 6-4 kbp, pastoral economies spread south from the Sahara through

the region. Both instances of subsistence change and resource intensification entailed major changes in settlement and mobility patterns. The earliest dates for domesticates in east Africa cluster around 4,000 BP, in sites from the Galana Boi formation in the LTB. These sites document the earliest evidence of herding in east Africa, and offer a rare opportunity to study the dynamics of early pastoralists' and foragers mobility and subsistence lifestyles during periods of increased climatic variability. Methods include field surveys, excavation, faunal analysis, obsidian sourcing and characterization using X-ray Florescence, Inductively Coupled Mass Spectrometry, and technological and typological analysis of obsidian artifacts. Findings demonstrate diversity and mobility patterns among Holocene foraging/ herder adaptations from what is seen today. The transition to food production in LTB and East Africa in general was complex, fluctuating and may have operated independently of one another. Abundance of aquatic and terrestrial fauna and non-local obsidian at archaeological sites indicate instances of high mobility patterns and exploitation of diverse food resource during times of nutritional stress. These data is important in informing our understanding on human capacities for responding to environmental challenges.

### *Biography*

*Emmanuel Ndiema* is a Ph D student at the Department of Anthropology, Rutgers University of New Jersey. His research involves the initial phases of domestication and the dynamics of culture and subsistence strategies during the Mid-Holocene in the Lake Turkana Basin in Northern Kenya. More specifically, this involves modeling raw material resources (mainly obsidian) using ecologically sensitive variables (hydrology, soils, geological substrate) employing geomatic techniques to understand the impact of climate change on human mobility and substance systems. He is also Research Scientist at the National Museums of Kenya Department of Earth Sciences; Field Director at Koobi Fora Field School of Paleoanthropology (Rutgers University and National Museums of Kenya), responsible for leading lectures and directing filed excursions in the Holocene Galana Boi Formation, and a lecturer at the Department of Africana Studies, and Centre for African Languages, Rutgers University, USA

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### **John W.K. Harris Purity Kiura Emmanuel Ndiema: Environmental and economic change in the Lake Turkana Basin, Northern Kenya: the local impact on the modern landscape of Dams, National Parks and increasingly sedentary populations.**

The arid landscape of the Lake Turkana Basin in Northern Turkana is home to over 300,000 people. These marginal lands have supported pastoralist populations for over 5,000 years. The waters of Lake Turkana are alkaline and input from the Omo River is the largest water source for this closed basin system. This paper presents an overview of the climate changes through this period and discusses the impact of dams on the Omo River, the establishment of Kenyan National Parks, UNESCO World Heritage Site status and changes in the mobility of the local populations. Conflicts over water and dwindling pastoral resources make the already daunting task of existing in a remote and marginalized region increasingly difficult. Yet the irony is that these areas have had steady population increases which further threaten the overall health of the peoples and traditional subsistence economies. Members of this research team have the unique perspective of working in this region for the last 30 years and have personal observations of these changes. In addition, these changes are documented through the use of rainfall rates, satellite images, measures of lake-level, vegetation studies and human and life stock census figures.

### *Biography*

*Jack Harris* is a Professor in the Department of Anthropology. He has dedicated more than 40 years to exploring, discovering and studying some of the world's most significant hominid fossil sites to gain understanding of human evolutionary history and the role of technology in our ancient past. Dr. Harris has an extensive record of publications including recent articles in *Science* and *Nature*.

## **April 13 – afternoon session**

### **Jon Barnett: Draining the Backwaters: On The Social Consequences of Engineering Mobility to Reduce Vulnerability**

This paper explains the likely consequences of proposals to resettle large numbers of people away from the Pacific Islands on the people left behind. It does this by describing the effects of large scale migration away from the small island state of Niue, which is a very good analogue from which lessons for other islands can be drawn. The paper begins by examining the discourse on large scale migration as a solution to save the people of the Pacific Islands from the impacts of climate change. The discourse of draining the people from these remote island backwaters of the world persists even though understanding of vulnerability and adaptation to climate change in the Pacific islands remains extremely limited. In this discourse there is little concern for the needs and rights of migrants, and no consideration whatsoever of the consequences of such movements for those people who cannot or do not wish to move. It is this latter issue that this paper examines. There has been large-scale migration from Niue since 1971, to the extent that 80% of the people born in Niue now live in New Zealand. The paper describes six principal effects of this depopulation on those who remain on the island, namely that it leads to: distortions in markets; obsolescent political and administrative institutions; a hyper-concentration of social capital; increased demands on labour; difficulties in defining and maintaining that which is 'traditional'; and an erosion of Niuean identity. Based on this examination, the paper identifies some key intellectual and policy challenges associated with the idea that depopulation of the Pacific Islands is an adaptation strategy. Given these challenges, and the risks of planning large scale international migration, it argues that migration is unlikely to be an adaptation strategy in as much as it will itself most probably constitute an impact of climate change rather than help to avoid one. Mitigation and adaptation must therefore be the preferred strategies, although there may be scope for carefully managed labour migration as part of a suite of adaptation strategies.

### *Biography*

*Jon Barnett* is a Reader and Australian Research Council Fellow in the Department of Resource Management and Geography at The University of Melbourne. Jon is a human geographer whose research investigates the impacts of and responses to environmental change on social systems. This includes research on climate change, environmental security, migration, water, and food. He has been conducting research on the social and institutional dimensions of vulnerability and adaptation to climate change since 2000. This has included field based research in the South Pacific, China, and Timor-Leste.

## **Anthony Marcus : Last Day on Earth: The Politics of Climate Change, Everyday Life and Catastrophism in the Republic of Maldives**

Inscribed in the idea of everyday-life is the belief that despite constantly changing interactions between people, places, and things each day is like the last. This belief undergirds planning and is the means and ends of state power. But what happens when that belief is ruptured? An old parlor game asks the question posed in global disaster films: “what would you do if you knew this were your last day on Earth”? Global climate change predictions and rising sea levels have forced this question on the politics of the Maldives, an atoll-based nation, one of the most vulnerable on earth.

While most predictions allow another century of habitability, the very existence of such estimates and the widespread expectation of mass resettlement impede planning and challenge the timelessness of nation, state, and culture in the Maldives. This paper, based on seven months of research in the Maldives in 2007 examines the political culture, rumor economy, and social experiences that Maldivians use to constitute and reconstitute “everyday lives” in face of the displacement and dislocation anticipated by climate change predictions.

### *Biography*

*Anthony Marcus* is a Cultural Anthropologist who specializes in International Development, civil society, public policy, and the political economy of urban environments. His most recent research focused on post-tsunami reconstruction in the Maldives and tertiary education and post-socialist transition in Kazakhstan.

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## **Mehdi Azam: Impact of Climate Change and Human Movement : A Case Study of Coastal Bangladesh**

Geographical location, poverty and higher dependence on climate sensitive sectors like agriculture make Bangladesh one of the top vulnerable countries to climate change. Climate change induced vulnerabilities viz., cyclone with tidal surge, subsequent flooding, higher risk of sea level rise, salinity ingressions, river erosion, extreme temperature and precipitation, are destroying people's work and living place almost every year, which forced them to migrate permanently or temporarily to less risky areas. The study has been carried out in the five sub-districts of south-western coastal region in 2008 and 2009. The study aims to identify the present vulnerable situation, factors responsible for their movement and migration scenario of Bangladesh. Intensive community consultation, personal interview, locally available information from government offices and recent relevant literature are the basis of this paper. In 2008, the result reveals about 20% people leave the area temporarily twice a year for works, whereas permanent migration was only 2%. The situation became worse in 2009 where temporary and permanent migration was 30% and 5%, respectively. It is also common to shift households within the union (area of several neighboring villages) once or twice due to river erosion/ tidal surge induced waterlogging. The study identified that stressed environmental condition and lack of available job leading to food insecurity force people move to another place. The situation becomes severe from mid September to end of November because rice storage is near to end and less available agricultural and other works. The repeated unexpected behaviour of nature in the form of cyclone and extensive tidal surge, Sidr in 2007 and Aila in 2009 forcing people more intensively switch to safer place. The slums of Dhaka are the most preferable place for migrant people because of low cost of living and job opportunities in the capital, then nearby urban areas also hosting those migrants. Initiatives have been taken through livelihood diversification and community based adaptation programme by civil society organization but the support was not adequate to cover the huge population. The study suggests a national policy action

and international initiatives to address the displaced and vulnerable people of the coastal region of Bangladesh.

#### *Biography*

*Mehdi Azam* is educated in Khulna University, Bangladesh and presently studying in Albert-Ludwigs-Universität Freiburg, Germany. He specialized in climate change and its impacts on environment, livelihood and food security and people's displacement in coastal areas of Bangladesh. He has published research articles in national/international journals and presented papers in national and international conferences and workshops in his specialized areas. Mr. Azam is working as a Research Officer (on study leave) in Alternative Livelihood Program in the Context of Climate Change (ALPCC) Project of Prodipan in Bangladesh.

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#### **Hari Prasad Bhattarai: The Climate Change and Responses of Indigenous People: A Case Study of the Surels of Dolakha District of Nepal**

Nepal is highly vulnerable to climate change impacts. Temperatures are likely to increase; monsoon precipitation patterns are also likely to shift in ways that will threaten Nepal's current agricultural practices, infrastructure and bio-diversity. These changes are strongly affecting people in many communities – in some cases, threatening their cultural survival. This paper examines the way the Surels- an indigenous people from eastern hill of Nepal- perceive climate change and their adaptation strategies to climate change. Through ways of life closely linked to their surroundings, these peoples have developed uniquely insightful ways of observing, interpreting, and responding to the impacts of climate changes. Their observations and responses to climate change are therefore of special value in understanding environmental changes but they have not been looked at in detail. This paper aims to fill this gap arguing that these people observe climate and environmental changes first-hand and use traditional knowledge and survival skills to adapt to these changes as they occur. They have devised, though it is not well documented, useful coping mechanisms— modifying cropping pattern and crop types, harvesting rain water and seasonal migration to India that have enabled the community to achieve stable livelihoods in their environment. The paper is based on ethnographic field study and review of literatures.

#### *Biography:*

*Hari Bhattarai* is an associate professor of anthropology at the Department of Sociology/ Anthropology, Patan Multiple Campus, Tribhuvan University, Kathmandu, Nepal. His main research has been with indigenous communities of Nepal. He has published several papers on various issues (changing survival strategies, politics of identity, poverty, citizenship, national integration, cultural diversity and pluralism, cultural injustice and unfair inclusion) of indigenous communities.

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#### **Tella M. O., K. O. Adenegan, P. F. Adeogun, and I. O. Tella: Challenges of Livelihood among some climate-refugee communities within the lake Chad bassin, and the socio-ecological impacts of their resettlement**

The shrinkage of Lake Chad from 25,000km<sup>2</sup> to 1,500km<sup>2</sup> between 1963 and 2007 has been linked to global climatic changes. The Lake is bordered by Nigeria, Chad, Niger, and Cameroon, while the Central African Republic, Algeria, Sudan and Libya share the lake's hydrological basin. It is estimated that its fortunes or misfortunes could affect the livelihoods of about 30 million people who depend on its resources. An unprecedented array of crises ranging from food security to

sociopolitical conflicts to disease epidemics have commenced and are expected to escalate if urgent measures are not taken. At present, many communities have migrated and could now best be described as climate refugees at various new locations. In this paper, we sought to catalogue and understand the multifaceted anthropological and socioeconomic challenges faced by some of such communities on the Nigerian side of the Lake Chad basin. We also highlighted the coping strategies adopted by the communities since their displacement; occasioned by the climate change-induced depletion of their water resources. The study tested the hypotheses that livelihoods of the communities have changed significantly since their resettlement, and that they have in turn, significantly impacted both the ecosystem and the dendrology of their new habitats.

#### *Biography*

TELLA, Iyiola Oladunjoye is PhD, MNIM, Associate Professor of Ecosystems Management, Federal University of Technology, Yola, Nigeria

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#### **Frank Sejersen: Mobility, Social Dynamics and Climate Change in the Arctic. The creation of new horizons of expectations and possibilities in Greenland.**

The Arctic societies experience the impacts of climate change at great speed as global warming is amplified in the Circumpolar North. In Alaska, the concept of *climagration* is applied to those communities which are to be totally relocated. Greenland is also experiencing the impacts of climate change as the ice-dependent ecosystem is affected by the melting sea ice. For some occupations and communities this means a shrinking landscape and a potential decline in mobility and resource access (e.g. in relation to hunting and fishing). The contemporary horizon of possibilities and expectations is challenged and new patterns of mobility are appearing. But the question is if climate change is the primary driver. Seen in a historical perspective, human mobility in Greenland has shifted between centripetal and centrifugal orientations dependent upon the political system and ideas about the good life. Mobility is in all its different forms indeed an integrated part of the historical and contemporary dynamics of society. Today, mobility is oriented towards the cities and processes of urbanisation are increasingly appropriating the landscape. These processes are underpinned by government policies and ideas about a new self-ruled, hyper-industrialised society. The present mobility – or rather hyper-mobility – challenges the idea of community resilience and the dominant representations of Greenlandic culture not only for outsiders but for Greenlanders as well.

#### *Biography*

*Frank Sejersen* has a MA in anthropology and a Ph.D. from the Faculty of Humanities. He is employed as associate professor at Department of Cross-Cultural and Regional Studies, University of Copenhagen. Since the end of the 1980s, he has been working with the human dimension of resource management, indigenous peoples' politics, economics, urbanisation, climate change and issues of self-determination in the Arctic.

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#### **Christian Vium: NOUAKCHOTT: An anthropological investigation of the interface between adaptation to sedentary politics and reinvention of nomad strategies in the urban slum of Nouakchott, Mauritania**

In 2010, The Islamic Republic of Mauritania in West Africa celebrates 50 years of independence. It has been 50 years of immense socio-cultural, economic and political changes vastly transfiguring the composition of Mauritanian society at large. Since 1957, the capital city of Nouakchott has

exploded from a mere 500 inhabitants to nearly one million (one third of the total population), of which some 70 percent are estimated to live in the precarious urban slum, the *kébbé* and *ghazras*. The majority of these urban poor are former nomads who have settled in the wake of severe and prolonged droughts in the rural areas throughout the 1970s and 1980s in particular. In this paper I wish to present material from my ongoing fieldwork among sedentarised nomads in *kébbé* El Mina and *ghazra* Toujounine. Based on qualitative empirical data, I will analyse the progressive interpenetration of nomad and sedentary ideologies and modes of social organisation by examining how inhabitants in these areas continually struggle to integrate into the urban environment. Central to my analysis is an investigation of urban mobility and how access to drinking water is negotiated and assured in the dynamic interface between adaptation to sedentary politics and reinvention of (contemporary) nomad strategies.

#### *Biography*

*Christian Vium* (PhD.) is currently conducting multi-sited fieldwork in the Islamic Republic of Mauritania in West Africa where he has been working continually since 2001. The subject is contemporary nomadism in a historical perspective, with particular focus on how nomads in rural, droughtprone areas and sedentarised nomads in urban slum, navigate their respective environments in the face of profound climatic, political, economical and social transformations.

### **April 14 – morning session**

#### **Ben Orlove, Heather Lazrus and Grete Hovelsrud: Recognitions and Responsibilities: How the World Has Come to Care about the Far North, Small Islands and High Mountains**

As the world has come to recognize the serious nature of climate change, three areas have received particular attention: the Arctic, low-lying islands, and mountain glaciers. The IPCC Working Group I on Science has noted that these are among the areas with the lowest uncertainty about the existence of ongoing impacts of anthropogenic climate change. Media discussions of climate change cover these areas regularly, and they are represented in public debates and international forums. These areas provide powerful visual images and persuasive narratives of the impacts of climate change. However, there are significant differences among these three areas in global climate discourses and institutions. This paper discusses these differences and seeks to explain them through a consideration of the physical and cultural attributes and specific histories of the three areas, the earlier discourses and institutions that represented them, and the efforts of residents of these areas to gain a place on the global stage and to make claims for support. It shows that issues of mobility are central--though in different ways--in all three cases.

#### *Biography*

*Ben Orlove* is an Anthropologist, and Professor at the Department of Environmental Science and Policy, UC Davis (University of California, Davis), and an adjunct senior research scientist at the International Research Institute for Climate and Society at Columbia University. He will present a paper on the movements and representations of movements in three sites (the Arctic, low-lying islands and communities near glaciers), presenting material from his current research on glaciers in the Italian Alps, the Peruvian Andes and the western US.

*Heather Lazrus* is co-author on the paper. She is an Anthropologist, PhD and Postdoctoral Research Associate. She is the Deputy Director at Social Science Woven into Meteorology (SSWIM), National Weather Center, University of Oklahoma.

*Grete Hovelsrud* is also co-author. She is Research Director at CICERO in Norway. She has extensive experience in the Arctic, with close knowledge of indigenous communities, NGOs and international organizations.

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### **Wolfgang Kempf: Climate Change, Migration and Christianity in Oceania**

In this paper I will argue that religious affiliation and institutions influence the migratory processes and diasporic configurations brought forth by climatic change. By means of three case studies, I will analyze the relationships between environmental change, migration, diaspora and Christianity in Oceania. First, I deal with the resettled Banabans, who have sought to integrate Christian religion into their politics of identity to ensure survival as a diaspora community in Fiji. Second, I look at the atoll state of Kiribati, whose government has enlisted the mediation of the Christian churches in an effort to set up measures of adaptation (including international migration) to the effects of climate change. Third, I consider the Carteret Islanders in Papua New Guinea; in the global media discourse presented as “climate refugees”, their resettlement has actually been postponed but then partially implemented by Christian networks. Such interventions involve efforts by Christian actors to position themselves as mediators in a terrain of potential conflict marked by environmental change and forced migration. This political practice resonates with official statements documenting how Christian institutions in the Pacific appropriate the discourse on environment, climate change, migration and diaspora in order to adapt their biopolitics to evolving circumstances.

#### *Biography*

*Wolfgang Kempf* (Ph.D., University of Tübingen) conducted fieldwork among the Ngaing in Papua New Guinea, and among diaspora Banabans in Fiji and Kiribati. Currently he is teaching and researching at the University of Göttingen. His most recent publication “A Sea of Environmental Refugees? Oceania in an Age of Climate Change” (2009) can be found at: <http://www.uni-goettingen.de/de/29562.html>

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### **Christian Webersik: Climate-induced migration and conflict: What are the links?**

History tells us that humans are perfectly capable of adapting to a changing environment. The past ice ages are proof of the great adaptive capacity of our kind. Climate change will happen—and if unabated—with catastrophic consequences. More extreme weather events, sea-level rise, and a hotter and drier climate are some of the predicted outcomes seriously affecting people’s choice of where to live on a much more crowded planet. In the past, people moved to less populated regions when faced by environmental change but today, population densities have increased dramatically and arable land has become more limited. Large cross-border streams of “climate migrants” or “environmental refugees” caused by tropical cyclones, associated flooding and landslides, droughts, and sea-level rise could trigger resource competition with violent outcomes in the receiving country or region. But can these claims be substantiated? This paper examines different types of natural hazards relevant for environmentally induced migration, and argues that without an analysis of identifying those who are most vulnerable to natural hazards, where they live, and how they are affected, it is difficult to assess the conflict-potential of climate-induced migration.

#### *Biography*

*Christian Webersik* is currently working at the Centre for Development Studies at the University of Agder as Associate Professor. His general research interests are the role of natural resources in armed conflict, climate change and security, natural hazards and development, and post-conflict

economic recovery. Before joining UiA, he was a Japan Society for the Promotion of Science – United Nations University (JSPS-UNU) Postdoctoral Fellow at United Nations University’s Institute of Advanced Studies (UNU-IAS). Webersik briefly worked as report writer for UNDP’s Bureau of Crisis Prevention and Recovery. Before that, he worked at the Earth Institute at Columbia University where he was hosted by the Center for International Earth Science Information Network (CIESIN). Following his doctorate, he was Assistant Professor of political science at Asmara University, Eritrea. He is holding a D.Phil. from Oxford University in political science where he studied the political economy of war and the role of natural resources in conflict in Somalia. In the past, Webersik worked in a number of conflict situations with UNDP, the UNHCR and UN OCHA. He worked for the UN Climate Change Secretariat in Bonn (UNFCCC). He continues to be interested in understanding in how humans interact with their environment, to what extent environmental factors play a role in armed conflict, and the impact of natural hazards, such as climate change, on people’s well-being and livelihoods.

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**Thomas Birk, Kjeld Rasmussen and Jytte Agergaard: Avoiding the inevitable: adaptation versus migration in Pacific atoll provinces**

Climate change scenarios generally agree that low-lying atoll islands, due to continued sea level rise, will be subject to considerable environmental changes (enhanced erosion, salt water intrusion and impacts from climate-related hazards), inevitably leading to their inhabitability. As a result, the option of abandoning the islands either through increased migration, partial relocation and/or total evacuation has been widely discussed as an active adaptation measure. However, moving people into new cultural, environmental and political settings remains a highly controversial issue and a relatively costly exercise, potentially creating new vulnerabilities. Based on research in the Solomon Islands, we explore how Pacific Island communities both historically and recently have engaged in human mobilities beyond the islands and in what ways these practices form active and deliberate adaptation strategies. The paper suggests that planned relocation or evacuation of island communities should be seen as an extreme response to climate change, and therefore perceived as more a failure in adaptation, than a successful accommodation. It is argued that while the collapse of Pacific atoll societies might be inevitable in the long run, local vulnerability to climate change may be reduced in the short- to mid-term by implementing a variety of low-cost adaptation and development practices.

*Biography*

*Thomas L. Birk* is a PhD student at the Department of Geography and Geology, University of Copenhagen. He will present a paper on human mobility and climate change adaptation in Pacific atoll provinces, based on his present field work in the Solomon Islands.

*Kjeld Rasmussen* is a human geographer and geophysicist, associate professor at the Department of Geography and Geology, University of Copenhagen. He is doing research on tropical agricultural systems, environmental change, climate change vulnerability and adaptation in West Africa, Vietnam and the Solomon Islands.

*Jytte Agergaard* is a human geographer and associate professor at the Department of Geography and Geology, University of Copenhagen. She is doing research on livelihoods and human mobility in South and Southeast Asia Southern Africa and the Solomon Islands.

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### **Michael Whyte and Quentin Gausset: Land purchase in Africa: resilience for whom?**

The search for new or better land has long been a driver of migration in Africa. For the most part, this movement of peoples has been peaceful, and strangers have been accepted, even integrated, into host societies. But a new form of scramble for land in Africa seems to be emerging and with it the risk of significant land alienation. Land in the Third World is being bought or leased on long term contracts to states and private companies from the Middle-East and Asia, either as part of a strategy to increase food security in these countries or as an attempt to secure carbon credits through extensive forest management. This paper examines and assesses available sources for commercial land acquisition in Africa, focusing on actual or projected contracts, probable consequences for local farmers and, more broadly, for African polities. The land-grab is sometimes presented as a win-win situation, suggesting the arguments made over a century ago for African colonialism. This new trend, by its scale, by the loss of sovereignty over large tracts of prime land and by the threat of imported labour to farm this land, recalls forced migrations under colonialism and apartheid. However, today the process is happening in a far more globalized world and a neoliberal, neo-Malthusian context of scarcity. This suggests significant differences for local populations. Old global inequalities are reinforced, as Africa becomes once more a sink in which industrial nations can dump their pollution (including now CO<sub>2</sub>). Food crops, exported to land owners on other continents, remove both food and water from regions where both are in increasingly short supply. Finally, this trend today seems to be triggered by the risk – to developed and/or powerful economies - of global climatic change. The consequences and conflicts that have begun to ensue (ranging from large scale resettlements to slave-like working conditions or social unrest and coup d'état – such as in Madagascar) show us that the global strategies for coping with climate change have the capacity to reduce the resilience of local and regional farming systems and to trigger a new era of rural-rural and rural-urban migration.

#### *Biography*

*Michael Whyte* is associate professor at the department of Anthropology, University of Copenhagen. Primary research areas: From 1969-71 I carried out fieldwork dealing with kinship and the funeral cycle among the Banyole of southeastern Uganda. Fieldwork in 1978-9 in Western Kenya allowed me to contrast 'peasant' Uganda and 'migrant' Kenya. My research and teaching from that time on has been directed towards issues of change, development, and empowerment - and the many links between local practice and global experience. I have combined research and applied work in a variety of fields: agricultural development; local literacy; food security and the culture of food; the anthropology of the environment; HIV/AIDS. I am interested in interdisciplinary cooperation and have worked with the Network for Smallholder Poultry Development at the Royal Danish Agricultural University for many years.

*Quentin Gausset* is associate professor at the Department of Anthropology, University of Copenhagen. Primary research areas: My research has dealt with different themes and regions, from classical ethnography with focus on religion and ethnicity in Cameroon, to AIDS prevention in Zambia, and to socio-cultural aspects of natural resource management in Malaysia (management of Niah national park), Cameroon (agro-pastoral conflicts), Botswana, Swaziland, and South-Africa (sustainable use of natural resources). More recently, I have been doing interdisciplinary research on agroforestry in Burkina Faso and in Tanzania. I am planning to do research on poultry and rural development in Benin and Niger.

## Posters

### **Javier Gonzalez-Soria, Durham University: Adapting alleviation. More People, more pumps?**

The disappearance of islands in the Indo-Gangetic Delta is linked to migration to Sagar Island. Beyond human control of the environment, people adapt to environmental conditions which are largely dictated by climate patterns. Beyond, natural disasters, extreme or new environmental conditions, such as droughts causing water scarcity, require further adaptation by communities, if any possible. Development projects then step in to alleviate the adaptation to these new or extreme environmental conditions. Sagar Island suffers water scarcity, soil erosion and flooding by brackish water. Water pumps for improved sanitation and water scarcity alleviation is a common focus in development projects. In addition to wells, population in the island has traditionally resourced to ponds, and still do, for their sanitation and water needs; which can however be considered as unimproved sanitation and water source. A changing climate can induce positive feedback mechanisms to environmental processes, such as soil erosion. Development by alleviating adaptation to these environmental processes might fall prey to those same environmental processes; for instance, exposed pump rods and damage of water pumps and platforms by acute soil erosion is a common feature in Sagar Island. Increased population add water demand and causes water pumps [wells] overuse and disrepair. This greatly limits their alleviating effect and communities might then turn back to perhaps less favourable adaptation channels originally available and in use. Under this scenario projects to alleviate adaptation might need to adapt its alleviation mechanisms incorporating, initially, less favourable solutions. Although, ponds can be considered an unimproved water source and sanitation, the way forward might come from adapting alleviation formally incorporating ponds to adaptation mechanisms.

### *Biography*

*Javier Gonzales-Soria*, is BSc, MSc in Environmental Sciences, UAM-Spain, exchange student Tufts University, USA, have worked as Environmental Consultant and Volunteered for several organisations, i.e.: United Nation Secretariat, Food and Agriculture Organisation of the UN and several NGOs, on projects about land and water resources management. Currently on concession in PhD studies (2nd Year) at Durham University, UK, have been granted scholarship for another PhD Research in Thailand at the National Institute of Development Administration (NIDA).