Centre for South Asian Studies, University of Edinburgh
South Asian Anthropocenes & Singhvi Lecture

Abstracts

30th May 2023

Peeping down, looking forward: exploring knowledge(s) of groundwater governance in India

Dhaval Joshi, University of Edinburgh

India is the largest user of groundwater in the world. To address challenges around the dependency and emerging crisis of managing and governing this invisible 'resource', series of responses in the form of policies and programmes are being designed and implemented across different parts of the country. However, very little is understood about the knowledge that shapes these governance responses. My research intends to explore two questions- 'how groundwater comes to be known' and 'what does this knowledge entail for its governance.' This research interest has emerged through my background of working as a practitioner on groundwater issues in India. I am inspired by recent work in Science on Technology Studies (STS) on the 'representations of the subterranean' as well as work on 'hydrosociality' from the field of Political Ecology. To undertake this empirical work, I conducted fieldwork in Western Indian state of Maharashtra, India. Using an ethnographic approach, I engaged with scientists in groundwater agencies, groundwater experts, practitioners working with NGOs, officials in different government department and farmers and community members from an 'overexploited' watershed of Osmanabad district to explore the questions posed by this research. I used participant observation, semi and un-structured interviews, oral histories, field walks with farmers, and textual analysis of relevant documents.

Visioning future flood risk with communities and government in Nepal

Hugh Sinclair, University of Edinburgh

Determining flood risk for future communities involves the generation of numerical models that enable the impacts of climate and land-use change to be predicted. But these models are complex and involve large uncertainties that are hard to calculate, but even harder to communicate. Through a large UKRI funded project, we have been working with a range of stakeholders to consider the utility of flood modelling for rural and urban communities in Nepal. These models are used to underpin international investment in major engineering projects aswell as guide future plans for urban expansion. But the engagement with, and the impact on communities is mixed. So what is the role for physical scientists in this process? Using examples in the Kathmandu valley, I hope to show how we are trying to use flood models as a catalyst for discussion between a wide range of stakeholders.

Losing Power, Searching for Trust: Conservationists' struggles for the environment during the rise of Nepal's political federalisation

Omar Saif, University of Edinburgh

I explore the case of federalisation in Nepal, a political process that has resulted in a significant shift of power to local governments, including control over natural resources. In contrast to previous decentralised institutions, local governments now have policy-making influence and development rights over their jurisdictions which is now challenging environmental conservation management authority across the country. I explore how conservationists are adapting to the new system by drawing on practitioners' opinions from across the sector to gain a broad view of the perceived opportunities and challenges for conservation within this new environmental politics. To gain site-specific understanding, I take an ethnographic approach based on research within two Himalayan conservation areas, where I was embedded in the mountain field offices of a large semi-governmental organisation and undertook interviews with conservation, local government staff and villagers. Testimonies and observations suggest that conservationists are being side-lined as the rise of local governments promotes new development visions and precipitates community opposition against conservation. This we argue leads conservationists on new campaigns to search for and build trust amidst their weakening hold on authority. For example, this is expressed through their drive towards environmental capacity building of local government staff. However, a rejection of these engagement efforts by local governments is occurring and nested under a historical backdrop of decentralised institutions' previous alienation from participation in natural resource management. Overall, this analysis on renewed tenisons between environment and development, hopes to ferment dialogue and reflect on the myriad complexitites that often come with hopeful movements towards political decentralisation.

From the ecologist's perspective, we can offer guidelines that would generate a more sustainable anthropogenic agricultural landscape, including : (i) increased crop diversity at the plant scale (intercropping of plants allows niche-partitioning, facilitating higher/more stable yields with potentially lower fertiliser use); (ii) increased soil organic carbon (potentially through the use of biochar) to improve water and nutrient retention and store carbon; (iii) recognition that we're competing with herbivores and support their killing by natural enemies; (iv) retention of limited large livestock (cows can support high insect biodiversity, but offer lower energetic yields compared to most crops).

However, this ecological approach is at odds with the major agricultural practices in India today, and (limited) evidence suggests that many farmers' ecological knowledge is insufficient to deliver these. In addition, ecological guidelines take little consideration of the social context: ecologists need to effectively engage with political scientists, social scientists, anthropologists and others. Even though these disciplines speak different languages, it is essential that they overcome this to ensure the delivery of healthy, sustainable food production

Jalthal Forest, Jhapa: a case study for pro-biodiversity forest management
Mark Watsonm Royal Botanic Garden Edinburgh

Jalthal tropical forest is a 6,000 ha island of unique biodiversity surrounded by a sea of farmland in the Tarai district of Jhapa. The plants of Jalthal are remarkable, as botanical influences from SE Asia extend across India into this far southeastern corner of Nepal: at least 10 tree species are known from Nepal only from this ancient forest. This extraordinary, biodiversity-rich area is home for several threatened species of plants and animals, including the iconic Asiatic elephant and pangolin. Jalthal is also important to the livelihoods and culture for over 80,000 people. However, in spite of its high ecological and socio-economic significance, Jalthal forest has been subjected to multiple pressures including invasive species, and many areas are severely degraded. Jalthal forest is managed by 22 Community Forest User Groups, but their ability to safeguard biodiversity is hampered by national forestry practices which focus on a few high-value timber species, to the detriment of maintaining biodiverse habitats. A Darwin Initiative project led by Nepali NGO ForestAction, in collaboration with Royal Botanic Garden Edinburgh and local stakeholders, has resulted in a deeper understanding of the biodiversity in Jalthal and the co-development new approaches to the control of invasive plants and habitat restoration. This has brought about positive changes in the knowledge and practice of forest management which are influencing the development of pro-biodiversity forest management and environmental policy in Province 1.

Golden Box of Trust in Allah": Religious Metaphors in Response to Environmental Crises
Ophira Gamliel, University of Glasgow

The presentation will discuss two cases of religious metaphors invoked in response to disasters, focusing on Kerala in South India. The first case study is drawn from an Arabic Malayalam flood ballad, Veḷḷappokkam (Unni, 2015), narrating the flood disaster of 1924. The metaphor relates to the courage of Muslim boatmen determined to sail through the gushing flood waters to bring rice to the starving population: "They deposited issues such as worry, anxiety, and distress in the golden box of trust in Allah, and locked it with the key of prayer." The other case is from contemporary Kerala, where disasters and crises invite responses widely circulated on social media. Thus, in response to COVID-19, the government released a social media campaign with a video featuring a traditional temple dance performance depicting COVID-19 as a demon and advising on how to "break the chain" of infections. At the same time, elsewhere in India, the metaphor of COVID-19 as a demon was used in local festivals (Yadav 2022), exacerbating the spread of the virus. The presentation will examine how the public discourse in Kerala relies on art and performance to respond to disasters while utilising religious knowledge for cultivating community resilience. The analysis draws upon studies of performance and ritual as systems of communication (Rappaport 1999; Carlin and Park-Fuller 2012), on the one hand, and on approaches to communicating desirable disaster response on the other hand (Schipper 2010; Nightingale et al. 2020).

The Art of Planetary Maintenance: South Asian Religions and Sustainability
Fawad Khaleel, Napier University and Alija Avdukic, University of Dundee

In this session, we will explore the mindset and practices on human, social and environmental sustainability that are created by and embedded in the South Asian religions and socio-cultural systems. South Asia as a region is religiously and culturally diverse, however for the purpose of this session, we will only concentrate on Hinduism, Buddhism, Islam and Christianity. The socio-cultural systems within these religions provide a worldview that creates an ontological authority for the sustainable practices. The existence of this ontological authority provides the necessary ethical framework that can be used to escalate the adoption of sustainable practices within the South Asian region. This can be achieved by aligning and contextualising the narrative on sustainability with the socio-cultural systems practiced by the people, which should result in a deeper engagement.

The Politics and Poetics of Climate Migration: A view from the Sundarbans delta
Debojyoti Das, University of Edinburgh

In a 2022 Guardian op-ed piece Gaig Vince a writer and broadcaster based in UK makes an alarmist call. "A great upheaval is coming. Climate-driven movement of people is adding to a massive migration already under way to the world's cities. The number of migrants has doubled globally over the past decade, and the issue of what to do about rapidly increasing populations of displaced people will only become greater and more urgent. To survive climate breakdown will require a planned and deliberate migration of a kind humanity has never before undertaken. The world already sees twice as many days where temperatures exceed 50C than 30 years ago – this level of heat is deadly for humans, and also hugely problematic for buildings, roads and power stations. It makes an area unliveable. This explosive planetary drama demands a dynamic human response." Media reports these days are replete with such observations. Can we truly believe them or turn a blind eye? Is Climate Change alone triggering mobility of population or are there other countervailing forces? Will it be justified to say that it will cause migration threat in Global North countries? My research funded by the Social Science Research Council, US, invested in a different set of epistemological question that surrounds the much-debated term Climate Migration and the Global South North mobility of population. While our research established that the inter-regional an intra-regional migration of people is much higher than South-North migration of environmental-climate refugees. People are increasingly internally displaced and move within a country in most case from rural to urban or rural to rural areas in search of alternative livelihood. The motivation behind migration is not always defined by climate stressors but people's aspiration and their need to earn a living to support family back home through remittances. Also, not everybody can migrate because of patriarchal norms and gendered roles within the family. The presentation will focus on the intersectionality of factors that makes climate mobility not a cause effect phenomenon triggered by Global Climate Change events but also focuses on anthropogenic factors and how migration is triggered by a set of factors that go beyond climate change narrative in the era of Anthropocene focussing on the Sundarbans delta.

Annual Singhvi Lecture

Decolonising Water: Knowing and re-enchanting waters from national to local scale
Daanish Mustafa, King's College London

There is something fundamentally dysfunctional about how we have known and imagined water under modernity. Colonial knowledge systems have been deeply intertwined with the project of modernity. Term like, cubic meters, average flows, parts per million of pollutants, hydraulic gradient among others, form the foundational vocabulary for knowing and interacting with water, waterways, rivers and springs across spatial scales. A decolonial imaginary and practice would incorporate the different ways of knowing and living with water, in addition to, and not necessarily instead of the colonial (scientific?) tropes that have imprisoned hydro-social imaginaries. Water has been thought of as a resource or a hazard within colonial water imaginaries. A decolonised praxis would emphasise the *experience* of water as variegated lens through which to know and live with water. Drawing upon the examples of 2022 floods in Pakistan, and the case of mountain springs in the post-conflict Swat valley of northern Pakistan, I make the case for a decolonial praxis of water, that may usher in a more gender and class inclusive *experience* to water from national to local scales. Water as an instrument of producing a national scale of water management is the real villain of the decolonising agenda in water. Re-enchantment of local waterscapes and re-democratization of hydro-social praxis is our best hope in negotiating a climate change present.

31st May 2023

Which Anthropocene do we want? Hopes from an agricultural ecologist
Alfy Gathorne-Hardy, University of Edinburgh

Agriculture arguably initiated the Anthropocene approximately 12,000 years ago (Ruddiman 2003) – generating the stable Holocene climate that allowed *Homo sapiens* to flourish. Today agriculture remains a key anthropogenic concern: we need it for food production, it dominates the Indian landscape, and it is the main driver of Indian biodiversity loss.

Agriculture is largely overlooked when considering Indian biodiversity due to the focus on India's national parks (in contrast to European landscapes, where there is a strong focus on biodiversity that occurs in agricultural settings) so that while it is reported to be declining, we have no baseline against which we can measure current populations . For example, in rural Odisha individuals are resorting to hand pollination of gourds following a loss of pollinators - but we don't even know how many pollinating species were there before.

Protecting the health of farmers and their families in the Anthropocene: Is natural farming the answer?
Lindsay Jaacks, University of Edinburgh
Natural farming has been promoted across South Asia as a solution to soil degradation and farmer debt. Few, however, have highlighted (synthetic) chemical-free agriculture as beneficial for the health of farmers and their families. Lindsay Jaacks is a nutritional and environmental epidemiologist, studying the health effects of what we eat – not just calories,

sugar, fat, protein, iron, salt, etc. but also pesticide residues. Exposure to pesticides has been associated with many of the health challenges faced by farmers in South Asia today – including, for example, diabetes and kidney disease. In collaboration with Rythu Sadhikara Samstha, Government of Andhra Pradesh, her team is currently evaluating the health effects of transitioning from conventional, chemical-intensive monocropping to natural farming. Lindsay's talk will present initial findings from this work in India, an overview of student-led projects in this area, and opportunities for collaboration.

A systems approach to renewable energy
Lata Shreshta, International Nepal Fellowship UK

The presentation highlights the importance of systems thinking in how we can help tackle complex, systemic developmental problems relating to human-environment interactions, with a focus on energy access and use in rural Nepal. Currently, 730 million people live without energy, and 2.4 billion lack access to clean cooking fuels and technologies. Over three million people in Nepal (11% population) still live without electricity, most are the rural poor, and just 35% of people have access to clean cooking. A lack of access to clean, reliable, and affordable energy severely constrains people's sustainable incomes, productivity, and welfare. It creates a reliance on often unaffordable and always unsustainable fossil-fuel-generated energy, contributing to emissions, and impacting environment, health, and education outcomes.

Innovation has a vital role to play in enabling sustainable growth, by making clean energy more reliable, efficient, and accessible to all. But clean energy technologies and business models are not being developed and rolled out at the scale needed to achieve the SDGs or avoid the worst effects of climate change. In developing countries like Nepal, even for existing technologies, while clean energy equipment is often more reliable and cost-effective over the long run, uptake is low due to low awareness of the benefits, poorly developed markets, including sales, servicing and finance, and higher upfront costs.

This presentation showcases interventions by Renewable World which seeks a systems thinking to support renewable energy access. The first case study demonstrates how beneficiaries of Solar Water pumping schemes have been enabled to protect and efficiently use water resources in Nepal.

The second case study explores the development of a new, self-sustaining market in bag digesters, biogas, and organic fertilizer that has contributed in increased nutritional intake and generated increased income in 12 communities in Surkhet and Banke districts. The final case study shows how environmental degradation, caused by rising temperatures, extreme weather events, and human activity, is translating into increased human-wildlife conflict (HWC) in Nepal, as wildlife encroaches into the buffer zones of protected areas in search of food and water, as their prey and water sources disappear, while persisting poverty intensifies encroachment. The intervention aims to implement sustainable, climate-resilient conservation strategies in collaboration with communities; achieve increased sustainable income and security within a strengthened market system and introduce green energy interventions underpinned by current research into green development. These case studies

demonstrate the importance of a systems approach grounded in inter-disciplinary and cross-sectoral collaboration, to achieve sustainable development in Nepal.

Freedom and Trepidation: Labouring in South India's Toxic Waters
Rishabh Raghavan. Max Planck Institute for Social Anthropology

My research work focuses on the everyday lives and livelihoods of those who live by a cluster of state-owned coal fired thermal power plants in Ennore, an estuarine peninsular suburb located to the north of Chennai (Tamil Nadu, India), and conceptualizes their bodily engagement, labour, and protest in the context of the multiple toxic substances suffusing the landscape. In the 'South Asian Anthropocenes' workshop, I will present my research on the labour of the fishermen who fished by Ennore's power plants, describing some of the ways in which toxic coal (together with the many by-products that arose from its combustion and circulation) seeped through their bodies and their environment. I argue that the constant bodily engagement with coal-based toxicities, every time the fishermen fished in Ennore's polluted waters, advanced upon them a distressing 'feeling'; on the one hand, labouring with the toxic had become a necessity in validating their identities as male fishers, while on the other hand, interacting with the toxic only accelerated the notion that they were rapidly disintegrating with their landscape. In presenting this research, I wish to collectively think through some of the questions the workshop aims at addressing by drawing focus to the uneasy ways in which certain labouring bodies mediate, challenge and embrace the toxic to meet particular ends.

Social Movement Environmental Knowledge: lessons from Cuddalore and Bhopal
Eurig Scandrett, QMU

Drawing on social movement studies and a political ecology of knowledge, this presentation will report on research into how knowledge about the human environment has been forged through social activism in two Indian social movements. Community Environmental Monitors, Cuddalore, have developed citizen-science techniques for monitoring and confronting pollution in the industrial estate in the State Industries Promotion Corporation of Tamil Nadu. This will be compared with knowledge generation on environmental toxicity and health in the Bhopal survivors' movement

An Approach to Reading Images of the Cow as a Subject of Human Thinking
Anisha Palat, University of Edinburgh

This paper will approach reading images of the cow by contemporary artists in India in relation to politics, caste and ecology. The animal nature of the cow is often diminished by the cow as a symbol of Hinduism and politics. The conjunction of these two notions will be examined through an overview of artists from India and the diaspora. Looking at themes like material presence of the cow, responses to violence in the name of the cow, and performative embodiments of the cow, the paper will explore different media by these contemporary artists. The artists' own lived experiences and particular art practices will be delineated through their different art works. The politics that surround the cow in relation to the cow's animality will be at the forefront of these examinations.

The Indian Age of the Horse

Yashaswini Chandra, University of Edinburgh

In this talk, Yashaswini Chandra outlines the age of the horse in India, focussing on its apogee in the early modern period, and its decline in the face of colonial rule and mechanisation. She argues that the discourse that commodifies the horse as a war animal or trade item misses out on the cultural impact of the horse and the affective side of the relationship between humans and the animal. This talk is based on her recent book *The Tale of the Horse: A History of India on Horseback*. The monograph is concerned with the multifaceted significance of the horse as a sentient being and examines them as a thread that connects Indian history, mythology, art, literature, folklore and popular belief based on a diversity of sources. Both a charismatic and an instrumental animal, the horse thus offers a revealing lens to view the history of India together with its global links