

# Confronting Environmental Change in Asia

## **Forest-Protecting Stone Inscriptions (*hulin bei*) and Vernacular Ecology in Late Imperial China**

Mark Swislocki

## **Arrival of the Anthropocene in South Asia: A View from the Mining Fields of the Himalayan Piedmont**

Iftekar Iqbal

The Zomia, denoting most of the continental Asian highland areas, is primarily conceived by anthropologists as a geographical and notional space in which certain cultural, political, and economic relations have taken shape. These upland spaces assume some degree of ecological stability in which autonomous politics unfold against surrounding plainland powers. Recent critiques of the Zomia argue that trans-local trade and ethnic mobilities across the uplands and the surrounding plains defied such autonomist propensity. The proponents of both highland autonomy and trans-spatial mobility thus appear to put paramount trust in the operability of human political and economic agency in difficult terrain for a long period. While these debates have enriched Asian studies in remarkable ways, this paper suggests that the question of environmental changes and dynamics of human-nature relationships have remained marginal. Within the Zomian spatial framework, this paper explores a few trends in the environmental history of colonial South Asia, especially from the vantage point of mining.

## **Coffee Plantations as Bioregional Sites: Lessons from India and Vietnam**

Subarna De

Due to the plantationocene, the unprecedented rate of global biodiversity loss and climate change have led researchers, practitioners, and environmental leaders to recognize the importance of indigenous resource management systems and agricultural practices to build a more ecologically just world. Yet, how to support equitable biodiversity conservation remains unclear, especially on plantation landscapes. I use bioregional theory on two indigenous coffee plantation landscapes from India and Vietnam between 1878 and 2020 to explain how bioregional reinhabitation successfully heals injured landscapes and helps regain almost 80% of functional native biodiversity on the plantations, transforming the coffee plantations into bioregional sites. Contemporary bioregionalism emerged in the late 1970s as a response to ecological degradation caused by growing recognition of consumerism and modern industrialization. Bioregionalism is the social movement and literary imagination that seeks to recover a place and community in an injured land. Conducting an ethnohistorical study of the indigenous Kodava community from the Kodagu coffee district in South India and doing a case study of the coffee plantations in the Central Highlands of Vietnam, this paper shows how bioregional practice, implemented in local geographical areas called “bioregions,” works for both people and the planet and helps to revitalize ecologically sustainable and culturally diverse societies. In doing so, this essay studies the historicity of bioregional thought and practice from its inception and argues that bioregional reinhabitation is not just an ecocritical theory but a decentralized pragmatic approach that helps restore indigenous environments of crisis. I aim to investigate how bioregionalism bridges the gap between research and practice. Hence, I argue that bioregional practice should be considered the most viable social, ecological, cultural, and economic solution to mend injured indigenous plantation landscapes worldwide.

## **Beaches and Pools in Mid-Century Egypt**

Alexandra Schultz

Vernacular beach photographs from the late nineteenth-mid twentieth century, housed at NYUAD, showcase beach sociability in a number of ways, especially a time to spend with family and friends, as well as a space of intimacy and self-fashioning. What do these photographs indicate about people's relationship to water, and how can we consider other popular sources, such as films, and songs, in light of these images? In this work, I consider beaches as opportune spaces. The aesthetics of beach and pool photography suggest a place of freedom and play, but also a space of thoughtfulness, individual contemplation, and autonomy, including for women. We can find additional meaning within these images when they are set against the backdrop of popular discourse on women's desire to be unremarked upon. To be "alone" and left alone, even if otherwise in a public space among friends.

## **A Rising Global Player: The UAE, Food Security, Climate Change and power realignments in West Asia and the Middle East**

Sophia Kalantzakos

For a few years now, the UAE and other countries in the Gulf have been positioning themselves as rising regional players in both North and East Africa and recently in the wider Indian Ocean. Scholars and other stakeholders have turned their attention to studying and evaluating the Gulf's economic, diplomatic, and security footprints. However, there is still paucity of reflection, research, and appreciation in the sudden emergence of food security as a central pillar of power-making for which the UAE offers a salient case study. Food security, which began as an internal policy priority to reduce the arid nation's vulnerability to food production constraints and supply disruptions from abroad, has now become the country's signature international policy as a global climate leader. This also aligns with the UAE's aspirations to help drive regional power re-alignments having become party to the Abraham Accords and of the I2U2 partnership (India, Israel, United States, UAE). The paper examines when, why, and how food security graduated from a domestic concern to a signature global climate leadership initiative for the UAE. It argues that the prioritization of "food security" has allowed the UAE to demonstrate regional climate leadership and power projection through the use of its economic power and provide solutions to the growing dystopian narratives of food scarcity as a result of extreme weather. A number of external crises (from droughts in East Africa to the war in Ukraine) can explain this policy shift that is based on technological innovation. The paper will (now) also interrogate how recent events in Gaza are impacting the UAE's participation in the power reconfiguration of the wider region.

## **Hydro-hegemony and Chinese Influence**

Selina Ho

China is the hydro-hegemon of Asia. Its preponderant power, upstream position on the most important rivers in Asia, and technological and infrastructure capability confer upon it significant advantages over the smaller and weaker neighbors it has water disputes with. Despite its enormous control and leverage over the water resources that flow through Asia, the literature on China's rise either disregards this critical aspect of

Chinese power or narrowly focuses on the impact of Chinese dam construction. China's power and influence as the "upstream superpower" need to be explored in a systematic manner. At the political, strategic, economic, environmental, and societal levels, China's position as the hydro-hegemon of Asia impacts how power is configured in the region. How does China exercise its hydro-hegemonic power and how effective has China been in translating its power into influence?

To assess Chinese influence as a hydro-hegemon, I propose a framework that examines three specific aspects of Chinese power in the river basin: institutional, coercive, and structural. The outcomes or measurement of influence are demonstrated via: 1. whether a target state's behavior is shaped or altered in line with Chinese preferences; 2. a target state accepts norms or rules of institutions that China creates; and 3. a target state accepts its asymmetrical disadvantages vis-à-vis China and takes into account Chinese preferences and interest when making decisions. The framework is applied to three case studies: the Mekong, the Ili and Irtysh, and Brahmaputra rivers.

## **Microbial Diversity in History**

Ashish Jha

As the planet is undergoing rapid changes in the Anthropocene, so are the complex ecosystems of microbes that are integral part of human physiological processes. Working with diverse non-industrialized populations in Nepal, we have demonstrated that the variations in the human gut microbiota is strongly linked with the degree of urbanization. Such changes in the gut microbiome have been causally linked to several chronic human diseases that are common in industrialized societies. But whether the oral microbiome—the second largest microbial ecosystem in the human body—contributes to human health remains markedly underexplored. Here, we implement a multi-omics analysis framework to evaluate the contributions of the oral microbiota to obesity in a cohort of ~200 Emirati nationals. Integrated analysis of metagenomics, metabolomics, and clinical markers revealed significant alterations in the oral bacterial functions in obesity that lead to salivary metabolite differences. Many of the bacterial functions and their metabolites are strongly associated with obesity-associated clinical markers in the blood, indicating significant host-oral microbiome interactions contribute to obesity. Specifically, oral microbiomes of obese individuals are enriched for pathways involved in the metabolism of dietary carbohydrates into lactate, biosynthesis of obesity-associated amino acids, as well as the production of obesogenic molecules such as uridine and uracil. In contrast, several pathways and metabolites associated with vitamin B and heme production are depleted in the obese individuals. Furthermore, many of the obesity-associated functional pathways and their metabolic products were strongly associated with obesity-related clinical markers in the blood, indicating that alterations of the oral microbiome contribute to metabolic disruptions leading to obesity and associated comorbidities. This study robustly links oral microbiome alterations with host metabolic changes in obesity, indicating that a mechanistic understanding of host-microbiome interactions in the oral cavity may provide a promising avenue for obesity intervention.

## **Culture, Nature, and the Commodification of Tibet**

Travis Klingberg

What has changed since the 1990s, when ethnic tourism and a nascent, transnational environmental movement helped bring Tibet to national attention in China? What can we make of commercial interests in Tibet fifteen years since the 2008 Lhasa riots upended a tentative post-reform ethnic politics, or since 2012

when state political retrenchment began under Xi Jinping? What does Tibet mean to a leisure-seeking nation, and to Tibetans locked into enforced cycles of sedentarization, state-building, and national integration? This chapter ventures an answer to these questions by focusing on efforts to commodify Tibet over the past few decades. We argue that the recent decades of commodification in Tibet have followed two interrelated patterns, that of "Tibetanizing" Tibet as a distinctive cultural space, and more recently of "ecologizing" Tibet as a pristine, beautiful national landscape disarticulated from its cultural life.

## **Is China Really Greening the Belt & Road Initiative? Intent, Finance, Measures**

Maria Adele Carrai

The urgency of the climate crisis has been emphasized post-COP26, particularly with catastrophic events such as the floods in Pakistan in 2022, propelling the global push towards achieving net-zero emissions by 2050. As the leading emitter of greenhouse gases, China's commitment to cease the development of new coal-fired power plants domestically and along its Belt and Road Initiative (BRI) is crucial. This commitment is significant both domestically and internationally, given China's extensive involvement in financing and constructing coal power projects as part of BRI. This study scrutinizes China's progression towards more environmentally responsible BRI, employing a tripartite analytical framework considering intention, financing, and measures. We evaluate China's ecological intentions and the tangible results, investigating policy discourse, financial allocations, and the environmental consequences of these initiatives. The analysis aims to shed light on the efficacy of China's 'greening' endeavors within the BRI framework. Additionally, by focusing on Pakistan's China-Pakistan Economic Corridor (CPEC) as an illustrative example, we illustrate how some challenges in China's greening efforts are external and may fall beyond its direct influence.

## **Tracing the Early Period in China Greening its Financial System**

Rastraraj Bhandari

Since the adoption of the Paris Agreement, China has made significant strides in greening its financial system and these approaches have been well studied and documented. However, the foundations for green finance were laid much earlier, with scholars categorizing the time frame between 1990 and 2010 as the early awareness period. The People's Central Bank of China issued guidance to banks on issues relating to improving environmental protection in credit policy in 1995. This early period, and the years that led to this, in China's green finance evolution and governance is relatively under-studied yet provides an interesting avenue for a comparative study of the history of China's environmental governance with the history of China's financial governance viz-a-viz 'top-down' policies of the People's Central Bank of China. This paper traces the early days of China's awareness of green finance and looks into a multitude of financial, political, and social factors that led to a kick-start in greening China's financial system.

## **A Flood with Many Sources: the Deep-Time, Generational, Colonial and Developmental Histories of Sikkim's 2023 GLOF**

Ruth Gamble

On the fourth of October, 2023, the South Lhonak Glacial Lake burst through the moraine holding it, and its waters cascaded down through the Teesta River Valley. Within hours, they had destroyed the Teesta III Dam and fifteen bridges in Sikkim and West Bengal. By morning, they had deposited unexploded ammunition from a flooded high-altitude army base in a West Bengal village hundreds of kilometres away. At least a

hundred people died, and many more are still missing. Most commentators on the flood focused on the disaster's immediate causes: excessive rain, the unmonitored glacial lake, and the lack of communication along the flood's route. This article looks beyond the immediate to examine the historical causes of the flood within multiple temporal scales, including those of deep time, generational indigenous lifeways, and colonial and developmental time frames. It explains how the region's deep-time geological and hydrological cycles created one of Earth's greatest stores of Gravitational Potential Energy, supercharging any flood's power. It then traces the valley's multiple human histories and shows how various groups responded differently to this energy. The valley's Indigenous inhabitants acknowledged the mountain and waters' combined power, but Sikkim's inclusion within the British imperial sphere led to a new way of seeing the Teesta catchment. The British Empire approached Sikkim as both a corridor between Tibet and the Indian Planes and a site of extraction. They used river sand and forest wood to build roads and towns, which enabled the invasion of Tibet to the north and the extraction of Sikkim's resources to the south. The post-colonial independent government (1947-1975) and the post-merger Indian state extended these roads and extractive industries as they sought to secure Sikkim's borders. In the past twenty years, despite intense protests from Indigenous groups who saw them as a threat to their lifeways, dam building has intensified the state's corridor-extraction approach to Sikkim. As the article argues, all these histories created the circumstances for the 2023 GOLF, and approaching such disasters through the lens of multiple temporal frames may provide insights into how future GLOFs can be avoided.

**“Climate and Frontier,” Chapter 7 from *Heavenly Drought: Natural Anomalies and State-Building in Vietnam, 1000-1600***

Hieu Phung

Dai Viet became a powerful regional player as the climatic condition turned drier in the fifteenth century. Together with new ideas and technologies obtained through intensive interactions with Ming China, both by force and voluntarily, and the maximization of agricultural power, the drier climate served as a contributing factor to the centralization of the Le dynasty. Drought and other natural anomalies provided incentives to strengthen the moral claim that the state, and especially the king himself, was responsible for astrometeorological dynamics. However, the turn to the sixteenth century saw a different political landscape, which was marked by the rise of regionalism and widespread rebellions. This chapter analyzes the mixed outcome of fifteenth-century developments. On the one hand, the society in northern and north-central Vietnam began to adapt to a cooling period. Only intense meteorological events could be so alarming to authorities that they would be recorded in the chronicles. A mentality that was consumed by the interlinks between state power and natural anomalies was declining. This change matched the turn to localism of the sixteenth century. In addition, the rise of various local temples meant that people could find aid from spiritual sources other than the state's moral meteorology. On the other hand, the exponential development of arable land pushed the Red River delta to its limit. During the sixteenth century, land reclamation, except along the lower delta, and the improvement of irrigation no longer served as the dominant source of wealth. Without revolutionary changes in technology and governance, Dai Viet turned to trade and an agricultural push into its frontiers. The Mac, relying on the northeastern and upper delta, added commerce to its revenues, while the Le, based mostly in the interior of Thanh Hoa and the central coast south of the Red River delta, began to expand southward.

**A Curricular Conversation: Does the Environment Have a Public History?**

Tzy Jiun Tan & Mark Swislocki

NYUAD has a curricular opportunity to create a program to address this question. The program had an original framework to respatialize history. Experience in the Arts and Humanities Division indicates student interest is predominantly in “practice” not “study.” The program is thus creating a “Global Public History” track. This panel asks: How might the environment feature as a teaching and research area in that program? An NYUAD History alumnus and Erasmus Mundus Public History shares her expertise from both programs and outlines various starting points for answering that question. The panel invites questions and comments from practitioners in various fields with related experience in engaging different publics with histories of environments.