



研東
究亞
Centre for
East Asian Studies



White Rose East Asia Centre

Universities' China Committee in London

The Roots of China's Environmental Crisis

University of Bristol
10 September 2010.

- 9.0 Coffee and registration
- 9.15 Welcome address by Professor Robert Bickers
- 9.30 Professor Peter Perdue, 'Asian Environmental History: The transnational perspective'
- 10.10 Dr Andrea Janku, 'Productive Landscapes in Linfen: The Quest for a Sustainable Balance in a Precarious Environment'
- 10.30 Dr Felix Wemheuer, 'Making Sense of Failure: Natural Disaster and Famine in Maoist China'
- 10.50 Discussion: Chair, Professor Stephen Morgan
- 11.20 Coffee
- 11.30 Professor David Pietz, 'Engineering Scarcity: The Yellow River and the Historical Roots of China's Water Crisis'
- 11.50 Dr Zhang Ling, 'Too Little Water, Too Much Silt: A History of the Yellow River and Sandification of North China Plain'
- 12.10 Professor Iwo Amelung, 'The Dynamics of River Control in Late Imperial China'

12.30 Discussion: Chair, Dr Carmen Meinhert

1.00-2.00 Lunch

2.00 Professor Zheng Yisheng, 'China's "environmental forces": Their hard work, the predicament they are in, and their own reflections'

2.30 Professor Eduard Vermeer, 'The benefits and costs of China's hydropower: development or slow-down?'

2.50 Dr Alan Boland, 'Consuming water in the productive city: Urban development, water supply, and pollution regulation in China, 1950-1965'

3.10 Discussion: Chair, Dr Cui Shunji

3.40-4.00 Coffee

4.00 Dr Anna Lora-Wainwright, 'Learning to live with pollution: how environmental protesters redefine their interests in a Chinese village'

4.20 Dr Karl Gerth, 'The Ecological Implications of Chinese Consumerism'

4.40 Reut Barak, 'Fighting transboundary water pollution in China: what can we learn from the past?'

5.00 Discussion: Chair, Chair Professor Robin Porter

5.30. Closing Discussion, Ms Isabel Hilton

6.00 Close

7.00 Dinner

Professor Peter C. Perdue, 'Asian Environmental History: The transnational perspective'

Abstract

Many studies in environmental history focus on regional or national scales, but nature, of course, does not observe political or economic boundaries. New trends in historical study emphasizing transnational perspectives have developed from traditional diplomatic history, but few take environmental considerations into account. Some studies of global commodity chains cross many national boundaries, but often do not root the commodities in the ecology of their production sites. This paper argues that we need to link these approaches together by following important global commodities from their production sites across trade networks to their consumption sites, while paying attention to the environmental effects of production, trade, and consumption along the way. I will illustrate this approach with examples drawn from recent Asian environmental history, including the history of tea and fish.

Dr Andrea Janku, 'Productive Landscapes in Linfen: The Quest for a Sustainable Balance in a Precarious Environment'

Abstract

The relationship between humankind and the environment that sustains its livelihood is one of mutual interdependence. While this basic principle is the same everywhere, the degree of vulnerability of both humankind and the physical environment varies quite a lot through time and space, is subject to constant change, and generally increasing. Therefore a constant process of ever more conscious mutual adaptation is required in the quest for a sustainable balance in an ever more precarious environment. The purpose of this paper is to trace the workings of these interactions in a historical case study of three of the scenic spots of Linfen in the south of Shanxi, on the fringes of North China's arid loess plateau: the Dragon Son Temple Springs on a foothill of the Guye Mountains east of the Fen River, the Lao River, a tributary to the Fen, and the Sleeping Tiger Mountain on the eastern border of Linfen. The first is an example of what may look like a naturally rich environment, the second was historically and still is dominated by a man-made irrigation system, and the third is what looks like a hopelessly degraded mountain today. This study traces the interaction between these quite different places and the human need for productive landscapes, and shows how fortunes rose and fell, not always in favour of those living in the most plentiful environment.

Dr Felix Wemheuer, 'Making Sense of Failure: Natural Disaster and Famine in Maoist China'

Abstract

According to estimates of Chinese scholars, over 18 million people died as result of natural disasters in Republican China. When the CCP came into power in 1949, it promised the people that no one would starve to death in New China. Against the background of serious natural disasters every two years between 1950 and 1958, it was not easy to keep this promise. Between 20 and 60 millions of peasants were effected by spring shortage (*chunhuang*) every year. Natural disasters became highly politicized, because the government felt that peasants and local cadres would exaggerate damage and hunger in order to get relief from the state. In the beginning of the Great Leap Forward Famine in 1959, exaggeration of damage or faking hunger could be labeled as 'rightist' crimes. When the CCP had to realize that millions were dying in late 1960, the party used the argument of natural disaster to mobilize the country. Later, the period of famine was called 'three years of natural disaster' in order to de-emphasize the man-made factors of the catastrophe.

The paper will examine what kind of role natural disasters played in the self-perception of the CCP from 1949 to the early sixties. It will use reports from the internal magazine *Neibu Cankao* and documents of the Central Committee to show how natural disasters were used to explain policies. Furthermore, it will analyze the official party historiography regarding the label of 'three years of natural disaster'. The paper will contribute to understand the responses of the CCP to natural disasters and the way how natural factors were used in the political discourse.

Professor David Pietz, 'Engineering Scarcity: The Yellow River and the Historical Roots of China's Water Crisis'

Central Argument

What forces have generated these increasingly severe water problems on the North China Plain? The book's central argument is that the depletion and degradation of water in the Yellow River valley is a consequence of water management practices dating from 1949. Human communities along the river have struggled with drought, floods, and famine for centuries. The government of the People's Republic of China sought to address these problems with the application of technology, political and social organization, and cultural expression that were consistent with building 'communist modernity.' These approaches had long-term environmental consequences that affected water supply and use.

Many observers of contemporary China have identified quickened industrial development and urbanization of the post-Mao period (1978-) as the agents responsible for water problems on the North China Plain. However, I argue that in order to understand water scarcity on the North China Plain, we must understand water management during the Mao period (1949-1978). The entire matrix of values and power in which hydraulic engineering and technology were socially embedded during the Mao era generated water problems before and during the present reform period. In other words, the manipulation of water in Maoist period cast a long shadow over water resources during the post-Mao period.

Dr Zhang Ling, 'Too Little Water, Too Much Silt: A History of the Yellow River and Sandification of North China Plain'

Abstract:

In recent decades, sandstorms that hit North China Plain every spring have become one of China's most phenomenal environmental crises. Relevant to the issues like climate change, water deficit, deforestation, soil erosion, and etc., modern sandstorms are believed to originate mainly from sandification and desertification on the Mongolian Steppe and the Gobi. More nuanced researches, however, reveal that many sandstorms are caused by local-level environmental degradations, such as the abandonment of local riverbeds and inappropriate land use. Situated in the large context of desertification in north and northwest China, the present paper seeks to examine the long-term relations between the historical flooding disasters of the Yellow River, the river's hydro-mechanism, and the local-level sandification process along the river's courses. It demonstrates how the special hydro-mechanism and the low water-silt ratio make the Yellow River a significant transmitter of sandy materials from the west to the east over a vast span of north China. Statistics of the river's floods, bank ruptures and course shifts between the tenth and twentieth centuries reconstruct the pattern of the distribution of the river's silt and suggest their profound impact on local lands. By thorough investigations into gazetteers of the eighteenth-twentieth centuries, the paper will provide a case study of Guantao County in south Hebei where, under the dual forces of the Yellow River's floods and intensive farming, sandification and sandstorms became dramatic from the early eighteenth century. Such changes in the landscape and disaster forms, maybe long overlooked due to their local, small-scaled features, bear far-reaching impact on local economy and human life, and leave an immense, painful environmental legacy to modern Chinese.

Professor Iwo Amelung, 'The Dynamics of River Control in Late Imperial China'

Abstract

The shift of the Yellow River in 1855 brought about important changes in respect to technical and administrative approaches to the control of the Yellow River. It also resulted in a far-reaching transformation of the ecology of the North China plain. While more traditional research on the question of the control of the Yellow River mainly has focussed on administrative and technological aspects of River control, during the last twenty years concerns of 'environmental history' have begun to play a more important role. Some of these results of historical research are quite brilliant, such as for example the article by Elvin and Su Ninghu on the impact of Yellow River control on Hangzhou bay, some of these researches lead to doubtful or even incorrect assumptions such as the assertion of K. Pomeranz in *Making of a Hinterland* on the ecological costs of the use of stalks for dike protection during the late Imperial era.

In this *paper*, however, I follow a much more modest approach. I will try to demonstrate the interdependence between river hydraulics and ecological change in the province of Shandong after the shift of the Yellow River up to the end of the Imperial era in 1911. While it is generally acknowledged that the break of the dikes of the River in 1855, which resulted in the shift certainly at least partially was due to ecological factors, the question of how ecological factors influenced the attempts to control the Yellow River and how *vice versa* administrative and technical decisions and choices had a direct impact on the condition of the river and the development of its environment have not been subjected to more systematic research. To a certain extent influenced by P.E. Will's research on the 'cycle hydraulique', I will argue that the interdependence resulted in the emergence of a particular dynamic of the Yellow River, which needs to be taken into account, not only when doing research into the political, administrative and social history of the late Imperial period, but also when attempting to understand ecological change in North China. It is my contention that the case of the control of the Yellow River in Shandong during the late Imperial era, which is quite well documented, offers a unique window to arrive at a better understanding of the interrelatedness of historical factors, which hitherto has been neglected in an unduly way.

Professor Eduard Vermeer, 'The benefits and costs of China's hydropower: development or slow-down?'

Introduction

This contribution seeks to answer three questions.

First, why has the approval and implementation process of hydro-power projects slowed down in recent years, even as its contribution to China's non-carbon targets has become more needed, the national electricity grid has improved, and costs of thermo-power production have risen?

Second, is this only a temporary slow-down, or a long-term structural one? Temporary causes might be found in China's transition difficulties to new institutional arrangements, in present uncertainties in electricity price formation, and in the adoption of different, more inclusive planning procedures. Structural changes in the speed and scope of hydropower development will occur if project cost-benefit evaluations change in a fundamental way, for instance because of a higher valuation of the cost of displacement and resettlement and ecological damages, and if other sources of power such as coal or nuclear energy are seen as better (cheaper, more predictable, easier to manage, etc.) alternatives. Once more comprehensive planning and implementation procedures, which include public consultation and representation of the interests of all stake-holders in river water use, result in longer planning and construction periods, they contribute to higher economic and administrative (and maybe political) cost of hydropower for the investors, thus making it less attractive to them but usually more acceptable to other affected parties and government.

Third, if the slow-down has important structural, long-term causes, and if a delay of hydropower project construction makes sense politically and economically (e.g. because resettlement costs will come down in the future), will China still be able to achieve its renewable energy and non-carbon targets through the expansion of nuclear, wind and solar power?

Dr Alan Boland, 'Consuming water in the productive city: Urban development, water supply, and pollution regulation in China, 1950-1965

Abstract

: This paper explores the environmental underpinnings of China's socialist development through a study of water quality issues that emerged in the wake of rapid industrial and urban expansion in the 1950's. Based on archival materials, I examine how China's 'productive' cities of the early socialist period developed in interaction with natural environments. I first outline the influence of the socialist urban political economy on the rapid increase of water supply to residents and industry. I then turn to analysis of the discursive and material responses to water pollution problems that emerged from this expansion of supply. Of particular interest here are the efforts taken to extract value from wastewater that was being produced at an unprecedented scale. How did these efforts reflect broader development strategies, within cities as well as between cities and their surrounding rural areas? And what were some of the institutional and biophysical limits of such a socialist industrial ecology applied to water?

Anna Lora-Wainwright, Wu Yunmei, Zhang Yiyun and Benjamin Van Rooij,
'Learning to live with pollution: how environmental protesters redefine their interests in a Chinese village'

Abstract

It is often assumed that when citizens do not oppose pollution, it is due to their ignorance of its effects or to structural barriers to change. Based on participant observation and semi-structured interviews in a heavily industrialised village in South-West China, this paper argues that a sense of inevitability of pollution is just as important an obstacle. We argue that perceptions of inevitability were produced by (1) interdependence between villagers, village leaders, and industries; (2) experiences with protests; and (3) an understanding of locality within the wider national project of development. By examining a few key instances of collective action against Linchang, a very large and partly state-owned fertiliser plant, we trace how locals' strategies of action and their demands adapted in view of their experiences. Conversely, we show that village officials' attitudes to collective action and their role in channelling local discontent and obtaining redress has shifted over time. In doing so, we provide a model for understanding the gradual processes whereby environmental subjects are formed. Our observations on the localisation of protests problematise any simplistic understanding of these protests as 'resistance' and enhances our understanding of the complexity of environmental movements more broadly.

Dr Karl Gerth, 'The Ecological Implications of Chinese Consumerism'

Abstract

Over the past decade, foreign observers have become increasingly worried about China's competition for manufacturing jobs and energy resources and its growing military budgets and carbon emissions. Yet they are largely overlooking a more subtle but challenging story unfolding over the past three decades: China's rapid development of a consumer culture and consumer-driven economy, which are revolutionizing the lives of hundreds of millions of Chinese and is re-shaping the world. With growing intensity following the global financial crisis, political and business leaders around the world have increasingly called upon China to rescue the global economy by saving less and consuming more—much more. China has already become the world's largest consumer of everything from mobile phones to beer and has begun to adopt such consumer habits as living in large single-occupancy homes, shopping in gigantic malls, and eating meat-based diets served in fast-food outlets. Chinese consumers are also spending on new leisure activities, from vacationing in exotic locations to attending professional sports events. Even rural Chinese, long the laggards of Chinese consumerism, have been buying refrigerators, televisions, automobiles, and larger houses in unprecedented numbers.

Taken together, these seemingly small changes in individual consumer habits are deeper and more profound than the more headline-grabbing stories on military budgets, carbon emissions, or trade disputes. China's creation of a consumer culture and consumer-driven economy connects these seemingly disparate phenomena and reveals why we should all care about the everyday choices made by ordinary Chinese, the sort of choices represented by children munching on hamburgers at a Beijing McDonald's. Economists, business leaders, and politicians may hope that Chinese consumers will replace overspent Americans as the global economic engine by using more beauty products, driving more cars, and wearing more high-end clothing. But this talk will suggest that in so doing, Chinese are already further challenging the global environment in ways that may be impossible to reverse.

Reut Barak, 'Fighting transboundary water pollution in China: what can we learn from the past?'

Abstract

Transboundary water pollution is one of the most challenging environmental problems faced by China today. Most of China's water flow through seven large cross-provincial river basins which are home to more than 80% of its population.

The transboundary nature of these basins stands as a significant obstacle to achieving successful pollution abatement along them; provinces are generally reluctant to join efforts in coordinated action and the Chinese governance structure limits the success

of cooperation efforts which do take place. Without joint action, localities maximize local short-term benefits in the expense of water quality.

Interestingly, China had established one of the first river basin institutions in world's history, during the Yuan dynasty. This paper examines the lessons one can draw from China's long history in river basin management to improving current management of these basins.

This paper discovers that whereas in historical China, local government officials participated in decision making related to river basin management and trans-jurisdictional agencies were led by a governor, equal in ranks to a minister; post-reform China carry out strict top-down management, where regional agencies of the Ministry of Water Resources manage these basins without local participation in decision making. The existing hierarchical structure limits the enforcement power of these agencies and with limited incentives to protect water quality in the local levels, provinces pursue local interests which hinder basin-wide sustainable management.

Based on historical experience and an investigation of a unique case of environmental cooperation attempt currently taking place on the Pearl River Basin, this paper offers recommendations for improving river basin management and fighting basin-wide water pollution in China.