An Ecological History of Modern China

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How have ecosystem changes, environmental changes and ecological changes shaped climate change in China and beyond? Stevan Harrell's An Ecological History of Modern China masterfully tackles this timely question by unpacking the "systems of interconnected elements" driving the ecological history of China, and by extension, of the world today (p. 3). Harrell's marvellously accessible instant classic brings Lance H. Gunderson and C.S. Holling's edited volume Panarchy: Understanding Transformations in Human and Natural Systems (Island Press, 2002) into a new and powerful conversation with the history of three key ecological zones in China: "Central Asia," a vast world of deserts, oases and grasslands inhabited largely by ethnic minorities across China's northwest and north; "Chinese Zomia," a terrain of steep highland and upland mountains with valley basins populated mostly by ethnic minorities in China's southwest and south; and "China Proper," a landscape filled chiefly with China's Han ethnic majority in the northeast and east. As Harrell shows, in each of these areas - and, for that matter, anywhere in the world - an "ecology" is composed of countless networks of people, animals, plants, crops, trees, land, water, air, bacteria, chemicals, technologies, social institutions, organizations, family relations, laws, policies, art, literature, values, beliefs, religions and more. Every ecology is, then, an assemblage of many moving parts that is shaped as much by its inner dynamics and resilience as it is by the forces that lie outside it. But perhaps above all, as Harrell describes in the parlance of Gunderson and Holling, every ecology follows a four-stage "adaptive cycle" that moves from the "exploitation" of resources to "conservation," until the pressure on resources creates a "release" away from conservation and a move towards a "reorganization" of how resources are handled, so that the adaptive cycle can start again. Here, ecological time does not flow in a linear fashion, but through cyclical oscillations between the productivity and resilience - or the efficiency and resilience - of a particular ecosystem.

This may all sound rather complex (and it is!), but Harrell renders the technical side of ecological history into smooth and entertaining prose for general readers, students, and specialists of China and environmental studies alike. The book is chock-full of eye-opening figures, statistics, maps and photographs that stretch mainly from a few years before the founding of the People's Republic of China (PRC) in 1949 to the present day. Some welcome diagrams modelling the PRC history in terms of the adaptive cycle are also included. Harrell's profusion of illustrative examples goes beyond "putting environment and ecology at the center of PRC history" – his examples break PRC history down into four key periods, which put paid to the idea that China has only recently entered an "ecological civilization" (p. 4). By recounting the ecological history of these four phases (which, incidentally, evokes the four-partite modelling in Gunderson and Holling's adaptive cycle), Harrell shows that the PRC's early efforts at organizing agriculture on a massive scale to keep people warm and full led to the tragedy of the Great Leap Forward and its aftermath, which was followed by more than 30 years of "environmentally unconscious development" and another 25 years of "eco-developmentalism."

Arguably, the book's most innovative contribution is that it provides an ecological history of both China Proper and its two great hinterlands, Central Asia and Chinese Zomia. Specialists might



quibble over the cartography of these regions, which have long fallen under a variety of names. Anthropologists of "Inner Asia," such as myself, often stress the distinction between Central Asian oases and Inner Asian grasslands, while muting the differences between the Inner Asian grasslands and mountainous Chinese Zomia, to call attention to certain shared political and economic histories, ways of making a living, and features of religious life across this region. But Harrell's map is drawn to throw the clearest light on ecological history, where China's approach to its oases and grasslands, on the one hand, and its tightly compressed highlands and uplands, on the other, is revealing unto itself. These borderlands and hinterlands of China are ethnic minority heartlands with rich natural resources that, as is the case the world over, have long experienced some of the keenest environmental injustices because they have been some of the most keenly exploited. Yet Harrell shows that, since the 2010s, China has also increasingly shifted its ecological exploitation abroad, offloading the damage onto other often less wealthy countries.

Still, Harrell urges us to keep clear sight of the fact that while "environmental policy and action are inherently political, we must never use our political preferences to evaluate the state of the environment" (p. 435). He cautions that environmental degradation and the partial remediation of it seem to be the same under any form of governance, whether that be the CCP authoritarian regime or electoral democratic regimes. Certain environmental harms are more directly traceable to development, and they may take effect at an astonishing distance away from their sources. Given this, the question arises: can knowledge of modern China's ecological history point us to new ways of envisioning and managing worldwide climate change?

The answer would seem to be yes. Harrell's book offers the hope that comes with a robust knowledge of ecological history. He reminds us that many predictions of ecological doom have been "belied by recovery after all sorts of disturbances" (p. 438) – from the unexpected collapse of the Soviet Union to the celebration of the centenary of the Chinese Communist Party – and that this "should make us humble in the face of the complexity of social-ecological systems" that surprise us by recovering even when this does not seem to be either apparent or possible (p. 439). His study of the radical reengineering of ecosystems in modern China will remain of lasting value precisely because those ecosystems are continuing to shape the world's ecology, economics, politics, climate, and more in ways that will have lasting effects far into the future. Our own visions of ecological history have much to learn from this, and much hope to derive from it.

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A Spark in the Smokestacks: Environmental Organizing in Beijing Middle-Class Communities

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The main question addressed in *A Spark in the Smokestacks* concerns the rise of vibrant civic associations in China, an authoritarian setting. To this end, the book delves into environmental activism in Beijing's new gated communities in response to the challenges posed by waste incineration