Forces of Nature: New Perspectives on Korean Environments edited by David Fedman, Eleana J. Kim, and Albert L. Park. Ithaca and London: Cornell University Press, 2022. 242 pp.

This edited volume aims to bring the forces of nature in Korea to the forefront of writing the history of Korea. Chapters in the volume cross the chronological, political, and geographical boundaries of Korea—between the premodern and modern periods, colonial and post-colonial periods, North Korea and South Korea, and Korea and the globe. The volume collectively sheds light on how ecology, energy systems, and climate events played a role in the co-production of nature and people in Korean history.[1] Perhaps misled by the title, *Forces of Nature*, some readers may expect an addition to the recent new materialist literature aiming to decentralize human actors in favor of non-human actors. However, as editor David Fedman notes, rather than simply questioning the anthropocentrism in Korean history, this collection aims to put human actors in their physical and material surroundings and reveal the relationship between them. For this reason, the term "forces of nature" is used in two senses: It refers to external events that humans cannot control—e.g., climate disasters—and to the powers humans use to control and manage their environment—e.g., hydropower and nuclear power (4). This clever definition allowed the editors to include perspectives from a range of fields. Despite the inclusive gesture toward Science and Technology Studies (STS), however, some contributors espouse a climate-determinist perspective and evince the binary of natural versus social.

The edited volume is experimental in several senses, one of which is the offering of two introductions—one general and the other geographical. Because of the emphasis on the role of physical and material environments in Korean history, the geological introduction offers detailed explanations of the Korean Peninsula's geological, geographical, and climate characteristics as background for the following chapters. Second, chapters are ordered in terms of four overarching themes rather than chronologically or geographically. These include imperial interventions regarding the Korean landscape, responses to environmental crises, processes of dispossession surrounding meat consumption and production, and reclaiming life through environmental movements and sciences. However, North Korea is relatively left out. South Korean cases, especially focusing on the post-Park Chung Hee period, are dominant, making up six of the nine chapters, while the last two of the four themes exclusively cover South

1. For the meaning of co-production, see Jasanoff (2004).

Korean experiences. This imbalance might reflect the lack of scholars working on North Korean or premodern history from an environmental history perspective and the widely accepted historiography that locates the emergence of civic environmental movements in South Korea in the 1980s and 1990s. Editors skillfully resolve this imbalance, however, by offering a wider historical background in the introduction to each theme.

The first part, "Imperial Interventions," consists of two chapters concerning the environmental footprints of two empires—the Mongolian Empire and Japanese Empire—in forming the Korean landscape and conservation policy. According to John S. Lee (chapter 1), the Mongolian Empire influenced not only the introduction of horses and pastures to Jeju Island but also pine-dominated landscapes in the southern part of the Korean Peninsula. A similar ecological transformation is observed by Joseph Seeley on the Yalu River during and after Japanese imperial rule (chapter 2). The Japanese Empire's establishment of the Supung Dam devastated freshwater fishing of icefish, and its freshwater aquaculture policy during wartime was sustained in the postwar regional developmentalist projects of the two postcolonial states of North Korea and the People's Republic of China.

The second part, "Crisis and Response," includes three chapters dealing with responses to various environmental crises. Sooa Im McCormick contributes to the recent buzzing interest in the impact of the Little Ice Age and argues that the frugality-centered material culture of the eighteenth-century Joseon Dynasty was a result of responses to economic crises caused by the climate disaster during the Little Ice Age (chapter 3). For this reviewer, the specter of climate determinism looms here, a hotbed of debates surrounding the writing of climate history for premodern Korea. I am not an expert in eighteenth-century Joseon history, but I would mention that Korean historians in this field have been more cautious about applying the crisis thesis because climate records in the *Joseon wangjo sillok* (Veritable records of the Joseon Dynasty) and *Seungjeongwon ilgi* (Daily records of the Royal Secretariat of the Joseon Dynasty) are quite selective in the Confucian political context (Gyeong 2022).

The next two chapters in the second part focus on the two Koreas' responses to environmental disasters caused by their developmentalist policies. Hyojin Pak shows that Nanji-do, a landfill in Seoul reclaimed as an ecological park, was a site created to resolve two urgent environmental issues in Seoul in the late 1970s: the exponential growth in waste and increasing number of urban poor (chapter 4). Although the landfill reclamation is still often recalled in the public memory of this site (e.g., the exhibition hall at the Seoul West Park Leisure Center), the labor of the urban poor and their lives on this site have been forgotten since its

"environmentally friendly" reconstruction in the 1990s. Ewa Eriksson Fortier and Suzy Kim narrate the development of North Korea's adaptation to natural disasters in relation to food security since the 1970s (chapter 5). According to them, the first significant turning point was the promulgation of the Environmental Protection Law in 1986, and from the 1990s on, via and together with North Korea's Red Cross, international humanitarian aid from the International Federation of Red Cross and Red Crescent Societies helped local communities to develop various long-term sustainability programs, spanning from disaster preparedness to reforestation. The authors assume that climate change was a cause of food crises and other natural disasters from the 1970s and 1990s, which is somewhat problematic for two reasons. First, the effect of anthropogenic climate change was not so evident until the late 1970s; by the mid-1970s, scientists were beginning to agree on anthropogenic climate change but with two opposing predictions—the drastic ice age and hotter earth (Weart 2008). Second, this assumption might reify the North Korean famine and other disasters during the 1990s as a result of climate change or natural causes, contrary to the widely agreed view of contemporary disasters as having socio-natural causes in the field of STS (Fortun et al. 2017).

In the third part, "Processes of Dispossession," two chapters pay attention to environmental destruction in South Korea with a focus on meat production and consumption. Anders Riel Müller persuasively explains the historical origin of a seemingly paradoxical feature of the Korean agricultural landscape, that is, the dominance of rice fields in the Korean landscape despite "meatification,"—a dramatic increase in meat consumption and livestock production (chapter 6). This has been enabled by a reliance on imported feed since the 1980s and recently by the externalization of feed production through the establishment of feed grain farms abroad, such as in Argentina and Brazil. By doing so, South Koreans have also externalized the environmental burden of meatification. In the following chapter, Lindsay S. R. Jolivette examines a cultural response to this meatification by analyzing visual media in a similar time frame (chapter 7). In Korean zombie films made in the mid-2000s, she sees both a sociocultural anxiety about the recent transition to mass meat consumption and production in South Korea, and a responding criticism to that transition.

The final part, "Reclaiming Life," contains three chapters focusing on South Korean civic environmental philosophy and related movements, including organic farming, local conservation, and anti-nuclear-energy activism. Yonjae Paik traces the history of organic farming movements with a focus on activists' efforts to establish self-sufficient cooperatives independent from the capitalist market's exploitive and centralized food systems and challenges made by the commer-

cialization of organic farming, as vividly presented in the organic food cooperative Hansalim's experience (chapter 8). Jeongsu Shin provides an eloquent in-depth ethnographical sketch of the socio-material emergence of *Gotjawal* as a space symbolizing a Jeju-esque natural resilience. This was achieved by the activities of local journalism, environmental activists, Jeju natives, and non-humans, including *Daphne jejudoensis* (chapter 9). In the final chapter, Nan Kim chronicles the history of South Korea's nuclear energy policy and ecological democratic movements opposing it. Kim also pays attention to the impact of natural forces—specifically, the 2016 Gyeongju earthquake—in the debates surrounding the nuclear energy system and its waste disposal issues (chapter 10).

Finally, the epilogue written by editors Albert L. Park and Eleana J. Kim is noteworthy for suggesting a new framework for future avenues of research. They note that the two Koreas, aside from the Korean War and the North Korean famine, have not experienced a singular large-scale catastrophe like Japan's frequent earthquakes, including the 2011 Tōhoku earthquake and tsunami. Scott G. Knowles's concept of "slow disasters," which manifest in daily life over time, is more appropriate to describe environmental issues in the Koreas (Knowles 2020). In this context, Park and Kim propose a close historical and ethnographic examination of "everyday ecologies." This means analyzing "people's daily practices in relation with nonhuman entities and how these interactions shape and reshape ecologies" to identify "a diverse range of environmental issues and the changes, damage, and destruction that they may have caused on the scale of daily life" (180). They discern three research areas from this framework of everyday ecologies: critical ecologies, landscapes of militarized modernity, and vernacular climate change.

How will future researchers explore these areas? Park and Kim stress how science and technology, along with capitalism and religion, have configured and transformed the Korean environment. They call for an examination of the historical process of the establishment and impact of science and technology in order to understand changes in human and nonhuman relationships in the environment and society. For instance, in relation to critical ecologies, the editors suggest the question, "How are scientific epistemologies of 'eco-,' which are embedded in Western epistemologies and modernist natural sciences, translated and transformed in Korean contexts?" (182). Such questions require a sophisticated analysis of both environmental history and the history of science. I believe the latter is an area as new and challenging as environmental history for Korean studies scholars interested in the environmental turn.

The good news for them is that they do not have to start from scratch. A small but vibrant community of Korean historians of science has committed

itself to studying the complex relationship between science and technology, the state, and the environment. These scholars initially focused on the agricultural and afforestation policies of the developmentalist Park Chung Hee regime, recently expanding their interests to include hydropower infrastructure, resource management and circulation—including the history of Nanji-do—ecology and ecosystems in scientific and legal fields, and various disaster activisms, including the asbestos disaster, humidifier disinfectant disaster, and Sewol ferry disaster activism. Some Korean historians of science have also focused on the relationship between animals and humans in premodern Korea. Now, historians of North Korean history have also joined this vibrant community, contributing to the deeper intersection of Korean history, environmental history, and the history of science.[2] Future ethnographic and historical research on everyday ecologies in Korea, especially focusing on science and technology, will be more productive if it proactively collaborates with Korean historians of science.

References

Fortun, Kim, Scott Gabriel Knowles, Vivian Choi, Paul Jobin, Miwao Matsumoto, Pedro de la Torre III, Max Liboiron, and Luis Felipe Rosado Murillo. 2017. "Researching Disaster from an STS Perspective." In *The Handbook of Science and Technology Studies*, edited by Ulrike Felt, Rayvon Fouche, Clark A. Miller, and Laurel Smith-Doerr, 1003–1028. Cambridge, MA: MIT Press.

Gyeong Seokhyeon. 2022. "Joseon hugi wigi damnon i goryeo haeya hal myeot gaji yuui sahang" [Some points to consider in the crisis discourse of the late Joseon period]. *Gogung munhwa* 15: 67–92.

Hyun, Jaehwan, and John P. DiMoia. 2022. "Korean Science since the Colonial Period: Environment, Medicine, and Technology in Transwar Korea." *Korea Journal* 62, no. 3: 5–19.

Jasanoff, Sheila. 2004. "The Idiom of Co-Production." In *States of Knowledge: The Co-Production of Science and the Social Order*, edited by Sheila Jasanoff, 1–12. New York: Routledge.

Knowles, Scott Gabriel. 2020. "Slow Disaster in the Anthropocene: A Historian

2. The list of publications is too long to include here. If interested in the case studies mentioned above, see the recent issues in *Hanguk gwahaksa hakoeji, Hanguk hwangyeong sahoehak yeongu*, and *Gwahak gisulhak yeongu*. Korean historians of science interested in the Korean landscape and disasters are active in their field's international community, so one can find related publications in *East Asian Science, Technology, and Society: An International Journal, History of Science, History and Technology*, and *Technology's Stories*. For an English introduction to the field of history of science in South Korea, see Hyun and DiMoia (2022).

Witnesses Climate Change on the Korean Peninsula." *Daedalus* 149, no. 4: 192–206.
Weart, Spencer R. 2008. *The Discovery of Global Warming*. Cambridge, MA: Harvard University Press.

Jaehwan Hyun
Assistant Professor
Institute of Liberal Education
Pusan National University