



Gongsheng in Ecological Anthropology

Weijia Zhou and Jun He

ECOLOGICAL ANTHROPOLOGY AND GONGSHENG

Ecological anthropology is a science that uses the theories and methods of anthropology to study the relations between culture, society, and the environment. One of the core tasks of ecological anthropology is to observe and reveal how humans live in a state of *gongsheng* with nature. Its perspectives, theories, and methods have expanded along with the development of related fields. Environmental determinism, cultural ecology, and neofunctionalism reveal different views of *gongsheng*.

In the early twentieth century, it was believed that nature and humanity, environment, and culture were two separate systems. Environmental determinists believed that nature played a dominant role in shaping people, the environment in shaping culture; the only difference

W. Zhou · J. He (✉)

National Centre for Borderland Ethnic Studies in Southwest China, Yunnan University, Kunming, China

e-mail: jun.he@ynu.edu.cn

W. Zhou

e-mail: weijia_619@163.com

W. Zhou

Institute of Ethnic Culture, Dali University, Dali, China

© The Author(s) 2024

B. Song and Y. Zhan (eds.), *Gongsheng Across Contexts*,
https://doi.org/10.1007/978-981-99-7325-5_10

was that of degree. Some described a causal relationship between the environment and culture; some questioned the direct causal relationship between similar geographical environments and different cultural characteristics; some believed the environment was a limiting factor in the development of cultural traits.¹ In the sociocultural sphere, Evans-Pritchard incorporated the geographical environment and local factors into a complete, complex social relationship, describing a social formation in which lifestyle, livelihood, and structure were directly restricted by systems of the ecological environment.² Although their views differed in some respects, the commonality of the above research was the tendency to view nature and humanity, environment, and culture as two separate systems.

In the 1950s, this tendency changed. Julian Steward viewed the core of culture as the integration of the environment with technology and the ways it is used. He studied how special environments and special cultures influence each other's development. Clifford Geertz believed cultural ecology created a conceptual system with integrative qualities, i.e., an effective ecosystem. Cultural and environmental factors interact with each other in this system: from this point onward, the distinction between conducting analysis from a "human" perspective and from the perspective of "nature" disappeared because, in actuality, these two perspectives belonged to the overlapping and mutually transformative analytical methods of the same system.³ From the relational perspective, cultural ecology discusses nature and humanity, environment, and culture as an integrated whole.

In the 1960s, culture and humans were internalized as a part of the ecosystem. Neofunctionalism, including systems theory and cultural materialism, viewed people as a part of the ecosystem and revealed the functional relationships between people and other parts of the ecosystem.⁴ Roy A. Rappaport's *Pigs for the Ancestors: Ritual in the*

¹ Yi Luo, *The Theory and Methods of Ecological Anthropology* (Beijing: China Science Publishing & Media, 2021).

² E. E. Evans-Pritchard, *The Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People* (Nabu Press, 2011).

³ Clifford Geertz, *Agricultural Involution: The Processes of Ecological Change in Indonesia* (Berkeley: Univ of California Press, 1969).

⁴ Emilio F. Moran, *Human Adaptability: An Introduction to Ecological Anthropology* (New York: Routledge, 2018).

Ecology of a New Guinea People is an exemplary work of this view that incorporates the environment with society and culture into one system and describes ritual—a perennial focus of anthropology—as key to regulating the relationship between people and the environment.⁵

Currently, the idea and paradigm that humans live in a state of *gongsheng* with nature and that human society and the environment influence each other to create complex systems is widely recognized by ecological anthropologists.⁶ In China, thanks to wise traditional practices and reliable field surveys conducted by local ecological anthropologists, endogenous ecological anthropology has always discussed culture and environment, humanity, and nature as a whole.⁷

GONGSHENG: LINKING CULTURAL DIVERSITY AND BIOLOGICAL DIVERSITY

How do humans and nature achieve a state of harmonious *gongsheng*? The key to understanding this question is the clear relationship between cultural diversity and biological diversity, as well as the interacting mechanisms of this relationship.

How are cultural diversity and biodiversity related? Research has clearly shown that places with a high diversity of languages, religions, ethnicities, and cultures are also places with a high diversity of plants, animals, and other organisms.⁸ Similarly, as biodiversity around the world has decreased, so too has linguistic and cultural diversity, showing that there is some type of functional connection between the two.⁹ Maintaining these two types of diversities requires a comprehensive strategy focusing

⁵ Roy A. Rappaport, *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People* (New Heaven: Yale University Press, 2016).

⁶ Gerald G. Marten, *Human Ecology: Basic Concepts for Sustainable Development* (London: Routledge, 2001).

⁷ Jun He, Zhimei Zhou, Huixian Yang, and Jianchu Xu, “Integrative Management of Commercialized Wild Mushroom: A Case Study of Thelephora Ganbajun in Yunnan, Southwest China.” *Environmental Management* 48, no. 1 (2011): 98–108.

⁸ Jonathan Loh, David Harmon. “A Global Index of Biocultural Diversity.” *Ecological indicators* 5, no. 3 (2005): 231–241.

⁹ L. J. Gorenflo, Suzanne Romaine, Russell A. Mittermeier, and Kristen Walker-Painemilla, “Co-Occurrence of Linguistic and Biological Diversity in Biodiversity Hotspots and High Biodiversity Wilderness Areas.” *Proceedings of the National Academy of Sciences* 109, no. 21 (2012): 8032–8037.

on special regions. Southwestern China is a region high in cultural and biological diversity, where there are numerous precedents for the coexistence and coordination between cultural and biological diversity at different levels and scales.¹⁰ People of different ethnic groups, each of which has different faiths, traditional knowledge, and social formations, living in different natural terrains, topologies, elevations, and climates interact with biological diversity at different genetic, landscape, and ecosystem scales, making southwest China one of the most biologically and culturally diverse regions on the planet. The belief in sacred mountains and forest conservationism of the Tibetan people, as well as the herbal medicine knowledge and species conservationism of the Yao people, are textbook examples of how cultural diversity and biological diversity interact with and reinforce one another.

What mechanisms actuate this relationship? The natural environment and biological diversity serve, limit, and harm human society; humans, meanwhile, study, change, and use the environment and distribute the benefits obtained from it. The services of the natural environment and biological diversity include supportive service, supply service, regulative service, and cultural service.¹¹ Cultural service refers to the intangible benefits humans derive from the ecosystem, including spirituality, religion, diversion, ecotourism, beauty, a sense of place, and cultural heritage. Cultural service and other services, as well as limits and harm that come from the natural ecosystem, affect cultural diversity together.

Humans, meanwhile, react back to nature and biological diversity on three levels: epistemology, technological implementation, and social organization. Epistemology and cosmology refer to how humans understand nature, how we understand the relationship between humanity and nature, and how we explain natural phenomena, social phenomena, and the phenomena of interaction between humanity and nature using our understanding. Technological implementation refers to how we organically integrate agriculture with forestry; how we organically integrate human behavior with natural succession; and how we diversify agricultural, arboricultural, and nomadic activities under the constraints of

¹⁰ Jianchu Xu, Erzi T. Ma, Duoje Tashi, Yongshou Fu, Zhi Lu, and David Melick, "Integrating Sacred Knowledge for Conservation: Cultures and Landscapes in Southwest China." *Ecology and Society* 10, no. 2 (2005): 7.

¹¹ Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being: Synthesis* (Washington, DC: Island Press, 2005.).

currently available resources. Organizational mechanisms refer to how we regulate the relationships between people, between people and society (the collective), and between societies using traditional, indigenous methods.¹²

Based on the above, cultural diversity and biological diversity become interlinked, which has an impact on biodiversity. Diverse ethnic and local cultures affect the richness of biodiversity in important ways. In terms of traditional knowledge, the widespread participation of traditional knowledge and local farmers in resource management and conservation of biodiversity can have immeasurable positive economic and ecological effects.¹³ In terms of technological implementation, research has proven that the much-criticized method of slash-and-burn agriculture, a local practice that appears to destroy forests and damage vegetation, is not as negative as one might assume. Rotating crops every couple of years allows for the restoration of vegetation and the ecological function of land through natural succession.¹⁴ In-depth research on slash-and-burn agriculture by the Chinese ecological anthropologist Yin Shaoting has shown that the slash-and-burn method is not the main culprit of vegetation damage; on the contrary, it is a wise practice that locals use to exploit and protect the resources and environment of specific habitats.¹⁵ On the level of local systems, while the impact of China's national forestation policies and ownership reforms on forest increase cannot be denied, local processes like livelihood changes and local systems are crucial to advancing and shaping the transformation of forests.¹⁶

¹² Jun He, *Current Ecological Anthropology in China*. Beijing: Social Sciences Literature Press, 2018.

¹³ Jun He, Zhimei Zhou, Horst Weyerhaeuser, and Jianchu Xu, "Participatory Technology Development for Incorporating Non-Timber Forest Products into Forest Restoration in Yunnan, Southwest China." *Forest Ecology and Management* 257, no.10 (2009): 2010–2016; He et al., "Integrative Management of Commercialized Wild Mushroom."

¹⁴ Shengji Pei, The Dynamics and Prospects of the Disciplinary Development of Ethnic Botany. *Acta Botanica Yunnanica* 云南植物研究, 25 (S) (2003): 1–10.

¹⁵ Shaoting Yin, *The Mountain Fire Faded Away: Swidden Agriculture in Anthropological Perspective* 远去的山火——人类学视野中的刀耕火种 Kunming: Yunnan People's Publishing House, 2008.

¹⁶ Jun He, Rong Lang, and Jianchu Xu, "Local Dynamics Driving Forests Transition: Insights from Upland Villages in Southwest China." *Forests* 5, no.2 (2014): 214–233.

DE-GONGSHENG: ANTHROPOCENE, CAPITALOCENE, AND GLOBALIZATION

Even though local practice and scientific research have verified the constructive interplay between cultural and biological diversity, the effects of the Anthropocene, the “Capitalocene,” and globalization have led to “*de-gongsheng*,” which has, in turn, caused a series of complex ramifications.

In the 1980s, Eugene Stoermer, an ecologist at the University of Michigan, introduced the concept of the Anthropocene, which he described as a new era in which human behavior was now the driving force in changing the planet.¹⁷ This narrative views humans as the primary cause of global warming and species extinction, a view that describes and encapsulates the violence and rapacity with which humans have exploited and changed the natural world in recent history. After the founding of the People’s Republic of China in 1949, the Chinese government launched the Four Pests campaign in an attempt to increase food production. The motto behind this movement, “humanity can prevail over nature,” suggested that humans existed outside of nature, and that humans were above nature. The polderization (the reclaiming of land from the sea or in wet zones by building levees, filling, and draining) of Dianchi Lake in Yunnan also showed how humans placed their own short-term interests above the natural order.¹⁸

In relation to the Anthropocene, in 2009 some Marxist ecologists and environmentalists proposed the “Capitalocene,” the concept that nature was being organized into the ecosystem of capitalism,¹⁹ highlighting the problem of the capitalization and commodification of nature. Since 2007, the sharp increase in the leasing and selling of land on a global scale, along with the upsurge in demand for food, biofuel, and cash crops, has intensified the capitalization and commodification of nature. To provide one example of this phenomenon, rubber tree plantations in Xishuangbanna, Yunnan grew from 87,226 hectares in 1992 to 336,434 hectares

¹⁷ Paul J Crutzen and Eugene F. Stoermer. “The Anthropocene.” *Global Change Newsletter* 41 (2000): 17–18.

¹⁸ Tania Murray Li, *The Will to Improve: Governmentality, Development, and the Practice of Politics*. Durham: Duke University Press, 2007.

¹⁹ Jason W. Moor, *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*. Oakland: PM Press/Kairos, 2016.

in 2010,²⁰ a 3.85-fold increase. Some scholars believe China's special land ownership arrangements, internal financing, and utilization of local diversity have allowed China's land transactions and crop planting to have a positive impact on the economy, ecology, and society.²¹ Unlike China, however, the capital for most land transactions and crop planting around the world flows from developed countries to developing countries, while the opposite is true of the flow of land and labor, which has complicated social, ecological, and economic effects. Research has shown that most of the time, the sale of land not only does not benefit the economy, but it can widen the wealth gap and gender disparity of a region. Most land sales damage soil, forests, and the ecosystem and can cause water pollution and other negative ecological effects. At the same time, while the planting of some biofuels can improve a portion of the land where the energy crops are planted, they nevertheless pollute the cropland, resulting in a sort of "pollution transfer." The changes brought about by land transactions often result in changes to traditional land ownership, livelihoods, cultural practices, and social governance structures. They can also lead to issues such as forced relocation, loss of land rights, exploitation by elites, and gender and wealth disparities.²²

More universally noticed than either the Anthropocene or the Capitalocene is globalization, which has impacted cultural and biological diversity more directly. Globalization refers to the large-scale, high-speed movement of people, goods, capital, technology, information, symbols, and ideas around the world, creating close connections and frequent interaction between different societies and cultures.²³ The onslaught of globalization has often put cultural diversity in dire straits. Research has shown that the younger generation is far less knowledgeable about traditional culture, such as the idea of sacred mountains, than the older

²⁰ Jianchu Xu, Philip Beckschäfer, and R. Edward Grumbine. "Landscape Transformation through the Use of Ecological and Socioeconomic Indicators in Xishuangbanna, Southwest China, Mekong Region." *Ecological Indicators* 36 (2014): 749–756.

²¹ Xiaobo Hua, Yasuyuki Kono, and Le Zhang. "Excavating Agrarian Transformation Under 'Secure' Crop Booms: Insights from the China-Myanmar Borderland." *The Journal of Peasant Studies* (2021): 339–368.

²² Bin Yang, Jun He, "Global Land Grabbing: A Critical Review of Case Studies across the World." *Land* 10, no. 3 (2021): 324.

²³ Ming He, "The Topic of Globalization and its Anthropological Issues 全球化及其人类学论题." *Thinking 思想战线* 42, no. 4 (2016): 1–12.

generation.²⁴ The loss of elements of cultural diversity, such as language, has been threatened more than the loss of species diversity.²⁵ In response to these trends, some anthropologists have worked hard to establish ethnic culture villages and museums as spaces free from the influence of the outside world, where they can be restored and preserved. The issue of how to keep static culture “fresh,” however, is one that deserves attention.

RE-INTRODUCING GONGSHENG: INDIGENOUS KNOWLEDGE, ENVIRONMENTAL JUSTICE, AND MULTISPECIES ETHNOGRAPHY

As the process of *de-gongsheng* continues to intensify, the *gongsheng* of ecological anthropology and its values require greater commitment and development. A return to *gongsheng* is both academically and practically needed. There are three routes to consider for re-introducing *gongsheng* that apply to both academic research and the practice of protecting cultural and biological diversity:

- (1) Integrating indigenous knowledge and traditional culture with protection and development practices,
- (2) Coordinating relationships between people and integrating environmental justice to promote cultural and biological diversity,
- (3) Embracing multispecies ethnography to discover possibilities that link biological diversity with cultural diversity.

The Reorganization, Rediscovery, and Reuse of Indigenous Knowledge and Traditional Culture

Indigenous populations with a history of continuous utilization of local resources often possess extensive knowledge of the complex behavior of the ecological systems in their area. This knowledge, obtained by diachronic observation, can supplement scientific knowledge based on

²⁴ Teri. D. Allendorf, Jodi S. Brandt, and Jian M. Yang, “Local Perceptions of Tibetan Village Sacred Forests in Northwest Yunnan. Biological Conservation.” *Biological Conservation* 169 (2014): 303–310.

²⁵ William. J. Sutherland, “Parallel Extinction risk and Global Distribution of Languages and Species.” *Nature* 423, no. 6937 (May 2003): 276–279.

synchronic observation. Indigenous populations who have relied on the environment to provide them with resources for long periods of time have made singular contributions to the protection and strengthening of biodiversity.²⁶ During the construction of Potatso National Park in the Tibetan region of southwestern China, local nomadic and religious culture were purposefully preserved and worked into the design of the landscape, thus achieving coordination between cultural and biological diversity. Recognizing local cultural practices, considering local cultural requirements, and adopting an inclusive approach to conservation projects are effective means of advancing cultural and biological diversity.²⁷ The Honghe Hani Rice Terraces, a UNESCO Intangible Cultural Heritage site, is a world-class example of coordination between cultural and biological diversity. In this system, the diverse cultures of different ethnic groups are coordinated, building organizational mechanisms to organically integrate different natural and human elements such as forests, villages, terraced fields, and drainage systems. This ensures the effective operation of the structure and functionality of cultural ecology.²⁸

The Coordination of Relationships Between People and the Integration of Environmental Justice

On some level, the relationship between humanity and nature is essentially the relationship among people themselves. Not considering the concerns of the local community or protecting their rightful interests can lead to the marginalization of certain groups and can even lead to varying forms of revolt.²⁹ A case study of communal forestry in a densely populated,

²⁶ M. Gadgil, Fikret Berkes, and Carl Folke, "Indigenous Knowledge for Biodiversity Conservation." *Biodiversity: Ecology, Ecology, Economics, Policy* (1993): 151–156.

²⁷ He Jun, and Na Guo. "Culture and Parks: Incorporating Cultural Ecosystem Services into Conservation in the Tibetan Region of Southwest China." *Ecology and Society* 26(3),2021, <http://dx.doi.org/10.5751/ES-12572-260312>.

²⁸ Dan Luo. *Beneficial Water Resources and Harmonious Relationship: Irrigation Order and Ethnic Resilience in the Hani Rice Terraces* 水善利与人相和: 哈尼梯田灌溉社会中的族群与秩序. Beijing: Social Sciences Literature Press 2022.

²⁹ Sayuni B. Mariki, Hanne Svarstad, Tor A. Benjaminsen, "Elephants over the Cliff: Explaining Wildlife Killings in Tanzania." *Land Use Policy* 44 (2015): 19–30.

culturally heterogeneous village in China's southwest proved that environmental justice at the levels of distribution, process, and acknowledgment is an important condition for managing local forestry in an effective and lasting way, effectively promoting biodiversity conservation.³⁰

Embracing Multispecies Ethnography

The emergence of multispecies ethnography runs parallel with the ontological shift of anthropology, recreating a state of *gongsheng* that crosses the boundary between humanity and other species with distinct character. The three notable characteristics of multispecies ethnography are a network-style arrangement, situated linking, and the simultaneous development of openness and hope.³¹ In *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, Anna Tsing tells a story of unstable livelihoods and the environment by tracking groups of people and commercial trade related to the matsutake mushroom, as well as its multispecies and ecological connections, revealing cracks in the global political economy. Tsing looks for opportunities for coexistence in destabilized environments, describing the possibility for life among multiple species that do not contend with one another despite not living in harmony.³² The book *Becoming Salmon: Aquaculture and the Domestication of a Fish* describes the weak and unpredictable relational practices of the salmon farming industry, as well as the various methods of “becoming salmon” that it induces, showing how the intersection of humanity and nature is constantly taking shape in the journey of salmon and how the two shape each other's landscapes.³³ Multispecies ethnography is a powerful tool for discovering the possibilities of connecting biodiversity and cultural diversity on multiple levels.

³⁰ Jun He, Adrian Martin, Rong Lang, and Nicole Gross-Camp, “Explaining Success on Community Forestry Through a Lens of Environmental Justice: Local Justice Norms and Practices in China.” *World Development* 142, (2021), 105,450.

³¹ Jianfeng Zhu, “Crossing Boundaries and Symbiosis: An Anthropological Response to a Global Ecological Crisis 跨界与共生: 全球生态危机时代下的人类学回应.” *Journal of Sun Yat-sen University (Social Science Edition)* 中山大学学报社会科学版, no. 4 (2019).

³² Anna Lowenhaupt Tsing, *The Mushroom at the End of the World. In The Mushroom at the End of the World*. Princeton: Princeton University Press, 2015.

³³ Marianne Elisabeth Lien, *Becoming Salmon: Aquaculture and the Domestication of a Fish*. Berkeley: Univ of California Press, 2015.

Gongsheng, *de-gongsheng*, and re-introduction of *gongsheng* among nature, humans, the environment, and culture is a core concern of ecological anthropologists. The concordance of cultural diversity and biodiversity is an incontestable fact. *De-gongsheng* is a one-sided delusion and desire of humanity that has created a host of social, economic, and ecological problems. Re-introducing *gongsheng* is a positive response to the needs of theory and reality. Measures such as reaffirming indigenous knowledge and traditional practices, integrating environmental justice to coordinate human relations, and encouraging a move toward multi-species ethnography are effective ways of promoting the revitalization of *gongsheng*.

This article is translated by Thomas Garbarini.

BIBLIOGRAPHY

- Alcamo, J. et al. *Ecosystems and Human Well-being: A Framework for Assessment*. Washington, D.C: Island Press, 2003.
- Allendorf, Teri. D., Jodi S. Brandt, and Jian M. Yang. "Local Perceptions of Tibetan Village Sacred Forests in Northwest Yunnan. *Biological Conservation* 169 (2014): 303–310.
- Crutzen, Paul J., and Eugene F. Stoermer. "The Anthropocene." *Global Change Newsletter* 41 (2000): 17–18.
- Evans-Pritchard, E. E. *The Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People*. Nabu Press, 2011.
- Gadgil, M., Fikret Berkes, and Carl Folke. "Indigenous Knowledge for Biodiversity Conservation." *Biodiversity: Ecology, Ecology, Economics, Policy* (1993): 151–156.
- Geertz, C. *Agricultural Involution: The Processes of Ecological Change in Indonesia* Berkeley: University of California Press, 1969.
- Gorenflo, L. J, Suzanne Romaine, Russell A. Mittermeier, and Kristen Walker-Painemilla. "Co-Occurrence of Linguistic and Biological Diversity in Biodiversity Hotspots and High Biodiversity Wilderness Areas." *Proceedings of the National Academy of Sciences* 109, no. 21 (2012): 8032–8037.
- He, Jun. *Current Ecological Anthropology in China*. Beijing: Social Sciences Literature Press, 2018.
- He, Jun, and Na Guo. "Culture and Parks: Incorporating Cultural Ecosystem Services into Conservation in the Tibetan region of Southwest China." *Ecology and Society* 26, no. 3 (2021). <https://doi.org/10.5751/ES-12572-260312>
- He, Jun, Adrian Martin, Rong Lang, and Nicole Gross-Camp. "Explaining success on Community Forestry Through a Lens of Environmental Justice:

- Local justice Norms and Practices in China.” *World Development* 142, (2021) 105450.
- He, Jun, Rong Lang, and Jianchu Xu. “Local Dynamics Driving Forests Transition: Insights from Upland Villages in Southwest China.” *Forests* 5, no. 2 (2014): 214–233.
- He, Jun, Zhimei Zhou, Horst Weyerhaeuser, and Jianchu Xu. “Participatory Technology Development for Incorporating Non-Timber Forest Products into Forest Restoration in Yunnan, Southwest China.” *Forest Ecology and Management* 257, no.10 (2009): 2010–2016.
- He, Jun, Zhimei Zhou, Huixian Yang, and Jianchu Xu. “Integrative Management of Commercialized Wild Mushroom: A Case Study of Thelephora Ganbajun in Yunnan, Southwest China.” *Environmental Management* 48, no.1 (2011): 98–108.
- He, Ming. “The Topic of Globalization and its Anthropological Issues 全球化及其人类学论题.” *Thinking* 思想战线 42, no. 4 (2016): 1–12.
- Hua, Xiaobo, Yasuyuki Kono, and Le Zhang. “Excavating Agrarian Transformation Under ‘Secure’ Crop Booms: Insights from the China-Myanmar Borderland.” *The Journal of Peasant Studies* (2021): 339–368.
- Li, Tania Murray. *The Will to Improve: Governmentality, Development, and the Practice of Politics*. Durham: Duke University Press, 2007.
- Lien, Marianne Elisabeth. *Becoming Salmon: Aquaculture and the Domestication of a Fish*. Berkeley: Univ of California Press, 2015.
- Loh, Jonathan, and David Harmon. “A Global Index of Biocultural Diversity.” *Ecological indicators* 5, no. 3 (2005): 231–241.
- Luo, Dan. *Beneficial Water Resources and Harmonious Relationship: Irrigation Order and Ethnic Resilience in the Hani Rice Terraces 水善利与人相和: 哈尼梯田灌溉社会中的族群与秩序*. Beijing: Social Sciences Literature Press 2022.
- Luo, Yi. *The Theory and Methods of Ecological Anthropology*. Beijing: China Science Publishing & Media, 2021.
- Mariki, Sayuni B., Hanne Svarstad, Tor A. Benjaminsen. “Elephants over the Cliff: Explaining Wildlife Killings in Tanzania.” *Land Use Policy* 44 (2015): 19–30.
- Marten, Gerald G. *Human Ecology: Basic Concepts for Sustainable Development*. London: Routledge, 2001.
- Millennium Ecosystem Assessment. *Ecosystems and Human Well-Being: Synthesis*. Washington, DC: Island Press, 2005.
- Moor, Jason W. *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism* Oakland: PM Press/Kairos, 2016.
- Moran, Emilio. F. *Human Adaptability: An Introduction to Ecological Anthropology*. New York: Routledge, 2018.
- Pei, Shengji. The Dynamics and Prospects of the Disciplinary Development of Ethnic Botany. *Acta Botanica Yunnanica* 云南植物研究, 14 (S) (2003): 1–10.

- Rappaport, Roy A. *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People*, New Heaven: Yale University Press, 2016.
- Sutherland, William. J. "Parallel Extinction Risk and Global Distribution of Languages And Species." *Nature* 423, no. 6937 (May 2003): 276–279.
- Tsing, Anna Lowenhaupt. "The Mushroom at the End of the World." In *The Mushroom at the End of the World*. Princeton: Princeton University Press, 2015.
- Yin, Shaoting. *The Mountain Fire Faded Away: Swidden Agriculture in Anthropological Perspective* 远去的山火——人类学视野中的刀耕火种 Kunming: Yunnan People's Publishing House, 2008.
- Xu, Jianchu, Erzi T. Ma, Duoje Tashi, Yongshou Fu, Zhi Lu, and David Melick. "Integrating Sacred Knowledge for Conservation: Cultures and Landscapes in Southwest China." *Ecology and Society* 10, no. 2 (2005): 7.
- Xu, Jianchu, Philip Beckschäfer, R. Edward Grumbine. "Landscape Transformation through the Use of Ecological and Socioeconomic Indicators in Xishuangbanna, Southwest China, Mekong Region." *Ecological Indicators* 36 (2014): 749–756.
- Yang, Bin, Jun He. "Global Land Grabbing: A Critical Review of Case Studies across the World." *Land* 10, no. 3 (2021): 324.
- Zhu, Jianfeng. "Crossing Boundaries and Symbiosis: An Anthropological Response to a Global Ecological Crisis 跨界与共生: 全球生态危机时代下的人类学回应." *Journal of Sun Yat-sen University (Social Science Edition)* 中山大学学报社会科学版, no. 4 (2019).

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits any noncommercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if you modified the licensed material. You do not have permission under this license to share adapted material derived from this chapter or parts of it.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

