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Global ecological civilization: An analysis of macro-level policies of the Belt and Road Initiative

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ABSTRACT

The critical study of China's influence on global sustainability is imperative, given its emergence as a global power. This paper examines China's leading environmental discourse—ecological civilization—in the global context. Although ecological civilization has become a key envisioning concept in China's domestic environmental politics and governance, the meanings of the term on the international stage have not been fully explored. This study empirically examines how ecological civilization is integrated into the Belt and Road Initiative—China's most significant international policy under Xi. We conducted a thematic content analysis of macro-level guiding policies that cover the core content of the Belt and Road Initiative and underpin the formulation of other sectoral-specific policies. The evidence suggests that the objectives and schemes of the Belt and Road Initiative represent a distinct interpretation of ecological civilization in comparison to its domestic version, with a heavy emphasis on developmentalism, free trade, and voluntary environmentalism but remain ambiguous about ideas such as eco-socialism, state control, and human-nature harmony. A shared aspect between domestic and international discourses is the emphasis on the use of technologies as a means of addressing environmental challenges, which suggests that the Belt and Road Initiative inspires to promote Chinese eco-technologies and industries overseas.

Introduction

The concept of ecological civilization (*shengtai wenming*) has been taken up by the Chinese government as a key political discourse and guiding philosophy for the country's unique brand of environmentalism (Gare, 2012; Hansen, Li, & Svarverud, 2018; Lo, 2020a; Pan, 2016). Xi Jinping gave ecological civilization a prominent place in the constitution, which cemented the prominent role of the ideology in economic planning and environmental governance. Perhaps more importantly, ecological civilization features prominently in *Xi Jinping's Thought*—the political manifesto that guides the actions of Chinese people. Since then, the Chinese government has drastically increased the expenditure on environmental protection, incorporated many environmental policies, and introduced new, and strengthened the existing, environmental governing institutions (Jiang, Bai, Wong, Xu, & Alatalo, 2019; Kostka & Zhang, 2018; Lo, 2020a; Lo & Castán Broto, 2019; Shin, 2018). In addition to becoming the ideological foundation for the government's strict environmental regulations, ecological civilization is a frequent topic on state media services such as Xinhua News Agency and People's

Daily; it has been estimated that more than 170,000 articles in mainstream press-media in China have raised the subject of ecological civilization (Heurtebise, 2017). The extensive media coverage has ensured that the ideology and its primary message of protecting the environment is widely accepted by the common citizens of China (Hansen & Liu, 2018).

The popularity of ecological civilization has undoubtedly made a significant impact on domestic affairs, but its implications on the international front are less understood. Ecological civilization influences not only the country's domestic policies but also its foreign policies. Therefore, it is critical to examine how China's ecological civilization can contribute to global sustainability. There is no doubt that China's influence in global environmental governance is rising (M. Liu, Lo, Westman, & Huang, 2022). A case in point is the Belt and Road Initiative (BRI), a mega infrastructure project that aims to improve the connectivity of many developing countries, especially in Asia and Africa (Sum, 2019). In 2017, environmental protection became an official goal of the BRI when the Ministry of Ecology and Environment with four other ministries released the "Guidance on Promoting a Green Belt and Road"

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(Harlan, 2021). The government has since sponsored numerous conferences on ecological civilization to promote the idea internationally (Gare, 2012). An eco-civilized global future can have significant implications for nearly two-thirds of the world's population that are affected by the BRI. As noted by Hansen et al. (2018), this makes China a new power that attempts to formulate a vision for the global future focusing on the environment, i.e., a *global ecological civilization*.

The concept of global eco-civilization also raises critical questions about the potential for the BRI may be perceived as a form of eco-imperialism. Eco-imperialism is understood here as strong and dominating nations using their superior political-economic power to impose their own environmental values and technologies on weaker nations (Mushkat, 2003). The concept is commonly employed to describe the imposition of Western-style environmental policies and conservation practices on non-Western societies (Doro & Swart, 2019). For example, conservation projects that prioritize the protection of wildlife over the rights and needs of local communities reflect and perpetuate colonial-era power dynamics (Mbaiwa & Hambira, 2023). Eco-imperialism limits the agency and autonomy of subaltern countries to pursue their own development goals and address environmental challenges in their own ways (Johnston, 1992). This can result in social and environmental injustices, such as the displacement of indigenous communities, the destruction of local ecosystems, and the exacerbation of poverty and inequality. It is therefore important to clarify the way the Chinese government intends to employ the concept of eco-civilization internationally.

The rest of the paper is organized as follows. Section 2 explains the concept of ecological civilization from the Chinese perspective. Section 3 provides relevant background information regarding the Green Belt and Road Initiative. Section 4 explains the methodology. It explains how the data for our analysis was sourced from a collection of high-level official documents that could throw light on the motives of the Chinese government. Results are presented in Section 5; and Section 6 offers some concluding thoughts on the implications of the findings.

Interpretations of ecological civilization

Ecological civilization is a powerful socio-technical imaginary that envisions a society characterized by environmental sustainability (P. Huang & Westman, 2021). Like the malleable concept of sustainable development, ecological civilization is a high-level concept with many interpretations about its meanings. According to Gare (2021), the concept has an eco-socialist root first developed by Soviet scientists and philosophers in the early 1980s. From the perspectives of eco-socialism, eco-civilization is an alternative socio-economic formulation differing from the dominating capitalist system. It argues that capitalism cannot be compatible with sustainability because it is a system that must continue to expand and promote consumption, while ignoring the limitations of natural resources and the ability of the earth to absorb waste (Zhu & Lo, 2022). An ecological civilization, in this formulation, is one that is opposite to capitalism in essentially all aspects: it does not grow unbridled, does not entice people to consume more, protects the life support system and respects limits, makes decisions based on long-term societal needs, fosters a culture of cooperation, and promotes truly democratic decision-making. Economically, ecological civilization replaces the logic of capitalist efficiency with the metabolic efficiency of natural cycles (Magdoff, 2011). The difference is that the former aims to produce with the least possible amount of input to maximize profits and drive consumption, whereas the latter respects the limits of nature. Production that conforms to the efficient natural cycle principle should minimize negative environmental effects and follow the principle of “cradle to cradle” where reuse of materials is built into the original product (Z. Zhang, 2022).

Ecological civilization from the eco-socialist perspective is also about democratic governance and empowerment that take place at the community level (Gare, 2012). In contrast to neoliberal and technocratic

environmentalism, which concentrate powers to big corporations and “experts”, respectively, ecological civilization emphasizes giving common people the rights and means to make political, economic, and environmental decisions. This is because commoners are well aware of local needs and are the most affected by developmental measures. A systematic supervisory to and, if necessary, removal of authority at all levels should be included in the self-regulation system (Magdoff, 2011). Furthermore, proponents of eco-civilization argues that a diverse society comprising people with different backgrounds, interests, opinions, and abilities, but dedicated to similar goals, can enable better decision-making because of the amalgamation of different ideas. Diversity can also provide more security and social, cultural, and economic power to communities.

Within China, the concept of ecological civilization has been constructed and contested by scholars and, more influentially, the political class (Gare, 2012; Huan, 2016). While the concept has been used in Chinese academic circle since the 1980s, a breakthrough of eco-civilization in formal politics came from a decision issued in 2003 by the State Council to officially adopt eco-civilization as a flagship term in the national governmental policy. Since then, ecological civilization has appeared routinely in government reports, although they never offer a clear definition of what eco-civilization is (Huan, 2016). There is no single overarching official definition that unambiguously defines ecological civilization. In official discourse, the term typically refers to a form of civilization that succeeds industrial civilization and is characterized by a harmonious relationship between humans and nature (Dong, Pan, Zhang, & Sun, 2020). This vague definition leaves room for different interpretations of the concept, making it a contested idea that represents a political space for negotiating a future based on ecological principles (Geall & Ely, 2018).

Some academics in China have interpreted ecological civilization from a radical eco-socialist perspective—one that recognizes that environmental protection is not merely a technical problem but more fundamentally, a socio-political issue. The initial drive for ecological civilization can be understood as a reaction to the belief that the rise of capitalism in the post-reform China is the root cause of environmental catastrophes (Gare, 2012). Consequently, some Chinese academics call for a reimagining of Marxism as a struggle for environmental, cultural, political, economic democracy simultaneously, locally, and internationally. Huan (2016) argues that ecological civilization should be understood as double dimensions of “deep-green” and “red-green” perspectives.

The concept of ecological civilization also builds on China's traditional culture that emphasizes the importance of living in harmony with the natural world. Both academic and official visions of ecological civilization include cultural elements from the traditions of Confucianism, Taoism, and Buddhism. For instance, when the concept was first used by Qianji Ye in 1984, it was mainly used to describe a new pattern of civilization with the characteristic of a harmonious human–nature relation (Huan, 2016). In a similar vein, Xi Jinping has repeatedly stated that the objective of ecological civilization is to build a beautiful China where humanity and nature exist in harmony. As such, ecological civilization is seen in China as a way to uphold traditional Chinese values, especially the Confucian-Daoist concept of “unity of human and nature” (*tian ren he yi*). The attempt to build a linkage between the state-led discourse and sociocultural dynamics is likely intended to and has successfully mobilized public support and action for environmental protection (P. Huang & Westman, 2021).

The official ecological civilization discourse foregrounds the instrumental value of nature. A well-known formulation of ecological civilization, articulated by Xi Jinping, is that “clear waters and green mountains are gold and silver mountains” (Meng et al., 2021). This axiom implies that ecological civilization is about creating a clean and aesthetically pleasing environment where people can live and work, characterized by clear water and blue skies. This vision of ecological civilization makes an explicit connection between environmental

sustainability and economic prosperity, highlighting that the two goals are not mutually exclusive, but rather, they are interdependent (Yang, 2013). In other words, ecological civilization is seen as an opportunity to promote modernization from overlapping economic, political, and ecological perspectives and actions (Fabinyi et al., 2021).

In addition to the philosophical and cultural roots of the concept, debates on the meanings of ecological civilization in China often take a pragmatic approach—the development of specific policies and technologies aiming at promoting environmental protection. Ecological civilization in China arises as a response to the acute environmental pollution problems caused by the country's decades-long hyper-industrialization. Ecological civilization has been mobilized to support the use of technological innovation, such as the development and application of eco-technologies (M. Liu & Lo, 2022b). Under strong state support, Chinese firms have become key producers of renewable energy equipment and electric vehicles (Andrews-Speed & Zhang, 2018; Lo, 2014). Ecological civilization also serves to justify the use of top-down regulatory measures and tough enforcement mechanisms to address the environmental challenges created by decades of rapid industrialization and economic development. These measures include regulating enterprises' carbon emissions and energy consumption (Lo, 2020b), the prohibition of commercial logging in natural forest and grazing in grasslands (Lo & Zhu, 2022; Wang & Lo, 2022a), the closure of coal mines (Wang & Lo, 2022b), and the widespread deployment of low-carbon energy systems (Deng, Mah, Cheung, & Lo, 2023).

In sum, ecological civilization has gained a variety of philosophical, political, cultural, and practical meanings in China. This complex and multifaceted concept is rooted in both eco-Marxist critique at capitalism and Chinese traditional values of living in harmony with nature. As an official discourse, eco-civilization also represents a pragmatic approach to environmental governance and sustainable development. Hansen et al. (2018) argue that the official interpretation of eco-civilization supports economic growth, and there are no official documents supporting radical deep-green ideas such as slowing production and degrowth. In a similar vein, Huan (2016) observes that in China the ideology suffers from insufficient and uncritical conceptualization and elucidation and is often simplified into a reference for environmental policies. Environmental campaigns, policies, and agencies may be utilized as a means of legitimacy creation, even if their effectiveness in achieving substantive environmental restoration or protection is limited (J. Liu & Lo, 2022a). In a similar vein, legitimacy concerns may lead to the perception that ecological civilization is a revolutionary concept, even though it does not demand the level of sacrifice required under previous policies, such as the one-child policy. However, it is important to note that the struggle to (re)define ecological civilization still continues, and it is important to understand which vision prevails in the global context.

Ecological civilization and the Belt and Road Initiative

The term "Silk Road" was invented by the German scholar Ferdinand von Richthofen, referring to the ancient trade and cultural exchange routes connecting China to most Eurasian countries (Chin, 2013). In 2013, this concept was revived with the BRI proposed by Xi Jinping. The "Belt" refers to the Silk Road Economic Belt and the "Road" refers to the Maritime Silk Road. The BRI aims not only to rebuild ancient trade routes, but also to treat this historical and cultural meaning as the basis for new international cooperation (Toops, 2016; Woon, 2019). The BRI is often described as a groundbreaking international policy initiative and an unprecedentedly ambitious infrastructure project. It aims to stimulate development in a vast region covering the sub-regions in Asia, Europe, and Africa, which accounts for 64% of the world's population but only around 30% of the global GDP (Yiping Huang, 2016). As of March 2020, 138 countries have officially signed up to the initiative.

The BRI is motivated by China's economic interest and geopolitical ambitions (Cheng, 2016). First, after about several decades of sustained

economic development, China has become the world's second largest economy, but growth has slowed down significantly, with economic development dropping from 10.5% during the 2000s to 7.4% in 2014 and 6.9% in 2015. It is now evident that China's export-oriented and infrastructure-driven economic model is running out of steam. Hence, the government needs to find new ways to sustain its economic growth, which underpin its legitimacy. As such, the BRI is a combination of "capital logic" and "territorial logic", giving China a strong incentive to accumulate and expand capital on a large spatial dimension (X. Zhang, 2017). Second, as an emerging power, China is able to promote its own development experience and to exert greater international influence. In particular, the BRI aims to respond to a US-dominated world by presenting China as a viable alternative global leader (Clarke, 2018; S. Shen & Chan, 2018). Driven by these motivations, China is keen to invest in BRI countries to modernize their infrastructure and improve cross-border transportation and other critical infrastructure, which in turn will help China establish strong bilateral trade and economic integration with its partners. In this context, Chinese scholars have argued that the BRI is different from the past neoliberal globalization by presenting a new model characterized by "open, inclusive and beneficial to all" (W. Liu & Dunford, 2016; W. Liu, Dunford, & Gao, 2018).

However, in addition to encountering financial challenges such as debt dependency and risks of default (Ameyaw-Brobbe, 2018; Sum, 2019), there is a rising concern over the environmental impact of the BRI, especially for poorer countries that lack institutional capacity or the political will to regulate pollution (Yanying Huang, Fischer, & Xu, 2017; Teo et al., 2019). For instance, Aung, Fischer, and Shengji (2020) examined the environmental impact assessment (EIA) in 64 BRI countries and found that many EIA systems are not strong enough to prevent the "pollution haven" effect that Chinese investment may bring. This means that developing countries participating in the BRI may be enticed to adopt the "pollute first, clean up later" development model. In fact, although it is difficult to assess the long-term economic benefits of the Belt and Road Initiative, several discussions on the environmental risks brought by BRI to a country are emerging (Yanying Huang, 2019; Tracy, Shvarts, Simonov, & Babenko, 2017).

The BRI involves promoting economic development through industrialization, which means that the problems of local pollution and resource consumption may intensify (Cai, Che, Zhu, Zhao, & Xie, 2018; Teo et al., 2019). Furthermore, China's investment in energy infrastructure such as coal-fired power plants and oil pipelines in countries along the Belt and Road may increase their dependence on fossil fuels and create a carbon-intensive future for them (Ascensão et al., 2018). Investment in hydropower projects may also cause serious ecological problems. Furthermore, the BRI intends to enhance connectivity and trade. This goal can only be achieved by building a large amount of transportation infrastructure such as railways and highways. However, such large-scale constructions will inevitably cut through eco-fragile regions and pose a threat to biodiversity (Hughes, 2019; Lechner, Chan, & Campos-Arceiz, 2018).

Failure to address the negative environmental impacts of the BRI will seriously affect the world's poor and undermine the legitimacy of the project (Geng & Lo, 2022). In order to achieve a laudable vision of a "diversified, independent, balanced, and sustainable development", the Chinese government needs to address the contradictions between economic development and environmental protection and make greater efforts to improve environmental governance in host countries. At the Belt and Road Forum for International Cooperation in May 2017, Xi Jinping recognized that "efforts should be made to strengthen cooperation in ecological and environmental protection and promote ecological civilization so as to realize the goals set by the 2030 Agenda for Sustainable Development" (Xi, 2017). The ecological civilization was then officially required to be considered in the Belt and Road Initiative (Boer, 2019). However, while the aim of achieving ecological civilization has been officially incorporated into the BRI, it is unclear in what ways the concept has been expressed by related policies. This study

examines the eco-civilization discourse in BRI policies to contribute to an understanding of global ecological civilization and shed light on China’s role in global environmental governance.

Methodology

Since its inception in 2013, a complex institutional framework consisting of both policies issued by government authorities, and guidelines issued by industry associations has been developed. In this study, we used the critical case sampling method, which is a purposive sampling method for collecting cases with vital evidence. If the chosen samples are sufficiently representative, logical generalizations can be made from the weight of the information they provide (Patton, 1990).

Among all the policies formulated by multiple agencies, macro-level guiding policies are of importance as they have a profound impact on policymakers and implementers from subordinate institutions (Mu, 2018). Therefore, macro-level guiding policies related to the BRI were collected. In this study, macro-level guiding policies are defined as guidance-type regulatory documents issued by the departments and institutions of the CPC Central Committee, the State Council, Supreme People’s Court, and Supreme People’s Procuratorate. Distinct from enforceable laws and regulations, macro-level guiding policies principally shape the common aspirational aims and prospects of future development.

This study utilizes data from two primary sources: the PKU Law Database (*bei da fa bao*) and the official BRI website. The PKU Law Database is the most extensive database on Chinese laws and treaties, containing 1,638 existing laws and regulations related to the BRI at the time of data collection. The official BRI website provides information on guidelines, action plans, bilateral documents, and regulations related to the BRI that have been published by central governments. After collecting the legal and policy documents, three sets of keywords were used to identify the documents related to ecological civilization. The first group includes keywords related to nature, including “environment”, “ecology”, “natural resources” and “energy” The second set of keywords are related to the human/nature interaction, including “agriculture”, “industry”, “infrastructure”, “trade” and “investment”, “production” and “consumption”. The last group of keywords are about socio-environmental characteristics, including “politics”, “culture” and “education”. Based on the above sampling criteria, a total of 32 key macro-level guiding policies were collected for analysis (Table 1). The 15 documents issued by the Central Committee of the CPC, General Office of the State Council, and People’s Bank of China are not specifically related to the BRI, but nevertheless contain a part concerning the sustainable development aspect of BRI projects and are therefore included in the study.

We then conducted a qualitative content analysis using a thematic coding process. The data was entered into NVivo 12, a software for qualitative data management and analysis. Following the thorough reading of collected policies, codes were formulated, drawing on the five elements that determine the types of ecological civilization in the context of BRI, namely empowered group, human diversity in decision making, production technology, self-sufficiency, and self-renewal ability of the society. After coding the collected guiding policies, the frequency counts of all codes were calculated. This step quantifies the degree of prevalence of each code in the documents and is used to develop the themes.

Results

The macro-level guiding policies launched by the Central Committee of the CPC unmistakably position the BRI as a market-friendly initiative aimed at developing an open and global economic system. This is exemplified in the following statements in the Opinions on Accelerating the Improvement of the System of Socialist Market Economy in a New Era (2020): “the international high-standard system of market rules shall

Table 1
Key macro-level guiding policies referring to the future development of BRI project from a Chinese perspective.

Issued by Central Committee of the CPC/State Council or General Office of the Central Committee of the CPC/General Office of the State Council		
Year	Title	
2020	Opinions on Accelerating the Improvement of the System of Socialist Market Economy in a New Era	
2020	Guiding Opinions on Building a Modern Environmental Governance System	
2019	Guiding Opinions on Advancing the High-quality Development of Trade	
2018	Opinions on Strengthening the Protection of the Ecological Environment in All Aspects and Firmly Winning the Battle of Preventing and Controlling Environmental Pollution	
2018	Opinions on Implementing the Strategy for Vitalizing Villages	
2015	Several Opinions on Developing a New System of Open Economy	
Issued by General Office of the State Council		
Year	Title	
2018	Opinions on Expanding Imports and Promoting Balanced Development of Foreign Trade	
2017	Guiding Opinions on Further Directing and Regulating the Direction of Overseas Investments	
2017	Guiding Opinions on Vigorously Advancing the Innovation on and Application of Supply Chains	
2016	Opinions on Developing a Unified Standard, Certification and Identification System of Green Products	
2016	Guiding Opinions on Adjusting Structure, Promoting Transformation and Improving Effectiveness of the Petrochemical Industry	
2015	Opinions on Accelerating the Transformation of Agricultural Development Mode	
2015	Several Opinions on Promoting the Steady Growth of Imports and Exports	
2014	Several Opinions on Strengthening Import	
Issued by Instrumentalities of the State Council		
Leading issuing authority	Year	Title
National Development and Reform Commission	2019	The Belt and Road Initiative Progress, Contributions and Prospects
	2018	Action Plan on Belt and Road Standard Connectivity (2018–20)
	2017	Building the Belt and Road: Concept, Practice and China’s Contribution
	2017	Vision for Maritime Cooperation under the Belt and Road Initiative
	2015	Vision And Actions On Jointly Building Silk Road Economic Belt And 21st-Century Maritime Silk Road
Ministry of Environmental Protection	2017	Guidance on Promoting Green Belt and Road
	2017	The Belt and Road Ecological and Environmental Cooperation Plan
National Energy Administration	2016	Vision and Actions on Energy Cooperation in Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road
Ministry of Commerce	2017	Initiative on Promoting Unimpeded Trade Cooperation along the Belt and Road
	2013	Guidelines for Environmental Protection in Foreign Investment and Cooperation
Ministry of Finance	2017	Guiding Principles on Financing the Development of the Belt and Road
Ministry of Agriculture	2017	Vision and Action on Jointly Promoting Agricultural Cooperation on the Belt and Road
Ministry of Science and Technology	2017	Special Plan on Advancing Cooperation of Science and Technology Innovation in the Belt and Road Construction
Ministry of Education	2016	Education Action Plan for the Belt and Road Initiative

(continued on next page)

Table 1 (continued)

Issued by Central Committee of the CPC/State Council or General Office of the Central Committee of the CPC/General Office of the State Council		
Ministry of Culture	2016	Action Plan on Belt and Road Culture Development (2016–20)
Issued by Supreme People's Court		
Year	Title	
2019	Opinions Regarding Further Providing Judicial Services and Guarantees by the People's Courts for the Belt and Road Initiative	
2015	Several Opinions on Providing Judicial Services and Safeguards for the Construction of the "Belt and Road"	
Issued by the People's Bank of China		
Year	Title	
2016	Guidelines for Establishing the Green Financial System	

be benchmarked”, “the movement of goods, capital, technology, and persons in a broader scope shall be facilitated” and “the liberalization and facilitation of trade and investment shall be boosted”. These statements suggest that the BRI aims to encourage the free flow of goods, capital, technology, and people across borders by adopting internationally recognized best practices for market regulations. In addition, the Guiding Opinions on Advancing the High-quality Development of Trade (2019) states that “free movement of international and domestic factors, efficient allocation of resources, and deep integration of markets shall be boosted”. Furthermore, the Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road (2015) states that “the connectivity projects of the Initiative will help align and coordinate the development strategies of the countries along the Belt and Road, tap market potential in this region, promote investment and consumption, create demands and job opportunities”. In other words, the BRI seeks to create a more integrated and interconnected region that can support economic growth and development for all participating countries. In general, nurturing new markets and expanding production and large-scale commodity trade in China and BRI countries are strongly advocated in many guidelines. These statements that emphasize economic expansion are in line with China’s need to find a new growth engine (Yiping Huang, 2016).

As can be seen from Fig. 1, energy resource trade is coded in 8 policies and is the most frequently mentioned trading commodity. It is followed by agricultural and resource products, which are mentioned in 5 and 2 policies, respectively. All these three types of commodities are natural resources. The deep-green interpretation of ecological

civilization emphasizes local, small-scale production. However, the BRI advocates the mass production of commodities, including food and energy products for trade activities, and would certainly enhance the dependency of local communities in China (Zhao, Liu, Wang, & Ge, 2019).

Given the strong emphasis on economic growth, it is not surprising that the guideline documents stress capitalist efficiency, especially the improvement of production efficiency through technological advancement as an effective way of reducing negative environmental impacts. Eight out of 32 guiding policies elaborate upon the efficiency improvement design or technology used in agriculture, infrastructure construction, and manufacturing. The Special Plan on Advancing Cooperation of Science and Technology Innovation in the Belt and Road Construction states that one of the main tasks of the Ministry of Science and Technology is to “facilitate the promotion of technologies concerning resource utilization, environmental governance and ecological restoration in rural areas”. In the field of manufacturing, Guidance on Promoting Green Belt and Road (2017) states that: “We will strengthen technological innovation for a lead in green development. We will build green technology banks and intensify the transfer and transformation of green, advanced, and applicable technologies in developing countries along the Belt and Road route”. In terms of infrastructure construction, the Belt and Road Ecological and Environmental Cooperation Plan (2017) states that “BRI will promote green low-carbon construction, including the operation and management of infrastructure in sectors such as green transportation, green building and green energy, as well as upgrading environmental management of industrial parks. We will jointly create eco-industrial parks with a focus on enterprise agglomerations, eco-industrial chains, and service platform.” In short, the BRI’s vision of ecological civilization involves promoting technological innovation and transfer in agriculture, infrastructure construction, and manufacturing.

Green trade is suggested as a key strategy to popularize the production and consumption of products with an ecological design. Again, this market-oriented approach is strongly encouraged in the BRI context to protect the environment. As stated in the Guidance on Promoting Green Belt and Road (2017): “We will liberalize environmental protection industries and expand the import and export of green products and services. We will develop a green product standard system, reinforce international exchange and cooperation, popularize China’s green product standards and reduce green trade barriers”. This suggests that the BRI aims to promote international trade in environmentally-friendly products and services through developing standards and remove obstacles to international trade such as tariffs. The emphasis on trade is consistent with the BRI’s developmental goal but runs counter to the ideal of radical eco-civilization’s emphasis on metabolic efficiency and respect for natural cycles.

Compatible with the emphasis on economic growth, trade, and efficiency, the market is positioned to play a vital role in environmental governance. For example, the Guidance on Promoting Green Belt and Road (2017) states that: “multi-dimensional cooperation pattern featuring government guidance, enterprise as the main player and civil society facilitation so as to render positive contributions to the green Belt and Road Initiative”. The statement very representatively introduces the order of participation of the government, enterprises, and the public in environmental governance. In another example, “the whole society will be mobilized to actively participate in environmental governance with the business sector bearing the main responsibility and the market playing the due role” (The Belt and Road Ecological and Environmental Cooperation Plan, 2017). Enterprises and business sectors are placed in important places for environmental governance. The public’s right to participate in decision-making, whether economic or environmental decisions, is not emphasized in the guidelines.

Furthermore, the guidelines do not call for the imposition of strict control over the environmental behavior of Chinese enterprises operating in BRI countries. Even when facing highly controversial environmental issues in developing countries, the guidelines impose extremely

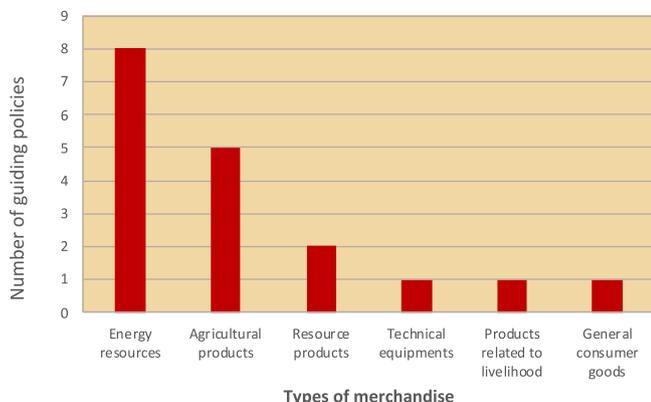


Fig. 1. Numbers of guiding policies concerning the trade among China and BRI countries.

low requirements for enterprises. Not only do they not insist on additional environmental protection requirements, they do not even explicitly require Chinese enterprises to obey the laws and regulations of host countries, or other international organizations.

“We will implement the Guideline of Environment Protection for Overseas Investment and Cooperation and drive enterprises to *voluntarily* obey local environmental protection laws, regulations, standards and codes, honor environmental and social responsibilities and release annual environmental reports (Guidance on Promoting Green Belt and Road, 2017).”

As such, the documents emphasize a voluntary approach of environmental governance, appealing to enterprises to self-regulate (Van der Heijden, 2012). For example, one guideline states that “relevant industry associations and chambers of commerce should establish code of conduct for overseas investment by enterprises and guide the enterprises to regulate their environmental behavior via self-discipline” (Guidance on Promoting Green Belt and Road, 2017). The statement encourages enterprises to voluntarily adopt responsible environmental practices, rather than relying solely on external regulations or enforcement mechanisms. There is no mention of punishment for the pollution and environmental damage caused by Chinese enterprises in any document.

Regarding the role of other actors in environmental governance, the idea that the BRI is an open and inclusive strategy that welcomes any participant is heavily emphasized in the majority of guiding policies. In 8 out of 32 documents, the spirit of “openness and inclusiveness” is coded. At the global level, the BRI “spans different countries and regions, different stages of development, different historical traditions, different cultures and religions, and different customs and lifestyles” (The Belt and Road Initiative Progress, Contributions and Prospects, 2019). The BRI also opens to all “international and regional organizations” (Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road, 2015). Another common expression relevant to the discussion here is “community of common destiny”, which is typically used to explain how diverse countries or people are bonded together by common interests and fate, although the “common interests” are not clearly defined (D. Zhang, 2018).

Moving beyond the diversity of countries and international organizations, the guidelines contain scant references to non-governmental co-operations; the roles of non-state actors in decision-making are not clearly specified. For example, one guideline states that cooperation should involve “channels such as political parties, parliaments, think tanks, localities, NGOs, business communities, the media, and institutions of higher learning” (The Belt and Road Initiative Progress, Contributions and Prospects, 2019). In other words, the stakeholders are mainly conceived for the ruling elites of China and BRI countries. In one exceptional case, the interest of specific groups at the grassroots level has received attention. In Building the Belt and Road: Concept, Practice, and China’s Contribution (2017), it was observed that “China has promoted exchanges on issues concerning women, youth, startups, and employment as well as ideas and experience regarding social justice and progress.” While China promises to “promote academic exchanges and visits among the Belt and Road countries... carry out joint education and training programs needed to meet the urgent development demands of the Belt and Road countries” in the Education Action Plan for the Belt and Road Initiative (2016), the focus is on meeting “urgent development demands” rather than environmental governance. This may limit the outlook for diverse talent cultivation, particularly when priorities defined by the powerful elites are in conflict with the needs of other stakeholders such as those from local communities.

With respect to greening the BRI, “diversified cooperation platforms formed by governments, think tanks, enterprises, social organizations and the public” are planned (Guidance on Promoting Green Belt and Road, 2017). While these international platforms promise the inclusion of diverse environmental actors, the networks will be dominated by the elites. It is questionable whether each stakeholder can participate in

decision-making on an equal basis (for example, governments and enterprises may exercise power than the public).

Discussion and conclusion

As a rising power, China’s commitment to a global ecological civilization could redefine environmental governance at a global scale, and the Belt and Road Initiative is an important conduit for such a possibility. Many BRI countries are underdeveloped and rely on Chinese investment, which makes it even more important for China to adopt a proactive approach to environmental governance and stop treating the BRI countries as pollution havens (Cai et al., 2018).

Our analysis of high-level guiding policies reveals China’s strong inclination to avoid being seen as a hegemonic and imperialist power among its BRI partners, as evident in the following statement that appears frequently in guiding documents: “China has no desire to export its ideology and no intention to impose its development model on other countries” (The Belt and Road Initiative Progress, Contributions and Prospects, 2019). Consequently, our analysis shows that there are differences between the domestic interpretations of eco-civilization and the global ecological civilization which is envisioned and advocated by China through the Belt and Road Initiative. The international version of Chinese eco-civilization does not make reference to the socialist or cultural-philosophical origins of the concept, nor does it promote the Chinese style of environmental governance and policies, which often involve strong state intervention (Lo, 2015). Instead, China advocates a form of market-based environmentalism, promising the reduction of environmental damage through voluntary business actions such as corporate responsibility and industrial standards. However, studies examining the environmental behavior of Chinese enterprises along the BRI have produced mixed results, indicating that there are significant limitations to relying solely on voluntary approaches to promote environmentalism (Bohnett et al., 2022; Springer, Evans, & Teng, 2021; Sun, Ren, Jin, & Hu, 2023). Given that many BRI countries have weak environmental law and enforcement capacity (Aung et al., 2020; Chaudhry & Dudeja, 2023), it is a question whether the envisioned international free-market environmentalism approach can adequately protect the local environment and the interests of local communities.

Our analysis also reveals the common aspects between domestic and global eco-civilization—the emphasis on economic development and the use of technology as a means of addressing environmental challenges. The BRI comes out strongly in favor of the ideal of ecological modernization with the focus on economic growth and capitalist efficiency through technological innovation (Mol, 2006). It promotes global connectivity and trade rather than self-sufficiency and local resilience (Szadziwski, 2020). This suggests that global ecological civilization could be used to promote Chinese eco-technologies and eco-industries overseas. Indeed, Chinese companies have recently emerged as the largest producers of renewable energy equipment, particularly in solar PV, wind turbines, and hydroelectric dams (Andrews-Speed & Zhang, 2018). In the transportation sector, China has become a global technology leader in high-speed railways (Eskenazi, 2022). The transfer of these eco-technologies is increasing in BRI countries, with countries such as Kazakhstan, Pakistan, Vietnam, Thailand, Indonesia, and the Philippines being key partners for such investments (Delina, 2021; F. Liu, Khan, & Marie, 2023). China also provides training and technical assistance to help these countries develop the necessary skills and knowledge to maintain and operate these technologies. However, the implications of this trend can be complex. On the one hand, the diffusion of eco-technologies from China to BRI countries could be a crucial component to mitigate global environmental challenges. On the other hand, exporting eco-technologies may lead to the displacement of local industries and other socio-economic impacts, as well as creating a technological, regulatory, and market lock-in, which would lock countries into a mode of production and consumption that is oriented towards China (Gao & Yu, 2022). As such, the promotion of ecological

civilization could be viewed as a form of eco-imperialism that enhances China's overseas infrastructure power. This interpretation of ecological civilization means that Chinese environmental influence should be situated within a broader geopolitical context, highlighting the emergence of security discourse in China's foreign policy and the extraterritorial extension of China's jurisdiction over areas such as data, technologies, infrastructure, and environment (Oliveira, Murton, Rippa, Harlan, & Yang, 2020; H. Shen & He, 2022).

As noted by Gare (2012), the meaning and application of ecological civilization is in flux because of the on-going struggle. As the meaning of the concept changes, it may have an impact on BRI-related policies. Therefore, sustained scholarly attention is needed to examine the evolution of the concept. This study focuses solely on Chinese macro-level guiding policies, which means that the local dimension of environmental politics has not been sufficiently analyzed. It is to be remembered that the countries involved in the BRI are hugely diverse, with different abilities and traditions in environmental governance. Ecological civilization as a foreign and hegemonic imaginary may seem far removed from the local people, and the environmental governance of BRI projects is not determined by the Chinese government alone, regardless of its position of power (Klinger, 2020). Instead, it is a political struggle that involves local and non-local actors. Therefore, more empirical studies are needed to understand how ecological civilization is challenged or supported by local environmental actors in BRI countries.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

- Ameyaw-Brobey, T. (2018). The Belt and Road Initiative: Debt trap and its implication on international security. *Asian Journal of Multidisciplinary Studies*, 1(2), 73–81.
- Andrews-Speed, P., & Zhang, S. (2018). China as a low-carbon energy leader: Successes and limitations. *Journal of Asian Energy Studies*, 2(1), 1–9.
- Ascensão, F., Fahrig, L., Clevenger, A. P., Corlett, R. T., Jaeger, J. A., Laurance, W. F., & Pereira, H. M. (2018). Environmental challenges for the Belt and Road Initiative. *Nature Sustainability*, 1(5), 206–209.
- Aung, T. S., Fischer, T. B., & Shengji, L. (2020). Evaluating environmental impact assessment (EIA) in the countries along the belt and road initiatives: System effectiveness and the compatibility with the Chinese EIA. *Environmental Impact Assessment Review*, 81, Article 106361.
- Bohnett, E., Coulibaly, A., Hulse, D., Hocter, T., Ahmad, B., An, L., & Lewison, R. (2022). Corporate responsibility and biodiversity conservation: Challenges and opportunities for companies participating in china's belt and road initiative. *Environmental Conservation*, 49(1), 42–52.
- Cai, X., Che, X., Zhu, B., Zhao, J., & Xie, R. (2018). Will developing countries become pollution havens for developed countries? An empirical investigation in the Belt and Road. *Journal of Cleaner Production*, 198, 624–632.
- Chaudhry, A., & Dudeja, G. (2023). Total factor efficiency of energy and carbon emissions in 18 Asian countries: An empirical assessment. *Journal of Asian Energy Studies*, 7, 77–90.
- Cheng, L. K. (2016). Three questions on China's "Belt and Road Initiative". *China Economic Review*, 40, 309–313.
- Chin, T. (2013). The invention of the Silk Road, 1877. *Critical Inquiry*, 40(1), 194–219.
- Clarke, M. (2018). The belt and road initiative: Exploring Beijing's motivations and challenges for its new silk road. *Strategic Analysis*, 42(2), 84–102.
- Delina, L. L. (2021). Promises and pitfalls of China-Southeast Asia energy connectivity. *Energy Strategy Reviews*, 33, Article 100574.
- Deng, L., Mah, D., Cheung, D.-M.-W., & Lo, K. (2023). Civic activism and petition politics in energy transitions: Discursive tactics, networking, and media mobilization in an anti-nuclear movement in China. *Energy Research & Social Science*, 95, Article 102889.
- Dong, F., Pan, Y., Zhang, X., & Sun, Z. (2020). How to evaluate provincial ecological civilization construction? The case of Jiangsu province, China. *International Journal of Environmental Research and Public Health*, 17(15), 5334.
- Doro, E., & Swart, S. (2019). A silenced spring?: Exploring Africa's 'Rachel Carson moment': A socio-environmental history of the pesticides in tobacco production in Southern Rhodesia, 1945–80. *Human Ecology Review*, 25(2), 5–39.
- Eskenazi, A. (2022). All aboard the net-zero express: Examining the effectiveness of China's high-speed rail for decarbonizing the transportation industry. *Journal of Asian Energy Studies*, 6(1), 37–47.
- Fabinyi, M., Wu, A., Lau, S., Mallory, T., Barclay, K., Walsh, K., & Dressler, W. (2021). China's blue economy: A state project of modernisation. *The Journal of Environment & Development*, 30(2), 127–148.
- Gao, J., & Yu, X. (2022). Factors affecting the evolution of technical cooperation among "belt and road initiative" countries based on TERGMs and ERGMs. *Sustainability*, 14(3), 1760.
- Gare, A. (2012). China and the struggle for ecological civilization. *Capitalism Nature Socialism*, 23(4), 10–26.
- Gare, A. (2021). The eco-socialist roots of ecological civilisation. *Capitalism Nature Socialism*, 32(1), 37–55.
- Geall, S., & Ely, A. (2018). Narratives and pathways towards an ecological civilization in contemporary China. *The China Quarterly*, 236, 1175–1196.
- Geng, Q., & Lo, K. (2022). China's Green Belt and Road Initiative: Transnational environmental governance and causal pathways of orchestration. *Environmental Politics*, 1–23.
- Hansen, M. H., Li, H., & Svarverud, R. (2018). Ecological civilization: Interpreting the Chinese past, projecting the global future. *Global Environmental Change*, 53, 195–203.
- Hansen, M. H., & Liu, Z. (2018). Air pollution and grassroots echoes of "ecological civilization" in rural China. *The China Quarterly*, 234, 320–339.
- Harlan, T. (2021). Green development or greenwashing? A political ecology perspective on China's green Belt and Road. *Eurasian Geography and Economics*, 62(2), 202–226.
- Heurtebise, J.-Y. (2017). Sustainability and ecological civilization in the age of Anthropocene: An epistemological analysis of the psychosocial and "culturalist" interpretations of global environmental risks. *Sustainability*, 9(8), 1331.
- Huan, Q. (2016). Socialist eco-civilization and social-ecological transformation. *Capitalism Nature Socialism*, 27(2), 51–66.
- Huang, P., & Westman, L. (2021). China's imaginary of ecological civilization: A resonance between the state-led discourse and sociocultural dynamics. *Energy Research & Social Science*, 81, Article 102253.
- Huang, Y. (2016). Understanding China's Belt & Road initiative: Motivation, framework and assessment. *China Economic Review*, 40, 314–321.
- Huang, Y. (2019). Environmental risks and opportunities for countries along the Belt and Road: Location choice of China's investment. *Journal of Cleaner Production*, 211, 14–26.
- Huang, Y., Fischer, T. B., & Xu, H. (2017). The stakeholder analysis for SEA of Chinese foreign direct investment: The case of 'One Belt, One Road' initiative in Pakistan. *Impact Assessment and Project Appraisal*, 35(2), 158–171.
- Hughes, A. C. (2019). Understanding and minimizing environmental impacts of the Belt and Road Initiative. *Conservation Biology*, 33(4), 883–894.
- Jiang, B., Bai, Y., Wong, C. P., Xu, X., & Alatalo, J. M. (2019). China's ecological civilization program—Implementing ecological redline policy. *Land Use Policy*, 81, 111–114.
- Johnston, B. R. (1992). Eco-imperialism, environmental alienation, and resource management: Virgin Islands experiences. *Capitalism Nature Socialism*, 3(4), 99–108.
- Klinger, J. M. (2020). Environment, development, and security politics in the production of Belt and Road spaces. *Territory, Politics, Governance*, 8(5), 657–675.
- Kostka, G., & Zhang, C. (2018). Tightening the grip: Environmental governance under Xi Jinping. *Environmental Politics*, 27, 769–781.
- Lechner, A. M., Chan, F. K. S., & Campos-Arceiz, A. (2018). Biodiversity conservation should be a core value of China's Belt and Road Initiative. *Nature ecology & evolution*, 2(3), 408–409.
- Liu, F., Khan, Y., & Marie, M. (2023). Carbon neutrality challenges in Belt and Road countries: What factors can contribute to CO2 emissions mitigation? *Environmental Science and Pollution Research*, 30(6), 14884–14901.
- Liu, J., & Lo, K. (2022a). Chinese environmental activism and the environmental politics of rumors. *Political Geography*, 95, Article 102593.
- Liu, M., & Lo, K. (2022b). Eco-cities as urban laboratories of Chinese ecological modernization: Eco-experimentation and the modernization of urban governance. *Urban Geography*, 1–25.
- Liu, M., Lo, K., Westman, L., & Huang, P. (2022). Beyond the North-South divide: The political economy and multi-level governance of international low-carbon technology transfer in China. *Environmental Innovation and Societal Transitions*, 44, 194–204.
- Liu, W., & Dunford, M. (2016). Inclusive globalization: Unpacking China's belt and road initiative. *Area Development and Policy*, 1(3), 323–340.
- Liu, W., Dunford, M., & Gao, B. (2018). A discursive construction of the Belt and Road Initiative: From neo-liberal to inclusive globalization. *Journal of Geographical Sciences*, 28(9), 1199–1214.
- Lo, K. (2014). A critical review of China's rapidly developing renewable energy and energy efficiency policies. *Renewable and Sustainable Energy Reviews*, 29, 508–516.
- Lo, K. (2015). How authoritarian is the environmental governance of China? *Environmental Science & Policy*, 54, 152–159.
- Lo, K. (2020a). Ecological civilization, authoritarian environmentalism, and the eco-politics of extractive governance in China. *The Extractive Industries and Society*, 7, 1029–1035.
- Lo, K. (2020b). Governing energy consumption in China: A comprehensive assessment of the energy conservation target responsibility system. *Energy Transitions*, 4(1), 57–67.
- Lo, K., & Castán Broto, V. (2019). Co-benefits, contradictions, and multi-level governance of low-carbon experimentation: Leveraging solar energy for sustainable development in China. *Global Environmental Change*, 59, Article 101993.

- Lo, K., & Zhu, L. (2022). Voices from below: Local community perceptions of forest conservation policies in China. *Forest Policy and Economics*, 144, Article 102825.
- Magdoff, F. (2011). Ecological civilization. *Monthly Review*, 62(8), 1–25.
- Mbaiwa, J. E., & Hambira, W. L. (2023). Can the subaltern speak? Contradictions in trophy hunting and wildlife conservation trajectory in Botswana. *Journal of Sustainable Tourism*, 31(5), 1107–1125.
- Meng, F., Guo, J., Guo, Z., Lee, J. C., Liu, G., & Wang, N. (2021). Urban ecological transition: The practice of ecological civilization construction in China. *Science of The Total Environment*, 755, Article 142633.
- Mol, A. P. J. (2006). Environment and modernity in transitional China: Frontiers of ecological modernization. *Development and Change*, 37(1), 29–56.
- Mu, R. (2018). Role of law, position of actor and linkage of policy in China's national environmental governance system, 1972–2016. *Sustainability*, 10(4), 1065.
- Mushkat, R. (2003). Potential Impacts of China's WTO Accession on its Approach to the Trade-Environment Balancing Act. *Chinese Journal of International Law*, 2(1), 227–264.
- Oliveira, G., Murton, G., Rippa, A., Harlan, T., & Yang, Y. (2020). China's Belt and Road Initiative: Views from the ground. *Political Geography*, 82, 102225.
- Pan, J. (2016). *China's environmental governing and ecological civilization*. Heidelberg: Springer.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications inc.
- Shen, H., & He, Y. (2022). The geopolitics of infrastructuralized platforms: The case of Alibaba. *Information, Communication & Society*, 25(16), 2363–2380.
- Shen, S., & Chan, W. (2018). A comparative study of the Belt and Road Initiative and the Marshall plan. *Palgrave Communications*, 4(1), 1–11.
- Shin, K. (2018). Environmental policy innovations in China: A critical analysis from a low-carbon city. *Environmental Politics*, 5, 830–851.
- Springer, C. H., Evans, S., & Teng, F. (2021). An empirical analysis of the environmental performance of China's overseas coal plants. *Environmental Research Letters*, 16(5), Article 054062.
- Sum, N.-L. (2019). The intertwined geopolitics and geoeconomics of hopes/fears: China's triple economic bubbles and the 'One Belt One Road' imaginary. *Territory, Politics, Governance*, 7(4), 528–552.
- Sun, Y., Ren, J., Jin, G., & Hu, H. (2023). The impact of governmental initiatives on corporate environmental responsibility: The case of the Belt and Road Initiative. *Marketing Intelligence & Planning*.
- Szadziewski, H. (2020). Converging anticipatory geographies in Oceania: The belt and road initiative and look north in Fiji. *Political Geography*, 77, Article 102119.
- Teo, H. C., Lechner, A. M., Walton, G. W., Chan, F. K. S., Cheshmehzangi, A., Tan-Mullins, M., ... Campos-Arceiz, A. (2019). Environmental impacts of infrastructure development under the belt and road initiative. *Environments*, 6(6), 72.
- Toops, S. (2016). Reflections on China's Belt and Road Initiative. *Area Development and Policy*, 1(3), 352–360.
- Tracy, E. F., Shvarts, E., Simonov, E., & Babenko, M. (2017). China's new Eurasian ambitions: The environmental risks of the Silk Road Economic Belt. *Eurasian Geography and Economics*, 58(1), 56–88.
- Van der Heijden, J. (2012). Voluntary environmental governance arrangements. *Environmental Politics*, 21(3), 486–509.
- Wang, X., & Lo, K. (2022a). Pastoralism and conservation: The politics and notions of environmental justice under the grazing ban policy in Inner Mongolia. *China. Political Geography*, 99, Article 102779.
- Wang, X., & Lo, K. (2022b). Political economy of just transition: Disparate impact of coal mine closure on state-owned and private coal workers in Inner Mongolia. *China. Energy Research & Social Science*, 90, Article 102585.
- Woon, C. Y. (2019). Translating territory, politics and governance. *Territory, Politics, Governance*, 7, 115–121.
- Yang, X. J. (2013). China's rapid urbanization. *Science*, 342(6156), 310.
- Zhang, D. (2018). The concept of 'community of common destiny' in China's diplomacy: Meaning, motives and implications. *Asia & the Pacific Policy Studies*, 5(2), 196–207.
- Zhang, X. (2017). Chinese capitalism and the maritime silk road: A world-systems perspective. *Geopolitics*, 22(2), 310–331.
- Zhang, Z. (2022). Evolution paths of green economy modes and their trend of hypercycle economy. *Chinese Journal of Population, Resources and Environment*, 20(1), 1–11.
- Zhao, Y., Liu, X., Wang, S., & Ge, Y. (2019). Energy relations between China and the countries along the Belt and Road: An analysis of the distribution of energy resources and interdependence relationships. *Renewable and Sustainable Energy Reviews*, 107, 133–144.
- Zhu, L., & Lo, K. (2022). Eco-socialism and the political ecology of forest conservation in the Greater Khingan Range. *China. Political Geography*, 93, Article 102533.