

# The Socio-environmental Impact of the Belt and Road Initiative in Southeast Asia: The Case of Laos

**Lungani Hlongwa**

Institute of Social Research and Cultural Studies  
National Chiao Tung University

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The Belt and Road Initiative (BRI) is a near-global project introduced by the Chinese government in 2013. It aims to facilitate trade and economic relations between China and much of the world, primarily through the construction of infrastructure. As the BRI continues to expand, it is causing both positive and negative impacts on the environment. This article explores the environmental impact of the BRI in Southeast Asia, focusing on Laos as a case study. It examines the environmental impacts of the Kunming-Singapore railway and explores prospects for making the BRI an environmentally just initiative. This study draws data from a range of sources to gain a better understanding of the project, including media coverage and EJAtlas. The study concludes by underscoring the need for enhancing the participation of local communities where BRI projects are implemented. Moreover, the study advocates for regulatory frameworks that will make the BRI a more environmentally just initiative.

*Keywords: Southeast Asia, Belt and Road Initiative, environment, Laos, environmental justice*

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## Introduction

The BRI is a multi-trillion-dollar initiative proposed by the Chinese government to integrate China's economy with the rest of the world. It consists of two core elements: a land dimension known as the Silk Road Economic Belt (SREB) and a sea dimension known as the Maritime Silk Road Initiative (MSRI). Both initiatives were first announced by Chinese President Xi Jinping in 2013 during his presidential visits to Kazakhstan and Indonesia (Yu, 2017). The BRI primarily focuses on the construction of infrastructure such as railways, highways, seaports, and special economic zones to connect China's economy with the world. While this infrastructure development has brought benefits to some, it has also had detrimental effects on others, particularly marginalized communities. As the BRI continues to expand, it is crucial to examine how some BRI projects shape the lives of local communities.

The aim of this study is to examine the environmental impact of the BRI and explore prospects for environmental justice for affected communities. Environmental justice, as defined by Martinez-Alier (2016), pertains to the fair distribution of environmental benefits and burdens among various social groups, with a particular focus on marginalized communities and the poor. The BRI often leads to certain individuals and communities experiencing a disproportionate amount of environmental harm, especially marginalized communities with limited participation in environmental policy-making processes. This article specifically examines how such environmental (in)justice plays out in Southeast Asia, focusing on Laos as a case study.

Methodologically, this article relies on data from a range of source, including media publications and EJAtlas. EJAtlas serves as a database documenting and cataloging socio-environmental conflicts worldwide. The primary objective of the EJAtlas is to enhance the visibility of struggles faced by communities experiencing environmental injustice and provide valuable information to researchers studying environmental issues (Temper, Demaria, Scheidel, Del Bene, & Martinez-Alier, 2018; Temper, Del Bene, & Martinez-Alier, 2015). Since its inception in 2012, numerous scholars have utilized the EJAtlas as a resource to investigate various dimensions of socio-environmental conflicts (Martínez-Alier, 2023), and additional contributions have been made to its database (Camisani, 2018). Moreover, the EJAtlas is widely recognized as a valuable tool for teaching environmental issues in disciplines such as Environmental Social Sciences, Political Ecology, Ecological Economics, Environmental Sociology, and Human Geography, among others (Walter, Weber & Temper, 2023). Thus, the EJAtlas stands as a highly regarded and evolving tool, making significant contributions to the field of socio-environmental studies while empowering communities and informing research efforts worldwide.

The remainder of the article will be structured as follows: the next section provides more background information on the BRI. Following the background, the article delves into the Laos case study, examining the socio-environmental impact of the Kunming-Singapore railway projects. Afterward, the article discusses the prospects for making the BRI an environmentally just initiative. Finally, the article concludes and suggests areas for further research.

### **Background of the Belt and road Initiative**

The BRI has been the subject of growing scholarly attention since it was first announced in 2013. Scholars have examined various aspects of this multifaceted initiative, including socio-cultural (Yuniarto, 2021), economic (Chan, 2017), and technological dimensions (Gao & Yu, 2022). Although scholars around the world have interpreted the initiative from their perspective, it is crucial to understand the initiative from the perspective of the Chinese government, who conceived the idea, in order to gain a more balanced understanding.

According to the Chinese government, goal of the BRI is to promote economic integration and regional cooperation by facilitating trade and investment flows between China and countries in Asia, Europe, Africa, the Middle East, and Latin America. The Chinese government sees the BRI as a reincarnation of the Ancient Silk Road, which connected the East and the West over 2000 years ago (Xi, 2017). During his speech at the 2017 BRI Forum in Beijing, Chinese President Xi Jinping stated that the BRI should seek to inherit the Ancient Silk Road spirit, which hinged on peace and cooperation, openness and inclusiveness, mutual learning, and mutual benefit (Xi, 2017). These are the same pillars, according to President Xi, that should guide the present-day Silk Road. In that same speech, President Xi further noted that the BRI should be guided five principles: first, it should prioritize peace and win-win cooperation; second, BRI participants should collectively pursue economic development and prosperity; third, BRI participants should strive for economic openness rather than isolation; fourth, BRI members should pursue collective innovation; and fifth, the BRI should strive to connect different civilizations and promote co-existence.

Southeast Asia is considered a vital region in the overall BRI due to its economic potential and its strategic location (Yu, 2017). Many of today's developing economies are in Southeast Asia—a region with strong economic ties to China. At the same time, many Southeast Asian countries lack

infrastructure deemed crucial for further economic growth. Thus, the BRI takes advantage of Southeast Asia's potential while at the same time seeking to develop the region (Yu, 2017). Southeast Asia is also strategically important to the BRI. Several crucial maritime routes traverse through the region, making it a crucial linkage between the Pacific and Indian Oceans. Furthermore, the BRI aligns with efforts to integrate the region, for example through the Association of Southeast Asian Nations (ASEAN) political economic union. The BRI also aligns with ASEAN's Master Plan to improve connectivity in the region through economic, trade, and policy frameworks (Foo, Lean & Salim, 2020). BRI projects in the region can be found in all ten ASEAN member states. While certain projects have made positive contributions to the economy and society, others have yielded adverse effects, and a few have even had a detrimental impact on the environment. However, before delving into the case studies, it is crucial to establish a basic understanding of Southeast Asia's environmental reality and how it connects with the BRI.

There are several factors that make Southeast Asia a compelling case for studying environmental issues associated with the BRI (Lechner, et al., 2020). First, the region is home to many BRI projects in various sectors, including transportation, energy, and telecommunications. Projects in these sectors have the potential to reshape the environmental landscape and the lives of local communities. Second, Southeast Asia is home to diverse communities, including indigenous peoples, rural populations, and urban residents who may be affected differently by BRI projects. Third, Southeast Asian countries have diverse forms of governments, ranging from democratic to communist regimes. Thus, it is worth studying how different governments respond to socio-environmental challenges posed by the BRI. Finally, Southeast Asia is characterized by its rich biodiversity, ecosystems, and cultural heritage—all of which may be impacted differently by BRI projects. Thus, Southeast Asia presents a compelling case for studying the interaction between different environmental stakeholders in the context of the BRI. The next section delves into case studies of two Southeast Asian countries to explore the environmental impact of the BRI.

### **The case of Laos**

Laos, officially known as the Lao People's Democratic Republic (PDR), is a small landlocked country in Southeast Asia with a population of approximately 7.2 million. It is considered a lower-middle-income country with relatively underdeveloped infrastructure compared to its neighbors. The country is a member of the Belt and Road Initiative (BRI), with China being its biggest investor. Chinese companies have invested billions of dollars in Special Economic Zones, dams, pipelines, and other infrastructure projects in Laos (Radio Free Asia, n.d.). One notable BRI project in Laos is the Kunming-Singapore railway line, whose construction began in 2016. According to the Lao government, this project aims to transform Laos from a landlocked country into a land-linked hub (Macan-Markar, 2018). For China, on the other hand, Laos is seen as the gateway to Southeast Asia, with the Kunming-Singapore railway line being emblematic of this perception (Kishimoto, 2017).





[“Nach Meppen? Immer geradeaus!”](#) by [Volkmar Bercher](#) is licensed under [CC BY-NC-ND](#).

The Kunming-Singapore railway, with an overall length of 3,000 km, will pass through Laos, Thailand, and Malaysia before reaching Singapore (Macan-Markar, 2018). In Laos, the railway covers 414 km, starting from the northern town of Boten and extending to Vientiane, the capital city of Laos. The Laos part of the route was officially opened to traffic on December 3rd, 2021. Given the rugged terrain between Boten and Vientiane, the railway consists of 75 tunnels and 167 bridges and is estimated to cost around USD 6 billion. A significant amount portion of the total amount for this project was loaned from Chinese banks (Macan-Markar, 2018). Like other BRI projects in different regions, there are concerns that this undertaking may burden the Lao government with significant debt, as the project's cost accounts for nearly half of the country's GDP.

The Kunming-Singapore railway project has both notable socio-economic and environmental impacts, which Laura Villadiego and Carro de Combate recorded on EJAtlas. Approximately 3,800 hectares of land were cleared for the project, necessitating the relocation of about 4,411 families. This displacement resulted in significant socio-economic upheavals, including the loss of traditional knowledge and practices, cultural disruption, and general land dispossession. The project has also led to a noticeable loss of landscape and potential noise pollution. There are fears among the local population that the likely rapid increase in tourism, facilitated by the new railway, could further damage the environment. Aesthetic degradation is also a notable issue, where previously untouched natural areas are being developed areas. In this context, the Kunming-Singapore railway project signifies the complex trade-offs between economic development, social displacement, and environmental sustainability.

## Environmental justice

According to Martinez-Alier (2016), environmental justice revolves around the equitable sharing of environmental benefits and burdens among various social groups, with particular emphasis on marginalized communities and the economically disadvantaged. An essential aspect of environmental justice is the active involvement of the impacted communities in decision-making processes related to environmental policy.

In the context of the BRI and the specific case of Laos, the Kunming-Singapore railway project underscores the pressing need for environmental justice. The construction of this extensive railway network has undoubtedly led to significant environmental transformations, with certain groups bearing a disproportionate share of the adverse effects. Indigenous communities and farmers, often marginalized in discussions about developmental projects, have been directly impacted by land clearance for the railway.

A crucial area of conflict in the Boten-Vientiane railway line is the lack of community participation in the project. Affected communities in Laos have reportedly been largely excluded from crucial discussions surrounding the project (Macan-Markar, 2018). There were also reports of delayed compensation from the government to communities who had lost their land (Macan-Markar, 2018). The absence of a platform for such communities to voice their concerns and contribute to decision-making processes is a resounding concern in the literature on environmental justice.

For the BRI and similar large-scale infrastructural initiatives to be truly sustainable and equitable, they must strive to include and address the concerns of all impacted communities. This involves the recognition of marginalized communities as important stakeholders and the establishment of meaningful channels for their participation. Both the Chinese government, and the governments hosting BRI projects, bear significant responsibility in this endeavor.

## Conclusion

The Belt and Road Initiative, exemplified by the Kunming-Singapore railway project in Laos, illustrates the intricate dynamics between economic development and concerns around the environment. While the BRI can provide economic advantages, it is essential to recognize the inequitable distribution of these benefits and the disproportionate environmental burdens often placed on vulnerable communities. There's a pressing need for establishing more regulatory frameworks that reflect the needs and interests of local communities in infrastructural development plans. Furthermore, it is also imperative to include local communities in decision-making processes that affect their land and livelihoods. Ultimately, achieving a balance between economic growth and environmental justice is vital for the BRI and similar initiatives to promote truly sustainable and equitable growth.

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