# Belt and Road Infrastructures: Modernist Dreams, Local Dilemmas?

**Research** · December 2017

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December 2017

Last summer, I drove from the Laotian capital up the two-lane road that is slated to become the Vientiane-Vang Vieng expressway (of which China will hold a **95 percent stake**). The billboards I whizzed by increasingly included Chinese characters. In Vang Vieng, I found myself speaking Chinese with guesthouse owners. Gift shops signs written in Chinese prohibited bargaining. The **Vang Vieng cement factory**, just south of town, is lauded as a symbol of China-Laos cooperation, yet the haze that settles over the valley tells another story of economic tradeoffs. The factory employs some Laotians, but others complain of changes in air quality. As a popular tourist spot, the town relies on the rushing water of the Nam Song river and clear dramatic karst views. Yet, this is changing as the landscape is consumed by concrete and pavement. The cement factory is one building block among many in China's infamous Belt and Road Initiative.

> *If the BRI is to promote "sustainable" development, questions must go beyond addressing energy access and economic development to consider who/what will capture the benefits and bear the (often environmental) costs of these massive projects and when.*

First announced in 2013, China's **Belt and Road Initiative** (BRI; 一带一路) commits USD$1 trillion to massive infrastructure projects, such as roads, rail, seaports and airports. Numerous explanations for China's massive push for infrastructure development are circulating, and include the expansion of trade routes, the promotion of peace and cooperation, and the provision of necessary infrastructures to developing countries. The

scope and scale of the BRI has profound implications for geopolitics, capital markets and the environment: The initiative **spans 69 countries** across Asia, Africa, and Europe, meaning approximately 4 billion people, three-quarters of the world's energy resources, and one-third of global GDP. The BRI promises connection, prosperity, and sustainable development. However, what is sustainable about the increasingly interconnected environmental, political, and cultural implications of these projects?

The primary motivation of the BRI is to bolster economic growth and as such, reports of **new trade corridors** and more efficient **transportation networks** often lead the headlines. While the BRI emphasises connectivity via the construction of ports, roads and rails, **energy infrastructure**, from coal to renewables, is a major focus of BRI investment. One Chinese energy scholar remarked, the BRI "will facilitate the development of an **energy revolution**". China's domestic energy perspective is trending increasingly towards renewables. In 2016, China announced the country's "greenest" social and economic **Five-Year Plan**. This domestic focus on investment in renewables coupled with the BRI energy goals, concern for climate change mitigation, and rising energy demands has led to increased attention on securing water resources for hydropower.

China's interest in hydropower is longstanding; even before the implementation of the BRI, China was the world's **largest dam builder**. As the upstream country of many major river systems that flow through South, Central, and Southeast Asia, China exerts substantial ecological and economic influence over **downstream countries**. With the introduction of the BRI, downstream countries (such as Laos, Cambodia, Vietnam and Thailand in the case of the Mekong River) must address longer standing water questions surrounding environmental impacts, governance and hydrohegemony alongside the swift implementation of BRI projects. While host countries collaborate on these projects, they generally hold less stake than the associated Chinese firms who jockey for quick implementation. The Asian Infrastructure Investment Bank (AIIB; a primary lender for BRI) **Energy Sector Strategy** has signed up to many global environmental initiatives (e.g. the United Nation's Sustainable Energy for All or **SEforALL**), however the BRI currently lacks transboundary water cooperation as well as local level policy frameworks for project implementation.

Despite this and in response to the growing regional and BRI energy demands, hydropower projects are proposed in water sensitive and politically complex areas in China's neighbouring countries, and may eschew common compliance processes. The **Don Sahong dam** in Laos is the second dam to be built on the mainstream of the Mekong, but would be disastrous for food security and fisheries. The **Nam Ou Cascade Hydropower Project** in Laos is also a significant piece of the BRI. International

Rivers **found** that the contractor for the project, the Chinese firm called Sinohydro, has yet to make environmental impact assessments or community resettlement plans publically available. What's more, Sinohydro is violating its own policy by operating within a national park.

At the same time, there is growing recognition that proposals backed by the Chinese state for massive infrastructures can come at high political and environmental prices. Just this year, the USD $2.5 billion **Budhi Gandaki hydroelectric project** in Nepal was scrapped due to financing conflicts with the construction company, and the USD $14 billion **Diamer-Bhasha dam** in Pakistan due to unfavourable Chinese financing terms. Similarly, in 2011 Myanmar cancelled the $3.6 billion **Myitsone dam**, and recently reinforced this position by announcing their withdrawal from any hydropower development.

**Infrastructural building blocks: a view from the ground**

From pouring concrete, to diverting and harnessing the power of the Mekong, to carving a rail route through the Pamir Mountains, infrastructure construction requires more than political handshakes and billions in bank loans. They need vast amounts of material resources – large machinery, pipelines, fuel, steel, electricity, concrete, land – and a tremendous amount of labour. The mechanisms to acquire or produce these inputs need to be available.

Consider the construction of a large dam on the Mekong River. Roads and power lines must be installed for access to remote mountain regions. Building materials like timber or steel are often locally produced. If not, how are they transported, and does that change the local environment? New factories to produce the materials have their own environmental consequences. Power lines are also required to transport electricity away when the project is functional. Where might that electricity go? There is speculation that some dam projects in Laos may **provide electricity to mining operations**, which seems contrary to visions of sustainable development.

Human labour is often imported with these large projects. Tens of thousands of workers bring demands on local ecosystems and communities. Workers need food, water, shelter, and sanitation systems, and may displace opportunities for local employment. This can place strain on already resource-poor rural regions, and result in mixed receptions by host communities. Just this year, the Chinese Embassy in Laos **issued a safety warning** for its citizens after Chinese migrant labourers were attacked and one was shot dead in Xaysomboun province. This is just one of the many ways cultural politics may manifest around large-scale infrastructure projects, as development is struggled over in locally and historically specific ways.

The BRI relies on the rhetoric of shared futures, collaboration, and improved livelihoods for recipient countries. Yet, economic expansion particularly via hydropower projects will intensify water demands, reshape river ecosystems and possibly increase pollution. The BRI brands itself as a **sustainable development project**, yet by conventional sustainable development metrics and standards there is serious misalignment between the BRI's goals and actions. If the BRI is to promote "sustainable" development, questions must go beyond addressing energy access and economic development to consider who/what will capture the benefits and bear the (often environmental) costs of these massive projects and when.

**Greening the Belt and Road**

In May 2017 in response to criticism of environmental standards, China released their **Guidelines for a Green Belt and Road**, which aim to "promote green development, strengthen eco-environment protection, and jointly build a green silk road". These guidelines will either offer lip service, or move to address existing problems and build contextually appropriate governance structures. While a step in the right direction, these guidelines operate at a high-level scale that continues to neglect local environmental changes and cultural politics. With these issues present, the questions remain: are these large infrastructure projects and all the materials, transport and labour bound up in them in fact sustainable?

In the language of the BRI, sustainable development has broad application. It is linked with everything from social wellbeing to economic growth to energy infrastructures. In this critical moment, as international development pivots towards Chinese-backed megaprojects, are "sustainable" and "green" simply buzzwords to facilitate a massive push to extend an economic empire around the world? Perhaps these concepts are rooted in western ideals rather than material processes; and when no one is held accountable, they become meaningless beyond their publicity value. Despite its emphasis on infrastructure and other place-based developments, the BRI lacks a local context.

By focusing on the economic aspects of development, BRI explanations shroud the very material ways large infrastructure projects transform landscapes and everyday life, carrying significant political and socioeconomic implications in recipient locations. These impacts manifest in China's neighbouring countries in Southeast Asia where energy development projects lead to radical social and environmental transformations. As these megaprojects take shape, questions remain of how the ecological impacts and cultural politics of "development" will be managed or contested between local, national and transnational levels.