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Co-opted authoritarianism and BRI greenwashing: How mutual interests shape climate priorities in Southeast Asia

Hui Feng and Stephen McCarthy

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Acronyms and abbreviations

ASEAN – Association of Southeast Asian Nations
BRI – Belt and Road Initiative
CAEC - China-ASEAN Environmental Cooperation Centre
CAECF - China-ASEAN Environmental Cooperation Forum
CCCP - Climate Change Centre for the Pacific
IDI - International development institution
JETP – Just Energy Transition Partnership
NGO – Non-government organisation
PLN - Perusahaan Listrik Negara
PNPCA - Procedures for Notification, Prior Consultation and Agreement
SOE – State-owned enterprise

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Executive summary

In recent years, Beijing has responded to the environmental and transparency concerns of its Belt and Road Initiative (BRI) by transforming it into a more environmentally friendly enterprise, or 'green BRI'. This Regional Outlook paper develops a *relational* model of co-opted authoritarianism between China and green BRI host countries to explain the dynamics behind the greenwashing of China's development infrastructure projects. Co-opted authoritarianism refers to the mutually beneficial relationship between developing countries and China based on utilitarian and transactional considerations. China's economic need to shift its domestic over-capacity overseas while expanding its regional geopolitical influence, on the one hand, is supported by the economic needs and political incentives of host countries on the other. This partnership of convenience drives host countries, largely marginalised in the international development funding regime, towards accepting 'greenwashed' projects that feed into their industrialisation ambitions but run contrary to the global as well as local environmental common good.

Co-opted authoritarianism highlights a structural problem of current international practice on low-carbon development which tends to ignore the likely trade-off between economic affordability and environmental sustainability on the part of local communities. Part of the greenwashing process has been to reimagine traditionally high emission or high impact energy sources as renewable or sustainable sources of energy. A climate of self-regulation, relaxed non-mandatory policy guidelines, and loosely defined green and clean energy has persisted in BRI green thinking since 2013. This has been particularly attractive to the ASEAN regional grouping and its lower income member states where many of China's SOE energy projects have been located. These dynamics are demonstrated by examining recent efforts at regional environmental cooperation along with examples involving hydropower in the Mekong region and coal-fired power plants in Indonesia.

Introduction

The cause of international development is facing unprecedented challenges at the beginning of the 2020s. On the one hand, China's global infrastructure-focused development program—the Belt and Road Initiative (BRI)—has been hugely appealing to many developing countries over almost a decade since it was launched. It represents a stark departure from the approach of funding social programs (schools, hospitals, sanitation) and good governance by Western governments and international development institutions (IDIs). At the same time, the emerging global agenda of tackling climate change through decarbonisation calls for new approaches to development that incorporate and prioritise environmental sustainability and facilitate the fulfilment of national commitments to climate change. Beijing has in recent years responded to the environmental and transparency concerns of the BRI by attempting to transform it into a more environmentally-friendly enterprise, which is often touted as the 'green BRI'. Combined with the ascendance of China's international competitiveness in renewable energies, the practice of the green BRI promises to have major implications over global development in delivering both socio-economic and ecological benefits.

The emerging literature on the green BRI highlights the opportunities it presents for the global leadership of the Chinese government in promoting green development as well as for businesses in this niche but burgeoning market.[1] Others, especially NGOs and think tanks, note the discrepancy between official narratives and the practice of Chinese companies on the ground in the form of environmental abuses—such as ignoring the need for environmental impact assessment and damaging local ecology through poor construction and operation in host countries.[2] While these works help establish a more balanced view and assessment of the green BRI, they are found wanting on a number of fronts. First, the discussions about 'greening' the BRI tend to take an *apolitical* view that largely positions Beijing's latest policy stance as a technical patch of 'environmental management' to its global investment program. In other words, this is treated as a matter of getting the policies right and ensuring they are implemented properly. However, an emerging literature approaches this issue from the perspective of political ecology that brings politics back in. It argues that the technical treatment of the narrative and practice overlooks the *politics* that infuse how 'green' development is politically constructed and reinforced through cognitive and institutional mechanisms, which is the key to understanding modern environmental initiatives, including the green BRI.[3] In addition, and more importantly, most studies tend to examine the supply side (China, as the capital provider) while largely ignoring the demand-side configurations interacting with host processes or what Zhang and Smith call 'reverse engineering' of soft loan-funded projects.[4]

The issues identified in the extant literature call for a more holistic, political economy approach in examining the implementation of China's green BRI initiative. In this paper we have developed a *relational* model of co-opted authoritarianism (CA) between China and green BRI host countries in the wider geopolitical context in explaining the dynamics of greenwashing of development infrastructure in the developing world. Co-opted authoritarianism here refers to the partnership between developing countries (many of which run versions of democratic political systems) and authoritarian China in fostering greenwashing. We argue that such a partnership has been based on mutual demands on both sides. For China, these have been the economic need to shift its domestic over-capacity overseas and the geopolitical motive of expanding its international influence. On the other hand, the economic needs and political incentives of host countries tend to drive them towards accepting 'greenwashed' projects that feed into their industrialisation ambitions but run contrary to the global as well as local environmental common good. At

the same time, these demands have been largely neglected by IDIs and western donor countries, which further cemented the partnership of convenience.

In the following sections we will first define 'green' and 'greenwashing' in relation to the global agenda in addressing climate change, which is informed by a critical perspective. This helps to construct our explanatory model of CA that looks at the interactions among China, host countries and the third parties in the international system that have helped deliver the partnership. These dynamics are then demonstrated in two case studies that involves hydropower in the Mekong region and coal-fired power plants in Indonesia.

Green discourse and co-opted authoritarianism

In today's discourse, 'green' development reflects the need to foster social-economic development by addressing greenhouse gas emissions that cause long-term climate change. In terms of infrastructure, 'green' commonly refers to investing in low-carbon infrastructure, such as alternative energy generation to fossil fuels. However, an emerging literature on political ecology calls for a *political* understanding of "how 'green' is conceptualised and implemented, and for whose benefit", which essentially reflects the problem of unequal power relations.[5] In particular, it highlights the political-economic forces and power relations that shape both material environmental conditions and discursive accounts about them.[6] Powerful actors tend to use environmental narratives and green development initiatives with selective enforcement as a means to gain control over resources and other benefits—a practice which is often referred to as 'greenwashing'.[7] For instance, in the green BRI, 'green' (which commonly refers to investing in new low carbon infrastructure and alternative energy generation) is often downgraded to refer to mitigating the environmental risks of *traditional* infrastructure and environmental degradation. The latter definition has been far more commonly found in low-income BRI host countries where the regulations are often poorly and selectively implemented.[8]

It is also important to examine who benefits from being 'green'. For example, Chen documents an incident in which the Jiangsu provincial government in China expropriated rural land to promote its solar photovoltaic manufacturing capacity, resulting in dispossession under the banner of green industrial transformation.[9] Therefore, political ecology offers a critical perspective that draws our attention to the political nature of the green BRI program, political choices made by stakeholders, as well as the way we deal with climate-friendly development. In particular, we must question how 'green' is defined and by whom; how and where the narratives are implemented; and how the social and environmental costs are distributed.

We have constructed a relational model of 'co-opted authoritarianism' in explaining the momentum behind China's green BRI program. Co-opted authoritarianism (CA) here refers to a cooperative relationship between democratic and non-democratic or authoritarian institutions that is based on utilitarian and transactional considerations. We argue that the appeal and rapid expansion of China's green BRI can be understood as a partnership between China and host countries under CA, in which host countries, largely marginalised in the international development funding regime, consciously co-opted China's greenwashing of its infrastructural projects for their own economic and political gains. Such a partnership has been built on mutual the demand and interests of key domestic political actors but renders public and community interests in jeopardy.

Chinese motives

There are three parties that are central to our analysis: China, green BRI host countries and the wider international context/system. The strategic motives of China in promoting the BRI and the green BRI have been well documented. Economically, the initiative would help make up external demand for its domestic productive capacity that has been built up in the last two decades. It is also a critical vehicle to extend China's political influence globally, especially in the developing world in the wake of its emerging rivalry against the United States and its allies.

In China, the worsening situation in environmental pollution over the last decade has helped gather both government and public support, in general, for ecological conservation and sustainability. However, the narrative on green development, including the green BRI, is mostly defined by the government. The specific costs for businesses and households in tackling climate change and achieving the country's climate commitments seldom enter the public domain. In the case of BRI, a range of domestic actors, including the party leadership, central and local governments, the lines of functional bureaucracy, major financial institutions (policy and commercial banks) and the corporate sector (mainly state-owned enterprises, or SOEs) have sought their interests in the grand campaign of outward infrastructural investment. This power setting has enabled the Chinese government to politicise a more or less coherent, but unchallenged, narrative on green initiatives at home and abroad. The government's ability to control resources and shape corporate decision making has also enabled Beijing's selective approach in selling its BRI and green BRI program according to the purchasing power of host countries. Those costly but genuine green projects have been promoted to high-income countries in the developed world, whilst those more affordable infrastructures are greenwashed to target low-income countries in the developing world.

Shaping the policy debate in host countries

BRI host countries are equally essential in the equation. After all, China cannot force sell its green BRI program in the international community. In fact, the host countries have consciously adopted the face value of China's green narrative and formed a political partnership with China in building economic infrastructure for domestic industrialisation. There are several mechanisms behind the greenwashing by host governments.

First, the transmission of international climate-change norms for infrastructural development requires the acceptance and promotion of these norms and narratives by domestic political and social actors. The top-down dynamics in China can also be found in many host countries of BRI projects, with a general lack of environmental expertise, policy capacity and public awareness. Therefore, the cognisance of stakeholders in host countries regarding climate change, environmental sustainability and green development, as well as their (often manipulated) perceptions of the costs and benefits of different options, help shape the public debate and policy preferences. At the same time, the push for green development on the international level tends to be viewed as foreign pressure without inclusive discussions, arrangements and support to cater to domestic infrastructural demands.

Moreover, according to Bunte, competing development options have different welfare impacts on domestic stakeholders, and states often cater to whichever ones that are politically dominant when making choices.[10] Hence, such choices and their implementation are invariably subject to political contestation among interest groups and stakeholders under their specific national institutional and power settings. In addition, electoral pressures under democratic political systems tend to push incumbents to short-termism political decision making. In this regard, Beijing's turn-key projects, completed with finance, deliver ideal and demonstrable platforms of performance to domestic electorates. However, the mismatch between relatively short electoral cycles and long-time realisation of infrastructural investment also tend to prompt political opportunism for incumbents that they could reap political benefits now without being punished for the potential negative impact from these projects. In addition, the huge dollar values associated with infrastructural projects could be appealing to rent seekers for personal gains where institutions of checks and balances are wanting.

Apart from outright politicisation by key political players for electoral and personal gains, the greenwashing of the green BRI tends to create 'policy space' by empowering developmentalist decisionmakers in implementing their agenda on industrialisation and

distribution.[11] China's infrastructure-led 'economic miracle' has been appealing to political elites in developing countries in that it presented a more or less proven track record in demonstrating an alternative path of industrialisation. Although this path has generated widely held concerns on social and environmental costs, it nonetheless serves as a critical case in which state-sponsored infrastructural spending could be instrumental in promoting economic growth. This is especially appealing to those lest developing countries whose elite tend to prioritise growth over equity and development.

There are also important economic and fiscal incentives for host countries to adopt greenwashing with China. Low-carbon infrastructure often entails high initial costs (and therefore risks), asset illiquidity, and little tangible returns in the short to medium terms compared to those based on traditional sources of energy.[12] This forms disincentives for low-income countries to wholeheartedly embrace low-carbon development given limited fiscal capacity. According to an estimate by PwC/Oxford Economics, big-ticket infrastructures, such as power generation, transport, buildings and industry, account for more than 60 percent of global greenhouse gas emissions.[13] Yet many middle to low-income countries have little or no ability to pay for the green transition, which could cost at least US6.9 trillion each year to 2030 to be compatible with the goals of the Paris Agreement—this is in addition to the financial pressures of pre-COVID fiscal distress and post-COVID debt.[14]

All in all, these various domestic mechanisms, in the form of economic and political incentives, have seen host countries and their policymakers form a partnership of convenience, in which China looked to gain market and influence, and host countries seek industrialisation at all costs.

Shifting international pressures on development

The green BRI also operates within a wider international institutional and power structure. The path and pace of the green BRI has been shaped by the push and pull of structural forces in the international system. The international system should play an important role in shaping the evolution of BRI, including its 'green' episode. Here the international system is understood to be the arena of exchange between the participants of the green BRI and a range of external stakeholders, the latter including national governments, international governmental and non-governmental institutions, and the global public. More importantly, the international system is understood as the structural context, i.e., grand material processes that constrain or enable agency in a dialectical manner.

On one hand, the increasingly institutionalised international agenda on tackling climate change has resulted in normative and progressive forces that have shaped the evolution of the BRI behind its green-turn. In other words, external pressures have been instrumental in the greening and greenwashing of the BRI. On the other hand, the evolution of the international development funding regime should also be highlighted in explaining the dynamics of the green BRI. This includes reduced donor resources for the developing world given the global financial crisis and COVID-19, tighter international banking regulations, and a less than enthusiastic private sector amidst IDIs reducing their reliance on public funds.[15] This was further devastated by the blunt approach of IDIs to green infrastructure financing, amongst which only low-carbon (and more costly) projects are considered. In response to calls to prioritise environmental sustainability and encourage commitments to address climate change, IDIs have ground to a halt their development lending to fossil fuel-based projects. For example, the World Bank stopped investing in upstream oil and gas in 2019 and issued zero new fossil fuel financing in 2021.[16]

These moves, however, lacked a holistic understanding of the bigger climate change policy picture—environmentally sustainable growth needs to be delivered on a platform of low-carbon 'green' infrastructure, which has yet to become economically affordable to most

developing countries. There is therefore a mismatch between the high national and political demand for affordable infrastructure that facilitates economic growth, and the relatively low international financial supply for these projects under the contemporary climate mandate. At the same time, despite reforms in recent years, developing countries remain more or less marginalised in the representation and major decision making on global development issues. Therefore, the recent push for decarbonisation without adequate measures to mitigate transitional costs for the developing world has caused a misalignment between local incentives and the global agenda, paving the way for developing countries flocking to the greenwashed BRI.

In summary, the institutional and power settings in the domestic and international system have helped forge a partnership of co-opted authoritarianism, between an authoritarian China and green BRI host countries, many of which are liberal or illiberal democracies. This partnership is transactional, serving mutual utility interests between China on the supply side and host countries on the demand side. The limit in international green financing and lack of support of the transitional costs for developing countries have further increased the latter's demand for a (greenwashed) BRI.

'Greenwashing' the BRI in Southeast Asia

The BRI was launched in 2013 as a signature project of the Chinese president Xi Jinping with an estimated aggregate pledge of at least US$1 trillion to be invested in mainly infrastructure projects around the world.[17] The move reflected China's ambition to expand its presence on the global stage by tapping into its high levels of national savings and domestic over-capacities. Since the early 2000s, when Beijing launched its 'Go-Out' program, Chinese SOEs, backed by state bank financing, were encouraged to consolidate and expand their overseas markets in targeted regions and countries mostly in need of infrastructural development.[18] The strong demand for BRI reflected a growing funding gap for critical infrastructures worldwide (some US$15 trillion by 2040)[19] and a lack of 'voice' reforms towards fairer representations of developing countries within the IDIs.[20] Indeed, the BRI accelerated China's shift from being an aid receiver to a major provider of development capital, especially in least-developed countries—both in developing Asia and in Africa.[21]

Despite its rapid expansion, BRI has been increasingly criticised for essentially exporting China's polluting model overseas by financing mostly 'brown' projects in the developing world, which were fossil fuel-based infrastructure such as coal-fired power plants, mines, oil pipelines, and heavy transport infrastructure.[22] In response, China began to frame the BRI under a new vision of 'green development' since 2017, which, according to Chinese President Xi Jinping, refers to 'a way of life that is green, low-carbon, circular and sustainable'.[23] This green discourse has been reinforced since then and operationalised by joint guidelines and operation plans from various central ministries. By 2018 China issued more green bonds (whose proceeds were used to finance low-carbon infrastructure) than any other country in the world, and this was set to reach a new high in 2021.[24]

Beijing has developed multiple green policies and guidelines governing debt finance for overseas investments.[25] These include the Ministry of Environmental Protection (MEP) and the Ministry of Commerce (MOFCOM) *Guidelines for Environmental Protection in Foreign Investment and Cooperation* (2013); *Working Guidelines for Green Development in Overseas Investment and Cooperation* (2021); and *Guidelines for Ecological Environmental Protection of Foreign Investment Cooperation and Construction Projects* (2022).[26] Importantly, only a few of these guidelines are legally binding on Chinese firms operating overseas; nor would many host countries have the capacity to enforce and monitor their compliance if they were legally binding.[27]

Beijing has also initiated a number of environmental cooperative mechanisms involving regional institutions and governments—this includes the China-ASEAN Environmental Cooperation Forum (CAECF) and the Climate Change Centre for the Pacific (CCCP). Between 2014 and 2019, China also invested more than US$23 billion in alternative energy projects worldwide.[28] Although overall BRI investment had been heavily impacted by COVID-19, it was expected to rebound post-pandemic, especially the green BRI projects that have drawn increasing interest from countries and markets.

As was previously noted, since 2013 a number of ministries in Beijing have issued various green policies and guidelines for governing debt financing for overseas investments. These became more frequent amidst international pressures on countries to address fossil fuel emissions following the 2015 UN Climate Change Conference (COP21) in Paris and, by inference, pressure on Beijing to stop building new coal-fired power plants overseas. Indeed, between 2014 and 2017, 91 percent of energy sector loans made by the six

major Chinese banks to BRI host countries were for fossil fuel projects; and in 2018, 40 percent of energy sector loans were for coal projects.[29] By 2021, China was responsible for more than half of the new coal power station capacity being built around the world.[30] However, while making various recommendations which merely encourage Chinese firms to follow environmental best practice—including adhering to the host countries' environmental laws, and conducting risk and environmental impact assessments—these policies and guidelines were not legally binding either on the banks or the Chinese BRI firms operating in the host country.

Prior to the 2021 COP26 United Nations Climate Change Conference in Glasgow, Xi Jinping announced to the UN General Assembly that China would not build new coal-fired power projects abroad. And in early 2022, four ministries published a further policy guidance document called *Opinions on Promoting the Green Development of the Belt and Road Initiative*.[31] While the document describes guiding relevant industry associations in establishing codes of conduct for environmental performance in overseas investments, it only speaks of guiding enterprises to 'standardise' or 'regulate' their environmental behaviour through industry-wide self-discipline. In other words, there remains no legal environmental obligations on Chinese firms operating overseas—only state guidance to self-regulate their behaviour according to industry-wide standards and codes of conduct. Indeed, there remains strong domestic reasons not to mandate guidelines on the environmental behaviour of Chinese SOEs operating abroad given that doing so has the potential to restrict China's exports. The SOEs are also supervised by the State Council through its State-owned Assets and Administration Commission using a profit-oriented performance evaluation mechanism rather than any environmental considerations.[32]

The *Opinions* policy document also declares that China will stop building coal-fired power projects abroad. However, it will "prudently proceed with existing ones that are under construction" and "push forward the green and low-carbon development of overseas coal-fired power plants that have already been built".[33] The latter refers to using technologies to make existing coal plants (and those under construction) more efficient and less polluting—but in so doing, also extending their lifetime emissions. The document also describes how China will deepen its cooperation on *green and clean* energy, and carry out joint research, exchanges and training with a focus on areas including high-efficiency and low-cost renewable energy power generation. This climate of self-regulation, relaxed non-mandatory policy guidelines, and loosely defined green and clean energy has persisted in BRI green thinking since 2013. It has been particularly attractive to the ASEAN regional grouping and its lower income member states where many of China's SOE energy projects have been located.

China joined the ASEAN Plus Three (Japan, Korea, China) Summit in 1997 and signed the China-ASEAN Framework Agreement on Comprehensive Economic Cooperation in 2002. From 2000-2016, Chinese firms were involved as contractors or developer-investors, either in sole or joint venture projects with host governments, in 64 coal-fired power and 119 hydropower projects in Southeast Asia. While the bulk of the coal-fired projects were located on Indonesia and Vietnam, and the hydropower projects in Laos, Cambodia and Myanmar, many of them remained in progress or were suspended. Between 2000 and 2018, Chinese policy banks had contributed to 109 (mostly coal-fired and hydro) power projects in Southeast Asia, of which more than 80 percent were commenced following the launch of BRI. Half of all Chinese-financed overseas coal-fired power projects during this time could be found in Southeast Asia.[34]

China-ASEAN efforts at cooperation on environmental issues began to take form during the 2007 China-ASEAN Summit and subsequent Environmental Ministers Meetings, leading to the creation of the China-ASEAN Environmental Cooperation Forum (CAECF) and the China-ASEAN Environmental Cooperation Centre (CAEC) in 2011. Various official statements, frameworks, and policy dialogues followed, including the China-ASEAN Strategy on Environmental Protection Cooperation (2009-2015; 2016-2020; 2021-

2025), commitments to the sustainable development goals in ASEAN's Community Visions, and the endorsement of the 'Green One Belt One Road' policy concept at the CAECF in 2016.

China has traditionally avoided membership of Western dominated regional bodies like the Mekong River Commission in preference to the ASEAN community and the 'ASEAN way' of consensus and non-interference in the domestic policies of member countries. ASEAN's approach to environmental cooperation reflects its consensus building culture whereby member states and their institutions are encouraged to achieve regional objectives and aspirational goals without the need for binding agreements or setting minimal standards. This complementarity to China's approach of setting non-mandatory policy guidelines on green BRI and encouraging self-regulation among SOEs in the industry has been mutually beneficial. It has also encouraged the greenwashing of traditional energy projects as 'green and clean' to ensure that China can continue to meet Southeast Asia's demand and preference for traditional forms of large scale and low-cost energy.

Part of this process has been to reimagine traditionally high emission or high impact energy sources—coal-fired plants and hydropower—as renewable or sustainable sources of energy. The *Plan of Action to Implement the ASEAN-China Strategic Partnership for Peace and Prosperity (2021-2025)*, for example, includes a plan to intensify cooperation in the areas of energy and minerals through encouraging investment in potential energy infrastructure development in power generation, regional power trade integration, and clean, renewable and alternative energy. It promotes information sharing, joint R&D and technical exchange in the development of new and *renewable energy sources* and technologies—including *hydropower and clean coal technology*. It also encourages enhanced geological and mineral cooperation through capacity building programs on *green mining* technology and *sustainable mining* practices.[35] The 'China-ASEAN Clean Energy Capacity Building Programme 2022' included an 'Exchange Project on Sustainable Hydropower Development'. The exchange project was organised by the China Renewable Energy Engineering Institute and the ASEAN Centre for Energy under the guidance of the National Energy Administration of China. The target participants were nationals of Myanmar—a country ruled by the military and undergoing civil war.[36]

The proportion of China's total BRI fossil fuel projects began falling in 2016 with renewables making up 58 percent of energy sector investments by 2020; and by 2021-2022 hydropower made up 56 percent of total renewable projects.[37] In 2022, China was continuing to invest in traditional energy sectors in Southeast Asia with 11 ongoing coal and 10 hydropower projects. Some 75 percent of China's energy projects were hosted by Indonesia (coal), Laos and Cambodia (hydropower); and six of the coal-fired power plants had been in their initial stages since January 2021.[38]

Hydropower on the Mekong

Approximately 55 percent of all Chinese-financed and constructed overseas dams can be found in Asia, and 73 percent of these can be found in Southeast Asia. Within the Mekong basin, 81 percent of overseas Chinese dams can be found in Laos.[39] Laos had over 70 operational dams in 2022 with a total generating capacity of 8.8 GW. Another 30 dams were under construction and over 200 were planned, including 11 dams planned along the Lower Mekong River—nine in Laos and two in Cambodia. Over half of Laos' generating capacity, the bulk of which was generated by hydropower dams, was exported to Thailand in 2021, while other ASEAN countries Vietnam and Singapore also import hydropower from Laos.[40] In 2020, China's Southern Power Grid Company signed a deal with the heavily indebted Lao government to gain majority control of Electricite du Laos and manage the national electricity grid. This would allow Chinese companies to produce and purchase electricity in the country, while extending Chinese influence by controlling its supply to neighbouring ASEAN states.

The China-ASEAN Environmental Cooperation Forum (CAECF) continues to include hydropower as a 'clean' or 'green' alternative energy source despite often causing major social and environmental impacts—a fact recognised by the multilateral development banks which began moving their renewable investments away from hydropower and towards solar and wind sectors in 2013, the same year the BRI was launched.[41] Yet the greenwashing of hydropower dams involves the promotion of these projects as a renewable and sustainable energy resource. However, evidence of the long-term sustainability of hydropower dams on the Mekong is questionable given the prolonged droughts and water shortages that have occurred in recent years. The associated deforestation and biodiversity loss caused by hydropower dam construction also contradicts their 'green' characterization, and some studies have shown that they cannot be considered 'green' because large-scale reservoirs produce substantial greenhouse gas emissions.[42]

The dislocation of people and food insecurity caused by hydropower dams highlights their social costs, made possible by weak institutions and environmental standards—or even a different set of standards that are mutually agreed upon by China and the host countries.[43] The social and environmental impacts of Chinese BRI dam construction in Cambodia has been well documented, including the lack of adequate environmental impact assessments by the host country, lack of meaningful participation and consultation with local communities, and the lack of recognition of opposition to projects by those most impacted by them.[44]

The Mekong River Commission, comprising Thailand, Cambodia, Laos and Vietnam, provides a framework for transboundary environmental governance that includes Procedures for Notification, Prior Consultation and Agreement (PNPCA). However, tensions between state and non-state actors in transboundary regions (Cambodia and Thailand) has impacted upon the process of conducting prior participation with stakeholders, and prior consultation has been criticised by civil society as a state-led 'rubber stamp' for mainstream hydropower development. The Lao government does not even hold community-based or national consultation meetings—it unilaterally declares that it has fulfilled its obligations under the PNPCA and proceeds with dam construction.[45]

Coal fired power in Indonesia

Indonesia's production of coal-fired power plants was boosted in 2015 with President Joko Widodo's announcement that an additional 35 GW (35,000 MW) of power capacity was needed by 2019 to cope with electricity shortages, and to meet his infrastructure building program in line with raising economic growth to 6-7 percent.[46] The construction of new coal-fired power plants would cover 20 of the targeted 35 GW required, gas-fired projects 13 GW, and renewable energy sources only 3.7 GW. It must be noted that, of the 3.7 GW 'renewable energy sources', almost two thirds, or 2.4 GW, was of hydropower, only the remaining third being genuine green power: 1.2 GW of geothermal and 120 MW of wind-generated electricity.[47] By 2021, numerous delays including the COVID pandemic had prevented the completion of the program; the financial stability of the government-owned power utility monopoly Perusahaan Listrik Negara (PLN) was in doubt; and the national projected demand for electricity had fallen short of planned expectations.

Nevertheless, public finances directed towards these goals had flowed primarily from China and Japan. Approximately 86 percent of Chinese financing, mainly from the China Development Bank and the China Export-Import Bank, had targeted coal-fired power plants.[48] In 2021, of the 31.9 GW of coal-fired power plant capacity installed in Indonesia, 41 percent was financed either fully or partially by Chinese entities. More Chinese finance had also been committed to another 13.8 GW of coal-fired capacity in the pipeline, as well as further finance for 4.5 GW of projects still in their planning stages.[49] These figures did not include Chinese investments in coal-fired power plant projects that were not

connected to the PLN grid—the so-called captive coal projects related to numerous specific industrial parks or smelters owned by Chinese investors. These include the 2,869 MW Nanshan Industrial Park, the 1,645 MW Delong Virtue Dragon Nickel Smelter Park, and the Chinese steel and nickel projects inside the Indonesia Morowali Industrial Park.[50] The Morowali project began in 2013 led by the largest producer of refined nickel in the world, China's Tsingshan Group, and now includes 11 smelters.

The industrial parks at Morowali on Sulawesi, Obi Island, and Weda Bay produce the nickel which is used for the production of stainless steel and electric vehicle batteries—both of which China has a large demand. Although Indonesia has the largest nickel reserves in the world, they are predominantly of low grade and require refinement to an intermediate level to produce stainless steel—by 2021 Indonesia was the second largest producer of stainless steel in the world. However, the refinement process required to reach the higher grade needed for electric vehicle batteries is energy intensive and environmentally harmful. As part of its strategy to create downstream industries, in 2020 Indonesia imposed a ban on exports of unrefined nickel ore. Given that China only has 3 percent of the world's nickel reserves and it is the largest market for electric vehicle batteries, Chinese firms aim to have 14 coal powered plants totalling 12.5 GW capacity across Obi Island, Morowali, and Weda Bay, primarily to increase capacity for the refinement of nickel to battery-grade. This would in effect double the captive coal projects linked to Indonesia's nickel industry.[51]

This continued Chinese over-investment in Indonesia's coal-fire power generation and off-grid capacity since 2015 runs contrary to the climate change pledges made by both Xi Jinping in 2021—not to build new coal-fired projects abroad—and Joko Widodo's 2021 pledge, and subsequent 2022 Presidential Regulation about Acceleration of Renewable Energy Developments, to stop building new coal-fired plants by 2023. However, the Indonesian ban does not apply for projects linked to the previous 35 GW power plan projects, new protected projects under construction and/or deemed to be a government priority, or ones linked to existing BRI projects—including six captive coal projects producing 8 GW capacity for the Chinese-owned nickel and steel complexes which are considered to be electricity supply for business and not for the grid.[52]

In addition, despite the Indonesian government's 2017 pledge to derive 23 percent of its energy from renewable sources by 2025[53], the government's PNL ten year energy plan (2021-2030) indicates that it relies on coal for 60 percent of its power and renewables make up less than 12 percent of the energy mix. The plan also describes how an additional 13.8 GW of coal-fired power plants will be built before the 2023 ban would come into effect.[54] Financing for non-renewables has grown faster than that for renewables, and coal-fired power plants remain attractive to investors due to the lower costs and higher returns on investment.

In 2021, Indonesia submitted its *Long-Term Strategy for Low Carbon and Climate Resilience 2050* to the United Nations.[55] The plan forecasts the continued growth of its power generation capacity in line with demand. Under the low carbon scenario compatible with the Paris Agreement (LCCP) strategy, it predicts that by 2050 renewables will comprise 43 percent of the power generation mix while coal will still comprise 38 percent. Yet approximately 76 percent of coal power plants are to be equipped with carbon capture and storage technology to achieve zero emissions in coal power plants, and net zero emissions by 2060. It was an ambitious plan given the current trajectory of adding more coal-fired power plants and growing emissions, and the high cost of carbon capture or clean coal technologies.

To assist Indonesia's conversion to renewable energy and phasing out fossil fuels, President Widodo signed the Just Energy Transition Partnership (JETP) at the G20 summit in Jakarta in late 2022. The deal would see the G7 countries plus Denmark and Norway provide US$20 billion in public and private financing (grants, loans and private

investments) over five years aimed at developing renewable energy and shutting down coal-fired power plants. Indonesia would aim to cap its power sector emissions by 2030, generate 34 percent of its electricity from renewable resources by 2030, and reach net zero emissions in the power sector by 2050—ten years ahead of schedule. Importantly, the deal would not apply to the coal-fired projects already approved and discussed above, including new captive coal projects for mineral-processing industrial parks which was expected to increase by 9.5 GW overall.[56]

While the 2022 JETP deal is a generous first step from the G7 countries to assist Indonesia's conversion, researchers at various think tanks believe that it falls well short of what would be required given that closing down power-purchase agreements for coal could alone cost $37billion; and combining coal shut-downs with clean energy investment could cost up to $25billion a year through to 2030.[57] In addition, the band aid solution trumpeted by the G7 overlooks Indonesia's extreme dependence on coal for energy and employment—over 60 percent of grid energy is derived from coal-fired plants and the industry employs a quarter of a million people. The huge overcapacity encouraged by increasing coal energy infrastructure since 2015, aided by Chinese finance, will continue to make it harder for renewables to compete. Moreover, the G7 solution overlooks the powerful political control leveraged by the coal industry in Indonesia—many members of Joko Widodo's own cabinet have worked for or have owned shares in large coal corporations, and the industry contributes large sums to political campaigns.[58]

Thus, like other countries in Southeast Asia, Indonesia plays a balancing game of responding to predominantly Western calls for climate change action while at the same time pursuing its own strategies for economic growth funded primarily by non-conditional Chinese finance. Realising its climate change commitments will include further juggling of its own concept of 'net zero' emissions, the closing down of some coal-fired power plants while opening others, and a reimaging of the meaning of renewable and clean energy. This includes making choices to pursue the expensive carbon capture and storage technologies for its fleet of 237 newish coal-fired plants[59]; 'greenwash' others as being necessary for the production of minerals needed for climate friendly electric vehicles; or build 'renewable' hydropower plants to produce so-called 'green' minerals smelted using low carbon energy. At the same time, Indonesia must cater to the political demands of the energy sector and there is no guarantee that President Widodo's successor will not return to the familiar oligarchical and corrupt model of Indonesian politics.

Conclusion

The world has come a long way in forging an international alliance in addressing climate change. The green BRI represents China's efforts in this regard in terms of increased funding for green infrastructure. However, it also involves greenwashing traditional infrastructure packaged for and adopted by the developing world through a transactional and opportunistic partnership that prioritise economic growth over sustainability. At the same time, the essential economic dilemmas and political concerns of the developing world, as well as domestic governance issues, have not been adequately addressed by the international community's response in fostering sustainable development.

Co-opted authoritarianism highlights a structural problem of current international practice on low-carbon development, which tends to ignore a likely trade-off between economic affordability and environmental sustainability on the part of local communities. Examining regional and national experiences in Southeast Asia in this regard helps us understand the partnership of convenience in this regard. The rapid increase in China's strategic influence through BRI investment has prompted Western countries to lift their game with increased commitments to infrastructural development. Although the resources committed so far have been nowhere near the scale of the BRI, this is likely to have a profound impact over the trajectory of the green BRI and the competitive dynamics of international aid and development.

Therefore, understanding the dynamics behind the partnership can help us establish a more viable and conducive framework for green development that adequately factors in transitional costs and governance arrangements. This is made all the more urgent and imperative given that most developing countries have pledged their national climate commitments in the UN conferences in Paris and Glasgow.

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