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# Ecological Civilization Goes Global: China's Green Soft Power and South-South Environmental Initiatives

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## Abstract

China's involvement in Global South environmental and development issues is reshaping 21st century environmental governance. This report examines China's green soft power through multilateral and bilateral environmental initiatives and exchanges. It draws on interviews and fieldwork conducted during the COP-15 UN Convention on Biological Diversity and in Southeast Asia on environmental exchanges with China-based organizations. The report finds that China's environmental leadership in multilateral arenas has progressed significantly over recent decades as exhibited by successfully advancing the Kunming-Montreal Global Biodiversity Framework. However, the report finds China's ability to influence international actors to adopt shared values and positive associations to China is limited. The report, furthermore, examines case studies of state-state exchange in Thailand and civil society exchange in Indonesia. In each case, Chinese organizations provide essential support to advance local environmental goals. These exchanges, however, exhibit limited influence in shaping values and attitudes toward China, in part, because the field of international environmental exchange is highly saturated, particularly with international and Global North organizations. This indicates that China's green soft power, while on the rise globally, remains relatively weak. The report concludes that the relative weakness of China's green soft power is attributable to strong political economic alliances with Global North countries and international organizations, as well as China's fragmented authoritarian governance, which limits governance effectiveness in international environmental arenas. Rather than viewing green China rising as a threat, China's emerging environmental leadership harbors potential for enhancing international collaboration. Policymakers and civil society organizations can engage with Chinese organizations and emerging conservation networks in the Global South to work toward shared environmental goals and enhance global environmental governance.

## Policy Implications and Key Takeaways

- China is ushering in a new era of environmental leadership. Financial resources and human capital should be mobilized by policymakers to identify common goals and interests that advance international cooperation and environmental stewardship. Conserving biodiversity and

mitigating climate change are essential to global security and peaceful international relations in the 21st century.

- Ecological civilization building is not only a political discourse in China, but a vision for global environmental change toward a socio-naturally optimized state of being. While the cognitive resonance of the discourse is strong with some people, it remains limited globally. It is imperative for policymakers and environmental practitioners to deepen their understanding of Chinese concepts of global environmental change, rather than viewing them as a threat. Furthermore, it is crucial to research and critically scrutinize environmental exchanges operating under this rubric to assess the processes involved and their socio-environmental outcomes.

- China's South-South environmental initiatives are not wholly directed by the state. Rather, there are numerous state, private, and civil society projects with distinct, yet occasionally overlapping goals. At times Chinese organizations compete with one another. Other times they cooperate. US engagement from policymakers and non-governmental actors should identify and capitalize on opportunities for cooperative exchanges with Chinese organizations to support conservation across Global South contexts.

- Policymakers should provide resources and programs to pluralize the types of organizations involved in Global South conservation. Moreover, training and tools should be developed for partner organizations to work more effectively in international environmental exchange and scientific knowledge sharing. Because one-size-fits-all models tend to be ineffective, flexibility and attention to locally-specific factors are crucial for successful socio-environmental outcomes.

- International environmental collaborations should be enhanced and new collaborations forged in effort to define and achieve shared global environmental goals. US institutions and civil society groups, such as NGOs, as well as universities, should seek collaborations with Chinese organizations and other international organizations through a variety of cooperative programs.

## Introduction

China is ushering in a new era of environmental leadership domestically and globally. From 2014 onward, the Chinese Academy of Sciences began working toward a comprehensive functional zoning program referred to as ecological redlining.[1] In 2020, China initiated a national park system with ten national pilot sites. Regionally, policies were adopted for enhanced protection of wetlands along the Yangtze River,[2] as well as migratory bird habitats in coastal regions.[3] Scholarly work has aptly drawn attention to how domestic conservation efforts solidify state power while reorienting citizens' relationships to land, livelihood, and everyday life.[4] However, it is crucial to differentiate between what China does domestically, in regard to the environment, and what it does internationally.

Internationally, China has initiated a wide array of green development, infrastructure, and conservation initiatives, particularly in Global South contexts. China's signature international investment and infrastructure program, now referred to as the "Belt and Road Initiative" (BRI) has undergone a process of "greening,"[5] which often benefits Global South partner state interests.[6] Tyler Harlan and Juliet Lu have provided a typology of green cooperation with BRI partner countries, including environmental trainings, dialogues, research, and development projects. Importantly, Harlan and Lu also show that many of these cooperative forms are not new at all. Instead, they are long-standing programs that are being reframed as green "to strengthen China's environmental leadership and soft power."[7] One way in which cooperative programs enhance China's interests is through the use of state finance to support green BRI developments, like hydropower and renewable energy projects.[8] Weila Gong and Joanna Lewis, in contrast, differentiate between direct engagements that influence green BRI project outcomes and indirect engagements that shape policies and investment practices.[9] Analyzing, what could be considered, direct engagements and capital interests, Jessica Liao argues that the use of Chinese state capital to forge BRI coalitions constitute green mercantilism as Global South countries support Chinese state interests through project-based cooperation.[10] In addition to forms of green cooperation and green mercantilism along the BRI, China has taken on key leadership roles in global environmental forums, most notably through serving as president of the United Nations Convention on Biodiversity.

During 2021, the city of Kunming hosted part one of the 15th UN Biodiversity Conference, followed in 2022 by part two in Montreal co-hosted with Canada. The conference was thematically titled "Ecological Civilization: Building a Shared Future for All Life on Earth." Ecological civilization building is a vision of global environmental change toward the optimization of socio-natural relationships. Further, it has been the Chinese state's way to differentiate its sustainable development trajectory from that of the West.[11] Domestically, however, ecological civilization building has been a key part of the party-state narrative that asserts China as a leader in environmental sustainability, thereby contributing to the solidification of state power[12] and the pacification of a beleaguered citizenry tired of living with pollution.[13] Internationally, in venues like the UN Biodiversity Conference, Chinese delegates drew on ecological civilization to project a *global* sustainable development trajectory. China is endorsing ecological civilization building on the global stage through existing multilateral platforms and its own institutional channels. President Xi Jinping, for instance, pledged 230 million USD to fund biodiversity conservation in developing countries through the Kunming Biodiversity Fund (KBF)—a Chinese state-funding mechanism that sits outside of the Global Environment Fund (GEF), which is the world's largest biodiversity-focused environmental fund governed through multilateral cooperation.

As examined below, China led the UN delegates toward adopting a new global biodiversity framework, which calls for 30 percent of the planet to be set aside as protected areas.[14] How will such large-scale conservation interventions transform environmental governance around the world? How has China's environmental leadership in global arenas progressed to bring new global environmental governance goals into being? Do China's efforts to make ecological civilization a "shared future for all life on earth" strengthen China's soft power internationally? Likewise, do China's bilateral South-South environmental initiatives, spearheaded by the state and civil society, strengthen China's influence abroad? These questions are particularly important for the Global South, where China is investing heavily and spearheading numerous environmental initiatives. Furthermore, these questions are of key importance for US policymakers in considering how to reorient environmental policies and international cooperative exchanges on the environment in a multipolar world.

As ecological civilization goes global, it is crucial to examine the role of China's environmental initiatives on the global stage. In this report, I examine *green soft power* through China's global environmental leadership in multilateral forums and bilateral South-South environmental exchanges. In conceptualizing green soft power, I place scholarship on soft power in conversation with green discourses and practices.[15] Joseph Nye, describing changing power relations in the post-cold war era, coined what he called "soft power" as a process wherein "one country gets other countries to *want* what it wants" through influential means "in contrast with the hard or command power of *ordering* others to do what it wants"[16] In this sense, soft power operates by producing the effects desired by a given state through persuasive communicative means rather than so-called 'hard' actions like coercion, threats to use force, or violent action. Drawing on the soft power concept, Maria Repnikova details fluid practices "whereby material resources and motivations tend to intermingle with political and cultural ones" to reach the minds of "target audience[s]... both domestic and international."[17] Repnikova argues that international communication and educational programs embedded in Confucius Institutes facilitate what she calls "Chinese soft power"—particularly in African countries like Ethiopia. Harlan and Lu, as noted above, have brought attention to the possibility of China's soft power operating through environmental trainings, dialogues, research, and development projects.[18]

Building on these insights, I define green soft power as expressions constituted in relation to environmental discourses and practices that influence actors to adopt shared values, goals, and positive associations to a given country. Based on cases of multilateral and bilateral environmental exchanges, I argue that while China's green soft power is growing globally it remains relatively weak. It is particularly weak relative to Global North countries and international organizations. To clarify, this argument pertains to the specific cases examined in the study. These include two cases of bilateral exchange, state-state exchange in Thailand and civil society exchange in Indonesia, as well as multilateral exchange through the COP-15 UN biodiversity conference, analyzed below. In other cases of bilateral or multilateral environmental exchange, however, one may find alternative articulations of China's green soft power. Indeed, additional studies across regions, countries, and exchange platforms are needed for a more holistic accounting of China's green soft power.

Furthermore, I argue that the relative weakness of China's green soft power is attributable, in part, to strong political economic alliances with Global North countries and international organizations, as well as China's fragmented authoritarian governance, which limits governance effectiveness in international environmental arenas. A consequence of fragmented governance is that China's global environmental initiatives do not elicit uniform responses in partner countries. Despite fragmentation, the Chinese state has achieved great strides in multilateral environmental leadership, as evidenced by their successful brokering of a post-2020 Global Biodiversity Framework and the resonance of China's home-grown concept of "ecological civilization" with some UN delegates, as discussed below.

It is crucial to recognize that China's green soft power operates through bilateral transactions ensconced in competition and cooperation. After all, scholarship has shown that bilateral environmental cooperation is permeated by competing domestic interest groups, such that China's domestic politics become entangled with international relationships.[19] Environmental cooperation entails a process of exchange often manifesting in a "project," or in other words shared goals approached through spatiotemporally limited cooperative activities. A project may be a community-supported conservation pilot area, an environmental plan, or a green fund, just to note a few examples. Environmental projects inevitably serve the ends of both partners. And not infrequently, environmental projects open the door for Chinese economic investment. Financial resources are abundant in China. So too are China's scientific expertise and reservoirs of data. In environmental exchanges, sound scientific practices and data are often the currencies of the realm.

As both financial capital and scientific expertise are in high supply within China, there is incredible domestic competition, across sectors and scientific fields, for international partners. Among highly competitive domestic environmental arenas, there are also instances of cooperation. A crucial feature of China's green soft power, therefore, is that it can manifest through environmental projects, which are not necessarily centrally orchestrated by the state but rather emerge from an amalgam of domestic competition and cooperation. The resulting projects serve the interests of local partners and the Chinese partner organizations who successfully forged partnerships abroad.[20] It is crucial to emphasize that Chinese organizations, whether

state, private or civil society, are at times in competition with one another for Global South partners and at other times they cooperate to advance shared goals. With limited space in this report, I will highlight one example below to illustrate this point.

In what follows, I examine green soft power through interviews with UN delegates before, during, and after the COP-15 biodiversity conference, as well as interviews and observations with those involved in China's environmental exchanges in Southeast Asia. After detailing the methods of the study, the report examines China's leading, albeit contested, role in producing the Kunming-Montreal Global Biodiversity Framework. The report contends that this event marks a watershed moment in China's international environmental leadership. Yet, the report also indicates limitations to the influence of "ecological civilization" among UN delegates. China's green soft power in this multilateral arena, therefore, is limited in scope and extent. The report further examines cases of bilateral environmental exchange between Chinese and Thai state actors involved in marine spatial planning in the Gulf of Thailand, as well as civil society exchange between environmental NGOs based in China and those in Indonesia on community-based mangrove conservation. In each case, Chinese organizations provide crucial support to advance local environmental goals. Hence, these cases of bilateral exchange exhibit a degree of influence as the projects contribute to defining and pursuing shared environmental goals. But they also reveal limitations of influence, particularly when compared to international and Global North partners.

## Research Methods

The data in this report comes from mixed methods including interviews about environmental initiatives and exchanges, as well as participant and non-participant observations from July 2022 to July 2023. To be definitionally clear, an environmental exchange, in this context, refers to a cooperative mechanism that brings together at least two different organizations around given practices, scientific endeavors, or market platforms explicitly aimed at addressing environmental issues. An environmental initiative is the process by which environmental exchanges initially proceed and the rubric under which they continue. I conducted interviews before, during, and after the UN

COP 15 Biodiversity Conference with delegates from various regions of the world. Interviews were conducted both in person and remotely. These interviews focused on perceptions of China's environmental leadership and the goals of delegate-affiliated organizations. I also participated in the conference. Additionally, I conducted interviews and fieldwork in Thailand and Indonesia including attending environmental exchange meetings and accompanying relevant parties on site visits. Interviews in Southeast Asia spanned representatives from local state, civil society, and scientific communities engaged in China's environmental exchanges, as well as representatives from Chinese organizations. All interviews are anonymized.

I chose a case of state-state exchange in Thailand surrounding marine spatial planning and a civil society exchange in Indonesia surrounding community-based mangrove conservation to have a comparison between state and civil society environmental exchanges. In Thailand, I conducted site visits and interviews with national-level and local-level environmental ministries in Bangkok and Chonburi. Furthermore, I accompanied local scientists and environmental ministry representatives during participatory planning sessions on marine spatial planning. In Indonesia, I visited conservation sites and environmental NGO offices in Jakarta and Bandung. I interviewed representatives from Indonesian environmental NGOs partnering with China-based environmental NGOs on community-based mangrove conservation. I analyzed the findings from interviews and field observations alongside a comprehensive literature review.

One might expect that state-led exchanges would be more effective than either civil-society-led or multilateral exchanges and, therefore, produce stronger articulations of green soft power. As illustrated below, however, I found that state-led, civil-society-led, and multilateral environmental exchanges all produced forms of green soft power. Yet, each expression was articulated through professional and interpersonal engagements, as well as political circumstances specific to a given case. The environmental exchanges examined below, contributed to shaping shared values, goals, and associations toward China. However, each case also revealed limitations to positive associations and shared values indicating that China's green soft power, while on the rise globally, is delimited in ways contingent on the political context and relative subject positions of those engaging in environmental exchanges.

In the following sections, I first examine China's environmental leadership and the resonance of ecological civilization building at the UN COP-15 conference. Then I examine two cases of environmental exchange, a state-state exchange in Thailand and a civil society exchange in Indonesia. I conclude by discussing the key findings and policy recommendations.

## China's Global Environmental Leadership: Progress and Limitations

China has become a global environmental leader, particularly regarding climate change and biodiversity governance. The transformation has been incremental. After being widely blamed by Western media for disrupting negotiations during the 2009 Copenhagen UN Climate Change Conference,[21] China has developed extensive programs in environmental knowledge sharing to support Global South biodiversity conservation, climate adaptation, and green energy transitions.[22] By exporting Chinese finance and expertise to countries in Asia, Africa, and Latin America, China is building networks with Global South countries and facilitating practical environmental work internationally.[23] Such exchanges, discussed in this section and those below, contribute to China's green soft power.

One means of environmental knowledge sharing and exchange is the China South-South Climate Cooperation Program. China is sharing knowledge regarding ecosystem management and restoration campaigns with developing countries, as well as its technocentric approach to engineering nature, increasingly referred to as "nature-based solutions." As Jeffrey Qi and Peter Dauvergne discuss, although nature-based solutions have been present for decades, they have only become mainstream in recent years.[24] Nature-based solutions refer to the idea that humans can engineer ecosystem relations to solve environmental and societal problems, such as climate change and biodiversity loss. A key shift in this environmental discourse came in 2019, when China and New Zealand spearheaded the nature-based solution tract at the UN Climate Change summit. Instead of thinking simply about sequestration or mitigation, nature-based solutions include energy transitions toward green and renewable sources such as large-scale afforestation projects. For example, China is providing technical support to build the "great green wall" in the

Sahara and Sahel in North Africa—a program that mirrors China's "three north shelter belt," a project colloquially referred to in Chinese as the "great green wall."[25] These projects have developed through decades of engineering desert landscapes.

Alongside these material transformations is the repositioning of China as an environmental leader within developing countries. Knowledge sharing,[26] scientific exchange, and promotion of China's environmental models, such as ecological redlining—a comprehensive functional land zoning and ecosystem management technique—as solutions for Southeast Asian conservation,[27] are some of the ways China's green soft power finds expression. These examples further index how China's environmental leadership is shaping global environmental governance. The shift in leadership emerged from multi-decadal processes through which China incrementally honed environmental leadership capabilities.

Zhou Enlai was China's first representative to a UN environmental event, attending the 1972 Conference on the Human Environment, held in Stockholm, Sweden. Despite Zhou's reputation as a one-man diplomatic charm offensive,[28] China's early leadership on the environment was muted by geopolitical tensions with the West and widespread reservations to ally with socialist states. A substantial shift in China's leadership in the global environmental policy arena emerged from the 1992 United Nations Conference on Environment and Development (UNCED)—sometimes called the Earth Summit—in Rio de Janeiro, particularly surrounding the principle of Common but Differentiated Responsibilities (CBDR). The CBDR principle holds that while all countries are responsible for environmental destruction, some countries, in particular Global North countries, have contributed the most to environmental disrepair and therefore should bear larger financial and practical responsibility.

While CBDR was widely debated in Rio de Janeiro, the discourse has roots in earlier discussions spearheaded by China's alliances with Global South countries. One of the main diplomatic issues in China gaining common ground with Global South countries was the transferring of financial resources and technologies from the Global North to the Global South for addressing environmental crises.[29] This position was spearheaded under China's leadership. In 1991, before the 1992 Rio Convention, China released a Beijing

Ministerial Declaration on Environment and Development, which framed the key issue of the UNCED as the transfer of financial wealth and technology from Global North to Global South. China, at the same time, advanced the notion of starting a "Green Fund" to be managed with equitable representation from the Global North and South to assist with environmental and development issues in developing countries, but with the majority of finance capital coming from Global North countries.[30]

Another rallying point for China-South relations was the issue of natural resource sovereignty. China supported unfettered national sovereignty over Global South natural resources, such as forests, while Global North representatives, in contrast, emphasized that forests ought to be managed as a global commons for the benefit of humankind.[31] Competing arguments regarding uneven responsibilities for restoration and who should bear the costs of conservation are iterative. They remain sites of struggle to this day. China's role in spearheading CBDR, however, serves to denote China's rising capability to express moral leadership in global environmental arenas and forge alliances with Global South partner states. Therefore, it serves both as an example of China's green soft power and a moment of incremental progress for China's environmental leadership as evidenced by its ability to popularize a new conceptualization of differentiated responsibility in global environmental governance.

China's global environmental leadership has continued to transform over time, most recently with a field-redefining display during the COP-15 Convention on Biological Diversity. The COP-15 conference marked the first time in history that China acted as president over a major UN environmental conference. Huang Runqiu, of the Ministry of Ecology and Environment, served as the President for COP-15. No less significant was the conference agenda, which entailed a new global biodiversity agreement to replace the 2010–2020 Aichi targets. To frame this process, China's homegrown concept of "ecological civilization building" was chosen as the theme of COP-15.

The concept of ecological civilization building emerged through global exchanges of China's premier scientists across Marxian political economy, systems science, and ecological economics.[32] Drawing on multiple ideas across disciplines, ecological civilization came to connote a socio-technical imaginary[33] wherein humanity achieves a future state of socio-natural optimization and sustainable development.[34] Xi Jinping and the upper echelons of the

CCP often draw on ecological civilization in their political rhetoric in effort to differentiate China's approach to environmental governance from that of the West and to frame China as a global environmental leader. The Director of the UN Environment World Conservation Monitoring Center, speaking after the initial announcement of the conference theme, said "ecological civilization not only reflects the essential role that nature plays in underpinning people's lives but also the need to improve our relationship with nature...we are working to help the world re-establish a balance in our relationships with other life on earth and we look forward to continuing to support the development of the future plan for nature."[35] Here ecological civilization operates as a strategic narrative that signals global green transformation.[36] Hence, within UN environmental platforms the concept of ecological civilization has found high praise, and therefore, expresses a modicum of green soft power.

While choosing ecological civilization as the theme for the UN global biodiversity conference signals a degree of resonance, the reality of how the discourse resonated with delegates during the multi-year conference was more complex and varied. Some international delegates that attended COP-15 found resonance with the concept of ecological civilization, as highlighted below. Others, however, expressed a level of dissonance or even explicitly criticized Chinese leadership for not adequately explaining the concept to a global audience. Interviews with delegates before, during, and after the conference, signal inherent limitations. This indicates that China's green soft power in this multilateral environmental forum, while exhibiting a degree of force to influence actors, is limited in scope and extent.

For example, a high-level civil society delegate based in Africa expressed a significant degree of support for and resonance with ecological civilization. The delegate stated:

> We believe in ecological civilization. For those in Africa, for my organization specifically we need to build that and create that awareness...I would say Africa hosts a greater percentage of global biodiversity and a greater percentage of economies dependent on nature. However, our level of civilization is low, so yes, of course we resonate and connect with that theme...There should be a kind of level of civilization—a level of change...That change in behavior must be sustainable and it must be

> communicated to the people. It needs to be reflected in government policy and the like. The theme of the conference is very relevant and it's very critical to us (Africa-based High-Level Civil Society Delegate, January 2023).

This expression reflects a UN delegate's substantial resonance with the concept of ecological civilization. Moreover, it shows how this interviewee interpreted the concept and applied it to the localized context in which they work. This example shows that there is a high degree of resonance for some. Other UN delegates to COP-15, however, found that Chinese representatives' efforts to fully explain the concept of ecological civilization were insufficient. For instance, a delegate stated:

> Regarding the message of ecological civilization building a shared future for all life on earth, I can see the way that China is trying. I don't think they were successful, because the academics come up trying to explain it, but in China they only listen to the leader. Whatever the leader says, they just repeat the same words. They did not try to explain it to the world enough. So, I still don't think that ecological civilization has been understood right...At this point China didn't explain much so the world is still in confusion. I saw them trying but I saw that their efforts were not very effective (North-America-based High-level Civil Society Delegate, February 2023).

This expression contrasts with that of the aforementioned delegate by claiming that the effort to spread the vision of ecological civilization was limited and ultimately not effective. Comparing these statements indexes regional differentiation in China's green soft power. At this point, it is important to note that the meanings associated with discourses are, by nature, malleable. People may make innumerable personal associations to a given signifier based on how they perceive and interpret it. Interpretation and ascription of valences enhances, and indeed broadens, the relative meanings and values associated with a given discourse. We can see from the latter example, however, that ecological civilization discourse, at times, doesn't leave a substantial impression.

Despite competing reflections from UN COP-15 delegates, China was successful in bringing the world to a new global biodiversity agreement. Some suggest China's environmental leadership and diplomacy was integral to agreeing on a post-2020 Global Biodiversity Framework. In the penultimate day of the conference, China led a session through the night into the early hours of the morning, ultimately confirming a new global biodiversity agreement. In the lead up to the conference, Western news media and advocacy groups portrayed a lack of leadership, as China had failed to lead the parties to an agreed upon framework at that point in time.[37] Chinese media, in contrast, framed China's leaders as integral negotiators finding the right balance between competing demands and smoothing out differences behind closed doors.[38] At around 3:30 a.m., prior to the final day, without formal objections to the proposed framework, COP-15 President Huang Runqiu consulted with the executive leadership and acted decisively to approve the global biodiversity framework in the face of concerted opposition from the Democratic Republic of Congo (DRC), a country that could have derailed the agreement if they lodged a formal objection. After a politically partitioned applause, DRC representatives began to protest claiming they did not support the agreement. But since they had not lodged a formal objection, the agreement was sustained. In the aftermath of lowering the gavel, China appeared to some as having made a bold and powerful move. Though others claimed they had neglected full consideration of competing interests.[39] The following day, China offered a symbolic apology in a handshake with DRC representatives. DRC representatives acquiesced to the global biodiversity agreement. In these diplomatic moves, Chinese representatives brokered a deal for nature by establishing a new global biodiversity framework. They did so with a day to spare in the conference, something uncommon in major UN conferences.

COP-15 delegates reflecting on the negotiation process had positive things to say about China's leadership in this environmental arena. One delegate in particular lauded classical philosophical principles of negotiation as crucial to the global biodiversity agreement. The delegate stated:

> We can see the wisdom in China. China finds a middle way—not exactly in the middle but a way through the middle. They find a way through which all sides can come together to agree. In Chinese, this is

> called 'the middle way' (中庸之道). That is a saying that reflects ancient Chinese wisdom. You try to listen to whatever key concerns from each country and community, and that community of key concerns are incorporated into the agreement. There is room for some disagreement but some of them can be dealt with later. I think that wisdom and that determination and willingness to compromise, all of that showed in the leadership practices of China (North-America-based High-level Civil Society Delegate, January 2023).

This statement offers praise for an essentially Chinese style of negotiation, which according to this delegate has roots in classical thought. Assertions of positive leadership, such as this, were echoed by delegates during interviews, thereby indicating a degree of green soft power. They were also echoed by Chinese environmental NGOs reflecting on shifts in the Chinese state's approach to the environment.

Presently, the Chinese state is paving the way to enhance international relationships through national policies and financial mechanisms that facilitate environmental exchanges between China-based NGOs and those in the Global South. China-based NGO representatives have commented on how the Chinese state has made conditions more favorable for supporting collaboration across Global South contexts stating:

> Generally, the door is opened and political hurdles removed. Because once the government talks about ecological civilization, or whatever it is, it's about ecology so any effort on ecology or environment or conservation or so on becomes relatively easier. There are fewer political constraints for these kinds of efforts. In the early 90s, if you talked too much about the environment then you'd get a lot of political pressure because at that time the government set up development as a national policy priority. Environment was not prioritized in national policy. But it is now. So, in that sense whatever it is ecological civilization or whatever you call it—it's a political term in my opinion. But the content is always conservation. That makes our work easier (China-based High-Level NGO Representative, February 2023).

Clearly, from the perspective of China-based environmental NGOs, the Chinese state is emphasizing environmental protection and making efforts to enhance China's international environmental collaborations.

The divergent receptions of ecological civilization and China's environmental leadership, visible in the above-noted quotes, is representative of variation across interviewees. Analyzing the interviews, I found that ecological civilization exhibited degrees of resonance but was ultimately limited in scope. Further, interviews revealed that degrees of resonance and perception of China's leadership do not neatly align with geographical regions or types of organization. Despite these varied responses, China's leadership during COP-15 exhibited substantial progress in the global environmental leadership arena.

Compared to China's inaugural appearance in a UN environmental forum in 1972 and the early 1990s, when China sought Global South alliances through CBDR, China at COP-15 was emboldened and acted decisively to bring about a global environmental agreement. These actions in a global environmental arena are a reflection of China's green soft power. By way of contrast, the United States did not sign the Global Biodiversity Framework, which signals relatively weak environmental leadership and hinders US engagement in multilateral environmental governance. As the case studies below attest, however, China's efforts to support Global South environmental projects are crucial for advancing local conservation aims, yet are limited in producing positive associations toward China.

## China's South-South Environmental Initiatives: Case Studies

Scholarship has shown that technocratic approaches to engineering nature and society underlie China's efforts to extend state power into new territories.[40] China promotes ecological civilization building not only to shape domestic conservation policies—such as zoning over 20 percent of China's national territory for conservation—but also to facilitate resource territorialization through conservation and green development initiatives.[41] In turn, environmental planning initiatives have contributed to creating new forms of inequality[42] and social injustices domestically.[43]

In Global South contexts, as discussed in the case studies below, China's conservation initiatives enhance green soft power but only to limited degrees. Because the field of international environmental exchange and cooperation is highly saturated, particularly with financial support and longstanding cooperation from organizations hailing from Global North countries, China's conservation efforts in Thailand and Indonesia result in relatively weak green soft power. Moreover, conservation-based exchanges and cooperation fail to elicit uniform responses from international partners or extend sovereign control over natural resources.

As shown in the case of Thailand, there is inter-state competition for international partners, as well cooperation, thereby indexing the pluralistic and fragmented nature of the Chinese state. Furthermore, the financial support profiles of China-based environmental NGOs are generally constituted from an amalgam of domestic and foreign sources, which may or may not include public and private contributions in the form of donations and grants. Government-organized NGOs (GONGOs), which are a separate category of NGO wholly funded by the Chinese state, were not included in this study. Civil society exchanges between environmental NGOs exhibit mutualistically beneficial relationships and outcomes, which do not simply serve governmental interests, but rather advance the relative goals of local partners.

These findings suggest that China's coercive environmentalism, prevalent within the mainland and projected as a potential model of global green governance,[44] is not materializing through Global South environmental initiatives. Rather, expressions of green soft power materialize, but to limited degrees. Given these circumstances, policymakers and NGOs should identify and capitalize on opportunities for cooperative exchanges with Chinese organizations. Furthermore, financial resources and human capital should be mobilized by policymakers, NGOS, and universities to identify common goals and interests that advance international cooperation and environmental stewardship across Global South contexts.

## State-State Environmental Exchange: Marine Spatial Planning in Thailand

This section examines green soft power through state-state environmental exchange between China and Thailand. In 2013, representatives from China's

Ministry of Land and Resources and State Oceanic Administration approached the Thai Ministry of Natural Resources and Environment regarding scientific exchanges on marine spatial planning. They agreed to begin scientific exchanges on marine spatial planning and initiated regular meetings between ministries. Experts and scientists from Chinese and Thai universities and state research institutes took part in these exchanges. In 2018, the environmental initiative shifted to China's Ministry of Natural Resources, as the Ministry of Land and Resources and State Oceanic Administration were replaced by this new Ministry. After ten years of international exchanges, Thailand had outlined its first marine spatial plan, which now is under consideration at the national level.

Marine spatial planning entails collecting and analyzing spatiotemporal data on human-environmental interactions in coastal areas and at sea in effort to achieve specific ecological, economic, and social objectives.[45] The content of marine spatial plans often take the form of multi-sector functional zones for specific land and sea uses. Producing a marine spatial plan entails assembling eco-system-based management frameworks and locally specific geospatial databases.[46] Collectively, a decade of exchanges contributed to producing Thailand's first marine spatial plan for Koh Lan.

The Koh Lan marine spatial plan pilot project is located in Chonburi province, the second most economically productive administrative region in Thailand, just behind Bangkok, which is a large city-region with provincial administrative status. Chonburi has a rich history of tourism and industry, both of which have negatively affected local coral reefs. A key aspect of the marine spatial plan, entails functional zones for tourism, a marine protected zone around the island, and enhanced treatment of water runoff in the coastal mainland.[47] The proposed marine spatial plan is set to be debated at the national level. Thailand's long-term national plans, however, already include marine spatial planning.[48] Hence, this marine spatial planning pilot project is likely to be adopted and potentially serve as a case for national emulation.

Marine spatial planning in Thailand entailed substantial exchange of scientific data from Chinese to Thai experts. A large amount of data had already been collected by Chinese scientists and institutes through remote sensing technologies. Early exchanges revolved around the sharing of data collected by Chinese scientists such as information about current flows and geophysical

data on ocean environments, which was used to develop models and projections. Much of this data was readily available to Chinese scientists and experts, but not to Thai experts until bilateral environmental exchanges began. A Thai scientist remarked, "Chinese scientists already have all the information they needed to begin modelling through remote sensing."[49] The Chinese scientific community, from the perspective of Thai marine scientists, was sharing data already collected at the beginning of the exchanges, something local experts greatly valued. With this data as a base, subsequent years entailed scientific exchanges and joint data collection on effluent pollution from coastal urban areas, changes to coral reefs over time, chemical compositions of ocean water, and biological surveys of marine organisms. Thai scientists explicitly noted that they undertook multiple visits to China and benefitted from studying China's marine functional zoning and spatial planning processes.[50]

China's functional zoning practices, data collection processes, and modelling served as a model for Thailand's marine spatial planning. In this sense, state-state scientific exchange on ocean conservation strengthened China's green soft power, as it advanced shared environmental values and goals. As a Thai scientist noted, "Cooperation with China strengthened my understanding of Marine Spatial Planning and contributed to the success of the Koh Lan marine spatial planning project."[51] In Thailand, though not necessarily in China, marine spatial planning includes a community-based participatory component to assess and estimate impacts on local communities, which I observed.[52]

It is crucial to reiterate in this example that neither the Chinese state nor its ministerial operations abroad are monolithic. An enduring conceptual framework to understand the character of the Chinese state is "fragmented authoritarianism." Fragmented authoritarianism holds that while bureaucratic structures, policies, and decision-making are centralized, the policy implementation process and actually existing state practices are disjointed often resulting in localized adaptation in pursuit of political economic advantage.[53] This framework, often used to discuss China domestically, is valuable for understanding China globally, as I demonstrate below.

Above, I noted that this was a case of state-state environmental exchange between the Thai Ministry of Natural Resources and the Environment and Chinese Ministry of Natural Resources. Within large Chinese ministries,

however, there are numerous subsidiary organizations. The two that matter most for illustrating this point are First Institute of Oceanography (FIO), based in Qingdao, and Third Institute of Oceanography (TIO), based in Xiamen. These are both nonprofit research institutes of oceanography that operate under the direction and financial support of China's Ministry of Natural Resources. These organizations work toward common goals yet are also in competition to obtain international partnerships and contribute to environmental projects abroad. Initially, they were in competition to obtain working cooperative relationships and projects in Thailand. Eventually, the two organizations came to cooperate with one another to advance shared interests, as well as Thailand's environmental goals for marine protection. The organizations maintain distinct but complimentary cooperative agreements for different aspects of the marine spatial planning data collection and planning. For instance, both gather and share relevant marine data. But FIO has established the China-Thailand Joint Laboratory for Climate and Marine Ecosystems. This example supports the claim that China's green soft power is operationalized through bilateral transactions characterized by both interstate competition and cooperation, as discussed above in the Introduction.

While China's exchanges on marine spatial planning are essential to advancing Thai efforts toward ocean conservation, Thailand has a much longer history of scientific cooperation and exchange with other international agencies. The International Union for Conservation of Nature (IUCN), an international organization aimed at promoting nature conservation and the sustainable use of resources, for example, has partnered with Thai environmental ministries for over 20 years on multiple projects. Additionally, there are numerous regionally based international organizations such as the Partnership in Environmental Management for the Seas of East Asia (PEMSEA), which is a network of 14 countries that aim to foster resilient coastal areas and oceans with over 20 years of exchanges. Furthermore, multiple generations of Thai scientists have participated in US cultural and scientific exchange programs, such as the US Department of State's International Visitor Leadership Program (IVLP), which forges novel science-based relationships between US organizations and international scientific communities. US universities, likewise, have hosted numerous international educational exchange programs that contribute to enhancing environmental knowledge sharing.

China's bilateral exchanges between state ministries are of comparatively less temporal duration and, thus far, enhance China's green soft power in limited ways. Furthermore, marine scientists and environmental managers expressed concerns over emerging partnerships with China on science and environmental protection. For example, there were multiple expressions of concern over environmental monitoring and the possibility of monitoring military activities in Thai seas.[54] As part of remote sensing and joint data collection, Chinese representatives may be able to gather knowledge relevant to military interests. Interviewees jested, however, that both China and the United States could obtain information on military activities without Thai consent and, therefore, they may as well obtain benefits from scientific exchanges.[55] These expressions point to the presence of China's green soft power and its limitations.

Finally, in Thai conservation agencies, the green soft power of the United States—not China—looms larger. Not only is there a long history of exchanges with the United States and other international organizations, but the US National Park conservation model is held up as an example of successful environmental management. For instance, I observed multiple conservation stations displaying representations of the US National Park system. Representations of US national parks adorned the walls of local-level Thai environmental agencies and punctuated our conversations during planning meetings, thereby indexing the predominance of American conservation models in the banal structures of the workplace and everyday discourse.

If maintaining a strong presence in the region is desired, US policymakers should advance more substantive scientific and environmental cooperation with local national organizations, as well as Chinese organizations, while continuing to offer international exchange programs like IVLP. Doing so would enhance strategic regional partnership on environmental science already in place, bolster data production and knowledge exchange, and further the development of shared environmental goals across the Southeast Asian region.

## Civil Society Environmental Exchange: Community-based Mangrove Restoration in Indonesia

This section analyzes green soft power through civil society environmental exchange between China-based NGOs and those in Indonesia. China-based

NGOs have begun to partner with NGOs across Global South contexts on conservation. Community-based mangrove restoration is one kind of partnership between Indonesian NGOs and China-based NGOs. In these exchanges, China-based NGOs share their expertise, offer Chinese translation support to facilitate communication with Chinese organizations, and assist in obtaining financial support for conservation from international donors. Additionally, China-based NGOs undertake cooperative projects in Indonesia, which at the expiration of "project-time"[56] funding schedules become part of Indonesian NGOs' general conservation program. In these ways, China-based NGOs' green exchanges and cooperation enhance Indonesian NGOs' capacity to perform community-based mangrove conservation work and obtain financial support. Like the case of state-state exchange, civil society exchanges exhibit a degree of green soft power for China, as they further local environmental goals and promote shared values on conservation, but they also reflect limitations to the expression of China's green soft power.

Community-based mangrove restoration projects are underway across numerous provinces in Indonesia to combat coupled socio-environmental problems of climate change, biodiversity loss, sea level rise, and poverty. Mangrove root systems hold sediment in place, thereby preventing coastal erosion. With rising sea levels globally, mangroves can stem the tide of land loss. Furthermore, mangroves act as sinks for carbon sequestration, storing substantial amounts within their above and below ground vegetative stocks.[57] Some Indonesian mangroves have become part of global carbon credit trading systems with corporations offering financial support for planting and maintaining mangrove plantations.[58]

Participation is a key component of community-based mangroves. Fostering participation entails a multi-step process of stakeholder engagement, knowledge sharing in mangrove forest management, and training in how to utilize mangrove-based resources. First, there is a process of land aggregation and payment to the community for land use. This often entails a minimum 20-year land-lease agreed upon through an MOU. Public awareness programs follow. The establishment of nurseries and monitoring of planting is jointly organized by Indonesian NGOs and the local community. This entails establishing a community partnership unit and spatial plan for mangrove protection, often drawing on already existing village government infrastructure

and resources. Finally, there is support for community training in developing mangrove-related products, such as batik art crafts, coffee, or softshell crab for sale on the international market. Indonesian NGOs, furthermore, market these agroforestry products and facilitate market transactions, which financially benefits relatively poor communities, particularly rural women who are otherwise pigeonholed into gendered forms of household reproduction.[59]

While Indonesian NGOs have already produced robust programs of community-based mangrove restoration, Chinese NGOs are cooperating with them by providing their expertise on community-based restoration and, importantly, access to grants and other financial support. China's environmental NGOs offer financial mechanisms to enhance and produce new community-based conservation project in provinces like Java and Sumatra. Particular to some projects is training in agricultural methods or craft production, such as batik, which uses organic dyes produced through mangrove tree roots and leaves. This entails training for local women in batik—an art style endemic to central Java. The resulting projects entail new community-based mangrove restoration areas replete with women empowerment and livelihood enhancement. While the project-time for these programs elapses after roughly three years, the partnerships between China-based and Indonesian-based NGOs continue as they endeavor to acquire more funds and create new environmental projects.

As this case illustrates, China's environmental NGOs are active in Southeast Asian conservation by supporting local non-governmental organizations. As an Indonesian NGO representative claimed, "China is very aggressive now trying to support local conservation."[60] Yet the forms of support offered from China to Indonesia for conservation are emanating not merely from civil society, but also from China's private sector and the state. In addition to the examples noted above, China's Society of Entrepreneurs and Ecology, an organization aimed at protecting the environment, has created the Blue Partnership Action Fund (BPAF), which promotes "nature-based solutions" and marine conservation. The fund has earmarked capital for supporting coral reef restoration in Indonesia.[61] From the Chinese state, the Foreign Environmental Cooperation Center of the Ministry of Ecology and Environment has promised funds to support mangrove restoration. Both Chinese state and private funds have been promised to support conservation

in the years to come, which may extend green soft power through the proliferation of shared environmental values and goals.[62] But again, as Chinese organizations pursue environmental initiatives they are at times in cooperation and at times in competition with one another, as described above.

Within this pluralistic landscape of environmental exchange and project generation, and parallel to the Thai case noted above, Chinese organizations are entering a field already saturated with international green financial assistance and partnerships. Indonesian environmental NGOs already have substantial multi-decade partnerships with international organizations and those hailing from Global North countries, particularly those in Europe, Japan, and the US. USAID has been funding Indonesian mangrove conservation[63] and marine spatial planning[64] projects for decades and is among the largest of financial supporters. In this sense, China is fighting an uphill battle for green soft power amidst myriad international organizations. In interviews, Indonesian representatives remarked that substantial funding for conservation comes from organizations hailing from the United States, France, Belgium, Japan, India, United Kingdom, Norway, and other Global North countries.[65] The field of international conservation and green development aid in Indonesia is saturated. Moreover, China's environmental NGOs also compete with one another to secure relationships with promising environmental NGOs in Indonesia, thereby thickening the competition for local partners.

Corroborating the argument of this report, Indonesian NGOs expressed reservations about working with Chinese organizations on conservation. An Indonesian representative reflected on their experiences partnering with Chinese companies that slashed the prices for mangrove-based products, saying: "I hope that America does not lose to China. China is not in it for the long-term collaboration. They are not consistent. Working with their companies, they try to get more profit and continually cut the costs until the communities in Indonesia are making a loss on the products."[66] Assertions like this, which were numerous, index widespread concerns over partnering with Chinese organizations in Indonesia. "China wants to be involved in a lot of projects, but in Indonesia working with China is sensitive. We lost lots of money in the past. We hope America will come back like they did five or six years ago, before the Trump administration. China is big and they are having a bigger influence," stated another NGO representative.[67] Yet, the

NGO representative tempered this claim by discussing how Chinese organizations are still building their networks in Indonesia with civil society and government institutions. These comments from these NGO representatives reflect a long history of political economic ties linking the United States and Indonesia, including substantial US investment in the country.[68] Indeed, engaging the histories of political economic and scientific exchange is essential to further illuminate the processes shaping contemporary environmental initiatives across Global South contexts.

To support engagement on environmental issues in the non-governmental sector, American NGOs and universities may consider strengthening partnerships and financial support for environmental initiatives in greater Southeast Asia, as well as partnering with Chinese organizations and emerging Southeast Asian conservation networks. Furthermore, US government agencies should consider offering financial incentives to enhance international environmental exchanges with civil society organizations and promote policies that facilitate environmental initiatives globally.

## Conclusion

China is ushering in a new era of environmental leadership as evidenced by taking on a leading role in global environmental governance and brokering a post-2020 global biodiversity framework. However, China's home-grown concept of ecological civilization building, while resonant with some, has found limited resonance globally. Furthermore, in instances of bilateral state-state and civil society environmental exchange, as discussed through the cases of marine spatial planning in Thailand and community-based mangrove conservation in Indonesia, Chinese organizations provide essential support to collectively advance local environmental goals and shape shared environmental values. Yet, the capacity of China's environmental exchanges to influence Global South actors to adopt shared values and positive associations toward China are limited. Therefore, China's green soft power in these environmental arenas is relatively weak. The report concludes that the relative weakness of China's green soft power is attributable to strong political economic alliances with Global North countries and international organizations, as well as China's fragmented authoritarian governance, which limits governance

effectiveness in international environmental arenas. In other cases, however, one may find stronger articulations of China's green soft power. Accordingly, additional studies are needed for a more holistic accounting.

It bears reemphasizing that expressions of China's green soft power emerge through both concerted efforts of the state to shape international discourse and practice, such as in multilateral arenas like the UN COP-15 Biodiversity Conference, as well as bilateral exchanges that cross state, private, and civil society organizations. These arenas underscore how green soft power emerges not merely through state orchestration but also through intra-state competition and international efforts from civil society and the private sector. Myriad expressions of Chinese green soft power emerge through pluralistic relationships characterized by competition and cooperation. The fact that the Chinese state is increasing financial support for environmental projects indexes how international cooperation on the environment has become a geopolitical field through which green soft power articulates.

While one might expect that enhanced financial support for state-led environmental initiatives would result in stronger green soft power, this report found that state-led, civil-society-led, and multilateral environmental exchanges all produced forms of green soft power. The limitations of China's green soft power, across these cases, can be partially explained by the fact that Chinese organizations are entering a highly saturated field of environmental diplomacy wherein Global North countries have long dominated. Moreover, countries with a history of strong political and economic ties to the United States, such as the cases discussed in this report, benefit from partnering with Chinese organizations but also wish to continue cooperation on the environment with US organizations. Policymakers should provide resources and programs to pluralize the types of organizations involved in Global South conservation. Moreover, training and tools should be developed for US partner organizations to work more effectively in international environmental exchange and knowledge sharing. Because one-size-fits-all models tend to be ineffective, flexibility and attention to locally specific factors are crucial for successful socio-environmental outcomes.

The question of how China's environmental influence will shape global environmental governance in the years to come is pertinent. It is crucial to point out that China's current limitations in the realm of green soft power

reflect the fragmented nature of "China" as a national entity operating in global environmental arenas. China's environmental exchanges are not monolithic. Nor are they fully orchestrated by Beijing. Rather, they emanate from the state, private enterprise, and civil society.[69] Moreover, structural weaknesses and inconsistencies in state orchestrated efforts exist, such as inefficiency in the coordination of environmental ministries abroad and the relative failure to project a clear and unified message on ecological civilization in global environmental forums. If state structural limitations that undergird China's state power can be surmounted, the pace of global influence on the environment may accelerate. Any future reality will inevitably be subject to sectoral and regional differences and shaped by political economic relationships specific to given types of environmental exchange. China's environmental exchanges are most abundant in Africa and Southeast Asia, no doubt because these regions signify China's most important political and economic partnerships. China's efforts to enhance green soft power are likely to continue to be most heavily concentrated in these regions and should be given concerted attention in future studies. It is imperative to empirically research and critically scrutinize environmental exchanges operating under the rubric of ecological civilization building to assess the processes involved and their socio-environmental outcomes.

While China's involvement in Global South environmentalism is on the rise, it should not be viewed as a threat. Rather, this moment of heightened awareness of environmental crises harbors unprecedented potential for international collaboration. Policymakers and civil society organization can contribute to rapidly transforming African, Latin American, East and Southeast Asian conservation networks by doubling down on scientific exchanges and financial supports to collectively define and work toward shared environmental goals. International environmental collaborations should be enhanced and new collaborations forged in effort to define and achieve shared global environmental goals. US institutions and civil society groups, such as NGOs, as well as universities, should seek collaborations with Chinese organizations and other Global South organizations through a variety of cooperative programs. Therefore, it is necessary for policymakers to mobilize resources to strengthen already existing cooperative alliances and partnerships in conserving biodiversity and combatting climate change, and to forge new ones. Doing

so will deepen engagement in Global South conservation, while bolstering global environmental capacity. Conserving biodiversity and mitigating climate change are essential for global security and peaceful international relations in the 21st century.[70]

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