

6 Conclusion: The Promise and Limits of Transnational Sustainability Governance

In the past three decades, eco-certification has become a popular mode of transnational governance for promoting sustainable production and consumption, first in the Global North and subsequently around the globe. Despite holding promise for leveraging market forces to provide public goods overlooked by the state, this new governance mode always faces challenges to scaling up its impact, especially in large emerging economies. China seems a particularly difficult destination for eco-certification due to the lack of civil society campaigns and political consumerism under its authoritarian regime. Additionally, the role of the state in the economy suggests that the uptake of eco-certification in China may not be fully determined by market dynamics. In this context, does transnational eco-certification still have a role to play? If yes, what can drive Chinese businesses to adopt voluntary standards and practices originating in the Global North? What can the case of China tell us about the future of transnational sustainability governance?

This book addresses these questions by investigating the rise and limits of eco-certification in three of China's commodity chains: seafood, palm oil, and tea. My comparative analyses at the sectoral and firm levels yield three general insights. First, unlike common pessimistic beliefs, it is very possible for eco-certification led by non-state actors to thrive in authoritarian China. This is not only because transnational market agents, such as multinational corporations, can introduce relevant standards to their Chinese suppliers, but more importantly, because actors in China's state bureaucracy can become interested in harnessing transnational governance to pursue development goals for their jurisdictions or industries. As shown in the book's empirical cases, such support by state (or quasi-state) actors

has been critical to the rapid growth of transnational certification programs in China's large domestic market, where foreign companies have limited influence.

Second, the striking variation across the three supply chains suggests that the potential for eco-certification in China is highly specific to the political economy context in each sector, especially the interaction between transnational and domestic stakeholders. In other words, to gain traction in China, certification programs and their NGO supporters need to be strategic and proactive in building partnerships with influential stakeholders in the domestic industry. In fact, even in an authoritarian context like that of China, opportunity structures are not always closed to non-state rule makers for finding domestic supporters, if these non-state actors can align their objectives with the interests of the latter.

Third, despite opportunities for the further and faster growth of eco-certification in China, many obstacles remain for transnational eco-certification programs to truly transform the mainstream market. The book shows clear evidence that eco-certification has advantaged large, capital-intensive businesses, leaving most producers and businesses in the relevant sectors unaffected. Without further incentives provided by the state and stronger pressure from civil society and consumers, most Chinese businesses may still lack the willingness or capacity to adopt higher standards. Given the increasingly strong role that the state is playing in Chinese society and the market, there is little doubt that the future of eco-certification and its ultimate impact on the Earth system will be largely determined by the Chinese government's policies on transnational governance. In this respect, different scenarios may occur, depending on the specific strategies used by the state.

To conclude the book, I first summarize the comparison across the three sectors and assess the hypotheses developed in chapter 2. Next, I consider the validity of my findings in large emerging economies beyond China. As the state will likely play an increasingly important role in determining the impacts of transnational governance in emerging economies, I then discuss broader implications for the interaction between public and private governance in three scenarios, as the state might adopt different positions. I finish by proposing a new research agenda on the changing roles of emerging economies in Earth system governance.

6.1 Comparison across the Three Sectors

Chapters 3–5 show that transnational sustainability governance has gained varying degrees of traction in China's different commodity chains. Of the three cases presented, the most prominent rise of eco-certification has occurred in the seafood sector, as demonstrated in chapter 3 by the significant progress of sustainable seafood certification since 2013, driven by an alliance between transnational programs and Chinese state actors. As of 2017, half of the top ten Chinese seafood companies have adopted relevant standards and have begun to sell certified products, not only to Northern buyers but also to domestic consumers. In addition, the major e-retailers in China have set ambitious targets for sourcing MSC- and BAP-certified products. Between the two subsectors of seafood production—wild capture fisheries and aquaculture—certification has been taken up much more readily in China's aquaculture production than in capture fisheries: The MSC has only one certified fishery in China's domestic waters, whereas GAA-BAP and ASC standards have been adopted by hundreds of fish farms across the country. In the industry of tilapia, a farmed species that has been one of the main targets of eco-certification, the proportion of certified products over the total production volume has even been estimated to reach 13%. As more and more Chinese businesses have firmly stated their support for sustainable seafood by producing or sourcing more certified products, the market uptake of certified seafood will likely increase and accelerate in the near future.

In comparison, businesses in China's palm oil supply chain have shown less interest in eco-certification, and the volume of certified palm oil imported to the country remains small. This outcome may not be very surprising, given that China is not a palm oil producer country and consumer awareness of the relevant sustainability issues is low. Nonetheless, the RSPO has still made noteworthy progress in China in the past decade, as an increasing number of companies have joined its membership and adopted its supply chain standard. An important achievement for the RSPO is its successful engagement with all major palm oil traders in the Chinese market, such that these key supply chain actors have shown their willingness to supply the country with more certified commodity. In the downstream part of the supply chain, an increasing number of consumer goods manufacturers have become

interested in sustainable palm oil—the result of awareness raising activities organized by the RSPO with support from actors in China's state organization. However, as of mid-2018, certified palm oil represents only 1.5% of China's total consumption by volume. Although this figure shows very weak demand for palm oil certification, one can still expect more rapid increase in the number of certified companies and the uptake of sustainable palm oil in China due to the sourcing commitments made by some influential players in the supply chain.

Lastly, tea is the least successful case in terms of the spread of transnational sustainability governance in China. Although transnational eco-certification, like that of Fairtrade, entered China earlier than did programs in other sectors, to date, all major tea certification programs that exist in Northern markets have remained nearly absent in China—the world's largest tea producer and consumer country. This outcome seems even more striking in comparison with the growth of a domestic organic program run by the Chinese government. To date, most stakeholders in China's tea industry, including businesses and government officials, remain largely unaware of the relevant transnational certification programs. Nonetheless, this lack of progress by transnational programs does not imply that China has an unsuitable environment for the rise of sustainable tea certification. My survey of Chinese tea companies suggests that most producers could have a strong interest in using transnational standards to comply with domestic policy on sustainable development, especially when the Chinese government lends support for the relevant programs.

Taken together, the three sectors show clear differences in the spread of transnational eco-certification measured by the level of business support, ranging from “scant” in the tea sector to “moderately strong” for sustainable seafood, with palm oil located somewhere in between. Table 6.1 gives a cross-sectoral comparison and shows how the factors identified in chapter 2 contributed to this variation. I now discuss each of these factors in turn and evaluate the extent to which the empirical findings are in line with the relevant hypotheses.

6.1.1 Northern Market Agents: Initial Diffusers but with Limited Influence

To begin with, in all three sectors, eco-certification was initially conveyed to China by market agents based in developed countries, after social pressure

Table 6.1

Evidence supporting the hypotheses on the spread of eco-certification

		Seafood	Palm oil	Tea
Business support		Moderately strong	Weak to moderate	Scant
Transnational market forces	Requirements of Northern buyers (hypothesis 1)	Strong before 2013, but decreasing since then	Very weak	Very weak
	Requirements of large multinationals (hypothesis 2)	Absent	Existent, but limited in scale	Existent, but limited in scale
Activities of certification programs	Transnational programs' local capacity and engagement efforts (hypothesis 3)	Strong	Strong	Weak or absent
Fit of industry structure	Market concentration, vertically integrated supply chains, large-scale production (hypothesis 4)	Moderate	Weak	Weak
Endorsement of actors in the Chinese state	Support from local governments (hypothesis 5)	Absent	Absent	Existent, but limited in scale
	Support from national industry associations (hypothesis 6)	Strong	Moderate	Absent
Enabling conditions to win state support	Proactive engagement of transnational actors plus unfragmented domestic regulatory structure (hypothesis 7)	Existent	Existent	Absent

on sustainable production and sourcing had emerged. But the influence of these transnational actors on the penetration of eco-certification in each sector varied, depending on China's role in the relevant global supply chain. For export-oriented Chinese industries that are highly dependent on Northern markets, international trade can be an important channel for the flow of transnational governance, as suggested by hypothesis 1. Evidence supporting this hypothesis exists in China's seafood sector, especially in the initial rise of sustainable seafood certification prior to 2013, when export-oriented processors and farmers became certified in order to gain access to developed markets. For instance, the relatively high adoption rate of eco-certification in China's tilapia industry was mainly driven by American buyers, although the industry has recently begun to expand its sales domestically. My statistical analysis of a national survey of seafood processors also finds that export-oriented companies became more likely to hold MSC or BAP certification in China throughout the early 2010s.

By contrast, in China's palm oil and tea sectors, the fact that most products are consumed domestically has rendered foreign buyers incapable of driving rapid growth in eco-certification, although a few Northern buyers played a central role in introducing the relevant certification programs to China. For example, in the case of tea, only a dozen Chinese companies have adopted Fairtrade standards in their production for export to Europe, whereas most producers in the industry have focused on the domestic market and, therefore, were never under pressure from Northern buyers. The results of my survey experiment provide further evidence of the lack of Northern buyers' influence in this industry, as the prospect of expanding into Northern markets does not trigger companies' interest in getting certified. In fact, even in the case of seafood, I have observed challenges facing transnational certification programs in reaching the traditional domestic market. Hence, given the scale of China and its growing domestic consumption, Northern buyers are unlikely to drive the uptake of eco-certification in China.

With respect to the role of foreign investment or multinational corporations, the three cases show that Northern-based multinational brands can be important disseminators of eco-certification in China, but their influence in the Chinese market remains very limited. For sustainable seafood, multinational retailers like Walmart have even been reluctant to make sourcing commitments for their business in China, so that the uptake of certified

seafood in the Chinese market has been driven by Chinese branded producers and e-retailers. In the case of palm oil, while a few multinational brands like Mars, Incorporated, have implemented responsible sourcing policies for their production in China, these actions cannot lead to a noticeable increase in the import volume of certified palm oil to the country due to their insignificant role in the Chinese market. Likewise, Unilever's commitment to sustainable tea has introduced RA certification to a very small number of producers in the large Chinese tea industry. Hence, even if Northern-based multinational corporations fully embrace eco-certification, these market agents alone are unlikely to make significant impact on the sustainability transition in the Chinese market. In short, although Northern buyers and investors are often the actors that initially introduced eco-certification to China, they can hardly constitute the key forces driving the subsequent rise of the relevant programs, not only because of their hesitance to take stronger action, but, more importantly, also because of their limited influence in the large Chinese market.

6.1.2 Agency of Certification Programs: Proactive Engagement on the Ground

When transnational market forces meet their limits, the activities of transnational certification programs and their NGO supporters in the destination country become crucial to generating domestic stakeholders' interest in the relevant rules and standards. The evidence from the three sectors suggests that proactive outreach activities and engagement efforts by these transnational non-market actors in China are necessary for the rapid spread of eco-certification in the country. These activities not only directly raise the awareness of Chinese businesses on the relevant sustainability issues and governance tools but also are helpful in building relationships with domestic regulators and therefore ensuring the legitimacy of their programs.

In the seafood and palm oil sectors, transnational certification programs made noticeable progress in increasing uptake after they had proactively approached some Chinese businesses and industry associations and built strong local teams to engage with domestic stakeholders. In the seafood case, the contrast between the rapid growth of the MSC, ASC, and GAA-BAP on one hand, and the lack of companies certified to FOS on the other hand, further demonstrates the importance of the local activities of transnational programs, as FOS has yet to start outreach activities in China. In

the tea sector, all three transnational programs have refrained from devoting resources to expanding their business in China, and this passive strategy has been a key factor in limiting their influence in China's tea industry. In addition, my survey shows that those tea companies frequently interacting with environmental NGOs (including certification programs) are more interested in adopting eco-certification, implying that proactive engagement of certification programs and their NGO partners with local businesses are likely to boost the uptake of the relevant standards. In sum, the three cases together provide support for hypothesis 3 on the importance of proactive engagement efforts and the strong local capacity of transnational programs.

6.1.3 Fit of Domestic Industry Structure with Transnational Rules

In addition to transnational forces, in line with hypothesis 4, my empirical study shows that the structural features of each industry or supply chain in China can limit the spread of transnational governance, and, accordingly, disadvantage some types of businesses. The three cases together provide evidence suggesting that eco-certification is more likely to be adopted by businesses embracing industrial, capital-intensive commodity production. In China's seafood sector, eco-certification has risen in the chains supplying the export and domestic premium markets, where both the degrees of horizontal and of vertical integration are high due to the rise of major brands. My statistical analysis of national surveys of seafood processing companies also shows that large companies with more financial resources are more likely to get certified. Hence, the transformation of China's seafood industry toward horizontal and vertical integration has facilitated the rise of sustainable seafood certification. Nonetheless, the absence of certified companies and products in the chain supplying China's traditional seafood market reminds us that an important part of this industry remains incompatible with the governance mode of eco-certification.

In the cases of palm oil and tea, structural conditions in the supply chains are not always conducive to the adoption of transnational eco-certification. In China's palm oil supply chain, a key barrier to sourcing certified palm oil is the lack of vertical coordination to ensure traceability. This is a particularly salient challenge for Chinese commodity traders that do not own plantations in producing countries. Moreover, the manufacturing stage of the supply chain remains highly fragmented, as palm oil is used in a range

of industries where many small companies exist. With respect to tea, the Chinese industry remains highly fragmented and filled with small-scale producers. This has presented a major challenge for transnational certification programs to quickly increase their uptake in the country, although the industry has rapidly increased vertical coordination and maintains a tradition of valuing quality through some good practices. Therefore, the three sectors presented in the book together show that, despite the rapid industrialization in China (including in its agri-food sector), the uptake of eco-certification in the country still suffers from the lack of fit between the governance mode of transnational standards and the structure of domestic industries.

6.1.4 Supporters in the Chinese State: Critical Role in Raising Awareness and Nudging Businesses

The most important factor contributing to the spread of eco-certification in China demonstrated by the three cases is the existence of supporters in the Chinese bureaucracy. As transnational market agents have a limited role in the large Chinese market, and the country's authoritarian context constrains advocacy by certification programs and their NGO supporters, the position of state or quasi-state actors becomes more important in China than anywhere else in determining the fate of transnational governance. Although we have not seen official endorsement by Beijing for any transnational certification programs, the empirics in the three sectors clearly show the rise of support from some national industry associations or subnational governments for transnational eco-certification and the positive effects of such support on businesses' adoption of relevant standards.

Chinese subnational governments have supported transnational governance in the tea sector, especially RA certification. As suggested by hypothesis 5, policy support provided by the local governments in Yunnan, and later Guizhou, facilitated the adoption of the relevant sustainable agriculture standards by tea producers in these regions. Both provinces belong to underdeveloped regions in China, where agriculture remains an important source of economic development. Thus, promoting local tea industries to boost economic growth was the primary motivation for these subnational authorities to endorse transnational governance. To facilitate the adoption of RA standards, these local governments have offered technical training, removed policy barriers for audits, subsidized certification costs, and even

helped certified producers reach out to foreign buyers. These measures were critical for the rise of certified farms in these localities. However, such successful experiences have yet to occur in other regions, so that the overall effect of local government support for transnational governance remains very limited in China's tea industry. Moreover, my survey research on organic tea companies also shows that transnational certification programs are more likely to be accepted by Chinese producers when they highlight their benefits for domestic policy on sustainable development and receive support from the Chinese government. This finding confirms the large shadow that the state casts over the uptake of sustainable tea certification in China, implying a promising future for the relevant transnational programs if they can obtain support from local governments across the country.

At the same time, the cases of seafood and palm oil show the critical role that quasi-state industry associations can play in promoting transnational governance in China. In the seafood sector, transnational certification programs for both capture fisheries and aquaculture have built strong partnerships with CAPPMA, the national association of the seafood industry supervised by the Ministry of Agriculture. Such partnerships have been based on the willingness of CAPPMA's leadership to use eco-certification to upgrade China's seafood industry, build reputation of Chinese producers both domestically and internationally, and raise the association's profile in the Chinese government. As a result, CAPPMA took the lead in promoting sustainable seafood certification in China by organizing stakeholder forums and market campaigns and also recommending transnational programs to Chinese producers and retailers. Although CAPPMA could not directly offer financial rewards, the information and advice it provided was taken seriously by businesses, given its authority and expertise in the industry. It also helped transnational programs obtain the consent of state regulators and thus enabled a favorable policy environment for the former's outreach activities in China. Hence, with the endorsement of CAPPMA, China's uptake of sustainable seafood certification has taken off since 2013, as illustrated by an increasing number of certified producers (especially those focusing on the domestic premium market) and also by the strong sourcing commitments of Chinese e-commerce giants. We can hardly imagine such progress without the efforts of CAPPMA.

Likewise, CFNA, a leading trade association comprising major palm oil importers and users in China, has helped the RSPO raise awareness of and

engage with influential players in China's palm oil supply chain since the early 2010s, especially state-owned agribusinesses. CFNA also organized stakeholder meetings to introduce the notion of sustainable palm oil to the whole industry, and it produced guidelines on sustainable investment for Chinese companies. CFNA decided to collaborate with the RSPO partly due to the program's growing influence in the global palm oil market, but also because of the opportunity for the association to expand its work and increase its profile both domestically and internationally. As a result, the partnership with CFNA has provided the RSPO with opportunities to establish dialogues with key players in the Chinese market and convince them to support its program. Despite the momentum driven by the RSPO-CFNA partnership, the moral or nudge-like support from CFNA has been unable to persuade many businesses to change their sourcing practices due to the lack of financial incentives. In addition, as palm oil is far from the dominant vegetable oil in China, CFNA itself has been also reluctant to lobby for government regulations supporting the sourcing of certified palm oil.

In sum, the three sectors show that even in China's authoritarian context, subnational governments and quasi-state industry associations can still find that supporting transnational governance is in their interests, and their support, in various forms, can make important contributions to the spread of relevant private standards. More specifically, as part of the Chinese state, their endorsement or nudges can help transnational programs reach out to more local businesses, ensure good relationships with domestic regulators, and increase the credibility and legitimacy of transnational rules in China. Nonetheless, other policy tools (e.g., training and financial rewards) might be able to more strongly incentivize businesses to adopt transnational rules, although such supportive measures are less likely to be used by Chinese state actors, especially industry associations. Therefore, given the limited influence of foreign actors, support from domestic state actors is necessary for the rise in prominence of transnational eco-certification in China. But whether sustainable commodities will become mainstream in the Chinese market depends on the willingness of the relevant state actors to take stronger action.

6.1.5 Conditions for Winning the Support of State Actors

Given the critical role played by state actors in determining the fate of transnational governance in China, more attention should be paid to the

conditions shaping their positions. In fact, the three cases studied in this book shed light on two enabling conditions, as suggested by hypothesis 7, for transnational governance programs to win support of state actors in China, especially at the national level. As mentioned earlier, a comparison across the three sectors, and even within the seafood sector, shows that to get support from actors in the Chinese state, certification programs and the NGOs supporting them need to proactively approach the relevant domestic stakeholders. In the seafood sector, frequent interaction between CAPPMA's leadership and transnational certification programs, such as the MSC, the ASC, and GAA-BAP, was crucial for making CAPPMA aware of the potential benefits of eco-certification for industrial upgrading and willing to promote transnational standards. In contrast, without establishing contact with CAPPMA or other public agencies, FOS could not find supporters in the Chinese state. The RSPO case also demonstrates the importance of proactive engagement, as the program was only able to develop a partnership with CFNA after having invited officials from the MOFCOM and CFNA to its annual conferences and its study tours in producing countries. As a result, despite the lack of market pressure for sustainable palm oil in China, CFNA still decided to collaborate with the RSPO on awareness-raising activities. The strategies used by transnational certification programs took a different direction in China's tea sector, as none of the major programs in the Northern markets had a strong interest in expanding their Chinese market. Consequently, these programs on sustainable tea have been very reluctant to reach out to state actors in China and seek their support.

In addition to the actions of certification programs, the domestic regulatory structure in each sector also matters. Among these three commodity sectors, seafood has the most concentrated structure, as the Ministry of Agriculture, which supervises CAPPMA, is the only state agency regulating seafood production, processing, and marketing. In contrast, tea has the most fragmented structure as a legacy of China's planned economy. In the case of palm oil, the MOFCOM is the only agency regulating China's import of the commodity and therefore plays a central role in the regulation of this supply chain. Nonetheless, the MOFCOM has no direct regulatory power over the producers of consumer goods in the food and chemical industries. Therefore, when transnational certification programs were eager to engage with actors in the Chinese state, the concentrated regulatory structure in the seafood sector facilitated their efforts and ultimately contributed to the emergence of CAPPMA's strong support for eco-certification. In comparison,

despite the RSPO’s proactive engagement, CFNA has been hesitant to provide further support for promoting sustainable palm oil, partly because of the association’s perceived inability to influence downstream industries in the supply chain. In the tea sector, it is not surprising that a fragmented regulatory structure and limited engagement efforts made by transnational actors have together resulted in the absence of strong support from any Chinese state actors.

Table 6.2 schematically maps the three empirical cases to reflect how the combination of the two conditions shapes the positions of Chinese state actors on transnational governance. It is worth noting that the cases covered by the book cannot reflect the situation in the lower-left entry in the table, where we expect ambiguity and even resistance by some state actors to transnational governance. Hence, future research needs to consider cases where transnational actors do not actively engage with Chinese state actors, but the domestic regulatory structure is concentrated, and tests whether the combination of these two conditions can cause the resistance of Chinese state actors to transnational governance.¹

To summarize, the findings across the three sectors generally confirm the validity of the analytical framework developed in chapter 2. The empirical evidence shows that both transnational and domestic stakeholders played a role in driving the rise of eco-certification in China, but it is clear that the influence of Northern buyers and investors remains limited in this large emerging market, especially compared to interventions by actors in China’s state bureaucracy, who support transnational governance for their own goals. Hence, to rapidly spread their standards in China, transnational

Table 6.2
Chinese state actors’ responses to transnational eco-certification in the three sectors studied

		Domestic regulatory structure in the sector	
		Concentrated	Fragmented
Level of engagement of transnational programs with state actors	High	Seafood: Strong support	Palm oil: Moderate support
	Low	Cases to be discovered: Ambiguous position with possibility of resistance	Tea: Almost no support

certification programs need to proactively engage with potential supporters in the Chinese state. The variation across the three sectors shows the importance of such strategic action in promoting transnational sustainability governance in the world's largest emerging economy.

6.2 Beyond China: Similar Challenges, Different Contexts in Other Emerging Economies

After summarizing the factors shaping the rise of transnational governance in China, we can ask whether similar dynamics exist in other emerging economies, especially rising powers in the global economy, such as the other BRICS countries (i.e., Brazil, Russia, India, and South Africa). To answer this question, I now consider the extent to which the inferences drawn from this study can be applied to other emerging markets. Overall, three broad patterns on the uptake of transnational governance observed in China are likely to also occur in other emerging economies.

First, the rapid growth of domestic markets and South-South trade are reducing the influence of Northern-based market agents on the adoption of eco-certification. As suggested by global value chain scholars, emerging economies—not limited to China—have driven a shift in global trade in the past decade or so to become major end markets (Gereffi 2014; Horner and Nadvi 2018). Hence, commodities having significant sustainability impacts are increasingly produced to meet the demand in these Southern markets, where transnational governance mainly developed by Northern actors remains unpopular. For instance, most of the palm oil produced in Indonesia is consumed either domestically or in India and China, and the Brazilian soy industry keeps growing to support meat consumption in China and in its own market (FAO 2018b). These structural changes mean that producers and retailers in emerging economies have received less and less pressure from Northern businesses to adopt eco-certification standards—a situation similar to the case of China's tea industry, where businesses have little interest in Northern markets. This trend is likely to continue, and even increase, given the growing importance of Southern end markets in global value chains.

Second and related, without a strong influence by Northern market agents, domestic stakeholders, and especially state actors, who support the “on-the-ground” activities of transnational governance programs should be

key drivers of eco-certification and sustainability standards in emerging economies. While the precise role of the state governing the market varies across emerging economies, the comparative political economy literature generally agrees that state-led development interventions have been a key commonality between large emerging markets, especially the BRICS countries (Ban and Blyth 2013). Accordingly, state actors in these countries should have the capacity to offer businesses incentives to accept transnational sustainability governance. In other words, nudge-like interventions, such as information sharing or technical advice, and financial rewards of host governments are likely to also work in other emerging markets (Loconto and Dankers 2014). For this reason, it is crucial to assess the relationships between domestic policy and transnational governance to understand the uptake of new standards and practices in emerging economies.

Third, the way in which transnational actors engage with domestic stakeholders has important implications for the fate of the relevant governance programs. As shown by my study on China, most domestic actors were initially unaware of Northern-developed certification programs, and, accordingly, lacked interest in the relevant standards. The same problem might also exist in other emerging economies, as Southern stakeholders have been largely absent in the standard-setting and decision-making processes of many transnational certification programs (E. Bennett 2017; Schleifer, Fiorini, and Fransen 2019). This is highly problematic, given the importance of emerging economies in today's global value chains and the different priorities for sustainability that Southern stakeholders may have. Therefore, to scale up their global impact, transnational eco-certification programs need to invest more resources and energy in emerging economies and proactively approach domestic stakeholders. In other words, to attract more supporters in emerging economies, certification programs must make themselves more inclusive and let Southern stakeholders' voices be heard.

Bearing in mind these broad trends, we must also recognize variations in different country contexts. Drawing on the existing literature, I now use the cases of soy certification in Brazil, fisheries certification in Russia, and tea certification in India to illustrate the applicability of my findings on China in other emerging economies before suggesting directions for future cross-country comparative research.

6.2.1 Brazil

As the world's largest soybean producer country, one of the most serious sustainability issues in Brazil is deforestation caused by soy and livestock production. As a commodity attracting global attention due to its significant environmental impact, soy became a target for certification in the mid-2000s. However, the relevant transnational programs have yet to make a significant impact in Brazil. To date, Brazil has the largest certified soybean area in the world, but the adoption rate of eco-certification in the whole sector of the country remains low: In 2016, the Roundtable on Responsible Soy (RTRS)—a leading soy certification program—only certified 2.1% of the soybean area in the country (Lernoud et al. 2018). As a result, eco-certification remains unable to bring discernible changes in the land-use patterns in Brazil's soy sector (van der Ven, Rothacker, and Cashore 2018).

This limited uptake of soy certification in Brazil can be explained by a combination of two factors. The first is the changing market orientation that has limited the influence of Northern buyers, who have been keen advocates of transnational governance in the form of eco-certification. Today, most soybeans produced in Brazil are sold to Southern markets, especially China and in Brazil's domestic market, which consumed, respectively, 47.2% and 26.7% of Brazilian soybeans in 2017. In comparison, the largest importer of Brazilian soybeans in the Global North—the EU—only consumed 11.3% of the country's production.² However, until now, the uptake of certified soy has been mainly driven by European buyers, and most Chinese buyers and supply chain actors remain unaware of both the concept of eco-certification and the relevant programs (Schleifer 2017; Solidaridad 2017).³ Hence, the rise of Southern end markets and the lack of engagement of certification programs with Southern buyers together have constrained the growth of soy certification in Brazil.

The second factor explaining the low uptake of soy certification in Brazil is the failure of transnational certification programs to collaborate with key domestic stakeholders in the country, including both state and industry actors. As a result, little additional support from domestic actors has been provided to producers for the adoption of relevant standards. In the case of RTRS, a major industry association of Brazilian soy producers—the Brazilian Association of Soybean Growers (Aprosoja Brasil)—was involved in the early stages of the program's creation but later withdrew its support when the program could not establish a compensation mechanism for covering

the cost of standard adoption and auditing (Hospes 2014; Schouten and Bitzer 2015). Moreover, although experts have indicated that conservation-minded, responsible producers do exist in Brazil, these actors have rarely been recognized and rewarded by transnational governance initiatives (Nepstad and Shimada 2018). Eco-certification programs have also had little interaction with Brazilian governments, although public regulations in tropical forest regions have made critical contributions to decelerating deforestation in the Brazilian Amazon since 2005 (Nepstad et al. 2014).

In sum, the case of sustainable soy certification in Brazil shows a similar pattern to sustainable tea certification in China, where the rise of Southern markets proves the limits of the influence of Northern buyers and investors in driving the rise of eco-certification in emerging economies. In this market context, support from domestic industry associations and regulators should be a critical driver of the adoption of transnational governance. Without such support, eco-certification has little chance to thrive. Looking ahead, to increase their impact, certification programs such as RTRS should devote more efforts to building alliances with regional governments and industry associations in Brazil.

6.2.2 Russia

The Russian Federation is a major seafood producer, especially for marine capture production. In 2018, the wild capture in marine waters accounted for 92% of the country's total seafood production volume, making Russia the world's fourth largest marine capture producing country.⁴ While domestic consumption has been nontrivial, with a per capita fish supply higher than the global average, Russia is also a leading exporter in the global seafood market. By volume, more than 40% of the fish produced in Russia is sold abroad, making the country the world's third largest fish exporter after China and Norway in 2017. Accordingly, sustainable fisheries certification can play an important role in improving the management of fishery resources in Russia. In fact, programs like the MSC were introduced to Russian producers in the late 2000s and have experienced rapid growth in the country since then: As of 2015, the country has become the fifth largest supplier of certified wild-caught seafood in the world (Potts et al. 2016).

A closer look at the uptake of the MSC in Russia reveals the key forces driving the adoption of eco-certification by Russian fisheries, as well as several challenges to the further growth of sustainable seafood in the country.

Like the initial rise of seafood certification in China in the late 2000s, the rise of seafood certification in Russia has been entirely driven by the demand of foreign buyers, especially European ones. A recent study based on interviews with relevant stakeholders finds that, because of the absence of a domestic market for sustainable seafood, “the only motivation for fisheries to obtain certification is to export their products” (Lajus, Stogova, and Keskitalo 2018: 113). However, given that most fish products captured in Russian waters are consumed domestically, many Russian fisheries have lacked incentives to adopt the sustainable practices required by the MSC. Additionally, Russia’s export has increasingly shifted toward emerging markets, especially China. According to the calculation of Rabobank (2019), more than half of Russia’s seafood export volume was sent to China in 2017. Therefore, the demand for certified seafood in the Chinese market is likely to have more influence on the future growth of eco-certification in Russia.

Moreover, in line with hypothesis 3, the local activities of transnational certification programs and their NGO supporters are helpful for the adoption of relevant standards in Russian fisheries. As in China, transnational environmental NGOs, such as WWF and Ocean Outcome, played a key role in introducing the MSC to Russia’s fisheries sector, and these civil society actors have provided important support for facilitating the communication between transnational and local stakeholders in the processes of standard adoption and audits (Pristupa, Lamers, and Amelung 2016; Lajus, Stogova, and Keskitalo 2018). Yet apart from these transnational actors, local civil society groups and research institutions have had little involvement in the adoption of sustainable fisheries certification in the country (Gulbrandsen and Hønneland, 2014; Lajus, Stogova, and Keskitalo 2018).

A more critical barrier to the spread of sustainable fisheries certification in Russia is the lack of support from domestic state actors. According to certified fisheries in the country, the local fisheries authorities neither provided support for nor created any obstacles to the adoption of transnational standards. However, interviews with relevant practitioners suggest that state authorities have had a negative attitude toward the introduction of sustainable seafood into the domestic market due to a fear that Northern-based certification programs would disadvantage local producers and distort the market balance (Pristupa, Lamers, and Amelung 2016; Lajus, Stogova, and Keskitalo 2018). This situation makes for a sharp contrast to

the position of CAPPMA in China, where state actors strategically promote eco-certification in the domestic market. As state authorities in Russia also likely have the capacity to create domestic demand for sustainable seafood and improve communication between transnational programs and domestic stakeholders for standard adoption, the future of sustainable seafood in Russia depends on whether transnational programs can build trust and cooperation with the relevant state actors. Without support from such influential domestic stakeholders, fisheries certification is unlikely to make significant progress in the country.

Lastly, as suggested by hypothesis 4 on the importance of domestic industry structure, in Russia, the MSC has favored companies having vertically integrated supply chains while disadvantaging small-scale fisheries (Gulbrandsen and Hønneland 2014; Lajus, Stogova, and Keskitalo 2018). This adds another caveat to the positive sustainability impacts of eco-certification in emerging economies. In short, the rise of sustainable fisheries certification in Russia confirms the influence of Northern market agents on the rise of transnational governance in emerging economies, but the absence of a domestic market of sustainable seafood shows the limits of this mechanism without support of state actors.

6.2.3 India

With a large population and a growing economy, India has emerged in the past two decades as a major producer and consumer in global agricultural and manufacturing supply chains. While the spread of transnational eco-certification in India varies across sectors and products, according to a study commissioned by the United Nations Conference on Trade and Development and conducted by the Indian government, in both the agri-food and textile sectors, the adoption of such private standards has been primarily driven by the demand in developed markets, while domestic consumers and buyers have little knowledge about the relevant programs (Pande 2017).

A typical case is the rise of sustainable tea certification in the country. India is the world's second largest tea producer and exporter after China. But unlike China, it is a major supplier of certified tea in the global tea market: It has the second largest tea areas certified by Fairtrade and RA and the largest tea area certified by UTZ (Lernoud et al. 2018). But most Indian tea producers got certified to enter Northern markets or supply multinational

companies having sustainable sourcing requirements, such as Unilever (Pande 2017; Langford 2019). In this sense, the gap between China and India in the uptake of sustainable tea certification should be mainly caused by higher demand for Indian tea in Northern markets and the stronger role of multinational brands in India's tea industry. However, relying on this mechanism to promote eco-certification has limitations due to the existence of a large domestic market in India and growing exports to Southern end markets. For instance, in 2017 less than 20% by volume of the tea produced in India was exported, and more than a third of India's tea export went to Russia and Iran, which are the top two consumers of Indian tea before the UK.⁵ Hence, without demand for sustainable tea in the domestic market and other emerging markets, sustainable tea certification is unlikely to make further progress in India.

Another challenge to the growth of eco-certification in India, including its tea industry, is the position of domestic regulators. In general, the Indian state tends to underscore competition between private governance and the national institutions when defining standards on product quality and production processes. Therefore, it has often seen transnational certification programs as trade barriers that add extra costs to Indian producers, especially smallholders (Pande 2017; Schleifer and Sun 2018).⁶ This official position means that transnational programs are unlikely to get support from most actors in India's state bureaucracy if they do not open their rule-making processes to domestic authorities. Even though state actors do not adopt policies against any particular program, without the former's support, transnational eco-certification would have a very difficult time gaining traction in the domestic market and spreading its standards more widely in the relevant industries.

Seeing this challenge, one response by transnational advocates of sustainability governance has been to develop homegrown multi-stakeholder initiatives with strong involvement from Indian state actors. A noteworthy example is the creation of the India Sustainable Tea Program (so-called "Trustea") in 2013, an initiative involving multinational buyers (e.g., Hindustan Unilever and Tata Global Beverages), transnational NGOs (e.g., the Sustainable Trade Initiative [IDH] and Solidaridad), certification programs, the Tea Board under India's Ministry of Commerce and Industry, and producer groups aiming to develop and implement a local sustainability code fitting the Indian tea industry's characteristics.⁷ Through a partnership

between transnational NGOs, businesses, and domestic state actors, the program seeks to provide a cost-effective and practical solution for improving the practices of farmers and factories that have faced challenges in adopting existing transnational standards (Langford 2019). While this program's effectiveness remains to be seen, it has the potential to serve as an alternative model of market-based governance in emerging economies.

In sum, the rise of sustainable tea certification in India has been driven so far by Northern buyers and investors, but as for the case of China, this mechanism to introduce transnational rules has left India's large domestic market untouched. Moreover, the position of the Indian government on transnational governance in general has further limited the growth of tea certification in the country. Nonetheless, a new model to engage with domestic state actors in the form of homegrown standards has emerged in India and might provide an alternative way to achieve the transition to sustainability in India's tea industry.

By briefly considering the spread of eco-certification in three other country cases, I find that the governance mode of eco-certification is far from mainstream in the emerging market context, and, in many cases, the sustainability problems being prioritized and the preferred governance instruments of Northern and Southern stakeholders cannot easily be made to converge. Today, emerging economies have become major players in global value chains, but in most transnational sustainability governance programs, the involvement of actors from these countries remains limited. The rapid expansion of domestic consumption in emerging economies further reminds us that Northern buyers and investors alone can no longer drive significant increases in the uptake of sustainable products in Southern end markets. This mismatch seems to suggest that the existing transnational governance initiatives led by Northern stakeholders need important changes if they are to become viable tools in emerging economies and that this governance mode cannot be the only way to trigger sustainability transitions in these new markets.

A major takeaway from the past experiences of different certification programs is the need to gain support from domestic stakeholders in Southern end markets in order to scale up their global impact. In this respect, one of the most important common phenomena across major emerging economies is the critical role that domestic state actors can play in promoting new standards and practices. Although transnational governance

assumes that public regulations are not adequate to reduce the negative environmental and social impacts of economic activities, the evidence in China and other emerging economies shows that the state has maintained a strong influence on businesses' decisions. Without the support of such domestic stakeholders, transnational rules made by non-state actors have little chance of gaining traction in fast-growing emerging markets. While scholars of transnational governance have recently begun to pay increasing attention to the interactions between public and private governance (e.g., Grabs 2020; Renckens 2020; Tzankova 2020), more studies are needed to focus on such interactions and their effects in the context of emerging economies.

At the same time, domestic NGOs have been missing so far in the politics of transnational governance in emerging economies. Whether this is caused by their disinterest in or even opposition to market-based governance or by constraints on exogenous institutions, like the case in China, warrants further consideration. From a business perspective, multinational companies from emerging economies, like COFCO, have risen to prominence and will continue to expand their global operations. As a result, the sustainability policies and governance arrangements chosen by these companies will have huge implications for our world's development pathways and the Earth's biophysical systems. More attention should therefore be given to these Southern-based multinationals, including to their decision-making processes concerning sustainability strategies. Given the growing economic interdependence among emerging economies, future research should also investigate initiatives governing South-South trade and investment, and it should identify the types of governance that can effectively steward economic activities in the Global South for environmental sustainability and social justice.

6.3 Back to the Future: Transnational Sustainability Governance under the Shadow of the State

This book examines the spread of eco-certification in China and finds that despite a lack of strong NGO pressure and consumer activism, transnational governance led by non-state actors can still germinate and grow in this emerging economy under authoritarian rule. A notable insight offered by the study is that actors in China's state bureaucracy may be willing to

endorse transnational governance to pursue their own economic and political goals. This result challenges the conventional view that the Chinese state remains hostile to private regulators in order to maintain its rule-making authority (Drezner and Lu 2009; Buckingham and Jepson 2013). However, when state actors have no intention of leveraging transnational rules, the relevant programs will have a difficult time attracting supporters in China because of the limited influence of Northern-based transnational actors in the country. Additionally, a quick scan of other countries in this chapter suggests that the lack of support from domestic state actors is a common challenge for transnational sustainability governance getting traction in emerging markets. Therefore, another discussion on possible actions by the state is warranted here to consider the future of transnational sustainability governance.

As we enter the third decade of the twenty-first century, the Chinese state and the governments of other emerging economies are likely to exert stronger influences on their jurisdictions. This expectation is partly based on a trend of tightened state control in these countries in the past decade. In China, since Xi Jinping came to power in 2012, he has steadily centralized the power of the party-state and increasingly expanded the state's influence in every aspect of Chinese society (Economy 2018; Nathan 2018). A major change in the Xi era has been intensified state interventions in the economy through top-down command and control measures, including regulations and industrial policies (Schubert and Alpermann 2019). Many signs also suggest that the Xi administration has further reduced the space of civil society in China, and accordingly, the Chinese government has become less responsive to citizens and societal actors (Qjaoan and Teets 2020). A noteworthy example in this respect is the enactment of a new Law on the Management of the Activities of Overseas NGOs, which requires every foreign NGO to be supervised by a Chinese state agency at the ministry or provincial government levels.⁸ Yet China does not seem to be a unique case of authoritarian entrenchment in the world of emerging economies: Civil society activists in other countries, including India, Brazil, and Russia, also have found their actions increasingly constrained by their respective governments (Mohan 2017; Sauer et al. 2019; Stuvøy 2020).

Furthermore, the outbreak of COVID-19 in the first half of 2020 and the unprecedented government responses around the globe have led everyone to rethink the role of the state in the provision of public goods (Hale et al.

2020; van der Ven and Sun 2021). In nearly all countries, the state has played or is expected to play a dominant role in coping with the pandemic, as well as the subsequent economic downturn. Therefore, it is reasonable to expect the revival of the state in the upcoming decade in global and domestic governance regarding many critical issues, including the environment and sustainable development. This changing role of the state should be especially salient in emerging economies as reflected by the aforementioned trend. Indeed, in China's environmental governance, the Xi administration has emphasized the use of "goal-based governance strategies" through top-down central planning and campaigns (Zhao et al. 2020).⁹

Looking ahead, in this broader context, transnational governance programs have little chance to avoid the state, especially in emerging markets; instead, they will need to more frequently interact with different state actors. And state actors in emerging economies will have to become more reactive to transnational governance, due to the global expansion of Southern multinational companies and the growing influence of relevant programs in the global market. Hence, the ways in which Southern states will react determines the future of transnational sustainability governance and the contributions that this governance mode can make to sustainability of our Earth system. In this section, I lay out three scenarios of states' reactions with very different implications.

6.3.1 Scenario One: Undifferentiated Support by the State

In the first scenario, state actors in emerging markets lend more and more support to transnational sustainability governance but do not differentiate among initiatives varying in stringency of standards and procedural credibility. The position that has been taken so far by CAPPMA on sustainable seafood certification is similar to this approach of undifferentiated support. From the perspective of the host government, this approach seems impartial, and given the state's influence on the market, it holds the promise to quickly raise awareness among Southern businesses and consumers and to change some of their practices. However, this policy may limit the ultimate effectiveness of transnational governance by overlooking the specific features and standards of each program. In this case, transnational governance programs that do not have credible or stringent rules are still championed, and consequently, they may prevail over competing programs that have

better governance systems and more rigorous rules to promote sustainable production and consumption.

The main concern of this scenario is the large variation across different eco-certification programs in their credibility and rigor, such that many of them have been criticized as greenwashing (Bullock 2017; Darnall, Ji, and Potoski 2017; van der Ven 2019). For processes of rule-setting and rule implementation, programs that do not adhere to key principles of procedural credibility—including transparency, relevance, engagement, impartiality, and accessibility—are unlikely to achieve their environmental or sustainability objectives (van der Ven 2019). Moreover, the strength of rules promoting environmental or sustainability improvements also varies significantly across programs. For instance, empirical evidence has suggested that industry-backed programs tend to have less stringent rules compared to NGO-backed programs for environmental performance (Darnall, Ji, and Potoski 2017; Judge-Lord, McDermott, and Cashore 2020). However, most consumers are not aware of such variations and may blindly trust eco-certification. To save costs, businesses may also prefer to adopt less stringent rules while still protecting their reputation through certification. All these dynamics provide opportunities for the success of programs that only have weak rules.

In addition, given the rise of many programs in the same issue areas, there is the danger of a race to the bottom when programs water down their rules to increase market uptake (Fransen 2011). In this respect, scholars suggest that over time, some prominent eco-certification programs have gradually shifted their focus on environmental performance toward balancing different sustainability outcomes and promoting producers' economic benefits. Such changes reduce the chances of the relevant certification programs from making significant contributions to Earth system governance (Cashore and Bernstein 2021). Therefore, if state actors provide indiscriminate support to eco-certification without filtering out programs promoting biased, arbitrary, and weak rules, emerging markets risk becoming grounds for greenwashing.

6.3.2 Scenario Two: Careful Steering by the State

To avoid the risks in the first scenario, state actors in emerging economies could adopt a more careful strategy when supporting transnational

sustainability governance while not eroding the rule-making authority of relevant programs. To unlock the full potential of this new governance mode, the state should only endorse or award those programs having credible and rigorous rules. This approach requires Southern state actors to have a thorough understanding of the politics of transnational governance, the governance structures, and the content of different programs. Once states are capable of identifying credible and rigorous governance programs, they can use suitable policy tools, such as subsidies and procurement policies, to incentivize Southern businesses and consumers to support the relevant programs. In this situation, transnational sustainability governance is likely to help emerging economies make significant contributions to global sustainable development.

In addition to differentiating good programs from greenwashing, state actors in emerging economies could further provide targeted support to businesses or producers that have been disadvantaged by the existing governance mode of eco-certification, such as smallholders and artisanal producers, helping them build capacity for the adoption of sustainable practices (Glasbergen 2018). By giving additional support to less powerful actors in the supply chain, the state will correct the distributional consequences of private governance and promote a more just pathway for the transition to sustainability. Furthermore, to address the absence of concern for Southern stakeholders in Northern-developed sustainability standards, states in emerging economies need to assist actors based in their countries to more actively participate in the decision-making processes of transnational governance programs. The involvement of stakeholders from emerging economies is urgently needed to address the geographic imbalance in today's global sustainability governance system and to make transnational rules more inclusive and legitimate (Chan et al. 2018; Schleifer, Fiorini, and Fransen 2019).

All in all, this scenario seems to be an ideal situation for state actors fully leveraging rigorous transnational rules to promote sustainable production and consumption in emerging markets. A precondition for achieving this synergy between public and private governance is for relevant state actors to learn about good operating principles for transnational governance and specific rules for sustainability improvements. The challenge, therefore, lies in establishing mutual trust and good communication between transnational governance programs and Southern states.

6.3.3 Scenario Three: Takeover by the State

Alternatively, states in emerging markets may turn their backs on transnational governance by substituting the relevant programs with their own rules and therefore take over the rule-making authority of non-state actors. This approach has been already reflected by the emergence of several home-grown initiatives led by Southern states (Schouten and Bitzer 2015; Sun and van der Ven 2020). Some scholars find it very worrisome, as the state restricts and sometimes even completely removes space for transnational governance in emerging markets (Buckingham and Jepson 2013; Bartley 2014). However, Southern states take this position partly due to a feeling of disadvantage and exclusion caused by Northern-developed transnational rules, and Southern states' interventions may imply a willingness to improve domestic regulations on environmental and social issues (Wijaya and Glasbergen 2016). Hence, this scenario would not necessarily lead to bad sustainability outcomes if state actors can effectively enforce stringent sustainability governance. In that case, transnational governance, as tools that emerged to bridge the regulatory gaps left by states, may no longer be needed.

Moreover, as shown by this book as well as many other studies, transnational governance programs may set very high bars in terms of performance standards and leave the "bottom of the market" unaffected (Marx and Cuypers 2010; Steering Committee of the State-of-Knowledge Assessment of Standards and Certification 2012). As a result, businesses whose preexisting behaviors were far from certification standards remain uncertified, and this uptake pattern limits the additionality of certification impacts on the environment and social justice. This issue can be especially salient in emerging economies, where the bottom of the market is crowded. In this context, the takeover of transnational governance by domestic state actors holds the promise of significantly improving environmental and social performance if the minimum standards are continuously raised. To reach this positive outcome, the state needs to provide additional support to the businesses remaining at the bottom of the market to strengthen their capacity or give them compensation if they decide to leave the market. Otherwise, stronger state regulations for sustainability may cause even more negative impacts than private rules by putting more burdens on small businesses. In this respect, a more constructive perspective is that state regulations and transnational governance can be complementary, rather than rivalrous, so

that their dynamic interactions can lead to continuous improvements of both the lowest standards set by the state and the highest standards set by non-state actors in emerging markets.

In sum, the three scenarios discussed here represent only some archetypes of Southern states' responses to transnational rules. Therefore, these scenarios do not cover the full spectrum of complex interaction between state and non-state actors in making and enforcing sustainability governance. As state actors in emerging economies increasingly encounter transnational governance initiatives and improve their understanding of this new governance mode, the debate on the interplay between public and private rules will not end. But instead of focusing on arguing about who is in a better position to make and implement rules, researchers and practitioners of sustainable development should pay more attention to the pathways toward synergies between state and non-state initiatives in complex systems of governance at different levels of society.

6.4 Toward a New Research Agenda on Emerging Economies in Earth System Governance

In addition to illustrating the importance of interactions between public and private governance, this book demonstrates the urgent need to understand the roles played by China—and more broadly emerging economies—in the changing global governance system for sustainable development. My analysis sheds light on the extent to which China has been involved in transnational commodity governance and identifies pathways to better engaging actors in emerging economies for sustainability transitions. Given the growing influence of emerging economies in global sustainability governance, the book's findings point to three key research areas to be further explored by future studies.

First, to understand the promises and challenges of sustainability governance in emerging economies, we should better understand the politics of sustainability transitions in these countries. As climate change and other sustainability challenges have become increasingly existential for many people and groups, political contestation on sustainability governance is likely to intensify in emerging economies from the subnational to the national and transnational levels, and ultimately, it will greatly influence the future of the Earth (Colgan, Green, and Hale 2020). But studying these

political dynamics is a highly challenging task due to rapid economic and societal transformations in emerging economies. It thus requires researchers to unpack governance processes in these countries by carefully identifying different stakeholders and examining how their interactions among one another and with the rest of the world may shape different transition pathways.

Second, sustainability governance research needs to pay more attention to governance innovations led by emerging economies and to identify conditions capable of triggering such innovations by both state and non-state actors. To date, the dominant paradigms on sustainable development tend to take a Western-centric perspective, assuming that innovations and experiments mainly, if not only, stem from the developed world. However, many global challenges that we have witnessed, including climate change and the COVID-19 pandemic, seem to disprove the idea that the Global North has all the expertise and solutions to effectively govern these challenges (Oldekop et al. 2020). For this reason, it is crucial to examine how effective governance can be homegrown from emerging economies and possible processes to promote multidimensional learning for tackling global sustainability challenges.

Third, and related to the first two research areas, as emerging economies like China continuously expand their global economic and political influences through trade and investment, more effort should be given to assessing the sustainability impacts of overseas engagement of these rising powers as well as the governance arrangements for steering the relevant activities. For instance, in the past decade, China has provided more development finance in the energy sector around the globe than the World Bank and regional development banks, and therefore is in a position to fundamentally influence global energy transitions (Gallagher 2018). Hence, emerging economies are in the process of moving from being rule takers to rule makers in Earth system governance, and for this reason, their choices in sustainability governance are likely to shape future trajectories of sustainable development around the world. The issue is particularly salient in the case of China's Belt and Road Initiative, for which the effectiveness of environmental governance has large implications for the achievement of global sustainability goals (Ascensão et al. 2018). This area of inquiry needs to examine not only commitments and policies of China and other emerging investors but also their interaction with different stakeholders in

recipient countries (Coenen et al. 2020; Hale, Liu, and Urpelainen 2020; K. Gallagher and Qi 2021). In summary, there is little doubt that emerging economies will play a central role in the future of global sustainability governance. To understand their influence and trigger positive changes toward sustainability transitions, it is imperative to provide fine-grained analysis on governance processes in these countries as well as their dynamic interactions with the rest of the world.

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Focusing on eco-certification, a promising private tool governing global commodity chains, this book examines the agency of different types of actors on multiple scales in driving the rise of transnational sustainability governance in China—the world’s largest emerging market. My study shows that, under certain conditions, Chinese state actors are willing to engage with Northern-based non-state rule makers in governing sustainable development; yet whether such engagement is durable and strong enough to trigger significant environmental and social impacts remains to be seen. Therefore, the book’s findings shed light on both the promise and limits of transnational sustainability governance to lead sustainability transitions in emerging economies—the new center of the global economy in the twenty-first century.

The book, therefore, stimulates further consideration on the role of transnational governance and its interaction with the state in sustainability transformations that are required by the Anthropocene, the current human-dominated geological epoch threatening the Earth system’s resilience (Biermann 2014; Young 2017). Two sets of broad issues warrant special attention by future research on transnational sustainability governance and its role in Earth system governance. First, we must more carefully assess to what extent new governance tools, such as private standards and certification, can effectively trigger and steer a transformation process (especially in fast-growing Southern markets) to ensure sustainability of the global environment as well as an equitable share of development benefits. In the field of eco-certification, a focus on impacts has recently emerged in the literature, but this “impacts literature” still suffers from poor data quality, narrow conceptions of impacts, and research design challenges (van der Ven and Cashore 2018). Future studies need to take a more holistic view when conceptualizing the transformational impacts of governance and to adopt

mixed-method designs to assess the impacts of relevant initiatives against key governance principles, including credibility, stability, adaptiveness, and inclusiveness (Biermann 2007). Second, more research is needed to study the possible transformations of transnational governance programs themselves as they expand to new places and grow over time. As shown by the case of China in this book, to thrive in a new market, eco-certification programs need to adapt to local contexts and changing market dynamics, and the way in which they do so is likely to determine the scale of contributions they can make to the effective stewardship of the Earth system. Hence, we need to devote more attention to the adaptiveness and reflexivity of transnational governance systems, especially in the context of increasingly intensive interactions between state and non-state actors (Burch et al. 2019).

Our existing development model has brought pressing challenges to the Earth system, which have led to several governance innovations in the past three decades. Transnational governance in the form of eco-certification is one of them. My book adds to the existing literature on Earth system governance by showing that this new governance mode has the potential to transform production and consumption in large emerging economies like China, but this mode also faces many challenges in scaling up its influence in these new markets. This study again reminds us about the complexity of the existing global governance system and the need to encourage collaboration between state and non-state actors to enable the sustainability transformations that our world urgently needs. As the global economy and politics are constantly changing, and China, as an emerging power, begins to take leadership positions on many fronts, anyone who cares about the future of the Earth and human society should make more of an effort to engage with actors there and help China make good contributions to the development of future generations, not only within the country but also beyond.

