## **Understanding China's Leadership in Nature-Based Solutions:**

## **Nominal Adoption of Fragmented Norms**

by

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### Abstract

Since the 2019 Climate Action Summit, China has been playing a prominent role in mainstreaming Nature-Based Solutions (NbS) in global environmental governance, promoting the use of ecosystem management to solve environmental and societal challenges. Global environmental norms like NbS shape our understanding of how to respond to environmental issues and guide our actions. This research investigates China's seeming leadership in adopting and promoting NbS in its domestic actions and bilateral and multilateral programmes. I argue that China's adoption of the NbS norm is a case of nominal adoption whereby its analogous local norms – Ecological Civilisation and the Two Mountains Theory – continue to guide domestic policy-making and are unaffected by the transnational norm. Relying on a systematic review of Chinese-language primary sources, I found that China's discourse and actions involving the NbS norm are outward-oriented and aim to incorporate its domestic environmental practices and ideologies into the fragmented NbS norm, where the global recognition of NbS does not translate into consistent local implementation. In doing so, China is shaping global NbS implementation to its advantage and preventing its institutionalisation. It seeks to showcase its domestic environmental successes, while gaining performance legitimacy and reputational benefits to boosts its international image. This research fills the gap in the political science research on NbS and contributes to the global environmental politics literature by examining the role of one of the most biologically diverse countries in the politics of the NbS norm. The nominal adoption model helps to explain the anomalies of China's NbS norm adoption and promotion; and highlights the evolving strategies of authoritarian environmentalism and the dynamic diffusion and localisation pathways of global environmental norms.

# Lay Summary

China has been actively promoting Nature-Based Solutions (NbS) – harnessing the power of nature to solve environmental and societal problems – at United Nations conferences and through its diplomatic activities. This research seeks to analyse China's seeming leadership in NbS by reviewing over two years' worth of Chinese government communications and policy documents. I argue that China framed its domestic, pre-existing policies and ecological conservation programmes as NbS, even though they do not necessarily conform to the international standards on NbS implementation; and it is trying to export its own practices and experiences to the world under the name of NbS. This framing allows the Chinese government to showcase its environmental policy success at home and abroad, while increasing its influence and soft power in global environmental governance through knowledge-export.

# Preface

This thesis is the original, unpublished, independent work by the author, Jianfeng Qi.

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# List of Abbreviations

BRI	Belt and Road Initiative	
CAS	Climate Action Summit	
CBD	Convention on Biological Diversity	
CCICED	China Council for International Cooperation on Environment and Development	
CFEAC	Central Financial and Economic Affairs Commission (China)	
СОР	Conference of the Parties	
СРО	Causal Process Observation	
EA	Ecosystem Approach	
EC	European Commission	
GEP	Global Environmental Politics	
IPBES	Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services	
IPCC	Intergovernmental Panel on Climate Change	
IUCN	International Union for Conservation of Nature	
LULUCF	Land-Use, Land-Use Change, and Forestry	
MEE	Ministry of Ecology and Environment (China)	
MFA	Ministry of Foreign Affairs (China)	
NbS	Nature-Based Solutions	
NDC	Nationally Determined Contributions	
NDRC	National Development and Reform Commission (China)	
NGO	Non-Governmental Organisation	
SFGA	State Forestry and Grassland Administration (China)	
SFP	Shelter Forest Project	
TNFP	Three-North Shelterbelt Programme	
UN	United Nations	
UNFCCC	United Nations Framework Convention on Climate Change	
WWF	World Wide Fund for Nature	

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# Dedication

To my parents,

And to my best friends,

Neal Cameron, Benjamin Georges-Picot, Anthony Bou Chedid, and Chloe Mao.

### **Section 1: Introduction**

In September 2019 the United Nations Climate Action Summit (CAS) brought significant attention to Nature-Based Solutions (NbS) for climate action, that emphasises the nature's power in solving the twin crises of climate change and biodiversity loss. China, notably, took the lead in co-organising the NbS track with New Zealand during the Summit. The fruitful collaboration between China and New Zealand generated great momentum for the NbS norm and led to the adoption of the Nature-Based Solutions for Climate Manifesto that highlights the heightened political interest in NbS.<sup>1</sup> It is worth noting that the concept of NbS is nothing new to the environmental science community - as the concept has been in use since 2008 - but the saliency of the NbS norm experienced a five-fold increase in both scholarly literature and government policies between 2018 and 2020.<sup>2</sup> Global environmental norms constitute both written and unwritten practices that affect the ways we respond to environmental issues and the legitimacy of these actions. The significant surge in recognition and popularity is noteworthy, especially considering China's eagerness in advancing the NbS norm globally through multilateral channels and domestic policies. The seeming Chinese leadership in promoting the NbS norm raises a few questions: Why did China suddenly adopt the then decade-old NbS norm? Was this norm adoption a case of policy diffusion, norm localisation, learning, or the mere appropriation of a global norm? And what were China's intentions behind promoting the NbS norm worldwide?

This research draws on the theoretical insights of norm constructivism and authoritarian environmentalism to investigate China's leadership in promoting the NbS norm with a critical lens. In answering the research questions, I argue that China's adoption of the NbS norm is a

<sup>&</sup>lt;sup>1</sup> UNEP 2019d.

<sup>&</sup>lt;sup>2</sup> Seddon et al. 2021; Hanson, Wickenberg, and Alkan Olsson 2020; Seddon et al. 2019.

case of nominal norm adoption that is predominantly outward-oriented. I contend that China grafted the NbS norm onto its existing domestic environmental policies in name only. The government rhetoric employing the NbS norm is mainly used at diplomatic venues, while the domestic policy languages have by and large stayed consistent without mentioning the NbS norm. The fragmented NbS norm – where it enjoys wide recognition but low implementation consistency – allows China to act as a 'norm promoter' by infusing its pre-existing environmental practices into the transnational norm in order to maintain the status quo of the NbS norm's fragmentation. I theorise that the normative and practical 'fit' of the NbS norm offers an internationally-accepted terminology for China to highlight its existing policies and progress in climate action, while simultaneously providing performance legitimacy and strategic benefits for its environmental diplomacy efforts to frame itself as a responsible great power and an active player in global environmental governance.

My analysis is informed by, and contributes to, the global environmental politics (GEP) literature in three ways. First, I explore the politics of NbS and its recent proliferation, which is a novel undertaking in GEP. To my knowledge, there are currently no GEP studies that investigate the politics of the NbS norm despite the expansive scientific writings on the transnational norm. This research attempts to fill this gap by discussing one of the world's most prominent players' involvement in shaping and promoting the NbS norm on the international stage. Second, I build on the growing literature on authoritarian environmentalism and China's environmental diplomacy to illustrate China's increasing involvement in global environmental governance. I revisit earlier discussions where scholars have argued that China has been a passive receiver of global environmental norms,<sup>3</sup> and advance that Chinese environmental diplomacy has progressed

<sup>&</sup>lt;sup>3</sup> Beeson 2010; Mak and Song 2018.

into being an active norm promoter that challenges the dominant Western visions and priorities in global environmental governance. This insight contributes to the research on China's role, present and future, in shaping global climate action. Third, this undertaking highlights the diverse dynamics of norm adoption and introduces the concept of nominal adoption. Building on the present understandings of norm diffusion and localisation, a nominal adoption model captures the scenario where a local norm develops parallel with a transnational norm of similar conceptual logic but different operational underpinnings. It offers the potential for norm adoption 'in name only' and the subsequent infusion and export of local-transnational norm hybrid.

Drawing on a range of primary and secondary sources, as well as participant observation,<sup>4</sup> I proceed with a brief introduction to global environmental norms and NbS in Section 2. In Section 3, I discuss China's newfound leadership in promoting the global environmental norm and why it is an anomaly that contradicts the conventional logic of Chinese environmental policy-making. In Section 4, I outline the conventional theories of norm diffusion and localisation, followed by the nominal adoption perspective and its theoretical model. Next, in Section 5, employing a process-tracing methodology, I demonstrate how China's adoption of the NbS norm is a case of nominal norm adoption, tracing the steps of how the country is actively shaping the NbS rhetoric as a norm promoter. In Section 6, I propose a few potential reasons behind China's adoption of the NbS norm. Lastly, I conclude in Section 7 by reflecting on what this study contributes to the GEP literature.

<sup>&</sup>lt;sup>4</sup> The author participated as an NGO observer or policy consultant in the following conferences related to NbS and global climate action: the 24<sup>th</sup> Conference of the Parties to the UNFCCC (Katowice, Poland, December 3-14, 2018); Joint briefing by the President of the General Assembly and the Special Envoy for the 2019 Climate Summit (New York, USA, February 14, 2019); NGO Briefing on the Preparation of the 2019 Climate Summit by the Special Envoy for the 2019 Climate Summit (New York, USA, February 22, 2019); UNFCCC SB-50 meeting (Bonn, Germany, June 17-28, 2019); UN Climate Action Summit (New York, USA, September 21-23, 2019); Paris Peace Forum (Paris, France, November 12-13, 2019); and UN Climate Change Dialogues 2020 (Virtual Conference, November 23-December 4, 2020).

#### **Section 2: The Nature Based Solutions Norm**

Norms constitute how we view our world, our collective understanding of our responsibilities, rights, and identities, as well as what behaviour or action is appropriate.<sup>5</sup> They could be written policies, laws, treaty obligations, and codes of conduct; alternatively, they can "manifest as unwritten expectations of appropriate state behaviour" and common practices by powerful actors or individuals.<sup>6</sup> Global environmental norms, in turn, both constitute our collective conception of global environmental governance and prescribe appropriate standards of practices and behaviour vis-à-vis environmental policies and sustainable practices.<sup>7</sup>

The present study focuses on the NbS norm. Although there is no universal definition for NbS, one of the most cited is the 2016 International Union for Conservation of Nature (IUCN) resolution that defines NbS as "actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits."<sup>8</sup> These actions include, *inter alia*, ecological restoration, forest landscape restoration, green and natural infrastructure, ecosystem-based adaptation and mitigation strategies, and area-based conservation.<sup>9</sup> The term 'nature-based solutions' was first mentioned in a World Bank portfolio report in 2008 that details the positive alignment between the World Bank's biodiversity investment and nature-guided climate mitigation and adaptation measures.<sup>10</sup> It was subsequently picked up by the IUCN who, in a position paper for the Copenhagen Climate Change Conference in 2009, urged countries to adopt

<sup>&</sup>lt;sup>5</sup> Bernstein 2002, 2.

<sup>&</sup>lt;sup>6</sup> Bernstein 2013, 128; Alger and Dauvergne 2020, 156–157.

<sup>&</sup>lt;sup>7</sup> Dimitrov 2005.

<sup>&</sup>lt;sup>8</sup> IUCN 2016, Annex 1, Art. 1.

<sup>&</sup>lt;sup>9</sup> Cohen-Shacham et al. 2016.

<sup>&</sup>lt;sup>10</sup> World Bank 2008.

NbS within the REDD-plus framework to "harness the potential of healthy and well-managed ecosystems to build resilience and reduce vulnerability of people to the impacts of climate change."<sup>11</sup> At the same time, the European Commission (EC) also initiated its own research programme into the NbS.<sup>12</sup> The *EU Research and Innovation Policy Agenda for NbS and Re-Naturing Cities* focused on the green infrastructure and urban regeneration aspects of the broader NbS norm. The EC stresses the important role of biomimicry, ecosystem engineering and urban ecosystem design in delivering cost-effective solutions that "provide environmental, social and economic benefits, and help build resilience."<sup>13</sup> The research funding provided by the EC led to the first wave of scientific and public policy studies into NbS, especially in terms of urban sustainability and green infrastructures.<sup>14</sup> But between 2008 and 2018, this norm continued to stay at the periphery of the global climate regime with only specific epistemic communities discussing the norm.

Nevertheless, this initial norm entrepreneurship by the IUCN and the EC laid the foundation for the NbS norm. Both entities' definitions focus on NbS's ability to provide ecosystem services and benefits for humans and our societal goals. This is a notable shift away from the eco-centric perspective of conservation policies towards a more anthropocentric framework. This divergence in *raison d'être* separates the NbS norm from what is viewed as its predecessor: the UN Convention on Biological Diversity (CBD)'s Ecosystem Approach – a similar global environmental norm adopted in 2000 that emphasises human wellbeing's dependence on a functioning and healthy ecosystem and natural environment.<sup>15</sup> This shift in

<sup>&</sup>lt;sup>11</sup> IUCN 2009.

<sup>&</sup>lt;sup>12</sup> Seddon et al. 2021, 4.

<sup>&</sup>lt;sup>13</sup> European Commission 2015; European Commission 2017, 28.

<sup>&</sup>lt;sup>14</sup> Eggermont et al. 2015.

<sup>&</sup>lt;sup>15</sup> CBD 2000.

emphasis was further reinforced by the concept of "Nature's Contribution to People" developed by the Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES) in 2018 that highlights biodiversity and ecosystem conservation policies' benefits to human societies.<sup>16</sup> Considering the growing ecological and climate crises, Griscom and colleagues argued in their seminal 2017 essay that effective nature-based actions could yield positive climate mitigation results.<sup>17</sup> Between 2018 and 2019, the Intergovernmental Panel on Climate Change (IPCC) released multiple special reports that pointed to the urgent need for ambitious climate action and highlighted the terrestrial ecosystem's potential in delivering mitigation benefits through afforestation and forest management.<sup>18</sup> With the publication of IPBES's landmark 2019 Global Assessment Report and the Global Commission on Adaptation's 2019 *Adapt Now* report,<sup>19</sup> NbS gained a new wave of attention and recognition for its anthropocentric focus and its potential to address the twin crisis of biodiversity collapse and climate change. It is presented by some climate change scholars and practitioners as a climate mitigation and adaptation solution that is innovative, sustainable, and policy-oriented.<sup>20</sup>

In early 2019, the Special Envoy of the Secretary-General for the 2019 Climate Summit announced that NbS would be a part of the Climate Action Summit (CAS), which turned out to be a tipping point for the NbS norm. With the backing of the UN, as well as major players such as China and the EU, NbS is now an integral part of the mainstream climate action discourse. Proponents of NbS are optimistic about its prospect in addressing a myriad of environmental challenges.<sup>21</sup> Some even claim that NbS could act as a guiding principle in charging a path to

<sup>&</sup>lt;sup>16</sup> Díaz et al. 2018.

<sup>&</sup>lt;sup>17</sup> Griscom et al. 2017.

<sup>&</sup>lt;sup>18</sup> IPCC 2018, para. C.3.4; IPCC 2019, para. A.1.1, B.2.2.

<sup>&</sup>lt;sup>19</sup> IPBES 2019, paras D8-9, 39; Global Commission on Adaptation 2019, chap. 3.

<sup>&</sup>lt;sup>20</sup> Cohen-Shacham et al. 2019.

<sup>&</sup>lt;sup>21</sup> Kabisch et al. 2016.

sustainable recovery after the COVID-19 pandemic.<sup>22</sup> Opposing this view are those who argue the NbS norm lacks operational rigour and could result in more environmental problems when misused.<sup>23</sup> Scholars and practitioners from the biodiversity area fear that NbS's ambiguity and vagueness would make it almost impossible to clearly define and maintain the norm's internal consistency – how standardised the norm's local implementation is – and leave room for greenwashing and exploitation. For the purpose of this research, I use the aforementioned IUCN definition as the basis of my analyses, since it is one of the most authoritative definition that captures the essence of NbS: while providing ecosystem services to human wellbeing and solving societal challenges, NbS actions must also preserve ecological integrity and contribute to ecosystem conservation and biodiversity.<sup>24</sup>

Regardless of the definitional debate, the growing scientific and public policy discourse on NbS demonstrate the popularity and the contention surrounding the global environmental norm. A study found that 131 state parties to the Paris Agreement – representing 66 per cent of all signatories – have included NbS components in their Nationally Determined Contributions (NDCs).<sup>25</sup> Further, the UK presidency of the UN Framework Convention on Climate Change (UNFCCC)'s 26<sup>th</sup> Conference of the Parties (COP) also announced that NbS would be one of the priorities of the Glasgow Climate Change Conference.<sup>26</sup> As mentioned, the rapid global momentum on NbS in recent years was partly due to the 2019 CAS, with China being in the vanguard mainstreaming the transnational environmental norm. This raises the question: how did China adopt the NbS norm and why is it promoting it?

<sup>&</sup>lt;sup>22</sup> Cook and Taylor 2020.

<sup>&</sup>lt;sup>23</sup> Nesshöver et al. 2017; Fernandes and Guiomar 2018; Colléony and Shwartz 2019.

<sup>&</sup>lt;sup>24</sup> Seddon et al. 2021.

<sup>&</sup>lt;sup>25</sup> Seddon et al. 2020.

<sup>&</sup>lt;sup>26</sup> UNFCCC 2020.

### Section 3: China and the NbS Norm

#### 3.1 China's NbS Leadership

The 2019 CAS was convened by UN Secretary-General António Guterres to present concrete and practical climate action plans to tackle the climate crisis. In February 2019, it was announced that the CAS's NbS track would be led by China (and later, co-led by China and New Zealand).<sup>27</sup> Between March and September 2019, China's high-level officials met bilaterally with environment ministers from New Zealand, Italy and France to discuss the preparation of the Summit's NbS track.<sup>28</sup> China and New Zealand also put out a call for successful NbS case studies to be showcased during the CAS.<sup>29</sup> Domestically, China's Ministry of Ecology and Environment (MEE) was eager to promote its leadership role in facilitating the NbS track and indicated that Ministers from both the MEE and the Ministry of Foreign Affairs (MFA) would attend the CAS to contribute to the organisation of the NbS track.<sup>30</sup>

During the CAS, China and New Zealand convened multiple roundtables and high-level discussions on NbS mainstreaming that focused on, *inter alia*, increasing saliency of NbS within national climate action plans, enhancing regional and international cooperation, generating international financial support, and scaling up existing NbS projects for climate action.<sup>31</sup> Moreover, the two countries spearheaded the adoption of the *Nature-Based Solutions for Climate Manifesto* that called on countries to embrace NbS in domestic policies fully and "do all within their power to ensure that nature's transformative potential is fully valued and realized in

<sup>&</sup>lt;sup>27</sup> Author's participation notes, "Joint briefing by the President of the General Assembly and the Special Envoy of the Secretary-General for the 2019 Climate Summit" on February 14, 2019; and "NGO Briefing on the Preparation of the 2019 Climate Summit" on February 22, 2019, in New York, USA.

<sup>&</sup>lt;sup>28</sup> MEE China 2019b; MEE China 2019e; MFA China 2019a.

<sup>&</sup>lt;sup>29</sup> UNEP 2019c.

<sup>&</sup>lt;sup>30</sup> MEE China 2019f.

<sup>&</sup>lt;sup>31</sup> UNEP 2019a.

decision-making especially in relation to climate action.<sup>32</sup> Accompanying the Manifesto was the "Group of Friends for NBS" (or the NbS Coalition) created by China and New Zealand to strengthen the international cooperation and collaboration on NbS mainstreaming and the sharing of best practices and lessons learned. In total, thirty-two countries, eight private sector companies, and twenty-one non-governmental organisations (NGOs) signed the Manifesto and joined the NbS Coalition during the CAS.<sup>33</sup> China's proactive involvement in organising and promoting the NbS track did not go unnoticed. Observers to the CAS have noted that "China has emerged as a champion for [NbS] ... not only by promoting some of the successes they've made at home, but also by actively recruiting other nations to step up their support for nature."<sup>34</sup>

Following the CAS, China has promoted the NbS norm bilaterally with multiple countries and subnational governments, including France, Norway, and California.<sup>35</sup> During these bilateral dialogues, the MEE expressed its willingness to "increase communications and strengthen knowledge-sharing and technical exchange" on NbS implementation with other parties to the Paris Agreement and conduct technical dialogues on NbS policies and science.<sup>36</sup> Furthermore, China and France reaffirmed the integral role NbS plays in global climate action in the *Beijing Call for Biodiversity Conservation and Climate Change*, and committed to capitalise on "the NbS Coalition co-lead by China and leverage [NbS] to coherently address biodiversity loss, mitigation and adaptation to climate change, and land and ecosystem degradation."<sup>37</sup> In addition to bilateral efforts, the country has promoted NbS adoption multilaterally at various UN fora and regional groupings, such as the 'Better Recovery' Conference convened by the CBD

<sup>&</sup>lt;sup>32</sup> UNEP 2019d.

<sup>&</sup>lt;sup>33</sup> Seddon et al. 2020.

<sup>&</sup>lt;sup>34</sup> Nature4Climate 2019.

<sup>&</sup>lt;sup>35</sup> Ministry for Europe and Foreign Affairs of France 2019; MEE China 2020i; MEE China 2020d.

<sup>&</sup>lt;sup>36</sup> MEE China 2020i (author's translation).

<sup>&</sup>lt;sup>37</sup> Ministry for Europe and Foreign Affairs of France 2019.

and the 2019 BASIC Ministerial Meeting on Climate Change.<sup>38</sup> China has also incorporated NbS into the Belt and Road Initiative (BRI)'s International Green Development Coalition (BRIGC) to enhance policy and research exchange on NbS between the participating countries.<sup>39</sup> And lastly, in terms of domestic policies, China has recently integrated NbS languages into one of its most ambitious climate policies. The *Guiding Opinion on Coordinating and Strengthening the Work Related to Climate Change and Ecological Environmental Protection* (hereinafter the '2021 Guiding Opinion') mandates subnational governments to coordinate climate action and biodiversity conservation programmes using NbS to strengthen climate resilience, reach emission peak by 2030, and achieve carbon neutrality by 2060.<sup>40</sup>

#### 3.2 China's Norm Promotion as an Anomaly

The seeming leadership of China in promoting the NbS norm globally contradicts the conventional understanding of China's environmental and foreign affairs policy-making in two ways. First, scholars of authoritarian environmentalism often point out that China's authoritarian regime is generally immune from the vagaries of public opinion and civil society influences.<sup>41</sup> The lack of electoral accountability, freedom of expression, activist mobilisation, and free media limits the civil society's power to influence high-level decision-making and insulates the government from NGO demands. Furthermore, China's approach to international cooperation and foreign affairs have traditionally been guided by the principles of sovereignty and non-

<sup>&</sup>lt;sup>38</sup> MEE China 2019a; MEE China 2020c; MEE China 2020b.

<sup>&</sup>lt;sup>39</sup> MEE China 2020a.

<sup>&</sup>lt;sup>40</sup> MEE China 2021a, para. 11. A Guiding Opinion (*zhi dao yi jian*) is an executive order issued by the Central Government of China that has *de facto* authority over subnational executive branch entities. Although it is not legally-binding, but in practice, it provides implementation guidance to local authorities for major national policy changes.

<sup>&</sup>lt;sup>41</sup> Mol and Carter 2006; Gilley 2012.

interference.<sup>42</sup> In emphasising these two principles, China has been hostile to and resisted the perceived 'Western influence' or 'Western norms' in global environmental politics, especially those concerning climate mitigation. Critics have called the People's Republic of China a 'spoiler' as the country has previously obstructed the negotiations of global climate agreements and its emission targets lag behind the country's fair share.<sup>43</sup> Lo points out that "China is extremely sceptical towards externally enforced restrictions that would undermine the potential for social and economic development for the sake of climate change," and the radicals see the foreign pressure on climate action as "a conspiracy theory ... to carve out benefits from the country's long-awaited prosperity."<sup>44</sup> Therefore, when introducing major climate policies, the MEE often has to stress that "tackling climate change is not what other [countries] force us to do, but our own initiative as an inherent need of China's sustainable development and our responsibility to promote a community with a shared future."45 Within this context, China's sudden adoption of a transnational environmental norm largely constructed by Western civil society and state actors is perplexing and does not conform to traditional Chinese political philosophy. It is equally puzzling why China adopted the NbS norm with full force instead of the similar and, at the time, more recognisable, transnational norm of Ecosystem Approach under the CBD of which China is a party to. There is no similar level of political enthusiasm for the Ecosystem Approach; and the CBD norm remained in the periphery of Chinese environmental policy discourses.46

<sup>42</sup> Sutter 2012.

<sup>&</sup>lt;sup>43</sup> Gallagher et al. 2019; Bodansky 2010; Dimitrov 2010.

<sup>&</sup>lt;sup>44</sup> Lo 2016, 38.

<sup>&</sup>lt;sup>45</sup> State Council of the PRC 2019 (author's translation).

<sup>46</sup> Jiang 2017.

The second anomaly concerns China's existing environmental policies. The country has been practising nature-based restoration and climate action policies long before the emergence of the NbS norm. Between 1978 and 2014, China has enacted seven major land-use, land-use change and forestry (LULUCF) policies.<sup>47</sup> These policies involve plateau afforestation, grassland restoration, animal husbandry regulations, and land-use and resource extraction intensity limits. To date, the State Forestry and Grassland Administration (SFGA) has identified six priority areas: afforestation, land greening, shelter forest construction, forest city creation, pest control, and green project financing.<sup>48</sup> These campaigns' policies and projects closely resemble those of the NbS and the Ecosystem Approach norm. With this in mind, if China had already been practising NbS-like policies, instead of just showcasing its existing actions by themselves or under the Ecosystem Approach norm, why did it actively adopt and promote the relatively new and less-known NbS norm?

<sup>&</sup>lt;sup>47</sup> Zhen and Hu 2017.

<sup>48</sup> SFGA China 2020.

### **Section 4: Theoretical Underpinnings**

#### 4.1 Conventional Theories of Norm Adoption

International relations (IR) literature on norms emphasises the role of transnational actors in building and amplifying ideas, norms and discourses. In analysing how international norms are being adopted, constructivist scholars have created various norm diffusion models to explain the spread of transnational norms and why states adopt them. These models, such as the "norm life cycle,"49 the "boomerang" pattern of influence,<sup>50</sup> "argumentative persuasion and social learning,"<sup>51</sup> and "policy diffusion and transfer,"<sup>52</sup> help to illustrate how norm entrepreneurs – actors who wish to establish or change a norm $^{53}$  – engage in the process of norm contestation and framing to raise the saliency of the norm and encourage global uptake. Previous GEP studies have pointed to the role of transnational activist networks and NGOs, such as Greenpeace, the World Wide Fund for Nature (WWF) and the IUCN, who engage in persuasion, public pressure, framing, name-and-shame, and symbolic politics to create awareness of, and facilitate, global norm diffusion by encouraging, incentivising and pressuring powerful actors to adopt and implement the new norms.<sup>54</sup> Besides activist and civil society pressure, constructivist scholars have theorised that states accept new norms because of their deep integration into the international community that sometimes incentivises or coerces conformity.<sup>55</sup> Countries are socialised by the international fora to accept the dominant discourse on what constitutes appropriate behaviours, thus allowing the diffusion of dominant norms. In addition, IR scholars

<sup>52</sup> Marsh and Sharman 2009.

<sup>&</sup>lt;sup>49</sup> Finnemore and Sikkink 1998.

<sup>&</sup>lt;sup>50</sup> Keck and Sikkink 1998.

<sup>&</sup>lt;sup>51</sup> Checkel 2001.

<sup>53</sup> Sunstein 1996, 909.

<sup>54</sup> Keck and Sikkink 1998; Ford 2003; Dimitrov 2005.

<sup>&</sup>lt;sup>55</sup> Finnemore and Sikkink 1998, 902–903.

have also discussed the importance of 'learning' in international politics.<sup>56</sup> Through international organisations or transnational communications, countries can observe and learn from each other's policies and practices. Over time, norms are diffused and transferred through this learning process, and domestic policies converge.

However, transnational norms can rarely be applied 'as is' to the local level. Acharya argues that a localisation process must adapt the foreign norm to local contexts and realities. He contends that transnational norms have to undergo a process of local contestation to build a normative and practical fit between the foreign norm and "local beliefs and practices."<sup>57</sup> A normative fit - or "cultural match" - refers to the convergence between a transnational norm's prescriptions and the local norms as reflected in discourses, cultural and traditional practices, and political arrangement.<sup>58</sup> Supplementary to normative fitness, a practical fit provides "a clear and actionable program that practitioners can follow to solve a given problem."<sup>59</sup> In other words, a normative fit between a transnational norm and the local practices dictates if the foreign norm is adopted or not, whereas the actual institutionalisation and the translocal diffusion process depend on their practical fitness. When deciding whether or not to adopt a new transnational norm, conventional theories posit that the local actors have three choices: the localisation of the foreign norm, the displacement of the local norm with the foreign norm, or the rejection of the foreign norm.<sup>60</sup> The first two options entail the successful local adoption of the transnational norm, which in turn strengthens its global diffusion; while the last option could lead to local resistance to the transnational norm. This local contestation could manifest in the export of locally

<sup>&</sup>lt;sup>56</sup> Johnston 1996; Holzinger, Knill, and Sommerer 2008; Bernstein and Cashore 2012.

<sup>57</sup> Acharya 2004, 245.

<sup>58</sup> Checkel 1999.

<sup>&</sup>lt;sup>59</sup> Stevenson et al. 2021, 2.

<sup>&</sup>lt;sup>60</sup> Acharya 2004.

constructed 'subsidiary' norms that "redefine the meaning and scope" of the existing transnational norm in order to "preserve [the local actors'] autonomy from dominance, neglect, violation, or abuse by more powerful central actors."<sup>61</sup>

Here, it is worth noting that despite the extensive literature on NGOs and activists as normative agents, civil society actors do not hold the monopoly of norm entrepreneurship. For example, multinational corporations have adopted the global norm of sustainability and transformed it to include economic and social sustainability in an effort to increase their governance power.<sup>62</sup> At the same time, state actors could also be norm creators and promoters; often for reasons beyond Acharya's local resistance and counter-diffusion strategy. For instance, some argue that the European Union has been a strong promoter of environmental norms and labour standards using its common trade and foreign policies.<sup>63</sup> Comparatively, Chile has been named an international human rights norm promoter for advocating for strong human rights benchmarks internationally and incorporating human rights considerations in its foreign policies.<sup>64</sup> These state actors promote norms for ideational or normatively progressive reasons that strengthen global governance. Thus, states are not merely passive receivers of foreign norms, but are also active shapers of the international normative structure and promote norms that they believe in or could benefit from wider acceptance.

The growing literature on norm adoption calls attention to the dynamic and diverse nature of norm diffusion and localisation. Questions emerged as researchers noticed the apparent disparities between the adopted transnational norms and their actual implementation on-ground.

<sup>61</sup> Acharya 2011, 97–100.

<sup>&</sup>lt;sup>62</sup> Dauvergne and Lister 2012.

<sup>&</sup>lt;sup>63</sup> See Poletti and Sicurelli 2012; Sicurelli 2015.

<sup>&</sup>lt;sup>64</sup> See Fuentes-Julio 2020.

This "decoupling" between the global standard and the local (lack of) institutionalisation resulted in a wave of new constructivist concepts, like "partial compliance," "incomplete internalisation," and "rhetorical legal adoption."<sup>65</sup> Simultaneously, rationalists like Levitsky and Murillo provide an institutional strength account that argues that some state actors adopt unstable or weakly enforced transnational norms merely to reinforce their international legitimacy and reputation without actually enforcing them domestically.<sup>66</sup> In like manner, GEP scholars offer useful typography that classifies global environmental norms into four categories: global norms, multilateral norms, fragmented norms, and marginalised ideas.<sup>67</sup> Alger and Dauvergne assert that the two dimensions of assessing a transnational norm's uptake are its global adoption rate and its local implementation consistency. Building on this typology, state actors with no intention of *bona fide* implementation may choose to adopt fragmented norms or marginalised ideas rhetorically – displaying their adherence to a norm publicly – but never move towards implementation or institutionalisation.

Though the conventional theories seem to apply in the Chinese NbS case, I argue that the current models rely on the assumption that the transnational norm is novel to a passive recipient state actor. What if a transnational norm and a similar local norm develop in tangent with each other? To put it differently, say the hypothetical foreign norm is virtually the same as a local norm in terms of its idea and concept but differs in the motivation and operational particularities; what would the adoption pathway look like? Beyond localisation and subsidiarity, partial compliance, and policy transfer, this similarity opens up the door for a fourth option: *nominal adoption*.

<sup>&</sup>lt;sup>65</sup> For an overview discussion on decoupling, see Zimmermann 2016, 102–104.

<sup>&</sup>lt;sup>66</sup> Levitsky and Murillo 2009.

<sup>&</sup>lt;sup>67</sup> Alger and Dauvergne 2020.

#### 4.2 A Nominal Adoption Perspective

In developing the nominal adoption model, I draw on Zimmermann's norm adoption pathway and Acharya's norm subsidiarity to illustrate that when two similar norms develop in parallel with each other on the local- and international-level, a state actor may choose to adopt the transnational norm 'in name only' while actively exporting an updated version of the transnational norm that has been infused with the local norm.<sup>68</sup> I define *nominal adoption* as a process whereby local actors adopt a transnational norm into their political rhetoric or legislations without displacing its comparable locally-constructed norm, while simultaneously disseminating its local standards and practices under the aegis of the transnational norm to institutionalise or fragment the original norm. I summarise this norm adoption pathway in Figure 1, where the state-level processes are highlighted.



Figure 1 Nominal Norm Adoption and Promotion Pathway

After the emergence and the diffusion of a new transnational norm that resembles a preexisting local norm, a state actor could either: ignore or reject the foreign norm and maintain the status quo of its local practices; or adopt the foreign norm nominally.<sup>69</sup> The first step on the

<sup>&</sup>lt;sup>68</sup> See Zimmermann 2016; Acharya 2011.

<sup>&</sup>lt;sup>69</sup> This model takes the view that norm adoption and institutionalisation is a state-centric process. Albeit civil society's norm entrepreneurship role, it nevertheless falls onto the state to legislate and enforce the norm's localisation and implementation. Falkner and Buzan show that "state agency and leadership by great powers made it possible" for creating environmental stewardship in a global international society. See Falkner and Buzan 2019.

nominal adoption pathway is *state commitment*, referring to a state actor's rhetorical demonstration of adherence to the transnational norm via showcasing public, political allegiance or ostensible legal adoption without enforcement or implementation standards. The second step is the *incorporation* of local practices, standards and beliefs into the transnational norm, which results in the *modification* of the original norm. The modification could manifest in the *institutionalisation* of the original norm, which fixes a set of standardised meanings, practices and guidelines into the transnational norm and, in turn, stabilises it into its new form. Alternatively, the modification could result in the *further fragmentation* of the transnational norm, through weakening its internal consistency, shared meanings and regulations by inculcating implementation flexibilities and preventing norm institutionalisation. These updated norms then restart the norm life cycle and began a new global diffusion process; this time, with the particular norm promoter's local norms attached.

The emphasis on institutionalisation is critical since norms are dynamic and versatile. They are frequently reframed, reimagined and reconstructed by different agents in different contexts.<sup>70</sup> Wiener argues that norms reflect the dominant discourse of our society, in which they mirror unstable 'structures of meaning-in-use' that are contested and reflexive.<sup>71</sup> What Alger and Dauvergne call a *fragmented norm* is a form of non-institutionalised norm that has gone through a successful global adoption process and reached near-universal acceptance; but its meaning and the associate implementation practices vary across different countries and regions, depending on the local actor's interpretation and the local contestation process.<sup>72</sup> With that being said, powerful international organisations or state actors may stabilise transnational norms and instil a

<sup>&</sup>lt;sup>70</sup> Carstensen 2011.

<sup>&</sup>lt;sup>71</sup> Wiener 2004.

<sup>72</sup> Alger and Dauvergne 2020, 163–164.

set of fixed standards or practices – creating a *global* or *multilateral norm*.<sup>73</sup> Institutionalisation legitimises a norm by embodying it in laws, standards, institutions, discourse, or customs by which creating an iterative process that allows these patterns of practices to be "reciprocally reproduced through interactions" and create internal consistency.<sup>74</sup>

In sum, nominal adoption brings together rhetorical adoption and norm subsidiarity to accentuate the role and the agency of state actors in choosing which and how transnational norms are adopted. It also highlights a scenario where the local norm is analogous to its transnational counterpart. The proposed nominal adoption pathway posits that state actors could showcase their commitment to the foreign norm without *bona fide* compliance, and disseminate their own ideas, concepts, practices, and norms under the banner of the original transnational norm.

<sup>&</sup>lt;sup>73</sup> Park and Vetterlein 2010; Alger and Dauvergne 2020, 161–163.

<sup>&</sup>lt;sup>74</sup> Bernstein 2013, 128; Park and Vetterlein 2010, 22.

#### Section 5: Norm Adoption with Chinese Characteristics

The following section analyses China's adoption and promotion of the NbS norm. I argue that China's adoption of the NbS norm is predicated on two factors. First, the NbS norm is noninstitutionalised and fragmented. It resembles a polycentric environmental regime without a coherent and universal set of standards guiding its local adoption and implementation. Second, the NbS norm partially aligns with China's pre-existing domestic policies and actions. The normative and practical fit between the NbS norm and China's afforestation and restoration campaigns provides the country with a universally-accepted language to categorise its environmental and ecological policies, notwithstanding the divergent operational particularities. This section begins with a discussion of the two factors mentioned above. Then, I trace China's adoption of the NbS norm using the nominal adoption model employing a process-tracing methodology - collecting evidence of state commitment, status quo local implementation, incorporation, modification, and re-promotion at different junctures of the NbS norm life cycle thus far. Figure 2 shows the process of nominal norm adoption, and its independent and dependent variables (a detailed process-tracing strategy and Bayesian tests against alternative theories are provided in Appendix A).



Figure 2 Nominal Norm Adoption Pathway

#### 5.1 NbS as a Fragmented Norm

Previous studies have argued that the NbS norm remains divided and lacks a well-defined and robust framework to guide its global implementation. For instance, Cohen-Shacham and colleagues caution that for NbS to achieve its objective of delivering ecosystem conservation cobenefits to humans, the norm "need[s] clear and coordinated principles, on which evidence-based standards and guidelines for practitioners and decision-makers can be developed."<sup>75</sup> Applying Alger and Dauvergne's environmental norm typology, the NbS resembles a fragmented norm with near-universal acceptance but low internal consistency.<sup>76</sup> It enjoys wide global recognition and acceptance as most countries are implementing climate mitigation and adaptation actions classified as NbS, but lacks internal consistency when implemented locally. This fragmentation is partially due to its nature of serving as an overarching conceptual framework that envelops pre-existing eco-practices. For instance, the EU recognises more than 300 different practices as NbS, and the number is growing as more research on NbS is being conducted.<sup>77</sup> Equally important is that there are no international agreements or legal instruments that institutionalise NbS. Although the IUCN has attempted to address this lack of conceptual clarity and implementation precision by developing a Global Standard for NbS outlining the key universal principles in implementing NbS practices,<sup>78</sup> the guideline's effectiveness remains unknown due to its novelty and its legal status. Most of the existing NbS-guided projects have already been operationalised prior to the Global Standard's development in 2020 and the long-term outcomes of these actions remain contested.<sup>79</sup> It is also crucial to recognise that the IUCN Global Standard

<sup>&</sup>lt;sup>75</sup> Cohen-Shacham et al. 2019, 21.

<sup>&</sup>lt;sup>76</sup> Alger and Dauvergne 2020.

<sup>&</sup>lt;sup>77</sup> European Commission 2015.

<sup>78</sup> IUCN 2020.

<sup>&</sup>lt;sup>79</sup> Nesshöver et al. 2017; Fernandes and Guiomar 2018; Colléony and Shwartz 2019; Maller 2021.

is not a multilateral agreement that is legally enforceable. It remains a voluntary, nonprescriptive framework that exists outside of the international legal system.

In contrast to NbS's lack of institutionalisation, the earlier Ecosystem Approach (EA) is comparatively more standardised and fixed-in-meaning. The EA serves as the 'framework of action' for the CBD to utilise ecosystem services and biodiversity conservation practices for climate change adaptation.<sup>80</sup> Its local implementation is guided by a CBD CoP decision in 2000 and the politically negotiated implementation guideline.<sup>81</sup> The guideline consists of twelve principles that range from the objectives and the purposes of EA to local consultation procedures and stakeholder engagement best practices. Although the guideline permits variations in implementation depending on local contexts and capacities, its internal consistency is strengthened by the auspices and the legitimacy of the CBD, and its detailed best practices and implementation guides ingrain a sense of responsibility and obligation into the state parties. But despite the long lifespan of the CBD and the EA, their implementation and saliency in the global climate regime remain low compared to the recent popularity of NbS.<sup>82</sup>

Though some might consider the flexibility of the NbS norm to be a benefit for its global uptake, ample research has shown that when NbS actions are improperly carried out, they have the potential to bring more harm than good.<sup>83</sup> For example, Maller argues that NbS projects must have a "more-than-human thinking" that considers their benefits and impacts holistically and views the ultimate goal of NbS as nature conservation.<sup>84</sup> Other scholars and practitioners caution that any NbS actions must be guided by an environmental justice lens that places human rights

<sup>&</sup>lt;sup>80</sup> Doswald et al. 2014; Waylen et al. 2014.

<sup>&</sup>lt;sup>81</sup> CBD 2000; CBD 2004.

<sup>&</sup>lt;sup>82</sup> Ulloa, Jax, and Karlsson-Vinkhuyzen 2018.

<sup>&</sup>lt;sup>83</sup> Colléony and Shwartz 2019; Hanson, Wickenberg, and Alkan Olsson 2020.

<sup>&</sup>lt;sup>84</sup> Maller 2021.

safeguards at the centre of implementation in order to avoid potential "land-grabs" and rights violations.<sup>85</sup> Despite a global norm's inherent need for flexibility in localisation, certain standards must be prescribed to ensure consistency in NbS implementation that promotes good governance and environmental integrity. As such, this research treats the Global Standard as the benchmark for NbS implementation globally since it is one of the most authoritative guidance on NbS to date and the first attempt to semi-institutionalise the transnational norm.

#### 5.2 Domestic Norm Alignment

China's existing environmental policies partially align with those advocated by the NbS norm. One of the key pillars of SFGA's ecosystem restoration programme is the shelter forest project (SFP – *fang hu lin*). The SFGA is currently administering six major SFP campaigns across China, and one of the most notable is the Three-North Shelterbelt Program (TNSP – *san bei fang hu lin*) that the State Council approved in 1978.<sup>86</sup> The TNSP has an impressive 72-year implementation period (1978-2050) and is accompanied by six other LULUCF projects enacted between 1986 and 2014, with a geographical span across thirteen provinces.<sup>87</sup> These naturebased programmes aim to combat and prevent the further desertification of Northern China's arid and semiarid ecosystems, and control the dust storms that often cause major environmental hazards for the Northern region.<sup>88</sup> The TNSP focuses on using a combination of LULUCF policies and ecosystem engineering to enhance the ecosystem services in the region and protect biodiversity.<sup>89</sup> The Chinese government estimates that since 2005, its ecosystem restoration and

<sup>&</sup>lt;sup>85</sup> Townsend, Moola, and Craig 2020; Cousins 2021.

<sup>&</sup>lt;sup>86</sup> SFGA China n.d.

<sup>&</sup>lt;sup>87</sup> Zhen and Hu 2017.

<sup>&</sup>lt;sup>88</sup> Qiu et al. 2017.

 $<sup>^{\</sup>rm 89}$  Wang et al. 2010; Zhen and Hu 2017.

afforestation campaign has contributed 4.56 billion cubic metres of new forest and grassland, which account for a quarter of the global newly afforested landmass.<sup>90</sup> Though the effectiveness of the TNSP in preventing desertification and dust storms is still contested,<sup>91</sup> the project has nevertheless contributed immensely to China's climate mitigation efforts. Environmental scientists agree that the TNSP and its associated policies have created massive carbon sinks, which have benefited local and global climate action.<sup>92</sup> China highlighted the carbon sequestration potential of the SFPs during the 2019 CAS; and the TNSP, along with 30 other Chinese projects, were featured as NbS success stories in the CAS's case studies compendium.<sup>93</sup>

In addition to the SFPs, China's domestic environmental policies have been guided by President Xi Jinping's "ecological civilisation theory" since 2015.<sup>94</sup> The 2015 policy reaffirmed the central role of ecological protection and restoration in Chinese environmental policy-making and prioritised climate action policy implementation between 2015 and 2020.<sup>95</sup> Central to the achievement of the so-called "ecological civilisation" (*sheng tai wen ming*) is the operationalisation of Xi's "Two Mountains Theory" (Lucid Waters and Lush Mountains are Invaluable Assets; *lü shui qing shan jiu shi jin shan yin shan*). The Two Mountains Theory – originating from Xi's tenure as the Communist Party Secretary of Zhejiang Province in 2005 – stresses "the harmony between human and nature, and between the economy and the environment."<sup>96</sup> It posits that environmental protection and economic development could be reconciled by a rapid and robust environmental policy transformation: creating policies

<sup>&</sup>lt;sup>90</sup> MFA China 2019b.

<sup>&</sup>lt;sup>91</sup> Wang et al. 2010; Luoma 2012.

<sup>92</sup> Lu et al. 2018.

<sup>&</sup>lt;sup>93</sup> UNEP 2019a, 143–172.

<sup>&</sup>lt;sup>94</sup> Wang, Su, and Wan 2017.

<sup>&</sup>lt;sup>95</sup> State Council of the PRC 2015.

<sup>&</sup>lt;sup>96</sup> Qin et al. 2018, 986 (author's translation).

promoting ecosystem restoration, sustainable natural resource extraction, green jobs creation, private-right and economic incentive creation, payment for ecosystem services, and green financing.<sup>97</sup> The solutions derived from the Two Mountains Theory bear uncanny similitude to the later popularised NbS norm, where both norms prioritise nature's contribution to societal and economic progress as the guiding principle. In fact, this alignment between NbS and the local norms is noted by a growing amount of NbS literature by Chinese scholars since 2019. Kang and colleagues argue that "although there are not many projects with the explicit name of NbS [in China], there are numerous practical case studies that conform to NbS's internal logics throughout [Chinese] history." <sup>98</sup> They further argue that NbS is a norm that is in the same vein as Xi's Two Mountains Theory and Ecological Civilisation due to their resemblance in operational logic and the solutions derived.<sup>99</sup>

However, the Two Mountains Theory puts more emphasis on the economic co-benefits derived from nature conservation projects than the NbS norm does. For instance, Chinese policy scholars have argued that some of the key benefits of Two Mountains Theory-derived policies are the growth of the local eco-tourism industry, natural resources and fishery replenishment, and agricultural land preservation.<sup>100</sup> The operational logic of the Two Mountains Theory is based on the commercialisation and commodification of natural capital – like biodiversity, forest cover rate, and clean air and water – to establish public-private partnership and market mechanisms for ecosystem products. The goal is to turn 'lucid mountains and lush waters' into 'gold and silver mountains' using "a diverse, market-based payment for ecosystem services system that

<sup>&</sup>lt;sup>97</sup> Qin et al. 2018.

 <sup>&</sup>lt;sup>98</sup> For an overview of the Chinese-language literature on NbS, see Kang, Shi, and Ren 2020, 179 (author's translation).
<sup>99</sup> Ibid., 181.

 $<sup>^{\</sup>rm 100}$  Wang, Su, and Wan 2017.

transforms ecosystem protection's positive spillovers into economic assets."<sup>101</sup> But under the IUCN definition and standards, NbS focuses not solely on bringing ecosystem services and societal co-benefits to humans. It instead stresses that NbS's main goal is to seek a net gain to ecosystem integrity and local biodiversity, proactively avoid "unintended adverse consequences on nature arising from the NbS."102 Looking at some of the ecosystem restoration projects in Northern China, one could question whether or not they are guided by the best-available science that take into consideration the holistic linkages between local ecosystem conditions and the native species. For instance, researchers have found that China's afforestation campaign in the Loess Plateau resulted in an increase evapotranspiration and soil moisture runoff, which have an adverse impact on native species and the overall ecosystem integrity.<sup>103</sup> Thus, despite prima facie similarities between the transnational norm of NbS and the local norms of Ecological Civilisation and the Two Mountains Theory, they have drastically different conceptual underpinnings. In other words, although the types of projects and policies derived from NbS and China's domestic norms might be similar, the operational characteristics and their rationales are contrasting – NbS focuses on the ecological integrity and its co-benefits to human progress, while the Chinese norm emphasises a "sociotechnical imaginary" that promotes nature conservation for the continued growth of consumption and production.<sup>104</sup> Yet, this surface-level similarity allows China to adopt the NbS norm in name only while continuing to implement its domestic norms in practice.

 $<sup>^{\</sup>rm 101}$  Zeng and Qin 2018, 21 (author's translation).

<sup>&</sup>lt;sup>102</sup> IUCN 2020, 10.

<sup>&</sup>lt;sup>103</sup> Meng et al. 2020.

<sup>&</sup>lt;sup>104</sup> Hansen, Li, and Svarverud 2018.
### 5.3 State Commitment

Under the nominal adoption pathway, the norm receiver should show *state commitment* to the new norm through either rhetorical or legal adoption. Emprically, I systematically searched the information disclosure portals and the news update sections of the MEE, MFA, and SFGA websites for any documents or web pages related to NbS (in Chinese, ji yu zi ran de jie jue fang an). Using the advanced search function (see Appendix B for a detailed description of the methodology), I found twenty-nine mentions of NbS between January 1, 2019 and April 30, 2021. Out of these, sixteen are press releases, four are transcripts of ministers' remarks, three are domestic policy documents, and six are diplomatic communiqués. In contrast, there is no mention of the EA norm between the same time period. In fact, the last searchable document that contains EA was produced in 2008. The frequent reference to NbS in government announcements and reports compares to the low saliency of the EA norm shows that China has achieved the rhetorical adoption of the NbS norm - the Central Government and its ministries are supporting the norm rhetorically by actively utilising the terminology to demonstrate their adherence to the norm-set publicly. For instance, the MEE has established a multi-ministerial technical working group to coordinate China's NbS actions; and the Minister of Ecology and Environment has committed the country to "continue exploring 'nature-based solutions' to protect and restore ecosystems with a whole-system approach, and make greater efforts to respond to climate change and protecting biodiversity."<sup>105</sup> Moreover, the Belt and Road Initiative has formally incorporated NbS as a part of its environmental cooperation programme.<sup>106</sup> And the China Council for International Cooperation on Environment and Development (CCICED) – a

 $<sup>^{\</sup>rm 105}$  MEE China 2019d; MEE China 2020g (author's translation).

<sup>&</sup>lt;sup>106</sup> MEE China 2020a.

government-affiliated think tank for environmental policies – has recommended the Central Government to increase its research into NbS-guided climate policies and strengthen their implementation capacity.<sup>107</sup> The CCICED has also recommended strengthening the domestic implementation of NbS and ensuring the synergies between national climate action policies and biodiversity policies.<sup>108</sup>

In addition, China has also adopted the NbS norm legally in its most recent climate legislation. The 2021 Guiding Opinion represents one of the country's most comprehensive and robust plans for climate action that includes policy guidance on mitigation, adaptation, carbon markets, technological innovation, industry transition, international cooperation, and capacity-building.<sup>109</sup> It obliges the government to utilise NbS in its mitigation and adaptation plans and coordinate biodiversity conservation and ecosystem restoration works under the "general principles" of NbS. However, this legal adoption remains weak and fragmented as it provides neither a definition for NbS nor any detailed guidance and standards for the norm's implementation.

### 5.4 Status quo implementation of the local norm

One of the nominal adoption model's outcomes is the *status quo implementation of the local norm*, despite the rhetorical and legal adoption of the transnational norm. Notwithstanding China's incorporation of the NbS norm into the 2021 Guiding Opinion, the transnational norm remains in the periphery of high-level Chinese decision-making. The Central Government continues to employ its pre-existing rhetoric on environmental protection and ecological

<sup>&</sup>lt;sup>107</sup> CCICED 2019, para. 4.7. <sup>108</sup> CCICED 2020a.

<sup>&</sup>lt;sup>109</sup> MEE China 2021a.

<sup>&</sup>lt;sup>107</sup> MEE China 2021

conservation in some of its most important policy documents. One example is the fourteenth Five-Year Plan (14<sup>th</sup> FYP) for Economic and Social Development (*shi si wu gui hua*). The Five-Year Plans are an integral part of China's development strategies,<sup>110</sup> and the 14<sup>th</sup> FYP outlines the socio-economic development strategies for the period of 2021 to 2025, as well as the long-term visions for 2035. Chapter 11 of the 14<sup>th</sup> FYP is dedicated to environmental protection and ecological conservation, which reiterates the country's commitment to green and sustainable development and puts forward new policies and goals, including a whole-of-society approach to climate action and a refinement of its ecological security shelterbelt system (that includes the nature-based adaptation approaches to climate change).<sup>111</sup> This FYP, however, continues to use the Ecological Civilisation concept and the Two Mountains Theory as its guiding principle of the environmental chapter without mentioning NbS, noting that the country:

Reaffirms lucid waters and lush mountains are invaluable assets; adheres to the principles of respecting nature, conforming to nature, protecting nature; prioritises conservation, protection, and nature restoration in implementing sustainable development; will improve the overall coordination mechanism for building an ecological civilisation system and promoting a comprehensive green transformation of the economic and social development model, in order to build a beautiful China.<sup>112</sup>

In addition, the Central Financial and Economic Affairs Commission (CFEAC) – China's *de facto* top economic policy body – proposed expanding the country's ecosystem carbon sequestration capacity using LULUCF and ecosystem conservation policies without mentioning the NbS norm that it claims to have adopted.<sup>113</sup>

On the other hand, however, international cooperation on climate change is highlighted in the 14<sup>th</sup> FYP and the CFEAC decision, especially in reference to the BRI's Green Silk Road

<sup>&</sup>lt;sup>110</sup> Gu, Teng, and Feng 2018.

<sup>&</sup>lt;sup>111</sup> State Council of the PRC 2021, chap. 11.

<sup>&</sup>lt;sup>112</sup> Ibid., chap. 11 preamble (author's translation).

<sup>&</sup>lt;sup>113</sup> MEE China 2021b.

initiative – an NbS-guided green infrastructure project – and South-South cooperation on capacity-building and experience sharing.<sup>114</sup> In fact, out of the twenty-nine mentions of NbS on the Chinese government's websites, twenty-five are transcripts of ministers' remarks, press releases and communiqués regarding international cooperation or China's participation in the multilateral environmental regimes; whereas only four are domestically-oriented. After compiling all of the major Chinese environmental policy initiatives released between January 1, 2019 and April 30, 2021 (see Appendix B for the detailed methodology and the full list), I found that only two out of the sixteen domestic policy instruments reference NbS as their implementation measure or guiding principle. One is the aforementioned 2021 Guiding Opinion. The other is the Shenzhen municipality's decision to employ NbS in its local ecosystem planning process.<sup>115</sup> The majority of the domestic policies continue using the pre-existing policy languages from the Ecological Civilisation concept. For example, the Guidelines for Ecological Protection and Restoration of Landscape, Forest, Field, Lake and Grassland (2020), the Opinion on Strengthening the Supervision of Ecological Protection (2020), and the State Council Secretariat's Opinion on Strengthening Grassland Protection and Restoration (2021) are policies related to ecological protection and ecosystem restoration, yet none of them employs the NbS norm and continues to use the local norm and pre-existing policy languages.<sup>116</sup> As shown above, the Central Government's usage of the NbS norm stays nominal, meaning that its rhetoric employing the NbS norm is predominantly aimed to highlight its existing domestic programmes and its international engagements on NbS. China's domestic norm continues to play an integral part in its domestic policy- and decision-making.

<sup>&</sup>lt;sup>114</sup> Ibid.; State Council of the PRC 2021, para. 11.38.4.

<sup>&</sup>lt;sup>115</sup> MEE China 2020h.

<sup>&</sup>lt;sup>116</sup> MNR China 2020; MEE China 2020e.

### 5.5 Norm Incorporation, Modification and Promotion

Of course, China is not merely adopting the NbS norm for rhetorical purposes only. A parallel outcome of the nominal adoption pathway is the *promotion of the updated norm* after being modified by the norm recipient. This *incorporation* and *modification* process involves infusing local practices, culture, actions and concepts into the transnational norm. A careful content analysis of the primary sources shows that China has indeed sought to incorporate its best practices and ideologies into the global NbS norm.

To begin, China took the opportunity of the 2019 CAS to frame its pre-existing ecosystem conservation programmes as NbS best practices and successful case studies. The NbS case studies compendium developed for the 2019 CAS compiles NbS projects worldwide to promote "innovative, implementable, measurable, replicable and scalable" initiatives and practices.<sup>117</sup> After introducing over 100 NbS projects, the Compendium provides a summary of the NbS best practices. Noticeably, all of the thirty-four best practices are taken from Chinese case studies, ranging from its "Beautiful China" campaign and urban ecological restoration to coastal seagrass restoration and the Northern afforestation programmes.<sup>118</sup> In particular, these best practices also include a section on encouraging and incentivising "social participation in nature reserve management."<sup>119</sup> These public participation components range from creating a community biodiversity conservation agreement to training local farmers on conservation techniques and granting free or low-interest loans to promote local eco-tourism and sustainable agriculture. However, public 'participation' merely reflects the involvement of local communities in *implementing* the projects. There is no mention of the need for prior

<sup>&</sup>lt;sup>117</sup> UNEP 2019a, 14.

<sup>&</sup>lt;sup>118</sup> Ibid., 143–172.

<sup>&</sup>lt;sup>119</sup> Ibid., 145.

consultations with relevant stakeholders and civil society organisations, nor safeguarding local landowners' rights. The emphasis on 'participation' echoes China's domestic environmental policy implementation's *modus operandi*: "government guidance, corporate responsibility, and public participation."<sup>120</sup> This is in line with previous studies on authoritarian environmentalism that characterise China's environmental policies as "being 'centred on the top-down, regulatory powers of the central state' and 'decidedly authoritarian' in 'its non-[democratic] participatory nature'."<sup>121</sup>

In addition, the MEE has prioritised sharing China's NbS knowledge, policy and best practices through bilateral and multilateral channels. In addition to the already mentioned *Beijing Call for Biodiversity Conservation and Climate Change* and the several technical dialogues China is planning to hold, the MEE intends to build on the momentum of 2019 CAS's NbS track to "showcase China's policies and actions against climate change [and] tell the 'Chinese story' of proactive climate action," as well as "actively carrying out South-South cooperation on climate change to build other developing countries' capacity of responding to climate change."<sup>122</sup> It is noteworthy that the majority of the highlighted Chinese best practices during the 2019 CAS were industrial-scale ecosystem restoration and engineering projects. Over the past two decades, Chinese domestic policies have prioritised large-, industrial-scale greening programmes to meet its ecosystem conservation and climate action objectives.<sup>123</sup> With the growth of its South-South Climate Change Cooperation programme, China has been exporting its industrial-scale greening practices to other developing countries. For instance, the Chinese Academy of Science and the

<sup>&</sup>lt;sup>120</sup> MEE China 2021c (author's translation).

<sup>&</sup>lt;sup>121</sup> Gamso 2019, 1395.

<sup>&</sup>lt;sup>122</sup> MEE China 2019f; MEE China 2019d (author's translation).

<sup>&</sup>lt;sup>123</sup> Feng et al. 2021.

National Development and Reform Commission of China (NDRC) have implemented twentythree million US dollars' worth of large-scale wetlands forest and green infrastructure projects in the Seychelles, Nepal and Mauritania.<sup>124</sup> In addition, the NDRC has also provided funding and technical support for the UNEP's African Great Green Wall project, which is based on "a consensus that China's experiences and technology are applicable to Africa" and the project "drew on China's experiences and lessons learned."<sup>125</sup> The use and export of large-scale adaptation and mitigation projects align with Ecological Civilisation's sociotechnical emphases on implementation size, green infrastructure, and technological innovation.<sup>126</sup> By promoting and exporting the "Chinese Experience" on NbS, China is gradually featuring its own practices and projects as the preferred way of implementing NbS.<sup>127</sup>

Lastly, China is pushing for the incorporation of NbS into the CBD's Post-2020 Global Diversity Framework. The Post-2020 Framework will become one of the most crucial instruments of the CBD, as it provides political and technical guidance on the global biodiversity conservation agenda for the next three decades.<sup>128</sup> In its role as the presiding country of CBD's CoP-15 (2020 and 2021),<sup>129</sup> China has actively promoted the integration of NbS and its local norms into the Post-2020 Framework.<sup>130</sup> First, the CoP's theme – "Ecological Civilisation: Building a Shared Future for All Life on Earth" – is named after Xi's Ecological Civilisation

<sup>&</sup>lt;sup>124</sup> UNEP 2019b.

<sup>&</sup>lt;sup>125</sup> UNEP 2020.

<sup>&</sup>lt;sup>126</sup> Hansen, Li, and Svarverud 2018; Westman and Broto 2018.

<sup>&</sup>lt;sup>127</sup> The Chinese Experience-Sharing is "a process of Chinese stakeholders making and interpreting China's developmental story, which provides a legitimating source of cognition that an alternative to the Western model is possible and even desirable," usually for developing countries. See Wang-Kaeding 2021, 55.

<sup>&</sup>lt;sup>128</sup> CBD 2019.

<sup>&</sup>lt;sup>129</sup> Due to the COVID-19 pandemic, the CoP-15 has been postponed from 2020 to 2021; and the associated work programme on the Post-2020 Framework has also been postponed.

<sup>&</sup>lt;sup>130</sup> Author's participation note, "COP15 Kunming: Last Boarding Call for Biodiversity" forum with the then MEE Deputy Minister Huang Runqiu at the Paris Peace Forum on 12 November 2019, in Paris, France. See also MEE China 2020c.

concept.<sup>131</sup> The MEE noted during a press conference that the CoP-15 theme "demonstrates the international significance of Xi Jinping's Ecological Civilisation thought."<sup>132</sup> Secondly, the government-affiliated CCICED commented that the Post-2020 Framework should "fully [recognize] the role of nature-based solutions in climate mitigation, and [ensure] that 1.5°C solutions do not jeopardize the integrity of ecosystems, nor the products and services the ecosystems provide."<sup>133</sup> However, after receiving the zero-draft of the Framework where NbS is linked to the goal of 30% reduction in carbon emissions,<sup>134</sup> the MEE quickly raised its objection to the target and argued that climate mitigation is beyond the CBD's core mandate and NbS is only complementary to the other mitigation actions defined under the UNFCCC.<sup>135</sup> Interestingly, the MEE's submission noted that "the carbon sequestration capacity of ecosystem[s] is limited and vulnerable to climate change," contradicting China's public rhetoric praising the NbS's cost-effective carbon sequestration capacity and the CFEAC decision to create additional carbon sinks for climate mitigation.<sup>136</sup>

Given China's attempt in advancing its own diverse NbS actions as best practices and this inconsistency in the promotion of the NbS norm, it could be inferred that China has no intention of institutionalising the NbS norm in the global environmental regimes. Its policy documents and public discourses do not offer a clear and coherent definition for NbS and its on-ground implementation. And in stressing a country-driven, bottom-up approach to global environmental governance, it is actively attempting to incorporate its local practices and ideologies into both the

<sup>&</sup>lt;sup>131</sup> MEE China 2019g.

<sup>&</sup>lt;sup>132</sup> MEE China 2021c.

<sup>&</sup>lt;sup>133</sup> CCICED 2020b.

<sup>&</sup>lt;sup>134</sup> CBD 2020, para. 12.(a).6.

<sup>&</sup>lt;sup>135</sup> MEE China 2020f, para. 6.

<sup>&</sup>lt;sup>136</sup> Ibid.; For China's previous rhetoric on NbS's climate mitigation potentials, see MEE China 2020b; For the CFEAC decision, see MEE China 2021b.

NbS norm and the global environmental regimes. In summary, these observations demonstrate that China adopted the NbS norm nominally to modify the transnational norm with its preexisting local practices and ideologies, all while continuing to implement its pre-existing local norms domestically despite its public rhetoric promoting NbS.

## Section 6: Reasons Behind China's Norm Promotion

At this point, another question arises: why is China acting as a norm promoter of the NbS norm? Why did the country spend this much political and financial capital on a norm it is not institutionalising domestically? I propose two potential reasons behind China's nominal adoption: a desire to keep the NbS norm fragmented, performance legitimacy and environmental diplomacy. Here, one comment is in order. There are inherent epistemological limits to establishing the intent of state actors in international politics. It requires "knowledge of actors' motivations, which may not be clear even to the actor themselves" to claim with certainty the causal linkage between an actor's motivation and their actions.<sup>137</sup> But obstacles to establishing causality between China's motivations and its adoption and promotion of the NbS norm do not prevent us from deriving critical understandings that matter to the future of the NbS norm and global environmental governance.

First, China has an incentive to prevent the institutionalisation of the NbS norm. Although NbS and China's domestic norms are similar to each other on the surface, they have different underlying logics and operational standards. Drawing on the experience of the CBD's EA norm, an institutionalised NbS norm would entail the establishment of internationallyrecognised normative and technical standards, with possible prescriptive guidelines on project specification and implementation attached. An institutionalised international NbS standard would certainly require human rights protection, local community consultations, stakeholder engagements, policy transparency, and other stringent compliance requirements. An institutionalised NbS norm with an extensive compliance monitoring and verification regime

<sup>&</sup>lt;sup>137</sup> Hurd 1999, para. 390.

would counter China's persistent policy position advocating for localised, flexible and nonprescriptive obligations under the current global environmental regime.<sup>138</sup> Moreover, an international NbS standard might disqualify China's existing practices as NbS actions. To illustrate, Chinese environmental policies' general tendency of inadequate consultation and public engagement contravenes the IUCN Global Standard's fifth criterion, which emphasises NbS projects must be "based on inclusive, transparent and empowering governance processes," that participation must be "based on mutual respect and equality", and "stakeholders who are directly and indirectly affected by the NbS" should be identified and consulted on before implementation.<sup>139</sup> The lack of democratic deliberative and consultative forums, combined with a weak record of human rights enforcement, makes it unlikely that China's NbS programmes are carried out in accordance with the Global Standard. Indeed, previous studies have questioned the integrity of Chinese environmental projects' stakeholder engagement component "with regard to the ability of local civil society groups, communities and individuals to meaningfully express their views."<sup>140</sup> Thus, a fragmented NbS norm at the global level could allow China to continue its domestic programmes and label them as NbS actions without incorporating international standards and guidelines into their implementation and evaluation.

China could also capitalise on the transnational norm's lack of institutionalisation by framing NbS as a part of its "international obligations," which provides legitimacy and social buy-in to the authoritarian country's environmental policies. Scholars of Chinese politics point out that the Chinese regime is "a fragmented power in a 'labyrinthine and complicated governance structure" that still requires "public participation and the willingness of local

<sup>&</sup>lt;sup>138</sup> The MEE has frequently used this rhetoric in its policy position briefings. See, for example, MEE China 2019c. <sup>139</sup> IUCN 2020, 14.

<sup>140</sup> Liu and Lo 2020, 3.

governments to implement policies and programs," especially for those that are unpopular and could impact local economic development negatively.<sup>141</sup> Lo has noted that "low-carbon ideas" – and climate action policies in general – meet heavy resistance from local or provincial governments who wish to protect their economic development bottom-line.<sup>142</sup> To ease this local resistance, the unitary state needs to secure political and social buy-ins from key stakeholders, including major industries and private-sector companies, as well as the general public.<sup>143</sup> With this in mind, the Central Government has framed the NbS norm as a part of China's international obligation to preserve biodiversity and combat climate change.<sup>144</sup> I theorise that adopting the transnational norm rhetorically and framing its domestic and somewhat unpopular environmental policies as NbS could generate social acceptance because of the norm's characteristics and the Chinese government's reliance on performance legitimacy. First, researchers have advanced that NbS provides an affordable and cost-effective adaptation solution to the changing climate when more local communities are directly impacted by global warming, and its underlying logic of protecting nature is relatively straightforward for everyday citizens.<sup>145</sup> Normatively, planting trees and preserving forests to improve the environment and air quality are common-sense solutions to the general public and would fare well compared to the other climate solutions perceived to be more costly and high-risk. And practically, China's existing policies and programmes conform to those of the NbS norm, and thus could be easily framed as such.

Secondly, by framing its domestic ecological policies as the fulfilment of China's international obligations vis-à-vis utilising NbS to combat climate change and biodiversity loss,

<sup>&</sup>lt;sup>141</sup> Engels 2018, 4.

<sup>&</sup>lt;sup>142</sup> Lo 2015.

<sup>&</sup>lt;sup>143</sup> Schreurs 2017.

<sup>&</sup>lt;sup>144</sup> MFA China 2019b; MEE China 2019f.

<sup>&</sup>lt;sup>145</sup> IPCC 2018; Royal Society 2014; Cohen-Shacham et al. 2016.

the Chinese government could receive a reputational boost in its domestic constituents and increase its policies' domestic legitimacy. Strengthening national power and its image on the international stage has been a key part of maintaining the legitimacy of the ruling Party. Zhu argues that the ruling Communist Party requires sustained "performance legitimacy" to maintain its power and status.<sup>146</sup> It means that the Chinese government relies on accomplishing concrete policy objectives, such as achieving economic growth and projecting a powerful external image, to retain its domestic legitimacy and popular support. Similarly, Li and Chen show that domestic audience cost exists in China, in that the general public cares about China's international reputation and is willing to express their disapproval over perceived diplomatic blunders.<sup>147</sup> Therefore, the NbS norm provides a set of internationally recognised languages for China to highlight its progress in environmental governance and improve its international image.

Building on the previous point, publicly adopting the NbS norm offers China an opportunity to further cement its new leading role in global environmental governance. Previous studies have argued that China is eager to enhance its soft powers and international reputation by adopting international norms and environmental conservation standards.<sup>148</sup> Its environmental diplomacy has evolved rapidly over the past two decades from a climate agreement 'spoiler' to a global leader in climate action and biodiversity conservation.<sup>149</sup> NbS is a globally-recognised norm that describes what China has been excelling at, and as long as the norm remains fragmented, it is not restrictive enough to demand high compliance costs or any changes to the

<sup>146</sup> Zhu 2011.

<sup>&</sup>lt;sup>147</sup> Li and Chen 2020.

<sup>&</sup>lt;sup>148</sup> McBeath and Wang 2008; Mak and Song 2018; Gamso 2019.

<sup>&</sup>lt;sup>149</sup> Dimitrov 2010; Sun 2016.

country's pre-existing policies and local norms. Thus, the nominal adoption and promotion of the NbS norm contribute to China's ongoing effort to frame itself as a 'responsible global power'.<sup>150</sup> Through multilateral channels like the 2019 CAS and CBD's CoP-15, as well as bilateral efforts in promoting the NbS norm, China is anchoring itself as the new steward of global environmental governance and the advocate for strengthening the common but differentiated responsibility principle on behalf of developing countries.

Furthermore, by incorporating NbS elements in the BRI, China could improve the programme's somewhat tainted reputation. Dossani and colleagues argue that one of the BRI's criticisms is the initiative's inadequate attention to social and environmental sustainability in the pursuit of economic development.<sup>151</sup> Chinese scholars and practitioners have advocated for exporting China's experience in implementing NbS-like projects through BRI's International Green Development Coalition (BRIGC) and support other developing countries' adoption of the NbS norm with Chinese implementation and technical support.<sup>152</sup> By showcasing its success stories and proactively promote NbS's incorporation, the BRI could ward off some of its criticisms on the sustainability front and reassure environmentally-conscious investors of the initiative's commitment to non-economic development interests. The incorporation of a fragmented norm also allows China to play the role of a norm entrepreneur to shape the transnational norm's implementation in other developing countries in a way that conforms to its interests. This conforms to earlier studies that argue that:

China's policymakers may increasingly seek to make international organizations reflect their vision of the world and priorities, rather than those cultivated by the West under the

<sup>&</sup>lt;sup>150</sup> For an example of China's effort to build itself as a responsible global power by participating in UN Peacekeeping missions, see Fang, Li, and Sun 2018.

<sup>&</sup>lt;sup>151</sup> Dossani, Bouey, and Zhu 2020, 18.

<sup>&</sup>lt;sup>152</sup> Zhang, Xie, and Zeng 2020.

auspices of American hegemony – even if they lack a coherent and clear vision of precisely what those priorities might be at this stage.<sup>153</sup>

This prediction seems to come true as Chinese international relations experts recommend that China should establish itself as a "political discourse generator" in the global climate regime to further integrate developing countries' needs and governance advantages into the mainstream discourse and counter the presently Western-centric system, as well as serving China's own national interests.<sup>154</sup> Wang-Kaeding argues that Chinese environmental diplomacy aims to Sinicise Western environmental norms and advance its own versions to the world, in order to "occupy the moral high ground in the international community and hence enhance the national image and status of China."<sup>155</sup>

In summary, a fragmented NbS norm plays into China's hand by allowing the country to continue framing its domestic actions as NbS, while avoiding institutionalised and stricter international obligations on NbS implementation. The NbS framing of its domestic ecological conservation and restoration programmes allows China to gain domestic and international legitimacy for its environmental policies, while contributing to its ongoing effort of accumulating soft power via environmental diplomacy and infrastructure investments in developing countries and emerging economies.

<sup>&</sup>lt;sup>153</sup> Beeson 2018, 42.

<sup>&</sup>lt;sup>154</sup> Li 2019a, 13–14; Li 2019b, 70.

<sup>&</sup>lt;sup>155</sup> Wang-Kaeding 2021, 18.

## **Section 7: Conclusions**

In conclusion, my analysis has demonstrated that China's apparent NbS leadership is a case of nominal norm adoption and promotion. The country adopted the NbS norm rhetorically and legally but seems to have no intention of internalising or institutionalising the transnational norm. Instead, it continues to employ its pre-existing local norm of Ecological Civilisation in its domestic environmental and ecological policy discourses. However, this nominal adoption allows China to exemplify and export its own practices, infusing its local norms and ideologies into the transnational NbS norm. This norm entrepreneurship, I have argued, is intended to keep the fragmented status of the transnational NbS norm that allows flexible and differential implementation at the local level. In addition, I have also advanced two possible reasons as to why China adopted and promoted the NbS norm. I theorised that it did so in order to advance its interests domestically and internationally – establishing its status as a responsible great-power while gaining domestic and international legitimacy for its environmental and ecological projects.

This study's findings are largely in-line with previous research on China's environmental diplomacy, that domestic considerations and self-interest influence the People's Republic of China's foreign policies.<sup>156</sup> At the same time, I concur with Wang-Kaeding that China has increasingly stepped up its effort to gain soft power within the global environmental regime over the past decade.<sup>157</sup> With a growing population and rapid socioeconomic development, China is moving beyond being a passive receiver of global environmental norms and plays a vital role in proactively shaping the future of global environmental governance. First, its growing discursive

<sup>&</sup>lt;sup>156</sup> Gilley 2012; Jeffreys 2016; Beeson 2018; Gamso 2019.

<sup>&</sup>lt;sup>157</sup> Wang-Kaeding 2021, 18–22.

power in multilateral environmental processes is challenging the once Western-dominated environmental diplomacy space. China is furthering its own understandings and practices not only to legitimise its domestic policies and practices, but also to transform the international regime to its economic and political advantage. This is evident in the analysis of the NbS norm as China highlights the areas it reigns supreme – such as large-scale ecosystem restoration and afforestation practices – while disregarding environmental NGOs' call to strengthen human rights safeguards and stakeholder engagement during NbS implementation. It is selecting elements it finds desirable and reinterpreting those contrary to its interests.

Secondly, China is actively framing itself as the vanguard of developing countries' interests and a model for other emerging economies. It is sharing the "Chinese Experience" and exporting its own norms and worldview to low- and middle-income developing countries. On one end, it is emphasising common but differentiated responsibilities in global environmental governance and advocates for the flexible, non-prescriptive implementation of global environmental norms on behalf of developing countries. On the other, it is building its soft power by providing financial and technological support to developing countries to replicate China's experience and success; seeking to validate its environmental management pathway and demonstrate the superiority of the "Chinese Way" overthe conventional Western environmental norms. The promotion and sharing of its pre-existing nature-based practices as NbS serve as a vivid illustration of this. It is beyond this project's scope to assign a value judgement on China's conservation programmes from a scientific perspective. However, with China's growing influence, it is worth exploring its environmental diplomacy's consequences, positive or negative, on global climate action.

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Nevertheless, I acknowledge that these findings could be premature due to the time and resource constraints that China could be facing that limited its ability to fully implement the IUCN Gold Standard. Right after the publication of the Gold Standard, China and the world faced an unprecedented public health emergency that could have delayed China's internalisation of the NbS norm. It is also worth noting that fully implementing the Gold Standard would require long-term financial and time investment which would be impossible to capture at the time of this study. Though I view this scenario as unlikely – due to the fact that nearly half of the primary sources gathered were from 2020 and China successfully controlled its domestic COVID situation relatively early compared to the rest of the world – GEP scholars and practitioners should pay close attention to China's future moves vis-à-vis the NbS norm.

This study also advanced the understanding of global environmental norms. The nominal norm adoption model demonstrated the dynamic nature of norm adoption and localisation and highlighted the role of state actors in promoting and reinterpreting transnational environmental norms. The model also showed the possibility of a state actor rhetorically adopting a new transnational norm while continuing to implement its resemblant, pre-existing local norms. Future research could explore the applicability of the nominal norm adoption and promotion model in more cases involving NbS or other global environmental norms.

Lastly, this study opens up new GEP research agendas on the politics of NbS. The findings echoed some practitioners' criticism of NbS; that its fragmented nature opens up space for misuse and green-washing. NbS also marks the return and the re-mainstreaming of anthropocentric environmental norms in GEP, which warrants further research: How is NbS shifting the political discourse on climate mitigation and adaptation? How does its mainstreaming impact the collective pursuit of a sustainable future? And what are some of the

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lessons we could learn from NbS's mainstreaming and the success of anthropocentric norms in GEP? Nonetheless, it is not this project's intention to dismiss the role of NbS in global environmental governance. Instead, it reinforces calls to institutionalise NbS on the global level and cultivate the full power of our natural ecosystem in solving societal challenges and the climate and ecological crises facing humanity.

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# Appendices

## Appendix A

This project's analysis relies on a process-tracing strategy to demonstrate that China's adoption of the Nature-Based Solutions (NbS) norm is a case of nominal norm adoption and promotion. Collier defines process tracing as "the systematic examination of diagnostic evidence selected and analyzed in light of research questions and hypotheses posed by investigators."<sup>158</sup> This small-*N* qualitative methodology establishes the causal linkages between an independent and dependent variable through causal process observations (CPO) within in-depth case studies to clearly delineate the causal pathway. The process-tracing approach stands in place of the traditional quantitative empirical tests by clearly demonstrating the causal inference process and test the main theory against rival hypotheses to increase our confidence in the result.

To reiterate, this study's independent variable is the global diffusion of a transnational norm that is similar to, or same as, a pre-existing domestic norm; whereas the dependent variable is the outcome of an actor's norm adoption. In the case of the nominal adoption model, there are two outcomes of interest: the status quo implementation of the domestic norm and the diffusion of an updated form of the original transnational norm. The main article has demonstrated that we could observe the two dependent variables in reality – that China continues to implement its domestic norm and has actively promoted an updated version of the NbS norm. Then, we consider the intervening variables, which are, in this order, local norm comparison, state commitment, and incorporation and modification.

<sup>&</sup>lt;sup>158</sup> Collier 2011, 823.

In this Appendix, I use Bayesian tests to evaluate which theory – the nominal adoption model or one of the conventional theories described in the main article – best explains the CPOs. As I gather the evidence, I compare the different theories' causal implications and the CPOs to investigate if China's adoption is, in fact, a case of nominal adoption. The main rival theories to the nominal model ( $H_{NA}$ ) are policy transfer ( $H_{PT}$ ), localisation and subsidiarity ( $H_{LS}$ ), and partial compliance or incomplete internalisation ( $H_{PC}$ ). I will assume for simplicity sake that these four theories are mutually-exclusive. The goal of using the Bayesian tests is to quantify heuristically how much a particular piece of evidence increases or decreases our confidence in the theory. It is important to note that the numerical probabilities used in the mathematical proofs are rough approximations and estimated heuristically. They do not represent a concrete or precise statistical value in reality and should not be mistaken as such. See Bennett (2015) for a more detailed introduction to utilising Bayesian analysis in qualitative process-tracing designs.<sup>159</sup>

### A.1 Causal Implications of the Nominal Adoption Model

This investigation focuses on three causal implications derived from the nominal adoption model:

- 1. *Local norm alignment*: We should observe a local norm that is similar to the diffused transnational norm, in their underlying concepts, purposes, practices, or intended outcomes.
- 2. State commitment but shallow local implementation: We should observe: a) state commitment to the transnational norm either via rhetorical adoption or legal adoption, or both; while b) the status quo implementation of the local norm without employing the supposedly adopted transnational norm. The norm recipient should either publicly state their

<sup>&</sup>lt;sup>159</sup> See Bennett 2015.

commitment to the transnational norm or adopt it into domestic legislations or institutional arrangements. At the same time, we should also observe the norm recipient continues to implement or employ its pre-existing local norms in practice.

3. Incorporation of the local norm(s) into the transnational norm: We should observe the norm recipient infusing its local norm, practices, traditions, culture, policies, ideas and ideologies, and concepts into the transnational norm. This could be through institutionalisation efforts such as producing guidelines and detailed strategies on implementing the transnational norm or through soft-incorporation strategies like knowledge-sharing or discourse generation.

### A.2 Causal Process Observations and Alternative Explanations

For the first causal implication, local norm alignment, we should observe a local norm resembling the diffused transnational norm. In my analysis, I argue that China could achieve nominal adoption ( $H_{NA}$ ) of the NbS norm because of the transnational norm's alignment with its pre-existing domestic norm. Consider a rival hypothesis of policy transfer ( $H_{PT}$ ), that China's NbS adoption was an example of global policy convergence and institutional isomorphism, that China was socialised by the international forum to accept the NbS norm.<sup>160</sup> A priori, I view  $H_{PT}$ to be less plausible than  $H_{NA}$ . While policy transfer may explain some of China's domestic policy convergence with an international norm,<sup>161</sup> China's domestic ecosystem management policies date back to the 1970's which is almost thirty years before the emergence of the NbS norm. However, in the Bayesian analysis below, I will set the prior aside and assume the two theories

<sup>&</sup>lt;sup>160</sup> See Marsh and Sharman 2009.

<sup>&</sup>lt;sup>161</sup> See Johnston 2003.

are mutually exclusive and demonstrate how the relative odds are updated after observing a causal process observation (CPO).

 $CPO_1$  = China's shelter forest projects (SFP) have been in implementation since 1978 with a focus on using LULUCF policies and ecosystem engineering to enhance ecosystem services in the Northern arid region and protect biodiversity. The SFP is an ecosystem-based solution to tackle environmental challenges and vulnerabilities, resembling NbS actions that uses the power of nature to solve societal issues.

 $CPO_2$  = China's domestic Ecological Civilisation norm and President Xi Jinping's Two Mountains Theory prioritise nature's contribution to societal and economic progress, which scholars have compared the domestic norms with NbS and argued that they bear similitude in their operational logic and the solutions derived.

These evidence on domestic norm alignment with the transnational norm are expected under the  $H_{RA}$  since the underlying causal logic of  $H_{NA}$  is that a state actor may frame the implementation of their domestic norm as an adherence to the transnational counterpart. By comparison, these two CPOs have a low likelihood under  $H_{PT}$ , as the causal logic of  $H_{PT}$  assumes transnational norm or policy to be novel to the state actor, and that the domestic norms or policies should be different from the diffused norms or policies. However, for the rest of the rival theories, localisation and subsidiarity ( $H_{LS}$ ) and partial compliance or incomplete internalisation ( $H_{PC}$ ), observing these two CPOs do not diminish their likelihoods. For  $H_{LS}$ , local actors may assimilate the transnational norm into their local norm or reject the transnational norm and disseminate its

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own local norm to the world as a countermeasure.<sup>162</sup> Therefore, if  $H_{LS}$  is operating, it is still very likely to see a local norm that aligns with the transnational norm with few differences in practical implementation. Similarly, for  $H_{PC}$ , the theory does not rule out a similar local norm in operation prior to adopting the transnational norm. The state actor may adopt a transnational norm rhetorically and legally, but the actual implementation could only partially comply with the transnational norm, while the domestic practices are largely unaffected.<sup>163</sup> Therefore, it would be neither expected nor surprising to observe the two CPOs if  $H_{PC}$  is operating.

$$\Pr(H_{NA}|E) = \frac{\Pr(E|H_{NA}) \times \Pr(H_{NA})}{\Pr(E|H_{NA}) \times \Pr(H_{NA}) + \Pr(E|H_{PT}) \times \Pr(H_{PT}) + \Pr(E|H_{LS}) \times \Pr(H_{LS}) + \Pr(E|H_{PC}) \times \Pr(H_{PC})} = \frac{0.8 \times 0.25}{0.8 \times 0.25 + 0.1 \times 0.25 + 0.8 \times 0.25 + 0.6 \times 0.25} = 0.35$$
(1)

$$\Pr(H_{PT}|E) = \frac{\Pr(E|H_{PT}) \times P(H_{PT})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})} = \frac{0.1 \times 0.25}{0.8 \times 0.25 + 0.1 \times 0.25 + 0.8 \times 0.25 + 0.6 \times 0.25} = 0.04$$
(2)

$$\Pr(H_{LS}|E) = \Pr(H_{NA}|E) = 0.35$$
(3)

$$\Pr(H_{PC}|E) = 1 - \Pr(H_{NA}|E) - \Pr(H_{PT}|E) - \Pr(H_{LS}|E) = 1 - 0.35 - 0.04 - 0.35 = 0.26$$
(4)

\* Here, Pr(H|E) is the posterior probability of the hypothesis; Pr(E|H) is the likelihood of the evidence (if we take H to be true, what is the probability of observing the evidence?); P(H) is the prior probability of the hypothesis (here, all theories are presumed to be mutually exclusive, thus the 25% prior probability); and the denominator is the calculation for the marginal likelihood of the evidence, Pr(E).

As the heuristic calculation shows, these two CPOs weighs in favour of the nominal adoption theory and the localisation and subsidiarity theory (from a probability of 25% to 35% each) and

<sup>&</sup>lt;sup>162</sup> Acharya 2004; Acharya 2011.

<sup>&</sup>lt;sup>163</sup> Noutcheva 2009.

diminishes the probability of the policy transfer theory (from 25% to 4%), while the probability of the partial compliance theory stays roughly the same (from 25% to 26%).

 $CPO_3$  = There are twenty-nine mentions of NbS in the Chinese government's official documents, communiqués, and domestic policies, between January 1, 2019 and April 30, 2021. The NbS language can be found in the 2021 Guiding Opinion on Coordinating and Strengthening the Work Related to Climate Change and Ecological Environmental Protection; and the Minister of MEE publicly indicated that the country would continue exploring NbS in domestic policies.

In a situation where  $H_{NA}$  holds, it is very likely to observe CPO<sub>3</sub> since the state actor would need to showcase its support and adoption of the transnational norm. This could be done either through rhetorical demonstration of adherence to the transnational norm or the incorporation of the transnational norm into domestic policies or laws. CPO<sub>3</sub> shows that China has achieved the rhetorical adoption and the legal adoption of the NbS norm. The Chinese government is using the NbS terminology to demonstrate their acceptance of the transnational norm and it has incorporated NbS into its domestic legislation on climate change. At the same time, it is equally likely to observe this evidence if  $H_{PC}$  is operating. Partial compliance denotes the decoupling of a state actor's adoption of a transnational norm and the actual implementation of the norm. For a state actor to be partially compliant of a transnational norm, it has to adopt the norm rhetorically or legally first. And while this evidence does not fit squarely into the causal mechanism behind  $H_{PT}$ , it is nevertheless consistent with the theory as the end goal of a policy transfer is for the state actor to adopt the norm legally within domestic legislations or practices. However, observing this evidence would be unlikely if  $H_{LS}$  is operating. The *raison d'être* of localisation is to preserve the original norm hierarchy of the local institutions.<sup>164</sup> It would be unlikely that the state actor demonstrates public adherence to a transnational norm directly, as the transnational norm would be modified by the local norms. And if the subsidiarity theory is operating, then we would see the rejection of, and resistance to, the transnational norm; instead of adopting the norm rhetorically and legally.

$$\Pr(H_{NA}|E) = \frac{\Pr(E|H_{NA}) \times P(H_{NA})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})} = \frac{0.8 \times 0.35}{0.8 \times 0.35 + 0.6 \times 0.04 + 0.3 \times 0.35 + 0.8 \times 0.26} = 0.45$$
(5)

$$\Pr(H_{PT}|E) = \frac{\Pr(E|H_{PT}) \times P(H_{PT})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})} = \frac{0.6 \times 0.04}{0.8 \times 0.35 + 0.6 \times 0.04 + 0.3 \times 0.35 + 0.8 \times 0.26} = 0.04$$
(6)

$$Pr(H_{LS}|E) = \frac{Pr(E|H_{LS}) \times P(H_{LS})}{Pr(E|H_{NA}) \times P(H_{NA}) + Pr(E|H_{PT}) \times P(H_{PT}) + Pr(E|H_{LS}) \times P(H_{LS}) + Pr(E|H_{PC}) \times P(H_{PC})}$$

$$= \frac{0.3 \times 0.35}{0.8 \times 0.35 + 0.6 \times 0.04 + 0.3 \times 0.35 + 0.8 \times 0.26} = 0.17$$
(7)

$$\Pr(H_{PC}|E) = 1 - \Pr(H_{NA}|E) - \Pr(H_{PT}|E) - \Pr(H_{LS}|E) = 1 - 0.45 - 0.04 - 0.17 = 0.34$$
(8)

<sup>†</sup> Here, the prior probability value, *P*(*H*), takes on the posterior value from the previous round of calculations (calculations 1-4).

As the calculation shows, observing CPO<sub>3</sub> increases the probability of both the nominal adoption theory and the partial compliance theory (an increase from 35% and 26% to 45% and 34%, respectively) and decreases the confidence in the localisation and subsidiarity theory substantially (from 35% to 17%).

<sup>&</sup>lt;sup>164</sup> See Acharya 2004, 254, figure 1.

 $CPO_4$  = The Central Government continued to use its pre-existing local norms in the 14<sup>th</sup> FYP and in the CFEAC decisions on environmental protection policies. A review of the Chinese environmental policy documents shows that out of the sixteen domestic policy instruments enacted between January 1, 2019 and April 30, 2021, only two reference the NbS norm. The majority of the domestic policies continue using the Ecological Civilisation and the Two Mountains Theory as their guiding principle or implementation measures.

The likelihood of observing this CPO is moderately high under  $H_{NA}$ ,  $H_{LS}$ , and  $H_{PC}$  because all three theories' causal logic includes the status quo implementation of the local norm. For  $H_{NA}$ , a state actor's domestic rhetoric prioritises the pre-existing local norm, while the transnational norm is only mentioned in its outward-oriented campaigns and documents. Thus, it is highly likely to observe CPO<sub>4</sub> if  $H_{NA}$  holds true. The likelihood is also high under  $H_{LS}$  since the local norm hierarchy continues to prioritise the implementation of local norms instead of the newly imported transnational norm. And in a world where  $H_{PC}$  holds, it would not be a surprise to find this CPO, since the state actor is only partially in compliance with the transnational norm and its domestic norm are largely unaffected; though observing this CPO is neither expected nor required under the  $H_{PC}$  logic.<sup>165</sup> As for  $H_{PT}$ , it is unlikely that we will observe this evidence if  $H_{PT}$  is operating, since the transnational norm would be novel to the recipient state actor and displaces its local practices.

<sup>&</sup>lt;sup>165</sup> For as long as there is a decoupling between the norm adoption and their actual implementation on-ground, the partial compliance theory holds true. The theory's logic does not require observing a prioritised local norm to operate. A state actor may not have a comparable local norm prior to the adoption of the transnational norm, but it still could only partially implement the transnational norm. See Zimmermann 2016, 102–104.

$$Pr(H_{NA}|E) = \frac{Pr(E|H_{NA}) \times P(H_{NA})}{Pr(E|H_{NA}) \times P(H_{NA}) + Pr(E|H_{PT}) \times P(H_{PT}) + Pr(E|H_{LS}) \times P(H_{LS}) + Pr(E|H_{PC}) \times P(H_{PC})} = \frac{0.8 \times 0.45}{0.8 \times 0.45 + 0.2 \times 0.04 + 0.7 \times 0.17 + 0.5 \times 0.34} = 0.55$$
(9)

$$\Pr(H_{PT}|E) = \frac{\Pr(E|H_{PT}) \times P(H_{PT})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})}$$

$$= \frac{0.2 \times 0.04}{0.8 \times 0.45 + 0.2 \times 0.04 + 0.7 \times 0.17 + 0.5 \times 0.34} = 0.01$$
(10)

$$\Pr(H_{LS}|E) = \frac{\Pr(E|H_{LS}) \times P(H_{LS})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})}$$

$$= \frac{0.7 \times 0.17}{0.8 \times 0.45 + 0.2 \times 0.04 + 0.7 \times 0.17 + 0.5 \times 0.34} = 0.18$$
(11)

$$\Pr(H_{PC}|E) = 1 - \Pr(H_{NA}|E) - \Pr(H_{PT}|E) - \Pr(H_{LS}|E) = 1 - 0.55 - 0.01 - 0.18 = 0.26$$
(12)

† Here, the prior probability value, *P(H)*, takes on the posterior value from the previous round of calculations (calculations 5-8).

Observing CPO<sub>4</sub> increases the probability of  $H_{NA}$  greatly compared to the rest of the rival theories (an increase from a probability of 45% to 55%). There is also a slight increase in the probability of  $H_{LS}$ , and a slight decrease in the probability of  $H_{PC}$ .

*CPO<sub>5</sub>* = The Chinese government actively promotes and incorporates its own norms and practices into the transnational NbS norm. This effort manifests in the sharing of Chinese best practices and lessons learned and the promotion of NbS in China's multilateral and bilateral foreign policies. Some examples include the incorporation of predominantly Chinese case studies in the NbS Compendium, the funding and technical support to other developing countries on industrial-scale NbS projects, the promotion of NbS in the Beijing Call for Biodiversity Conservation and Climate Change, and the policy position of incorporating NbS into the CBD Post-2020 Global Biodiversity Framework.
$CPO_6$  = China objected to attaching a 30% carbon emission reduction target to NbS in the CBD Post-2020 Global Biodiversity Framework, arguing that "the carbon sequestration capacity of ecosystem is limited and vulnerable to climate change." This policy position is contradictory to China's public rhetoric praising NbS's cost-effective carbon sequestration capacity and potential in addressing the climate crisis.

The last two CPOs relate to China's norm promoter role in mainstreaming the NbS norm. These two CPOs illustrate crucial elements of  $H_{NA}$ 's causal mechanism, including norm modification and the promotion of the updated norm to either institutionalise or further fragment the transnational norm. The likelihood of observing CPO<sub>5</sub> under  $H_{LS}$  is high, as one of the outcomes of subsidiary norm promotion is the "strengthening of transnational norms."<sup>166</sup> However, CPO<sub>6</sub> corresponds to the other outcome of  $H_{LS}$ , which is the resistance of transnational norms by the norm recipient. Since the original norm subsidiarity causal logic does not account for the existence of both outcomes simultaneously, I assigned these CPOs a moderate likelihood value for  $H_{LS}$  for the next round of Bayesian updating calculations. As to both  $H_{PT}$  and  $H_{PC}$ , it is unlikely we will observe these two CPOs if they are operating, since their causal pathway does not include a norm promotion aspect.

$$Pr(H_{NA}|E) = \frac{Pr(E|H_{NA}) \times P(H_{NA})}{Pr(E|H_{NA}) \times P(H_{NA}) + Pr(E|H_{PT}) \times P(H_{PT}) + Pr(E|H_{LS}) \times P(H_{LS}) + Pr(E|H_{PC}) \times P(H_{PC})}$$

$$= \frac{0.8 \times 0.55}{0.8 \times 0.55 + 0.1 \times 0.01 + 0.6 \times 0.18 + 0.1 \times 0.26} = 0.77$$
(13)

$$\Pr(H_{PT}|E) = \frac{\Pr(E|H_{PT}) \times P(H_{PT})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})}$$

$$= \frac{0.1 \times 0.01}{0.8 \times 0.55 + 0.1 \times 0.01 + 0.6 \times 0.18 + 0.1 \times 0.26} = 0.00$$
(14)

<sup>166</sup> Acharya 2011, 99.

$$\Pr(H_{LS}|E) = \frac{\Pr(E|H_{LS}) \times P(H_{LS})}{\Pr(E|H_{NA}) \times P(H_{NA}) + \Pr(E|H_{PT}) \times P(H_{PT}) + \Pr(E|H_{LS}) \times P(H_{LS}) + \Pr(E|H_{PC}) \times P(H_{PC})}$$

$$= \frac{0.6 \times 0.18}{0.8 \times 0.55 + 0.1 \times 0.01 + 0.6 \times 0.18 + 0.1 \times 0.26} = 0.19$$
(15)

$$\Pr(H_{PC}|E) = 1 - \Pr(H_{NA}|E) - \Pr(H_{PT}|E) - \Pr(H_{LS}|E) = 1 - 0.77 - 0.00 - 0.19 = 0.04$$
(16)

† Here, the prior probability value, P(H), takes on the posterior value from the previous round of calculations (calculations 9-12).

After four rounds of Bayesian updates, our confidence in the nominal adoption theory has significantly increased, from the initial 25% to 77% probability at the end, taking into consideration six CPOs extracted from the main article. At the same time, our confidences in the rest of the rival theories have been diminished substantially.

The nominal adoption model captured elements that the rest of the three theories miss. The policy transfer and partial compliance theories do not account for pre-existing local norms and the incorporation and promotion of local norms into a transnational counterpart. And the norm localisation and subsidiarity theory does not capture the hybrid scenario of both accepting and promoting the transnational norm while seeking to challenge and fragment the Westernconstructed environmental norm.

## **Appendix B**

## **B.1** Methodology of Collecting Primary Sources from the Chinese Government

This project relies on various primary sources, including participant observation and the compilation of official government records, communiqués, policy documents, and press releases from the Chinese government's websites. The author surveyed four government entities' websites: the Ministry of Ecology and Environment (MEE), the Ministry of Natural Resources (MNR) and its State Forestry and Grassland Administration (SFGA), and the Ministry of Foreign Affairs (MFA). These ministries and agencies were selected due to their mandates within the State Council (China's executive branch) after the 2018 institutional reform.<sup>167</sup> Both MEE and MNR are mandated to carry out works related to ecosystem restoration, climate change mitigation and adaptation planning, and international cooperation on environmental protection and biodiversity conservation, with the MEE taking the leading role. The SFGA is in charge of executing the MNR's ecosystem restoration planning and implementation duties; and act as the lead agency in coordinating the Shelterbelt Forest Projects. The MFA supports the MEE and MNR in carrying out their international cooperation duties, including international negotiations and liaising with relevant United Nations entities.

The author used the advanced search function on each of these government entities' information disclosure and news updates websites. The temporal scope of this search is any documents or webpages that were created between January 1, 2019 and April 30, 2021. This range was chosen due to the timing of the NbS norm's global diffusion. The NbS norm gained traction at the Katowice Climate Change Conference in December 2018, and the term NbS was not mainstreamed in the global environmental regime prior to that. The collection of these

<sup>&</sup>lt;sup>167</sup> State Council of the PRC 2018.

documents was a two-step process. First, the author compiled all documents that either mentions or relates to:

- 1) Nature-Based Solutions (*ji yu zi ran de jie jue fang an*);<sup>168</sup>
- 2) 2019 Climate Action Summit (*lian he guo qi hou xing dong feng hui*);<sup>169</sup> or
- 3) Ecosystem Approach (*sheng tai xi tong fang fa*).<sup>170</sup>

The first search was to gather all documents that pertain to the main subject of this research to assess the level of norm adoption and promotion by the Chinese government. The second search represents a more expansive gathering of all national-level policies regarding climate change, biodiversity conservation, ecosystem restoration, and environmental protection (*policy scope*). The author used the "Policy Document Library" on the government entities' websites to systematically collect all policy documents related to the areas mentioned above. The author first sorted the library using the categories: natural ecosystem protection, combatting climate change, water ecology, ecosystem restoration, and international cooperation. Then, the author carefully reviewed all policy documents to determine:

- 1) If the policy document pertains to the aforementioned policy scope;
- 2) If the policy document is generated between the temporal scope; and
- 3) If the policy document mentions NbS or Ecosystem Approach.

Through the Policy Document Library, certain State Council decisions pertaining to MEE and MNR's mandates could also be accessed, and these State Council decisions (Guiding Opinions – *zhi dao yi jian*) are also included in the list.

<sup>&</sup>lt;sup>168</sup> In Mandarin Chinese, "基于自然的解决方案".

<sup>&</sup>lt;sup>169</sup> In Mandarin Chinese, "2019 年联合国气候行动峰会" or "气候峰会".

<sup>&</sup>lt;sup>170</sup> In Mandarin Chinese, "生态系统方法".

After this collection procedure, the author carefully reviewed all of the collected documents again to classify the individual documents into the following classifications and categories:

- 1) Classifications:
  - a. Domestic: The document is a domestic policy document or is intended for domestic audiences (monthly press conference, press releases regarding domestic actions and policies, or remarks by high-level officials for a domestic event or setting).
  - b. International: The document is a diplomatic communiqué or is regarding China's international cooperation and diplomatic activities (press releases on a bilateral or multilateral meeting, remarks by high-level officials for a foreign event or setting).
- 2) Categories:
  - a. Policy: Policy documents by the Ministry, the Ministerial Secretariat or the State Council.
  - b. Communiqué: Diplomatic announcements, UN-related conferences' position paper or joint communications by China and other countries on a diplomatic initiative.
  - c. Press Release: Including press conferences and press releases issued by the Ministries.
  - d. Remarks: Transcript of high-level officials' remarks at an event or conference.

Lastly, the links to each document or webpage have been shortened using TinyURL and assigned unique codes for easy access and classification. Unless otherwise noted, the websites were accessible on May 10, 2021.

## **B.2** List of Primary Sources from the Chinese Government

No.	Title	Year	Ministry	Classification	Category	NbS	Link
1	Meeting between Minister Li Ganjie and UN Secretary General's Special Envoy on the 2019 Climate Action Summit	2019	MEE	International	Press Release	Yes	http://tinyurl.com/qi2021-cn1
2	China-New Zealand Leaders' Statement on Climate Change	2019	MEE	International	Communiqué	Yes	http://tinyurl.com/qi2021-cn2
3	Ambassador Wu Peng, the Permanent Representative to the United Nations Environment Programme, met with the Acting Executive Director of UNEP Joyce Msuya	2019	MFA	International	Press Release	Yes	https://tinyurl.com/qi2021-cn3
4	Meeting between Minister Li Ganjie and Italian Minister of Environment, Territories and Ocean	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn4
5	Press Release for the Joint-Meeting between Foreign Ministers of China and France, and UN Secretary-General on the Climate Action Summit	2019	MFA	International	Press Release	Yes	https://tinyurl.com/qi2021-cn5
6	UN CBD Secretariat Released Theme for COP-15: Ecological Civilisation – Building a Shared Future for All Life on Earth	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn6
7	Transcript of Ministry of Ecology and Environment Press Conference (August 2019)	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn7
8	Technical Regulations for Ecological Protection Red Line Survey and Definition	2019	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn8
9	UN Convention on Biological Diversity Secretariat releases theme of the 2020 UN Biodiversity Conference COP-15: Ecological Civilization: Building a Shared Future for All Life on Earth	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn9
10	Regulation and Guideline on Constructing Model Cities and Counties for National Ecological Civilisation Demonstration	2019	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn10
11	UN Climate Action Summit: China's Position and Action	2019	MFA	International	Communiqué	Yes	https://tinyurl.com/qi2021-cn11

12	China and the United Nations – China's Policy Position Document for the 74 <sup>th</sup> General Assembly	2019	MFA	International	Communiqué	Yes	https://tinyurl.com/qi2021-cn12
13	Transcript of Minister of Foreign Affairs Wang Yi Remarks at the UN Climate Action Summit	2019	MEE	International	Remarks	Yes	https://tinyurl.com/qi2021-cn13
14	Chinese Climate Action – Consistently Demonstrating "Positive Energy"	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn14
15	Ministry of Ecology and Environment Officials Visit New Zealand	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn15
16	Meeting between Minister Li Ganjie and Executive Director of UNEP	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn16
17	12 <sup>th</sup> Annual Meeting between the Ministry of Ecology and Environment and UNEP	2019	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn17
18	Beijing Call for Biodiversity Conservation and Climate Change	2019	MFA	International	Communiqué	Yes	https://tinyurl.com/qi2021-fr18
19	Joint-Communiqué of the 29 <sup>th</sup> BASIC Ministerial Meeting on Climate Change	2019	MEE	International	Communiqué	Yes	https://tinyurl.com/qi2021-cn19 (webpage no longer available)
20	Remarks by the Minister of Ecology and Environment at the 2020 National Ecological and Environmental Protection Conference	2020	MEE	International	Remarks	Yes	https://tinyurl.com/qi2021-cn20
21	Elizabeth Murema, Acting Executive Secretary of the UN Convention on Biological Diversity, delivers a speech for the 2020 International Day of Biological Diversity	2020	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn21
22	Ministry of Ecology and Environment Virtual Conversation on "Environment, Climate and Green Recovery" with the Government of California	2020	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn22
23	Minister Huang Runqiu's Remark at the Virtual Conference of UNCBD COP-14 on "Better Recovery"	2020	MEE	International	Remarks	Yes	https://tinyurl.com/qi2021-cn23
24	Virtual Meeting between Minister of Ecology and Environment and Norwegian Minister of Climate and Environment	2020	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn24
25	"Guidelines for Ecological Protection and Restoration of Landscape, Forest, Field, Lake and Grassland (Trial)": Promoting Integrated Protection and Restoration	2020	MNR	Domestic	Policy	No	https://tinyurl.com/qi2021-cn25

26	Guiding Opinion on Facilitating Climate Action Investment and Financing	2020	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn26
27	Opinions on Several Specific Issues Concerning the Facilitation of Ecological and Environmental Damage Compensation System Reform	2020	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn27
28	Shenzhen takes the lead in conducting land ecological surveys and assessments in the city to find out the background of the ecosystem and propose natural-based solutions	2020	MEE	Domestic	Policy	Yes	https://tinyurl.com/qi2021-cn28
29	Interim Measures for the Management of South-South Climate Change Cooperation Material Assistance Projects	2020	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn29
30	Opinions on strengthening the supervision of ecological protection	2020	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn30
31	White Paper on SFGA Climate Action Policy and Action 2019	2020	SFGA	International	Press Release	Yes	https://tinyurl.com/qi2021-cn31
32	Scientific Presentation on Climate Change and Biodiversity Protection by Huang Runqiu, Minister of Ecology and Environment, at the Jiu San Society General Meeting	2020	MEE	Domestic	Remarks	Yes	https://tinyurl.com/qi2021-cn32
33	Regulation for the Establishment and Revision of National Ecological Environment Standards	2020	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn33
34	Guiding opinions on coordinating and strengthening the work related to climate change and ecological environmental protection	2021	MEE	Domestic	Policy	Yes	https://tinyurl.com/qi2021-cn34
35	Transcript of Ministry of Ecology and Environment Press Conference (January 2021)	2021	MEE	International	Press Release	Yes	https://tinyurl.com/qi2021-cn35
36	"Beautiful China, I am an actor" Action plan to enhance citizens' awareness of ecological civilization (2021-2025 Plan)	2021	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn36
37	Guiding Opinions of the State Council on Accelerating the Establishment and Improvement of a Green and Low-Carbon Circular Development Economic System	2021	State Council	Domestic	Policy	No	https://tinyurl.com/qi2021-cn42
38	The Fourteenth Five-Year Plan for the National Economic and Social Development	2021	State Council	Domestic	Policy	No	https://tinyurl.com/qi2021-cn41

of the People's Republic of China and the Outline of Long-Term Goals for 2035

39	2020 Government Work Report	2020	State Council	Domestic	Remarks	No	http://www.gov.cn/guowuyuan/ 2020zfgzbg.htm
40	2021 Government Work Report	2021	State Council	Domestic	Remarks	No	http://www.gov.cn/zhuanti/202 11hzfgzbg/index.htm
41	State Council Secretariat's Opinion on Strengthening Grassland Protection and Restoration	2021	State Council	Domestic	Policy	No	https://tinyurl.com/qi2021-cn43
42	Regarding Emission Peak and Carbon Neutrality, what decisions were made by the Central Financial and Economic Affairs Commission	2021	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn37
43	Opinion on Establishing and Improving the Value Realization Mechanism of Ecological Products	2021	MEE	Domestic	Policy	No	https://tinyurl.com/qi2021-cn45
44	Chair's Summary of the Fifth Climate Action Ministerial Meeting	2021	MEE	International	Communiqué	Yes	https://tinyurl.com/qi2021-cn44