# Transnational NGOs and Delegated Governance: The Logic of Foreign Protected Area Management

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**Abstract**

Governance by and between nonstate actors has become an increasingly key part of international governance. Most research conceives of transnational governance as agreements between nonstate or subnational actors across borders, or as multilateral international agreements that delegate functions to a nonstate actor. I examine another form of transnational governance in which a transnational actor takes on governance functions within a state's territory. Transnational NGOs manage protected areas (PAs) for biodiversity and ecosystem conservation either independently from or in cooperation with national governments. I argue that transnational actors strategically target countries that are both reliable partners in this "delegated governance" and also have valuable biodiversity hotspots that they are unable or unwilling to manage. This leads TNGOs to target states that have enough capacity to work with them, rather than those with low capacity where delegated governance may be more efficient for the environment. I test this argument using a dataset of over 17,000 privately or jointly managed protected areas in over 125 countries, finding support for my propositions. I then extend the logic to show that TNGO-managed PAs are more effective at reducing deforestation than government-managed PAs in low-capacity countries, but not in high-capacity countries. The findings have important implications for our understanding of the strategic incentives of international nongovernmental organizations; they suggest that TNGOs balance practical and "mission-oriented" considerations. They also show that this balancing may be detrimental both for low-capacity states and the environment.

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# 1 Introduction

Many of the most pressing global issues today are transnational in nature, including climate change, human rights, wealth and income inequality, conflict, and more. While formal, multilateral organizations continue to play an important role in managing these issues, transnational governance by and between nonstate actors has become increasingly important in filling implementation and management gaps (T. Hale 2020). Most research on transnational governance conceives of it as agreements between nonstate or subnational actors across borders that influence their behavior (like cities joining a climate pledge), or as a multilateral agreement between states that delegates monitoring functions to a nonstate actor (like the Convention on International Trade in Endangered Species delegating to the NGO "TRAFFIC") (Büthe and Mattli 2011; Green 2014). This paper examine another type of transnational governance: when a transnational actor takes on governance functions within a state's territory. Increasingly, transnational NGOs and other organizations directly manage policy or even territory within sovereign nations.

While this phenomenon has not usually been recognized as transnational governance to my knowledge, it has been discussed in some scholarly literature. First, multinational corporations (MNCs) sometimes provide infrastructure, healthcare, security, etc. as part of a greenfield investment, usually when the state is incapable of doing so (Kline 2006). Second, host states sometimes relinquish sovereignty in order for third parties to provide security or develop governance functions for the state in "governance delegation agreements" (Matanock 2014). This paper discusses a third case: Transnational NGOs (TNGOs) setting up protected areas (PAs), like national parks or nature preserves. Large environmental NGOs are involved in protected areas in over one hundred countries around the world, spending millions of dollars and employing thousands of staff. These PAs are managed either independently from the state (such as when the organization buys the land and holds it privately as a PA) or in cooperation with it (such as when the NGO provides funding for and adminstrates the PA, but the land is owned by the government).

This dynamic differs from the previous research on MNCs and governance delegation agreements in important ways. First, MNCs only provide governance functions reluctantly because it is costly for them to do so. They would rather not for financial reasons, and often provide the bare minimum of governance. With TNGOs and PAs, the TNGO is specifically acting in the country *in order to* provide those governance functions, and it (generally) wants to do so to the best of its ability. Second, with governance delegation agreements, these are typically targeted toward extremely weak or failed states, and the idea is for the arrangement to be temporary while state capacity in the host state is built.[1] TNGOs govern PAs in a wide range of countries, and while they may want to return governance functions to the host country once it is willing and able to take them on, that is not the goal at the outset. In summary, this is an unusual phenomenon that does not seem to fit squarely in pre-existing categories in the literature.

When a state allows a TNGO to manage a PA in its territory, it is permitting a foreign actor direct control over a significant portion of its territory with the express purpose of managing it long into the future. This has interesting implications for internal sovereignty[2] because the state is in essence conceding that the provision of the collective good of biodiversity conservation is desirable,[3] but it is unwilling or unable to provide it by itself. It therefore allows the transnational actor to do so. This dynamic raises interesting questions. What makes states more likely to permit governance by/with transnational actors in their territory? How do transnational actors choose which countries to attempt to enact governance in? And what are the effects on policy outcomes? In this paper, I focus on the latter two of these questions.

I argue that TNGOs are strategic actors that balance desire to pursue their "advocacy-related" preferences while balancing practical considerations (Keck and Sikkink 1998). They are more likely to target countries with high biodiversity, because establishing and managing these PAs is in service of preserving biodiversity as the end goal for most if not

[1]For example, Australia provided governance functions in the Solomon Islands following the latter's near collapse and takeover by militias after the Asian financial crisis (Matanock 2014).

[2]The government's sole authority to govern its territory.

[3]Biodiversity refers to the diversity of life at the genetic, species, and ecosystem levels.

all of them. However, they are also more likely to target states that are easier to work with; that is, they target states with capacity to work with the NGO as a reliable partner, and that are amenable to allowing the NGO to operate in their territory. Because TNGOs target states that have both features, they are less likely to operate in countries with very low capacity and high biodiversity that are arguably most at risk of depleting biodiversity rapidly–in other words, states most in need of transnational conservation funding. Further, I argue that TNGO-managed PAs will be less effective at reducing environmental harms than government-managed PAs in higher-capacity countries, while the opposite is true in low-capacity countries. In order words, the strategic incentives of TNGOs lead them to target countries less in need of transnational funding and lead to smaller marginal improvement of environmental outcomes in the places they do target, compared to if they targeted low-capacity but high biodiversity countries.

To test the implications of my argument, I leverage data on over 17,000 privately or jointly managed protected areas in over 125 countries, which are mostly managed by a small number of large, environmental TNGOs. I find that the level of biodiversity in a country can only weakly explain the presence of transnationally managed PAs (TMPAs). State capacity is a much stronger predictor for the presence of TMPAs, while state capacity combined with biodiversity is even stronger than either on its own. Then, I measure deforestation outcomes within a global sample of all PAs using fine-grain remote sensing data. I find that TNGO-managed PAs reduce deforestation more than government-managed PAs in low-capacity countries, but less in higher-capacity countries. This exacerbates the worrying implications of the first set of findings: in higher-capacity settings, TNGO-managed PAs do not seem to be improving environmental outcomes above and beyond what the government would do instead.

These findings contribute to the international relations literature in several ways. First, I highlight an understudied but surprisingly prevalent form of transnational governance. While scholars have studied transnational governance in detail (T. Hale 2016; T. Hale and C. Roger 2014; T. Hale 2020; Green 2014; Andonova 2014; Abbott and Snidal 2010), they

have focused less on this form, where states delegate governance to transnational actors within their own territory, rather than in monitoring or enforcing an agreement between states. This form of governance has important implications for the implementation of international agreements, international cooperation on transnational issues, and the role of nonstate actors in international relations more broadly. It shows that nonstate action beyond cooperation across borders can help determine a state's aggregate "commitment" to a particular issue.

Second, I contribute to the literature on the importance of civil society in international relations. I point out the important role that TNGOs continue to play in funding and managing environmental policy around the world, adding to work that analyzes how civil society aims to fill gaps and push change when government policy falls short (Keck and Sikkink 1998; Tasmim et al. 2020; Andonova, T. N. Hale, and C. B. Roger 2017; Murdie and Davis 2012; Schoner 2023). Third, I add to the environmental politics literature, both in highlighting the large role that TNGOs play in this space (Hadden and Jasny 2019; Shibaike 2022; Ulloa 2023; Dörfler and Heinzel 2023; Goes and Chapman 2024), and in contributing to literature on the political economy of protected areas and conservation (Mangonnet, Kopas, and Urpelainen 2022; Alger 2021; Hawkins and Goodliffe 2023; Beacham 2024). I focus on how the incentives of TNGOs to advance their conservation goals in a "fiscally efficient" manner has potentially negative implications for global conservation goals as a whole.

The paper proceeds as follows: The next section explains what delegated governance looks like in the domain of protected areas and contextualizes PAs as a policy. Then, I introduce a theory of strategic TNGO behavior that predicts prioritization of both biodiversity hotspots and reliable state partners jointly, rather than "triage" targetting of vulnerable biodiversity in and of itself. Next, I explain the research design to test the implications of this theory, before discussing the results. I conclude by discussing ways forward and limitations with the current study that are being addressed in future versions.

# 2 Delegated Governance and Protected Area Management

Biodiversity and ecosystem conservation are global public goods. They provide incalulable economic, health, and social benefits for both human and nonhuman species (Sala 2020). Protected areas are one of the default policy solutions for conservation, and currently cover over 17% of the planet's land surface (see Figure 1). They are defined as locations set aside for the long term conservation of nature (Dudley 2008). Research demonstrates that they benefit biodiversity and improve environmental outcomes on average (Geldmann et al. 2019; Gray et al. 2016; Nepstad et al. 2006), although there is significant heterogeneity across time, management regimes, and countries. Although they do provide benefits, proper management of PAs is not costless, especially in places where they genuinely prevent land conversion that would otherwise take place for economic reasons.[4] PA sponsors and managers must monitor them, enforce prohibitions on economic activity, and ideally promote ecosystem functions and environmental health. All of these activities cost money. Additionally, PAs are sometimes considered "costly" to local communities because of their economic opportunity cost (Fernández Milmanda and Garay 2019). This means that political and economic considerations often come into play when governments decide when and where to establish a PA. While PAs provide enormous benefits, they are diffuse and long-term while the costs are obvious and localized. This dynamic has led states to systematically under-invest in PAs, especially in economically valuable places.

This is where TNGOs enter the picture. While they are by no means immune from political and economic considerations in managing PAs, they are more focused on environmental outcomes than governmental actors who must balance many more considerations. NGOs do advocate for and directly manage PAs in their home countries. However, most of the world's remaining biodiversity and large swaths of intact "natural" ecosystems are

[4]PAs are not always in these places; they tend to be biased toward "high and far" places that are not under active threat of conversion, which reduces their impact (Joppa and Pfaff 2009), even if they do still provide ecosystem and other benefits (Wuerthner, Crist, and Butler 2015).

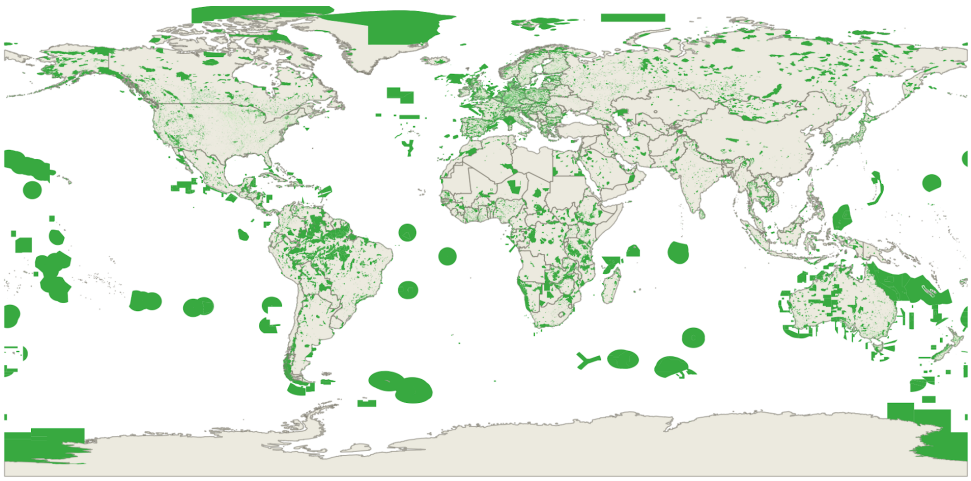

Figure 1: Global Protected Area Network as of December 2020. Data on PAs from Protected Planet (UNEP-WCMC and IUCN 2022).

located in poorer, less well-resourced countries. Therefore, if an NGO cares about the global good of biodiversity, they must work to shift outcomes in those other countries (Swanson 1994). In other words, biodiversity is a specific asset. Protecting it in one country is not equivalent to protecting it in another. It matters everywhere, but urgency and expected "return on investment" are higher in weaker, less protected, and poorer states. They both have the highest remaining biodiversity and are most likely to convert it into biodiversity-poor, human-managed alternatives for economic development. This provides the impetus for TNGOs to want to engage in "delegated governance" of PAs in other states.

They have done so throughout the history of conservation. Environmental NGOs based in Western countries have been one of the key drivers of PA establishment since the modern environmental movement began in the 1960s (Adams 2004). The four largest conservation NGOs (Conservation International, The Nature Conservancy, the World Wildlife Fund, and the Wildlife Conservation Society) alone collectively have an annual revenue of over 2 billion dollars, and manage hundreds of thousands of square kilometers of land across the world (Wan 2023). For example, Tompkins Conservation, an NGO established by Douglas and Kristine Tompkins, has established or expanded fifteen national parks in Argentina and Chile. Some work has found that PAs managed by these organizations improve

outcomes for wildlife and tourism (Denny, Englander, and Hunnicutt 2024), compared to state-managed alternatives.[5] The influence of these organizations is sometimes not welcomed by local communities near or in the sites of the PAs they establish or manage (Shibaike 2024), and there are broader ethical concerns regarding their power and wealth in comparison to the governments of the countries that they work in (Wan 2023). However, their contributions to the growth of the global PA network are clear, and understanding the strategy behind their involvement as well as its effect on outcomes is important both for our understanding of conservation politics and international actors more broadly.

# 3 Theory

What states are TNGOs most likely to target? I argue that they will strategically target states that both (1) have valuable biodiversity that they are unwilling or unable to manage themselves and (2) have enough capacity and openness to credibly commit to working with the TNGO or allowing it do work independently. Past work has argued that the search for easy and willing partners was the dominant pattern in the participation of TNGOs in PAs (Lewis 2000). However, I argue that globally, TNGOs are likely to prioritize biodiversity and partners jointly. In addition, Lewis focused on democratic political structures and the presence of domestic NGOs with whom the TNGO can partner. I build on this insight by highlighting how the capacity of the target state matters in addition to these dimensions. The implication of this joint prioritization is that TNGOs target their PAs efficiently from a resource perspective, but not necessarily from an environmental perspective. I discuss these priorities separately as well as their interaction, before discussing their influence on environmental outcomes.

[5]The same article finds that outcomes are actually worse for human security, so the picture is not entirely positive.

## 3.1 Environmental Priority

Environmental TNGOs work to fund, establish, and manage PAs because their primary goals are conservation, ecosystem preservation, and biodiversity protection. They are mission-driven organizations organized around these objectives, so it is reasonable to expect them to prioritize countries with higher levels of biodiversity. These places are where they can get the most "return" on their investment in conservation.

To be sure, protecting "biodiversity hotspots" is not the only aim of these organizations in their work.[6] There are other environmental priorities, such as protecting iconic species, unique ecosystems that may not host a wide range of species, culturally significant natural monuments, and other historical sites (Adams 2004). However, higher levels of biodiversity are correlated with many of these other factors, and biodiversity protection is often the stated goal of the organizations. For example, Conservation International explicitly says that "In 1989...Conservation International adopted the idea of protecting these incredible places [biodiversity hotspots] as the guiding principle of our investments. For nearly two decades thereafter, hotspots were the blueprint for our work" (Conservation International 2024). Similarly, the Wildlife Conservation Society says "Our goal is to conserve the world's largest wild places in 14 priority regions, habitat for around 50% of the world's biodiversity and a wide range of charismatic megafauna" (WCS 2024). Some TNGOs explicitly only work in high biodiversity places, such as the Critical Ecosystem Partnership Fund, who cite that "relatively small investments can help move the needle in a meaningful way toward sustainable conservation" in these places (CEPF 2024).

I therefore expect these TNGOs to prioritize countries with higher levels of biodiversity on average. These countries are more likely to have biodiversity hotspots and charismatic megafauna (like lions, elephants, and gorillas), which are also often a conservation priority.

**Hypothesis 1** *More biodiverse countries will have more TMPAs than less biodiverise countries, all else equal.*

[6] Biodiversity hotspots are places with a significant concentration of species that are under threat from human activity (Myers et al. 2000).

## 3.2 Practical Priority

While these organizations' primary aim is to protect nature, they still have to take practical concerns into account when deciding where to put their limited resources. I argue that state capacity is a key driver of TNGOs' decisions on where to place their efforts. TNGOs usually either manage a PA directly by purchasing land and converting it into a private PA, or work with the government to jointly manage government-owned land. In the latter arrangement, the TNGO either provides funding to the government for the management of the PA and monitors it in coordination with the government, or directly manages public land. Regardless of the specifics of the setup, the TNGO is likely to prefer a reliable partner in the government with enough administrative and bureaucratic capacity to work with it, respond to requests, and be invested in the outcomes inside the PA. The more capacity a government has, the more likely it is to have bandwidth to prioritize environmental protection and working with nonstate actors.

While high capacity is a draw, low capacity is also explicitly a negative for these organizations, because it raises concerns about follow-through on commitments, corruption, and comepetence. For example, Lewis quotes a conservation NGO director as saying their organization would not work in Zaire because "its political instability and perceived levels of corruption" mean that their efforts "do not yield results" (2000, p. 108).

Because of the economic and political costs of PAs discussed above, TNGOs also want some assurance that their investment in a PA in another country will actually be honored–that is, that it will not be retaken by the state or encroached on by extractive interests. States with higher capacity are more likely to respect the property rights of the TNGO if the organization owns the land privately, based on research that finds a link between state capacity and property rights (Cai, I. Murtazashvili, and J. Murtazashvili 2020; Besley and Persson 2009). Higher state capacity also means that the state will be more able to effectively coordinate enforcement efforts in the park, if it is providing some of these resources itself. New work shows that parks are generally quite understaffed

globally (Appleton et al. 2022); this is likely to be even more of a problem in states with low capacity. TNGOs want to avoid establishing or being associated with "paper parks" with little actual protection; higher state capacity provides some signal that the state can work with them toward this end.

Previous literature has highlighted political openness as the key variable driving TNGO willingness to engage with partner states. This is in part because these countries are more open to international pressure, a strategy that TNGOs sometimes use in trying to convince governments to work with them. However, I argue that capacity is at least as important as political openness (which would presumably be measured by strength of democratic institutions) for two reasons. First, research in other areas of environmental policy has found that capacity is an overlooked but important explanatory factor in positive environmental outcomes, above and beyond democratic institutions (Povitkina 2018; Meckling and Nahm 2018). Indeed, broader literature argues that it is the primary explanation for political openness in the first place (Herbst 2000; Tilly 2007), so capacity may precede openness.

Second, there are many documented instances of TNGOs working with non-democratic regimes to establish and maintain protected areas. For example, Sala (2020) details how a TNGO, Pristine Seas, met with Bongo Ondimba, the president of Gabon (an electoral autocracy, according to Regimes of the World), to try to convince him of the benefits of protecting offshore marine areas. They took him onboard their exploratory vessel, allowing him to pilot the underwater drone that they use to document wildlife. This experience seemed to have had a profound impact on the president: In its aftermath, he publicly acknowledged the importance of PAs and went on to create a network of marine PAs off the coast of Gabon. While it is likely that TNGOs based in democratic, Western countries would prefer to work with democratic governments, their prioritization of biodiversity discussed above means that they are likely also willing to "get their hands dirty" in working with and in non-democratic states–as long as they have the administrative and bureaucratic capacity to actually implement protection. As another example, the World

Wildlife Fund was deeply involved in communist China during the 1980s as it expanded and institutionalized its national parks system (Hathaway 2017). Based on this discussion, I propose my second hypothesis:

**Hypothesis 2** *Countries with higher state capacity will have more TMPAs than countries with lower state capacity, all else equal.*

## 3.3 Balancing Priorities

It logically follows that TNGOs would like to prioritize countries that have both of these characteristics. That is, countries with high biodiversity that have high state capacity. These countries are the most natural target for TNGOs because they can both advance their global environmental mission while working with a more reliable state partner.

In fact, it is likely that TNGOs will prioritize capacity at the expense of biodiversity, if they must choose between them. This is because their resources are limited, and as international actors they have many choices over where to invest effort in conservation. They may believe that states with low capacity are unlikely to allow them to properly manage PAs in their territory, or be unreliable partners in management due to resoure constraints, corruption, or other factors. Returning to the example of Zaire above, this was precisely the dynamic that played out: despite Zaire being considered a global biodiversity hotspot, the organization in question chose not to work there because of its perceived corruption (Lewis 2000). State capacity may be a minimum requirement for TNGO involvement, with biodiversity the next priority once that bar has been cleared. After all, as mentioned previously, the TNGO can credibly claim that there are other worthy environmental goals to pursue in these higher capacity states.

**Hypothesis 3** *Countries with both high biodiversity* ***and*** *high state capacity will have more TMPAs, all else equal.*

**Hypothesis 4** *State capacity has more explanatory power than biodiversity in explaining variation of TMPA presence across countries.*

This dynamic makes sense given the resource constraints of TNGOs and globally diffuse challenge of environmental degradation and ecosystem loss. However, a normatively worrying implication of this pattern, should it prove to hold, is that it is precisely states that are most in need of international assistance with conservation that are unlikely to receive it–at least from TNGOs. Weaker states with fewer economic resources also tend to have lower capacity, and they are less able to fund and effectively manage PAs themselves. They would benefit most from international partnership, but are unable to secure these partners because of the very lack of capacity that makes them need it in the first place. At the same time, many of earth's remaining natural places are located in these exact countries. This may help to explain how, despite the tremendous growth of PA networks globally in recently decades, species and habitat loss have continued at alarming rates (Ceballos et al. 2015).

## 3.4 Implications for Environmental Outcomes

While this paper's theoretical development primarily focuses on TNGO strategy at the point of deciding whether or not to manage a PA–a policy outcome–it has further implications for environmental outcomes more directly.[7] In higher-capacity states, governments are able to devote significant resources to PA management. They can hire staff such as park rangers, properly train and equip them, use external monitoring tools like satellites and drones, and compensate local people for potential economic losses from a PA preventing economic activity. Higher-capacity countries also tend to be less corrupt, meaning that PA enforcers are less likely to be bribed by businesses or individuals hoping to exploit natural resources within PA boundaries. While TNGOs are often quite well-resourced, they are unlikely to be able to improve on environmental outcomes above and beyond what a well-resourced and motivated government management regime is able to do. In fact, it may reduce the effectiveness of management depending on its staff's familiarity

[7]This subsection is in the process of being expanded. The current content is intended to give the intuition behind the hypotheses.

with local conditions, motivation, and its own resources.

**Hypothesis 5** *TMPAs in countries with higher state capacity will not improve environmental outcomes compared to government-managed PAs.*

Conversely, when a TNGO has decided to manage a PA in a low-capacity country (something that is still possible given my theoretical expectations; I only argue that it is less likely, not that it does not happen at all), I expect the TMPA to be *more* effective than a government-managed alternative. Low-capacity governments are more likely to establish "paper parks" with little enforcement, either because of corruption or lack of resources to properly enforce the PA. TNGOs are often better resourced than the parks or wildlife management departments of lower capacity countries, and more motivated to genuinely enforce protections inside of a PA.

**Hypothesis 6** *TMPAs in countries with lower state capacity improve environmental outcomes compared to government-managed PAs.*

It is worth briefly reiterating what these theoretical expectations would mean in practical terms. In targeting higher-capacity countries, TNGOs would be "efficiently" allocating more resources towards countries where they can more easily operate. Their "protection per dollar" would be optimized. However, this also means that they are neglecting lower-capacity countries that are most in need of external funding for conservation. At the same time, the PAs that they are establishing in higher-capacity countries are not improving environmental outcomes above and beyond what the state would do on average. In lower-capacity states, TMPAs are both needed because the government is less likely to establish PAs, and are more effective than government-managed alternatives. While each TNGO may be efficiently allocating its limited resources, the global result is under-provision of PAs in low-capacity countries, and worse environmental outcomes in the PAs that are established there.

# 4 Research Design: TNGO Priorities

To examine the empirical implications of my theoretical argument, I analyze data on the establishment of PAs using the World Database on Protected Areas (WDPA) (UNEP-WCMC and IUCN 2022). The dataset is the most comprehensive global data available for PAs available, with detailed spatial and descriptive information about over 280,000 PAs. I focus on PAs that are privately or jointly managed, to study those that are managed by TNGOs. I combine this data with country-level information on biodiversity and state capacity. The sample includes 151 countries, including countries which had no PAs established that fall under one of these governance types. This is because I am interested in explaining TNGO targeting across all potential partner countries, not just countries that have been targeted. Because I am interested in variation across countries and the independent variables of interest are relatively static within each country, I take the average or sum of variables across three periods: 1990–1995, 1996–2005, and 2006–2015. This results in three observations for each country in the sample. I focus on this period because the vast majority of growth in PAs has occurred during this time, after the Cold War. Total land coverage has grown from 4% to 17%, while marine PAs have gone from about 1% to around 7%.

## 4.1 Dependent Variable

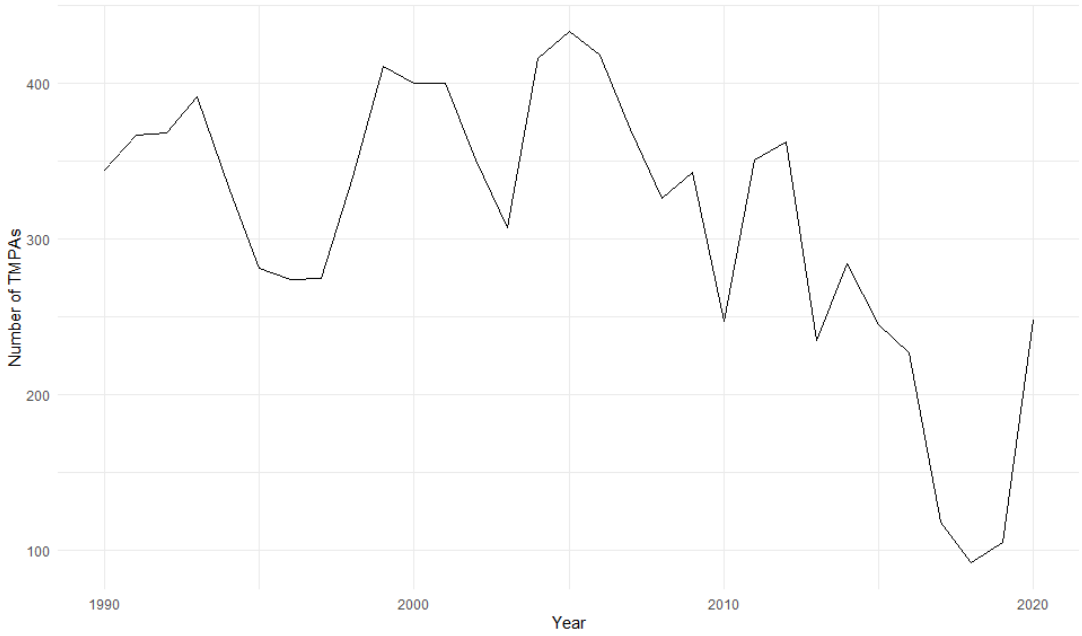


Figure 2: Count of new TMPAs established each year 1990–2020. Data on PAs from Protected Planet (UNEP-WCMC and IUCN 2022).

I measure *New TMPAs* as the number of PAs established in a country during a period whose governance type has been identified as "Government-delegated management," "Non-profit organisations," "Joint governance," or "Collaborative governance."[8] Future versions of the paper will implement a web-scraping design to more precisely identify PAs managed by TNGOs, but initial validation exercises using this coarser classification show a strong relationship between these governance types and TNGO involvement.[9] I identify the year that the PA was established using the *STATUS_YR* variable in the WDPA, then total the number that was established each year, before summing each annual total within each period described above. Figure 2 displays the annual count of new TMPAs in recent years. As an extension, I also use the log total area of new TMPAs established within each country-period as the dependent variable (see Findings section).

[8]This information comes from the *GOV_TYPE* variable in the WDPA.

[9]A random sample of 50 PAs from the subsample was chosen and researched using web searches, and of these 41 seemed to be managed by or in partnership with a readily identifiable TNGO.

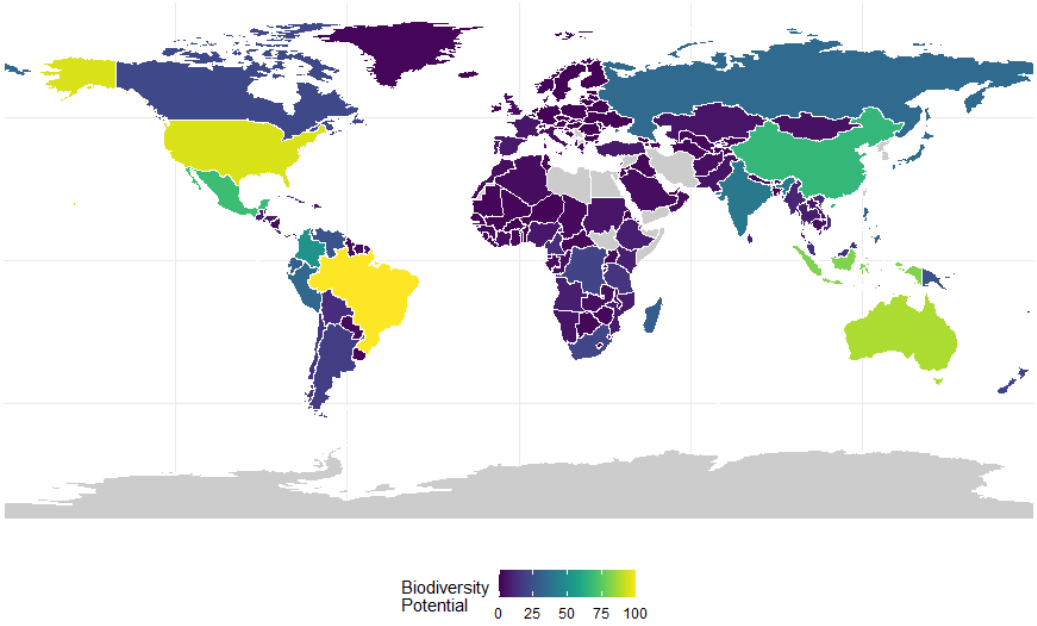


Figure 3: Global map of countries colored in viridis color scale based on biodiversity potential (Pandey et al. 2006).

## 4.2 Main Explanatory Variables

I expect that countries with higher biodiversity, higher state capacity, and in particular a combination of the two will be targeted by TNGOs and thus have more TMPAs established during my sample. I measure *Biodiversity* using the Global Environment Facility's biodiversity benefits index, which "is a composite index of relative biodiversity potential for each country based on the species represented in each country, their threat status, and the diversity of habitat types in each country. The index has been normalized so that values run from 0 (no biodiversity potential) to 100 (maximum biodiversity potential)" (Pandey et al. 2006). Figure 3 displays a global map with biodiversity potential shown. This variable does not change over time, so it is constant across the three periods. In robustness checks, I also use a country median of 30 square kilometer grid cell-level biodiversity priority from Jung et al. (2021).

To measure *State Capacity* I use a Bayesian latent variable estimation of state capacity from Hanson and Sigman (2021), which is based on three dimensions: extractive, coercive,

and administrative capacity. This measure is intended to be useful as a general purpose measure of state capacity, which is appropriate for the construct I have theorized in this paper. I take the average of state capacity across the years within each of the three periods that make up the analysis. To test how *Biodiversity* and *State Capacity* are jointly prioritized, I include an interaction between the two variables.

### 4.3 Control Variables and Model Specification

I include three control variables. First, I include V-Dem's Polyarchy Index to measure a state's institutional openness (Coppedge et al. 2021), in line with Lewis's (2000) expectations discussed above. Second, I include the log of each country's total area in square kilometers, from the World Bank Development Indicators (WBDI) (World Bank 2023). A larger country is more likely to receive more TMPAs because there is more area to protect. Third, I include foreign aid receipts, also from the WBDI. This variable captures how much assistance the country has been able to receive in general, and should also help proxy for its level of development. I do not include a variable for economic development directly, such as GDP Per Capita, because this variable is highly correlated with *State Capacity* and doing so would introduce multicollinearity. Additionally, the literature has found that state capacity may in part determine development (Acemoglu and Robinson 2023), so including such a direct measure may be endogenous to the main variable of interest.

I estimate ordinary least squares models with robust standard errors clustered at the country level. The data is time-series cross-sectional. For ease of interpretation, all variables except country area (which is log-transformed) are standardized with a mean of 0 and a standard deviation of 1.

## 5 Findings

Table 1 presents the main estimation results. Models 4 and 5, which include controls, are the main models that test Hypotheses 1–4. Across all models, I do not find an association

Table 1: Main Regression Results

| Dependent Variable: | New TMPAs | | | | |
|---|---|---|---|---|---|
| Model: | (1) | (2) | (3) | (4) | (5) |
| *Variables* | | | | | |
| Constant | 16.68** | 18.73* | 15.35** | -9.371 | -18.26 |
| | (8.246) | (10.38) | (7.013) | (46.16) | (26.73) |
| Biodiversity | 61.08 | | 58.92 | 58.74 | 5.538 |
| | (39.78) | | (38.76) | (41.22) | (14.96) |
| State Capacity | | 29.74* | 22.46** | 18.16** | 24.35** |
| | | (16.76) | (8.882) | (8.435) | (9.705) |
| V-Dem Polyarchy | | | | 0.6577 | 1.811 |
| | | | | (6.991) | (4.479) |
| Country Area (logged) | | | | 2.189 | 2.148 |
| | | | | (3.584) | (2.171) |
| Foreign Aid | | | | -12.72 | -0.3781 |
| | | | | (8.933) | (2.787) |
| Biodiversity x State Capacity | | | | | 80.19** |
| | | | | | (35.33) |
| *Fit statistics* | | | | | |
| Observations | 531 | 470 | 452 | 452 | 452 |
| $R^2$ | 0.20945 | 0.04402 | 0.23211 | 0.23942 | 0.51603 |
| Adjusted $R^2$ | 0.20795 | 0.04198 | 0.22869 | 0.23089 | 0.50951 |

*Clustered (Country) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

between *Biodiversity* and an increase in newly designated TMPAs. These findings do not support Hypothesis 1, which predicted that TNGOs would target states with higher biodiversity. *State Capacity*, however, has a positive and significant association with more TMPAs in Model 4, the non-interacted model. Countries with higher state capacity tend to have more TMPAs. This lends support to the idea that TNGOs strategically target more reliable and capable partners.

Model 5 includes the interaction between *Biodiversity* and *State Capacity*. The positive and significant interaction term indicates that TNGOs are jointly prioritizing countries with both higher biodiversity and higher state capacity, in line with Hypothesis 3 and my theoretical expectations. Figure 4 displays the predicted coefficient for biodiversity across

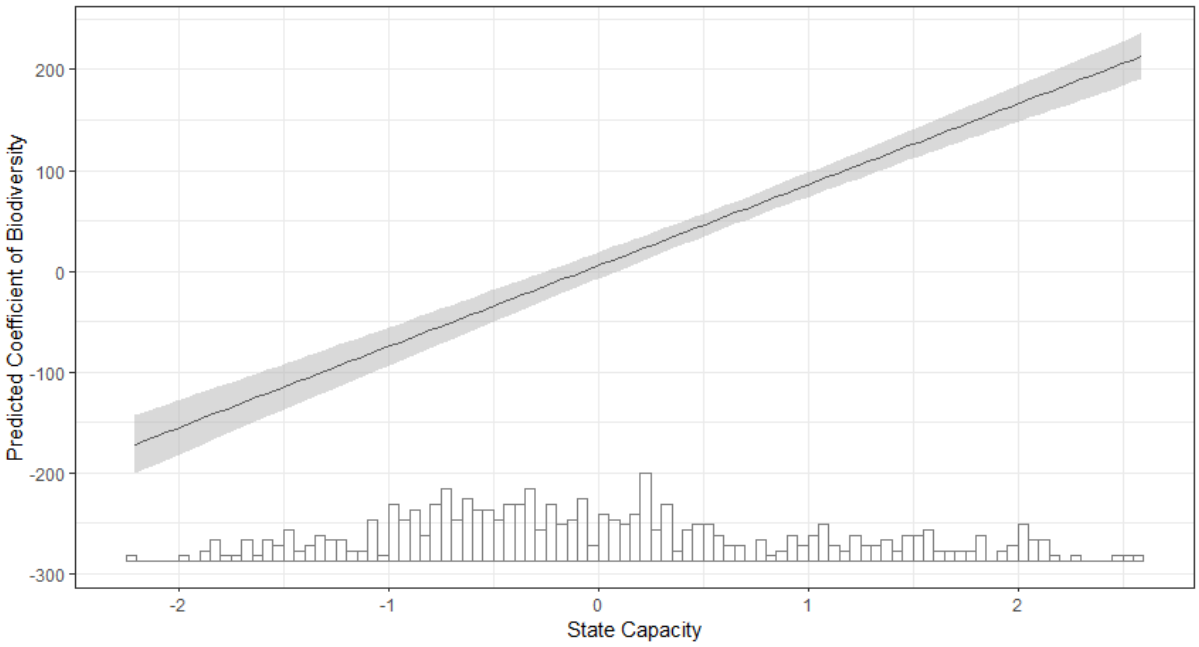


Figure 4: Interaction plot between biodiversity and state capacity. The histogram displays the frequency of values for state capacity present in the sample.

the range of values of state capacity in the sample. Interestingly, when state capacity is low, biodiversity is predicted to have a negative coefficient, meaning highly biodiverse low capacity states are less prioritized than low biodiversity low capacity states. This is not in line with the theoretical expectations about biodiversity, but is in line with the other results showing little explanatory power for biodiversity alone. However, when state capacity is high, biodiversity is strongly associated with more TMPAs. This lends credence to the idea that capacity is a minimum requirement for these international actors to identify partner states. Overall, given the insignificance of *Biodiversity* across the models when considered separately from *State Capacity*, Hypothesis 4 also finds some support. None of the control variables achieve statistical significance.

## 5.1 Empirical Extensions

To explore these dynamics further, I use the log of the total area of newly established TMPAs as the dependent variable. This takes into account the *size* of the investment that

the TNGO is making in the country, rather than just the count of investments. Table 2 displays the results of the full models both with and without the interaction term.

Table 2: Regression Results with Area as Dependent Variable

| Dependent Variable: | New TMPA Area (Logged) | |
|---|---|---|
| Model: | (1) | (2) |
| *Variables* | | |
| Constant | -2.812 | -2.979 |
| | (1.932) | (1.848) |
| V-Dem Polyarchy | 0.1743 | 0.2412 |
| | (1.002) | (0.9613) |
| Biodiversity | 0.0048 | -0.0360* |
| | (0.0199) | (0.0184) |
| State Capacity | 0.5466* | 0.2242 |
| | (0.2811) | (0.2788) |
| Country Area (logged) | 0.3386** | 0.3793** |
| | (0.1617) | (0.1541) |
| Foreign Aid | $2.2 \times 10^{-11}$ | |
| | $(3.33 \times 10^{-11})$ | |
| Biodiversity x State Capacity | | 0.0382*** |
| | | (0.0106) |
| *Fit statistics* | | |
| Observations | 452 | 452 |
| $R^2$ | 0.07160 | 0.10072 |
| Adjusted $R^2$ | 0.06119 | 0.09064 |

*Clustered (Country) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Model 1 shows that the significance of *State Capacity* is reduced to the $p < 0.10$ level, while *Biodiversity* continues to not be significant. In the interacted Model 2, the interaction term is still significant and is more precisely-specified than in Table 1 using the count variable. These results suggest that TNGOs both are involved in more PAs and a larger area of PAs in countries that have high biodiversity and capacity. In these models the coefficient of the country area variable is significant, indicating that a larger footprint of TMPAs is more prevalent in larger countries, which is logical.

As an additional extension, I replace the state capacity variable with GDP Per Capita.

As I discussed above, I do not include GDP Per Capita in my main model for multiple reasons, but using it can further speak to the potential issues that joint prioritization of biodiversity and capacity may cause from a global environmental perspective.

Table 3: Regression Results with GDP Per Capita

| Dependent Variable: | New TMPAs | |
|---|---|---|
| Model: | (1) | (2) |
| *Variables* | | |
| Constant | -17.09 | 5.810 |
| | (35.07) | (19.64) |
| Biodiversity | 58.63 | 27.53*** |
| | (39.18) | (10.29) |
| GDP Per Capita | 36.05* | 39.31*** |
| | (20.04) | (12.36) |
| Country Area (logged) | 3.038 | 0.7843 |
| | (2.735) | (1.544) |
| V-Dem Polyarchy | -0.1396 | -1.948 |
| | (5.775) | (2.602) |
| Foreign Aid | -9.650 | 3.957 |
| | (6.686) | (2.759) |
| Biodiversity × GDP Per Capita | | 83.77*** |
| | | (29.79) |
| *Fit statistics* | | |
| Observations | 471 | 471 |
| $R^2$ | 0.26976 | 0.68505 |
| Adjusted $R^2$ | 0.26191 | 0.68098 |

*Clustered (Country) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

The results in Table 3 suggest that wealthier, more biodiverse countries are receiving more attention from TNGOs. This was likely predictable given the connection between capacity and wealth, but it is striking to see the strong significance of the interaction term: wealthy countries are targeted more than developing countries, which are the countries that are likely most in need of funding by international actors. Some of these countries may have a strong desire to protect the natural environment, at least to the extent that it does not impede the bulk of economic development, but be unable to due to resource

constraints. At least in the case of TNGOs, it seems that international actors are not filling this void, to the likely detriment of environmental outcomes in these countries. This is in line with the key finding from Lewis (2000), although the pattern appears even more widespread in this global sample.

### 5.2 Robustness

I have taken several measures to validate the robustness of my findings, and have plans for several further extensions in future versions of the paper.[10] First, I use a simplified model that does not average over periods, with similar results to the main models. Biodiversity becomes significant in this model, but this is potentially because of repeat observations for countries.[11]

I also use alternative main explanatory and control variables, including different measures for biodiversity, state capacity, and democracy. The results are supported across all of these alternative specifications.

## 6 Testing Environmental Hypotheses

I use a separate research design to test Hypotheses 5 and 6 on the relative effectiveness of different PA management regimes. While it is difficult to assess the effectiveness of a global sample of PAs in improving environmental outcomes given the wide range of underlying habitats and conservation goals, a commonly used (though admittedly coarse) measure is to focus on PAs' ability to reduce deforestation (Andam et al. 2008; Spracklen et al. 2015). As a first step towards assessing global variation in effectiveness across different management regimes, I leverage remote sensing data on forest cover from Hansen et al. (2013). This dataset allows me to measure forest loss within all 293,275 PAs across the world as well as in a five kilometer buffer around them. The intuition behind this design is

[10] Tables and further extensions are in production and available from the author upon request.

[11] In country fixed effects models, I do not find statistical significance for the variables of interest, but this is likely because biodiversity does not change and is thus completely absorbed by the fixed effects, while state capacity has little variation year-to-year within countries.

that if deforestation is greater directly outside a PA than within it, it is likely that PA is preventing deforestation by its presence. There are some known issues with this method, such as spillover effects and overly-optimistic findings (Mas 2005; Andam et al. 2008), but it is still a commonly-used tool in establishing a baseline measure of PA effectiveness (Spracklen et al. 2015).[12] The unit of analysis for this analysis is the PA.

## 6.1 Dependent Variable

The dependent variable is the difference in the percentage of forest cover lost within a PA from 2000 to 2022 and the percentage of forest cover lost within a 5km buffer around the PA from 2000 to 2022 (*Forest Loss Prevention*). The variable can range from -1 to +1. Positive values indicate that more forest cover was lost inside of the PA, while negative values indicate that more forest cover was lost in the buffer. A more effective PA, therefore, will take a negative value. This variable is calculated using the Hansen Global Forest Change dataset in Google Earth Engine (Hansen et al. 2013), along with the WDPA (UNEP-WCMC and IUCN 2022).

## 6.2 Explanatory Variable

The main explanatory variable is derived from the Governance Type variable from the WDPA. In exploratory analysis, I leave it as a categorical variable to explore the baseline differences across all management regimes. The main hypothesis test simplifies the categories to an indicator variable which takes a 1 if a PA has been previously identified as a TMPA, and a 0 otherwise. I then interact this variable with the *State Capacity* variable discussed above, testing if the effectiveness of TMPAs varies based on the capacity of the state in which they're located.

[12]Additionally, there are few theoretical reasons to expect that the biases found in this method would be systematically more prevalent in one form of management regime versus another, so even if the magnitude of effectiveness is inaccurate, the differing levels of effectiveness across regimes is still likely to be valid. This is the outcome of interest in this paper, so the concerns about ground-truth validity are less of a concern here.

I also control for two other important factors that may explain deforestation. First, I include the PAs' baseline forest cover in the year 2000, since initial conditions likely explain much of the variation in deforestation. Second, I include the size of the PA. Smaller PAs are easier to completely deforest. Including these factors should also go some way toward alleviating concerns around heterogeneity in the appropriateness of the buffer method.

## 6.3 Findings

I first present the results of the exploratory analysis that separates across all governance regimes in Figure 5. The comparison grouped that is dropped is "Federal or national ministry or agency." The results show that essentially all other forms of PA management perform worse than or the same as nationally-administered PAs on average across the entire sample.[13] The difference in forest loss within the PA versus in the buffer is expected to be a larger value in all other categories, meaning that the PA is preventing less deforestation than nationally-managed PAs. These findings make some sense when one considers that state buy-in can help prevent corruption or exploitation even within non-state managed PAs. State-controlled PAs are also the model upon which most others are designed, so they are the "standard" in some sense. However, the starkness is somewhat surprising given the ongoing debate around community involvement in and indigenous management of PAs (Agrawal and Gibson 1999; Baragwanath and Bayi 2020), and other work that finds that privately-managed are more effective in some settings (Denny, Englander, and Hunnicutt 2024).

[13]The extremely wide confidence interval on transboundary governance is likely because there are very few observations in this category compared to the others.

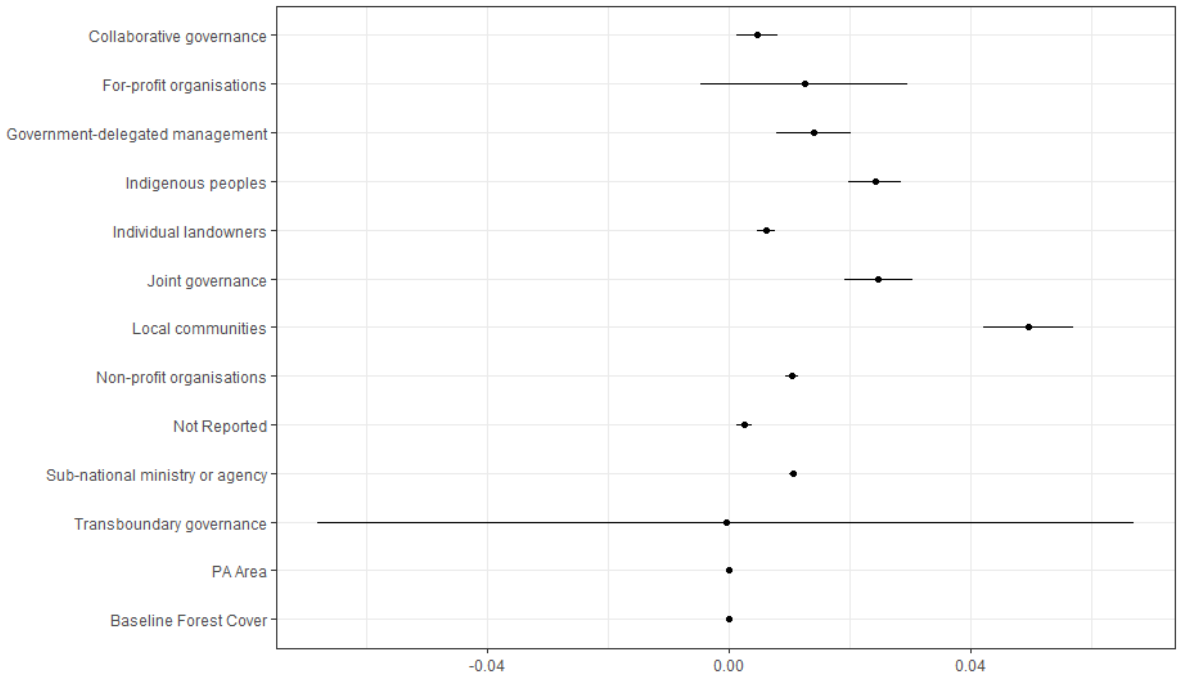


Figure 5: Results of exploratory regression with 95% confidence intervals. Federal or national ministry or agency is the comparison category.

The main results focus on the interaction between the indicator variable *TNGO Managed* and *State Capacity*. An interaction plot from a regression that includes the control variables described above is presented in Figure 6. The results are quite stark. In states with low capacity, a PA being TNGO-managed is predicted to positively influence its environmental effectiveness: it prevents more deforestation than a government-managed PA on average. Recall that a negative coefficient means a smaller value is predicted for *Forest Loss Prevention*. On the other hand, in high-capacity states (on the right of the plot), TNGO management is associated with worse environmental outcomes: more deforestation inside of the PA. These findings are in line with the theoretical expectations described in Hypotheses 5 and 6.[14]

[14]This section is also in the process of being expanded.

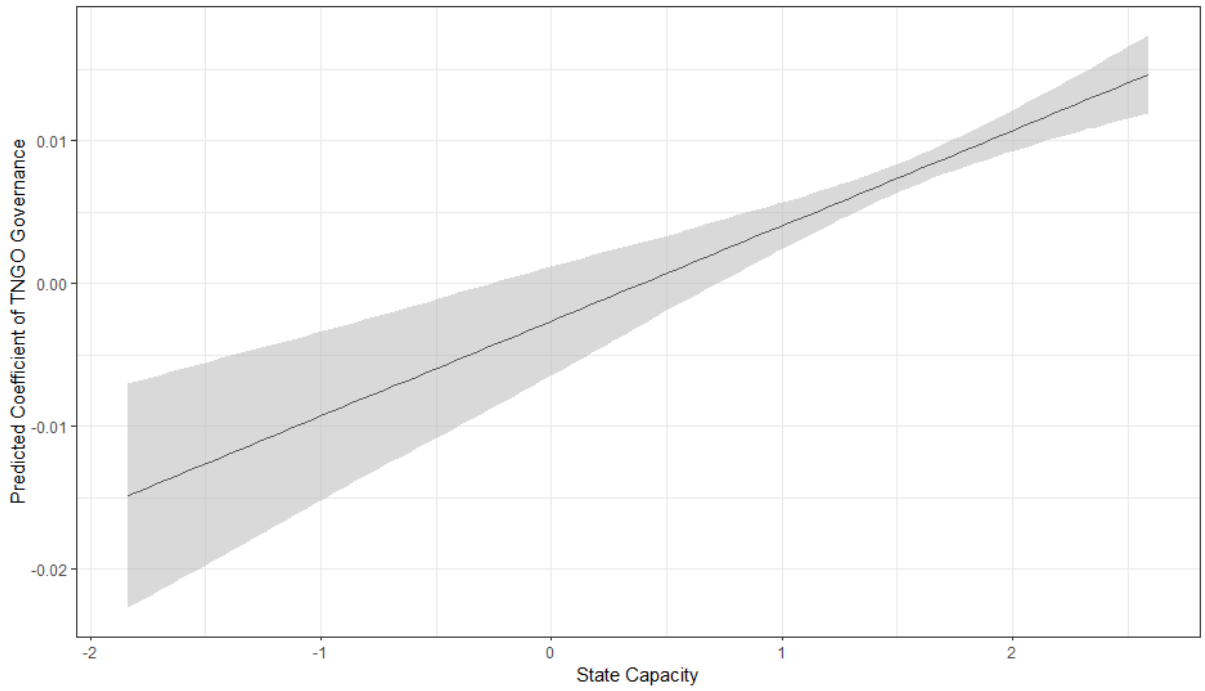


Figure 6: Interaction plot between TNGO management and state capacity.

# 7 Conclusion and Next Steps

In this paper, I have highlight a relatively understudied form of transnational governance, where transnational, nonstate actors take on governance functions within a country. Focusing on the empirical case of protection areas for conservation, I developed an argument about what types of states transnational actors are likely to target. I argued that they will target countries with high biodiversity and high state capacity. I also focused on how they will jointly prioritize their mission-driven goals with more practical concerns like seeking a reliable, capable partner in their host nation. I tested the argument using a global dataset of protected areas, finding support for the joint-prioritization propositions. Interestingly, I did not find evidence that biodiversity in and of itself explains variation in TNGO targeting. This combining of factors leads to underprovision of "delegated governance" opportunities to states that may be most in need of it, and who may be most open to this sort of arrangement. I found further evidence that TMPAs are not improving

environmental outcomes above and beyond what the government would do instead in high capacity countries, while they are in the less common cases that they operate in low-capacity countries.

This has worrying implications for the specific subject area in this paper, but also for transnational politics more broadly. Each transnational actor rationally targeting specific states may lead to a global misallocation of effort and resources, further entrenching inequality in outcomes. This dynamic could apply in other areas such as human and labor rights, climate adaptation, and economic investment. The evidence suggests that TNGOs and other international actors should focus on trying to convince governments to shift their own policies in high-capacity countries, and turn resources to establishing and maintaining policy changes in low-capacity states that are currently not prioritized. In the specific case focused on in this paper, this would mean applying advocacy pressure in high-capacity states, while actually directly funding and investing in PAs in lower-capacity states. While it may require more resources, the outcomes on a global scale would potentially be improved if at least some of the major NGOs in this space took this approach. As policy issues become increasingly globalized in nature, understanding the strategic incentives of the actors, and the subsequent outcomes that result, is an increasingly important topic in international relations.

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