

*IDEAS AND TRANSNATIONAL CLIMATE
CHANGE GOVERNANCE: HOW
ENVIRONMENTAL BELIEFS SHAPE REDD+
PROJECTS*



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ABSTRACT

Both scholars and policymakers working on transnational climate change governance (TCG) have largely sidestepped long-running ideological debates within environmentalism. This thesis brings the issue into the spotlight by investigating how “environmental beliefs”, which I define as actors’ normative and causal ideas about dealing with environmental challenges, affect TCG. Specifically, I focus on projects associated with “Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries” (REDD+) as a subset of TCG. I examine how environmental beliefs affect who partners together to create a REDD+ project and how they are designed and implemented. I conduct a nested analysis, involving a large-N logistic regression analysis of an originally coded database of REDD+ projects and their developers and five case studies of projects in Colombia and Peru. The quantitative analysis demonstrates an independently important relationship between the environmental beliefs of project developers, operationalised through Clapp and Dauvergne (2005, 2011)’s “environmental worldviews”, and emphasis on different aspects of REDD+ project design. Qualitative evidence from the case studies corroborates these findings and, with process tracing, I distil specific mechanisms through which environmental beliefs affect REDD+ projects. I show that project developers prefer to partner with those who share similar environmental beliefs and emphasise project aspects that resonate with their beliefs during project design and implementation. These findings show that environmental beliefs are not epiphenomenal and are likely generalisable to other types of TCG with relevance for the broader study of International Relations (IR). They imply that scholars and policymakers should pay greater attention to environmental beliefs; which ones are included (or not) by governance structures will likely tangibly impact their design and operation.

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ACRONYMS

ACOPAGRO	Cooperative Agraria Cacaotera
AIDER	Asociación para la Investigación y el Desarrollo Integral
APAHUI	Asociación de Productores Agropecuarios de Huicungo
APEC	Asia-Pacific Economic Cooperation
APROBOC	Asociación de Protección de Bosques Comunales Dos de Mayo
ARR	Afforestation, reforestation, and revegetation
BOS Foundation	Borneo Orangutan Survival Foundation
CANAPRO	Cooperativa Casa Nacional del Profesor
CASSE	Center for the Advancement of the Steady State Economy
CCBA	Climate, Community, and Biodiversity Alliance
CCBS	Climate, Community, and Biodiversity Standard
CDM	Clean Development Mechanism
CIFOR	Centre for International Forestry Research
COCOMASUR	Consejo Comunitario de Comnidades Negras de la Cenca del Rio Tolo y Zona Costera Sur
COP	Conference of the Parties
CO ₂	Carbon Dioxide
DRC	Democratic Republic of the Congo
EPI	Environmental Performance Index
FEPROCAMD	Federación de Productores de Castaña de Madre de Dios
FUNDAVI	Fundación Amazonia Viva
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
ID-RECCO	International Database on REDD+ Projects linking Economic, Carbon and Communities data
IFM	Integrated Forest Management
IGO	Intergovernmental organisation
IIED	International Institute for Environment and Development
IR	International Relations
ITTO	International Tropical Timber Organisation
LPAA	Lima-Paris Action Agenda

ACRONYMS

MDB	Multilateral Development Bank
MLM	Multi-Level Model
MPGCA	Marrakech Partnership for Global Climate Action
MRV	Monitoring, Reporting, and Verification
NAZCA	Non-State Actor Zone for Climate Action
ND	Not Determined
NEP	New Environmental Paradigm
NGO	Non-Governmental Organisation
OLS	Ordinary Least Squares
PDD	Project Design Document
PIN	Project Idea Note
PPP	Public-Private Partnership
REDD	Reducing Emissions from Deforestation and forest Degradation
REDD+	Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
SPB	Royal Society for the Protection of Birds
RSPO	Roundtable on Sustainable Palm Oil
SERNANP	Servicio Nacional de Áreas Naturales Protegidas
SES	Social and Environmental Standards Initiative
SFM	Sustainable Forestry Management
SSDMP	Sine-Saloum Delta Mangrove Ecosystem Restoration Project
TBS	Tambopata National Reserve and Bahuaja-Sonene National Park
TCG	Transnational Climate Change Governance
UK	United Kingdom
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
VCS	Verified Carbon Standard
WAAME	West African Association for Marine Environment
WCED	World Commission on Environment and Development
WHO	World Health Organization
WWF	World Wide Fund for Nature

1. INTRODUCTION

What do Coca-Cola, the Royal Society for the Protection of Birds (RSPB), and the Black Lives Matter movement have in common? One answer might be their shared commitment to addressing environmental crises. While RSPB has worked to conserve nature for over 120 years, the others have also become active in the environmental movement in recent years. Coca-Cola now regularly publicly promotes its environmental ambitions, including to reduce greenhouse gas (GHG) emissions in their supply chain, include more recycled material in their packaging, and more efficiently manage water use in their product. In 2016, Black Live Matters activists shut down London City Airport to protest its expansion and highlight climate change as a racist crisis that disproportionately affects peoples of colour. Despite the common focus on environmentalism, it should be obvious, however, that these three examples embody very different ideologies and, to a large degree, have different interests at heart. In the dominant narratives of global climate change governance, however, such differences are often papered over. While an ascendant frame of unity and action is drawing an increasingly large and diverse array of actors into the struggle against climate change, the radical variation in their visions of a safe climate is rarely considered seriously. In fact, this variation has been explicitly de-emphasised in the service of political tactics to accelerate climate action.

The consequences of papering over ideological contestation in climate politics should be interrogated seriously. With the rise of transnational climate change governance (TCG), this diversity of actors is now increasingly institutionalised in structures governing our relationship with the environment from the global to the local level. The argument I advance in this thesis is that TCG is shaped by what I call “environmental beliefs”, the

normative and causal ideas that actors have about dealing with environmental challenges. This is an issue that both the scholarly and policy communities working on TCG are yet to study and understand the implications of. Failing to do so, I argue, may have important consequences for the effectiveness and legitimacy of global climate governance. The study of TCG provides an excellent platform from which to demonstrate this; it also offers theoretical insights that can enrich our understanding of broader fields of International Relations (IR).

This introductory chapter proceeds as follows. Firstly, I trace the shift in climate politics from being a largely national and intergovernmental process to one with significant transnational activity that also involves subnational and non-state actors. Secondly, I outline the major ideological debates about environmentalism and how they have been largely sidelined in the context of TCG. This sets up my research question, which I present in the third section with a summary of my core argument that environmental beliefs shape projects associated with “Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries” (REDD+) through the preferences of their developers. I also offer initial thoughts about the generalisability of this to other types of TCG and beyond. Fourthly, I discuss REDD+ projects as the specific subset of TCG that serve as the empirical focus of this thesis. I explain the new database of these projects that I analyse and how REDD+ projects are a useful focus for studying TCG. The chapter concludes with a fifth section that describes the structure of the rest of the thesis.

“ALL HANDS ON DECK”: THE TRANSNATIONALISATION OF CLIMATE GOVERNANCE

At the time this thesis was submitted, on the 23rd of July, 2018, the remaining global carbon budget was approximately 698,000,000,000 tonnes (Mercator Research Institute 2018). This is the amount of carbon dioxide (CO₂) that can be emitted into the atmosphere while retaining a >66% chance of global mean temperatures rising no more than 2°C by the end of this century. If we are to achieve the ambitious long-term goal of the Paris Agreement and limit this to below 1.5°C, the budget is obviously even less. Today, the importance of confronting climate change is widely accepted and commitment to the Paris Agreement appears strong despite the recalcitrance of the latest United States (US) government. This commitment has also spread rapidly beyond the realm of high politics, with a groundswell of pledges and actions to combat climate change from subnational and non-state actors that began in the lead-up to the United Nations Framework Convention on Climate Change (UNFCCC)’s twenty-first Conference of the Parties (COP 21) and that continues to snowball. Thousands of cities, regions, businesses, and community organisations have started undertaking efforts to reduce GHG emissions and adapt to the realities of a changing climate, underpinning and often surpassing the political efforts of the national governments. The Non-State Actor Zone for Climate Action (NAZCA), a United Nations (UN) supported portal that tracks many such actions, includes over 12,500 such commitments (UNFCCC n.d.).

Many of these initiatives have also linked across international borders, marking the transnationalisation of climate change governance. Transnational governance can be understood as “efforts to authoritatively steer society by a range of actors—including civil

society organisations, subnational governments and companies—operating across international borders” (Bulkeley et al. 2018, 63; Rosenau and Czempiel 1992). As Roger and Dauvergne (2016, 2) highlight, although transnational governance has remained on the periphery of IR, it has been proliferating across a wide range of issue areas, “reaching further than ever into our lives”.¹ Fields as diverse as public health, workers’ rights, and financial cooperation have all experienced a transnational turn (Hale and Held 2011; Abbott, Green, and Keohane 2016). In the context of TCG, specific examples include networks of cities, regions, and local governments such as the C40 Cities Climate Leadership Group; businesses networks such as the We Mean Business coalition; certification schemes such as the Verified Carbon Standard (VCS); non-governmental organisation (NGO)-business partnerships, such as the World Wide Fund for Nature (WWF)’s Climate Savers programme; and large, multi-stakeholder platforms such as the African Renewable Energy Alliance.

The rise of TCG has played an important role in shifting the fundamental structure of climate change governance. For most of its history, it had been characterised by national government policies and intergovernmental processes, until the failed attempt at a global agreement at COP 15 in Copenhagen. Since then, it has become, as Jordan, Huitema, Van Asselt, and Forster (2018) elucidate, much more polycentric in nature. Ostrom (2010), who was one of the first to bring the lens of polycentrism to climate change governance, describes such systems as

“characterized by multiple governing authorities at differing scales rather than a monocentric unit. Each unit within a polycentric system exercises considerable independence to make norms and rules within a specific domain (such as a family,

¹ Roger and Dauvergne (2016) exclude subnational activity from their definition of transnational governance, referring only to *private* transnational governance. They acknowledge, however, that the term is regularly used more broadly, as it is in this thesis, to also include the subnational element.

a firm, a local government, a network of local governments, a state or province, a region, a national government, or an international regime)” (Ostrom 2010, 552).

Polycentric governance systems can involve both top-down and bottom-up elements, this being the case in the climate regime. States and global institutions such as the UN still play important guiding roles (van Asselt and Zelli 2018), and in many ways have orchestrated the rise of TCG (Hale and Roger 2014).

The contemporary global climate change narrative has developed into one that actively supports the development of TCG and further bottom-up, as well as top-down, climate action. Bäckstrand et al. (2017, 562) describe it as “hybrid multilateralism”, defined by policy architecture involving both state and non-state actors with “dynamic interplay between multilateral and transnational climate action”. This was embodied by former UN Secretary General Ban Ki Moon’s declaration at the New York Climate Summit in 2014 that “to ride this storm we need all hands on deck” (UN News 2014). The Marrakech Partnership for Global Climate Action (MPGCA), developed at COP 22, furthers this in calling for action from and partnerships between “all sectors of the economy and society” (UNFCCC 2016). This narrative of inclusive and collective action is closely linked to a second narrative of depoliticising climate change, on the basis that partisan politics have delayed climate action for too long. This was a theme during discussions of climate change at the Asia-Pacific Economic Cooperation (APEC) summit in 2017, where New Zealand Prime Minister Jacinda Ardern, who has dramatically increased her government’s ambition on climate change since taking office, led the way in emphasising this point (Bracewell-Worrall 2017). These two narratives have combined to create a strong focus on unity, collective engagement, and catalysing immediate action to reduce GHG emissions.

These narratives and the emergence of a polycentric climate governance regime go hand-in-hand to underpin the dynamic state of contemporary climate politics. In turn, TCG

has blossomed into a rich subfield of research based on work such as the seminal book *Transnational Climate Change Governance* by Bulkeley et al. (2014). TCG has clearly become an important feature of the climate governance landscape, although its diverse functional role, questions of measurement and overlap, and the early stage nature of much of it make determining its precise impact difficult. Nonetheless, to give an (already out of date) inkling of its potential, Hsu, Moffat, Weinfurter, and Schwartz (2015) estimate that five of the 2014 New York Climate Summit's pledges are capable of reducing 2.54Gt of CO₂ equivalent GHG emissions in 2020, "roughly the same magnitude of emissions reductions as national pledges that are currently proposed for 2020" (Hsu et al. 2015, 502).

TCG was an important enabling force of the Paris Agreement (Hale 2016) and is now even more in the spotlight with the shift in focus to implementation. Although policies and pledges have yet to translate into major reductions in global emissions, it appears that new life has been breathed into climate politics after 20 years of protracted gridlock, with TCG featuring prominently. As the tagline from COP 23 implores, the focus now is on moving "further, faster, together" (Nuttall 2017). This is undoubtedly progress, and the deliberate elevation of the now ascendant action frame must be given significant credit. However, such a strategy unavoidably comes with some trade-offs. So, what has been lost in our focus on unity and action? As the next section elaborates, I argue we have at least partially lost sight of the important ideological differences that exist among all those we have tried to unify.

BUT TO WHERE ARE WE SAILING? IDEOLOGICAL CONTESTATION IN THE FIGHT AGAINST CLIMATE CHANGE

With the global carbon budget and the time available for decarbonising the global economy to avoid the worst effects of global warming dwindling, the appeal of positive, unifying, and action-oriented narratives is understandable. This appeal is also remarkable, however, when one remembers the major substantive and ideological divisions that have frustrated progress in environmental and climate change negotiations over the past decades. Clapp and Dauvergne (2011) trace key environmental debates between major political moments over the past fifty years, starting with the Stockholm Conference in 1972 where concerns from the Global North about environmental damage caused by continued industrial growth were pitted against the priorities of countries in the Global South to pursue this development themselves and challenge perceived exploitation by global capitalist institutions. In the 1980s, as neoliberal ideologies championed by the Reagan and Thatcher administrations in the US and United Kingdom (UK) respectively began to take hold, a major consensus-building milestone came in the presentation of the report of the World Commission on Environment and Development (WCED). In 1987 it published its report, *Our Common Future*, which established the concept of sustainable development to reconcile competing objectives of environmental protection and economic growth. It was defined as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987). This attractive solution to frame previously competing objectives as mutually compatible, and even reinforcing, was endorsed and entrenched in global environmental politics at the 1992 Rio Earth Summit (which launched

the UNFCCC). The ideological power of this moment was substantial, with Bernstein (2001, 2002) identifying it as the moment when the norms of “liberal environmentalism” were entrenched. Liberal environmentalism continues to provide the cornerstone norms of global environmental governance in the present, making coherence with continued economic growth and liberalisation a *de facto* requirement for any environmental agenda to gain traction at the national or international level.

This was not the end of all debate, of course. The norms of liberal environmentalism are broad and plenty of ideological contestation continued within its bounds. Much of this centred on what efforts Global South countries must undertake given their relative lack of contribution to causing global environmental problems and how much finance the Global North should provide to help facilitate this (Clapp and Dauvergne 2011). Bäckstrand and Lövbrand (2006) describe three meta-discourses that have framed environmental politics since this time. Forms of the “ecological modernisation” discourse, which closely aligns with the norms of liberal environmentalism, have been some of the most predominant. It emphasises the decoupling of environmental degradation and economic growth, with technological innovation and market-driven solutions combining to create a win-win storyline where industrial capitalism becomes more environmentally friendly. Ecological modernisation has shared recent discursive supremacy with forms of “green governmentality”, which emphasise technocratic, administrative management of Earth and its natural systems based on scientific knowledge (Bäckstrand and Lövbrand 2006). These discourses have manifested within the bounds of liberal environmentalism, oscillating in their relative predominance over time. Green governmentality defined the discursive framing around the formation of the Kyoto Protocol, adopted in 1997. It represented technical-managerial efforts at planetary governance:

“The targets and timetables for emission cuts allocated to industrialized states in the Kyoto Protocol epitomize the centralized multilateral negotiation order promoted by green governmentality and its associated techno-scientific infrastructure for carbon monitoring, reporting and management” (Bäckstrand and Lövbrand 2016).

The discourse of green governmentality, however, suffered a major setback when UNFCCC negotiations collapsed with the failure to reach a comprehensive agreement at COP 15 in Copenhagen in 2009. The result of this was a shift in political rationality towards ideas of ecological modernisation and bottom-up, voluntary action based on efficiency and cost-effectiveness (Bäckstrand and Lövbrand 2016).

While ecological modernisation and green governmentality defined discursive debates in the UNFCCC and among powerful actors, the third discourse, civic environmentalism, captured the ideas of many critical voices beyond these. Embedded in this discourse are desires for more democratic global governance. Among the radical strands, it also challenges the norms of liberal environmentalism, opposing the globalisation of consumer capitalism as the key driver of environmental degradation (Bäckstrand and Lövbrand 2006). This discourse challenged the commodification of nature and carbon that was promoted through green governmentality, but lost momentum after this became institutionalised through the Kyoto Protocol (Bäckstrand and Lövbrand 2016). Outside the negotiation halls, activists used the discourse of civic environmentalism to advance issues such as the importance of indigenous rights and biodiversity but found themselves unable to successfully influence outcomes of key moments such as the 2002 World Summit on Sustainable Development in Johannesburg (Clapp and Dauvergne 2011). Following the collapse of negotiations in Copenhagen, however, radical elements of the civic environmentalism resurged through a growing climate justice movement (Hadden 2015). This movement criticised the voluntary approach that was being negotiated in the UNFCCC

and rallied against many of the norms of liberal environmentalism including neoliberal globalisation, the endless pursuit of economic growth, carbon markets, and geo-engineering. They did this both from the outside, at alternative events such as the People's Climate March and the People's Summit on Climate Change in 2014, and on the inside, by trying to lobby within the UNFCCC (Bäckstrand and Lövbrand 2016).

How did we get from this battlefield of ideological contestation to the post-Paris consensus of “all hands on deck” and “further, faster, together” described above? In the run-up to Paris, the stage was set with the discourses of green governmentality and, increasingly predominantly, ecological modernisation defining the debate in the UNFCCC while civic environmentalism and climate justice discourses provided prominent critiques from the margins. Falkner (2016) highlights how the post-Copenhagen shift away from pursuit of a deal with binding emission reduction targets to one based on voluntary pledges removed the major distributional conflict and roadblock from negotiations. Contestation remained regarding financing, North-South divisions of responsibility, markets, mitigation versus adaptation, liability for climate losses and damages, and the viability of certain technologies (Gupta 2015), but astute diplomacy managed to navigate these. Importantly, this did not mean resolving them. One of the masterstrokes of the Paris Agreement was its deliberate skirting of ideologically contested issues. Some were addressed but without adding substance (e.g. financing) and others were included in vague terms with the pretext of being negotiated later (e.g. loss and damage). The agreement also avoided discussing specific energy sources or technologies such as carbon capture and sequestration or responsibilities regarding climate-induced migration. It does, of course, regularly emphasise promoting sustainable development. Potential criticism from the climate justice movement was also undercut with a reference to climate justice in the preamble and an aspirational long-term goal of limiting global warming to 1.5°C instead of 2°C, but these remained strictly non-

legally-binding. This exceptional use of diplomatic language to skirt the fundamental divides in global climate politics was crucial to the Paris Agreement's acceptance. While focusing on the long-term goal of a net-zero emissions economy by the second half of this century, it avoided engaging seriously with what that future should look like.

The momentum generated by the signing of the Paris Agreement and the enthusiasm surrounding it (COP 21 saw the largest gathering of heads of state and government in history) cemented the deliberately crafted action narrative. As already mentioned, in the run-up to COP 21 a groundswell of subnational and non-state actors had been making commitments to climate action. The Lima-Paris Action Agenda (LPAA) integrated this into the COP itself, promoting an array of TCG initiatives throughout the two weeks of negotiations and emphasising narratives of action and unity. Civil society leaders coordinated their response to the Paris Agreement to build upon this, emphasising that the sustainability transition was already underway and now inevitable. The task is now, they said, is to double-down on and expand these existing efforts, holding businesses and politicians account for their pledges (Climate Action Network International 2015). Observers knew that the Paris Agreement was not perfect and were aware of its substantive deficits, but a narrative of unity and action was preferred to one that jeopardised the momentum that had been built by emphasising ideological debates. The mainstream international reception of the Paris Agreement was thus overwhelmingly positive, treating it as a breakthrough success despite its lack of substance on many issues (Spash 2016).

The unity espoused at COP 21 and now in the global push to implement the Paris Agreement has motivated climate action but stifled critics and sucked the oxygen from the ideological debates it masked. However, while these debates have not returned to the global spotlight, neither have they been resolved. They still feature inside the UNFCCC halls as negotiators hammer out the “rulebook” for the Paris Agreement (Leonard 2018), but rarely

surface prominently outside of this. Voluntary governance arrangements, such as many types of TCG, tend not to seek the consensus and universal participation that often brings out ideological contestation in UN forums. There is no need to explicitly resolve ideological debates if actors are under no obligation to engage with others who think differently to them. While some platforms such as the MPGCA try to facilitate cooperation and promote some guiding standards, TCG actors essentially do what they want, when they want, and with whom they want.

If ideological debates do not feature prominently in TCG, then are the environmental beliefs among relevant actors no longer so diverse? Or are they simply not consequential? Looking beyond the promotional narratives of the UNFCCC and associated platforms for climate action, we see there is some ideological contestation in relation to TCG. The LPAA was targeted by some activists for including initiatives accused of greenwashing. For example, the “4 per 1000” initiative, which aims to improve soil carbon sequestration, was targeted for opening the door to agricultural models based on genetically modified organisms. The inclusion of the Oil and Gas Methane Partnership was also accused of legitimising continued reliance on fossil fuels (Barbière 2015). Environmental beliefs that oppose the norm of liberal environmentalism also find some support, although not yet on any scale to challenge it as a global norm. An example is Transition Network, a charity that supports community-led “transitions” around the world that reimagine sustainable social and economic systems. They encourage local activities to promote low-carbon, sustainable lifestyles and communities based on principles such as social justice and acknowledging limits to growth (Transition Network n.d.). It appears there is still a diversity of environmental beliefs within TCG, but contestation is only visible at the margins. As such, it is difficult to discern what the impact of these beliefs are.

Although TCG research has blossomed, it has not yet paid serious attention to ideological dynamics; the existing literature is primarily functionalist or structural in nature, mirroring broader trends in transnational governance scholarship (Roger and Dauvergne 2016). For example, scholars have looked at how material factors condition private sector (Hsueh 2016) and state (Andonova 2014; Andonova, Hale, and Roger 2013; Hale and Roger 2012; Roger, Hale, and Andonova 2014, 2017) participation in TCG, the role of orchestration (Chan, Ellinger, and Widerberg 2018; Hale and Roger 2014), and TCG's relationship to national policymaking (Andonova, Hale, and Roger 2017). There has also been a line of policy-focused research that has sought to outline strategies for tracking and galvanising transnational climate action (e.g., Chan et al. 2015; Hale and Chambers 2014; Hsu et al. 2015) as well as measuring its impact (Chan et al. 2016, 2018; GGCA 2016; Michaelowa and Michaelowa 2017; van der Ven, Bernstein, and Hoffmann 2016).

Other areas of transnational governance have engaged with ideational factors in more depth. One major theme of this work has been carbon markets, with work exploring the ideological foundations of their rise, expansion, and effect on the conceptualisation of climate politics (e.g. Bailey, Gouldson, and Newell 2011; Newell and Paterson 2010; Boyd, Boykoff, and Newell 2011). Another focus issue has been legitimacy, both from normative and empirical angles (Bernstein 2011; Bernstein and Cashore 2007). This has been studied in many realms of transnational governance, with certification schemes, particularly of forests, being a prominent example (Overdevest 2010; Bernstein and Cashore 2004). As well as at a general level, ideational factors have been addressed in nuanced ways as specific explanatory variables. Good examples include Hale (2015), Margulis and Porter (2013), and Abbott and Snidal (2001), who consider their interactions with important material explanatory factors in the contexts of transnational commercial disputes, land grabs, and coordination on international standards, respectively. Normative diffusion has also been a

point of investigation in transnational governance. For example, Dauvergne (2018) leverages the global rise of the anti-microbead norm and the role of transnational actors to highlight when environmental norms strengthen and diffuse more quickly. Dingwerth and Pattberg (2009), meanwhile, focus on the social interaction of transnational organisations to explain normative diffusion among them. Other examples of ideology in transnational governance can be found in scholarly work on the professional services sector (Suddaby, Cooper, and Greenwood 2007) and eco-labelling (Dauvergne and Lister 2010), to list just two.

The few considerations of ideological contestation (or lack thereof) in TCG scholarship extend only to acknowledging liberal environmentalism as its normative backdrop (Bernstein et al. 2010; Bulkeley et al. 2014, 2018). This is not sufficient to understand its significance, however. TCG is a voluntary, multi-level phenomenon with a large bottom-up component. It involves thousands of diverse actors conducting diverse activities all around the world. While there are trends and patterns, it is unlikely to be accurately painted with a broad normative brush. To understand the impact of ideological contestation on TCG, we must get “closer to the ground” and consider the environmental beliefs of specific actors. This is supported by evidence such as the experiments of Banuri, Dercon, and Gauri (2017) showing policy professionals to be biased in their evaluations of evidence based on their ideological beliefs. In this thesis, I make the first attempt to systematically examine the impacts of environmental beliefs held by TCG actors by focusing on REDD+ project developers. These, and REDD+ projects themselves, are described in detail in the next section.

This research is more than an academic gap-filling exercise. As I demonstrate in this thesis, studying environmental beliefs in TCG is vital for helping us understand its direction, potential impacts, and how to shape it. In their study of discourses surrounding

forest projects associated with the Clean Development Mechanism (CDM), Bäckstrand and Lövbrand (2006, 51) argued that “a reflexive debate on the power, interests and values defining the dominant discursive framing of the sink arena is needed in the design of sustainable CDM projects in the coming decade”. This, unfortunately, has not yet happened and, although the CDM is less prominent in the political landscape now than a decade ago, I argue the authors’ call is even more applicable now in the context of TCG. What are the lines of ideological contestation in TCG? What does it mean to have “all hands on deck”, if there is no agreement on to where we are sailing? Does TCG offer environmental beliefs that challenge the norms of liberal environmentalism opportunities to spread and gain traction or simply entrench them? This thesis aims to address these questions.

ARGUMENT: ENVIRONMENTAL BELIEFS SHAPE TRANSNATIONAL CLIMATE GOVERNANCE THROUGH PREFERENCES

To address the broad motivating questions I have described above, the specific research question I tackle in this thesis is *how do environmental beliefs shape the emergence, design, and implementation of REDD+ projects?* I discuss REDD+ projects and why I chose them as a subset of TCG to focus on in the next section, but my core argument is as follows. Environmental beliefs, I contend, act as important determinants of actor preferences that affect REDD+ project developers and thereby the projects themselves in three key ways. Firstly, project developers prefer partnering with those that share similar environmental beliefs. Secondly, project developers prefer project designs that emphasise features that

resonate with their environmental beliefs and seek to create projects as such. Thirdly, project developers will look to implement projects in ways that emphasise aspects that resonate with their environmental beliefs. I marshal both quantitative and qualitative evidence to support these arguments, which I believe generalise to other forms of TCG and have relevance to the wider study of transnational governance and IR.

The key relationship I demonstrate in this thesis is one between a particular set of beliefs held by actors and the emergence, design, and implementation of a related governance structure. This is a very basic relationship based on these beliefs influencing actor preferences. As beliefs and preferences are universal phenomena, my findings should have wide applicability. Without focusing on it expressly, Suddaby et al. (2007) provide an example of this in the professional services sector. They demonstrate that beliefs regarding whether professional services should operate for “public-” or “consumer-interest” informed the preferences of the key actors such as professional services associations and the Big Five accountancy firms that shaped the sector’s regulatory development. The authors also show that collaboration among these actors appears to have developed in part based on similar belief sets. Overall, the precise impact of a belief set in a given context will vary with different institutional structures. For example, in a REDD+ (or other type of) project, there is a relatively low opportunity cost of non-participation due to their limited scope of impact. I develop these caveats with my argument throughout the thesis and consider the generalisability of my findings in detail in the conclusion.

REDD+ PROJECTS: A TESTING GROUND FOR THE ROLE OF ENVIRONMENTAL BELIEFS

The universe of TCG is massive and diverse; to study the entire phenomenon in detail would be an impossible task. For this thesis I have chosen to focus on REDD+ projects. First conceived as an intergovernmental policy process within the UNFCCC, REDD+ is a mechanism based on the concept that finance could flow to countries in the Global South to reduce forest-related GHG emissions. The conceptual and policy evolution of REDD+ is well-captured by Pistorius (2012), who notes that it emerged from discussions led by Brazil on the possibility for the compensated reduction of deforestation in developing countries at COP 9 in Milan, in 2003. This later developed into a proposal by the Coalition of Rainforest Nations at COP 11 in 2005, in Montreal, for a financial mechanism supporting reducing emissions from deforestation (RED). At COP 13 in Bali, in 2007 the concept was broadened to also include avoided forest degradation, thus becoming “REDD”, and further politicking over its scope and the risk of biased incentives concluded in the official inclusion of conservation, sustainable forest management, and enhancing forest carbon stocks as the “+” in REDD+ in 2009 (Pistorius 2012).

Decisions at COP 16 in Cancún, 2010, outlined a three-stage process for developing countries wishing to engage with the REDD+ mechanism: Firstly, they would undertake “readiness” activities involving strategy development political and institutional reform. Secondly, states enter an early implementation stage involving pilot activities before, thirdly, pursuing full implementation with formal verification of emission reductions and benefit distribution (Minang et al. 2014). A number of institutions have emerged to assist states through these stages, including notably the World Bank’s Forest Carbon Partnership

Facility and the UN-REDD programme. These institutions provide financial and technical assistance, such as for the development of safeguards and MRV systems.

At the same time, and this is the empirical focus of my thesis, REDD+ has also spawned transnational activity through hundreds of projects created, managed, and implemented by a range of different state and non-state actors from all sectors and levels, plus partnerships thereof. Some of these are formal “pilot” initiatives as part of national REDD+ strategies, but the majority are bottom-up, voluntary initiatives. In this thesis, any actor that appears to have been involved with the design or implementation of a project is referred to as a “project developer”. The projects pursue REDD+ objectives in defined, local areas, often generating carbon credits via the emissions they reduce or sequester that are then certified by standard-setting schemes such as the VCS, the Climate, Community, and Biodiversity Standard (CCBS), Plan Vivo, and CarbonFix (which was acquired by the Gold Standard in 2012). TCG databases such as that of Roger, Hale, and Andonova (2015) have included these voluntary certification schemes but not yet REDD+ projects directly. In Chapter 3, I present my database of REDD+ projects and outline the definitional requirements for inclusion, along with the implications of this for my analysis. For now, let it be noted that I use a broad understanding of a REDD+ project. I include projects in developing countries that explicitly focus on carbon emission avoidance or sequestration through any of the defining activities of REDD+ (avoided deforestation, avoided forest degradation, sustainable forest management, and the enhancement forest carbon, the latter of which includes both reforestation and afforestation), including those that do so without using the REDD+ moniker itself.

Scholars working specifically on REDD+ have often noted projects’ transnational dynamics (e.g. Myers et al. 2018; Seyller et al. 2016; McDermott et al. 2011; McDermott 2014; Jodoin 2017), but this thesis makes the direct connection between the literatures for

the first time by explicitly considering REDD+ projects as manifestations of TCG. They exemplify many aspects of TCG due to their management and implementation by project developers from a wide range of sectors, jurisdictional levels, and countries. They are at once transnational in themselves, intertwined with other transnational initiatives such as the certification schemes just mentioned, and genealogically related to the global REDD+ paradigm in the UNFCCC. In Chapter 3, I present and analyse a new, originally coded database of REDD+ projects and their developers.

As an empirical subject, REDD+ projects are an ideal focus for this thesis and a rich new pasture for TCG researchers for several reasons. Firstly, REDD+ projects are a useful subarea for examining the role of environmental beliefs. After its introduction to the UNFCCC at COP 13 in 2007, the idea of REDD+ quickly gained support from states in the Global North and South alike due to its “win-win” framing and embodiment of the dominant market norms of liberal environmentalism. Even when the broader negotiations collapsed at COP 15 in Copenhagen in 2009, REDD+ was one major issue where progress continued to be made (Pistorius 2012). At the same time, significant ideological opposition to REDD+ has existed outside of the UNFCCC from the outset. Much of this has come from groups, including indigenous peoples and agrarian activists, that oppose the commoditisation of nature promoted by REDD+ and the neo-colonial overtones of rich countries diverting attention from reducing their own emissions by paying the less-rich to preserve forests (Tramel 2016). Although REDD+ is included in the Paris Agreement and broad coalitions of state and non-state actors have now come to endorse it, including major environmental NGOs such as Conservation International, major normative debates still continue about it in some quarters and there are groups dedicated to its critique or outright rejection such as the Global Alliance Against REDD. REDD+ is thus an interesting area in which to consider the

role of environmental beliefs due to these varying degrees of normative consensus and polarisation existing in different fora and among different actor communities. .

By engaging this contestation, the academic literature on REDD+ has brought ideational factors, including some that resonate with environmental beliefs, to the fore. The most significant ideational research on REDD+ has used discourse analysis. The most influential discursive framework has been the three meta-discourses described earlier from Bäckstrand and Lövbrand (2006)'s analysis of forest-related CDM projects²: ecological modernisation, green governmentality, and civic environmentalism (for examples using these, see Adelman 2015; Di Gregorio et al. 2015; Wallbott 2014). Di Gregorio, Gallemore, Brockhaus, Fatorelli, and Muharrom (2017) deploy them in the study that is the most similar to this thesis to date. They examine the relationship between “policy core beliefs” and adoption of the three discourses by actors involved with REDD+. An important distinction to note, however, is that this discursive research is rooted in notions of Foucauldian governmentality; it does not attempt causal inference but focuses on identifying the discursive shifts that define and produce the very worlds of REDD+ and climate politics (Bäckstrand and Lövbrand 2016). In contrast, I focus specifically on measuring environmental beliefs and their causal effect. Overall, the study of ideational factors is more established in the REDD+ scholarship than that for TCG, making the former a useful platform from which to bring environmental beliefs into the latter.

In exploring these different perspectives about REDD+, the literature examines a wide range of issues. Three regularly identified as fundamental are (1) the degree to which REDD+ should focus on carbon sequestration versus promoting socio-economic and

² As will be discussed in Chapter 3, afforestation CDM projects are included in the database as REDD+ projects.

ecological co-benefits such as creating jobs for local communities or promoting biodiversity, (2) whether financing should come through market mechanisms or non-market mechanisms, and (3) the degree to which monitoring, reporting, and verification (MRV) processes should be conducted by expert staff and be based on expert knowledge or also by local communities and with the use of local knowledge (Hiraldo and Tanner 2011; Visseren-Hamakers, McDermott, Vijge, and Cashore 2012; den Besten, Arts, and Verkooijen 2014; Gallemore, Prasti, and Moeliono 2014; Vijge 2015; Turnhout et al. 2017).

In practice, debates over these issues often centre on the use of “safeguards”. These are rules and norms established at the UN-level and by large institutions such as the World Bank that aim to ensure REDD+ activities adhere to basic standards regarding various issues including the three mentioned above. McDermott et al. (2012) describe how, despite safeguards being supported by a broad consensus in principle, beneath this lies substantial disagreement regarding their operationalisation and prioritisation. This leads to variation in REDD+ on the ground, much in the same way that I argue environmental beliefs are shaping TCG despite the high-level narratives of unity and partnership. I return to these contested aspects of REDD+ in Chapter 3, where I discuss how I turn them into five dependent variables. These are coded into my database of projects and through my empirical chapters, I attempt to account for their variation based on the environmental beliefs of project developers.

Secondly, studying REDD+ projects also contributes to TCG scholarship by extending the analysis to the project level. Considerations of multi-level governance are well established in the literature (e.g. Betsill and Bulkeley, 2006; Kern and Bulkeley, 2009) but existing work has largely focused on governance at the city, national, or supranational levels. Research on projects has largely been confined to management and business studies, but this need not be the case as projects are also sites of political contestation. Operating at the

project level, REDD+ projects make their impact via direct access to sites of domestic politics. Bernstein and Cashore (2012) show that this “direct access” is the dimension of influence by structures of global governance that has been the least studied, with most attention in the literature being paid to influence through rules, norms, and markets. Bulkeley (2016) begins to open space for a concerted analysis of project level climate governance in elucidating how “climate publics” are being created at all levels of society “through which what it means to govern climate change is both enacted and disputed” (Bulkeley 2016, 135). Beisheim and Liese (2014) also almost make the connection in their study of transnational sustainable development partnerships by examining the projects they carry out. However, these are still not directly discussed in terms of governance. This thesis makes a clear contribution to the literature by firmly demarcating projects as an important site for the study of climate change governance. With direct implementation being a more readily observable feature of projects than, say, international regimes, their importance in the literature will likely increase as attention moves from examining plans and commitments to combat climate change to their actual effectiveness and implementation.

Thirdly, the relative abundance of REDD+ projects compared to other forms of TCG that exist at higher levels of governance is also a boon, particularly for researchers interested in large-N approaches. The number of projects in my database far exceeds the total of TCG initiatives that have been analysed in other systematic studies; the database presented in this paper contains 389 observations while notable other studies such as Roger et al. (2015) present a database of 75 and Michaelowa and Michaelowa (2017) extend the same one to 109. Larger samples are important because as Bulkeley et al. (2014) point out, compiling larger databases allows for the identification and quantitative testing of trends in TCG that case studies alone cannot provide. Quantitative analyses are also more feasible with REDD+ projects as they are far more comparable to each other than the plethora of

different initiatives that have comprised previous databases of TCG. Fourthly, REDD+ projects are a valuable phenomenon to study because, by definition, they are all located in the Global South. This helps address the lack of data on TCG in the Global South, something that has been repeatedly highlighted as a major weaknesses in the existing literature (Bulkeley et al. 2014; Chan et al. 2016; Chan and Hale 2015).

RESEARCH DESIGN AND CHAPTER OUTLINE

To examine the effect of environmental beliefs on REDD+ projects I use a nested analysis research design, taking inspiration from Lieberman (2005). This involves a large-N quantitative analysis of an originally coded database of REDD+ projects, complemented by five qualitative case studies that I analyse with both comparative and process-tracing approaches. Results and predictions from the quantitative model are used to inform case selection in way that facilitates useful testing of the model and my theoretical claims. The cases are thus “nested” into the model in a way that maximises the strengths of both the quantitative and qualitative approaches.

This design unfolds in the thesis as follows. Chapter 2 outlines the theoretical framework and how I approach the broad questions outlined above. In it, I briefly trace the treatment of ideas in IR and define environmental beliefs as the specific type I am interested in. As mentioned, I demarcate these as combinations of normative and causal ideas about dealing with environmental challenges such as climate change. I also explain how I operationalise environmental beliefs in the quantitative analysis through Clapp and Dauvergne (2005, 2011)’s environmental worldviews framework. My theoretical argument is that environmental beliefs shape the preferences of REDD+ project developers and thereby affect REDD+ projects at three stages: pre-project partner courting, project design,

and implementation. This chapter discusses these stages in depth. I also derive here two main hypotheses: (1) that project developers will prefer partnering with those that share similar environmental beliefs, and (2) that project developers will prefer to design and implement projects in ways that align with their beliefs. I also create specific sub-hypotheses for how the three environmental worldviews I operationalise will be associated with project design. In testing these hypotheses, I am not trying to argue that environmental beliefs are the sole, or even necessarily the primary determinant of REDD+ projects, but that they are independently important factors that must be considered.

Chapter 3 introduces the database of REDD+ projects that provides the empirical base for the quantitative part of this thesis. The database contains 389 projects coded on five main aspects of project design and 857 project developers coded by their actor type and environmental beliefs, the latter categorised by one of the environmental worldviews. The chapter provides a detailed account of the origins, coding, and content of the database. The relative abundance of REDD+ projects, coded systematically for the first time in my database, makes for a useful resource that I hope other scholars will draw upon. I also examine some descriptive statistics that offer initial empirical insights into the effect of environmental beliefs on REDD+ projects. The distribution of environmental worldviews across actor types and in projects suggests that project developers are indeed looking to partner with those that share similar environmental beliefs. It also emerges that environmental beliefs cannot be assumed simply based on actor type, and that the process of project design appears more additive than zero-sum.

In Chapter 4, I present the main quantitative analysis. Through a series of logistic regressions, I examine how environmental beliefs, measured by the presence of each environmental worldview among project developers, are associated with the likelihood of emphasising each aspect of project design. The chapter describes the data and model I use

in depth, including the operationalisation of worldviews as independent variables and the various controls I include at the project and national levels. One important limitation that should be noted here is that I was often unable to control for or rigorously consider the impact that local communities may have had on projects in my database. In some projects, communities were involved as project developers but this not always the case. The communities themselves can vary greatly in terms of their structure, interests, beliefs, and relationships with nearby projects; in Chapter 7 I offer some thoughts as part of my conclusion on the significance of this for my research.

Based on my theory, I outline several observable implications regarding the relationship between presence of specific environmental worldviews among project developers and emphasis on aspects of project design. This is one of the very few systematic large-N analyses of TCG (or REDD+ projects, for that matter) and the first that specifically examines the effect of environmental beliefs. Despite data limitations and the inherent difficulty of measuring environmental beliefs, I still find support for my hypotheses regarding their effect on project design. I find a large number of the expected observable implications from my theory across the model variations and only one, under some limited circumstances, contradicted.

These quantitative results are carried through to the case study stage of the nested analysis in Chapter 5. Taking guidance from Lieberman (2005), I use predictions from my model to determine which projects are “on-the-line” (well-predicted by the model) or “off-the-line” (poorly-predicted by the model) for each dependent variable. As the quantitative results in Chapter 4 were generally supportive of my theoretical expectations, I select cases that are mostly on-the-line to facilitate more detailed testing of my hypotheses. Chapter 5 describes the case selection process, which led to my choice of two projects in Colombia and three in Peru, in detail. It explains my case study research and interview methods, the

data from which forms the basis for the analyses in this chapter and Chapter 6. The analytical portion of Chapter 5 also considers how the coding and model predictions for each of the five case studies compares to the rich qualitative data I gained during my interviews and whether they support my theory that environmental beliefs shape preferences and thereby project design. In a few instances, the relationships do not map exactly to the specific sub-hypotheses for each project developer's coded environmental worldview. This is because actors' environmental beliefs are, in reality, complex and the environmental worldviews are ideal types that few actors should be expected to embody perfectly. It is for this reason that the qualitative interviews are important; they allow the analysis to go beyond the typology and explore environmental beliefs in greater detail than what the written sources I draw on for my coding allow. In doing so, the results of this analysis reinforce the findings from the quantitative model and my core hypotheses.

Chapter 6 takes the case study analysis further. I employ process tracing to distil the specific causal impact of environmental beliefs at each stage of the projects. Whereas the earlier chapters' results are correlational, in this chapter I attempt to generate causal inferences by focusing on key decision moments and examples of when an explanation based on material incentives would differ from one based on environmental beliefs. The results are not immediately generalisable, coming from a small number of cases, but they demonstrate how my theorised relationships can actually unfold through specific mechanisms. At the partner courting stage of REDD+ projects, I show how environmental beliefs push project developers towards partners with similar beliefs by, in some cases, acting to initially filter out those with conflicting beliefs and, in others, by improving their evaluations of certain potential partnerships. At the project design and implementation stage, I also distil clear examples of project developers pursuing environmental belief-driven preferences. The results do not imply that environmental beliefs completely determine

project developer behaviour; there are several examples in my cases where they are trumped by material incentives as the main drivers of action. What they do, however, is demonstrate the plausibility of the broader relationships I find in my large-N analysis and elicit specific mechanisms through which they manifest.

The final chapter brings together the key findings from the analytical chapters and discusses the contributions and implications of this thesis, both academically and for policy. Most importantly, it emphasises the contribution made by demonstrating the independent causal importance of environmental beliefs in shaping REDD+ projects. At a time when both academic research on TCG and policy debates are neglecting historically important ideological divisions in favour of facilitating new climate action and partnerships in the immediate term, this thesis acts as an important reminder of their salience. I argue that many of the findings can be generalised beyond REDD+ projects and that competing environmental beliefs are also likely shaping other forms of TCG. This should serve to elevate their importance in the academic debate on TCG. By systematically studying ideational factors and complementing case study research with a large-N analysis, I contribute to two areas of the discipline that need to be strengthened as transnational governance continues to establish itself as major subarea of IR.

Policy-wise, my findings that environmental beliefs are shaping TCG have implications for both considerations of individual initiatives and the TCG system as a whole. They suggest that considering environmental beliefs can be an important addition to the policy toolkit for achieving the desired outcomes of particular initiatives. I also identify a potential trend towards ideological homogeneity in TCG based on liberal environmentalism that could threaten the broader system's effectiveness and legitimacy. The future challenges posed by addressing climate change remain uncertain, so maintaining a healthy diversity of potential approaches is prudent. A potential loss of TCG legitimacy could have grave

consequences because of the potential for this spilling over to climate politics at large. With TCG governance structures still emerging, an important policy window currently exists that policymakers must capitalise on to ensure they are robust for the future.

2. THEORETICAL FRAMEWORK

“The ideas of economists and political philosophers, both when they are right and when they are wrong are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually slaves of some defunct economist.”

—John Maynard Keynes (1936)

This chapter articulates the theoretical framework of the thesis. It describes my concept of environmental beliefs and how I theorise them to influence preferences and thereby REDD+ projects. All actors, I argue, have some environmental beliefs that affect their perception of environmental challenges, whether they realise it or not. Even practical policymakers or project developers that think they are simply following “best practice” or merely doing what is “effective” are influenced by these beliefs, which pervade their very understanding of the problem and viable solutions. The first section builds up my concept of environmental beliefs, drawing on the different treatments of ideas in international and environmental politics scholarship. The second section outlines Clapp and Dauvergne (2005, 2011)’s “environmental worldviews” framework and explains its selection as my operational typology of environmental beliefs. The third section then elucidates the theorised impact of environmental beliefs on REDD+ projects at three stages: partner courting, design, and implementation. It also outlines specific hypotheses that guide my empirical analyses in Chapters 3–6.

IDEAS AND ENVIRONMENTALISMS IN INTERNATIONAL POLITICS

Ideas are fundamental to political life and occupy an important place in the study of international politics. They constitute what we think and believe, what we are interested in, and how we interpret the world around us. Despite this, IR has long been dominated by approaches that focus on material factors that can be more readily observed such as votes, guns, and money. However, a significant body of work has also developed demonstrating that ideational factors such as norms and identity are also independently important and not simply epiphenomenal to the material (Adler 2013). It is now widely accepted that everything matters to some degree and that a mix of material and ideational factors are almost always important. To move forward, the important academic challenge for those interested in ideas is to understand *how* they matter, to what extent, and under what circumstances. I take steps in this direction with a focus on TCG, a subfield in which ideational factors are understudied. As will be discussed, bringing ideas into the spotlight of TCG and theorising their impact is one of the key contributions of this thesis.

Where ideas are taken seriously in the study of international politics there are two broad approaches, depending on one's ontology. The first is to treat ideas as an important set of factors independent from material considerations that help explain international politics. In their seminal book, Goldstein and Keohane (1993) focus on demonstrating just this. Considerations vary in terms of how much weight they give to ideas, from considering them as the fundamental independent variable to more of an intervening variable that explains some residual amount of variation in outcomes that other core, material interests cannot on their own. The second approach is to assign ideas a deeper ontological role,

considering them constitutive of all actor interests, including those that others may consider as material. This perspective is articulated well by Wendt (1999). This thesis primarily operates within the realm of the first conception of ideas. The quantitative chapters test their explanatory power regarding REDD+ projects, controlling for key sources of material interests to distinguish them as not epiphenomenal. In the qualitative chapters, a deeper analysis seeks to understand precisely *how* ideas have an impact, including how they interact with other interests such as power or material benefit.

The ideas that I am interested in for this thesis are those varying perspectives on how we should deal with environmental challenges such as the many stemming from climate change. In their simplest form, they are a mixture of ideas about what is the “right” thing to do and what is the most effective thing to do. I call these “environmental beliefs” and define them explicitly as beliefs about the nature of environmental problems and how we should respond to them both normatively and in terms of efficacy. I focus on these as they are the kind of ideas that define the environmental debates I mentioned as having been sidestepped by TCG to date. In this thesis, I demonstrate how, despite not being in the spotlight, environmental beliefs are still playing important roles in shaping TCG.

My focus on both normative and causal ideas comprising environmental beliefs is shared by many scholars attempting to theorise the role of ideas in international politics. Goldstein and Keohane (1993), for example, describe a tripartite typology of ideas: *principled beliefs*, normative ideas of right and wrong; *causal beliefs*, ideas about cause and effect; and *worldviews*, fundamental conceptions about possibility and what constitutes the world. While analytically useful to distinguish between principled and causal beliefs, they are, in reality, often intertwined and difficult to separate. Schmidt (2008) offers a different approach, presenting ideas at three levels: the micro level, as they pertain to specific policies or actions; the meso level, that encompass the general programmes or paradigms that reflect

underlying assumptions or principles of actors; and the macro level, where basic worldviews and philosophies underpin fundamental understandings of knowledge and the world. She argues that at each of these levels there tends to be both normative ideas about what is good or bad and cognitive ideas about “what is” and what can be done (Schmidt 2008, 306). The latter of these is very similar to causal ideas.

Environmental beliefs fall more towards the meso level defined by Schmidt (2008). They are more abstract than beliefs about specific policies or activities but more specific than a basic worldview as they are limited to the broad domain of environmentalism. Berman (1998)’s “programmatic beliefs” are a useful conceptualisation of such meso level ideas. Programmatic beliefs are “abstract; systematic and coordinated; and marked by integrated assertions, theories, and goals” but not “total visions of the world” in the way that macro level ideas such as ideologies are (Berman 1998, 27). They can be tied to specific actors and, within their specific domains, programmatic beliefs provide guidelines for practical activity and for the formulation of solutions to everyday problems. They supply, in other words, the ideational framework within which programmes of action are formulated. When political actors seek to formulate responses to particular challenges, it is, therefore, to their programmatic beliefs that they should look (Berman 1998, 27). Environmental beliefs can be considered as a particular type of programmatic beliefs specific to environmentalism.

The way “environmental beliefs” has been used as a term in political research historically is not dissimilar to this. It has largely appeared in psychological studies of political choice to try and explain environmental behaviours such as recycling (e.g. Corraliza and Berenguer 2000; Kilbourne and Pickett 2008). However, this line of research has measured environmental beliefs in terms of their intensity rather than their diversity. That is, for example, asking whether having stronger environmental beliefs is associated with a greater likelihood of recycling. The most common way of measuring these environmental

beliefs has been through questionnaires associated with Dunlap and Van Liere (1978)'s "new environmental paradigm" (NEP). The NEP is a set of beliefs concerned with issues such as limits to growth and the (dis)harmony between man and nature. It is the most widely used measure of environmental beliefs, but it remains a measure of the intensity of one particular set.³ In contrast, in this thesis, I focus on exploring the impact of *variation* in environmental beliefs. The intensity of the different variations of environmental beliefs I consider is likely also important, but it is not a focus of this thesis.

As Davidson (2014) thoroughly summarises, there are many attempts in the literature to capture and codify different sets of environmental beliefs.⁴ All such typologies have their own strengths and weaknesses but are ultimately imperfect as they try to impose fixed categories on phenomena that are naturally dynamic. Actors' beliefs change, there will always be grey zones and borderline-cases, and, in practice, they are often inconsistent and thereby defy academic attempts at order. Despite this, typologies remain useful for bringing some analytical structure to the table and facilitating analysis of these elusive yet important phenomena. It is difficult to judge which typology is "best" in the abstract; selection must be based on goodness of fit for the application at hand.

For this thesis, the application is codifying the environmental beliefs of REDD+ project developers and the framework that I use is Clapp and Dauvergne (2005, 2011)'s "environmental worldviews". Despite the broad name, environmental worldviews exist at the meso level and should not be confused with worldviews as conceptualised by Goldstein and Keohane (1993) or Schmidt (2008) as macro level ideas. In the rest of the thesis the term "worldview" specifically refers to "environmental worldview". The next section justifies the

³ For a discussion and reflection on the NEP scale see Dunlap (2008).

⁴ See, for example, diZerega (1995), McManus (1996), Bess (2003), Bäckstrand and Lövbrand (2006), Di Gregorio (2012), Neumayer (2013), Dryzek (2013), and Mann (2018).

framework's selection before summarising the four environmental worldviews: market liberal, institutionalist, bioenvironmentalist, and social green. An example of each is also provided for illustration, using a project developer from my database. The detailed discussion of my coding method, however, is reserved until Chapter 3 where I present the database in full.

THE ENVIRONMENTAL WORLDVIEWS FRAMEWORK

Clapp and Dauvergne (2005, 2011) presented the four environmental worldviews on global environmental change in their 2005 book *Paths to a Green World: The Political Economy of the Global Environment* and the subsequent second edition, published in 2011. They were chosen as my operational framework to capture environmental beliefs for a number of reasons. Firstly, they are defined based on the same type of ideas that comprise environmental beliefs: those existing at a meso level similar to programmatic beliefs with conjectures about the nature of environmental problems and both normative and causal beliefs about addressing them. Clapp and Dauvergne (2011, 4) write that each worldview is largely constructed on using “literature that looks at an environmental problem and asks: Why is that happening? What is causing it? And what can be done?”. This speaks to causal beliefs most directly, but in reading the elucidations of each worldview and how they are deployed, they are clearly also partly normative. In describing the market liberal worldview's perspective on responsibility for addressing environmental degradation, for example, there are clear normative ideas about inequality:

“It is unrealistic—perhaps even unjust—to ask poor people to consider the implications of their survival on future generations. The only way out of this

vicious cycle is to alleviate poverty, for which economic growth is essential” (Clapp and Dauvergne 2011, 5).

This example also elucidates how, as mentioned, causal and normative ideas are often intertwined.

Secondly, the worldviews align well with the key debates that exist both in academic and policy circles surrounding REDD+. These focus on the emphasis placed on carbon sequestration versus other ecological and social outcomes, financing mechanisms, and approaches to MRV. These are discussed in more detail in the next section, but it can be noted here that they extend beyond purely environmental issues. Davidson (2014) critiques the environmental worldviews for being limited in their ability to connect with broader debates that go beyond pure environmentalism, but this is a narrow reading of the framework. In fact, the environmental worldviews are “intentionally transdisciplinary” to make connections with related socioeconomic and political debates (Clapp and Dauvergne 2011, 3). For example, while the bioenvironmentalist worldview is strongly associated with a conservation ethos, it is also closely connected to economic discourses such as steady-state economics. Furthermore, the social green worldview is intrinsically tied to broader questions about economic and social relations through its focus on global equalities. The inherent multidisciplinary of the environmental worldviews framework, a point the authors themselves emphasise, helps it relate directly to the key polemics of REDD+.

Thirdly, the environmental worldviews framework is ideal for engaging with multiplicity of actors involved with TCG:

“It moves well beyond the traditional academic focus on international agreements and institutions in an effort to capture the views on politics, economics, and the environment within the halls of global conferences, on the streets during antiglobalization protests, and in the boardrooms of international agencies, nongovernmental organizations, and industry associations” (Clapp and Dauvergne 2011, xi).

Due to these strengths, it also already has an established connection to the TCG and REDD+ literatures. Bulkeley et al. (2014) used the environmental worldviews to code project developers of TCG initiatives in their database (although this is not developed into a major focus of the book) and both Shankland and Hasenclever (2011) and Visseren-Hamakers et al. (2012) have used them to discuss differing perspectives on REDD+.

Fourthly, despite their analytical breadth, the four worldviews still capture the key divides on fundamental environmental issues such as the environmental sustainability of economic growth as well as some variation within these about focuses for solutions such as economic liberalisation versus international institutions and conservation versus local empowerment. Finally, they also remain at a level of abstraction with sufficient room for interpretation to be suitable for applying to this thesis' data sources, which do not provide the fine grained detail to, for example, determine among the nine categories of McManus (1996) or the subcategories of Davidson (2014). These traits facilitate the drawing of clear hypotheses about the expected relationship between each worldview and the coded aspects of project design. I present these hypotheses in the next main section of this chapter, while the coding and the data sources are discussed in Chapter 3.

I now proceed to introduce each of the four environmental worldviews.

Market liberal

Clapp and Dauvergne (2011) describe the market liberal environmental worldview as being inspired by neoclassical economics and seeing market distortions, poverty, and a lack of economic growth as the key drivers of environmental degradation. The proposed remedies of its adherents involve reversing these, arguing this will also lead to the higher incomes needed to generate the “funds and political will to improve environmental conditions”

(Clapp and Dauvergne 2011, 4). They see globalisation as a positive force for the environment and place great faith in human ingenuity, free trade, and technological innovation. Market liberals acknowledge that there may be environmental damage caused by globalisation and economic growth in the short-term but see this as more than compensable with the increased wealth that will be generated. Within the market liberal worldview there can be plenty of variation. For example, at one extreme it could accommodate neoliberal libertarian approaches that suggest a fully free market with zero government intervention as the most efficient way of promoting sustainability. Also falling under the market liberal worldview, however, would be more balanced agendas that still emphasise markets and growth but support the role of government guidance and intervention such as through a carbon tax. An example of a market liberal project developer from the database is Biofíllica, a Brazilian forestry company. Biofíllica says on its website that it aims “to contribute to the creation and development of a solid and reliable environmental market” and that its “model is based on the commercialization of environmental services” (Biofíllica n.d.). This emphasis on markets and commercialisation of nature is a clear signal of the market liberal worldview.

Institutionalist

The institutionalist environmental worldview has similarities to the market liberal one in that it generally sees economic growth, technology, and globalisation as positives for tackling environmental challenges. It differs significantly, however, in its bullishness for letting the deregulated market drive our solutions. Institutionalists see environmental challenges as often the result of collective action problems and poor international cooperation. They do not, however, consider our current systems of economic and political

life as systemically problematic and in need of revision (Clapp and Dauvergne 2011). Instead, they advocate for the creation and enhancement of international institutions to create structures and norms that will “ensure that global economic policies work to both improve the environment and raise living standards” (Clapp and Dauvergne 2011, 8). Correspondingly, they also emphasise the need for states to be strong enough to operate with these and manage global economic forces. Considering variation within the institutionalist worldview, those at one extreme could appear very similar to moderate market liberals. On the other extreme, some institutionalists may support the creation of institutions with relatively stringent and invasive requirements that would certainly not be desired from a market liberal perspective. An example of a project developer from my database with the institutionalist worldview is the International Tropical Timber Organisation (ITTO), which “develops internationally agreed policy documents to promote sustainable forest management and forest conservation and assists tropical member countries to adapt such policies to local circumstances” (ITTO n.d.). The emphasis on international agreement and developing state capacity is a clear marker of the institutionalist worldview

Bioenvironmentalist

The bioenvironmentalist worldview is premised on concern for the biological limits of the planet. It is the worldview that best aligns with the NEP. It considers economic growth and globalisation to be causes of rather than solutions to environmental degradation, with ever-increasing production and consumption taking us beyond Earth’s carrying capacity. At the same time, globalisation is considered to be spreading unsustainable western lifestyles, amplifying neo-Malthusian fears about pressures of a growing global population (Clapp and Dauvergne 2011). The solutions offered by bioenvironmentalists focus on curbing

population and economic growth and developing new metrics of progress that go beyond production and consumption. It is from this perspective that academic agendas such as steady-state economics emerge. This is a type of economics championed by thinkers such as Herman Daly that considers and advocates for an economy based on a relatively stable size, population, and consumption instead of economic growth. In a steady-state economy, “[b]irth rates equal death rates, and production rates equal depreciation rates” (CASSE 2016). On the whole, they are also more sympathetic to command-and-control style regulation in conserving the environment (Clapp and Dauvergne 2011). As with the other worldviews, there is space for variation within the bioenvironmentalist camp. A moderate bioenvironmentalist, for example, might focus on the promotion of protected areas, reducing consumption, and developing more sustainable business models for corporations. A more extreme manifestation of the worldview might advocate draconian measures to control population growth in developing countries. An example of a project developer from my database coded with the bioenvironmentalist worldview is the World Wide Fund for Nature (WWF), whose mission statement is

“To stop the degradation of the planet's natural environment and to build a future in which people live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, [and] promoting the reduction of pollution and wasteful consumption” (WWF n.d.).

This concentration on conservation, aversion of environmental degradation, and reducing consumption is a strong indicator of a bioenvironmentalist worldview.

Social green

Social greens “drawing primarily on radical social and economic theories, see social and environmental problems as inseparable” (Clapp and Dauvergne 2011, 12). Like

bioenvironmentalists, they consider economic growth and globalisation as causes of environmental degradation rather than solutions but place a greater emphasis on their connection with other social issues and human rights. In particular, social greens are concerned with inequality of power, access to resources, and exposure to environmental harm, which they see as being exacerbated by capitalist globalisation. Solutions for social greens thus tend to focus more on fundamentally changing the global economic order rather than just “greening” the system. For some social greens, this would occur through means such as a “retreat from the large-scale industrial and capitalist life and a move toward local, self-reliant, small-scale economies” (Clapp and Dauvergne 2011, 14). Due to the focus on inequality there can be a variety of focuses within the worldview such as gender, class, or race. In terms of practical engagement, social greens could vary from an extreme “outsider” stance that rejects anything that reproduces a globalised capitalist economic system to a moderate one that concentrates on empowering local communities and working as an “insider” to ensure vulnerable communities voices are heard in environmental policymaking. For an example of the social green environmental worldview from the database, consider COCOMASUR, an NGO that represents an autonomous black community in Colombia. Their vision is to be an organisation that

“...strengthens territorial autonomy, maintains and rescues our traditions and customs by hand through self-sustaining economic development that fortifies social and economic leadership through caring for the land” (COCOMASUR, 2018).

The focus in this statement on local culture and explicitly connecting social goals to environmental goals are good indicators of the social green worldview.

FROM IDEAS TO ACTIONS: HOW ENVIRONMENTAL BELIEFS SHAPE REDD+ PROJECTS

In this thesis, the theorised impact of environmental beliefs is that they influence the preferences of actors as they pursue their interests. Interests are considered as the principal objectives that actors seek to achieve, while preferences reflect the prioritisation of strategies and options for pursuing them. It is assumed that in the increasingly transnational effort to combat climate change, one of the significant interests by which actors are motivated is one to protect the environment that involves combinations of goals such as mitigating climate change and protecting ecosystems. This is not to say that such an altruistic motivation is the only interest; economic and power interests are certainly also significant. Some of these might also interact with environmental objectives, but it is assumed that an environmental interest is significant in driving responses to climate change and, in particular, voluntary initiatives such as projects. In this thesis, environmental worldviews are theorised to play an important role in influencing REDD+ project developers as they pursue these environmental interests. This section lays out the general hypotheses for how this occurs at three stages of REDD+ projects: partner courting, design, and implementation. During partner courting, the project developer with the initial idea to create a project looks for partners. During project design, the project developers that agreed to partner negotiate and decide upon the project design. During implementation, the project is executed. In practice these three stages may overlap or occur simultaneously, but it is analytically useful to consider them separately and sequentially. For each stage I also consider some of the key intervening factors that I expect to interact with project developers' ability to pursue their interests such as resources, power,

and agency. In the analytical chapters that follow, I articulate specific observable implications of these hypotheses as they relate to the analyses at hand.

Partner courting

During the partner courting stage, one or more project developers has an idea for a project and is looking for partners to help bring it into being. There is little existing scholarship that focuses on explaining this stage of REDD+ projects. Gallemore and Jespersen (2016) come the closest, using network analysis to show that donors are more likely to support projects where the transaction costs are lower due to existing connections to project developers, being from the same country, or having a known partnership broker. I expect these functionalist factors to be important but not sufficient to explain partner courting for REDD+ projects, with environmental beliefs also playing a significant role.

I expect project developers to prefer, where possible, partnering with those that share similar environmental beliefs. There are three reasons for this. The first is normative alignment: Project developers would prefer to partner with those that share their environmental beliefs because it entails a commonness of cause and shared vision. Di Gregorio (2012) finds that alliances of environmental NGOs form around shared types of environmentalism, particularly for substantive, on-going cooperation. REDD+ projects involve more than NGOs, but the long-term nature of many projects (often upwards of 30 years) means shared environmental beliefs are likely important. They would make a potential partnership seem “easier”, more natural, and thereby more attractive.

The second reason is to minimise reputational risk. As Abbott and Snidal (2009) argue, a value-driven organisation risks being seen as “selling out” by its supporters through collaborating with a profit- or material interest-driven partner. Similarly, the latter may risk being portrayed negatively if it gets too close to one of the former and disagreements arise.

The same can be said for an organisation considering a partnership with an actor whose own environmental beliefs contradict with their own. In the context of this thesis, one can imagine this between project developers coded with the market liberal and bioenvironmentalist worldviews, for example.

The third reason is efficiency maximising: Most project developers want their project to succeed and if their partners have environmental beliefs comprising conflicting ideas about how to effectively address environmental challenges, it may cause problems. Drawing from principal-agent theory, Hawkins, Lake, Nielson, and Tierney (2006) summarise how agents can act in defiance of an agreed contract through “shirking”, or not completing tasks, and “slippage”, taking alternative action that breaches the contract. Partnering with a developer that holds conflicting environmental beliefs and preferences for the project comes with a greater risk of them shirking or slipping during implementation to pursue these. Alternatively, it could lead to undesirable compromise over project design in attempts to mitigate this risk. As Abbott and Snidal (2009) note, bargaining over the terms of collaboration is costly. Di Gregorio (2012) suggests that while alliances of environmental organisations can feature a plurality of values about environmentalism, they can rarely cope with ones that are outright contradictory.

Due to these concerns, project developers are expected to prefer partnering with those that share similar environmental beliefs when creating a project. This is the first hypothesis for the thesis:

H1: Project developers will prefer partners that share similar environmental beliefs.

Although project developers are expected to pursue partners with similar environmental beliefs, projects are not expected to be one dimensional. In fact, there are a number of reasons why project developers will look to actors that are different to themselves. For example, financial constraints and a lack of likeminded partner options might force an NGO with limited resources to actively seek a corporate partner with conflicting environmental beliefs. Similarly, a well-resourced corporate actor might seek out an NGO partner with conflicting environmental beliefs to create a perception of legitimacy that they would otherwise lack (K. Abbott and Snidal 2009). These are important factors in the partner courting stage, but it is still expected that a project developer would first seek out the desired functional profile within the community of actors with whom they share similar environmental beliefs before looking outside of this.

Project design

At the design stage, project developers have agreed to try and create a REDD+ project and work to negotiate the details of its design. With their respective preferences for the project design informed by their environmental beliefs, the developers are theorised to enter a bargaining process. Following standard political bargaining theory, the outcome of the process is expected to reflect the respective bargaining power of the different project developers. In the present context, this means that the design of REDD+ projects should reflect the relative bargaining power behind each set of environmental beliefs held by the project developers. During this bargaining process, I theorise environmental beliefs to affect the design preferences of project developers in two ways. Firstly, they would affect the goals and objectives of a project. Environmental beliefs involve different understandings of what environmental challenges are as well as normative ideas about what ends should be pursued. As mentioned, one of the key debates about REDD+ is whether it should focus on just

reducing emissions or on other social and ecological goals. The second mechanism is through affecting project developers' preferred means of achieving these goals. Environmental beliefs also comprise causal ideas, which should affect perceptions of the most effective strategy for a project. This could relate to how a project is financed or who conducts its MRV, for example. Normative ideas, however, could also influence actors' preferred strategies as certain ones, such as having significant community participation, may be preferred by project developers as being simply the "right" thing to do, rather than on efficacy grounds. Based on this, my second hypothesis is

H2. The environmental beliefs of project developers will shape their preferences regarding the design and implementation of REDD+ projects

Unlike for the partner courting stage, the effect of environmental beliefs on project design and implementation is expected to vary with different belief sets. Operationally, I thus have three distinct sub-hypotheses of H2 for the three environmental worldviews most relevant to REDD+ projects: the market liberal, bioenvironmentalist, and social green. These sub-hypotheses are primarily used for the quantitative analysis of project design in Chapter 4 but also to guide my nested case study analyses in Chapters 5 and 6. The institutionalist worldview is not operationalised because, as is borne out in Chapter 3, its presence among project developers in my database is negligible. This makes sense: given the worldview's focus on international institutional solutions, actors with such environmental beliefs would not be expected to invest their resources in initiatives at the project level. I discuss this decision further in Chapter 3 with the presentation of my database.

For the market liberal environmental worldview, the emphasis on the market as the most efficient and effective solution to environmental challenges suggests that project developers with this worldview will favour projects predicated on market forces and mechanisms. They would favour projects that are for-profit and, with finite resources, would prioritise efficiency and have a more zero-sum approach to project design. For REDD+ projects, this means that in an effort to find the most efficient emission reductions, market liberal developers would be expected to resist the inclusion of additional focuses or activities in their projects that might be less profitable. Finally, the market liberal faith in technology and science also suggests a preference among developers for management by technical experts throughout the project.

H2a: The market liberal environmental worldview will shape project developers' preferences regarding REDD+ projects towards market mechanisms, the prominence of experts, and away from focuses beyond emissions reductions.

The hypothesis stemming from the bioenvironmentalist worldview draws on its concern for the irreversible destruction of nature and potential ecological collapse. It is expected that project developers with this worldview will prefer REDD+ projects that promote conservation and broader environmental protection efforts beyond simply emissions reductions. The bioenvironmentalist worldview does not place efficiency on the same pedestal as the market liberal worldview, so the activities and focuses of projects are not expected to be as zero-sum. They should be open, and in fact supportive, of multidimensional projects that promote their priorities. Additionally, the

bioenvironmentalist concern with economic growth as a primary cause of environmental destruction will likely lead to some resistance to projects that are profit- and growth-driven.

H2b: The bioenvironmentalist environmental worldview will shape project developers' preferences regarding REDD+ projects towards broader goals of environmental protection and conservation, and away from designs that promote profit and economic growth.

The hypothesis for the social green worldview stems from its distinctive focus on empowering local communities and resisting global capitalism. It is expected that due to their concern for social inequality, social green actors will support projects that actively involve and support local communities. For the same reasons as for the bioenvironmentalist worldview, these preferences for project focus are expected to be additive in nature rather than zero-sum. The social green worldview also views economic growth and globalisation as primary causes of environmental destruction and therefore would be resistant to projects involving market mechanisms and profits for international project developers. Due to its concern for poverty and inequality, however, it would be open to projects that generate incomes and economic opportunity for poor local communities. It would also support projects that involve North-South transfers of wealth such as donor financing.

H2c: The social green environmental worldview will shape project developers' preferences regarding REDD+ projects towards involving and supporting local communities, North-South transfers of wealth, and away from market mechanisms and profits for international actors.

Intervening factors aside, whether or not project developers are able to influence project design to align with their environmental beliefs depends on their bargaining power. Abbott and Snidal (2009) describe this as being in great part derived from their capacities. “Go-It-Alone-Power”, they describe, stems from an actor’s capacity to not join an initiative, either through pursuing a unilateral alternative or simply not participating. “Inclusion power”, on the other hand, stems from the importance of the capacities that they can contribute to an initiative through their participation. Abbott and Snidal (2009) write in the context of regulatory standard-setting, which is very different from project creation as regulations apply to the gamut of activities undertaken by an actor. Projects, on the other hand, represent a limited area of work and tend to be at least partly independent from other operations of the entities involved. As a result, there is a much lower opportunity cost of not participating. This is a dynamic that the empirical chapters will highlight as important for considering the generalisability of my findings to other areas of TCG.

The capacities that Abbott and Snidal (2009) deem as necessary for a successful regulatory scheme, and that therefore underpin their two categories of power, however, also apply to the project context: independence, representativeness, expertise, and operational capacity. Independence is important for credible monitoring and evaluation of a project, representativeness for legitimate and effective engagement with affected populations, expertise for managing technical components, and operational capacity to fund and resource implementation. With these varying capacities, project partners are theorised to push for their preferences to be reflected in the project design and consider whether negotiated outcomes are better than their status-quo option of not participating in the project. Partners can always choose to step back from a project, highlighting how in practice the stages of design and partner courting are dynamically interlinked.

Implementation

The story does not end with the “final” design of a project. As important determinants of preferences, I also theorise environmental beliefs to have an impact during project implementation. There is certainly a correlation between project design and outcomes but it is not unmitigated. Heeks and Stanforth (2014) note that across both political science and management studies, implementation has been understudied. Despite growing interest and attention, this holds true in the subfield of TCG. Some work has been done that examines the outputs or activities (e.g. Chan et al. 2016; Szulecki, Pattberg, and Biermann 2011) and design features that might lead to effectiveness (Michaelowa and Michaelowa 2017). Beisheim and Liese (2014) provide a deep dive into this in their book, examining 21 public-private partnerships (PPPs) and 45 projects implemented by these to see which design features and intervening area and project level variables influenced effectiveness. Hsu, Moffat, Weinfurter, and Schwartz (2015) try to consider impacts, by estimating the total emission reductions potential of initiatives. These studies provide interesting insights but remain difficult to generalise from and limited in what they have been able to focus on. None of them have considered ideational factors and in their focus on “success” and “effectiveness” have ignored the political dimension of implementation and what exactly these terms mean, and for whom.

The REDD+ literature has a more established record of looking at implementation and outcomes but is dominated by case study approaches and medium-N comparative work. It has however, dipped into the political nature of project implementation, showing that the intentions behind and designs of REDD+ projects are “subject to re-interpretation and translation” on the ground by intervening actors (Myers et al. 2018; Sanders et al. 2017). The Centre for International Forestry Research (CIFOR)’s Global Comparative Study on REDD+ is the most extensive evaluation effort to date, attempting to analyse in-depth the

implementation and impacts of subnational REDD+ using a before-and-after control intervention (Sunderlin et al. 2016). However, this research is still ongoing after starting at 2009 and still only deals with 22 cases, a fraction of the overall universe of REDD+ projects. This highlights the incredible amount of time and resources required to evaluate implementation and impacts for one case, let alone at a large-N scale, that have made systematic studies of implementation difficult. As such, with the time and resources available for this thesis I am only able to examine implementation (and not impacts) for five projects. This makes a valuable contribution, however, as first time that the effect of environmental beliefs on REDD+ project implementation has been studied. These are “nested” as case studies into my large-N analysis and explored qualitatively in Chapters 5 and 6.

H2's expectation that environmental beliefs shape project developers' implementation preferences should manifest through two basic mechanisms. Firstly, project developers are expected to try and implement projects in ways that emphasise design aspects and activities that align with their environmental beliefs. Secondly, project developers are expected to try and implement projects in ways that undermine or reduce the emphasis on design aspects and activities that conflict with their environmental beliefs. As a general example, the two mechanisms could manifest in an implementing project developer diverting resources to or withholding resources from particular activities. At a more extreme level, a project developer could stubbornly continue with activities or a strategy to which they are ideologically attached, even if there were strong material incentives not to. Alternatively, an implementing project developer with enough bargaining power may formally revise aspects of the project design that conflicted with their environmental beliefs. Operationalised with the environmental worldviews framework, the sub-hypotheses H2a-H2c offer some guidance for detecting these mechanisms. However, as I examine

implementation through qualitative case studies, I am able to consider the environmental beliefs of the project developers in finer grained detail than just the three environmental worldviews. This is discussed more in Chapters 5 and 6.

The ability of project developers to manipulate project implementation based on their environmental beliefs is mediated by power and the project structure. To consider this, I start from the basic agent theory assumption that agents will pursue their interests to the degree they can based on conditions created by their principals. Considered as an important source of preferences, environmental beliefs can be slotted into this broadly rationalist framework. The hypotheses for the environmental worldviews outlined above fit well with this as they include preferences both for and against potential aspects of REDD+ projects. I expect environmental beliefs to push project developers to shirk or slip in implementation depending on the degree to which the design matches their own preferences, mediated by external constraints.

In the context of REDD+ projects, a key caveat to the standard principal-agent theory is that, in many projects, implementing actors (agents) are also project developers involved in the project design (principals). This likely has two impacts on the typical delegation model. Firstly, the contract, or project design, is likely to be more in alignment with the interests and preferences of the implementing actor as they participate in its creation. This means there would be relatively less incentive for shirking or slippage. Secondly, if an implementing agent is simultaneously a project developer the power differential between them and the other principals is likely to be less (they may even have more power than the other principals). One reason for this is that they will have an informational advantage by having both direct knowledge of the implementation as well as sharing in that of the other

principals. This entails that if the agent does seek to slip or shirk, it would be more capable of doing so than in a traditional delegation model where agents and principals are mutually exclusive.

Specific environmental beliefs could play out differently in this implementation framework. As important sources of actor preferences, they affect the project design process and ultimately the degree of alignment between the agreed project design and the preferences of implementing actors. Additionally, some actors may have more zero-sum environmental beliefs than others. For example, I expect the market liberal worldview to reflect more zero-sum environmental beliefs compared to the bioenvironmentalist and social green worldviews. This has implications for agent autonomy, the realm of activity for an implementing agent that is not prescribed in the contract, or in this case, project design, that does not expressly contradict it. For example, my hypotheses would expect bioenvironmentalist and social green principals to allow more autonomy for implementation than market liberals. The latter would be more likely to consider autonomous action as shirking and slippage, as resources committed to one end could have been committed to other, market liberal-preferred objectives. Thus, the effect of environmental beliefs on actor preferences is expected to have an influence on both the implementation preferences of implementing project developers and the relationship between them and non-implementing project developers.

CONCLUSION

This chapter has described the theoretical framework for the thesis, from the nature of environmental beliefs, to how I capture them with the environmental worldviews

framework, and how they are expected to affect REDD+ projects at three stages. I theorise environmental beliefs as key determinants of project developer preferences, with consequences for who partners together to create a project and how projects are designed and implemented. The chapter has also outlined my two key hypotheses pertaining to the influence of environmental beliefs at each stage and three sub-hypotheses pertaining to the specific environmental worldviews that I operationalise. In the four analytical chapters that follow, I describe and test for a number of expected observable implications derived from each hypothesis that relate to the specific analyses undertaken. The next chapter introduces my database, describing how I coded the design of REDD+ projects and environmental worldviews for project developers. It also presents descriptive statistics to outline key trends and initial observations regarding how environmental beliefs appear to be shaping REDD+ projects.

3. SYSTEMATISING REDD+ PROJECTS AND ENVIRONMENTAL BELIEFS: A NEW DATABASE

INTRODUCTION

This chapter presents the original database of REDD+ projects that I created and use as the empirical base for my analyses. It draws on an existing list of projects that I coded in terms of project design and the environmental beliefs of project developers. What follows is divided into three key sections. The first outlines the methodology used to create and code the database. This includes the origins of the database in previous research and detailed examples that demonstrate the coding process for both my independent and dependent variables. The second uses descriptive statistics and a selection of key figures to introduce the database and the diversity of REDD+ projects and project developers. The third section discusses three key trends that emerge from the data relating to my research question: that project developers appear to prefer partnering with those that share similar environmental beliefs, that environmental beliefs cannot be assumed simply based on actor types, and that project design bargaining appears to be more additive than zero-sum. Finally, a summary and brief discussion concludes the chapter and sets the stage for the quantitative analysis in Chapter 4.

BUILDING THE DATABASE: METHODOLOGY AND POINT OF DEPARTURE

The database I created for this thesis is original and brings a new level of systemisation to the world of REDD+ projects. It did not, however, come from a vacuum: it builds upon significant work undertaken by other scholars. The most important is that of Simonet et al. (2016), whose “International Database on REDD+ Projects linking Economic, Carbon and Communities data” (ID-RECCO) provided the inspiration and starting point for my own database. ID-RECCO is a database of 454 REDD+ projects located in 56 countries, coded on up to 110 variables per project. It is an impressive feat of data aggregation and, to the best of my knowledge, is the largest database of REDD+ projects publicly available. At the same time, as there is no official central database or organisation that tracks REDD+ projects, it is near impossible to know whether any dataset captures the full universe of projects. The definition of REDD+ projects I use in this thesis is that elaborated by Simonet et al. (2016), which serves as the criteria for inclusion in their dataset and thereby the basis for my own. They required REDD+ projects to meet four criteria: (i) “are located at the local or landscape, but not national, scale”; (ii) “have the explicit aim of reducing emissions from deforestation and forest degradation, improving forest conservation or management, or enhancing forest sequestration”; (iii) “are financed by REDD+ funds and/or carbon markets”; and (iv) are “located in forested, non-Annex I countries and thus potentially involved in the UNFCCC REDD+ mechanism”⁵ (Simonet et al. 2015, 10).

⁵ This fourth criterion distinguishes REDD+ projects from the broader category of “forest carbon projects”, which incorporates projects in Annex I countries.

This is a very broad definition of a REDD+ project that conflicts with narrower potential interpretations, such as one that only includes “official” pilot projects from national REDD+ strategies or one that excludes all commercial afforestation activities. The broad definition captures both projects that fully embrace the title of being a REDD+ project, those that are only using the rubric of REDD+ to gain visibility, and those that do not engage with the concept of REDD+ at all but still meet the definitional criteria outlined above. The value of this broad set of criteria is that it allows me to capture a large number of comparable TCG observations. However, while the variance amongst these projects is appropriate for considering them as examples of (the even more wide-ranging world of) TCG, the trade-off is that the projects may be too dissimilar for me to draw conclusions about their design that are precise enough to make serious advances on the work of scholars who are working specifically on REDD+ and its nuances. This thesis aims to contribute primarily to the TCG literature and it is difficult to, with the same data, also draw conclusions of equal specificity to the REDD+-specific literature. The latter is often much more finely grained and often distinguishes between the types of projects that have been brought under a singular umbrella in this thesis. As this chapter elucidates, the coding for projects in my database is coarse and only captures broad variation in project design. Nonetheless, the systematic approach I take to examining REDD+ projects does, in addition to leveraging them to reflect on how environmental beliefs shape TCG, offer some insights that should be useful for the scholarly and policy communities working on REDD+.

Following the criteria described above, Simonet et. al (2016) built their dataset by amalgamating 21 diverse existing sources of REDD+ projects, including databases created by NGOs, records of voluntary carbon standards, and existing academic studies. The different focuses and origins of each add a degree of balance that would be missing in a single database, meaning it should suffer from less selection bias than any of its component

sources. Although one cannot be certain, it should contain a significant percentage of the total population of REDD+ projects. It includes projects that meet the criteria but are affiliated with other mechanisms, such as the CDM. Projects that are missing are likely to lack international project developers and not be associated with any certification scheme. These are two attributes that lend to greater visibility of a project so without them there is a greater chance of a project having been overlooked by the sources comprising ID-RECCO.

I used the list of projects in ID-RECCO as the starting point of my database. It provided the largest starting sample of REDD+ projects available that I later whittled down through minor edits such as removing duplicates, projects for which neither publicly available information nor contact information was available, and projects that did not directly pursue REDD+ objectives of emission reductions or sequestration (e.g. that only focused on capacity building). ID-RECCO codes the projects on a myriad of variables, including many related to my interest in the focus, financing, and MRV of REDD+ projects. It also contains information about their project developers. However, the majority of this data could not be used effectively for a quantitative analysis such as my own. This is due to the large amount that is missing and its inconsistent manner of entry. Many variables, for example, are coded with combinations of numbers of written descriptions. This is not to devalue the database, however, as such inconsistencies are reflected by the nature of the publicly available data that exists for REDD+ projects in the sources mined for its creation; if anything, ID-RECCO is an excellent reflection of the world of REDD+ project data as it exists. Simonet et al. (2016) acknowledge the limitations of the database and even include variables that reflect how complete the data is for different variables. ID-RECCO is intended as a public, collaborative source that will improve in quality as other scholars engage with and contribute towards it. I certainly hope that many will do so and that my database will complement this.

To briefly outline the coding process (detailed explanations of coding the dependent and independent variables are provided in the following sub-sections of this chapter), projects from the ID-RECCO database were selected in turn via random number generation. I then coded each project based on the publicly available information that could be obtained through an internet search. As projects in the ID-RECCO list were clustered by region and those with the same core project developers often listed consecutively, randomising my coding order helped maintain a methodical coding approach that could be hampered by coding many similar projects successively. Each project was coded on five aspects of its design (dependent variables) and the project developers on their actor type and environmental beliefs (independent variables). I interpreted sources in English or Spanish directly while sources in other languages were interpreted with the assistance of Google Translate.

The aspects of project design coded as dependent variables were chosen based on the key REDD+ debates discussed in the introductory chapter. They are the emphasis in the project design placed upon (a) social and economic benefits for local communities, (b) ecological benefits, (c) financing from market mechanisms, (d) financing from non-market mechanisms, (e) and local participation in MRV processes. These are broad categories, but deliberately so as the data sources available rarely provide the granular detail to reveal variation within sub-debates in category. Furthermore, the overall objective of this thesis is not to be submerged in the nitty-gritty of REDD+ projects. It is to draw on their broad trends to gain insight into the effect of environmental beliefs in a way that may translate to the study of TCG at large. The design aspects were each coded as 3-point ordinal variables that reflect the emphasis placed on them. A score of 1 represents low emphasis, 2 medium emphasis, and 3 high emphasis. To complement this ordinal structure, a binary coding system was also employed. Scores of either 1 or 2 from the ordinal scale were automatically

converted to 0 (no emphasis on the design aspect) and scores of 3 to 1 (emphasis on the design aspect). Thus, the binary system applies a more rigorous standard for projects to be coded as emphasising a design aspect. As will be discussed later, the binary coding system is the one I proceed with for my main analyses. The major sources of data for the dependent variables were Project Design Documents (PDDs) and Project Idea Notes (PINs), many of which were created for certification standards. Other important sources included project websites, information about projects on developer websites, and online project databases such as the Forest Carbon Portal and Global Canopy Programme's REDD Desk.

Project developers had their environmental beliefs coded based on one of the Clapp and Dauvergne (2011)'s environmental worldviews (market liberal, institutionalist, bioenvironmentalist, or social green). The actor types from amongst which project developers were coded were (i) host country private sector, (ii) international private sector, (iii) host country NGO, (iv) international NGO, (v) host country national public sector, (vi) host country subnational public sector, (vii) international national public sector, (viii) international subnational public sector, (ix) university / research institution, (x) PPP, (xi) intergovernmental organisation (IGO), and (xii) multilateral development bank (MDB). For coding environmental beliefs, the key sources were websites of the project developers, particularly pages that outlined organisational missions, visions, and philosophies of work. Actor types could be straightforwardly deduced by the name and basic information available about project developer or how they are described in project documents.

In developing my coding practice, I took guidance from the principles of qualitative content analysis. Phillip Mayring, one of the leading authors of this method, describes it as “an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step by step models, without rash quantification” (Mayring 2000, 2). There are a range of detailed procedures for content

analysis described by Mayring and others but, unfortunately, the data sources I work with are very limited and not conducive to many of these. For many of the project developers, the only available and relevant data for coding the worldview was a couple lines of text. For others, this information was not expressed directly in the language of environmental beliefs, so specific contextual interpretation and understanding was required. There are also no previous studies or theoretical grounding for approaching the systematic coding of environmental beliefs to draw on or to which I can compare. For the dependent variables there was often more information, particularly if a PDD for a certification scheme was available, but the level of detail within these still varies substantially. The coding is ultimately based on subjective judgements, but the level and kind of information readily accessible for projects and their developers necessitates this. However, by pursuing a structured, rigorous, and thoughtful process, translated to the realities of my data sources and relative novelty of my approach, the spirit of content analysis could be followed. This is conveyed in more detail in what follows for the dependent variables followed by the independent variables. A preliminary check of intercoder reliability was also carried out, a discussion of which can be found in Appendix 1. The full database including the final coding and all the sources used saved as .pdfs is available in Appendix 4.

The possibility of strategic communication was an important consideration when coding as the majority of my data is self-reported, or communicative expressions by the project developers themselves. The concern is that actors are taking into account the effect their words might have on others and therefore not expressing themselves honestly. For project design, I think the risk is minimal. 75% of the projects are either certified or intending to become certified by independent certification schemes that involve third-party auditing to ensure projects are implemented as designed. This should reduce the likelihood of project developers offering misleading information in project documents to an acceptable level. For

environmental beliefs, the risk is also considered to be low despite there not being a similar mechanism to ward it off. While there may be strategic incentives to overstate commitment to dealing with environmental problems, particularly for public sector actors and consumer-facing private sector actors, there is little with regards to the *type* of environmentalism one supports. This is what I attempted to capture in coding environmental beliefs. Furthermore, as already mentioned, the environmental worldviews are broad categories; if a project developer was moderating its language slightly it would likely still be coded with the same worldview barring it being a borderline case, which would make it difficult to code confidently regardless. Ultimately, after searching for the best information available, a subjective judgement had to be made for each variable. If there was insufficient information to inform a judgement, the variable was coded as “not determined” (ND).⁶ A code book that outlines the coding criteria can be found in Appendix 3.

Dependent variable coding: project design

To illustrate the judgement criteria for coding the dependent variable, consider the social benefits design aspect. If social benefits are clearly outlined as a priority and main objective of the project, it would be coded as having a high emphasis (as a ‘3’). However, if social benefits are portrayed as an important side benefit of activities that ultimately pursue a different primary objective, such as tree planting that creates jobs and training opportunities but is primarily to sequester carbon and produce commercial timber, it would be coded as a having a medium emphasis (as a ‘2’). If a project does not intend to promote social benefits

⁶ For projects that I was not able to code a variable(s) I attempted to contact one of the key project developers directly via email until March 2018. I used emails templates that were translated from English into Spanish, Portuguese, French, and Indonesian by native speakers for contacting project developers that did not operate in English. I conducted the same outreach for obtaining missing data on environmental worldviews. The email templates can be found alongside the code book in Appendix 3.

and/or it is not a key mechanism to facilitate other objectives and is merely a by-product at best, it would be coded as having a low emphasis (as a '1'). Similar logic was applied to the coding of the other four dependent variables/aspects of project design.

To illustrate this in detail let us consider an example from the database: “the Sine-Saloum delta mangrove⁷ ecosystem restoration project” (SSDMP).⁸ Its Plan Vivo PIN outlines two project developers: Face the Future, a Dutch NGO, and the West African Association for Marine Environment (WAAME) a Senegalese NGO. These are clearly listed under the heading of “project coordinator and contact details” and there are no references to other actors having a significant hand in project design elsewhere in the document (Face the Future and WAAME 2012). Additionally, on the third party Blue Carbon Portal website, after a description of SSDMP as a Face the Future project, WAAME is listed as the partner in the project with no mention of any other organisations (Blue Carbon Portal n.d.). As such, these two organisations are coded as the two project developers.

Moving to the dependent variables, the ordinal and binary coding scores for each design aspect are shown in Table 1. Regarding the project focuses, the PIN summarises its aims as “improving local communities’ well-being and buffer climate change impacts while contributing to conserving marine and coastal biodiversity. Water salinity will also be

⁷ Despite not being what comes to mind for most people when they think of a forest project, mangroves are considered within the realm of REDD+. They are often recognised as a type of “blue forest” and known as important carbon sinks as well as for providing a range of other ecological services.

⁸ SSDMP was ultimately discontinued but had its PIN approved before then, which contains a coherent project design. As the quantitative part of this thesis does not examine implementation, discontinued projects are maintained in the database if they still reached a stage of serious project design.

Table 1: Project design coding for the Sine-Saloum delta mangrove ecosystem restoration project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design (ordinal)	HIGH	MEDIUM	HIGH	LOW	HIGH
Emphasis in project design (binary)	YES	NO	YES	NO	YES

improved by the project” (Face the Future and WAAME 2012). This immediately implies that the focus of the project is on a number of social benefits (improved well-being, buffering against climate impacts, and improved water salinity), while also noting some ecological ones (conservation of biodiversity). The more detailed PIN account of “project objectives and activities” says

“The project is aimed at improving local communities’ well being and buffer [sic] the effects of climate change through the restoration of mangrove ecosystems of the Sine-Saloum Delta. In addition, the project facilitates climate mitigation through long term carbon sequestration. The project is community based and consists of planting 1000 ha of mangrove (5 million trees) in 26 villages of Djilor, Djirnda and Bassoul, which is key in providing local community members with improved livelihood activities and preserving their marine a lifestyle, at risk of disappearing should the project not take place. All community leaders that Face-the-Future met with echoed a fear of losing these activities now and for the generations to come” (Face the Future and WAAME 2012).⁹

⁹ In the coding examples used in this chapter, all quotes are taken directly from original sources. Spelling and grammar in the quotes reflects exactly how it is expressed in these sources with none of my own editing.

This again puts social benefits at the forefront, adding the risk of disappearing livelihoods as a normative supplement to the explicit statements of project focus. Ecological benefits receive another mention, but here it is phrased as a means to achieve social benefits (“...improving local communities’ well being and buffer the effects of climate change *through* the restoration of mangrove ecosystems”). Furthermore, carbon sequestration is phrased as an additional benefit after social benefits, suggesting the latter is truly the primary priority for the project. The first line of this excerpt is also repeated as the description of the project on the Blue Carbon Portal website (Blue Carbon Portal n.d.). Looking at the PIN’s description of project activities, the following are mentioned:

- “Sensitization and capacity building of local communities”
- “Identification and restoration of degraded mangrove sites”
- “Development of alternative livelihood activities such as market gardening, apiculture, oyster farming, fishing, etc. Activities such as these will be long-term and sustainable sources of income resulting in poverty alleviation”.

(Face the Future and WAAME 2012)

The first and third of these activities are clearly geared towards generating social benefits with the description of the third going as far to explicitly describe how it is expected to do so (“Activities such as these will be long-term and sustainable sources of income resulting in poverty alleviation”). The second activity represents ecological benefits, but the same ones that have already been described above as existing as a means towards more strongly emphasised social benefits. Based on these sources, the project is coded ordinally as placing a high emphasis on social benefits and a medium emphasis on ecological benefits. In the binary coding this corresponds to an emphasis on the former and not on the latter.

The two dependent variables for project financing are coded based on the PIN. There are several sections dedicated to describing the structure of revenue sharing from the carbon credits it generates. These are referred to by their technical name as verified emission reductions (VERs). One such section highlights the centrality of this revenue to the project:

“In order to guarantee fair revenue sharing, the project budget has foreseen a scheme to feed a fund for micro credits with €200,000 going to the community groups for adaptation measures. This will be paid simultaneously to carbon credits being issued against specific KPI's and milestones (to be agreed) as a long term incentive for protecting the restored area.

In addition, the Community carbon rights will be honoured by granting 50% of the carbon profits to the villages in 2 ways:

- A guaranteed carbon income: whereby the investor will need to commit to selling the carbon at least 1.23 € over cost price (@8€) and share the margin of € 0.615 per estimated VER with the local fund. This should guarantee at least €125.000. Should the carbon sell lower, this amount is due to the local community fund simultaneously to carbon issuance.
- A variable carbon income: should the carbon sell @ €9 then revenue sharing of 50% can mean up to €225,000 for the community fund during the initial 5 years of the project.”

(Face the Future and WAAME 2012)

These are large sums of money calculated based on carbon revenue over the project's 30-year proposed lifespan. The fact that details are provided for this and there are no other descriptions of specific revenue sources elsewhere in the document suggest that market financing is highly emphasised while non-market financing is not. This is supported in a later section of the PIN that outlines projected sources of start-up financing for the project:

“We are currently working with various organizations based in Germany on securing funding. <http://www.forestcarbongroup.de/> and Forest Finance. Their team was on

site on July 21/22 2012. We will be looking for impact investors rather than carbon traders to pre-finance this project” (Face the Future and WAAME 2012).

The project developers state that they will be specifically looking for start-up financing from market sources (impact investor) and, tellingly, the alternative that they have rejected (carbon traders) is also a market source. This suggests that there is little interest from the project developers in non-market financing sources. Based on this, SSDMP is coded ordinarily as placing a high emphasis on market financing and a low emphasis on non-market financing. In the binary coding this corresponds to an emphasis on the former and no emphasis on the latter.

Finally, the local MRV dependent variable coding can also be derived from the PIN. It describes a MRV structure which involves both Face the Future and WAAME, with a transition over time to the latter managing it in its entirety. WAAME is a local NGO that is embedded in the local community, directly employing many community members and facilitating the involvement of others. Due to this close link, control of MRV procedures by WAAME is considered to amount to local MRV unless it is framed in a way that suggests external technical experts are in the lead. Looking to the PIN, a section describing the distribution of responsibilities reveals that WAAME plays a major role in the project’s MRV:

“Governance structure:

- Project coordinators: Face The Future together with WAAME taking over after year 6.
- Face the Future will manage the certification and carbon sales aspect,
- WAAME is the coordinator in Senegal and take over future verification in year 6.

Technical functions: WAAME

- Providing technical support and training to producers in planning and implementing project activities;

- Developing, reviewing and updating forestry and agroforestry systems (technical specifications);
- Evaluating Plan Vivos
- Monitoring Plan Vivos.

Administrative functions: Face The Future/ WAAME

- Registration and recording of Plan Vivos and sale agreements: Face The Future
- Managing the use of project finance in the Plan Vivo and making payments to producers: WAAME
- Coordinating and recording monitoring: WAAME
- Negotiating sales of Plan vivo Certificates: Face The Future
- Reporting to the Plan Vivo Foundation: Face The Future
- Contracting project validation and verification: Face The Future
- Managing project data: Face The Future”

(Face the Future and WAAME 2012)

These descriptions of WAAME managing technical monitoring and evaluation roles suggests that there is an emphasis on local MRV. The fact that after six years WAAME will assume the carbon certification component of the project signals that this local involvement is a fundamental goal, as WAAME would then be managing it for the majority of the project lifespan. This is reinforced by the description of the contractual basis of the project:

“In addition, in each benefitting village, a facilitator will be hired by local village committees for the facilitation and monitoring of the project activities. WAAME will build in those village delegates to coordinate the activities. Local leaders will thus be the link between the NGO and the villagers and be in charge of sensitizing the villagers’ mangrove reforestation and ongoing monitoring” (Face the Future and WAAME 2012).

Together, these sections suggest there is a significant focus on local MRV, which is characteristic of Plan Vivo projects. The project is this coded ordinally as placing a high emphasis on local MRV, which corresponds to emphasis in the binary coding.

Overall, the SSDMP is a useful example of project coding because it has variation across the dependent variables. It draws on two sources, with the PIN providing the bulk of

the information. This is common for many projects in the database, as PINs and PDDs tend to provide the most detailed project information. Often there are supporting sources such as summaries on third party websites or on the websites of project developers themselves.

Although originally intended as a robustness check, the binary coding became the primary one that is analysed in this thesis. As will be seen in Chapter 5, the ordinal coding did not uphold the proportional odds assumption required for the ordinal logistic regressions. A generalised ordered logistic regression was able to account for these but created a much messier analysis for results that ultimately mirrored those from the binary coding. The latter more clearly reveals the dynamics of interest and, by requiring greater variation in the data to detect an effect, means more weight can be given to the statistically significant results that are found. This is discussed again in the next chapter, but for now let it be noted that the presentation of statistics from the database in this chapter and the regression in the analysis in the next both reflect the binary coding. The ordinal coding is referred to where useful to provide additional detail. Test results for the proportional odds assumption along with a regression table for the generalised ordered logistic regression are provided in Appendix 2.

Independent variable coding: environmental beliefs of project developers

In coding the environmental beliefs of project developers with the environmental worldviews framework, websites of the developers were the primary source of information, particularly pages that outlined organisational missions, visions, and philosophies of work. In considering the fit for each project developer with the environmental worldviews, I concentrated on identifying language that corresponded with the three interrelated aspects of environmental beliefs mentioned in Chapter 2: (1) conceptions of the nature of

Table 2: Summary of ideas constituting each environmental worldview

	Nature of environmental problems	Normative ideas	Causal ideas / solutions
Market liberal	Market failure, inefficiencies	Globalised world and economic growth	Economic liberalisation, growth, technology transfer
Institutionalist	Collective action problem, failure of coordination	Institutionalised global governance	Strengthening international institutions and state capacity
Bioenvironmentalist	Overshoot of ecological limits	Steady-state / circular economy, strict protections of natural areas	Reduction of consumption, nature conservation, population control
Social Green	Unsustainable economic system inextricably linked to exploitation and inequality	Transformed economic system, reduction of inequalities, decentralisation of power	Poverty alleviation, North-South redistribution, empowerment of marginalised communities

environmental problems, (2) normative ideas about environmentalism, and (3) causal ideas about the efficacy of potential solutions to environmental problems. These are outlined for each worldview in Table 2. For a more detailed refresher on the worldviews I direct the reader back to Chapter 2 (pp.32–39). These summaries are obviously simplifications of the worldviews (which are already ideal types) and the three components of environmental

beliefs I have identified do not in practice separate as simply as I have described. Nonetheless, this structure provides a useful structure for maintaining a disciplined coding approach that considers the different dimensions of environmental beliefs that I am interested in and concentrates on the distinguishing features of each worldview.

To illustrate the judgement criteria for coding the independent variable, consider coding the bioenvironmentalist worldview: if the mission of a project developer was described in terms of conservation and the need to *protect* and *preserve* the environment, this would be a strong indicator as it speaks to a fundamental concern for the overexploitation or destruction of nature. An emphasis in a developer's vision on increasing production, productivity, or economic growth would in turn be a red flag suggesting that the bioenvironmentalist worldview is not a good fit. If, on the other hand, the developer's narrative promoted developing radically different, sustainable economic models such as those related to steady-state economics, then this would be suggestive of a bioenvironmentalist worldview.

As for the dependent variables, a full example from the database is helpful to properly illustrate the process for coding environmental worldviews for project developers. An example of a bioenvironmentalist project developer is the Borneo Orangutan Survival (BOS) Foundation, an Indonesian NGO:

“Established in 1991, Borneo Orangutan Survival (BOS) Foundation is an Indonesian non-profit organization dedicated to the conservation of the Bornean orangutan and its habitat, in cooperation with local communities, the Indonesian Ministry of Forestry and international partner organizations. BOS Foundation is currently taking care of almost 650 orangutans with the support of 400 highly devoted staff, as well as experts in primatology, biodiversity, ecology, forest

rehabilitation, agroforestry, community empowerment, education, and orangutan healthcare” (BOS Foundation n.d.).¹⁰

This statement is the general description of the organisation provided on the BOS Foundation website under “About”. The emphasis it places on conservation of nature, specifically the Bornean orangutan and its habitat relate directly to the normative and causal ideas of the bioenvironmentalist worldview. Additionally, the choice of the word “survival” in the organisation’s name invokes a problem conceptualisation based on the overexploitation and destruction of nature, from which the orangutan must be “saved” — its very survival is at stake. Looking at the BOS Foundation’s mission and vision statements provides more support for its bioenvironmentalist coding:

“The BOS Foundation Vision

‘The realization of Bornean orangutan and habitat conservation with community’s participation’

The BOS Foundation Mission

- Accelerating the release of Bornean orangutans from *ex-situ* to *in-situ* locations
- Encouraging the protection of Bornean orangutans and their habitat
- Increasing the empowerment of communities surrounding orangutan habitat
- Supporting research and education activities for the conservation of Bornean orangutans and their habitat
- Promoting the participation of and partnership with all stakeholders

¹⁰ The web page that I used to code the BOS Foundation has been updated since I coded it in December 2016. The URL associated with this reference now leads to a blank page, however the original page that I coded from can be found as a .pdf file in the database available in Appendix 4 under project developer no. 100. The new BOS Foundation website provides more detail but would still have been coded as bioenvironmentalist.

- “Strengthening institutional capacity” (BOS Foundation n.d.)¹¹

The conservation ethos of the bioenvironmentalist worldview comes through with the front-and-centre placing of species and habitat protection. However, looking closely at both sources, there is also language that points to worldviews other than the bioenvironmentalist. Most significantly, in both excerpts there are references to community cooperation, participation, and empowerment. These are more reflective of the causal and normative ideas of the social green worldview. This combination of references aligning with more than one environmental worldview is natural and exists for project developers throughout the database. As I have already mentioned, the descriptions provided by Clapp and Dauvergne (2011) are ideal types: there should be no expectation of project developers coded with a worldview to conform exactly and without variation. In the case of the BOS Foundation, the community participation element is clearly important to the organisation but on the balance is not considered sufficient to tip the coding to the social green worldview. References to the protection of threatened nature are always presented first or more prominently and in the “About” excerpt, the expertise drawn on by the organisation related to conservation far outnumber those related to community engagement. The data sources I draw on rarely, and are not expected to, refer to all the elements that make up these ideal types. The data for the BOS Foundation, for example, does not refer to notions of steady-state economics or human population control but is nonetheless clearly most aligned with the bioenvironmentalist worldview.

My coding is the first effort I am aware of to systematically measure environmental beliefs for a large-N sample. It is also the first application of the environmental worldviews

¹¹ The same situation as described in the previous footnote applies to this text too, with an update of the website changing the information, but not in a way that affects coding decisions.

framework at this scale. Some recent work on REDD+ has tried to code a related type of beliefs for specific organisations, using what Sabatier (1988) calls “policy core” beliefs. Sabatier developed these with the concept of advocacy coalitions and defines these as “fundamental policy positions concerning the basic strategies for achieving normative axioms” (Sabatier 1988, 145). These are most similar to the causal idea component of my concept of environmental beliefs. In the context of REDD+, Babon et al. (2014) used a combination of a survey, interviews, and document analysis to measure these policy core beliefs for actors involved with REDD+ in Papua New Guinea. They derived six such beliefs: “(1) importance of tackling drivers of deforestation and degradation, (2) need for structural and/or governance reforms, (3) promoting the rights of and benefits for forest-dependent peoples/customary landowners, (4) promoting evidence-based policy, (5) the need for multiactor and multilevel, including decentralized, governance, and (6) use of market-based mechanisms” (Babon et al. 2014 ‘Data collection and analytical methods’, para. 6). They did not, however, use these beliefs to explain policy outcomes, instead finishing their analysis by grouping actors into prospective advocacy coalitions based on shared beliefs.

Di Gregorio et al. (2017) also utilise policy core beliefs, deriving them from a survey of 428 organisations across eight countries that asked respondents to report ordinarily how much time they spent on three kinds of activities: carbon measurement or trading, community livelihoods development, or research and policy design. The authors do not define or measure specific policy core beliefs but assume that a cluster of them are represented by the focuses on each of these activities. Unlike Babon et al. (2014), but relevant to this thesis, Di Gregorio et al. (2017) use these belief proxies to explain outcomes, namely use of the three environmental meta-discourses pointed out in Chapter 3 (ecological modernisation, green governmentality, and civic environmentalism). This approach is an

interesting juxtaposition to my own. They use activities to measure beliefs in order to explain discourse, while I use excerpts of discourse and text to measure beliefs in order to explain activities. Di Gregorio et al. (2017) use activities as a proxy for beliefs to try and manage the strategic communication issues I outlined earlier, but ultimately they may also apply to authors' survey responses as well as their interpretation of discourse. Ultimately, the main difference in our approaches is that my focus on environmental beliefs is broader than their policy core beliefs and I am interested in their effect on specific policy/project outcomes rather than on discourse.

REDD+ PROJECTS: BASIC FACTS AND VARIATION

The database contains 389 REDD+ projects and 857 project developers. As the primary quantitative model I use in Chapter 4 is the binary logistic model, the description of the database provided here is also based on the binary coding. In this section I consider, in order, basic facts and variation in project start dates and geographic spread, project designs, and the environmental beliefs and actor types of project developers.

Figure 1 shows the cumulative number of REDD+ projects based on the starting dates of those coded in my database, between 1990 and 2015. There is an exponential growth of projects with 75% of projects started after 2006. This coincides with the emergence of REDD+ as a concept in the UNFCCC and voluntary carbon markets upon which many REDD+ projects depend. The most prominent carbon credit certification schemes that

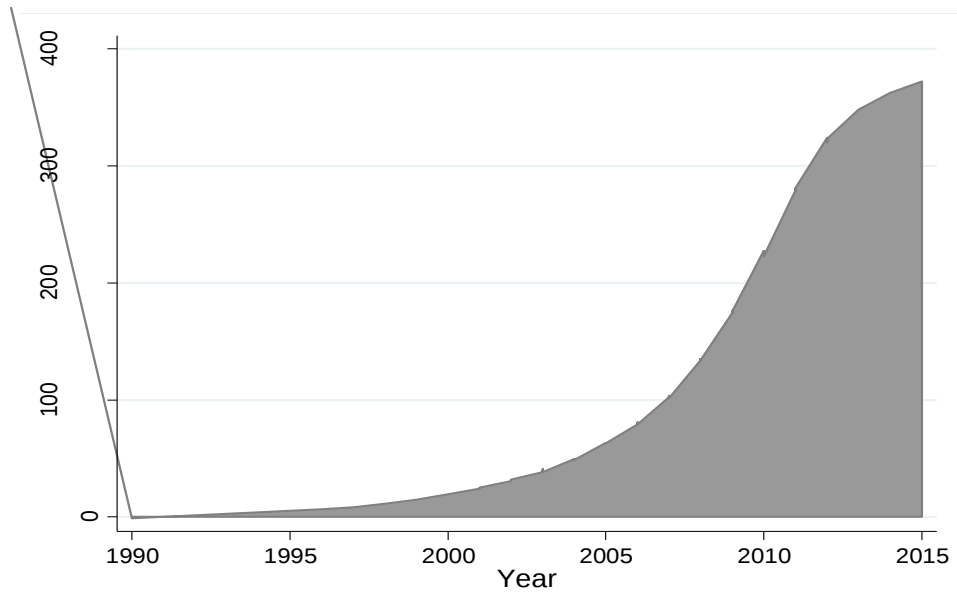


Figure 1: The rise of REDD+ projects, 1990–2015

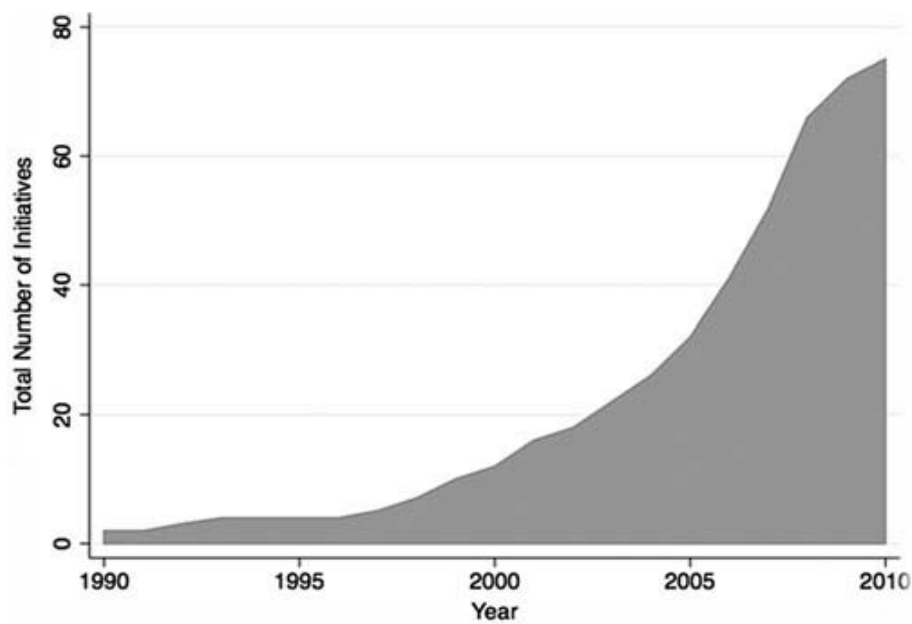


Figure 2: The rise of transnational climate governance, 1990-2010

(Roger, Hale, and Andonova 2017)

underpin most of the market, the VCS, CCBS, and Carbon Fix started in 2005, 2005, and 2007, respectively (IIED n.d.; CCBA n.d.; Tell It's Green n.d.). Plan Vivo began in 1994 but only began to expand significantly after a new version of the standard was released in 2008 (Plan Vivo n.d.). By comparing this to Figure 2, created by Roger, Hale, and

Andonova, (2017), we can see the growth of REDD+ aligns with the growth of TCG initiatives more broadly.

Figure 3 shows the geographic spread of the projects on a heat map, which are carried out in 55 different host countries. A darker shade represents a higher number of projects located in that country. The spread reflects the fact that the REDD+ projects in this database are by definition only located in UNFCCC Annex I countries. By virtue of all being located in the Global South, bringing REDD+ projects into the study of TCG makes an important contribution to addressing the geographic imbalance in the existing literature. Within the Global South, there is a higher concentration of projects in larger countries such as Brazil, the Democratic Republic of the Congo (DRC), China, India, and Indonesia.

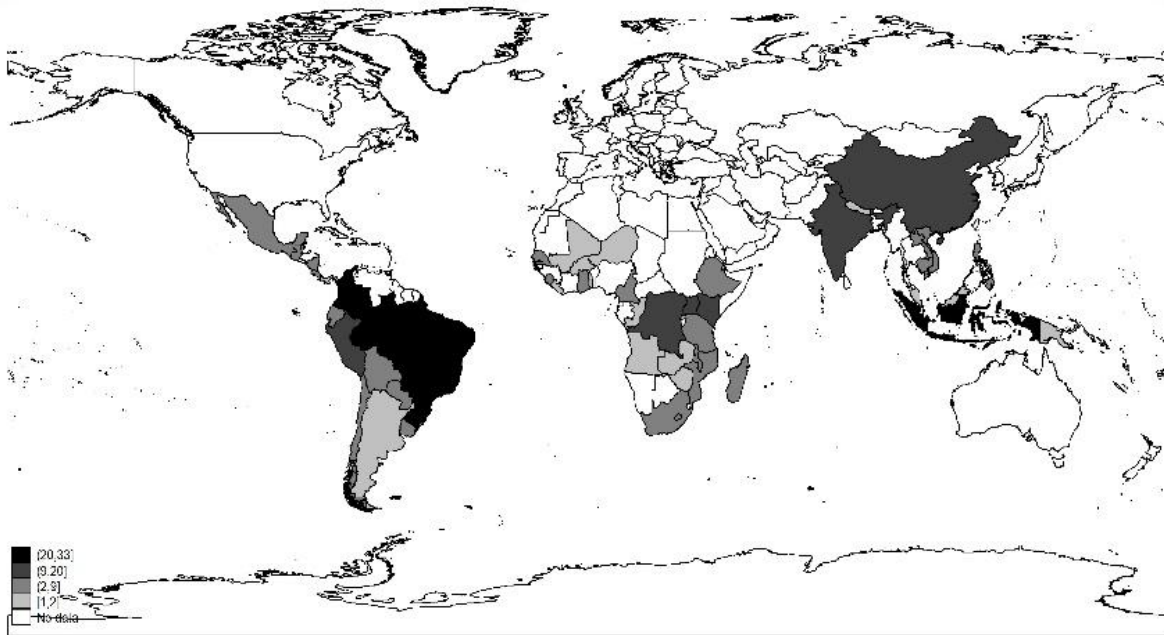


Figure 3: Heat map of REDD+ project host countries

Dependent variables: project design

The 389 projects varied significantly in terms of their design. Within the broad gamut of activities covered by the definition of REDD+ projects provided earlier, for 50% the main activity is afforestation, reforestation, and revegetation (ARR), 47% reducing emissions from deforestation and forest degradation (REDD), and 3% integrated forest management (IFM).¹² In terms of the specific aspects of project design that form my dependent variables, Figure 4 shows that for project focuses, 68% emphasise social benefits and 54% ecological benefits. Additionally, 43% emphasise both and 19% neither. Regarding project finance, on one hand there is significant variation regarding non-market financing, which Figure 4

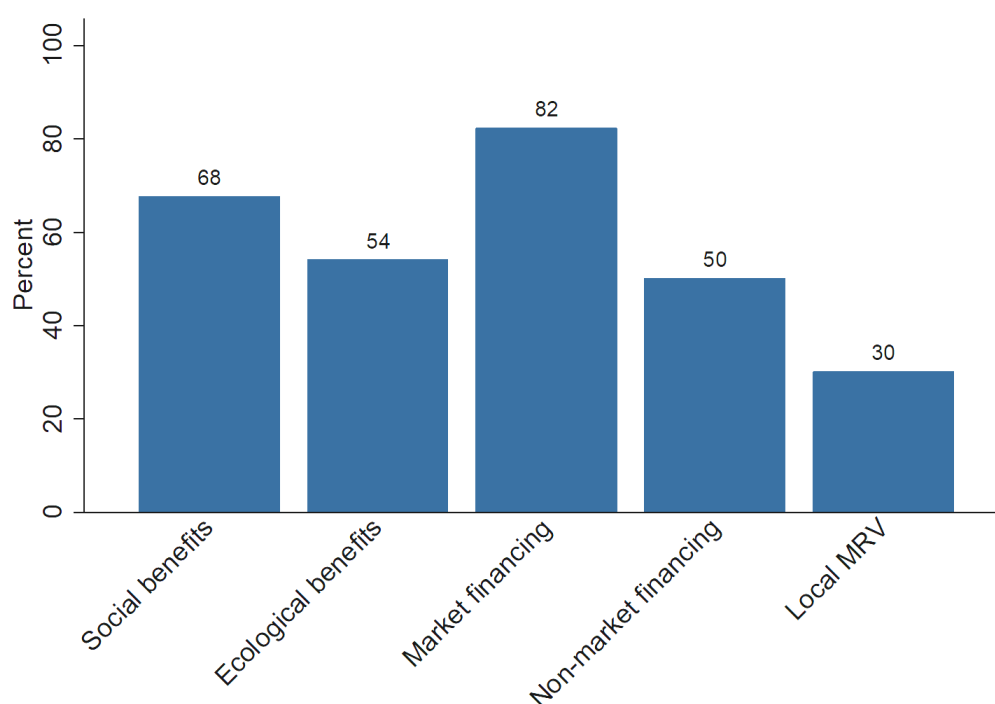


Figure 4: Percentage of projects that emphasise each aspect of project design

shows is emphasised by 50% of projects. On the other, there is much less for market

¹² These are the three main categories of VCS forest project-based standards. REDD activities essentially involve reducing deforestation and degradation, ARR planting trees to sequester carbon, and IFM reducing emissions from and improving the sustainability of forests that are already commercially harvested.

financing, with 82% of projects emphasising it. Understandably, there are no projects that do not emphasise either of the financing sources while 34% emphasise both. A minority of projects, 30%, emphasise local participation and knowledge in their MRV. These figures are consistent across regions and regardless of the main activity type (ARR, REDD, or IFM).

Independent variables: project developers and environmental worldviews

The project developers are those actors deemed to have been involved in the design or implementation of each project. 857 of them were coded in terms of their actor type and with an environmental worldview to capture their environmental beliefs. Figure 5 shows that of project developers whose worldviews could be coded, 55% are market liberal (32% of the total), 21% are bioenvironmentalist (12% of the total), 22% are social green (13% of the total), and 2.4% are institutionalist (1.1% of the total). This dominance of the market liberal

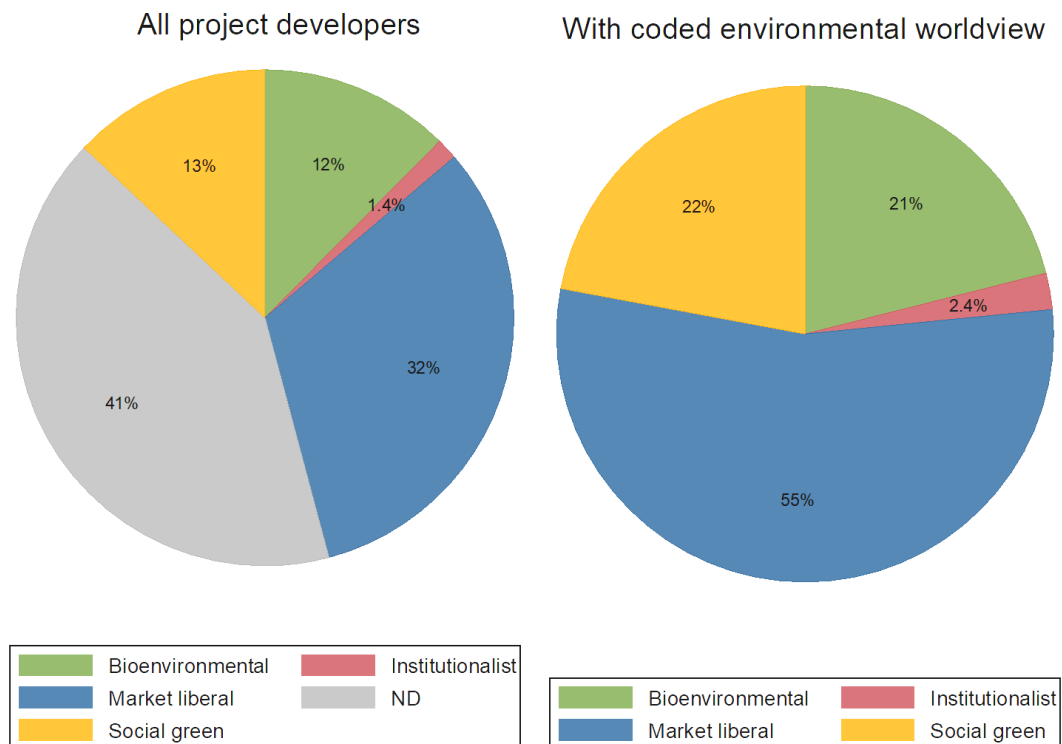


Figure 5: Percentage of project developers with each environmental worldview

worldview is unsurprising given the market-based conceptual origins of REDD+ (den Besten, Arts, and Verkooijen 2014) and the normative backdrop of liberal environmentalism that exists in environmental politics (Bernstein 2001). The discrepancies with the total figures are because an environmental worldview could not be coded (“ND”) for 41% of project developers. This is a significant amount and although I contacted these developers directly to collect missing data, response rates were very low. This leads to potential bias in my quantitative analysis, as I apply an exclusion criterion in my regressions to filter out projects with excessive amounts of missing worldview data. I also introduce some imputed data to reduce the amount that is missing. These are discussed further in Chapter 4 when I present my quantitative model.

To investigate the nature of this potential bias, Figure 6 shows the actor types of project developers that were not coded with an environmental worldview. Public sector actors from host countries (subnational and national) are disproportionately represented.

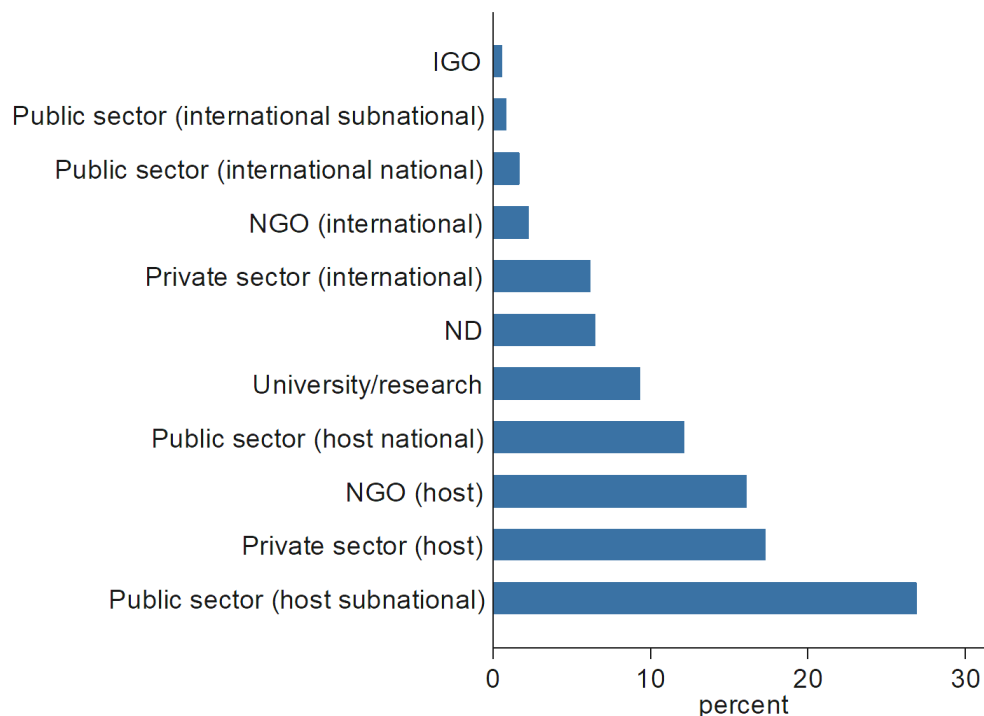


Figure 6: Actor types of project developers missing environmental worldviews

Together, they account for 39% of actors with missing worldviews (compared to 22% in the whole database). Coding the environmental beliefs of public sector actors was difficult because government data sources often lacked public statements of “missions” and “visions” that provided much of the data for private sector actors and NGOs. Government sources would seldom refer to motivations, strategies, focuses, or priorities for work. It is harder, therefore, to ascertain environmental beliefs and code these actors with an environmental worldview. This problem was amplified for host country actors as Global South actors tend to have less resources and less well-established public internet presences, which were key for my coding. It may also be the case that many public sector actors lack a coherent set of environmental beliefs because their logic as public agencies may be to reflect and balance the varied preferences and beliefs of a diverse population. Nonetheless, for public sector actors that could be coded with an environmental worldview, 32% were bioenvironmentalist and 58% market liberal. Figure 6 also shows that a sizeable proportion (23%) of missing environmental worldviews are from private sector actors. For those of these whose environmental beliefs could be coded, 92% were with the market liberal worldview. The missing data for these actor types combine to suggest that the environmental beliefs associated with the market liberal and, to a lesser extent the bioenvironmentalist worldview, are underrepresented in my coding.

Regarding the overall distribution of actor of actor types in the database, the simple distribution is 32% NGO, 32% private sector, and 26% public sector. Figure 7 presents the detailed breakdown: 20% of project developers were host country NGOs, 13% international NGOs, 12% host country private sector actors, 18% international private sector actors, 9% host country national level public sector actors, 12% host country subnational public sector actors, 4% international national level public sector actors, and 0.14% international subnational public sector actors. IGOs (1.4%), MDBs (0.56%), PPPs (0.4%), and university/research institutes (6%) make up the remainder. An actor type could not be coded (“ND”) for 3% of project developers.

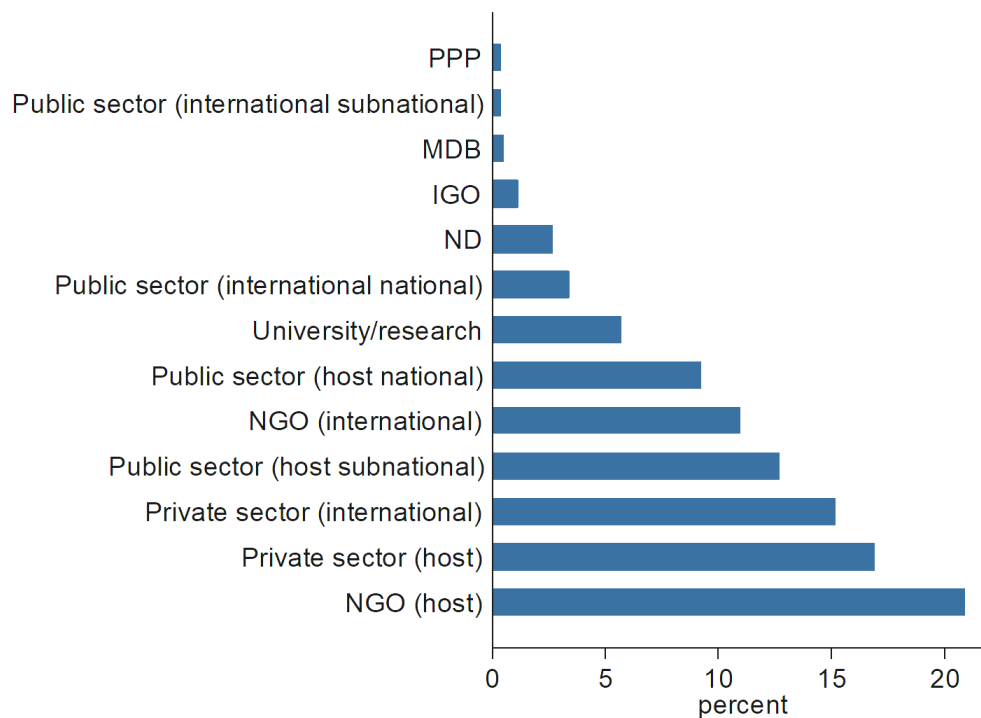


Figure 7: Percentage breakdown of project developer actor types (all project developers)

Before moving on from this discussion of the independent variables, it is worth addressing the scarcity of projects coded with the institutionalist worldview. In Chapter 2, I

noted my expectation that the usefulness of the institutionalist worldview would be limited in coding the environmental beliefs of REDD+ project developers because of its focus on international institutions and state capacity. As predicted, the data sources used to code project developers rarely emphasised this dimension and only 1.1% of project developers were coded with the institutionalist worldview. I choose to drop it from my analyses because of its negligible presence. This leaves the market liberal, bioenvironmentalist, and social green worldviews as my distinct categories to capture the variation in environmental beliefs among REDD+ project developers.

This may surprise some readers, as the very concept of REDD+ could be seen as rooted in an institutionalist worldview. One could argue that actors who might have been coded with the institutionalist worldview ended up with market liberal, which is the most similar. However, if this did occur, it would not be consequential for the argument I advance in this thesis. My core argument is not about the specific effects of particular environmental worldviews but that variation in environmental beliefs they capture is important for outcomes. If some environmental beliefs that might have better fit an institutionalist coding are subsumed into the market liberal, this coding category remains clearly distinct from the bioenvironmentalist and social green worldviews. Results from my quantitative analysis showing a relationship between it and variation in project design would still serve as evidence for the effect of environmental beliefs. All the primary sources are available with my database in Appendix 4 for those who wish to interrogate the coding.

DESCRIPTIVE OBSERVATIONS ABOUT THE IMPORTANCE OF ENVIRONMENTAL BELIEFS

With this basic description of the projects and project developers in place, I now move to consider specific patterns in the database that shed light on how environmental beliefs shape REDD+ projects. I make three descriptive observations: (1) That there are signs of a “like with like” pattern to partner courting, as predicted in H1; (2) that environmental beliefs cannot be assumed simply based on actor type; and (3) that project design may be more additive than zero-sum. These observations are not “smoking guns” in and of themselves but building blocks for the arguments I develop further in Chapters 4–6.

Like goes with like – partner courting along worldview lines

H1 expects initiating project developers to first look to partners with similar environmental beliefs to their own when bringing together a project. This implies there should be projects in my database where all the developers have been coded with the same environmental worldview (“single-worldview projects”) to the extent that the necessary capacities for developing a project can be found among actors in the database with that worldview. The observable implications of this are that, if there are a wide range of actors with one worldview, likely signalling a diverse range of available capacities, we should expect more single-worldview projects based on that environmental worldview. In turn, if a worldview is only found among a narrow range of actors, likely signalling a limited range of available capacities, we should expect to observe it underpinning relatively fewer single-worldview projects.

Looking at the distribution of worldviews in projects, we indeed see this “like goes with like” trend. Figure 8 shows that the market liberal worldview is clearly spread among the greatest range of actor types, followed by the bioenvironmentalist and social green,

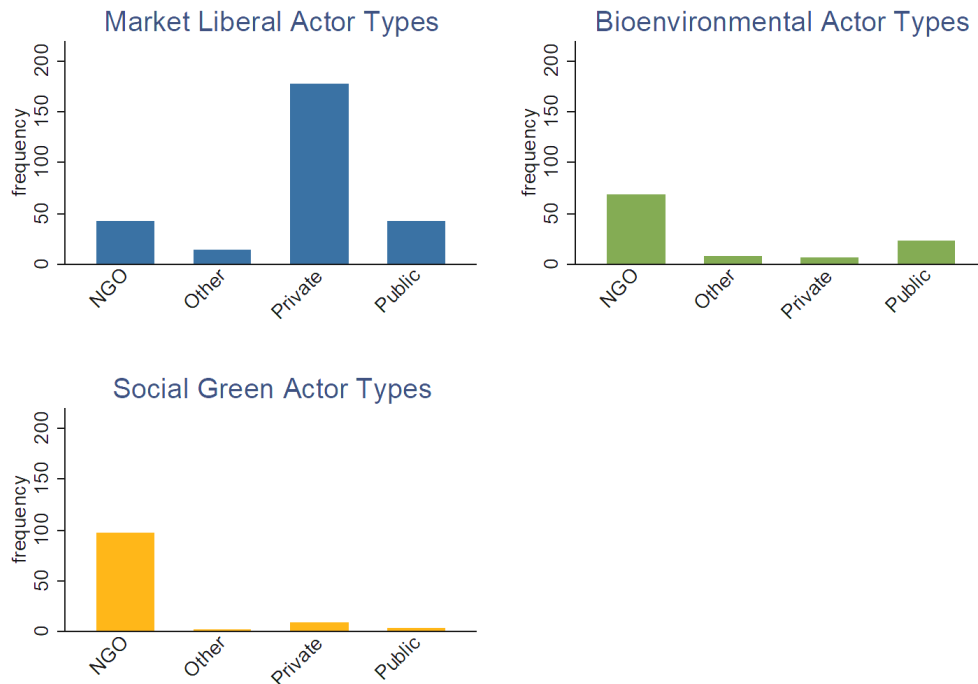


Figure 8: Frequency of simplified actor types with each environmental worldview

respectively. This wider spread of the market liberal worldview is unsurprising given it was by far the most common among in the database. The greater diversity of actors with the market liberal worldview makes it more likely that a market liberal REDD+ project developer can find all the required capacities for a project within their worldview than for a bioenvironmentalist or social green project developer. Figure 9 supports this, showing the variation in single-worldview projects to mirror this distribution of capacities. The market liberal worldview accounts for a majority (74%) of single-worldview projects, followed by the bioenvironmentalist (17%) and the social green (8.7%). There also appears to be a strong tendency to create single-worldview projects, which account for 57% of projects in the

database. These results support H1 by suggesting that project developers prefer to partner with those that share similar environmental beliefs when possible.

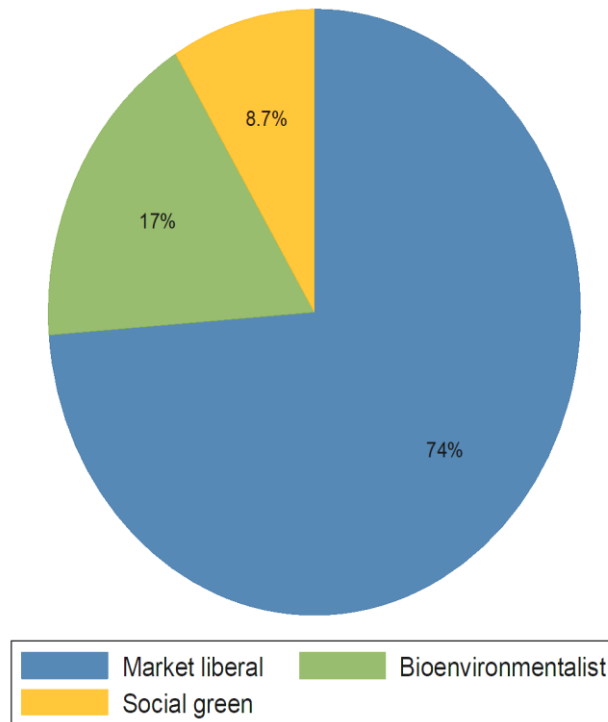


Figure 9: Environmental worldview underpinning projects in which all project developers share the same worldview

This proposition still rests on the functional notion that assembling the required mix of capacities is fundamental to partner courting and so does not contradict the argument of Abbott and Snidal (2009). It does, however, carve out an important explanatory niche for environmental beliefs that complements their argument. Environmental beliefs, it appears, may act as a filtering mechanism that initially limits the pool of potential partners that are considered. Alternatively, initiating project developers may simply evaluate potential partners who share similar environmental beliefs more favourably than those that do not, without any explicit filtering. I develop these potential mechanisms further in Chapter 6 through my case study analysis.

Environmental beliefs are not synonymous with actor type

Another important insight from the database is that, for NGOs and public sector actors in particular, environmental beliefs cannot be simply assumed by actor types. This is highlighted by Figure 8, which shows there are actors from all sectors coded with each environmental worldview. It is important because if, as I argue in this thesis, environmental beliefs are an important determinant of actor preferences, then the accuracy of deriving preferences from actor types, as is commonplace in IR (see, for example, Keohane and Victor 2011; Michaelowa and Michaelowa 2017), can be questioned. The proportion of private sector actors having the market liberal worldview (92%) is probably strong enough to be usefully assumed, but it is not perfect. It is also an imprecise assumption, as a broad range of environmental beliefs can be covered by each worldview. In Chapter 6, we will also see in the case studies that variation in the environmental beliefs of private sector actors, including those coded with the market liberal worldview, can be fundamental to project dynamics.

Project design as more additive than zero-sum

Looking more closely at the project designs, it appears project design may not be as competitive a bargaining process as I originally theorised. In projects where there is more than one environmental worldview among the project developers (mixed-worldview projects), the relative frequency of projects emphasising my coded aspects of project design is almost identical to those of single-worldview projects. Table 3 shows the percentage of projects that emphasise each design aspect for mixed- and single-worldview projects featuring each worldview, as well as the breakdown for the database as a whole. To clarify these definitions, a “pure market liberal project” refers to a single-worldview project where all project developers are coded with the market liberal worldview. A “mixed market liberal

project” is one comprised of project developers with the market liberal and at least one other worldview. The same system applies for the pure and mixed bioenvironmentalist and social green projects.

Table 3: Percentage of “pure” and “mixed” environmental worldview projects that emphasise each aspect of project design

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local-MRV
Whole database	68	54	82	50	30
Pure market liberal	55	33	93	27	21
Mixed market liberal	80	69	79	66	36
Difference	-25	-36	14	-39	-15
Pure bioenvironmentalist	56	76	63	75	35
Mixed bioenvironmentalist	77	74	78	69	35
Difference	-21	2	-15	6	0
Pure social green	82	58	75	63	50
Mixed social green	87	68	83	63	44
Difference	-5	-10	-8	0	6

Table 3 offers an initial snapshot of which aspects of project design are being emphasised by project developers coded with each environmental worldview. For example, it appears the social green worldview is strongly associated with emphasis on social benefits, which is intuitive given the description I have provided of the worldview. There are, however, multiple intervening factors that are not accounted for here that could be affecting this. Making correlational claims at this stage would thus be premature. As such, I reserve this analysis for Chapter 4, where I outline my specific expectations for the relationship between the presence of each worldview and each aspect of project design. I then test these with logistic regressions that allow me to control for intervening factors. In this sub-section I focus solely on the difference between mixed and single-worldview projects and what this tells us about the nature of project design.

To this end, consider the respective scarcity and abundance of large positive and negative values in the difference column of Table 3. This suggests that the process of project design is more additive than zero-sum. There are few cases in which a design aspect emphasised in a single-worldview project would not be if one of the project developers instead had a different environmental worldview. Similarly, there are few cases in which a design aspect that is rarely emphasised in a single-worldview is not emphasised more frequently in a mixed-project. Project developers that want to emphasise a design aspect seem to almost always get their way. If they want to emphasise a design aspect, they do not appear to have to sacrifice this to accommodate a partner with different set of environmental beliefs. The data for the market financing and market liberal worldview is the sole notable exception to this. That for the bioenvironmentalist and social green worldviews with non-market financing and local MRV respectively represent minor exceptions.

This data contradicts the parts of H2a–H2c that expect environmental beliefs to shape the preferences of project developers coded with each worldview against certain design aspects of REDD+ projects. This was based upon project design being theorised as a competitive bargaining situation. Project developers were expected to advocate for their preferred design aspects and resist the inclusion of those their preferences went against. I theorised that this would be particularly evident for project developers coded market liberal worldview, who I expected to have the most zero-sum mentality regarding project design. Instead, it appears that project design is not so competitive, with little resistance to the preferences of other developers with conflicting environmental beliefs. One explanation for this could be the low opportunity cost of not participating in a REDD+ project. Unlike in types of TCG with broader institutional arrangements that can affect entire sectors or regions, a potential project developer is rarely worse off for not joining a project, which are inherently limited in scope. For most actors, there is little incentive to participate in a project

that conflicts with their own preferences. When this is the case, project design is essentially occurring as part of partner courting rather than as an independent subsequent step.

Environmental worldviews are also ideal types, with few project developers expected to have environmental beliefs that perfectly and exclusively map on to one. While many will have preferences driven by their beliefs, it makes sense that many remain open, or at least not vehemently opposed, to alternatives that may arise during the project design process. Based on these results, it is worth considering whether a bargaining framework is the most accurate framing for the process of project design. However, it might also be that significant bargaining over project design does occur, but at a level that is too granular to be detected by my coding. Project developers may come together on shared notions of what a project should broadly emphasise, which is what I have coded, but negotiate fiercely over specific means and measures. The reality is likely a mixture of both, and I continue with the bargaining structure as the theoretical underpinning of my main quantitative model. I do, however, also run a variation of the model based on a more additive notion of project design as a robustness check. This is discussed further in the subsequent chapters based on my quantitative results and evidence from my case studies.

CONCLUSION

This chapter has introduced the database of my thesis. It is originally coded and represents the first systematic look at the design of REDD+ projects and the environmental beliefs of their project developers. With descriptive statistics from the database, I highlighted the significant variation that exists among these. Data limitations had to be navigated in coding the database, but this is to be expected given the novelty of my approach. Despite ideational factors being notoriously difficult to measure, I have demonstrated how environmental

beliefs can be systematically captured with a rigorous coding method. This, and the database itself, should serve as excellent platforms for future research.

A number of important insights were gleaned with descriptive statistics from the database. Firstly, the relative distribution of worldviews across actor types suggests a “like goes with like” pattern to partner courting, where project developers prefer to partner with those that share similar environmental beliefs. Secondly, environmental beliefs cannot be automatically inferred from actor types as significant variation in environmental worldviews was found within many actor types in the database. Thirdly, the process of project design appears to be less competitive and zero-sum than originally hypothesised, with project developers appearing to not resist competing preferences of other developers—at least at my data’s level of granularity. These, and the general description of the variation in REDD+ projects and their developers, provide some useful scene-setting and act as a platform for the analyses in Chapters 4–6. In the next chapter, I present a quantitative analysis of this database. This involves a series of logistic regressions, the results of which reinforce this chapter’s observations and demonstrate an independent influence of environmental beliefs in shaping REDD+ project design. This is an important finding that I build upon in the later chapters and that should help bring environmental beliefs into the spotlight of TCG scholarship.

4. HOW ENVIRONMENTAL BELIEFS SHAPE REDD+ PROJECT DESIGN: THE QUANTITATIVE ANALYSIS

INTRODUCTION

This chapter proceeds to analyse my database of REDD+ projects with a quantitative model. This is the large-N component of the nested analysis. The descriptive statistics presented in the previous chapter have offered some general insights into how projects and the environmental beliefs of their developers vary together but do not amount to a rigorous analysis. In this chapter, I use logistic regressions to distil the independent relationship between the environmental worldviews of REDD+ project developers and project design. Partner courting and implementation are left aside for now and picked up again in Chapter 6. As discussed in the theory chapter, the process of project design is considered as a bargaining situation in which project developers with varying bargaining power based on their capacities contest and negotiate a design outcome. With environmental beliefs theorised to influence the preferences of project developers, it is expected that the final project design will reflect the set of these beliefs with the greatest bargaining power behind it.

The first section of the chapter describes the quantitative model that has been built to test this. I use a series of logistic regressions for each aspect of project design as dependent variables and the coded environmental worldviews of project developers as independent

variables. I also introduce control variables to account for actor type and relevant project and country level factors. The second section briefly recaps H2 and its sub-hypotheses H2a-H2c that relate to specific environmental worldviews. It also outlines specific observable implications from these that I would expect to find in the regression results. The third section presents the results, testing for the observable implications and considering effect size through a regression table and some relevant figures. The final section concludes with a summary and discussion of the findings to set the scene for the case study component of the nested analysis, which follows in Chapters 5 and 6.

DATA AND MODEL

This section presents the regression model and describes the data and variables that comprise it. For each of the five aspects of project design Y_i the regression model can be written as

$$Y_i = \beta_0 + \beta_1(ML_i) + \beta_2(BE_i) + \beta_3(SG_i) + \beta_{Ri}(R_i) + \beta_{Xi}(X_i) + \varepsilon_i$$

β_1 , β_2 , and β_3 are the coefficients for the independent variables ML_i , BE_i , and SG_i , which represent the percentage of project developers for project i with the market liberal worldview, bioenvironmentalist and social green worldviews respectively. R_i represents a vector of variables for the percentage of project developers coded with each of ten actor types while X_i is a vector of the six control variables and ε_i the error term. What follows in this section is a description of each model component starting with the dependent variables, how environmental worldviews are deployed as the independent variables, actor type controls, and finally other project and country level control variables. Summary statistics for each variable are presented at the end of the section in Table 4.

Dependent variables: aspects of project design

The dependent variables are based on the five aspects of project design that were described in the previous chapter: emphasis (or lack thereof) on social benefits, ecological benefits, market financing, non-market financing, and local MRV. Initially, I carried out ordered logistic regressions with the ordinal coding of the dependent variables (high, medium, or low emphasis on each design aspect). However, I found that they failed the proportional odds assumption upon which ordinal logistics regressions rest. The test results for this are provided in Appendix 2.¹³ Instead, the binary coding of the dependent variable (where high from the ordinal coding = 1 (emphasis) and medium or low = 0 (no emphasis)) was used to run binary logistic regressions, and these are the results presented in this chapter. The binary coding also makes for a harder test of the theory as greater variation is required to be detected as a change in the model. To summarise, the dependent variables are emphasis in project design on

- social benefits
- ecological benefits
- market financing
- non-market financing
- local MRV

Independent variables: environmental worldviews

The independent variables in the model are the percentage of project developers with each of the market liberal, bioenvironmentalist, and social green worldviews in each project. It

¹³ I also ran a generalised ordered logistic regression using the user-created STATA package *gologit2*. This allows an ordered logistic regression that relaxes the proportional odds assumption for the variables that violate it. This serves as a robustness check and supports the results from my main, binary model. A regression table for this can be found in Appendix 2.

has been discussed that project design is expected to reflect the environmental beliefs with the most bargaining power behind them but, unfortunately, the direct bargaining power of project developers could not be coded. It is well known that the conceptual complexity of power makes it a difficult as a tricky concept to measure, let alone systematically quantify (Ray and Singer 1973; Barnett and Duvall 2005). The percentage of project developers with each worldview is the best measure that could be used that reflects my theoretical assumptions. In the results, this is referred to as the “main” model. The logic behind it is that every project developer will have some bargaining power, meaning more project developers coded with a particular worldview will entail more bargaining power behind the environmental beliefs that it captures. Of course, this fails to capture the critical factor that not all project developers are equal. The influence of different actors in the bargaining framework can vary both in terms of how much power they wield and the nature of their involvement; that is, are they involved as a lead partner, a technical consultant, a funder, or an implementer, to name a few examples. It possible, for example, that in a project with multiple project developers, power over project design is entirely concentrated in one actor while the others have almost no influence. This is borne out in some of my case studies and described in Chapter 5.

Unfortunately, the data I used to create the database lacked the detail to account for these variations. As a first attempt to systematically measure environmental beliefs in TCG, such imperfections are to be expected. Nonetheless, this measurement of the independent variables remains the most appropriate given the context. As my results will show, it is still sufficiently precise to advance our understanding of how environmental beliefs shape TCG and demonstrate their importance and viability as a research focus. As a robustness check, I also run a variation of the model with the independent variable measured as the binary presence (or absence) of a project developer with each environmental worldview. This

attempts to reflect the possibility that project design is more of an additive than competitive bargaining process as was identified in Chapter 3. I include the results of this below (referred to as the “binary presence of worldview” model), which reinforce the those from the main model.

To recap, the independent variables in the main model are the percentage of project developers with the

- market liberal worldview
- bioenvironmentalist worldview
- social green worldview

Actor types

Actor types are important to consider in the analysis because they form what can almost be considered a competing explanation. This thesis is testing the theory that environmental beliefs are key determinant of preferences for REDD+ project developers. While still working within the broad rationalist paradigm, this departs from the standard treatment of preferences that tends to take them as externally given based on their actor type. For example, in their consideration of factors that lead to TCG initiatives meeting criteria for likely success (having a mitigation target, including financial incentives, conducting MRV, and conducting baseline surveys), Michaelowa and Michaelowa (2017) consider in blanket form the effect that significant involvement by firms, subnational actors, and NGOs have. They do not take into account the possibility that there may be significant variation within these actor types in terms of their preferences and what kind of TCG initiatives they develop, thereby affecting the likelihood of these design elements featuring. This would be particularly likely for financial incentives, the inclusion of which aligns strongly with a neoliberal ideology.

To advance my theory, I must show that environmental beliefs are significant in shaping project designs, independent of actor types. Variables are introduced for each of my twelve coded actor types, except for PPPs and international subnational public sector actors. As project developers of these types only account for 0.54% of those in the database, including them would not warrant the trade-off of parsimony and degrees of freedom. MDBs also accounted for only 0.56% of project developers but were maintained in the model. Although few in absolute terms, the total universe of MDBs is very small compared to these other actor types and they tend to be important actors, present in more than 10% of projects. There was some potential multicollinearity between actor type variables, but this could be resolved by removing the variable for international private sector actors. The regression results, however, remain robust regardless its inclusion or exclusion so, due to its theoretical value, the variable is retained in the model. Details of this are shown in Table 22 and Table 23 in Appendix 2. To match the independent variables, the actor types are included as the percentage of project developers that are

- | | |
|---|--|
| - host country private sector | - host country subnational public sector |
| - international private sector | - international national level public sector |
| - host country NGO | - university / research institution |
| - international NGO | - IGO |
| - host country national level public sector | - MDB |

Project level control variables

Land tenure

The land tenure inside the project area is controlled for because of the critical influence it would have on design outcomes in the bargaining framework. Actors with legal title to the land would have the ultimate authority to approve or reject a proposed project, which is a major source of bargaining power. Developers of a REDD+ project on land owned by local communities, for example, would likely feel greater pressure to emphasise local social and economic benefits than if they owned the land themselves. I code land tenure as three control variables accounting for private, state, and community tenure. In some project areas there can be more than one type of tenure, so the variables are not mutually exclusive and coded as dummy variables. This data is from Simonet et al. (2016).

Protected area

A control variable is included to account for whether the project falls inside a protected area as designated by the host country government. These areas, such as national parks or reserves that already have a specific protection purpose, likely impose legal requirements on project developers that influence the design of any projects in the area. For example, in an area protected for conservation, it would be expected that projects wishing to operate in it would be required to place an emphasis on ecological benefits. This is a dummy variable taken from Simonet et al. (2016).

Country level controls

In addition to project level factors, there are some at the country level that likely affect the design of REDD+ projects. Roger et al. (2015) demonstrate that a number of domestic political conditions shape participation in TCG and it is likely that REDD+ projects are also affected. As a hierarchy exists in the database, with projects being grouped into countries, initially two alternative model types were considered to address country level influences but ultimately found to be inappropriate. A multi-level model (MLM) was considered for its potential to separate the impacts of country level and project level factors. This would have provided a greater richness of information than what the model presented here can. However, a MLM depends on the random-effects assumption that, in my case, errors at the country level are not correlated with the individual projects (Clarke et al. 2010). This cannot be assumed for the database of this thesis as the “selection” of projects into host countries is unknown and there is insufficient data to control for this. This would lead to the coefficients of a MLM being unacceptably biased.

A fixed effects model was also considered for its parsimonious ability to control for all variation at the country level. This would facilitate strong causal analysis into variation at the project level, such as among the environmental worldviews of project developers, which is the primary focus of this thesis. Unfortunately, there is insufficient variation in the database solely at the project level, partly due to many countries with few observations (19/52 countries with two or less). This was borne out in the inability of a fixed-effects model to be fitted for three of the five dependent variables and extremely large standard errors across the board for the other two that could be fitted.

With these two options being infeasible, I approximate the logic of fixed effects in my logistic regressions by clustering standard errors by host country and including three country level control variables that are now described.

Government environmental policy

Following Roger et al. (2015), it makes sense that domestic policy, particularly that related to climate and forests, could have an impact on REDD+ project design. For example, a project that operates in the territory of a government with strong environmental protection policies is likely to face direct or indirect pressure to emphasise ecological benefits. Unfortunately, there is no systematic data evaluating the environmental policies of national governments. Roger et al. (2015) use the Yale Environmental Performance Index (EPI) Climate and Energy index score. Unfortunately, it contained too much missing data to be useful for my model. It lacked observations for many of the countries in the database that host a large number of projects, such as the DRC, and therefore brought the sample size for the regression unmanageably low.

As REDD+ is specifically about forests, the EPI Biodiversity and Habitat score was used instead. Unfortunately, no reliable systematic data for forest protection is available beyond calculations of forest loss. This was deemed unsuitable because forest loss can vary drastically year on year and includes both desired and undesired deforestation. The Biodiversity and Habitat score is an index of scores for species protection, terrestrial biome protection, and marine protected areas. This is not perfect but is the best available option to approximate the important potential influence of national policies (forest policy is not reflected in the EPI Climate and Energy index). Ideally, the Biodiversity and Habitat score would have been coded for the start year of each project, but consistent EPI data only goes back to 2007. Attempts were made to use the EPI sources to find data stretching back earlier but this was unsuccessful. Instead, the 2007 score was used for the 25% of projects that started before this. This was deemed appropriate as the scores for this have generally not

varied significantly across the years of EPI publication. As a robustness check, I also ran a model variation giving all projects the 2007 score, regardless of start year. The model was robust to this change.

Civil liberties

Civil liberties are controlled for because of their likely impact on the capacity and mobilisation of domestic communities and NGOs. Where civil liberties are restricted, they would be expected to have less capacity and be unable to pursue their interests as forcefully. This could, for example, reduce the pressure felt by project developers to emphasise social benefits for local communities in their project design. It is also well established empirically that this is an important factor to control for in cross-country analyses, including in the context of TCG by Roger et al. (2015). The data from this is taken from the Freedom House database and coded based on the start year of the project. The model was also shown to be robust to using Polity IV scores as an alternative measure of civil liberties.

GDP

A control variable is included for the per capita gross domestic product (GDP) of the host country. This is to capture the likelihood that, on average, actors from more wealthy countries will have greater capacity. A project that is developed in a wealthier country will probably encounter local project developers and other groups that may influence the design that are more powerful. This could manifest in a greater likelihood of project developers emphasising social and ecological benefits due to pressure from these interest groups. It could also affect the financing of projects, as donors may be less interested in supporting

projects in higher income countries. This would lead to an increased likelihood of projects drawing on market rather than non-market financing. Like with civil liberties, there is also a history of empirical evidence that shows GDP is important to control for in cross-country contexts. This is the case in the context of participation in TCG (Roger, Hale, and Andonova 2015). The measurement used for this is the logarithm GDP per capita of the host country in the project starting year, taken from the World Bank (2017).

Table 4 presents a summary of descriptive statistics for each variable in the model. Variation in the number of observations is due to missing data.

Table 4: Summary of regression model variables

VARIABLES	Obs	Mean	Std. Dev.	Min	Max
DESIGN ASPECTS					
Social benefits	365	0.68	0.47	0	1
Ecological benefits	366	0.54	0.50	0	1
Market financing	356	0.82	0.38	0	1
Non-market financing	339	0.50	0.50	0	1
Local MRV	292	0.30	0.46	0	1
ENVIRONMENTAL WORLDVIEWS					
% Market liberal	387	42.3	34.1	0	100
% Bioenvironmentalist	387	15.8	25.4	0	100
% Social green	387	10.4	21.6	0	100
ACTOR TYPES					
% Host private-sector	385	14.6	27.2	0	100
% Int'l private-sector	387	21.9	30.5	0	100
% MDB	385	3.40	11.9	0	100
% Host subnational public	385	7.31	17.0	0	100
% Host national public	385	9.71	18.8	0	100
% Int'l national public	385	5.17	11.8	0	50
% IGO	385	1.67	6.57	0	50
% Host NGO	385	15.3	23.2	0	100
% Int'l NGO	385	15.7	23.7	0	100
% University/research	385	3.22	9.92	0	75
CONTROLS					
Private land tenure	315	0.38	0.49	0	1
State land tenure	315	0.57	0.50	0	1
Community land tenure	315	0.19	0.40	0	1
Protected area	382	0.31	0.46	0	1
EPI Biohabitat score	370	81.5	11.8	31.9	98.6
Civil liberties	370	3.41	1.31	1.00	6.00
GDP per capita	370	7295	5093	575	31951

Exclusion criterion

As mentioned in the previous chapter, an exclusion criterion is applied to mitigate the problem of missing data on environmental worldviews. The main regression model excludes projects where more than 50% of project developers lack an environmental worldview. Unfortunately, as public sector actors account for a disproportionate amount of the missing data, the exclusion principle biases the model away from projects where they feature prominently. Specifically, the 50% exclusion criterion removes 62 projects, or 19% from the sample. Among the excluded projects the mean percentage of developers coded as public sector is 28% while among those that remain it is 19%. This must be kept in mind while interpreting the rest of the results. As robustness checks, the model is also run with the exclusion criterion tightened to exclude projects where more than 33% of project developers lack coded worldviews and also with it loosened to exclude those where more than 67% are lacking them.

As a complementary technique to address the issue of missing data, I also run the model with some imputed values. This involved coding all private sector project developers missing worldviews with the market liberal worldview, based on the extremely high percentage match (92%) of these among private sector developers that could have their environmental beliefs coded. Imputing these values reduced the percentage of project developers missing worldviews by 10%, to 31%. It also increased the percentage with the market liberal worldview by the same amount, to 42%. In doing so, it increases the sample size of projects under the 50% exclusion criterion by 9%.

As is discussed below with the results, these different approaches to dealing with missing data lead to slight variations in the results but in ways that support my overall argument.

HYPOTHESES RE-CAP: OBSERVABLE IMPLICATIONS

The quantitative model outlined above seeks to test the three sub-hypotheses outlined in Chapter 2 pertaining to the relationship between the market liberal (H2a), bioenvironmentalist (H2b), and social green (H2c) environmental worldviews and REDD+ project design. Here they are briefly recapped along with the specific expected observable implications in the data that flow from them. Elucidating and maximising these will help expand the scope for causal inference from the theory and model that are being deployed (King, Keohane, and Verba 1994). These are summarised in Table 5.

Table 5: Expected observable implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design (positive ‘+’, negative ‘-’, or none ‘n/a’)

	Social benefits	Ecological benefits	Market financing	Non- market financing	Local MRV
Market liberal	-	-	+	n/a	-
Bioenvironmentalist	n/a	+	-	n/a	n/a
Social green	+	n/a	-	+	+

For H2a, the market liberal worldview’s emphasis on the efficiency of the market and the role of scientific and expert knowledge leads to an expectation that an increase the percentage of project developers with the market liberal worldview will be associated with an increase in the probability of the project emphasising market financing mechanisms. The

zero-sum, competition driven mindset of the market liberal worldview leads to three more: that an increase in the percentage of project developers with the market liberal worldview will be associated with a reduction in the probability that the project emphasises social benefits, ecological benefits, and local MRV. These would all be seen as unnecessary extras to an ideal REDD+ project that most efficiently reduces emissions based on expert knowledge and skills. No statistically significant relationship is expected for non-market financing because, although a market liberal project developer is expected to favour market financing mechanisms, financing is always useful and there is no reason for them to be averse to other sources, even if sourcing it is not a priority for them.

H2b predicts that the bioenvironmentalist worldview will lead project developers' preferences towards broader goals of environmental protection and away from profit- and growth-led strategies. For the present quantitative model, the observable implications would be an increase in the percentage of project developers associated with the bioenvironmentalist worldview being associated with a greater likelihood of the project design emphasising ecological benefits and a decreased likelihood of emphasising market financing. The latter is mostly a result of the concern that bioenvironmentalist actors have with promoting economic growth. There are no expected statistical relationships for the local MRV variable nor, due to less of a zero-sum mindset as previously described, for social benefits.

The social green worldview is covered by H2c, which expects it to be associated with the involvement and support of local communities, North-South transfers of wealth, and resistance to activities that promote profit and growth for international actors. In the quantitative model outlined above, observable implications would be an increase in the percentage of project developers with the social green worldview being associated with an increase in the probability of the project design emphasising social benefits, local MRV, and

non-market financing, plus a decreased probability of emphasising market financing. Like the bioenvironmentalist worldview, the social green worldview is expected to be less zero-sum in its outlook on project focus because it does not emphasise efficiency in the same way as the market liberal worldview and, therefore, no statistical relationship is expected to be observed for ecological benefits.

REGRESSION RESULTS

Table 6 presents the primary regression table with estimated coefficients presented as odds ratios and standard errors. It shows that the prevalence of different environmental worldviews among the project developers has a statistically significant effect, independent of the prevalence of different actor types, on aspects of REDD+ project design, particularly their focus. The results are robust across many potential sensitivities such as region and main activity type (ARR, REDD, or IFM). As predicted, the bioenvironmentalist worldview was positively associated with the emphasis on ecological benefits and the social green worldview positively with emphasis on social benefits. These are statistically significant at the 0.01 level and give support to H2b and H2c as expected observable implications, suggesting that environmental beliefs lead to differences in preferences regarding the focus of REDD+ projects.

Table 6: Logistic regression results [main model, 50% exclusion criterion] (odds ratios)

VARIABLES	Social benefits	Ecological benefits	Market finance	Non-market finance	Local MRV
ENVIRONMENTAL WORLDVIEWS					
% Market liberal ^z	1.590* (0.377)	1.213 (0.307)	1.840 (1.217)	0.706 (0.357)	0.693 (0.233)
% Bioenvironmentalist ^z	1.043 (0.301)	2.897*** (0.567)	0.535 (0.208)	1.828 (0.887)	0.807 (0.271)
% Social green ^z	2.119*** (0.543)	1.248 (0.294)	0.770 (0.271)	1.750 (0.639)	1.043 (0.248)
ACTOR TYPES					
% Host private-sector	0.964 (0.030)	0.970 (0.023)	0.988 (0.061)	1.010 (0.083)	0.961 (0.028)
% Int'l private-sector	0.969 (0.031)	0.962 (0.024)	0.950 (0.040)	1.015 (0.080)	0.972 (0.024)
% MDB	0.962 (0.037)	0.953 (0.030)	0.883*** (0.042)	1.043 (0.086)	0.930** (0.033)
% Host subnational public	0.973 (0.033)	0.983 (0.029)	0.930 (0.044)	1.035 (0.074)	0.973 (0.023)
% Host national public	0.966 (0.028)	0.953* (0.027)	0.930 (0.047)	1.037 (0.081)	0.948* (0.027)
% Int'l national public	0.974 (0.031)	0.959 (0.037)	0.908** (0.043)	1.084 (0.089)	0.966 (0.031)
% IGO	0.983 (0.043)	0.979 (0.030)	0.875*** (0.024)	1.271** (0.122)	0.992 (0.035)
% Host NGO	0.991 (0.031)	0.966 (0.029)	0.974 (0.042)	1.012 (0.074)	0.988 (0.023)
% Int'l NGO	0.977 (0.029)	0.953* (0.027)	0.946 (0.040)	1.058 (0.087)	0.985 (0.029)
% University/research	0.966 (0.029)	0.973 (0.023)	0.955 (0.049)	1.065 (0.090)	1.000 (0.025)
CONTROLS					
Private land tenure	0.943 (0.310)	0.785 (0.372)	2.508 (2.027)	0.984 (0.627)	0.691 (0.422)
State land tenure	1.540 (0.534)	0.758 (0.434)	0.227** (0.168)	1.092 (0.695)	1.767 (0.675)
Community land tenure	3.341** (1.845)	0.999 (0.420)	0.443 (0.303)	0.408* (0.198)	1.362 (0.667)
Protected area	0.795 (0.341)	1.744* (0.548)	1.214 (0.747)	1.260 (0.632)	0.572 (0.247)
EPI Biohabitat score	1.008 (0.015)	1.006 (0.015)	0.987 (0.024)	1.014 (0.022)	0.989 (0.016)
Civil liberties	1.271* (0.173)	2.042*** (0.373)	1.936** (0.540)	0.825 (0.270)	0.973 (0.180)
GDP per capita	0.759 (0.140)	1.303 (0.241)	0.706 (0.224)	0.700 (0.254)	0.688 (0.168)
Constant	48.617 (152.412)	0.328 (1.089)	42,422.425** (226,970.499)	0.490 (4.948)	335.008 (1,237.980)
Observations	237	235	233	223	202
Prob > chi2	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.181	0.192	0.389	0.440	0.204

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

z = Standardised z -score

Contrary to what I hypothesised, the market liberal worldview was also positively associated with social benefits, significant at the 0.1 level. This could be explained by considering the breadth of the environmental worldviews and how, although not motivated by social justice, the market liberal worldviews interest in economic growth and development could well manifest in support of project designs that provide particular types of social benefits for local communities. I based H2a upon a more “extreme” conceptualisation of the market liberal worldview that would eschew such designs in favour of maximising the efficiency of carbon sequestration. The regression results suggest that, to the contrary, market liberal project developers instead tend to share environmental beliefs that are more amiable to promoting social benefits in REDD+ projects. Inquiring more into this relationship, however, shows that it is not as straightforward as for the relationship between the social green worldview and social benefits. Of the 118 projects in the database where social benefits are not emphasised, 46% have more than half their project developers coded with the market liberal worldview, including 22% that are pure market liberal projects. In comparison, only 2% of these projects have more than half social green project developers and only one is pure social green. It is likely, then, that there is much greater variation in the environmental beliefs of market liberal project developers regarding social benefits than for social green developers. It appears that there is a significant amount of market liberal developers that, contrary to the regression results but more in line with H2a, do not have a preference for or have a preference against emphasising social benefits in REDD+ projects. Those that do support social benefits, however, are clearly significant enough in the database to bring a statistically significant result, albeit one that has a lower p-value and, as is discussed below, a smaller effect size than for the social green worldview with social benefits.

Looking at the effect sizes, we see that the relationships in the model are also substantive from a practical perspective. Figure 10 shows predicted probabilities for emphasis on social and ecological benefits, holding other model values at their means. For ecological benefits, the probability of it being emphasised in project design is about 0.4 when the bioenvironmentalist worldview is absent, but steadily climbs towards 1 as the percentage of project developers with the worldview climbs in increments of 20 percent. In

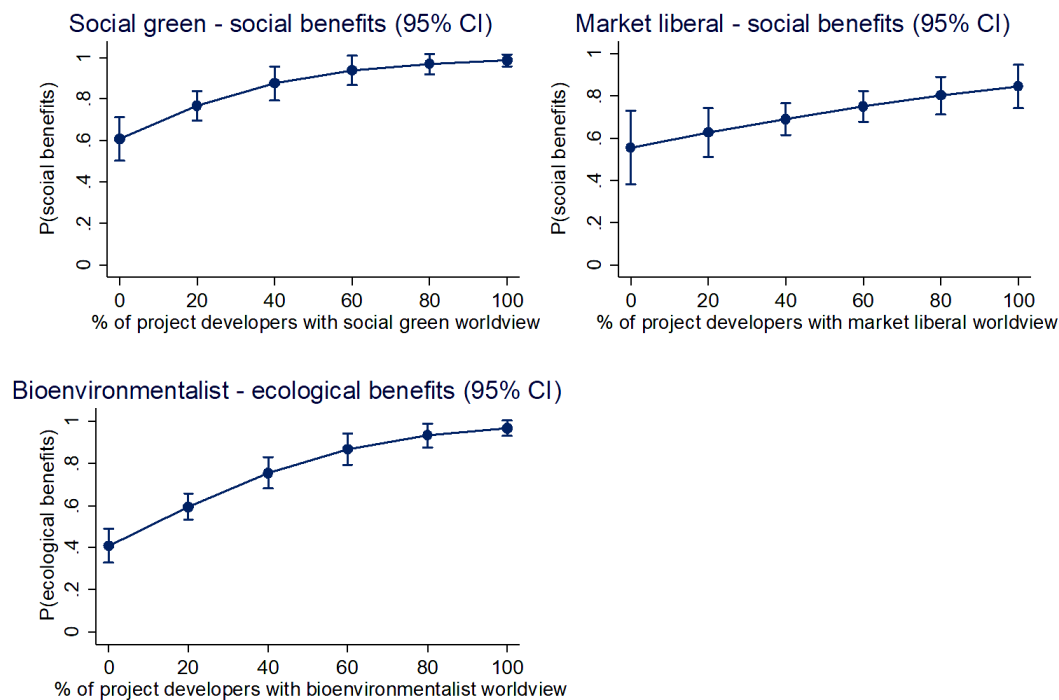


Figure 10: Predicted probabilities for the relationship between the social green worldview and social benefits, the market liberal and social benefits, and the bioenvironmentalist and ecological benefits

a theoretical example, this would entail an increase in the likelihood of emphasising ecological benefits increasing from 40% to 70% when a project with two non-bioenvironmentalist project developers are joined by third, bioenvironmentalist developer. Figure 10 also shows a similar pattern for the relationship between the social green worldview and social benefits, albeit slightly weaker because the estimated probability when

the social green worldview is absent is relatively higher at 0.6. Again, however, it climbs steadily to almost reach 1 as the percentage of project developers with the social green worldview increases to 100. In a theoretical example this could manifest as a project with four non-social green project developers having a 60% likelihood of emphasising social benefits in the project and this increasing to 80% with the addition of a social green developer. For the market liberal worldview with social benefits, it shows that in the worldview's absence the probability of emphasising social benefits is just below 0.6. This climbs more slowly than with the social green worldview, to just over 0.8 as the percentage of developers with the market liberal worldview reaches 100. This would be the equivalent of a project with one market liberal developer and three with other worldviews being joined by an additional market liberal developer and the likelihood of emphasising social benefits increasing from just over 60% to about 70%.

These effect sizes are important, but I am interested in their general patterns rather than the specific coefficients, which should not be taken as precise. By holding other independent variables constant to estimate a coefficient, the regressions fail to take into account the interdependence of the variables coded as percentages. For example, if we imagine the percentage of project developers with the bioenvironmentalist worldview rising by 20%, this would entail a 20% decrease in the percentage covered by the other worldviews as they must total to 100%. The same applies for the actor type variables. This does not invalidate the results but means there is some additional variation that would alter the precise coefficient values that is unaccounted for. For this reason, my focus is on the general relationships between the worldviews and aspects of project design rather than precise measurement of their estimated marginal effects.

Table 7 summarises the key results with a post-analysis update of the predicted observable implications presented in Table 5. The cells have a “-” if the expected relationship was negative, “+” if it was expected to be positive, or “n/a” if no relationship was expected. Where these observable implications were supported by the regression results there is green shading, where inconclusive (meaning no statistically significant relationship was found where one was expected), yellow, and where contradicted (meaning there is a

Table 7: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model, 50% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Market liberal	-	-	+	n/a	-
Bioenvironmentalist	n/a	+	-	n/a	n/a
Social green	+	n/a	-	+	+

statistically significant relationship in the opposite direction to what was expected), red. Overall, despite the expectation of the market liberal worldview opposing social benefits expectation being contradicted, there is general theoretical congruence for the two focus variables. The directionality of the all the other relationships that were expected to be either positive or negative are also as hypothesised.

Under different variations to address the issue of missing data, the results differ slightly but in ways that support my overall argument. Using the Hosmer-Lemeshow goodness-of-fit test, the various models also appear to fit well. Details of these tests are provided in Appendix 2. When the exclusion criterion is tightened to 34%, the market liberal worldview becomes, as hypothesised, positively associated with market financing, significant at the 0.05 level. When loosened to 67%, the relationship between the market liberal worldview and local MRV becomes negative, as hypothesised, significant at the 0.1 level. The relationship between the market liberal worldview and social benefits also loses its statistical significance. With imputed data for private sector actors with missing worldviews, these same relationships are found. The two major differences with imputation are that, under the 50% exclusion criterion, the positive relationship between the market liberal worldview and social benefits criterion loses its significance under all exclusion criteria and that between the bioenvironmentalist and market financing becomes negative, as expected by H2b, significant at the 0.05 level. Full regression tables and summary tables of observable implications for all model variations can be found in Appendix 2.

The key takeaway from these results is that the environmental beliefs of REDD+ project developers appear to be independently associated with the design of their projects, particularly what they focus on. While the regression results do not imply causality, it is much more logical to assume that beliefs affect project design through actor preferences than vice versa. This contrasts from accounts that simply assume material utility-maximising preferences, often based on actor type. By controlling for actor types in the regression models, the results suggest that environmental beliefs have independent explanatory power themselves. Interestingly, while two of the environmental worldviews had statistically significant relationships with the social benefits design aspect, none of the actor types did. This aligns with McDermott et al. (2012)'s findings that a wide range of actors with differing

preferences regarding what REDD+ should prioritise have shaped a diverse set of the environmental beliefs of their developers and I have shown already that these beliefs are spread unevenly across actor types. Thus, while the effect of environmental beliefs may be at least partially independent of actor types, considering the participation of different actor types remains important as a means of including different beliefs.

This is not to say that environmental beliefs are the only important factor, as Table 6 shows that several control variables were also significant in explaining the variation in the dependent variables. For the financing dependent variables, actor types were statistically significant in explaining much of the variation. Without environmental worldviews being significant in the regression results, the pseudo- R^2 scores are much higher for the finance variables than for those pertaining to project focus. This resonates with the fact that actor type is often fundamentally tied to financial activities. The emphasis in non-market financing mechanisms was positively associated with the presence of IGOs. They, along with international national level public sector actors and MDBs are also negatively associated with market financing. These relationships make sense as these actors often act as donors, and donors would be less likely to provide their limited funding to projects that already have a sustainable market-based funding mechanism. Abbott and Snidal (2009) focus on the capacities of different actor types in initiative creation, which are also tied to the types of financing they can offer. My results do not contradict their approach but add another layer to the story. While the right mix of capacities are critical to an initiative functioning, *how* it functions and what it focuses on appear to be influenced by the environmental beliefs of its developers.

These results also reinforce the findings from Chapter 4 that suggest the design process of REDD+ projects is more additive in nature than zero-sum. No negative relationships were observed between the prevalence of specific environmental worldviews

and design aspects apart from that between the market liberal worldview and local MRV under the 67% exclusion criterion. This was hypothesised for the bioenvironmentalist and social green worldviews but not the market liberal one. For the latter, the emphasis on efficiency suggested that project design would be seen as more of a zero-sum game with reduced emphasis expected on strategies or focuses that could compete with preferences associated with the market liberal worldview. These results largely contradict this, with the market liberal worldview being found positively associated with the social benefits design aspect. This aligns with the idea that the low opportunity cost of not participating in a project greatly reduces the zero-sum bargaining nature of REDD+ project design. Under these conditions, the partner courting and project design stages of REDD+ project creation become intimately related; a developer will only join a project if its design broadly aligns with their preferences.

I tested this possibility in a variation of the model that modifies the independent variables to reflect the binary presence of each worldview among project developers, instead of the percentage measure used in the main model. Table 8 presents the observable implications table for this model under the 50% exclusion criterion, replicating the format used in Table 5. The findings provide slightly more support for the hypotheses than my “main” model: the relationship between the market liberal worldview and social benefits is inconclusive instead of contradictory; and that between the bioenvironmentalist worldview and market financing becomes negative, which supports H2b. At the same time, this latter negative relationship then pushes back against the contention that the project design process is additive rather than zero-sum. Like with the main model, varying the exclusion criterion and introducing imputed values produces results that differ slightly but continue to reinforce my overall.

Table 8: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model, 50% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironmentalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

The reality of project design is likely a mixed story, with variation in both the degree of explicit bargaining and the strength of zero-sum attitudes to project design among project developers coded with each worldview. In this diversity, my model remains robust in supporting my basic argument that environmental beliefs shape the preferences of actors and thereby the design of REDD+ projects. Small variations in the model alter the results slightly, but they are more similar than different, and all broadly support my theory. As mentioned, regression and observable implication tables for all model variations can be found in Appendix 2.

CONCLUSION

The analysis of this chapter represents a first probe into the role of environmental beliefs in shaping TCG. It draws upon my database of REDD+ projects, showing theoretically informed and statistically significant relationships between environmental worldviews and

the design of the projects. Most clearly, I found a positive relationship between the bioenvironmentalist and social green worldviews and emphasis on ecological benefits and social benefits respectively. These were found across all model variations, providing clear support for H2b and H2c. Across the various model sensitivities, including to changes in the exclusion criterion, imputation of missing private sector worldviews, and using the binary presence of worldviews instead of their percentage shares, several other of expected implications were also observed. These include the positive relationships between the market liberal worldview and an emphasis on market financing and the social green worldview and local MRV. The expected negative relationships between the market liberal worldview and local MRV and the bioenvironmentalist worldview and market financing were also observed. Only in a couple of model variations were relationships observed that contradicted by theory, principally a positive one between the market liberal worldview and social benefits. However, this was only significant in two of my twelve variations and at the 0.1 level. Furthermore, other relevant patterns in the database suggest this finding does not confound my theory. I discuss this result further based insights from some of my case studies in Chapters 5 and 6. In no model variation are all of the theoretically expected implications observed, but the overall spread and consistency of certain findings provides strong evidence that environmental beliefs shape preferences and thereby project design.

As the first systematic large-N analysis of environmental beliefs in TCG, my model confronted important data limitations that have already been discussed. Despite these, statistically significant results were found that support key elements of my hypotheses. The fact that these were based on the hard test of my theory provided by the binary coding gives credence to the theoretical claim of the thesis that environmental beliefs are indeed important in shaping REDD+ projects. As has been mentioned, however, these results are, of course, only correlational in nature and do not immediately imply causality. That said, they do

support my theoretical arguments about the causal effect of environmental beliefs. They form the large-N platform for the qualitative part of the nested analysis that occupies the next two chapters. In Chapter 5, I detail the process through which I selected five case studies in Colombia and Peru by drawing on the regression results presented above. Through interviews with the key individuals involved from each project developer in these projects I test the accuracy of the model, its predictions, and my theoretical assumptions about the process of project design. In Chapter 6, I use process tracing to distil the causality of environmental beliefs and the mechanisms through which they influence REDD+ projects, including during implementation, which my quantitative analysis has not addressed.

5. THE NESTED CASE STUDIES: TESTING FINDINGS AND THEORIES ABOUT PROJECT DESIGN

INTRODUCTION

The previous two chapters have introduced the quantitative, large-N element of my nested analysis. They presented a new database of REDD+ projects and results from logistic regressions showing a relationship between project design and environmental beliefs. This chapter brings the second part of the nested analysis by examining case studies of five projects from my database. I test the accuracy of the quantitative model's predictions and my theory about environmental beliefs shaping project design preferences with richer, qualitative evidence from interviews with project developers.

Overall, I find support for H2 and my argument with project designs largely reflecting the environmental beliefs of the project developers that controlled project design. In some cases, it also reflected their coded environmental worldviews, but in many the environmental beliefs were nuanced in ways that are not captured by the ideal type worldview categories. By considering more granular evaluations of project developers' environmental beliefs, this chapter introduces a new level of detail to my core argument, which is further extended in Chapter 6. The case studies also usefully highlight the limitation of the quantitative model in not being able to account for variation in the type of involvement of different project developers. Influence over project design is not equal among the project

developers and in some of the cases, certain project developers are not involved with project design at all.

This chapter proceeds first by explaining my case selection, which was based on a mixture of “on-” and “off-the-line” selection using the model’s predictions and practical considerations. Lieberman (2005)’s guide to nested analysis is used as inspiration in this regard but not as a precise formula. I modify the approach based my use of a logistic instead of linear regression and having multidimensional observations with five dependent variables rather than one. In the second section, I describe my process of conducting interviews with project developers, which was my primary method of data collection for the case studies. The third section comprises the bulk of the chapter and is focused on analysing each of the nested case studies one-by-one. Each case study is assessed on whether it supports the model’s predictions and my theoretical assumptions about project design and environmental beliefs. A concluding section summarises the findings as generally supportive of the model. It also sets the scene for Chapter 6, where I use process tracing discern the independent causal impact of environmental beliefs at each stage of the cases.

CASE SELECTION

Following the nested analysis approach, I selected four projects as case studies based on the large-N results. After beginning my fieldwork, it also became possible to include a fifth case study, which was added to provide additional richness to the qualitative analysis—this is discussed later in this section. Lieberman (2005) describes the nested analysis using a hypothetical linear regression. He suggests that if the quantitative results support the theory in question and are robust, cases that are “on-the-line” (conform to the model’s predictions)

should be chosen to provide a more detailed test of the model. If the results are not satisfactory and robust, “on-” and “off-the-line” (do not conform to the model’s expectations) cases should be chosen to facilitate a more inductive, theory building small-N analysis. He demonstrates this with a scatter plot of actual and predicted dependent variable values from a hypothetical linear regression, fitted with a line-of-best-fit as shown in Figure 11. Once an evaluation of the model and a decision is made about what kind of observations will be chosen as case studies, it is relatively easy to do so by looking at the chart. Observations such as H and G are clearly off-the-line while B and D are clearly on-the-line.

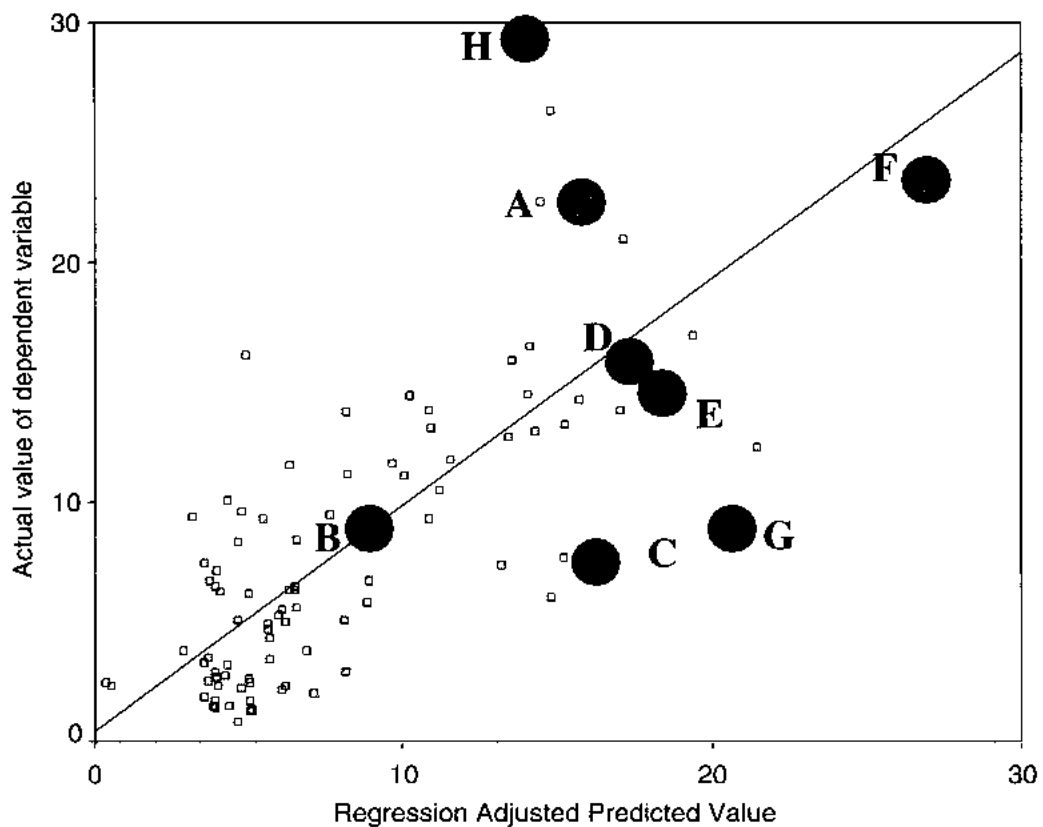


Figure 11: Lieberman (2005)'s case selection chart from a hypothetical linear regression analysis

My case selection does not precisely follow Lieberman (2005)'s process, owing to two crucial differences between my analysis and the one he elaborates. Firstly, I am

conducting logistic regressions, which are not conducive to plotting a linear line of best fit through actual and predicted values, which is Lieberman's primary means of showing cases' positions relative to the line. In a logistic regression this does not work because the actual values can only be either 0 or 1. Secondly, even if I could produce a linear plot of my data, the situation would be more complex as I have five dependent variables. This entails five separate regressions and the predictions from each of these differ in their accuracy for each project, leaving no objective method for deciding whether a case is on- or off-the-line. Projects are on-the-line for some dependent variables and off-the-line for others.

Despite these complicating factors, I still manage to follow the nested analysis approach to case selection. The plotting and interpretation of results from multiple logistic regressions is more complicated but yields similar information to Lieberman (2005)'s linear example. In doing this, I also make a methodological contribution to the existing literature. Scholars of IR have rarely attempted nested analyses based on logistic regressions and those that have tend to use the idea as a guiding thought rather than something to follow rigorously (e.g. Howard and Roessler 2006; Seeberg 2014). While for the above reasons I cannot follow Lieberman (2005)'s method to the letter, I advance on previous studies by still managing to plot observations in my own version of his chart and consider mathematically how well the model predicts them. As will be seen, this provides useful leverage for my case selection.

In defining my observations as on- or off-the-line, I used 0.4 and 0.6 as thresholds for "low" and "high" probabilities respectively; projects were considered on-the-line for each aspect of project design if they were coded as 1 (emphasis) on the binary coding while having a high probability or coded as 0 (no emphasis) with a low probability. In turn, projects were considered off-the-line if they were coded as 1 with a low probability or 0 with a high probability. Those with probabilities between 0.4 and 0.6 were considered "undetermined" as the model is not confidently predicting a result either way.

The large-N results presented in the previous chapter were generally supportive of my theoretical expectations regarding the influence of environmental beliefs on REDD+ projects. Figure 12 shows the percentage of predictions for each aspect of project design that fall into each of these categories. For the first attempt at modelling the effect of environmental beliefs, the predictions are satisfactory overall, with 59% being on-the-line and only 17% being off-the-line. For the average project, then, approximately the predictions for 3/5 design aspects would be on-the-line, 1/5 undetermined, and 1/5 off-the-line.



Figure 12: Percentage of model predictions that are on-the-line, off-the-line, or undetermined for each aspect of project design

On a simple level, this could lend itself to case selection for theory testing as Lieberman (2005) suggests. However, the quantitative model is not based upon a long history of theoretical development and confronted data containing significant noise, so a pure theory testing approach would be premature. This thesis is breaking new ground in both its attempt to empirically analyse the impact of environmental beliefs and its systematic

analysis of REDD+ projects, so it is important to also use my case studies for theory building. As such, I chose mostly on-the-line cases but balanced them with some off-the-line and undetermined cases to facilitate both deductively testing the quantitative model and some inductive exploration. This draws on the principles of nested analysis but adjusts to the context of my research. It also helps me avoid the pitfalls of strict on-the-line theory testing highlighted by Rohlfing (2008), where (unknowingly) biased regressions results and a narrow deductive approach combine to cause the overlooking of crucial omitted variables.

To start the case selection process, I narrowed the scope of consideration to projects based in Latin America and the Caribbean to facilitate the selection of more comparable cases and for the practical reasons of existing established contacts and language abilities. This still provided a large pool of potential cases, as the region comprises 38% of projects in the database (112 total) and maintains plenty of variation across the independent and dependent variables. Case selection was also informed by the desire to have a diversity of projects designs and project developers in terms of their actor types and environmental worldviews. This is not to achieve any kind of representativeness: that is not possible from such a small sample of cases. As this thesis is pushing the research agenda into new territory, however, a diversity of cases is sought to facilitate a useful combination of theory testing and building that allows specific mechanisms to be explored while also offering a rich snapshot of the world of REDD+ projects for the TCG literature.

I selected five case studies in the region, all of which pursued both the VCS and CCBS certifications. Initially, I chose only four: two in Colombia and two in Peru, to provide some diversity across countries. These are the “Grouped project for commercial forest plantations initiatives in the department of Vichada” (Vichada Project), the “Recovery of Degraded Areas with Agroforestry Systems in Colombia” (Degraded Areas Project), the “Biocorridor Martín Sagrado” (Martín Sagrado Project), and the “Reduction of

Deforestation and Degradation in Tambopata National Reserve and Bahuaja-Sonene National Park Within the Area of Madre de Dios Region, Peru” (Tambopata Project). The fifth case study, the REDD Project in Brazil Nut Concessions in Madre de Dios (Brazil Nut Project) was not selected by the above method. As mentioned earlier, it was included after the initial case selection for extra depth and robustness. Adding the project was straightforward as some of the key individuals involved with Tambopata Project were also involved with Brazil Nut Project and the offices of the remaining project developers in each project were in the same city.

Figure 13 represents my equivalent of Lieberman (2005)’s scatter plot that I presented earlier. It shows plots with the absolute deviance residuals of the logistic regressions on the y-axes and the predicted probability of projects emphasising each aspect

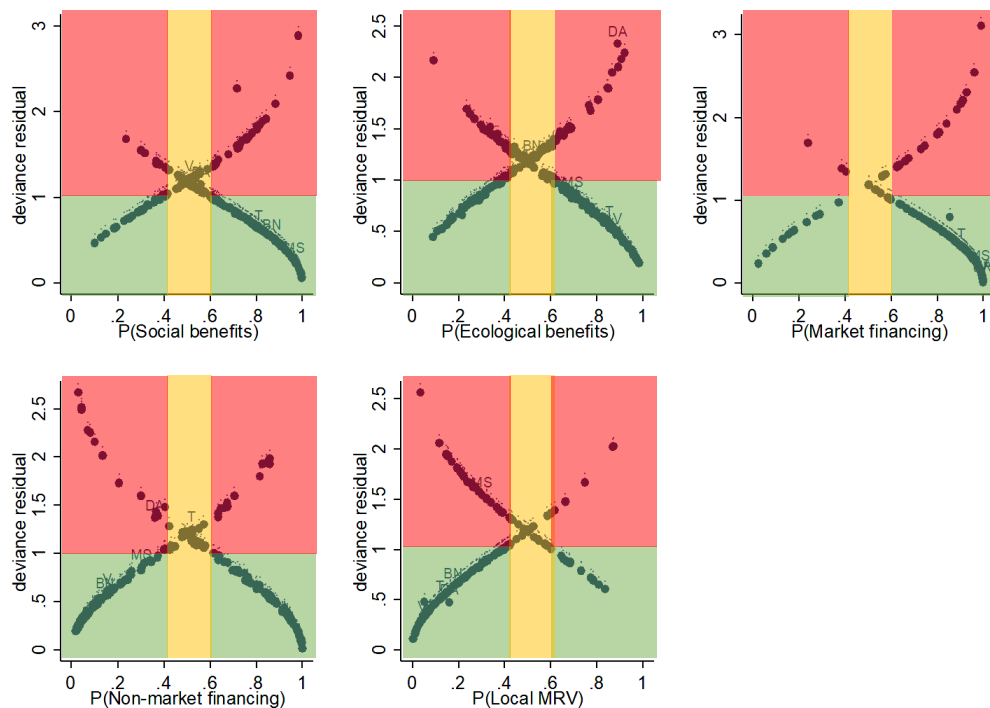


Figure 13: Scatter plots of deviance residuals and probabilities for each aspect of project design (green areas = on-the-line; yellow areas = undetermined; red areas = off-the-line)

of project design on the x-axes. As discussed, logistic regressions do not allow for the same linear regression line plotting as ordinary least squares (OLS) regressions. The plots are therefore not as intuitive as the example Lieberman (2005) uses. However, Figure 13 still provides the same information. Logistic regressions seek to minimise the deviance residual in the same way that OLS regressions minimise residuals. “The line” in these plots is not a line-of-best-fit but the line of $y=0$, as the deviance residual reflects the discrepancy between the predicted probability and actual value.¹⁴ While keeping in mind the specific thresholds outlined above, the greater the absolute deviance residual the more off-the-line the observation can be considered for a given dependent variable. The initials for each of my five case studies appear next to that observation in each plot. The clusters of observations in the green areas near $y=0$ and $x=1$ or $x=0$ reflect those on-the-line observations that the model predicted accurately as emphasising or not a design aspect, respectively. The cluster of observations in the yellow areas between $x=0.4-0.6$ and near $y=1$ represent the “undetermined” observations where the model failed to provide a confident prediction. The trail of observations in the red area towards $y=3$ and $x=1$ or $x=0$ represent the off-the-line projects that were increasingly less accurately predicted to have emphasised or not the design aspect, respectively.

Following the immediately subsequent section that describes the methods used to analyse them, I proceed to describe each case study and analyse them in relation to the quantitative model. For now, however, it is useful to summarise them in relation to “the line” and the above discussion of case selection. Table 9 provides this, showing the dependent variable coding and prediction for each project, with the identifying initial(s) used for each

¹⁴ When calculated, deviance residuals for binary regressions are both positive and negative. Positive values represent observations that were coded as 1 and negative values those that were coded 0. I converted these to their absolute value to remove negatives when generating Figure 13.

project in the above scatterplots next to their project name. Variables with on-the-line, undetermined, and off-the-line predictions are coloured green, yellow, and red, respectively.

Table 9: Summary table of project designs and model predictions (green = on-the-line; yellow = undetermined; red = off-the-line)

	Social benefits	Ecological benefits	Market finance	Non-market finance	Local MRV
Degraded Areas Project (DA)	YES (0.52)	NO (0.89)	YES (0.99)	YES (0.39)	NO (0.10)
Vichada Project (V)	NO (0.52)	YES (0.88)	YES (0.99)	NO (0.17)	NO (0.05)
Martin Sagrado Project (MS)	YES (0.97)	YES (0.69)	YES (0.99)	NO (0.31)	YES (0.30)
Tambopata Project (T)	YES (0.82)	YES (0.85)	YES (0.91)	NO (0.54)	NO (0.12)
Brazil Nut Project (BN)	YES (0.87)	NO (0.52)	YES (0.99)	NO (0.14)	NO (0.18)

METHODS

The case studies were based upon in-depth semi-structured interviews with key representatives of the project developers involved with each project. In total, I interviewed 26 individuals representing 21 different project developers. I also visited the project sites to observe project implementation, project developer behaviour, and have more informal exchanges that offered different insights than those which could be gleaned during an interview. This fieldwork was carried out between July-September 2017 with ethical approval from the Blavatnik School of Government's Departmental Research Ethics Committee.¹⁵ Interviewees were approached based on publicly available contact information, often specified in PDD's and project websites, as well as through snowball

¹⁵ Ref No: SSD/CUREC1A/BSG_C1A-17-009

sampling. The interviews I conducted were probing but did not involve sensitive information; as such, participants were open to talking and recommending other people to interview from their own organisation or other project developers. All participation was voluntary and interviewees could withdraw at any time. No reward or compensation was offered for participation. The evidence presented in this chapter and the following are based on data from this research. This includes the interviews themselves, their recordings, notes I took during them, and informal conversations and observations. Most of the interviews were recorded and conducted in Spanish; the direct quotes included from these are my own translations.

During interviews and observations, I focused on distilling how environmental beliefs had affected the projects, along with testing the degree to which my coding, model predictions, and theoretical framework reflected reality. Here I focus on the latter, leaving the former for the next chapter, in which I focus on process tracing the specific mechanisms through which environmental beliefs shaped each project. The focus of this chapter is specifically on the case studies as observations nested in the quantitative model. Three broad questions underpin this: For the many aspects of projects that were on-the-line, does a closer, qualitative examination of the project confirm this? For those that were off-the-line, is there a contextual explanation for why? For undetermined aspects, are there reasons that explain why the model could not confidently predict them that require our attention?

As project developers neither think about their work in terms of “environmental worldviews” nor “environmental beliefs”, nor consider their projects in terms of binary design coding, inferences about these had to be drawn indirectly. As such, I did not have a rigid plan or set of questions that I replicated for each interview. I did, however, have general lines of pre-planned questioning that proved useful at prompting the kinds of reflections from interviewees that offered insight into my research questions. For example, in

attempting to confirm or understand in more detail the environmental beliefs of project developers, I pursued lines of questioning that probed their understanding of their organisation's mission and its motivation for participating in the project. I also asked for their organisational perspective on the principal drivers of the environmental challenge they are trying to confront. Answers to these types of questions often brought out useful combinations of both causal and normative ideas that together make up an actor's environmental beliefs. Likewise, to help elicit information about the design of a project, I would ask interviewees simply to explain the purpose of a project and its primary objectives. By cross-checking the prioritised objectives as expressed by different interviewees and written sources it was possible to confidently determine whether my coding of emphasis on social and ecological benefits had been accurate. Similar approaches worked with asking how a project was financed or conducted its MRV.

In the process of arranging and during my interviews it was important to consider my own positionality in relation to the interviewees and subject matter. Although the parts of Colombia and Peru to which I travelled are today peaceful, they have recent histories of conflict and narcotrafficking involving foreign groups. As such, it was important for me to approach conversations about history carefully and be mindful of perceptions my interviewees might have of the often-unsolicited outreach I made to them. Similarly, I had to pay close attention to the ways in which I, as a white man coming from an elite institution in Europe to "study" projects in Colombia and Peru might be perceived. For many of the small local project developers, most of their interactions with people "like me" would have been with people holding some sort of power over their project: independent monitoring and verification teams or potential buyers of products such as wood or cocoa, for example. It was therefore a concern for my research that interviewees would be reluctant to reveal information that reflects negatively on the "success" of the project. I am not specifically

interested in the success of projects, but I am interested in *how* they operate as well as inter-project-developer dynamics. In pursuing these, it was inevitable that lines of conversation would emerge related to success, particularly as this is a common frame through which project developers think about their own work. It was therefore important for me to establish my non-partisan position as a researcher and alleviate any concerns that project developers had about possible allegiances, links to funders, and the confidentiality of my data collection.

THE CASE STUDIES

In this section I introduce the five case studies. Taking them in turn, I first provide a basic description of each project and introduce its project developers. I then present the project's coding from the database and analyse the accuracy of the model's predictions and how closely my theoretical framework reflects reality. In examining each case I specifically look for observable implications of my theoretical argument that project designs will reflect the environmental beliefs of the project developers with the most bargaining power. I consider this in relation to the specific observable implications outlined for my quantitative model as well as the regression results themselves, which supported the theoretical expectations to different degrees depending on the aspect of project design. The case studies allow us to consider how the theory and the quantitative model relate: For these projects, does the theory hold and is it only noise in the model preventing it from identifying all the hypothesised relationships? Or was the model accurate and do some of my theoretical expectations simply not hold in these cases? If the former, I expect to find crucial factors not captured by the model, such as variation in the type of involvement by different project developers, that account for when the regression model does not accurately predict project design. If the latter, I expect to observe a project design distinct from what the model predicted despite an

alignment of variables theorised to lead to a design different than that observed. To begin, I start with the two Colombian projects before moving on to the three in Peru.

Recovery of Degraded Areas with Agroforestry Systems in Colombia

The Degraded Areas Project is a grouped project, meaning it has activities taking place in independent, physically separate locations. It operates in the Colombian Department of Antioquia to restore a natural reserve and develop productive agroforestry. It was started in 2012 by the multinational sustainability solutions company South Pole Carbon¹⁶ (coded as market liberal) and the Colombian research institute Carbono y Bosques (coded as bioenvironmentalist). They obtained financing from the Finnish Ministry of Foreign Affairs (which had no input into the project itself) to develop a forest carbon project and looked for partnering organisations. Carbono y Bosques had an existing connection with the Colombian environmental NGO Fundación Natura (coded as bioenvironmentalist) who joined to execute the project as did the multinational financial company BTG Pactual (coded as market liberal). BTG Pactual went on to contract the Colombian agrobusiness

¹⁶ Which in 2015 rebranded as the South Pole Group to reflect their expanding nature. In this thesis they continue to be referred to as South Pole Carbon, as they were known when the case studies with which they are involved began.

AGROFUTURO to manage part of the project before taking these operations in-house in 2015. Table 10 summarises this project developer information.

Fundación Natura already owned and had been restoring as a natural reserve through native species reforestation an area of land called “El Silencio” near the town of El Retiro. The land backs onto an area of natural forest that was highly degraded from past cattle ranching. Fundación Natura had existing ambitions to incorporate a carbon credit

Table 10: Project developers for the Degraded Areas Project

Project developer	Environmental worldview	Actor type
Fundación Natura	Bioenvironmentalist	Host NGO
South Pole Carbon	Market liberal	International private sector
Carbono y Bosques	Bioenvironmentalist	University/research
BTG Pactual*	Market liberal	International private sector
AGROFUTURO**	Market liberal	Host private sector
* was not included in original project coding		
** ended participation in project in 2015		

component to this and El Silencio became one of the project sites. BTG Pactual joined the project as they had recently launched a new investment fund focusing on social and environmental goals as well as financial returns. They found AGROFUTURO had a farm of the right size and the experience to be a partner to design and implement a productive agroforestry project, mixing cocoa and plantain crops with tree planting for carbon sequestration. This became the second site of the Degraded Areas Project, known as

“Guacamayas”, after the name of the farm near the municipality of Necoclí. Figure 14 shows the location of the two project sites.

The project was validated in 2016 and as of the time of writing is looking towards verification in El Silencio.¹⁷ BTG Pactual, however, decided to halt its participation in the project in Guacamayas. The area of the farm eligible to generate carbon credits was much smaller than initially projected and they therefore decided that the project was not

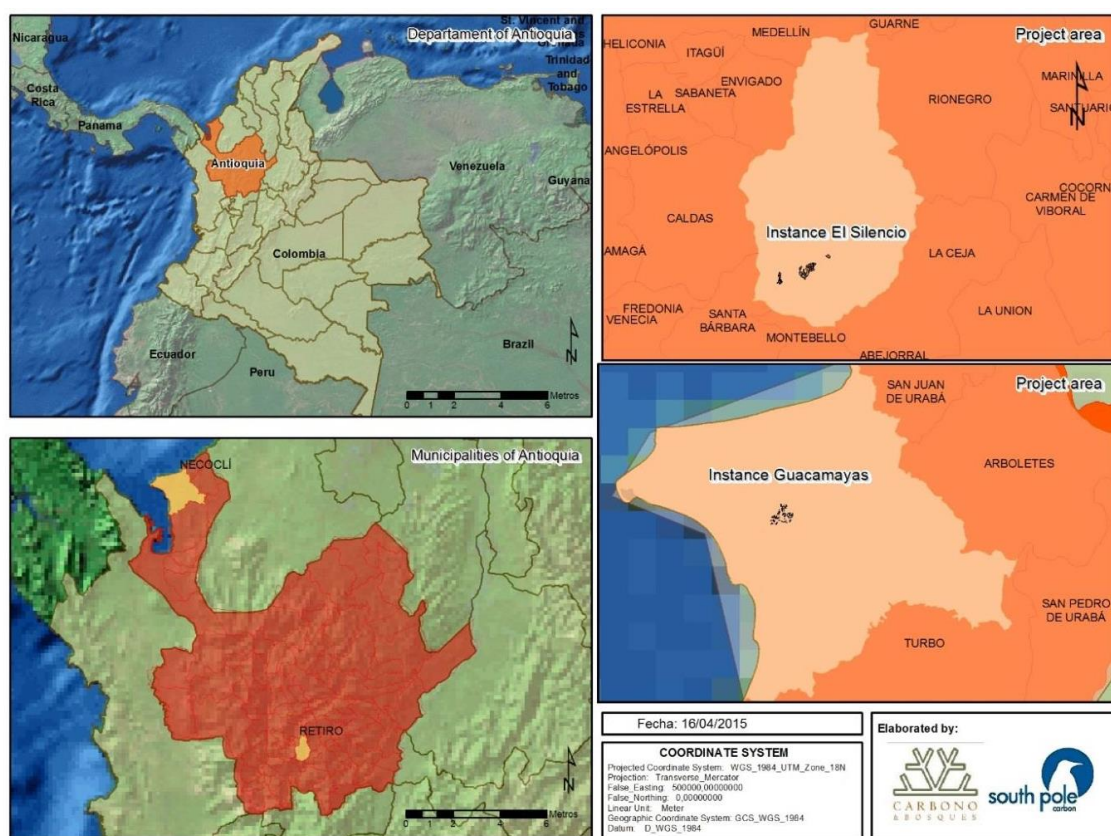


Figure 14: Degraded Areas Project locations (South Pole Carbon and Carbono y Bosques, 2015)

¹⁷ To produce certified carbon credits under standards such as VCS or CCBS, project developers must clear two clear hurdles. “Validation” refers to getting the project design document (PDD) approved as meeting the standard requirements on paper and “verification” involves a third-party audit of implementation activities to confirm that emission reductions have indeed been generated. Once a project is underway, verifications happen periodically (often every five years) to confirm credit generation under the standards.

economically worthwhile. The ineligibility stemmed from large parts of the farm being found to historically have been deforested too recently.¹⁸

Table 11 shows the dependent variable coding of the Degraded Areas Project from the database (yes/no for emphasis on each aspect of design), along with the predicted probabilities. Dependent variables that were on-the-line, off-the-line, or undetermined are coloured green, red, and yellow respectively. Overall, the Degraded Areas Project represents a poorly-predicted case, having only two on-the-line variables. Most strikingly, it did not emphasise ecological benefits despite the theorised and statistically significant positive relationship in the model between doing so and the bioenvironmentalist worldview—with which two of the project developers were coded. The project was also coded as emphasising non-market financing despite the model predicting this would be unlikely and social benefits, which had an undetermined prediction.

Table 11: Project design coding for the Degraded Areas Project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	YES (0.52)	NO (0.89)	YES (0.99)	YES (0.39)	NO (0.10)

After conducting interviews with the project developers, however, these erroneous predictions can be explained. Most importantly, my coding had failed to capture a technical detail of the project's grouped structure: that the two sites are different "instances". This

¹⁸ CDM Methodology for reforestation and afforestation projects, which is used for VCS projects of the same nature, stipulates that eligible land must not have been forest on 31 December 1989 or for 50 years respectively (UNFCCC 2005).

meant that the two project sites were completely independent and their owners, Fundación Nature and AGROFUTURO, did not collaborate beyond having shared a single PDD (produced by Carbono y Bosques and South Pole Carbon) for pursuing VCS and CCBS certification. Carbon credits accrue to the owners of the instances that generate them and the verification of one to a standard is independent of the other. This sits in contrast to the Vichada Project, which is also a grouped project but has its different sites comprising the same instance. Fundación Natura designed the El Silencio instance with technical support from the consultants while the same occurred independently in Guacamayas with BTG Pactual and AGROFUTURO as a contractor. A second coding inaccuracy unearthed during my fieldwork was involvement of BTG Pactual. The PDD and other publicly available information did not mention their participation, only that of AGROFUTURO.

The implications of this are that the model is missing a key project developer for the Degraded Areas Project and treating it as a unitary project when it is essentially two independent projects. As this is a measurement error rather than a fundamental flaw in the model, I test whether re-coding based on this additional information would have improved the accuracy of the model's predictions. Table 12 and Table 13 represent modified coding based on re-running the model after splitting the project into two independent projects and including BTG Pactual as a project developer in that for the Guacamayas instance.

Table 12: Revised project design coding for Guacamayas instance of the Degraded Areas Project as an independent project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	NO (0.45)	NO (0.83)	YES (0.99)	NO (0.14)	NO (0.12)

Table 13: Revised project design coding for El Silencio instance of the Degraded Areas Project as an independent project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	NO (0.55)	YES (0.96)	YES (0.99)	YES (0.49)	NO (0.31)

The model predicts the split projects more accurately than for the unitary Degraded Areas Project. The off-the-line variables in the latter were ecological benefits and non-market financing. The predicted emphasis on these likely came from the involvement of Fundación Natura and Carbono y Bosques. The former was conducting ecological restoration work in El Silencio and funding this from its own resources in addition to using the revenue from its sale of carbon credits generated at the site. In contrast, before the Guacamayas instance was halted, AGROFUTURO and BTG Pactual were not emphasising the pursuit of ecological benefits beyond carbon sequestration. The instance was primarily focused on crop production and financed through their private sector, market-based resources. As shown in Table 13, considering El Silencio as a standalone project emphasising ecological benefits and non-market financing puts both of these variables back on-the-line. This also aligns with H2b, as the bioenvironmentalist Fundación Natura had near complete control of project design and focused it on ecological benefits as per their environmental beliefs. A director of Fundación Natura described their work in this area in a way that clearly reinforces the bioenvironmentalist coding:

“In the last 10-12 years we have worked a lot on topics to do with climate change. Initially, because climate change is a threat to biodiversity. It generates some new tensions in ecosystems and how people use those ecosystems... in this we eventually arrived to the carbon projects, *forest carbon projects*, we don’t work on carbon projects in general, but those that are related above all else with forests and land use” (Interview 1 2017).

In Guacamayas as a standalone project, the removal of Fundación Natura as a project developer puts the non-market financing variable back on-the-line but still leaves ecological benefits off-the-line, with the model confidently giving it a 0.83 probability of being emphasised. Given the regression results, this is likely due to the involvement of Carbono y Bosques, whose bioenvironmentalist worldview was statistically significantly associated with emphasising ecological benefits. This discrepancy reflects one of the general limitations to the model already discussed: the inability to account for variation in the type of involvement of project developers. In this case, Carbono y Bosques acted as a technical partner and had little substantive influence on the project design in either instance. The real bargaining power lay with BTG Pactual and AGROFUTURO in the case of Guacamayas and Fundación Natura in El Silencio. This is largely because they owned the land on which the project would take place and were contributing their own financial resources. Carbono y Bosques and South Pole Carbon were critical in assembling the project developers and providing technical support as well as initial financing, but their power to influence the substantive design of each instance was very limited. The model's inability to consider this likely accounts for the inaccurate prediction that the Guacamayas instance would emphasise ecological benefits because of the misattributed weight given to Carbono y Bosques' bioenvironmentalist worldview.

The social benefits variable also changes when each instance is treated as an individual project. The Degraded Areas Project was coded as emphasising social benefits, due to expressed commitments in the PDD to promote inclusive community decision making and economic opportunities for local communities in the Guacamayas instance. Evidence from my fieldwork, however, suggested that this was not reflected in reality. During interviews with the project developers, social benefits was never emphasised in relation to

either instance. Nonetheless, the model's prediction for social benefits is undetermined for the two separated projects. This makes sense as none of the project developers' environmental beliefs had promoting social benefits at its core. Fundación Natura does give it some weight with "sustainable human development" featuring as part of their mission statement (Fundación Natura n.d.), but conservation remains its *raison d'être*. Additionally, the El Silencio is not conducive to emphasising social benefits as it is simply a reforestation project on private land. In Guacamayas, the undetermined prediction comes despite 75% of the project developers being market liberal and the regression results having found a positive and statistically significant relationship between the two. The relationship was contrary to H2a and my theoretical expectations, but this example, along with others in the cases that follow, suggests that it may not be so straightforward.

In both instances, as well as the original combined project, the lack of emphasis on local MRV is well-explained. There are no project developers with environmental beliefs or coded worldviews positively associated theoretically or in the regression results with emphasis on the variable. It follows logically that the variable was not emphasised in either instance.

Overall, the Degraded Areas Project is a poorly-predicted case due to inaccuracies in its coding. The bifurcation between two independent project instances makes predicting it accurately as a single project impossible. While this highlights a limitation in the data used to code the database, this error is very technical and specific to the project. There are few grouped projects in the database and the Degraded Areas Project should be considered an outlier in having multiple independent project instances. By entertaining a split into two separately coded projects, the model better accounts for them. The model's inability to account for variation in the type of project developer involvement was highlighted and is important to bear in mind when interpreting the quantitative results or predictions. The fact

that a general congruence between the model's predictions and my theoretical expectations still emerges is a promising sign that they still have purchase and support my overall argument. The Degraded Areas Project also serves as an example where there was not a process of competitive bargaining over project design; instead, one project developer designed the project with technical support from consultants.

Grouped project for commercial forest plantations initiatives in the department of Vichada

The Vichada Project began in 2015 and comprises a series of commercial forest plantations near Puerto Carreño, in Colombia's eastern department of Vichada. It was created by Fundación Natura, which wanted to engage forestry plantations to improve their environmental integrity and protect the region's biodiversity hotspots and remaining areas of natural forest. Five plantation operators joined the project: Cooperativa Casa Nacional del Profesor (CANAPRO) (coded as social green), Unión Temporal Agroindustria Horizonte Verde, Reforestadora El Toro, Ecoforestal de Colombia, and Amazonia Reforestation (all coded as market liberal). CANAPRO is a national cooperative of teachers of which an NGO-branch is managing the project, while the latter four are all Colombian private sector forestry companies. The project is grouped in that there are multiple independent sites managed by the different plantation owners, but there is one design

document and, unlike the Degraded Areas Project, they all comprise one instance. Table 14 summarises the project developers.

Table 14: Project developers for the Vichada Project

Project developer	Environmental worldview	Actor type
Fundación Natura	Bioenvironmentalist	Host NGO
South Pole Carbon	Market liberal	International private sector
Carbono y Bosques	Bioenvironmentalist	University/research
Unión Temporal Agroindustria Horizonte Verde	Market liberal	Host private sector
Ecoforestal de Colombia	Market liberal	Host private sector
Reforestadora El Toro	Market liberal	Host private sector
Amazonia Reforestation	Market liberal	Host private sector
Cooperativa Casa Nacional del Profesor (CANAPRO)	Social green	Host NGO

The project is implemented in plains that have steadily expanded over the past decades due to low-intensity cattle ranching and associated land burning practices. Recently, however, it has been identified as having significant natural forestry potential due to its warm, even temperatures and reliable rainfall. The Colombian government has sought to promote forestry with policies such as the Forestry Incentive Certificate that offers tax and financial support for new plantations, which began to proliferate near Puerto Carreño, the departmental capital, from about 2010. Figure 15 locates Vichada within Colombia and Figure 16 the project sites. The yellow areas are the plantations of CANAPRO, the pink of Ecoforestal de Colombia, the green of Reforestadora El Toro, the red of Amazonia Reforestation, and the blue of Horizonte Verde.



Figure 15: Location of the department of Vichada (Government of Vichada, 2015)

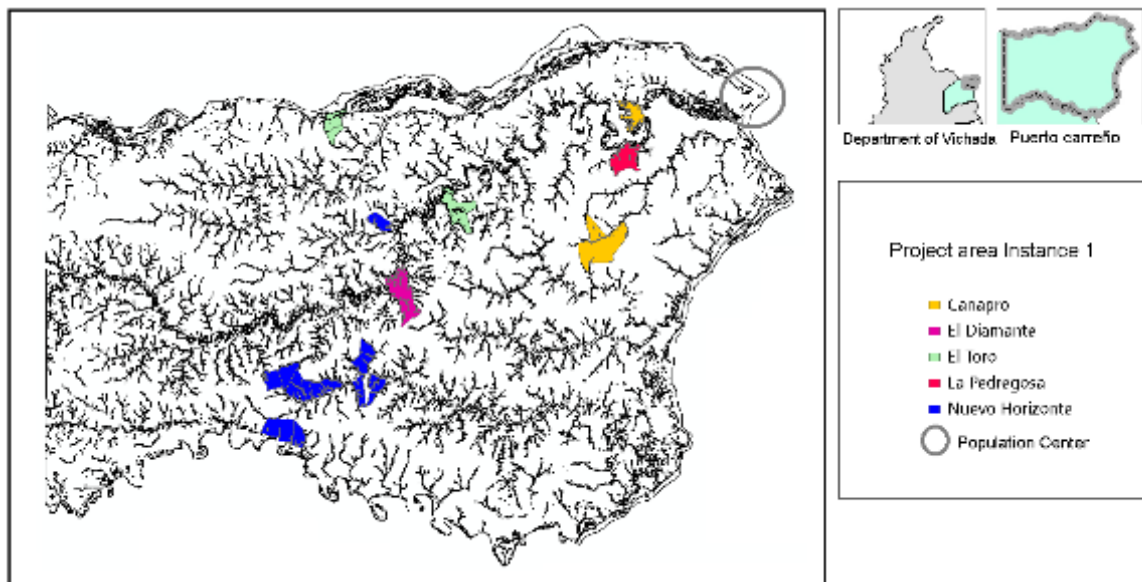


Figure 16: Locations of the Vichada Project (South Pole Carbon and Carbono y Bosques, 2016)

Fundación Natura saw the rise of forestry plantations as both a threat and opportunity as many plantations operated with poor environmental standards. They had received grant money from the Global Environment Facility (GEF) (who did not become involved in the project in any way) that they used to develop a project to improve the environmental integrity of plantations. They hired South Pole Carbon and Carbono y Bosques as consultants to assist with the technical aspects of project design and ran numerous consultations with plantation operators in the region. Fundación Natura used the prospect of additional revenues from carbon credits to attract plantation owners who would have to adhere to the VCS and CCBS standards to ensure the environmental integrity of their plantations (Interview 1 2017). This involves things such as ensuring separation from and protection of existing natural forests and watersheds, sound management procedures, and biodiversity monitoring. Fundación Natura manages the technical and carbon-related aspects of the project such as monitoring, while the plantation operators provide information and adhere to the standards. Project design was thus not a competitive bargaining process but, like in the individual instances of the Degraded Areas Project, one led by a single project developer with technical support from consultants.

In the database, I coded the Vichada Project as shown in Table 15. It is well-predicted by the model, with four of five dependent variables being on-the-line. This coding was corroborated by the qualitative data gathered through my fieldwork. The primary focus of the project is improving the environmental integrity of forest plantations to protect local

Table 15: Project design coding for the Vichada Project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	NO (0.52)	YES (0.88)	YES (0.99)	NO (0.17)	NO (0.05)

ecosystems, forests, and biodiversity. This emphasis on ecological benefits was confidently predicted by the model and is theoretically consistent because of Fundación Natura's complete control of the project design. Of course, they had to design a project that would be attractive for plantations owners to join. This nonetheless supports H2b and the quantitative relationship between the bioenvironmentalist worldview and emphasis on ecological benefits. The quantitative model was unable to factor in Fundación Natura's monopoly of influence over project design but 25% of project developers with bioenvironmentalist worldviews appears to have led it to confidently predict this design feature with a probability of 0.88.

The model also accurately predicted the project's emphasis on market financing. Fundación Natura elected a market-based financing structure, defying H2b's expectation that bioenvironmentalist actors will oppose this. While the GEF grant money helped Fundación Natura get the project off the ground and cover PDD costs, the primary and ongoing financing of the project comes from the generation of carbon credits and expenditures by the plantation owners to adhere to the project requirements. This is explained by the fact that Fundación Natura's environmental beliefs, while best fitting the bioenvironmentalist environmental worldview, are actually in no way opposed to market financing mechanisms. This was also evidenced in the Degraded Areas Project. In fact, they have played a major role in developing the domestic carbon market in Colombia (Interview 1 2017, 1). This highlights the how environmental beliefs can vary at a level of detail too granular to be captured perfectly by the broad categories of environmental worldviews.

The model accurately predicted the lack of emphasis on local MRV in the Vichada Project. MRV processes are carried out by experts overseen by Fundación Natura. While Fundación Natura does have a stated commitment to participatory processes, these plantations are on private land far from population centres. This naturally makes it difficult

to involve local communities. It also helps explain why social benefits are not emphasised in the project design. Social benefits were the sole design aspect that was not on-the-line, instead being undetermined. Considering the results of the regression analysis, this is surprising: 6/8 project developers had a worldview that was associated positively with social benefits (5 market liberal, 1 social green). This mirrors the Degraded Areas Project, where the model did not predict an emphasis on social benefits for the Guacamayas instance despite a prevalence of market liberal worldviews. It adds to the potential argument that the positive relationship between the market liberal worldview and social benefits is not as robust as the regression results suggested. The lack of emphasis on social benefits aligns with my theoretical argument, however, as a project developer coded with the bioenvironmentalist worldview (Fundación Natura), which was not theoretically linked to social benefits, controlled the project design.

The Vichada Project is a well-predicted case that supports my theoretical claims. It is a diverse project that represents TCG well, featuring the three primary environmental worldviews related to REDD+ projects and international as well as local developers from both the NGO and private sectors. There are important dynamics in the project that are not captured, however, such as having a large number of project developers who did not wield influence over the project design. Project design was not a competitive bargaining process but dominated by a single developer with consultant support. That the model still managed accurate predictions is promising. The project design aligns well with the environmental beliefs of its designer, Fundación Natura, providing support for my main theoretical argument and H2.

Biocorridor Martín Sagrado REDD+ Project

Started in 2010, the Martín Sagrado Project seeks to reduce deforestation in three adjacent private conservation concessions in Peru's Amazonian region of San Martín. Its origins lie with French firm Pur Projet (coded as bioenvironmentalist), which had been working in the region for many years promoting reforestation and agroforestry in cocoa supply chains. Seeing the need to also reduce deforestation and protect upstream water sources, they embarked on creating a REDD+ project with two local cocoa cooperatives, Cooperative Agraria Cacaotera (ACOPAGRO) and Asociación de Productores Agropecuarios de Huicungo (APAHUI) and the local NGO Asociación de Protección de Bosques Comunes Dos de Mayo (APROBOC) (all three coded as social green), which all held private conservation concessions. Wanting to make the project as locally owned as possible, Pur Projet facilitated the creation of another local NGO, Fundación Amazonia Viva (FUNDAVI) (coded as social green), that was a membership organisation of the concession holders, to coordinate project operations. The concessionaries have ultimate control for implementation and MRV in their areas but cooperate closely and collectively agree budgets for the project. Pur Projet provides strategic oversight and manages the sale and marketing of carbon credits. Table 16 presents the summary table of the project developers.

The project aims to reduce deforestation in the concessions, improve community livelihoods in the region, protect ecologically important and biodiverse conservation areas, and safeguard water sources that underpin the local agriculture industry. To achieve this,

Table 16: Project developers for the Martín Sagrado Project

Project developer	Environmental worldview	Actor type
Pur Projet	Bioenvironmentalist	International private sector
Fundación Amazonia Viva (FUNDAVI)	Social green	Local NGO
Cooperative Agraria Cacaotera Acopagro (ACOPAGRO)	Social green	Local private sector
Asociación de Protección de Bosques Comunes Dos de Mayo (APROBOC)	Social green	Local NGO
Asociación de Productores Agropecuarios de Huicungo (APAHUI)	Social green	Local private sector

two types of activities are carried out. The first is direct conservation work, such as monitoring and surveillance and awareness raising about the consequences of deforestation and climate change. The second type is economic development work, such as the promotion of agroforestry and forest plantations to give communities their own sustainable source of timber and assistance to intensify agricultural production or transition towards more sustainable forms of agriculture.

Figure 17, from the project's PDD, shows the location in San Martín and Figure 18 the project area in more detail with the three conservation concessions of Martín Sagrado (top), El Breo (middle), and Montecristo (bottom), which are managed by ACOPAGRO, APROBOC, and APAHUI respectively. The green dots highlight nearby communities that are engaged through the project.

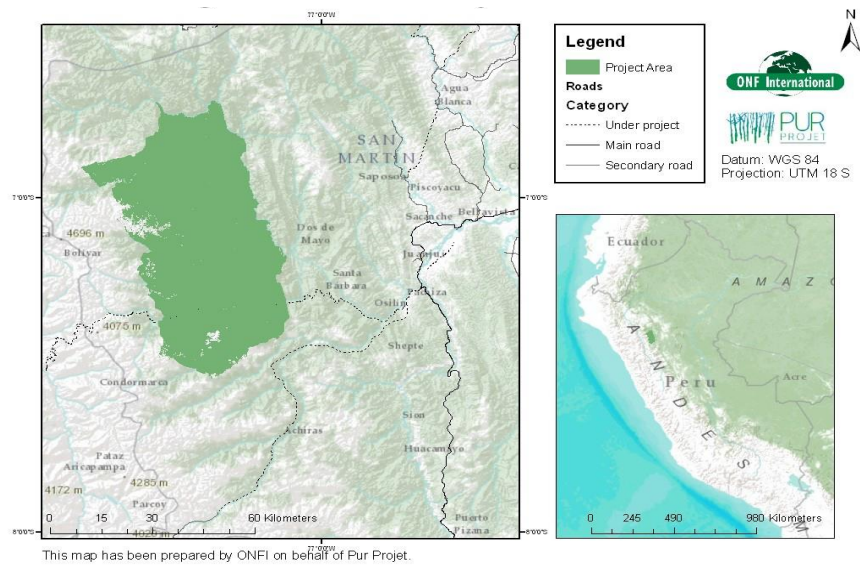


Figure 17: Location of the Martín Sagrado Project (Pur Project, 2012)



Figure 18: Martín Sagrado Project conservation concessions (Rojas Paredes, 2017)

Table 17 presents the dependent variable coding, showing the Martín Sagrado Project to be well-predicted, with four of five dependent variables on-the-line. It brings an interesting mix of actor types to the table with local cooperatives (coded as private sector), and NGOs partnering with a foreign firm. Critically, however, it also had been coded as emphasising local MRV, which was off-the-line. It thus provides an interesting opportunity

Table 17: Project design coding for the Martín Sagrado Project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	YES (0.97)	YES (0.69)	YES (0.99)	NO (0.31)	YES (0.30)

to consider this variable, which only 30% of projects in the database were coded as emphasising. Interviews with the project developers clarified that the emphasis on local ownership (including of MRV) was reflective of their shared environmental beliefs. The project design was a bargaining process between the concessionaries, FUNDAVI, and Pur Projet, with the latter wielding the most bargaining power as the project visionary, technical expert, and financial backer. At the same time, Pur Projet was fundamentally committed to empowering the concessionaries and FUNDAVI to lead the project in all aspects. This is central to Pur Projet’s environmental beliefs, as a senior staff member explained:

“We don’t want to be disconnected from the communities or the project... that has been created without participation of communities. There is a high risk of failure. If you want to develop something you need to involve the communities. They need to be the beneficiaries. They need to participate in the design, the implementation, [and] the monitoring of all the activities. If they don’t participate, it is impossible that the project is working” (Interview 12 2017).

The concessionaries and FUNDAVI also believe in the importance of local leadership for sustainability, which fits with H2c and my theoretical expectations for the social green

worldview. For my theory, then, emphasis on local MRV in the Martín Sagrado Project would be expected, given a design process involving several social green project developers and another that shares a commitment to local level leadership. While the quantitative model did not establish a relationship between the social green worldview and local MRV nor predict its emphasis in the Martín Sagrado project, the emphasis on it aligns with my theory.

The other aspects of project design were well-predicted. For the emphasis on social and ecological benefits, the model, in line with H2b and H2c, found a significant positive relationship between the likelihood of these and the social green and bioenvironmentalist worldviews respectively. Interviews with project developers showed this reflected the reality of the project. The social green actors, particularly the two cooperatives ACOPAGRO and APAHUI, see improving the livelihoods of their farmer members and communities as intertwined with protecting their concessions. A manager of ACOPAGRO described their outlook:

“As a cooperative, we have created this area; we care for these trees so that we don’t lose water. With the trees that you use or deforest, water is lost. If we don’t look after the forests here, there will be little water. It will be lost. So, what have we been doing? The main objective is to raise awareness [with local communities], form associations, so that they themselves have the knowledge and awareness that, to fell a tree, you are losing water. This is the message that we promote. In each community we have community managers, a leader of the community that develops jobs: bee-keeping, gardens, fish farms, technical assistance, developing milk derivatives... activities through which they can generate their own income [instead of felling forest]” (Interview 21 2017).

Pur Projet fits its bioenvironmentalist coding because of its overarching focus on ecosystem restoration and fundamentally changing the sustainability model of business and supply chains. They work to promote "a vision shared by a growing number of organisations

regarding how companies can balance their relationship with the environment upon which we all depend” (Pur Projet n.d.).

For the financing dependent variables, there is theoretical alignment with the environmental beliefs of project developers but not with my expectations of coded environmental worldviews. The emphasis on market financing and not on non-market financing was “on-the-line” in the model, supported by the lack of a statistically significant relationship between the social green and bioenvironmentalist worldviews and either type of financing. H2b and H2c expected actors with these worldviews to oppose market financing and H2c the social green worldview to also support non-market financing. In the Martín Sagrado Project, project developers did not conform to these ideal type hypotheses about their environmental worldviews. Pur Projet was coded as bioenvironmentalist but is a for-profit company and underpins the project’s finances by investing its own corporate revenues and managing the carbon credit component. They see market forces and business growth as compatible with sustainability provided the former can undergo a fundamental transformation. The bioenvironmentalist worldview is still the best fit for Pur Projet, but their environmental beliefs do not conform perfectly with the ideal type definition. Likewise, neither FUNDAVI, ACOPAGRO, APAHUI, nor APROBOC are opposed to market financing mechanisms. This is likely because as cooperatives (or an organisation that coordinates cooperatives, in the case of FUNDAVI) they are accustomed to market and business logics already. Still, they are best suited to the social green coding because of their commitment to community-orientated sustainability. Despite deviating from the expectations of H2b and H2c, the Martín Sagrado Project’s financing thus still aligns with H2 by reflecting the environmental beliefs of the project developers.

The Martín Sagrado Project is a good example of the quantitative model predicting design outcomes well and successfully navigating the inevitably imperfect match between

coded environmental worldviews and the true environmental beliefs of project developers. Apart from the local MRV dependent variable, the model accurately predicted the emphasis on the key aspects of project design. Nuances in the environmental beliefs of project developers meant that the project did not match the sub-hypotheses for specific environmental worldviews, but it does support H2 and my core theoretical argument that environmental beliefs shape actors' preferences and thereby project design. The project also exemplifies a competitive project design bargaining process as was originally theorised.

Reduction of Deforestation and Degradation in Tambopata National Reserve and Bahuaja-Sonene National Park Within the Area of Madre de Dios Region, Peru

The Tambopata Project originated in 2008 when the Peruvian government's agency in charge of protected areas (SERNANP) (coded as bioenvironmentalist) tendered a partial administration contract for the Tambopata National Reserve and Bahuaja-Sonene National Park (TBS). The contract would involve managing biological monitoring and promoting research in the part TBS located in Madre de Dios, a region in Peru's lower rainforest that borders Bolivia and Brazil. Known as the country's "capital of biodiversity", Madre de Dios has received massive immigration during in recent decades, bringing unprecedented pressure on the region's ecosystems and a surge in deforestation as settlers claim and clear land for farming or mining. In TBS, illegal mining has emerged as the principal driver of deforestation.

The contract was won by the Peruvian NGO Asociación para la Investigación y el Desarrollo Integral (AIDER) (social green), who proposed to finance the contract activities through a REDD+ project. Bosques Amazónicos (market liberal), a Peruvian forestry company, was a financial partner in the bid who managed the carbon credit sales until exiting the project in 2011. The original project design was negotiated between AIDER and Bosques

Amazónicos but had to meet the requirements of SERNANP. The degree of competitive bargaining over the design, however, was limited as a clear division of labour from the outset based on expertise and capacities gave AIDER complete control over the project strategy while Bosques Amazónicos managed the financial dimension. This was facilitated by a good existing relationship based on prior collaboration, which is discussed more in Chapter 6. In 2014, the European impact investment firm Althelia Ecosphere (market liberal) joined the project as a new financial partner. This change was an important moment in the project, leading to a change in project design that is a focus of my process tracing in Chapter 6. In this chapter, however, the focus is on the original design as coded in the database. Table 18 summarises these project developers.

Table 18: Project developers for the Tambopata Project

Project developer	Environmental worldview	Actor type
Asociación para la Investigación y el Desarrollo Integral (AIDER)	Social green	Host NGO
Bosques Amazónicos*	Market liberal	Host private sector
National Service of Natural Protected Areas by the State (SERNANP)	Bioenvironmentalist	Host national public sector
Althelia Ecosphere**	Market liberal	International private sector
*left project in 2011		
** joined project in 2014		

Figure 19 shows the project area, with purple representing the Bahuaja-Sotonal Park¹⁹, green the Tambopata Reserve, and the yellow-lined area the buffer zone in which most project activities take place. Shaded orange parts represent indigenous communities. The project's REDD+ strategy consisted of three main components: Firstly, promoting conservation and sustainable economic activities such as agroforestry and cocoa farming in the buffer zone. Secondly, strengthening patrolling and vigilance of TBS and, thirdly, supporting the collaboration between SERNANP, the legal forestry governance system, and local communities.

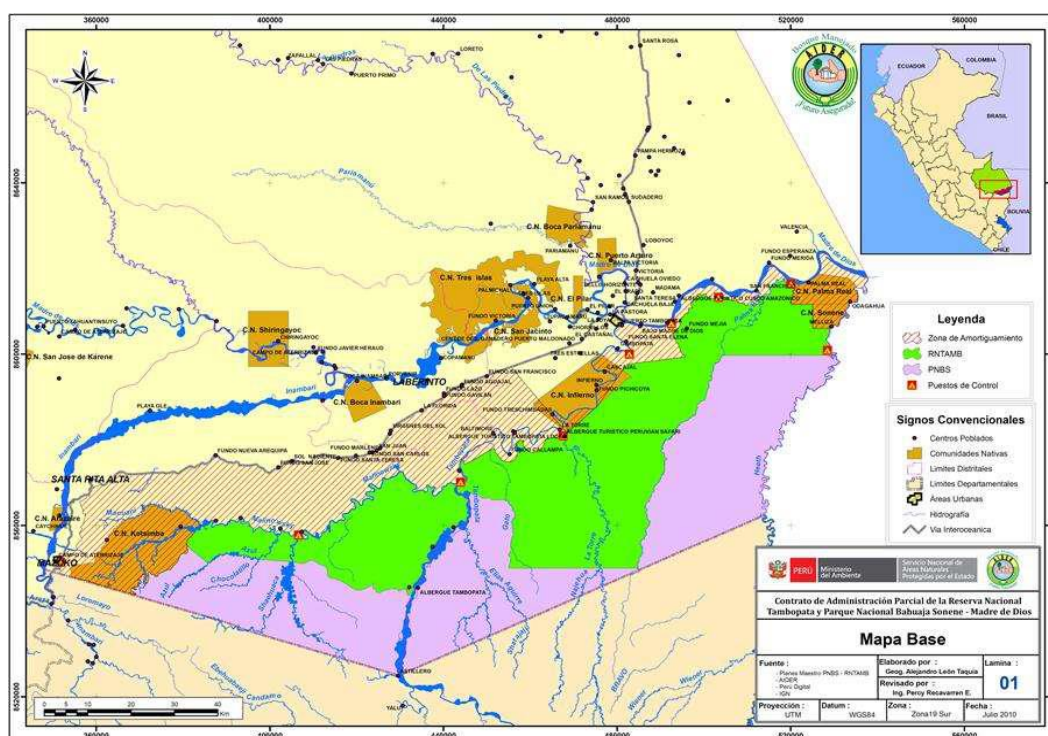


Figure 19: Location of the Tambopata Project (AIDER, 2010)

¹⁹ This only represents the part of the park that falls within the region of Madre de Dios. The park extends southwards into the Puno region, but the partial administration contract granted to AIDER, and therefore the project, only operates in the parts located in Madre de Dios.

Table 19 presents the project's design coding. Four of the five dependent variables are on-the-line and non-market financing has an undetermined prediction. Social and ecological benefits are both emphasised in the project, in alignment with both the model's predictions and what my theory would expect. The project design reflects the combination of SERNANP's requirements for biological monitoring and research, and AIDER's REDD+ plan, which focuses on providing economic support to local communities. From a theoretical perspective, the bioenvironmentalist and social green project developers appear to have each contributed their preferences to the project's focus in line with their environmental beliefs as H2b and H2c expect. While H2a expects Bosques Amazónicos' market liberal coding to

Table 19: Project design coding for the Tambopata Project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	YES (0.82)	YES (0.85)	YES (0.91)	NO (0.54)	NO (0.12)

put them in opposition to these focuses, the ecological benefits were a non-negotiable part of the administration contract and, as mentioned, the project design was devolved in a way that they did not have much influence over its design beyond its financial component. As will be extrapolated in Chapter 6, Bosques Amazónicos' environmental beliefs also defy the market liberal expectations by actually being generally supportive of social and ecological benefits.

The project's financing is also as my hypotheses expect. The emphasis on market financing reflects the preferences of Bosques Amazónicos and thereby H2a. Although two of the project developers, SERNANP and AIDER, both have worldviews that I predicted would oppose market financing, control over the project's financial design lay firmly with

Bosques Amazónicos. The fact that SERNANP and AIDER were happy with Bosques Amazónicos controlling this also suggests that they did not oppose market financing as H2b and H2c expect for actors with the social green and bioenvironmentalist worldviews. This was borne out during my fieldwork, with an antipathy to market financing never emerging in interviews with either project developer. As a director of SERNANP explained to me, AIDER's proposal to finance the project primarily through market sources, thereby requiring less financial support from SERNANP than other proposals, was a key reason they won the contract (Interview 24 2017). For AIDER, their support for market financing in the project came largely from an interest to experiment with REDD+, which was a new concept at the time. (Interview 24 2017). Despite not being able to take into account these nuances, the model still accurately predicts the emphasis on market financing. This emphasis also supports H2 in reflecting the environmental beliefs of the relevant project developers.

The Tambopata Project was well-predicted by the quantitative model. My fieldwork also revealed its design to be aligned with my theoretical expectations about the preferences and environmental beliefs of project developers that shaped it. With a clear division of control over certain aspects, bioenvironmentalist SERNANP required ecological benefits in the contract bid, social green AIDER designed it to focus on social benefits, and market liberal Bosques Amazónicos created its market financing model. The design was negotiated, but with less competitive bargaining than my theory assumes. The impact of AIDER's and SERNANP's environmental beliefs appeared to be additive, tied to supporting certain project activities rather than contesting its financing strategies.

REDD Project in Brazil Nut Concessions in Madre de Dios

Started in 2010, The Brazil Nut Project started is based on assisting brazil nut farmers to reduce deforestation in their concessions, thereby generating carbon credits. Federación de Productores de Castaña de Madre de Dios (FEPROCAMD) (coded as social green), is the regional federation of brazil nut farmer organisations and implements the project while Bosques Amazónicos provides upfront investment, technical support, and manages the carbon component. Table 20 summarises these two project developers. The brazil nut concessions are a unique economic system in Peru, providing harvest by wild collection rather than plantation. Concessions consist of huge swaths of primary rainforest given by

Table 20: Project developers for the Brazil Nut Project

Project developer	Environmental worldview	Actor type
Federación de Productores de Castaña de Madre de Dios (FEPROCAMD)	Social green	Host NGO
Bosques Amazónicos	Market liberal	Host private sector

the government to individual farmers, each spanning on average more than 760ha. Concessionaries can harvest the nuts that fall during December-March in return for managing and protecting the forest. Protecting the concessions is challenging due to their size and the fact that wild collection harvesting can make the forest appear “unutilised” and thereby a target for invaders looking to clear and claim land.

The origins of the project lie in Bosque Amazónicos seeing an opportunity to develop a forest carbon project with FEPROCAMD due to the immense area covered by the brazil nut concessions. The design focuses on helping farmers protect their concessions by

enhancing surveillance systems and improving farmers' incomes through promoting some agroforestry in the concessions and the construction of a brazil nut processing plant (at present farmers in the project only sell the raw product). There is a revenue sharing agreement where FEPROCAMD receives 70% of revenue from the brazil nut production and 30% of the carbon credit revenue and vice versa for Bosques Amazónicos. In total, the project involves a group of 405 concessions covering 308757ha as shown in Figure 20.

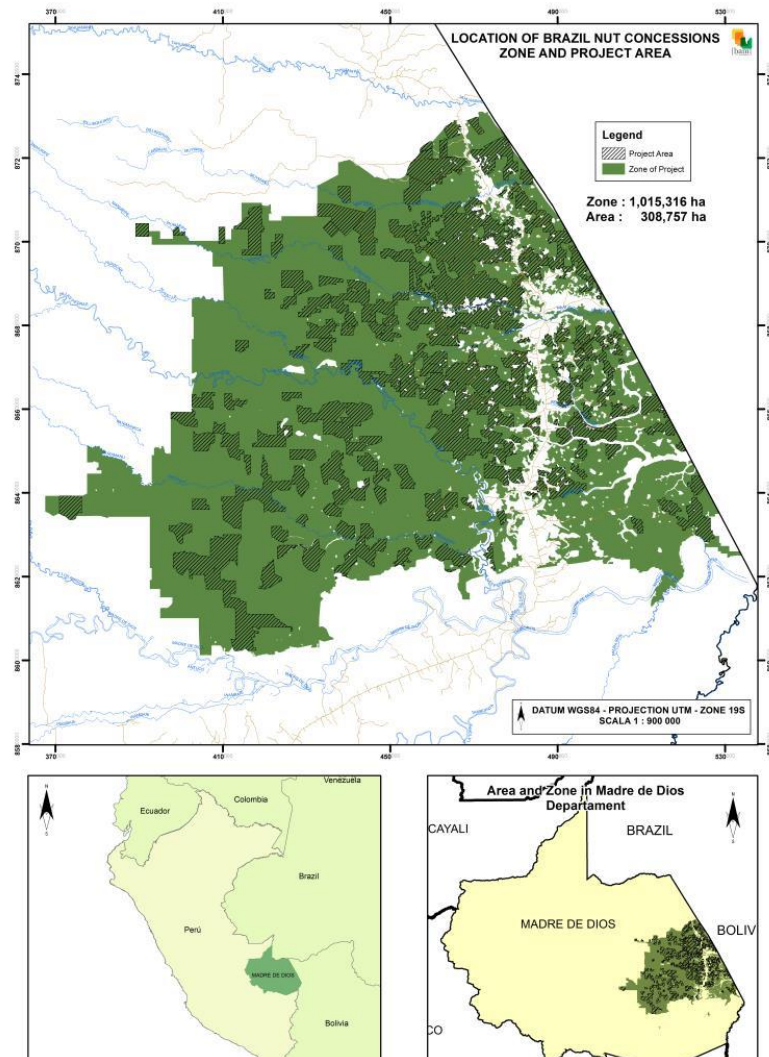


Figure 20: Location of the Brazil Nut Project (Bosques Amazónicos, 2014)

The project's dependent variable coding and model predictions are presented in Table 21, with four on-the-line variables and ecological benefits as undetermined. Social benefits and market financing are coded as being emphasised while the others are not.

Table 21: Project design coding for the Brazil Nut Project

	Social benefits	Ecological benefits	Market financing	Non-market financing	Local MRV
Emphasis in project design	YES (0.87)	NO (0.52)	YES (0.99)	NO (0.14)	NO (0.18)

Fieldwork and interviews with the project developers largely supported the coding, model predictions, and my underlying theoretical argument. The design of the project was a negotiation between the two project developers, with Bosques Amazónicos wielding greater bargaining power because they had more technical knowledge about carbon projects and would provide the financial backing. Social benefits are emphasised as the key aim in addition to reducing emissions from deforestation is supporting the livelihoods of brazil nut farmers. This was driven by FEPROCAMD, for whom it was their primary objective, which aligns with H2c and their coding as a social green actor. Bosques Amazónicos supports this focus which, as a market liberal actor, contradicts H2a but supports the statistically significant relationship found in some variations of the quantitative model. The Brazil Nut Project is an example that may shed some light on this finding, which I earlier already noted as warranting further consideration. H2a expected a negative relationship between social benefits and the market liberal worldview because the former could be a “distraction” from efficiently pursuing emission reductions. However, in the Brazil Nut Project, this theorised opposition does not exist because supporting brazil nut farmers is the direct means through which emission reductions are achieved: support for the livelihoods of the brazil nut farmers enables them to more effectively patrol and protect their concessions from deforestation.

Situations such as this, where promoting social benefits is not an “extra” but the medium of achieving emissions reductions, may account for the statistical relationship between them and the market liberal worldview. If so, this would suggest the need to refine H2a and consider how the impact of the market liberal worldview systematically differs according to context.

Ecological benefits were not emphasised in the project and had an undetermined prediction in the model. Protecting the brazil nut plantations does offer inherent ecological benefits as the concessions comprise biodiversity-rich primary rainforest, but this aspect was never framed as a motivating purpose or objective for the project. Theoretically, this aligns with my expectations, as I expected market liberal project developers to oppose emphasising ecological benefits and Bosques Amazónicos had the most bargaining power in this case. The model understandably did not predict this as neither the social green nor the market liberal worldview had a statistically significant relationship with the emphasising ecological benefits. Despite their market liberal coding, however, Bosques Amazónicos did express during my interviews a strong motivating environmental ethic related to conservation. A former manager said they would knowingly take economic risks by working with native species and degraded soils to achieve extra ecological benefits (Interview 19 2017). Nonetheless, it appears these beliefs did not lead to additional emphasis being placed on ecological benefits in the design of the Brazil Nut Project.

The project financing coding and predictions were also supported by my fieldwork, which confirmed the private investment of Bosques Amazónicos and income from carbon credits and brazil nut sales as the financial basis for the project. Bosques Amazónicos designed a market-based financial strategy in line with H2a’s expectations for market liberal project developers. As a social green actor, FEPROCAMD is expected by H2c and my theory to oppose market financing, although a statistically significant relationship was not

found between these in my regression results. Neither did they not express a strong preference against it during my fieldwork. This can be explained by FEPROCAMD being a federation of brazil nut producers and embodying their business ethic. FEPROCAMD still fits best with the social green environmental worldview, however, based on their commitment to economic justice for poor farmers and belief in local communities leading conservation efforts. One of their directors professed that without the concessionaries, most of the forest they use would have been destroyed. They also advocated for extending the concession model based on the belief that families and communities will protect forests better than private companies, which they said will fell them for profit (Personal communication 3 2017). Nonetheless, FEPROCAMD's environmental beliefs do not oppose market mechanisms, which, although in contradiction of H2c and my expectations about the social green worldview, makes the project's emphasis on them align with H2 and my broader argument regarding the effect of environmental beliefs.

The Brazil Nut Project's MRV is conducted periodically by third party experts. The farmers monitor their concessions in a basic way to ward off deforestation but the technical MRV work for the project and its certifications to calculate carbon credits is expert-driven with little involvement by local communities or the brazil nut farmers themselves. This was reflected accurately in the project's design coding and fits with H2 and H2a's expectations for a project design situation where a market liberal project developer was most powerful. This negative relationship between the market liberal worldview and local MRV was significant in the model under one of the sensitivity checks. Concerning the social green project developer, there was no evidence that supported the expectation of H2c that FEPROCAMD would actively support local MRV. During my interviews, although FEPROCAMD seemed frustrated at times with process of meeting the certification requirements, they did not oppose external experts carrying this out as they considered it too

technical and difficult for them to undertake themselves. Neither did they express any eagerness to change the MRV process in a way that would facilitate local involvement. (Interview 27 2017).

Similar to the Tambopata Project, the Brazil Nut Project represents a well-predicted case that largely aligns with H2 and my theoretical expectations about environmental beliefs. It supports H2a's expectations about market liberal project developers but less so H2c's for the ideal type of the social green worldview. The alignment of social and emission reduction focuses in the project also offers an interesting potential explanation for the positive relationship between the market liberal worldview and social benefits that emerged in a couple of model variations. It suggests that the market liberal worldview's positive association with social benefits potentially pertains specifically to social benefits that are themselves the direct means of achieving emissions reductions. This is not an immediately generalisable claim, but a plausible explanation that warrants further testing.

CONCLUSION

This chapter has begun the qualitative part of the nested analysis and tested the quantitative model's predictions about project design based on close observation of five case studies. The cases involve a range of project developers of different actor types and with different environmental beliefs. The project design aspects were largely on-the-line for purposes of theory testing but also featured some off-the-line aspects that generated valuable insights. Investigation of the on-the-line variables demonstrated the model to be a generally accurate in predicting project design. Although the diversity of the project developers' environmental beliefs could not be perfectly captured by the environmental worldviews framework,

predictions still aligned well with the rich evidence obtained through my fieldwork. The model cannot be expected to be perfect, particularly as this is the first attempt to quantify the impact of environmental beliefs on TCG, but my findings suggest it is effectively converging on relevant insights through the diversity of projects and project developers in the database. With more precise data it could, of course, be improved further.

The off-the-line and undetermined variables offer some ideas for improving the model but do suggest that fundamental revision is required. The Degraded Areas Project highlighted the challenge of distinguishing grouped projects logically that, fortunately, affects very few projects. The failure to predict the emphasis on local MRV in the Martín Sagrado Project, despite strong theoretical rational for the outcome with the presence of many social green actors, suggests that the model might be systematically underestimating this relationship and could be better specified. Figure 12, presented at the beginning of this chapter, also showed that the local MRV predictions were only on-the-line for only 47% of projects, the least of any design aspect. The local MRV scatterplot in Figure 13 also supports this and suggests it is particularly the case for projects that do actually emphasis it in project design.

Thus far I have made the case that environmental beliefs affect REDD+ project design outcomes and found my model to be generally accurate in predicting this across five case studies. Critical to extending this, however, is demonstrating environmental beliefs to have causal effect in explaining these variations in projects. Our understanding of TCG is not significantly advanced by considering environmental beliefs if they are simply epiphenomenal to other factors. The results presented so far have built the platform for my argument, but all been correlational in nature. This is the point of departure for the next chapter. It takes a process tracing approach to my five case studies and seeks to distil the causal impact of environmental beliefs. It also considers partner courting and

implementation in addition to project design. Finally, Table 9 is repeated here to refresh the reader with a summary of the project design coding and model predictions for each of the case studies.

Table 9: Summary table of project designs and model predictions Summary table of project designs and model predictions (green = on-the-line; yellow = undetermined; red = off-the-line)

	Social benefits	Ecological benefits	Market finance	Non-market finance	Local MRV
Degraded Areas Project (DA)	YES (0.52)	NO (0.89)	YES (0.99)	YES (0.39)	NO (0.10)
Vichada Project (V)	NO (0.52)	YES (0.88)	YES (0.99)	NO (0.17)	NO (0.05)
Martin Sagrado Project (MS)	YES (0.97)	YES (0.69)	YES (0.99)	NO (0.31)	YES (0.30)
Tambopata Project (T)	YES (0.82)	YES (0.85)	YES (0.91)	NO (0.54)	NO (0.12)
Brazil Nut Project (BN)	YES (0.87)	NO (0.52)	YES (0.99)	NO (0.14)	NO (0.18)

6. IDEAS IN ACTION: PROCESS TRACING THE EFFECT OF ENVIRONMENTAL BELIEFS ON REDD+ PROJECTS

INTRODUCTION

In this chapter I add to the developing argument of how environmental beliefs shape REDD+ projects by delving deeper into the case studies. Specifically, I employ process tracing to tease out causal inferences at each stage of the projects. To help focus the analysis that follows, it will be useful to recap how environmental worldviews were hypothesised to affect REDD+ projects. H1 makes a general claim about partner courting in REDD+ projects: that initiating project developers will prefer partners with similar environmental beliefs. H2 expects that project developers' preferences for the substantive content of REDD+ projects will be informed by their environmental beliefs. It has three sub-hypotheses that each pertain to one of the coded environmental worldviews in the contexts of project design and implementation. H2a suggests that project developers with the market liberal worldview would try to shape projects towards market mechanisms, expert knowledge and management, and away from non-carbon focuses. H2b predicts that bioenvironmentalist project developers would pursue preferences for REDD+ projects that emphasise broader ecological purposes whilst being against the promotion of economic growth. H2c expects project developers with the social green worldview to favour projects that involve and

support local communities and North-South transfers of wealth whilst being against the use of market mechanisms and profit-seeking by developers from the Global North.

In the quantitative chapters, the observable implications of these hypotheses were limited to the statistical relationships as summarised in Table 9. Notably, clear support was found for some of H2b's and H2c's expectations for the influence of bioenvironmentalist and social green worldviews and H1's prediction regarding project developers' preferences for partners that share similar environmental beliefs. In Chapter 5, the observable implications became more varied as the case studies showed how project developers' environmental beliefs often are more nuanced than can be captured perfectly by Clapp and Dauvergne (2011)'s ideal type environmental worldviews. This trend continues in this chapter as I go deeper into the case studies and pursue the causal impact of environmental beliefs. As such, the evidence in this chapter mostly relates to the proposition of H2 that environmental beliefs shape actors' preferences rather than the sub-hypotheses.

In structuring this chapter, I take into account the findings from the quantitative chapters that showed my three theorised stages of REDD+ projects (partner courting, design, and implementation) are not totally independent. In particular, project design does not always happen in an independent bargaining process. It is often implicitly part of partner courting or an organic process that occurs as part of project implementation. This interplay is evident in the five case studies and I structure this chapter accordingly with two main sections concentrating on partner courting and implementation. Insights into project design are integrated into each as appropriate. By bringing my qualitative evidence to bear on these project stages, this chapter complements the previous chapter, which specifically focused on project design.

The first section describes the process tracing method I employ in the chapter, framing it in relation to the previous analyses. Following this, sections two and three

consider how environmental beliefs shape partner courting and implementation, with reflections on project design mixed throughout as mentioned. For each project, and at each key moment of analysis in my process tracing, I deliberately juxtapose an explanation based on material incentives with one driven by environmental beliefs in order to distil the causal effect of the latter. I find the greatest leverage from this by focusing on moments when these two explanations diverge in their expectations and moments when the material incentives surrounding a project change. Specifically, the second section considers partner courting, highlighting two mechanisms through which environmental beliefs lead project developers to partner with others that share similar beliefs. The third section is dedicated to implementation. It highlights examples where project developers pursued preferences aligned with their environmental beliefs, some in ways that fit expectations for their coded environmental worldviews and others that do not. In some situations, the causality of this is overdetermined by material incentives but, in others, environmental beliefs have a clear independent causal effect.

METHODS

The previous chapter outlined the approach to the qualitative portion of the nested analysis, including case selection. This chapter is also based on evidence collected during the fieldwork and interviews previously described. Methods-wise, I now make a point of departure by focusing not on testing the model predictions and coding of projects and project developers but on distilling the causal impact of environmental beliefs. I do this specifically through process tracing and testing their epiphenomenalism in relation to material incentives. Process tracing can be defined as “an analytic tool for drawing descriptive and causal inferences from diagnostic pieces of evidence—often understood as part of a temporal

sequence of events or phenomena" (Collier 2011, 824). Diagnostic evidence refers to evidence that can be used to derive these inferences based on connection to existing knowledge and theoretical frameworks (Collier 2011, 824). In my case, this backdrop has been provided by the previous chapters that have built a theoretical model about environmental beliefs and TCG and tested it on my database of REDD+ projects. While the previous empirical results have been correlational in nature, in this chapter I attempt to make causal inferences. As Vanhala (2017) notes, process tracing as a method is common in environmental politics research, although many scholars have been reluctant to embrace the specific terminology. This is partly due to disciplinary tensions about the appropriate use of positivist versus interpretivist or post-positivist approaches, with process tracing being strongly associated with the former. My own approach is a positivist one, so process tracing is a natural fit. At the same time, I am focusing on ideational factors, which have tended to be the domain of more interpretivist scholars. Both research approaches are valid and beneficial; by demonstrating the importance of ideational factors with a positivist approach I hope to encourage common appreciation of an important set of variables that may foster better collaboration across methodological lines in environmental politics.

As is excellently detailed by Jacobs (2015), process tracing the effect of ideational factors is challenging because of the difficulty of observing them and distinguishing whether something is caused by them or material incentives as they often point in the same direction. To navigate these difficulties, I try to detect the influence of environmental beliefs using multiple sources: the written sources I used to code projects and project developers in the database, my interviews, and observation. For example, I would ask interviewees to explain the lead up to particular events and seek justification for particular decisions such as to partner with a particular project developer or change the project in a certain way. As a starting point, I search for the basic necessary condition that observed behaviour reflects the

theoretical expectations of environmental beliefs being a key independent variable. As this is not alone sufficient for causal inference, I also go further to try and isolate the causal effect of ideas by honing in on moments where incentives derived from environmental beliefs and material incentives are contradictory or at least unaligned. I do this by following closely the chain of events and decision points in each project to try and identify the impact of environmental beliefs. As will be seen, it is not always possible to disentangle these competing explanations. However, when it is, it offers excellent leverage to highlight the causal effect of environmental beliefs.

PARTNER COURTING: LIKE GOES WITH LIKE

It was theorised in H1 that project developers would first look to partner with others that shared their environmental worldview. This was backed by the descriptive statistics presented in Chapter 3 and some of the results from Chapter 4. Based on my fieldwork, in this chapter I suggest two mechanisms through which this occurs: (1) that the initiating project developer initially restricts their partner consideration to those that share their environmental beliefs and (2) that the initiating project developer entertains all potential partners but places a premium on those with similar environmental beliefs in its assessment of the options. I refer to these mechanisms as the “filtering” and “belief premium” mechanisms respectively. But is this how it plays out in reality? There are observable implications that would be exhibited in the case studies if H1 were to be correct. For example, project developers might specifically describe these mechanisms. Related to the

filtering mechanism, there might be evidence that they restricted their partner search to those with similar environmental beliefs. Project developers may have only looked at potential partners with similar environmental beliefs before settling on an arrangement with one that has a different set. Alternatively, they may not have considered partners with alternative environmental beliefs, including those with useful capacities that are well-known. Related to the second mechanism, there could be evidence that a project developer considered alignment of environmental beliefs as an important factor in their considerations of potential partners. In describing partnerships, alignment of environmental beliefs would be noted as one of the key reasons why one works well.

A number of these observations are found in my case studies, which suggest that project developers look first to partners with similar environmental beliefs. This is seen across two main types of project genesis: (1) a project developer actively seeking others with whom to create a project (Degraded Areas, Brazil Nut, and Martín Sagrado Projects) or (2) a project developer designing a project themselves and then seeking partners to join it (Vichada Project). These are not mutually exclusive, however, and it is possible for both dynamics to feature, as in the Tambopata Project. From interviewing project developers, I found clear examples of environmental beliefs influencing project developers' partner preferences in both contexts.

The Degraded Areas Project: environmental beliefs as a filter for partner courting

Looking at the project developers of the Degraded Areas Project, both Fundación Natura and Carbono y Bosques are coded with the bioenvironmentalist worldview. Through my fieldwork it became evident that this was the pivotal relationship in the project and that

similarities in their environmental beliefs were fundamental to their decisions to partner together. As mentioned in the previous chapter, Carbono y Bosques and South Pole Carbon had funding from the Government of Finland to help create a project and Fundación Natura, with disposable funds from GEF, was the first partner to join with its El Silencio reserve. This gave the project momentum and later Carbono y Bosques and South Pole Carbon found BTG Pactual and AGROFUTURO to create the second project instance. A material incentives-based explanation would have expected partnerships to form for largely functional reasons. Both Fundación Natura and Carbono y Bosques had available resources for project development, but this is not sufficient to account for this partner courting behaviour. A vast array of organisations work in this space in Colombia that could have been considered as potential partners, including 82 that are in my database. It is not clear that these resources were enough to immediately make this partnership stand out above all alternatives for both parties.

Adding environmental beliefs to the explanation, however, can square this. In an example of first theorised partner courting mechanism, my interviews suggested that when Fundación Natura decided to integrate a carbon sequestration component into their restoration work in El Silencio, they looked immediately to Carbono y Bosques and did not consider alternative partners. This is a clear observable implication that supports H1, and the filtering mechanism of project developers initially limiting their partner considerations to those with similar environmental beliefs. Fundación Natura and Carbono y Bosques had an existing relationship, which began during their participation in the National REDD+ Table, a forum for dialogue between actors involved in REDD+ at different levels in Colombia. Finding much in common, they proceeded to collaborate on various projects such as the Degraded Areas Project (Interview 1 2017). During interviews it was clear that both organisations had a strong focus on conservation and ecological concerns. They also shared

a specific focus on the sustainable management of forests as a key area for confronting climate change. As a director of Fundación Natura described, their primary objective is to “promote conservation and the sustainable use of biodiversity” (Interview 1 2017). Representatives from Carbono y Bosques described their mission in similar ways, focusing on forest and land use, albeit more from a research angle. In describing why it was simple for them to partner with Carbono y Bosques, the director of Fundación Natura said

“...we identify a lot as two civil society organisations. They are more of a research centre than a NGO, but we have many things in common that interest us: forest ecosystems, to find different solutions to the problems that afflict the forests...” (Interview 1 2017).

As well as praising Carbono y Bosques’ expertise, they emphasised the “synergy” between and their requirement that groups they partner with must “be walking in the same direction” (Interview 1 2017). Likewise, a representative from Carbono y Bosques spoke highly of the relationship with Fundación Natura and, when asked whether the relationship was different from that with AGROFUTURO, with whom they collaborated in designing the Guacamayas instance, replied “Totally. Because we speak the same language” (Interview 3 2017). These reasons for the fruitful nature of the relationship and partnership are not based on material interest; they are tied to shared understandings about the environmental work they do and how they approach it – in other words, environmental beliefs. In sum, the partner courting behind the key relationship in the Degraded Areas Project was significantly affected by environmental beliefs. Fundación Natura’s consideration of potential partners was narrowed immediately to those with whom they knew they shared such beliefs. That Carbono y Bosques had resources available to commit to a project was undoubtedly important, but it

appears most likely that this material incentive helped cement the decision only after environmental beliefs had filtered the search. This is a clear observable implication of H1.

The Tambopata Project: environmental beliefs and financing requirements

The similarity of environmental beliefs was also important in the partnering decision of two project developers in The Tambopata Project. Unlike in the Degraded Areas Project, however, where Fundación Natura and Carbono y Bosques were coded as bioenvironmentalist, in this case the support for H1 does not cleanly fit with the environmental worldviews framework. The project bid for the administration contract offered by SERNANP was lodged by AIDER but based on a pre-established agreement with Bosques Amazónicos as a financial partner. AIDER was coded as social green and Bosques Amazónicos as market liberal. Through interviews with key individuals from each organisation, I was satisfied that the worldviews I assigned them were the most accurate, but also found alignment of environmental beliefs that crossed worldview lines which were significant to their choice to collaborate.

The collaboration between Bosques Amazónicos and AIDER in the Tambopata Project came on the back of an existing relationship that had proved very positive and fruitful. It stemmed from a previous forest plantation project where the former had employed the latter as a technical advisor. The two later decided to design a REDD+ project together. There was no extended period of open partner courting for the project, it emerged organically from the existing relationship. A materialist explanation for this partnership in the Tambopata Project would point to this previous relationship being the key factor, reducing the transaction costs of searching for alternative partners. The explanation for AIDER agreeing to join the plantation project in the first place could also be explained as it

was simply in the financial interest of an NGO to take money to deploy their expertise. I argue this explanation is insufficient and that the consideration of aligning environmental beliefs is necessary to account for the partnership. Importantly, this REDD+ project was one of the first in Peru and a totally new endeavour for both AIDER and Bosques Amazónicos. It is too big of a leap from a plantation project advisory contract to what was expected to be a multi-decade partnership for a multifaceted REDD+ project and government administration contract for this limited past experience to sufficiently explain the organic partner courting process.

My fieldwork suggested that a commonality of environmental beliefs was critical to the partnerships. AIDER is a local Peruvian NGO whose stated mission is to “conserve and sustainably utilize the forests of Peru in harmony with the conventions of biological diversity, climate change, and combatting desertification and drought” (AIDER n.d.). Their approach emphasises “social inclusion and participation of the population that lives in the forest” (AIDER n.d.), which a senior member of staff emphasised to me as key and enabling them to have greater impact (Interview 18 2017). Initially, the decision of such a socially-minded forest protection organisation to partner with Bosques Amazónicos, a private forestry company coded with the market liberal worldview appears to go against H1. However, as I mentioned in the previous chapter, I found through my interviews that Bosques Amazónicos’ environmental beliefs were actually much more grounded in ecological restoration than is captured by my high-level coding choice of the market liberal worldview. Fundamentally, Bosques Amazónicos’ environmental beliefs put conservation at the core of their work, even to the extent that they are willing to compromise profit to produce more ecologically beneficial projects. In describing why AIDER decided to accept the contract and collaborate with Bosques Amazónicos despite apparently significant, an interviewee who had held senior positions in both organisations explained how “Bosques

Amazónicos has many surprising elements for being a private enterprise” (Interview 19, 2017):

“They could have worked in much richer soils; it would’ve been much less expensive... in the first year they didn’t plant anything; they planted guava and lucuma, plants that don’t have any value, only to recuperate the soil... What they wanted to demonstrate was that even with degraded soils you could restore the quality of the soil and return it to forest” (Interview 19 2017).

Bosques Amazónicos actively wants to restore degraded soils and avoid monoculture and foreign commercialised species. “It was only native species, they didn’t plant pine, eucalyptus, or teak. They only used... five native species” (Interview 19 2017). This, they described, was not just a feature of a particular project but of Bosques Amazónicos general philosophy and critical to explaining why AIDER felt comfortable working with them. This was echoed by a director of Bosques Amazónicos, who, in describing their philosophy, emphasised that profits they made had to be done “in the correct way”. By this he was referring to environmental and social standards and explained their belief that it was essential to work closely with local communities in forest projects (Interview 17 2017). Referring specifically to why the relationship with AIDER worked well, he also stressed that there was a shared vision and causal belief regarding how to effectively protect forests. Namely, that it is essential to work with local people to increase the relative value of keeping trees standing compared to felling them (Interview 17 2017).

Through these accounts it becomes clear that Bosques Amazónicos has strong environmental beliefs that go beyond its market liberal coding and align in many ways with those of AIDER. It also appears this was important to the original formation of the relationship from which the Tambopata Project emerged. This can be considered an example

of the belief premium mechanism, with AIDER's perception of Bosques Amazónicos being boosted significantly by the alignment of environmental beliefs and this being critical to their decision to take the contract. Adding this convergence of environmental beliefs to the partner courting explanation makes it much more convincing in accounting for why the pair agreed to undertake such a significant new project without a wider search for partners. Their environmental beliefs are, of course, not identical; the market liberal and social green worldview coding is still the most appropriate. However, there are enough similarities across these that makes the relationship between the two far deeper than one based purely on transactional benefits and financial alignment. Shared normative and causal ideas gave them confidence in one another and ultimately led to an example of the filtering courting mechanism. The organic evolution of the Tambopata Project from the relationship is essentially them considering partner options that align with their environmental beliefs. The existing relationship was the most proximate and already fitted both this and provided the required capacities for the project. However, the partnering episode remains somewhat overdetermined as both the materialist and environmental belief driven explanations predict the same outcome. To be confident in assigning significant causality to environmental beliefs we have to consider further evidence, with developments later in the project's life proving revealing in this regard.

The importance of environmental belief alignment was highlighted by a second round of partner courting that occurred in the Tambopata Project. In 2011, Bosques Amazónicos was forced to leave the project as the Peruvian government's political position changed to one that did not support private companies profiting from the carbon stored inside a national park (Interview 24 2017). Bosques Amazónicos also suffered a number of financial setbacks at this time that contributed to the situation (Interview 17 2017). As a result, SERNANP discontinued the arrangement that was the basis for Bosques Amazónicos

financial involvement with the project, leaving the project without a financial partner and key revenue stream. This lasted until 2014 (by which time the government had passed legislation that restored their confidence in allowing such private partnerships again), when Althelia joined (Interview 24 2017). During these intervening three years, AIDER searched for another partner but, as a director of AIDER told me, they found it very difficult to find one with whom they aligned as well as Bosques Amazónicos (Interview 18 2017). Althelia, a European private investment company, was coded with the market liberal worldview in my database. They emphasise investing in high-impact projects that generate economic, social, and environmental returns (Interview 25 2017). However, they lack the environmental beliefs and environmental ethos of Bosques Amazónicos, which was willing to knowingly forgo more profitable activities for ecological purposes. One of Althelia's requirements for joining the project was to redesign it with a major focus on commercial cacao production to make it more profitable. This was a challenge to accommodate for the existing project developers. As a manager of SERNANP described,

“The conversations within AIDER with respect to Althelia were very difficult... [AIDER] would say] why am I [gaining] so little? Why are you gaining so much? And they [Althelia] say, because I assume the risk and am investing money. So they were long conversations. It was a process of negotiation of almost one year, if not more” (Interview 24 2017).

The fact that AIDER took a couple years before agreeing to terms with a new financial partner suggests that environmental beliefs had been an important factor in their partner courting decisions. A manager at SERNANP said that they and AIDER considered and turned down a number of partnership proposals before eventually proceeding with Althelia. They also said that they looked at partnering with Bosques Amazónicos again, but by that time Bosques Amazónicos had experienced further financial difficulty and could not support

the project (Interview 24 2017). A project manager from AIDER also emphasised how challenging it was to continue the project in the intervening years and that they had to scale back activities (Interview 26 2017, 2). For example, another manager described how they could not afford their own vehicles and so were forced to borrow from or share transport with other organisations to reach important field sites, greatly reducing the speed and flexibility with which they could operate (Interview 29 2017).

A materialist explanation would have expected them to agree on a new partnership much earlier, rather than suffer through three years of struggling to implement the project while severely financially hamstrung. Instead, it appears that the first partner courting mechanism I theorised was in play with AIDER attempting to filter their potential partners to find one that was similarly aligned in its environmental beliefs to Bosques Amazónicos (who they tried to re-partner with), but ultimately being unsuccessful. It eventually had to broaden its search and accept a partnership with a less ideologically aligned organisation, which necessitated a major change in the project design away from their original preferences. When a manager of AIDER was describing the partnership with Althelia, they said it worked well but added “it’s a pity it’s not with Bosques Amazónicos” (Interview 18 2017). This is despite Althelia being a much larger company and able to provide greater levels of financial support. It demonstrates that environmental beliefs were indeed fundamental to AIDER’s partner courting in this second phase, but also gives weight to the argument that it was these beliefs more so than material incentives driving their behaviour in the first courting episode with Bosques Amazónicos. Together, these demonstrate both theorised partner courting mechanisms and support H1’s expectation that project developers will prefer partners with whom they share environmental beliefs. It links to Abbott and Snidal (2009)’s work in that material capacities were critical to the partner courting, but in a context of prior ideological filtering. In this case the filtering was not successful; as was

suggested in Figure 8, finding financial capacities outside the market liberal worldview (or that come with ecologically- and socially-minded environmental beliefs within the market liberal worldview, as is the case with Bosques Amazónicos) is difficult.

The Martín Sagrado Project: belief in local ownership as the driver of partner preferences

The French company Pur Projet was the initiating actor of the Martín Sagrado Project. During its inception, ideological considerations were of such importance to their partnering decisions that they went as far as to orchestrate a partner's creation. Pur Projet is an interesting project developer because it is one of the few examples of a private sector actor that was not coded with the market liberal worldview. It is a certified "B-Corp", meaning it adheres to "rigorous standards of social and environmental performance, accountability, and transparency" and works towards "redefining success in business" (B Corporation n.d.). Coded in my database with the bioenvironmentalist worldview, this manifests in Pur Projet's work to transform business models and supply chains into forces for sustainability and ecological regeneration through agroforestry. Their approach to this work is also defined by a fundamental belief in working through and empowering local partners as was described in Chapter 5.

This uncompromising belief in the importance of local ownership explains the partner courting process that unfolded in the Martín Sagrado Project. Pur Projet had already been working with ACOPAGRO on a separate reforestation project and looked to add other local partners that shared similar environmental beliefs. They found APAHUI, another local cocoa cooperative, and APROBOC, a community environmental organisation. I coded all three with the social green worldview, which was confirmed by what they expressed during fieldwork: each firmly believed in empowering their communities to be leaders in protecting

the environment. This had manifested in each pursuing and being granted a large private conservation concession to manage by the Peruvian government, which formed the physical basis for the project. ACOPAGRO was confident of joining the project on the back of their prior relationship with Pur Projet and APAHUI was similarly eager to join. APROBOC, on the other hand, was reluctant at first and suspicious of entering into such an international partnership. They came around, however, after more up-front financing was put on the table (Interview 20 2017). To ensure local leadership of the project, Pur Projet went as far to create FUNDAVI as an umbrella organisation of which the three concessionaries are the principal members in order to coordinate the project among them. Pur Projet was the initiating actor with the resources to get the Martín Sagrado project off the ground, but their environmental beliefs about the need for local ownership defined their partner courting strategy.

It is difficult to explain this partner courting from a materialist perspective. For the concessionaries, of course, it was in their material interest to join a project that was bringing in significant external resources to support their work while also giving them significant control. For, Pur Projet, however, it was not a lucrative decision. As a corporate actor, Pur Projet would be expected to pursue efficient partnerships towards economic and financial gains. While the concessionaries could be attractive partners due to their responsibility for large tracks of land, they are small, have limited capacity, and are located in difficult to access areas. To get from the nearest main population centre to the headquarters of APROBOC in the village of Dos de Mayo (where there is no internet or cell phone service), is a full day's boat ride. By creating FUNDAVI, Pur Projet also deliberately ceded significant leadership and power in the partnership towards the concessionaries, who had no prior experience with the concept of REDD+. The project had little prospect of turning a significant profit and continues to be propped up by Pur Projet's revenue from other business activities. Considering this, it appears that environmental beliefs were fundamental to Pur

Projet's partner courting preferences. It reflects a combination of both the filtering and belief premium mechanisms: the strength of Pur Projet's beliefs meant that it was only going to consider partners who were also committed to local leadership; their evaluation of those they finally partnered with was likely boosted by this as justifying a partnership with them on material incentives alone would have been difficult. This is a clear observable manifestation of H1 based on Pur Projet's environmental beliefs that are more nuanced than what its bioenvironmentalist coding can capture.

The Vichada Project: environmental beliefs drawing partners to the table

Partner courting based on similar environmental beliefs but in a way that cuts across environmental worldviews also occurs in the Vichada Project, although manifesting differently due to its structure. Unlike the Degraded Areas and Tambopata Projects, in the Vichada Project the initiating project developer (Fundación Natura) designed the project themselves (with technical support from Carbono y Bosques and South Pole Carbon) and then sought partners to accept it and join post-design. The purpose of the project was to improve the environmental sustainability of commercial forest plantations. As a director of Fundación Natura described, they did not target particular plantations but instead ran a series of open meetings and consultations to which all interested owners were welcome. They were willing to work with any plantation owner who would to subscribe to the project (Interview 1 2017). This does not support my partner courting hypothesis: H1 would have expected Fundación Natura to actively look for potential partners that shared their environmental beliefs. Instead, a materialist explanation largely accounts for this as it would expect Fundación Natura to partner with whomever had the capacities to implement the project effectively.

Fundación Natura launched with the Vichada Project with five plantation owners in 2015.²⁰ In my coding, none of these shared the bioenvironmentalist worldview with Natura; however, through my interviews, it became clear that they all shared environmental beliefs that are not ubiquitous in the sector. Three of the partners, El Toro, CANAPRO, and Amazonia Reforestation, had already collaborated with Fundación Natura in producing a study and guide on sustainable, biodiversity protecting forestry management in the region (WWF et al. 2014). Amazonia Reforestation even has a tagline that is “Combining Forestry with Conservation” (Amazonia Reforestation n.d.). They, along with the other private enterprises in the project, remain profit driven, but that is not all that guides them. A director of Ecoforestal de Colombia summarised their mission as “to develop a forestry project with great respect for nature” (Interview 4 2017). He emphasised that they simultaneously develop a nature reserve on their land and “only plant in degraded zones: savannahs that were previously dedicated to cattle ranching for many years and are now degraded” (Interview 4 2017). Recalling that the private sector plantation owners were all coded with the market liberal worldview and CANAPRO as social green, these shared environmental beliefs with important normative ideas about conservation cut across worldview lines. Fundación Natura did not explicitly seek partners for their project that had similar environmental beliefs, but those that did were ultimately the ones attracted to joining.

A materialist explanation does not easily account for these partner courting dynamics. Although Fundación Natura had grant money to cover the technical costs of project design and tried to avoid making joining the project a financial burden, there were no, or at best very weak, material incentives to join the project. Being part of the project still

²⁰ To recap, these are CANAPRO (a local NGO coded as social green), Unión Temporal Agroindustria Horizonte Verde, Ecoforestal de Colombia, Reforestadora El Toro, and Amazonia Reforestation (all local private sector actors coded as market liberal).

requires plantation owners to carry out additional activities such as biological monitoring and new types of data collection in their plantations. They also must cover the costs of hosting and transporting independent validators when they came to the project. These are significant costs for the owners as their business model is premised on major up-front investment with returns only in the long-term, leaving them often with little cash on-hand. The project was partly sold on the prospect of additional revenue for the plantation owners through the sale of carbon credits, but the material incentive from this was still very limited. The prospects of any revenue remained years away due to the lengthy certification process, the relatively weak voluntary carbon at the time, and the owners were all new to the entire concept so would have had little reason for having great confidence in a financial windfall from the project. A plantation owner's willingness to go through the rigmarole of learning about, preparing for, and joining the project is much better explained by their environmental beliefs that aligned with those of Fundación Natura influencing their preferences. This is a manifestation of the belief premium mechanism I theorised above, with the plantation owners evaluating the proposed project more highly based on the alignment of environmental beliefs.

This fits as an observable implication of H1, particularly when juxtaposed against plantation owners that chose not to join the project. A senior manager of one such company, which was far larger and was investing many times more money into their operations than the five Vichada project owners, expressed that their lack of desire to join the project was partly due to ideological differences. He was concerned that his company, which placed a greater focus on use of agrochemicals and followed a more aggressive commercial model, faced reputational damage by joining due to scrutiny from owners in the Vichada project with strong environmental beliefs that were critical of his practices. Technical concerns to do with integrating a far larger plantation into the project fold were also relevant, but unease

about the ideological differences was fundamental (Personal communication 1 2017). This is a perfect representation of the concerns theorised by Abbott and Snidal (2009) making actors suspicious of collaboration. It also highlights the flipside of the belief premium: for those who did not share the beliefs, the material incentives on their own were not enough for joining and for those with starkly conflicting environmental beliefs, the project was evaluated even more poorly as a result. Fundación Natura needed the capacities of plantation owners to realise their project, but which owners ended up joining was strongly influenced by environmental beliefs. Those whose beliefs emphasised ecological concerns saw more value and less reputational risk in joining and so, even without direct partner courting, project developers still came together in alignment with environmental beliefs.

PROJECT IMPLEMENTATION: THE PURSUIT OF ENVIRONMENTAL BELIEFS

Environmental beliefs are also theorised to shape preferences regarding REDD+ projects during project implementation, including when it occurs in tandem with project design. Each of H2a–H2c suggest how the three worldviews I am operationalising would generate particular preferences for project developers. In this section, I demonstrate this with observable examples from my five case studies that show how environmental beliefs can account for variation in REDD+ project implementation. In general, project developers have implemented their projects in ways that align with their environmental beliefs, which, in most (but not all) cases, also mapped onto their coded environmental worldview. In some situations, behaviour is overdetermined in that explanations based on environmental beliefs

and material incentives would predict the same outcome. In other cases, however, process tracing unveils situations where my environmental belief-based argument can be contrasted with the expectations of a materialist one. In the Martín Sagrado Project, shirking and slippage arose as an important issue, with project developers initially pursuing their own preferences that did not align with the negotiated project design. They also did so in line with their competing environmental beliefs despite facing similar material incentives. In the Brazil Nut and Tambopata Projects, we see a variety of responses to changes in material incentives with some project developers altering behaviour in ways a materialist explanation would expect while others acted consistently with their environmental beliefs despite the change. In these two cases we see less shirking and slippage, partly due to constraints on autonomy and partly due to there being a close alignment of preferences. This section fleshes out these scenarios for each of these three case studies.

The Martín Sagrado Project: variation in behaviour despite common material incentives

While the partner courting of the Martín Sagrado Project has been described above, the processes of design and implementation each occurred independently. Importantly for my argument, they unfolded in a similar fashion with ACOPAGRO, APAHUI, and ABROBOC behaving in line with the variation in their environmental beliefs but in the context of similar material incentives. After bringing together the three concessionaries and FUNDAVI as a coordinating entity, Pur Projet and these partners carried out a participatory process of project design. They discussed potential strategies for protecting the conservation concessions and agreed to focus on two main lines of work. The first was direct conservation work such as patrols, monitoring, and environmental education and awareness raising in local communities. The second was providing economic support to farmers and local communities that would reduce their incentive to fell trees. This included capacity building

to make cocoa production more efficient, introducing agroforestry, and promoting a shift from cattle ranching to less forest-threatening economic activities. In this case, there was an independent period of project design bargaining. Interviewees told me it was a positive and collaborative process but that there were conflicting preferences regarding the relative weight of the two types of activities. While Pur Projet and APAHUI both preferred a design that balanced both equally, ACOPAGRO and APROBOC each advocated for a concentration on economic support and conservation activities respectively (Interview 20 2017).

The role of environmental beliefs in shaping the preferences of the project developers can be distilled in this case by considering the differing perspectives of the concessionaries. All three were coded with the social green worldview, with ACOPAGRO and APAHUI being cocoa cooperatives and APROBOC a community-based conservation organisation. In addition to their responsibilities to protect their conservation concessions, the two cooperatives focus on providing technical and financial assistance to their farmer members and developing product processing and export capacity. Many of APROBOC's members are also farmers, but the organisation is dedicated to conservation work such as the activities mentioned above for the project. Comparing ACOPAGRO and APAUHUI, both have material incentives to favour the economic support activities in the project as they have direct economic benefits to gain as cooperatives of the very farmers who would receive the support. Both activities help protect their concessions, but the conservation activities direct resources away from their primary business of cocoa farming while the economic support activities directly augment it. The conservation activities are argued to be in the enlightened material self-interest of the farmers by bolstering the long-term sustainability of the water sources on which they depend, but the immediate benefit of these activities to the cooperatives that are already working with poor and economically vulnerable farmers is

limited. Given this, a purely materialist explanation would expect both developers to prefer and emphasise the economic support activities. While ACOPAGRO fitted this mould, APAHUI broke it by advocating for an even balance with direct conservation work.

Through my fieldwork I was able to detect that ideological differences explain this variation. When I visited the headquarters of ACOPAGRO and APAHUI in the towns of Juanjui and Huicungo respectively, there was a stark difference in the atmosphere and visual emphasis. ACOPAGRO has a much more commercial ambience, perhaps reflected by their greater size. There was also very little evidence of their conservation work either in the main spaces of their building or the back offices. When we discussed the REDD+ project, the director I spoke to had to retrieve a map from storage and put it on display for us. During my visit to APAHUI, in contrast, several maps of the project and conservation concession were permanently set up, the internal walls of the main building were covered in banner-size photographs of fauna from their concession, and I was eagerly introduced to various dedicated park monitors to hear about their work. ACOPAGRO did not even have specialist dedicated park monitors.

My interviews with directors of from ACOPAGRO and APAHUI clearly suggested that conservation work was much more a core part of latter's identity and philosophy of work than for the former (Interview 21 2017; Interview 23 2017). This is also evident structurally: the top manager of APAHUI oversees both the commercial and conservation work of the cooperative while the management of ACOPAGRO's involvement in the project is separated from the general leadership of the cooperative. A director of FUNDAVI who played a central role in facilitating the project design negotiations recounted how difficult the negotiations were because of the concessionaries' different visions and preferences for the project. ACOPAGRO's vision was "only on the theme of production". Their attitude was described as "I am a cocoa farmer, I don't get very involved in conservation... how

profitable is it? Ecosystems? I'm not sure... [let's] produce more cocoa" (Interview 20 2017). In contrast, the director described how APAHUI was interested "in both things", "conservation and production", and understood how they were interrelated (Interview 20 2017). The different preferences for project design of ACOPAGRO and APAHUI cannot be explained by material incentives, which were the same for both, but map closely onto the difference in their environmental beliefs. This supports my theory and H2 that environmental beliefs shape preferences for project design.

APROBOC differs from the other concessionaries in that it favoured an emphasis on direct conservation activities. Its material incentives, however, also differ from APAHUI and ACOPAGRO because it is a local conservation organisation rather than a cooperative. With its organisational and legal aims directed towards conservation it is more difficult to distinguish the effect of environmental beliefs in driving their behaviour. However, by tracing APROBOC's behaviour over time and considering the fact that its members are also cocoa farmers it is still possible to see environmental beliefs having an influence. I coded APROBOC with the social green worldview based on their strong commitment to community-led conservation, which was evident when spending time with them in the village of Dos de Mayo, where they are headquartered. The organisation is largely volunteer-run, comprising local farmers who give up their time to carry out conservation work and help protect their concession. Through conversations with numerous APROBOC members I consistently heard their pride in and passion for their conservation work. They were also quick to distinguish themselves from ACOPAGRO and APAHUI by emphasising they were "distinctly" or "100%" conservationists, and the first of the three organisations to receive their concession from the government (Personal communication 2 2017). As a director of FUNDAVI described, "the vision of APROBOC is strictly conservationist, not production [focused]" (Interview 20 2017).

It was clear APROBOC has strong ideological commitment to conservation and forest protection. The fact that much of their work is done voluntarily and by farmers who sacrifice time they could invest in their farms also suggests that environmental beliefs are influential in guiding their behaviour, much of which goes against economic incentives. The community of Dos de Mayo is very poor; APROBOC's members are not farmers who are so economically secure that they can comfortably take time off to pursue conservation activities. In many ways, the work of APROBOC is an economic sacrifice. Through the REDD+ project, they now receive external support through FUNDAVI and Pur Projet, but when they first received the conservation concession they were working to protect its more than 100,000ha with essentially no funding (Interview 22 2017). The members of APROBOC continue to be very poor and would mention during my fieldwork their need to improve the commercialisation of their cocoa. By advocating for a project design that emphasised direct conservation, they did so at the expense of advocating for economic support activities that they and their community would benefit from. There is certainly an incentive for APROBOC to fulfil its organisational mission, but it is doubtful that in this context it is significantly stronger than the everyday economic incentives of its members. The fact that, despite this, APROBOC pursued a conservation focused project design suggests that their strong environmental beliefs grounded in conservation and protecting the forest were influential in driving their behaviour. Like for the explanation of the cooperatives above, this observation does not link directly to one of the worldview-specific sub-hypotheses but to the general argument behind H2 about environmental beliefs shaping preferences.

The design of the Martín Sagrado Project that was eventually agreed upon balanced the conservation and economic support activities evenly, largely due to this being the preference of Pur Projet. Although the French company was committed to empowering the

local partners to lead the project, their oversight was and remains extremely influential (Interview 20 2017). During the initial years of the project, however, the contestation over project design persisted into its implementation. As a director of FUNDAVI told me, ACOPAGRO's and APROBOC's initial implementation was skewed towards economic support and conservation activities respectively, in line with their differing visions described above (Interview 20 2017). This combination of shirking and slippage was possible because of the significant agency and autonomy of the implementing partners. The project covers a huge area and involves many isolated communities scattered along rivers that are only accessible by boat from the main population centre, where FUNDAVI's coordinating office is located. Pur Projet staff visit the project several times each year but their closest office is in Colombia. If one of the concessionaries was shirking or slipping in its implementation the rest of the project would not know for days or weeks and responding to this would take even longer. With their incentives being as described above, this provides another example of environmental beliefs shaping preferences, this time in the context of implementation. FUNDAVI and Pur Projet were aware of this, however, and over time worked to bring all the partners into line with the agreed project design that balanced conservation and economic support activities. This was done through a combination of socialising the partners to embrace the balance in the project design and transmitting the message that if they did not reply they would not receive the benefits of the project and its resources. I had expected social green (FUNDAVI) and bioenvironmentalist actors (Pur Projet) to have a less zero-sum view of project focuses but this case shows they still actively worked to combat shirking and slippage, despite the difficulty in doing so.

In 2015, after about five years of implementation, the Martín Sagrado Project also underwent a structural transformation in which environmental beliefs played a critical role. The original structure of the project involved a centralisation of resources in FUNDAVI who

then implemented activities with concession holders. As a director of APAHUI recounted, they, ACOPAGRO, and APROBOC began to feel a little disgruntled with the setup and wanted to have more financial ownership and direct control of the project:

“Sincerely, we thought it would be more satisfactory if we could manage... we are capable of managing our own funds. So, we petitioned the foundation [FUNDAVI] to say that we are going to manage our own fund. We are capable of having our own administrators within each cooperative” (Interview 23 2017).

This push from the concessionaries aligns with their environmental beliefs that value community-led conservation as well as their direct economic interest, so it is difficult to distil the specific effect of the former. However, the process unfolded with FUNDAVI and Pur Projet welcoming the proposed change. Although it defied their economic incentives to control the projects’ finances, they supported the proposed change and facilitated the design of a new structure where budgets were allocated to each of the concessionaries. This left FUNDAVI with only a small team and resource pool to manage. For FUNDAVI and Pur Projet, who are the most powerful actors in the project, then, it appears their environmental beliefs in operating through and empowering local partners, as already discussed, were vital to the project undergoing this reform. This is another observable implication of H2 as well as H2c pertaining specifically to the social green worldview.

The Brazil Nut Project: environmental beliefs supporting consistent behaviour

Moments when material incentives change but environmental beliefs stay constant, as one can expect over short time-scales, provide useful leverage for distilling the latter’s impact. In the Brazil Nut Project, there was little incentive for slippage or shirking in implementation

as the preferences of FEPROCAMD and Bosques Amazónicos were almost perfectly aligned. As described in Chapter 5, the protection of the brazil nut concessions is fundamental to the work FEPROCAMD and the direct means through which Bosques Amazónicos would derive financial benefits from the project. Supporting and empowering the concession owners was seen by both project developers as the best way to do this. Despite this alignment, economic circumstances deteriorated significantly during implementation that could have disrupted this. However, Bosques Amazónicos and FEPROCAMD were remarkably consistent in their implementation of the project in ways suggesting they were driven by their environmental beliefs. This change in material incentives offers useful insights into the way that environmental beliefs influenced the project developer's behaviour.

The project was built on the back of gaudy revenue projections for selling carbon credits on the voluntary market. This would go towards continuing to organise the various brazil nut farmer organisations through FEPROCAMD, investing in improved forest monitoring operations, building a brazil nut processing plant, and profits for the project developers. Unfortunately for the project developers, the financial projections failed to be realised. A director of Bosques Amazónicos explained that while the project has been relatively successful in protecting the brazil nut concessions and thereby generating carbon credits, they had struggled to sell credits. In a market with a supply glut and weak demand that never grew as anticipated, they have only been able to sell approximately 40% of their VERs (Interview 30, 2017b). This has led to the indefinite postponement of initiatives such as the processing plant and significantly reduced budgets for FEPROCAMD's activities. From a financial standpoint, the project has largely been a failure given the significant investments made by Bosques Amazónicos to establish and certify the project. A director of FEPROCAMD described their perspective on the situation:

“We started with a big perspective of being able to... [we thought] that if this project really develops into the future it can help us improve living conditions and help us better maintain the project – [this would be] welcome! But it was not like that... and it generated malaise among all of us... and it [still] has not happened until now. We certified the [carbon] credits but there are few sales... these sales sometimes are [only] for administrative expenses” (Interview 27 2017).

Interestingly, both project developers have stuck with the project and plan to continue doing so despite no obvious signs of the voluntary carbon market picking up. There is also a major threat to the project in the years ahead from the possibility of the Peruvian government adopting of a new national deforestation baseline level, which would reduce the number of credits being generated by the project (Interview 19 2017; Interview 30 2017). For Bosques Amazónicos, sticking with the project does not fit with an explanation premised on material incentives. As private company, they would be expected to pursue economic and financial returns, which the project is not providing. Their persistence with the project is even more surprising from this perspective given that the company has undergone multiple corporate restructurings in recent years because of financial difficulties. In 2008, Sustainable Forestry Management (SFM), a firm that had started investing in the Bosques Amazónicos since 2007, just before the project started, had financial problems and was acquired by Octavian Special Fund. They proceeded to restructure their investments in Bosques Amazónicos before selling control of the company to Andean Crown in 2014 (Bosques Amazónicos 2017). Despite these financial and operational disruptions, Bosques Amazónicos continued to invest its resources into the Brazil Nut Project. Such persistence in the face of unconvincing financial incentives for a private company defies the expectations of a purely materialist explanation. They could have looked for new projects or redirected investments into their other activities such as the large successful forest plantations they run elsewhere in Peru. This suggests that environmental beliefs did play an

important role in driving their behaviour. It also supports what I found regarding their partner courting behaviour in the Tambopata Project and their ideological preference for ecologically beneficial projects over simply the most profitable as described earlier. As a director from the company confirmed in talking about the Brazil Nut Project: “We are interested in the project staying alive and that nobody touches even half a hectare of the 300,000 that there are. This is what interests Bosques Amazónicos” (Interview 30, 2017).

FEPROCAMD also stuck diligently to the project despite its financial struggles and the failure of expected benefits to materialise. I coded them with the social green worldview and in conversations with the president and some farmers their belief in their role as conservationists came across powerfully. Their persistence in the project, however, offers less analytical leverage into assessing the influence of environmental beliefs because their ideological and material incentives are both firmly aligned with protection of the brazil nut concessions regardless of the project’s financial fortunes. As brazil nut farmers their livelihoods depend on protecting their forests: the aim of the project was essentially to strengthen what they were already doing. An ideational explanation would expect the same outcome as one based on material incentives. This is a situation that arises in the implementation of some of the other case studies too. For example, in the Degraded Areas Project, AGROFUTURO pulled out of after the economic projections for carbon credit revenue in the Guacamayas instance came out below their initial expectations. I coded them with the market liberal worldview, which I confirmed reflected their environmental beliefs accurately through my fieldwork. They are profit-focused, and see their environmental contribution coming through conducting efficient agriculture business. They also combine some agroforestry with their plantations, which was the initial basis for their participation in the project. However, they were unwilling to extend this or pay to certify it without a compelling business case, which led to their drop-out (Interview 6 2017). Here again, the

behaviour is explained by both an ideational and materialist argument, making it difficult to distil the causal effect of environmental beliefs.

The Tambopata Project: material constraints trumping environmental beliefs

Environmental beliefs are not always the most cogent explanation for the implementation of REDD+ projects; let it be clear that I am not trying to advance such an argument. The previous section demonstrated how it can be difficult to assign causality to environmental beliefs because of overdetermination. In this section, I show that, in other situations, they are clearly trumped by material incentives in explaining implementation. In the Tambopata Project, for example, a change in economic fortunes of the project forced AIDER to implement the project in a way that contradicts what would be expected if environmental beliefs were driving their behaviour. While the project started as an AIDER-Bosques Amazónicos partnership that won the partial administration contract from SERNANP, when the latter was forced to leave in 2011 and the project was denied its key revenue stream AIDER, the implementing project developer, had to decide how to adjust to the lower-resource environment. An environmental belief-based argument would expect AIDER's beliefs about community empowerment and forest protection to drive it to focus on maintaining the community development aspects of the project. However, AIDER's agency to implement in pure accordance with its preferences was severely limited because of the administration contract with SERNANP. There was no room for shirking as its legal obligations compelled it to maintain the research and biological monitoring activities through the years of financial difficulty. SERNANP also has a significant presence in the region that allows it to monitor implementation of the contract. A manager of the project said that during the three years before Althelia joined as the new financial partner, AIDER did not completely abandon their community development activities, which are their core

interests, but did have to scale them back (Interview 26 2017). Once Althelia joined, alleviating the resource constraints, AIDER continued to be constrained in pursuing its preferences. Althelia's joining involved a major change in project design to focus on the expansion of commercial cocoa production, requiring AIDER to advance this agenda as well as manage the monitoring and research for SERNANP. Althelia also had exacting reporting requirements for AIDER that limited room for shirking or slippage (Interview 25 2017). This example highlights that even if environmental beliefs inform actor preferences, material considerations and constraints may often override them in shaping behaviour.

CONCLUSION

This chapter has used process tracing to test my theorised mechanisms regarding the impact of environmental beliefs. In doing so, I have also sought to bring to life the arguments previously made quantitatively by drawing on examples from five case studies. The cases are not intended to be representative of all REDD+ projects, nor even of my database. Across the five projects, however, I have shown how the environmental beliefs of project developers have influenced their preferences and thereby behaviour during partner courting, project design, and implementation. In the Degraded Areas Project, environmental beliefs worked as a filtering mechanism for the partnership between Fundación Natura and Carbono y Bosques. In the Vichada Project, plantation owners joined on the back of the belief premium mechanism. These mechanisms can also operate together as was the case for AIDER and its financial partners in the Tambopata Project and Pur Project in the Martín Sagrado Project. In the latter, the concessionaries' preferences for project design and implementation varied despite similar material incentives, highlighting the influence of environmental beliefs in these stages. Their impact on implementation was also evident in the Brazil Nut Project,

where Bosques Amazónicos normative commitment to the project fortified their preference to continue with it despite poor financial performance. Together, these case studies provide concrete evidence in support of both my main hypotheses and the large-N findings from Chapter 4. In several places, the cases also demonstrate, however, that the causal power of environmental beliefs is far from absolute, with material considerations clearly acting as the key drivers of behaviour. The restraints on AIDER in implementing the Tambopata Project were a case in point. In other instances, the effect of environmental beliefs is indistinguishable due to overdetermination with material incentives, such as with Fundación Natura in the design and implementation of the Degraded Areas and Vichada Projects.

The process tracing of the five case studies represents the final empirical contribution of this thesis. Chapter 3 presented a new, originally coded database of REDD+ projects, which I analysed quantitatively in Chapter 4 as the first part of my nested analysis. I presented quantitative evidence to show that environmental beliefs, operationalised through environmental worldviews, appear to shape the partner courting and design of REDD+ projects. In Chapter 5, I began the second part of the nested analysis by testing my coding, theoretical suppositions, and the model's predictions about project design against qualitative evidence from my five case studies. This demonstrated that the coding and model outcomes, despite their broad nature, reflected reality and predicted the project design of my cases well. This chapter has followed up on the broad claims made in this work by diving deep into the projects to highlight examples of *how* environmental beliefs are shaping REDD+ projects. These include the filtering and belief premium mechanisms for partner courting, and their general influence on the preferences of project developers during project design and implementation. I also demonstrated that environmental beliefs can shape the behaviour of all actors, including those from the private sector and those coded with the market liberal worldview. Bosques Amazónicos and Pur Projet are two cases in point. The

environmental beliefs of actors are diverse and nuanced: the simple profit-maximisation assumption that dominates the theoretical treatment of these actors in the international politics literature is not perfect. This is not to say it is not useful or should be scrapped, but that alternatives should not be ruled out and in certain cases more attention is needed to prevent overlooking of the important role environmental beliefs play in shaping behaviour.

This chapter has delved into the details of my case studies by process tracing the effects of environmental beliefs on REDD+ projects. However, this is not a thesis solely about REDD+ projects, but about the transnationalisation of climate change governance in general. A key purpose of this chapter was to add grounding to the high-level quantitative findings, which is important given this is the first study of TCG to examine REDD+ projects as explicit manifestations. The TCG literature will benefit from developing a closer familiarity with REDD+ projects as they are a promising site for future research due to their number, location in the Global South, and diverse stakeholder participation. In the next chapter, which concludes this thesis, I step back to frame my research firmly back in the world of TCG. I summarise my findings and consider their relevance to other areas of TCG and beyond. I also discuss the theoretical contributions of this thesis, implications for policy, and suggestions for future research.

7. CONCLUSION

In this thesis I have argued that environmental beliefs play an important role in shaping TCG, thereby warranting greater attention by scholars and policymakers. In this concluding chapter, I first consolidate and summarise the key findings from each chapter to present my argument as a whole. The second and third sections discuss, respectively, my academic contributions and the relevance of my findings to policymakers. A final section concludes by considering the limitation of this thesis and recommendations for future research.

HOW ENVIRONMENTAL BELIEFS SHAPE REDD+ PROJECTS

The motivation for this thesis was to understand how ideological contestation is shaping TCG. In Chapter 2, I defined my research question as *how are environmental beliefs shaping the emergence, design, and implementation of REDD+ projects?* My answer to this has been based on analysing a new, originally coded database of projects, presented in Chapter 3. The projects were coded in terms of whether they emphasised each of five design aspects: social benefits, ecological benefits, market financing, non-market financing, and local MRV. These formed the dependent variables of my quantitative model. Project developers were coded in terms of their actor type and environmental worldview, which was my operational concept for environmental beliefs. I found significant variation in the project designs, project developers, and combinations thereof. To examine the effect of environmental beliefs in

shaping this diversity, I theorised their impact at three stages of a REDD+ project: partner courting, design, and implementation.

Partner courting

At the partner courting stage, I expected REDD+ project developers to prefer partners who shared similar environmental beliefs, as captured in H1. In Chapter 3, I presented descriptive trends from the database that suggested this. The distribution of environmental worldviews across actor types matched the relative frequency of single-worldview projects of each worldview, which builds on the idea that it is easier to assemble the necessary capacities for a project within a worldview if there is a wide range of actors that have it. In my database, the market liberal worldview was spread across the widest range of actor types and almost three quarters of single-worldview projects were based on it. This was followed by the bioenvironmentalist and social green worldviews as the next most spread across actor types respectively, which also matched the share of single-worldview projects they comprised. These patterns all support the argument that project developers prefer to partner with those that share their environmental beliefs. This does not conflict with material incentive-based explanations for partner courting but complements them. In many situations, there may be multiple ways of assembling the requisite capacities or material requirements for a project; environmental beliefs appear to contribute an explanation of how decisions are made among these options and why, in some situations, actors appear to defy material incentives.

My qualitative analysis supported these findings and, in Chapter 6, revealed two specific mechanisms through which environmental beliefs shape partner courting. One I labelled the “filtering” mechanism, where a project developer looking for partners limits initial considerations to those that share similar environmental beliefs—thus “filtering” out those with conflicting beliefs. This was demonstrated in my case studies of the Degraded

Areas Project and the Tambopata Project. In the former, Fundación Natura and Carbono y Bosques had an existing relationship based on shared environmental beliefs and, in a case of rapid filtering, looked directly to each other and did not seriously consider others when they were interested in creating a project. In the Tambopata Project, the same dynamic played out between AIDER and Bosques Amazónicos in creating one of Peru's first REDD+ projects. The role of environmental beliefs was highlighted again when AIDER sought an alternative financial partner after Bosques Amazónicos left the project. AIDER's struggle to do so and ultimate acceptance of significant changes to the project design to accommodate Althelia reflected their strong initial preference for another partner with similar environmental beliefs. This also highlights the blurring of the project design and implementation stages.

The second mechanism I labelled the “belief premium”. It sees project developers more positively evaluating a potential partnership based on shared environmental beliefs. In other words, placing a “premium” on environmental beliefs. In the Martín Sagrado Project, Pur Projet wanted to partner with local organisations that held conservation concessions and shared beliefs in community empowerment for environmental protection. The proposed partnership was difficult to manage and not financially lucrative, but it appears the alignment of environmental beliefs improved their evaluation of it to the point where they were willing to proceed with it. In the Tambopata Project, AIDER's evaluation of a contract to work with Bosques Amazónicos on a commercial forest plantation that otherwise appeared incongruent with their work was improved by an alignment of environmental beliefs. This contract established the relationship between the two upon which the filtering mechanism came into play as mentioned above. In the Vichada Project, the plantation owners decided to join the project because the premium from sharing environmental beliefs with Fundación Natura

improved their evaluations of the project, which would not have been appealing on financial grounds alone.

Project design

Results from my quantitative analysis comprised the primary evidence for my argument that environmental beliefs shape the design of REDD+ projects through actor preferences. In Chapter 4, I built on the descriptive findings of Chapter 3, which showed significant variation in project design, and tested H2 and its sub-hypotheses via logistic regressions. By controlling for actor types and factors at the project and national levels, I isolated the relationship between environmental worldviews and each aspect of project design. Through the different model variations, I found several statistically significant relationships between specific worldviews and design aspects that support H2a-H2c as observable implications. The positive relationship between the bioenvironmentalist worldview and an emphasis on ecological benefits, and the social green with an emphasis on social benefits, were the most robust of these, each evident regardless of the model specification. Only one observable implication of my hypotheses was contradicted: the market liberal worldview being associated with an emphasis on social benefits under some circumstances. This relationship was weaker than the other two just mentioned, however. Further probing highlighted that there is variation in environmental beliefs within the market liberal worldview; some developers coded with it appear to support social benefits, but a large group also appears not to. Considering that environmental worldviews are broad categories and my coding having faced significant data limitations, some noise in the results is to be expected. The fact that the quantitative results nonetheless aligned with my theoretical expectations provides strong

support for my claim that environmental beliefs shape REDD+ project developers' preferences.

These results of my main model are based on an assumption in my main quantitative model that project design occurs in a competitive bargaining situation. Project developers were theorised to come together and then negotiate a project design, with each developer pushing preferences informed by their environmental beliefs. In many ways, however, the quantitative results suggested this was not always the case. Through the presentation of the database in Chapter 3, we saw that project developers did not appear to be effectively resisting the preferences of other developers to emphasise design aspects based on different environmental beliefs. My original theory imagined project developers actively bargaining and contesting which design aspects should be emphasised; the results from the database, however, call this into question and suggest that project design is a more additive process. This makes sense given the low opportunity cost of not participating in a project; there is little reason to join a project if it will not match your preferences. This likely highlights a difference between project governance and larger institutional structures, and how design is often fundamentally linked to partner courting and not always an independent stage in project creation. This perspective was also reinforced by the quantitative results presented in Chapter 4. While several of the expected relationships between each worldview and emphasis on aspects of project design were observed, most of those not observed were those hypothesised to be negative. When I altered the measure of the independent variables in the model from the percentage presence of each environmental worldview (based on an assumed competitive bargaining framework for project design) to one that just considers the binary presence (or not) of each worldview, a greater number of my expected observable implications were observed. This reflects an additive model of project design, where the

inclusion of an environmental belief set is enough to influence a project regardless of the presence of competing beliefs.

This is not to say that all projects are designed the same way. In my case studies, I found environmental beliefs to be shaping a variety of project design processes, some more additive than others. In the Degraded Areas Project, each of the project instance owners designed their part of the project individually, working with consultant partners but not having to bargain with other primary developers. In the Tambopata Project, design bargaining occurred as part of the partner courting process before AIDER and Bosques Amazónicos applied for the administration contract (although this happened very organically and easily based on their previous relationship). In the Martín Sagrado and Brazil Nut Projects, on the other hand, the project design processes were more independent and involved bargaining that took place after partner courting. The Vichada Project was unlike either of these, instead being designed entirely by Fundación Natura who then sought partners to buy in to the already confirmed design. In Chapter 5, I showed that the final project designs of my case studies did reflect the environmental beliefs of those with the most power in these different design processes. In many cases, this power was synonymous with inclusion, as per the additive model, with the Martín Sagrado Project being the one exception where project developers did have to bargain over competing preferences. In Chapter 6, I distilled the independent causal role of environmental beliefs in this case as some project developers expressed and pursued preferences that contradicted what a purely materialist explanation would expect. While the quantitative analysis in Chapter 4 is not causal, there is strong intuitive directionality as project developers with environmental beliefs design projects, rather than project designs determining the environmental beliefs of those who created them. Additionally, by controlling for actor types as a key proxy for

material incentives, a strong case can be made that the environmental beliefs of project developers are independently significant in shaping their preferences for project design.

Implementation

Chapter 6 also highlighted how the effect of environmental beliefs on actor preferences had implications for project implementation. In the Martín Sagrado Project, the same misalignment of preferences that manifested during project design continued into its implementation. Even after a design was agreed upon, implementing project developers attempted to exploit their agency to pursue their preferences, which for some went against the agreed upon design. As mentioned, these preferences aligned with environmental beliefs more than just material incentives. In the Brazil Nut Project, Bosques Amazónicos remained committed to continuing implementation in a way that aligned with their environmental beliefs even when deteriorating financial results incentivised them otherwise. My quantitative analysis was not able to examine project implementation, so the evidence on it is less developed compared to the other project stages. Nonetheless, my case studies and the strong evidence of environmental beliefs shaping actor preferences, and thereby outcomes at the partner courting and design stages, suggest that this is likely to continue at implementation.

GENERALISABILITY BEYOND REDD+ PROJECTS

My findings, I argue, are generalisable to other areas of TCG and beyond. That environmental beliefs shape preferences during partner courting, project design, and implementation is a fundamental claim that should translate to other contexts. All actors

have preferences and beliefs; my argument is essentially that the connection between the two is substantively important for shaping governance structures. Derived from a context of transnationalisation where relevant actors, beliefs, and preferences have been multiplying, the claim is widely applicable.

My quantitative analyses controlled for many important intervening variables and the case studies illustrated the independent importance of environmental beliefs in a number of ways. The specific dynamics of how this affects outcomes may differ based on governance structure, but the importance of environmental beliefs for actor preferences should carry. In the case of REDD+ projects, the low opportunity cost of non-participation probably augmented the “like goes with like” trend of project developers preferring to partner with those that share similar environmental beliefs; there is little incentive to do otherwise. It also likely contributed to my finding that project design was often more additive than zero-sum in nature, with project developers tending to avoid significant ideological conflicts. Greater opportunity costs of non-participation, however, would at least partially counter the preference to partner with those sharing similar beliefs and likely lead to more situations of competitive bargaining and ideological conflict within initiatives. In such situations, the specific forms of bargaining power mentioned by Abbott and Snidal (2009) would likely be more visible than they were in my analysis.

A higher opportunity cost of non-participation would likely apply to more institutional initiatives that govern or influence entire sectors or jurisdictions. Some TCG initiatives even affect those who do not sign up to them. REDD+ projects rarely fit this description, but the REDD+ safeguarding examples studied by McDermott et al. (2012) do. These are broader institutions such as the UN-REDD programme and the CCBS as an entity itself, rather than particular projects. To better understand the impact of the actors involved with these, considering their potential ideological heterogeneity rather than treating them as

homogenous groups could be a valuable step forward. There are also many examples outside the domain of REDD+. For instance, it is easy to imagine actors involved with or concerned about the palm oil industry wanting to join the Roundtable on Sustainable Palm Oil (RSPO) even if they had conflicting environmental beliefs with other participants. Central actors involved with the RSPO have sector-wide significance, so other interested parties want to have a chance of influencing it or at least not missing out on important developments. For those with a direct stake in the soy industry, decisions in the RSPO will likely affect their work, whether they like it or not. In comparison with a REDD+ project, there is much more to lose from not engaging with the RSPO. For this reason, there has been significant ideological contestation surrounding the RSPO (Schouten, Leroy, and Glasbergen 2012), which I discuss more in relation to this thesis' policy contribution later in this chapter.

My findings about environmental beliefs influencing actor preferences are likely to generalise to other forms of TCG and transnational governance. Exactly how it manifests may differ, however, with the opportunity cost of non-participation being one key factor that affects this. Environmental governance's rich history of ideological debate makes it a good area to consider the ideological consequences of transnationalisation, but it is not the only one. While the relevant set of beliefs may differ by context, they should similarly inform actors' preferences for initiative design and who they partner with. As mentioned, Suddaby et al. (2007) provide a clear example of this in the transnational professional services sector. Whether environmental beliefs or other belief sets are causally significant or not in a given area, however, is an empirical question. In this thesis, I do not in any way refute the importance of material factors or claim that environmental beliefs are the sole explanatory factor for variation in REDD+ projects. My argument is simply that they are independently significant factors that should not be overlooked. This harks back to the work by scholars such as by Goldstein and Keohane (1993), who demonstrate that ideational factors are not

epiphenomenal in IR, upon which this thesis builds. The importance of environmental beliefs or other belief sets in determining preferences for a given context likely depends on their strength and variation as well as the relative influence of competing factors, material or otherwise (Abbott and Snidal 2001).

The theoretical relevance of this thesis also extends beyond transnational governance to broader areas of IR. The conceptual framing of my analysis, that TCG scholarship and practice has been neglecting important ideological dynamics, could apply in many contexts. Flinders and Buller (2006) describe how attempts have been made to depoliticise many areas of politics by side-lining ideology and political contestation in order to advance policy. I have already mentioned how this has been an important narrative in the climate change space. Such efforts may render politics as “technical”, but they do not make issues ideology-free. More commonly, issues become grounded on a common set of beliefs that become taken for granted. Take trade, for example, which among Western countries was, until recently, often considered a technical issue to be managed through shrewd political bargaining and calculation. However, the US’ recent protectionist trade measures, including imposing tariffs on allies such as Canada and the EU, have brought ideology back into the spotlight. These are major policy changes from the Obama regime but are not well explained by the consideration of material interests. Prior to these policies, US national economic performance had continued to be strong, as it was when Obama left office, and geopolitical tensions with neither Canada nor the EU nor key rivals such as China and Russia had oscillated beyond what had been recent standard variation. In contrast, these policy changes align with an evolution in US preferences based on the ascendance of a set of nativist and populist beliefs captured by President Trump’s slogan “Make American Great Again” (Irwin 2017). Trade politics were not devoid of ideology but resting upon a stable set of beliefs about an open, liberal, and globalised economic order that had been taken for

granted. These recent developments, however, demonstrate how quickly such situations can be upended by the ascendance of a powerful conflicting belief set.

Woods (2018) contextualises these trade developments as part of a trend where the common liberal economic and democratic norms that have long underpinned collaboration among Western countries are increasingly being challenged. To understand this, a renewed focus on the role of ideational factors in driving cooperation is required, which my findings about environmental beliefs shaping partner courting can contribute to. The potential fracturing of a common set of beliefs should also call for greater attention to ideological dissensus and the presence of competing belief sets. While liberal environmentalism remains the dominant set of basic norms in environmental politics, my examination of REDD+ projects has shown the utility of considering the variation in environmental beliefs among relevant actors. The role of beliefs in shaping preferences is well-established in IR (see, for example, Wendt 1992; Moravcsik 1997; Barkin 2003) and, similarly to how I have shown the implications of this for understanding the transnationalisation of climate governance, it will be an important lens for understanding other developments in global politics as new norms and powers continue to rise.

ACADEMIC CONTRIBUTION

This thesis enriches the TCG literature in a number of ways. Firstly, the primary academic contribution is in theorising and analysing empirically how environmental beliefs affect REDD+ projects. Despite environmental politics being an area of great ideological diversity and contestation for many decades, TCG research has largely focused on functional features of TCG and its “effectiveness”. Ideological contestation has rarely been given serious consideration. Function and efficacy are important, but we should also critically examine what exactly they mean, and to whom. When ideational factors have been considered in the

relevant literature, it has largely been in a macro context that considers meta-discourses or how liberal environmentalism defines the ideological status quo. In this thesis, I make an important advance by getting “closer to the ground”, demonstrating how the environmental beliefs of actors have an impact by influencing preferences. This impact is independent of, but can also both complement and compete with, material incentives. Examining environmental beliefs also adds to the scholarship considering actor level variables in explaining TCG, which have so far received less attention than those at the national and transnational levels. This is important, as Hsueh (2016) demonstrated by finding that firm level factors accounted for the majority of variance in TCG participation by Global 500 companies.

In addition to showing the explanatory importance of environmental beliefs, I begin to fill another major gap in the literature regarding what functional elements of TCG are being explained. Existing research has focused on explaining why and where TCG emerges, along with what conditions actor participation and its effectiveness. In this thesis I open the black box of TCG and address the major gap between these agendas by attempting to explain variation in the substantive content and nature of initiatives. Michaelowa and Michaelowa (2017) have examined the designs of TCG initiatives previously, but only in terms of whether they have particular technical elements such as targets, baselines, and a MRV procedure that the authors argue are important for effectiveness. The focus of this thesis has been more substantive: I have shown how the environmental beliefs of the project developers have implications for what REDD+ projects focus on, how they are financed, and how they conduct their MRV. A number of studies have described substantive variation in TCG (e.g. Bulkeley et al. 2014, 2018; GGCA 2016; Chan et al. 2018) but a systematic effort to account for it has been lacking.

The substantive content of TCG is critical to understand and connects directly to both the questions of who participates in it and how effective it is. This was borne out in my data showing how project design was often fluidly connected to both partner courting and implementation. Abbott and Snidal (2009) have explained how certain functional capacities are required for governance initiatives, but a related question is what patterns we should expect when there are multiple options for assembling these capacities? In my analysis of partner courting, I show that project developers tend to prefer partners that share similar environmental beliefs. While I do not examine the effectiveness of TCG directly, my findings suggesting that the implementation REDD+ projects is affected by environmental beliefs has implications for it. Most importantly, my findings reinforce the wide variation that exists in terms of what TGG aims to achieve. This is to say that effectiveness is not a neutral term and evaluations of it in TCG should do more than simply count carbon. Additionally, I showed how a diversity of environmental beliefs among project developers can lead to shirking and slippage during project implementation if there is misalignment between their preferences and the initiative's design. Such behaviour undermines effective implementation, suggesting that the internal dynamics among initiative developers should be considered alongside design and structure as important for this.

The study of REDD+ projects in the context of TCG itself is another important academic contribution. While the certification schemes covering many REDD+ projects have been studied, the projects themselves have received little analysis in the context of broader global climate governance. With a rich sub-disciplinary literature of their own and by involving the full gamut of political actor types and combinations thereof, REDD+ projects are an enriching addition to the field of TCG. They introduce a wealth of new empirical observations located in the Global South, helping fill a recognised gap in TCG scholarship and practice (Chan et al. 2018). As projects, they also embody a level of

governance that has been understudied in the context of TCG, including by those taking multi-level perspectives. With this comes the body of literature examining the impact of REDD+ projects, including qualitative studies of their social and political implications as well as quantitative impact evaluations (e.g. Caplow et al. 2011; Murdiyarso et al. 2012; Maraseni et al. 2014; Simonet et al. 2018). As mentioned, studies of impact, or effect, are a major thrust of current research on TCG, both to determine the changing nature of global climate change governance but also to understand the physical contribution of TCG initiatives to reducing GHG emissions for global accounting purposes (van der Ven, Bernstein, and Hoffmann 2016). My thesis has not focused on impact evaluation of REDD+ projects per se but has examined how environmental beliefs shape the behaviour of project developers in implementing them. It is not a radical assumption to assume a connection between variation in implementation and variation in impacts. Projects tend to exist with greater immediacy to their impacts, making them more conducive to evaluation. It is thus timely that the REDD+ project and TCG literatures come together.

In pursuing these theoretical objectives, this thesis also makes a number of useful methodological contributions to the literature. My systematic analysis of REDD+ projects is important as large-N analyses remain rare in study of TCG and REDD+. By incorporating a large quantitative component, I demonstrate how environmental beliefs can be systematised, measured, and deployed as independent variables. This is an important step towards raising the profile of ideational factors as independent variables for positivist scholars. All too often, they are placed in the “too hard to measure” or the “probably epiphenomenal” baskets. The construction and coding of my database, discussed in Chapter 3, and the results I derive from it show that this need not be the case. Even with relatively limited data sources, I captured environmental beliefs with sufficient accuracy to conduct a rigorous mixed-methods analysis. In Chapter 4, I used them quantitatively as key

independent variables in a regression analysis. In Chapter 6, I demonstrated how process tracing can be effectively used to derive causal inferences from them using qualitative, case study evidence. Ideational factors often prove challenging for process tracing but, as I showed in my case studies, their impact can be distilled by considering temporal variation and moments where ideational and material explanations would diverge. These different approaches show ideational factors to be versatile, relevant, and amenable to modern social-scientific methods in a discipline where they are still understudied. Further research can continue to refine these practices and, of course, appropriate theoretical frameworks must continue to be developed and applied.

As relatively new fields of study, it makes sense that the TCG and REDD+ literatures have been dominated to date by small-N approaches. Such work has helped us understand the phenomena and begin to build theoretical frameworks around them. To go from being interesting niche subareas to penetrating mainstream debates about international politics, as I believe the insights from these fields warrant, more systematic and large-N research is needed. This is not to play methodological favouritism, but to recognise that large-N studies offer opportunities to test whether theories and propositions generated by case study work can be generalised and to identify political trends and patterns that are otherwise unconfirmable. My sample size of REDD+ projects is modest and the statistical methods straightforward, but they represent a step forward in the literature nonetheless. The database I have created is publicly available for other researchers to replicate and test my findings as well as to use in further research.²¹ The ghost coding process, as described in Appendix 1, does not offer significant leverage into analysing my results but represents a methodological exploration and an incremental step forward in systematising and increasing

²¹ A link to the database can be found in Appendix 4.

the rigour of the research agenda. With my own database or others, I hope other researchers bringing a quantitative approach to bear on TCG will be able to extend this with even greater rigour.

By combining case studies with this quantitative work, this thesis also makes some contributions towards refining mixed-method research designs. Lieberman (2005)'s nested analysis remains a common inspiration for such approaches but few studies deploy the method he describes precisely. I do not follow it to the letter either, but this would be impossible given that I have five dependent variables rather than one and use a logistic instead of a linear model. Nonetheless, I make an important advance on existing research by adhering to Lieberman (2005)'s guidelines more closely than previous work based on logistic regressions and show the value in doing so. In Chapter 5, I demonstrated how even with a multi-variable, logistic regression model, quantitative results from a large-N analysis can still be plotted and used to guide case selection. It is a more challenging task to define observations as on- or off-the-line, but I show how, with a structured approach, this can still be a useful rubric for case comparison. My nested analysis did not include a second large-N analysis as suggested by Lieberman (2005) but thoughtfully selecting cases based of the model is a key step towards this. Overall, this thesis still pushes and remains rigorous with the nested analysis. It thus contributes to ongoing efforts to make mixed-method approaches in the literature more systematic and better leverage the strengths of both quantitative and qualitative techniques.

IMPLICATIONS FOR POLICY

The evidence and arguments presented in this thesis pertain to a number of issues in contemporary TCG policy, both for individual initiatives and the system as a whole. At each

of these levels, my finding that environmental beliefs are independently important in shaping outcomes has implications for both TCG's legitimacy and effectiveness. After considering each of these, this section goes on to consider the urgency of the current policy moment for considering environmental beliefs in TCG followed by specific policy options.

Implications for TCG initiatives

Legitimacy and effectiveness are two elements of TCG initiatives that should be considered closely by policymakers. Legitimacy relates to both input (based on process and representation) and output (based on performance) (Scharpf 1997). To have input legitimacy, key stakeholders should at least be able to see actors with preferences similar to their own represented in TCG. To have output legitimacy, the TCG system should be delivering results that reflect these preferences. This includes the reduction of GHG emissions, of course, but also the other important substantive impacts that TCG has, which my focus on REDD+ projects has highlighted. In practice, the pursuit of legitimacy in TCG tends to manifest in attempts to include and have representation of relevant stakeholders from different sectors. For example, the REDD+ Social and Environmental Standards Initiative (SES) emphasises the benefits of multi-stakeholder processes and explains that they “should engage government, civil society, Indigenous Peoples and local communities, private sector and other relevant stakeholders” (REDD+ SES n.d.). This mirrors the academic trend already described of preferences being externally derived from actor types. In this thesis, however, I have shown empirically that environmental beliefs are important determinants of preferences and that these cannot be automatically inferred from actor types. Input legitimacy cannot be guaranteed by simply including representatives from a diversity of sectors or actor types. An institution or project may involve a diversity of actor types without having a diversity of perspectives, ideas, or interests. More deliberately, they may

also involve this diversity of actor types while specifically excluding certain views or voices. An example of this is the RSPO, which touts its multi-stakeholder credentials but has been repeatedly accused of greenwashing and excluding critical voices (Dauvergne 2016; Schouten, Leroy, and Glasbergen 2012).

I also demonstrated that the effect of environmental beliefs in shaping actor preferences has an independent effect on the design of REDD+ projects, which relates to output legitimacy. Overlooking the role of environmental beliefs means, in the case of REDD+ projects, overlooking a key explanatory factor for their focuses and to a lesser extent financing and MRV. The output legitimacy of a TCG initiative depends on its performance as related to the preferences of its key stakeholders. My results suggest that the inclusion of the environmental beliefs from certain groups increases the likelihood that the design and outputs of an initiative will reflect their preferences.

My claim is not that a greater diversity of environmental beliefs in an initiative is necessarily more desirable in all situations, however. As I have shown, conflicting environmental beliefs in an initiative can lead to difficulties in implementation and thereby undermine initiative effectiveness. Additionally, the voluntary nature of TCG and the fact that it does not attempt to include everybody have been fundamental to its success in driving climate action. By trying to be fully inclusive (at least of states), UNFCCC negotiations are highly legitimate but, unsurprisingly, end up progressing frustratingly slowly as a result. TCG has been critical in allowing groups of willing actors to move forward with climate action without having to wait for, and simultaneously building pressure for, the Paris Agreement. TCG has an important niche and should not try to replicate the all-inclusiveness of the UNFCCC. This does not mean, however, that ideological dynamics within it should be permanently ignored. TCG must strike a balance between legitimacy and representation

on one hand and united, streamlined structures that enable efficient performance on the other.

This is a difficult task, but a first step would be ensuring TCG is accessible to groups with different environmental beliefs. Practical measures for this could include providing financial and technical assistance to facilitate the participation of actors from the Global South and ensuring a diversity of environmental beliefs are institutionalised in bodies such as the MPGCA. Striking the right balance will be a continual process rather than a discrete problem, highlighting how a focus on environmental beliefs must be an ongoing lens through which we analyse TCG policy challenges.

Implications for the TCG system

The legitimacy and effectiveness of TCG can also be considered from a system perspective. Determining the legitimacy of the TCG system as a whole, however, is much more complex than for an individual initiative, but perhaps also more important. If the TCG system is ideologically homogenous and working only in the interests of one slice of the population, its legitimacy will be in jeopardy. But who are the stakeholders for whom the TCG system must be legitimate? Unlike for a specific initiative, the system as a whole is an abstract, decentralised phenomenon, with no clear responsible or authoritative actor that controls it. This makes considering legitimacy more difficult; there is no clear answer. At one extreme, the TCG system could be entirely beholden to states, but this would undermine the flexibility that enabled it to progress while intergovernmental negotiations were in gridlock. It is also difficult to imagine most of the non-state actors involved with TCG accepting such a situation. At the other extreme, TCG could become a true “wild west”, where legitimacy is but an afterthought. This would also be problematic, however, as I will discuss. The legitimacy of the TCG system is an active topic of debate, with some activists and states

now calling for discussion on whether fossil fuel companies should be allowed to participate in the UNFCCC (Karunungan 2017). One suggestion has been to model the World Health Organization (WHO), which has a formal code of conduct for engaging with non-state actors (WHO 2016). The WHO also managed to restrict the involvement of the tobacco industry when it negotiated its framework convention on tobacco control.

While there are many dimensions which can be debated, it is hard to imagine the TCG system being legitimate from an input perspective without involving a diversity of environmental beliefs. It has been discussed how presently norms of liberal environmentalism predominate in TCG (Bulkeley et al. 2014; Bernstein 2011), which manifested in the market liberal worldview being the most widespread in my database of REDD+ projects. Healthy representations of the social green and bioenvironmentalist worldviews were also present, however, and we know a diversity of environmental beliefs does exist among stakeholders of climate governance. As such, we should closely scrutinise TCG's ideological trends. It is impossible to know precisely how well different environmental beliefs are represented in TCG, but it is important to keep the question in mind. Knowing there is a diversity of environmental beliefs out there, an extremely narrow representation in TCG where one set is truly overwhelming would suggest that groups with other environmental beliefs are either being systematically excluded or deliberately not engaging. The latter would suggest that they see no value in doing so, meaning there is likely a problem with the process of engagement, the quality of which is another key component of input legitimacy. Environmental beliefs can shape TCG but only when actors with them can genuinely pursue their preferences through it. Actors choosing not to participate in TCG likely signals that they see the process of and opportunities for engaging in TCG as inadequate in this regard.

It is probably natural for dominant sets of beliefs to emerge, but an overly homogenous ideological landscape or complete absence of alternative environmental beliefs in TCG should be concerning. Due to its growing centrality in global climate governance, maintaining the legitimacy of TCG as a system should be a priority. If TCG develops based upon a narrow range of environmental beliefs and works largely to the benefit of a small slice of the international community, the political consequences could be dire. While a key feature of TCG is the primary involvement of non-state actors and transnational constituencies, the TCG system is not a fully independent phenomenon and is fundamentally intertwined with intergovernmental climate governance (Bäckstrand et al. 2017; van Asselt and Zelli 2018; Bulkeley et al. 2018). Due to this connection, a loss of legitimacy of the TCG system could easily flow into the UNFCCC, where legitimacy based on global representation is fundamental to its function. Schleifer and Bloomfield (2015) have shown how a loss of legitimacy can lead to institutional failure and, while the UNFCCC is unlikely to completely collapse due to its high level of institutionalisation, a return to the gridlock (Hale, Held, and Young 2013) of the Copenhagen era is a real possibility. Much of the recent progress in climate politics has come on the back of a degree of unity and collective action. As discussed in the introduction to this thesis, the rise of TCG has been a key part of this, along with the skirting of ideological contestation. However, the sustainability of this progress will rest in part upon maintaining the legitimacy of climate politics, to which TCG is increasingly central. In the long run, achieving this will likely require a re-engagement with ideological debates about environmentalism and therefore considering the environmental beliefs comprising TCG. As there is a diversity of these beliefs among important constituencies, working to maintain a plurality of these in the TCG system from an early stage is a crucial step to ensuring its legitimacy and future viability.

A healthy representation of different environmental beliefs is also important to TCG's long term functional effectiveness. While there is a promising groundswell of TCG emerging, its impact remains to be seen. For this reason, it would be prudent to maintain some ideological plurality in the TCG system. A key fact about environmental beliefs is that they are not facts. Even if the normative components were universally agreed upon (they are not), the causal ideas that also comprise environmental beliefs are not certainties: what we currently think are the most effective ways to achieve desired environmental outcomes may be incorrect. What if the current generation of largely market liberal TCG proves ineffective? The inherent uncertainties that come with attempting to address climate change mean that some iteration and adaptation in governance strategies will be necessary. We should not assume that the current approaches being pursued in TCG are infallible, neither for reducing GHG emissions nor achieving other desired outcomes. It is therefore important to have a TCG system with the adaptive capacity to adjust based on what proves to be effective (or not). Having a diversity of environmental beliefs in the TCG system is important for this. New governance strategies come from new ideas. The capacity of TCG to adapt as will likely be necessary could be undermined by ideological homogeneity.

Like with an individual TCG initiative, this is not to say that there should be an unconsidered embrace of all ideological perspectives in the TCG system. The diversity I have been referring to is grounded in environmental beliefs, which are all related to a genuine desire to address environmental challenges. There should be no pressure to include perspectives that fundamentally oppose this common aim. Nonetheless, as has been made clear by now, there is a wide range of environmental beliefs and seeking a thoughtful balance of representation is far from being narrow-minded. Given the diversity of priorities for what should be achieved in addressing climate change, a plurality of environmental beliefs in TCG is likely necessary for pursuing these effectively. The values and aspirations captured

in the preamble of the Paris Agreement, for example, are so plentiful that no one set of beliefs could truly emphasise all of them. From technology transfer to sustainable consumption, and from the protection of biodiversity to sustainable development (UNFCCC 2015), if we are to fulfil these, the existence of constituencies that will become involved directly to pursue them or advocate for their continued importance is vital. The effectiveness of TCG will be judged on that of particular initiatives and the system's overall contribution to fulfilling the Paris Agreement. While its legitimacy is simultaneously debated, having a plurality of environmental beliefs in the system will help ensure the breadth of focus necessary for this.

The urgency of considering environmental beliefs for TCG policy

These considerations are particularly important at the time of writing because global climate governance is in flux. The UNFCCC is currently negotiating the rulebook for implementing the Paris Agreement and new institutions are emerging to support this, such as the MPGCA. These are crucial as the rules and institutions created now will define global political efforts to tackle climate change for decades to come. As the final arrangements are yet to be confirmed, an important moment exists for influencing them. In one recent development, a new “local communities and indigenous peoples platform” was approved within the UNFCCC to enhance the engagement of these historically marginalised groups (UNFCCC 2017). What impact this will have, however, remains to be seen. More specifically to TCG, the MPGCA continues to define itself in the run-up to 2020 when its current mandate expires and the Paris Agreement becomes officially operational.

A similar state of flux exists for the specific realm of REDD+ projects. While it has been mentioned that voluntary forest carbon markets have been weak for a number of years,

there are signals that they may revive, depending on the fate of their legal standing in relation to REDD+ policy decisions at the national level. In particular, the International Civil Aviation Organisation's 2016 announcement to create a sector-wide carbon offset scheme could provide an enormous financial influx for forest carbon projects. The negotiations for this scheme, including important criteria for MRV processes and to determine what kind of emissions are eligible to be included will continue until 2021 (Jungcurt 2018).

My findings regarding the “like goes with like” nature of partner courting suggests that the stakes are high for shaping TCG in this nascent stage. With no authoritative body controlling TCG, actors do, and are encouraged to do, essentially whatever they want or can to combat climate change. In this context, a dominant set of environmental beliefs, such as those associated with the market liberal worldview at present, can be expected to further entrench its position in a self-reinforcing cycle of partner preferences. There is only a certain amount of “space” and resources for governance initiatives in a particular niche (Abbott, Green, and Keohane 2016); if new initiatives are more likely to succeed if they align with the dominant norms then they will come to dominate the niche and if institutional competition arises, those based on alternative worldviews will tend to lose out. New TCG based on the dominant ideology will be both more plentiful and more likely to gain traction. Taken to its full extension, competing sets of environmental beliefs, if not able to entrench themselves in some enduring and influential structures, would find themselves increasingly suffocated for space and marginalised in an ever more homogenous ideological landscape.

If TCG niches become saturated with a single set of environmental beliefs it will be difficult to change. As mentioned, this would have negative consequences for both TCG's legitimacy and effectiveness and potentially that of climate governance more broadly. It is therefore important that the environmental beliefs reflected in TCG and its broader ideological trends are rigorously debated now, at this early stage, rather than being left to its

own “natural selection”. The societal and economic transformations needed to deal with climate change are too profound to not have meaningful dialogue on what they should look like. The rise of liberal environmentalism and the dominance of environmental beliefs aligned with the market liberal worldview is, in fact, distinctly not natural but the product of political and ideological contestation. It is an active choice who and what kind of environmental beliefs are included in individual TCG initiatives and promoted by overarching structures such as the MPGCA. There will be winners and losers from our collective efforts to confront climate change; who they are should be seriously considered by policymakers and society alike. This already happens regarding specific climate policies and within UNFCCC negotiations, but it must also extend to TCG.

Policy options

At the initiative level, my findings suggest that if specific outcomes, such as the emphasis on more diverse ecological benefits or greater involvement of local communities, are considered desirable, efforts to include champions of environmental beliefs that emphasise these could be effective. A focus on environmental beliefs shifts the theory of policy change. Without considering them, the approach is output-focused and based on convincing an existing set of actors to design an initiative in a particular way, one that likely diverges from what they would do otherwise (or else it would not be necessary to intervene). This increases the risk of shirking or slippage in implementation, as I evidenced in the case of REDD+ projects where implementing actors have preferences that do not perfectly align with project design. It also risks being seen as paternalistic. In contrast, considering the environmental beliefs of actors as central leads to a more input-orientated focus. This would start with *ex ante* consideration of actors’ beliefs and preferences and what kind of outcome is likely to emerge from them. My results show that this would require more than just trying to include

additional actor types, but also specifically considering their environmental beliefs and how they align with desired outcomes. Based on such a consideration, interventions could be made during the partner courting process to encourage the involvement of actors with relevant sets of environmental beliefs that are otherwise missing.

Inclusion can mean as a core initiative developer, but as there are limits to the number of core developers than can be directly involved without compromising its effectiveness, it can also mean consultation. This can form part of a second strategy that is based on influencing the design or implementation process to make initiative developers confront or more seriously consider certain priorities. This could be through formal consultative groups, creating permanent agenda items for initiative governance meetings, or involving external review. The key, of course, is *meaningful* inclusion. The low opportunity cost of non-participation in REDD+ projects meant that all project developers involved appeared to have influence over the project. If they would not, there was little incentive for them to participate at all. As already mentioned, for actors with alternative environmental beliefs to have an impact they must be able to genuinely pursue their preferences. Without access to decision making processes this is unlikely to be the case.

Attempting to alter the ideological balance or overall structure of the TCG system is a daunting challenge. The inclusion of alternative environmental beliefs in one governance initiative may seem like a drop in a limitless ocean, but it is the first step towards the broader recognition of such beliefs in the wider system. This echoes the work of Di Gregorio et al. (2017, 142), who argue that “presence of substantive constituencies... provide the necessary basis for reformist discourses to emerge and spread”. Beyond working with specific initiatives directly, policy interventions could work to identify actors with the underrepresented environmental beliefs and strengthen their access to platforms and resources that would facilitate their engagement in TCG. Another lever would be focus

on key institutions such as the MPGCA and “moments” that will take place between now and 2020 to bring normative and political pressure to bear on efforts to combat climate change. These include the Global Climate Action Summit in September 2018 and one hosted by the UN Secretary-General in New York in 2019. While there has been a historic focus on increasing the momentum for climate action through greater quantity, there is now greater pressure to encourage quality as well. This presents a useful policy moment, the outcomes of which, my results suggest, will likely be influenced based on which environmental beliefs are meaningfully included.

Consideration of environmental beliefs, of course, should not be the only component of TCG policy. The approaches based on environmental beliefs highlighted above can be pursued alongside other strategies. The argument I am trying to make is that by including this neglected approach in our policy toolkit we can better appreciate the value of certain interventions and conceptualise TCG issues in different ways. As Bäckstrand and Lövbrand (2016) put it:

“By emphasizing the plurality and discontinuity of political rationalities in the post-Copenhagen landscape, we believe that students of IR can begin to unsettle some of the political assumptions that seem to have defined the realm of the possible in Paris. This is an important analytical task that may help us to counter what critics have called ‘the crisis of imagination’ in climate politics (Klein 2015), and hereby extend ongoing efforts explore new political trajectories for a carbon constrained world” (Bäckstrand and Lövbrand 2016, 16).

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This thesis has pushed the frontiers of TCG research in many ways, which inevitably entails some important limitations; many of these have already been noted. In the database, there is a large amount of missing data for the environmental worldviews of project developers. The sample size was still large enough to support my regression analyses, but there is room for improvement. Coding relied on existing public information, but further research could push this to collect more data directly from project developers through survey methods. More extensive imputation could also be considered. These would not only improve the sample size but help address the slight bias against projects with significant public sector involvement that I highlighted in Chapter 4.

As mentioned in Chapter 1, my analysis also only considered the importance of formal project developers in shaping projects. Although I controlled for several project and country level variables in my regression analyses, this importantly still ignores the role that local communities and landowners that do not feature as project developers may have had in shaping projects at each stage. The inclusion of civil liberties and potential recognition of community land tenure as control variables in my regressions does, to a degree, capture the power that local communities may have to influence a project, but it does not account for variation in what their preferences might be. This is important in the context of this thesis as one of my important findings is that environmental beliefs shape actor preferences independently of actor types. The same likely applies for local communities: their environmental beliefs also likely vary, and their preferences should not be considered as homogenous (the same also likely applies for different individuals within the community).

The potential impact of local communities and landowners on REDD+ projects that I have been unable to capture is potentially significant. Even if they are not formally involved as project developers, they can likely affect project implementation directly or shape project developers' preferences through, for example, threatening to be "bad neighbours" and needing to be placated. While it is often done in case study work, finding ways to bring local communities more firmly into systematic analyses of REDD+ projects would be an excellent addition to future research.

Another key data limitation applying not to the quantity, but the quality of data, is the model's inability to account for differences in the type of involvement by project developers. Due to lack of specificity in the data sources available, all project developers were treated as equal. This is rarely the case in reality: my case studies showed important variation in terms of bargaining power, position as initiator, and type of involvement. Clarifying this is only possible through direct communication with projects and developers; even coding which project developers are consultants or funders based on my written sources could be misleading as the type of involvement of these actors can vary significantly from project to project and written details of this are seldom provided. Ultimately, what is relevant for my model is bargaining power during project design, which is difficult to account for accurately without a detailed investigation of each project. Further research that seeks accurate and accessible proxies for power would make a huge contribution but also be challenging. Another approach would be to pursue in-depth case studies of each individual project. This obviously takes significant time and resources, but this thesis has shown the value of such qualitative work in revealing dynamics of power, collaboration, and contestation.

Regarding the next steps for research into how environmental beliefs shape TCG, I see two important ways forward. The first is to *deepen* the analysis by refining both the

measurement of environmental beliefs and their effect. The environmental worldviews framework proved effective for my analysis, with a level of generality appropriate to the precision of my data sources while still being distinguished internally along some of the major debates about REDD+. However, as predicted, there was significant variation in the environmental beliefs of project developers in my database that could not be captured by the worldviews. The purpose of this thesis, however, has not been to quantify or measure with great specificity the impact of environmental beliefs. It has been to distil an independent effect of environmental beliefs on broad, but key issues to REDD+ projects. If more detailed and richer data can be accessed to refine my database or construct others, it might be possible to begin studying more granular variations of environmental beliefs and their impact. This could be done with alternative frameworks or by using environmental worldviews in a modular fashion, potentially coding actors with more than one. Such efforts would hopefully yield more precise results and help raise the level of importance of environmental beliefs in TCG closer to that of material factors, the measurement and deployment of which remains much more refined.

The second pathway is to *broaden* the analysis by considering how ideas and environmental beliefs affect other forms of TCG. This thesis represents the first time that a study of TCG focused directly on REDD+ projects, so it would be valuable to bring my theoretical approach back to the already established areas of TCG. While there is reason to believe that my findings will translate to other types of TCG as described above, there is a need to explore this empirically. One well-developed strand of TCG that my research could immediately contribute to is that which considers hybridity (being constituted by both public and private actors). The REDD+ projects in my database feature various combinations of twelve coded actor types; by quantitatively coding the participation of each in every project, the database can facilitate the examination of hybridity in more detail than has been done

before. Instead of just considering whether a project is public, private, or hybrid, Ewert and Maggetti (2016) make an advance by considering three degrees of hybridity. With my database this could be extended even further by quantitatively identifying the percentage makeup of each project by different sectors.

Another way of broadening the analysis would be to investigate how environmental beliefs form and change. I have made the case that they are important phenomena but essentially treated them as static. While they are unlikely to change easily, they do change. The rise of liberal environmentalism was not simply the result of actors with such perspectives dominating the rest, but genuine widespread adoption. Dauvergne (2016), for example, traces how much of the environmental movement has become less radical and increasingly aligned with these norms. Insights into this would offer a valuable new policy lever and fuel activist efforts in all areas of environmental politics. It would also help clarify the impact of TCG in institutionalising, changing, and spreading certain ideological perspectives. In this thesis, I have assumed a causal direction from the environmental beliefs of REDD+ project developers to their projects; it is worth investigating, however, the possibility of this being bidirectional.

My research suggests that studying the role of environmental beliefs in other types of TCG should be a feasible task. While REDD+ projects were chosen as the empirical basis of this thesis partly because of the prominent ideological contestation that exists around it, there is no shortage of such contestation when it comes to other issues. Consider energy, for example, where there is ample debate about what a clean or renewable energy source is, the appropriateness of certain techniques such as hydraulic fracturing, and extending energy access while also reducing GHG emissions. Furthermore, observing my theoretical expectations in REDD+ projects was likely more difficult than it might be for other forms of TCG. The low opportunity cost of non-participation meant that the “like with like” partner

courting trend was prominent, with little incentive for project developers to partner with those holding conflicting environmental beliefs. The effect of environmental beliefs was evident, but subtle in its manifestations as the structural incentives to bring conflicting beliefs into contact were weak. In situations where the environmental beliefs of TCG initiative developers conflict, I expect their importance to be more prominent and easily observed. In REDD+ projects, the frequent alignment of environmental beliefs often made collaboration appear natural and meant they were less of a defining feature in the minds of project developers. It is easier to observe something causing clear differences of opinion and conflicting preferences than something that does not. All forms of TCG will vary in terms of the degree to which their structure is conducive to ideological conflict emerging. REDD+ projects exist towards the less conducive end, where environmental beliefs remain important in shaping preferences but their doing so manifests more subtly. By demonstrating this, I have demarcated environmental beliefs as an essential component of the TCG research agenda that must be seriously considered by scholars and practitioners moving forward.

BIBLIOGRAPHY

REFERENCES CITED

- Abbott, Kenneth, Jessica Green, and Robert Keohane. 2016. 'Organizational Ecology and Institutional Change in Global Governance'. *International Organization* 70 (02): 247–77. <https://doi.org/10.1017/S0020818315000338>.
- Abbott, Kenneth, and Duncan Snidal. 2009. 'The Governance Triangle: Regulatory Standards Institutions and the Shadow of the State'. In *The Politics of Global Regulation*, edited by Walter Mattli and Ngaire Woods, 44–74. Princeton, NJ; Oxford: Princeton University Press.
- Abbott, Kenneth W., and Duncan Snidal. 2001. 'International "standards" and International Governance'. *Journal of European Public Policy* 8 (3): 345–70. <https://doi.org/10.1080/13501760110056013>.
- Adelman, Sam. 2015. 'Tropical Forests and Climate Change: A Critique of Green Governmentality'. *International Journal of Law in Context* 11 (02): 195–212. <https://doi.org/10.1017/S1744552315000075>.
- Adler, Emanuel. 2013. 'Constructivism in International Relations: Sources, Contributions, and Debates'. In *Handbook of International Relations*, edited by Walter Carlsnaes, Thomas Risse, and Beth Simmons, 112–144. New York: Sage.
- AIDER. n.d. 'Quienes Somos - AIDER'. Accessed 19 February 2018. <http://www.aider.com.pe/nosotros.html>.
- Amazonia Reforestation. n.d. 'About Us'. Amazonia Reforestation. Accessed 22 February 2018. http://www.myreforestation.com/about_us.html.
- Andonova, Liliana. 2014. 'Boomerangs to Partnerships? Explaining State Participation in Transnational Partnerships for Sustainability'. *Comparative Political Studies* 47 (3): 481–515.
- Andonova, Liliana, Thomas Hale, and Charles Roger. 2013. 'Diffusion or Domestic Politics Explaining Global Patterns of Participation in Transnational Climate Governance'. Paper presented at the ACUNS Annual Meeting, Lund, Sweden.
- . 2017. 'National Policy and Transnational Governance of Climate Change: Substitutes or Complements?' *International Studies Quarterly* 61 (2): 253–68. <https://doi.org/10.1093/isq/sqx014>.
- Asselt, Harro van, and Fariborz Zelli. 2018. 'International Governance'. In *Governing Climate Change: Polycentricity in Action?*, edited by Andrew Jordan, Dave Huitema, Harro van Asselt, and Johanna Forster, 29–46. Cambridge: Cambridge University Press. <https://www.cambridge.org/core/books/governing-climate-change/international-governance/B01AC00192C974BC2ACDF29A5EA3C6D1>.

- B Corporation. n.d. 'What Are B Corps?' B Corporation. Accessed 10 March 2018. <http://www.bcorporation.net/what-are-b-corps>.
- Babon, Andrea, Daniel McIntyre, Gae Gowae, Caleb Gallemore, Rachel Carmenta, Monica Di Gregorio, and Maria Brockhaus. 2014. 'Advocacy Coalitions, REDD+, and Forest Governance in Papua New Guinea: How Likely Is Transformational Change?' *Ecology and Society* 19 (3). <https://doi.org/10.5751/ES-06486-190316>.
- Bäckstrand, Karin, Jonathan W. Kuyper, Björn-Ola Linnér, and Eva Lövbrand. 2017. 'Non-State Actors in Global Climate Governance: From Copenhagen to Paris and Beyond'. *Environmental Politics* 26 (4): 561–79. <https://doi.org/10.1080/09644016.2017.1327485>.
- Bäckstrand, Karin, and Eva Lövbrand. 2006. 'Planting Trees to Mitigate Climate Change: Contested Discourses of Ecological Modernization, Green Governmentality and Civic Environmentalism'. *Global Environmental Politics* 6 (1): 50–75.
- . 2016. 'The Road to Paris: Contending Climate Governance Discourses in the Post-Copenhagen Era'. *Journal of Environmental Policy & Planning*. <https://doi.org/10.1080/1523908X.2016.1150777>.
- Bailey, Ian, Andy Gouldson, and Peter Newell. 2011. 'Ecological Modernisation and the Governance of Carbon: A Critical Analysis'. *Antipode* 43 (3): 682–703. <https://doi.org/10.1111/j.1467-8330.2011.00880.x>.
- Banuri, Sheheryar, Stefan Dercon, and Varun Gauri. 2017. 'Biased Policy Professionals'. The World Bank. <http://documents.worldbank.org/curated/en/685691498482210671/Biased-policy-professionals>.
- Barbière, Cécile. 2015. 'The Lima-Paris Action Agenda: A Questionable Melting Pot'. Euractiv.Com. 11 December 2015. <https://www.euractiv.com/section/climate-environment/news/the-lima-paris-action-agenda-a-questionable-melting-pot/>.
- Barkin, J. Samuel. 2003. 'Realist Constructivism'. *International Studies Review* 5 (3): 325–342.
- Barnett, Michael, and Raymond Duvall. 2005. 'Power in International Politics'. *International Organization* 59 (01): 39–75.
- Beisheim, Marianne, and Andrea Liese. 2014. *Transnational Partnerships: Effectively Providing for Sustainable Development? Governance and Limited Statehood Series*. Basingstoke: Palgrave Macmillan.
- Berman, Sheri. 1998. *The Social Democratic Moment: Ideas and Politics in the Making of Interwar Europe*. Cambridge, Mass. ; London: Harvard University Press.
- Bernstein, Steven. 2001. *The Compromise of Liberal Environmentalism*. New York: Columbia University Press.
- . 2002. 'Liberal Environmentalism and Global Environmental Governance'. *Global Environmental Politics* 2 (3): 1–16.
- . 2011. 'Legitimacy in Intergovernmental and Non-State Global Governance'. *Review of International Political Economy* 18 (1): 17–51. <https://doi.org/10.1080/09692290903173087>.

- Bernstein, Steven, Michele Betsill, Matthew Hoffmann, and Matthew Paterson. 2010. 'A Tale of Two Copenhagen: Carbon Markets and Climate Governance'. *Millennium-Journal of International Studies* 39 (1): 161–173.
- Bernstein, Steven, and Benjamin Cashore. 2004. 'Non-State Global Governance: Is Forest Certification a Legitimate Alternative to a Global Forest Convention'. *Hard Choices, Soft Law: Voluntary Standards in Global Trade, Environment and Social Governance*, 33–63.
- . 2007. 'Can Non-State Global Governance Be Legitimate? An Analytical Framework'. *Regulation & Governance* 1 (4): 347–371.
- . 2012. 'Complex Global Governance and Domestic Policies: Four Pathways of Influence'. *International Affairs* 88 (3): 585–604.
- Bess, Michael. 2003. *The Light-Green Society: Ecology and Technological Modernity in France, 1960-2000*. Chicago ; London: University of Chicago Press. <http://www.loc.gov/catdir/toc/ecip043/2003009664.html>.
- Besten, Jan Willem den, Bas Arts, and Patrick Verkooijen. 2014. 'The Evolution of REDD+: An Analysis of Discursive-Institutional Dynamics'. *Environmental Science & Policy*, Climate change and deforestation: the evolution of an intersecting policy domain, 35 (January): 40–48. <https://doi.org/10.1016/j.envsci.2013.03.009>.
- Betsill, Michele, and Harriet Bulkeley. 2006. 'Cities and the Multilevel Governance of Global Climate Change'. *Global Governance: A Review of Multilateralism and International Organizations* 12 (2): 141–159.
- Biofilica. n.d. 'Biofilica Investimentos Ambientais'. Accessed 18 February 2018. <http://www.biofilica.com.br/web/?lang=en>.
- Blue Carbon Portal. n.d. 'Face the Future'. BlueCarbonPortal.Org. Accessed 28 October 2016. http://bluecarbonportal.org/dt_portfolio/face-the-future/.
- BOS Foundation. n.d. 'About BOSF'. Borneo Orangutan Survival Foundation. Accessed 30 December 2016a. <http://orangutan.or.id/bosf/about-bosf/>.
- . n.d. 'Vision and Mission'. Borneo Orangutan Survival Foundation. Accessed 30 December 2016b. <http://orangutan.or.id/bosf/visi-dan-misi/>.
- Bosques Amazónicos. 2017. 'Carta Ojo Público Bosques Amazónicos'. Ojo Público. 2017. <https://www.scribd.com/document/363555577/Carta-Ojo-Publico-Bosques-Amazonicos>.
- Boyd, Emily, Maxwell Boykoff, and Peter Newell. 2011. 'The "New" Carbon Economy: What's New?' *Antipode* 43 (3): 601–11. <https://doi.org/10.1111/j.1467-8330.2011.00882.x>.
- Bracewell-Worrall, Anna. 2017. 'Jacinda Ardern: It's My Responsibility to Lead on Climate Change'. Newshub. 11 October 2017. <http://www.newshub.co.nz/home/politics/2017/11/jacinda-ardern-it-s-my-responsibility-to-lead-on-climate-change.html>.
- Bulkeley, Harriet. 2016. *Accomplishing Climate Governance*. Cambridge: Cambridge University Press.
- Bulkeley, Harriet, Liliana Andonova, Michele M. Betsill, Daniel Compagnon, Thomas Hale, Matthew J. Hoffmann, Peter Newell, Matthew Paterson, Charles Roger, and Stacy

- D. VanDeveer. 2014. *Transnational Climate Change Governance*. Cambridge: Cambridge University Press.
- Bulkeley, Harriet, Michele Betsill, Daniel Compagnon, Thomas Hale, Matthew Hoffmann, Peter Newell, and Matthew Paterson. 2018. 'Transnational Governance'. In *Governing Climate Change: Polycentricity in Action?*, edited by Andrew Jordan, Dave Huitema, Harro van Asselt, and Johanna Forster, 63–80. Cambridge: Cambridge University Press. <https://www.cambridge.org/core/books/governing-climate-change/transnational-governance/3C9C84D520C714A2D63B7EB2F3D0660B>.
- Caplow, Susan, Pamela Jagger, Kathleen Lawlor, and Erin Sills. 2011. 'Evaluating Land Use and Livelihood Impacts of Early Forest Carbon Projects: Lessons for Learning about REDD+'. *Environmental Science & Policy* 14 (2): 152–167.
- CASSE. 2016. 'Definition'. Center for the Advancement of the Steady State Economy. 2016. <http://steadystate.org/discover/definition/>.
- CCBA. n.d. 'History of the Standards'. The Climate, Community, and Biodiversity Alliance. Accessed 12 June 2018. <http://www.climate-standards.org/ccb-standards/history-of-the-standards/>.
- Chan, Sander, Harro Asselt, Thomas Hale, Kenneth W. Abbott, Marianne Beisheim, Matthew Hoffmann, Brendan Guy, et al. 2015. 'Reinvigorating International Climate Policy: A Comprehensive Framework for Effective Nonstate Action'. *Global Policy* 6 (4): 466–473.
- Chan, Sander, Paula Ellinger, and Oscar Widerberg. 2018. 'Exploring National and Regional Orchestration of Non-State Action for a 1.5 °C World'. *International Environmental Agreements: Politics, Law and Economics* 18 (1): 135–52. <https://doi.org/10.1007/s10784-018-9384-2>.
- Chan, Sander, Robert Falkner, Matthew Goldberg, and Harro van Asselt. 2016. 'Effective and Geographically Balanced? An Output-Based Assessment of Non-State Climate Actions'. *Climate Policy*, November, 1–12. <https://doi.org/10.1080/14693062.2016.1248343>.
- . 2018. 'Effective and Geographically Balanced? An Output-Based Assessment of Non-State Climate Actions'. *Climate Policy* 18 (1): 24–35. <https://doi.org/10.1080/14693062.2016.1248343>.
- Chan, Sander, and Thomas Hale. 2015. 'Galvanizing the Groundswell of Climate Actions in the Developing World'. Working Paper. Galvanizing the Groundswell of Climate Actions, Blavatnik School of Government (Oxford University), German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE). https://www.climategroundswell.org/s/WP_Galvanizing-the-Groundswell-of-Climate-Actions-in-the-Developing-World28429.pdf.
- Clapp, Jennifer, and Peter Dauvergne. 2005. *Paths to a Green World: The Political Economy of the Global Environment*. Cambridge, Mass.: MIT Press.
- Clapp, Jennifer, and Peter Dauvergne. 2011. *Paths to a Green World: The Political Economy of the Global Environment*. 2nd ed. Cambridge, Mass.: MIT Press.
- Clarke, Paul, Claire Crawford, Fiona Steele, and Anna F. Vignoles. 2010. 'The Choice between Fixed and Random Effects Models: Some Considerations for Educational

- Research'. *Discussion Paper Series // Forschungsinstitut Zur Zukunft Der Arbeit* No. 5287. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1700456.
- Climate Action Network International. 2015. 'Civil Society Responds as Final Paris Climate Agreement Released'. Climate Action Network International. 2015. <http://www.climateactionnetwork.org/press-release/civil-society-responds-final-paris-climate-agreement-released>.
- Collier, David. 2011. 'Understanding Process Tracing'. *PS: Political Science & Politics* 44 (04): 823–30. <https://doi.org/10.1017/S1049096511001429>.
- Corraliza, José A., and Jaime Berenguer. 2000. 'Environmental Values, Beliefs, and Actions: A Situational Approach'. *Environment and Behavior* 32 (6): 832–48. <https://doi.org/10.1177/00139160021972829>.
- Dauvergne, Peter. 2016. *Environmentalism of the Rich*. Cambridge, Massachusetts: The MIT Press.
- . 2018. 'The Power of Environmental Norms: Marine Plastic Pollution and the Politics of Microbeads'. *Environmental Politics* 28 (4): 1–19. <https://doi.org/10.1080/09644016.2018.1449090>.
- Dauvergne, Peter, and Jane Lister. 2010. 'The Prospects and Limits of Eco-Consumerism: Shopping Our Way to Less Deforestation?' *Organization & Environment* 23 (2): 132–54. <https://doi.org/10.1177/1086026610368370>.
- Davidson, Kathryn. 2014. 'A Typology to Categorize the Ideologies of Actors in the Sustainable Development Debate'. *Sustainable Development* 22 (1): 1–14. <https://doi.org/10.1002/sd.520>.
- Di Gregorio, Monica. 2012. 'Networking in Environmental Movement Organisation Coalitions: Interest, Values or Discourse?' *Environmental Politics* 21 (1): 1–25. <https://doi.org/10.1080/09644016.2011.643366>.
- Di Gregorio, Monica, Maria Brockhaus, Tim Cronin, Efrian Muharrom, Sofi Mardiah, and Levanita Santoso. 2015. 'Deadlock or Transformational Change? Exploring Public Discourse on REDD+ Across Seven Countries'. *Global Environmental Politics* 15 (4): 63–84. https://doi.org/10.1162/GLEP_a_00322.
- Di Gregorio, Monica, Caleb Tyrell Gallemore, Maria Brockhaus, Leandra Fatorelli, and Efrian Muharrom. 2017. 'How Institutions and Beliefs Affect Environmental Discourse: Evidence from an Eight-Country Survey on REDD+'. *Global Environmental Change* 45 (July): 133–50. <https://doi.org/10.1016/j.gloenvcha.2017.05.006>.
- Dingwerth, Klaus, and Philipp Pattberg. 2009. 'World Politics and Organizational Fields: The Case of Transnational Sustainability Governance'. *European Journal of International Relations* 15 (4): 707–43. <https://doi.org/10.1177/1354066109345056>.
- Dryzek, John S. 2013. *The Politics of the Earth: Environmental Discourses*. 3rd ed. Oxford: Oxford University Press.
- Dunlap, Riley E. 2008. 'The New Environmental Paradigm Scale: From Marginality to Worldwide Use'. *The Journal of Environmental Education* 40 (1): 3–18. <https://doi.org/10.3200/JOEE.40.1.3-18>.

- Dunlap, Riley E., and Kent Van Liere. 1978. 'The "New Environmental Paradigm"'. *Journal of Environmental Education* 9 (4): 10–19. <https://doi.org/10.1080/00958964.1978.10801875>.
- Ewert, Christian, and Martino Maggetti. 2016. 'Regulating Side by Side: The Role of Hybrid Organisations in Transnational Environmental Sustainability'. *Policy and Society* 35 (1): 91–102. <https://doi.org/10.1016/j.polsoc.2015.12.004>.
- Face the Future, and WAAME. 2012. 'Sine-Saloum Delta Mangrove Ecosystem Restoration Project'. *Plan Vivo Project Idea Note*. http://www.planvivo.org/docs/PIN_Face_Waame_Senegal_published.pdf.
- Falkner, Robert. 2016. 'The Paris Agreement and the New Logic of International Climate Politics'. *International Affairs* 92 (5): 1107–1125.
- Flinders, Matthew, and Jim Buller. 2006. 'Depoliticisation: Principles, Tactics and Tools'. *British Politics* 1 (3): 293–318. <https://doi.org/10.1057/palgrave.bp.4200016>.
- Fundación Natura. n.d. '¿Quiénes somos?' La Fundación Natura Colombia. Accessed 14 March 2018. <http://www.natura.org.co/la-fundacion/mision-y-vision/>.
- Gallemore, Caleb, and Kristjan Jespersen. 2016. 'Transnational Markets for Sustainable Development Governance: The Case of REDD+'. *World Development* 86 (October): 79–94. <https://doi.org/10.1016/j.worlddev.2016.06.009>.
- Gallemore, Caleb, Rut Dini Prasti, and Moira Moeliono. 2014. 'Discursive Barriers and Cross-Scale Forest Governance in Central Kalimantan, Indonesia'. *Ecology and Society* 19 (2). <https://doi.org/10.5751/ES-06418-190218>.
- GGCA. 2016. 'Lima-Paris Action Agenda Independent Assessment Report'. Galvanizing the Groundswell of Climate Action. http://static1.squarespace.com/static/552be32ce4b0b269a4e2ef58/t/56673b3cb204d59deb517d8d/1449605948836/LPAA_Assessment_Report_7DEC15.pdf.
- Goldstein, Judith, and Robert O. Keohane. 1993. 'Ideas and Foreign Policy: An Analytical Framework'. In *Ideas and Foreign Policy: Beliefs, Institutions, and Political Change*, edited by Judith Goldstein and Robert Keohane O., 3–30. Cornell Studies in Political Economy. Ithaca, N.Y.; London: Ithaca, NY; London: Cornell University Press.
- Gupta, Joyeeta. 2015. 'Normative Issues in Global Environmental Governance: Connecting Climate Change, Water and Forests'. *Journal of Agricultural and Environmental Ethics* 28 (3): 413–33. <https://doi.org/10.1007/s10806-014-9509-8>.
- Hadden, Jennifer. 2015. *Networks in Contention: The Divisive Politics of Climate Change*. Cambridge Studies in Contentious Politics. Cambridge: Cambridge University Press.
- Hale, Thomas. 2015. *Between Interests and Law: The Politics of Transnational Commercial Disputes*. Cambridge: Cambridge University Press.
- . 2016. "'All Hands on Deck": The Paris Agreement and Nonstate Climate Action'. *Global Environmental Politics* 16 (3): 12–22. https://doi.org/10.1162/GLEP_a_00362.
- Hale, Thomas, and Louis Chambers. 2014. 'Design Considerations for a Registry of Sub- and Non-State Actions in the UN Framework Convention on Climate Change'. Policy Memo. Oxford: Blavatnik School of Government.

- Hale, Thomas, and David Held. 2011. *Handbook of Transnational Governance*. Cambridge: Polity.
- Hale, Thomas, David Held, and Kevin Young. 2013. *Gridlock: Why Global Cooperation Is Failing When We Need It Most*. Cambridge, UK: Polity Press.
- Hale, Thomas, and Charles Roger. 2012. 'Domestic Politics and Participation in Transnational Climate Governance: The Crucial Case of China'. Research Center for Chinese Politics and Business Working Paper 23. Indiana University.
- . 2014. 'Orchestration and Transnational Climate Governance'. *The Review of International Organizations* 9 (1): 59–82. <https://doi.org/10.1007/s11558-013-9174-0>.
- Hawkins, Darren, David Lake, Daniel Nielson, and Michael Tierney. 2006. 'Delegation under Anarchy: States, International Organizations and Principal-Agent Theory'. In *Delegation and Agency in International Organizations*, edited by Darren Hawkins, David Lake, Daniel Nielson, and Michael Tierney, 3:3–38.
- Heeks, Richard, and Carolyn Stanforth. 2014. 'Understanding Development Project Implementation: An Actor-Network Perspective'. *Public Administration and Development* 34 (1): 14–31. <https://doi.org/10.1002/pad.1671>.
- Hiraldo, Rocío, and Thomas Tanner. 2011. 'Forest Voices: Competing Narratives over REDD+'. *IDS Bulletin* 42 (3): 42–51.
- Howard, Marc Morjé, and Philip G. Roessler. 2006. 'Liberalizing Electoral Outcomes in Competitive Authoritarian Regimes'. *American Journal of Political Science* 50 (2): 365–81.
- Hsu, Angel, Andrew S. Moffat, Amy J. Weinfurter, and Jason D. Schwartz. 2015. 'Towards a New Climate Diplomacy'. *Nature Climate Change* 5 (6): 501–3. <https://doi.org/10.1038/nclimate2594>.
- Hsueh, Lily. 2016. 'Transnational Climate Governance and the Global 500: Examining Private Actor Participation by Firm-Level Factors and Dynamics'. *International Interactions*, 1–28.
- IIED. n.d. 'The Verified Carbon Standard (VCS)'. Shaping Sustainable Markets. Accessed 12 June 2018. <https://shapingsustainablemarkets.iied.org/verified-carbon-standard-vcs>.
- Interview 1. 2017. Interview with Fundación Nature 1.
- Interview 3. 2017. Interview with Carbono y Bosques / South Pole Carbon 1.
- Interview 4. 2017. Interview with Ecoforestal de Colombia 1.
- Interview 6. 2017. Interview with AGROFUTURO 1.
- Interview 12. 2017. Interview with Pur Projet 1.
- Interview 17. 2017. Interview with Bosques Amazónicos 1.
- Interview 18. 2017. Interview with AIDER 1.
- Interview 19. 2017. Interview with Bosques Amazónicos / AIDER 1.
- Interview 20. 2017. Interview with FUNDAVI 1.
- Interview 21. 2017. Interview with ACOPAGRO 1.

- Interview 22. 2017. Interview with APROBOC leadership.
- Interview 23. 2017. Interview with APAHUI 1.
- Interview 24. 2017. Interview with SERNANP 1.
- Interview 25. 2017. Interview with Althelia 1.
- Interview 26. 2017. Interview with AIDER 2.
- Interview 27. 2017. Interview with FEPROCAMD 1.
- Interview 29. 2017. Interview with AIDER 3.
- Interview 30. 2017. Interview with Bosques Amazónicos 2.
- Irwin, Douglas A. 2017. 'The False Promise of Protectionism'. *Foreign Affairs* 96 (3): 13.
- ITTO. n.d. 'About ITTO | The International Tropical Timber Organization (ITTO)'. Accessed 9 March 2017. http://www.itto.int/about_itto/.
- Jacobs, Alan M. 2015. 'Process Tracing the Effects of Ideas'. In *Process Tracing: From Metaphor to Analytic Tool*, edited by Andrew Bennett and Jeffrey T. Checkel, 41–73. Strategies for Social Inquiry. Cambridge: Cambridge University Press.
- Jodoin, Sébastien. 2017. 'The Transnational Policy Process for REDD+ and Domestic Policy Entrepreneurship in Developing Countries'. *Environment and Planning C: Politics and Space* 35 (8): 1418–36. <https://doi.org/10.1177/2399654417719287>.
- Jordan, Andrew, Dave Huitema, Harro Van Asselt, and Johanna Forster, eds. 2018. *Governing Climate Change: Polycentricity in Action?* Cambridge: Cambridge University Press.
- Jungcurt, Stefan. 2018. 'ICAO Adopts Standards and Recommended Practices to Reduce Emissions from International Aviation | News | SDG Knowledge Hub | IISD'. IISD SDG Knowledge Hub. 2018. <http://sdg.iisd.org/news/icao-adopts-standards-and-recommended-practices-to-reduce-emissions-from-international-aviation/>.
- Karunungan, Renee Juliene. 2017. 'The Danger of Allowing Polluters Inside the UN Climate Talks'. *Climate Tracker* (blog). 8 June 2017. <http://climatetracker.org/danger-allowing-polluters-inside-un-climate-talks/>.
- Keohane, Robert O., and David G. Victor. 2011. 'The Regime Complex for Climate Change'. *Perspectives on Politics* 9 (1): 7–23. <https://doi.org/10.1017/S1537592710004068>.
- Kern, Kristine, and Harriet Bulkeley. 2009. 'Cities, Europeanization and Multi-Level Governance: Governing Climate Change through Transnational Municipal Networks*'. *JCMS: Journal of Common Market Studies* 47 (2): 309–332.
- Keynes, John Maynard. 1936. *The General Theory of Employment, Interest and Money*. London: Macmillan.
- Kilbourne, William, and Gregory Pickett. 2008. 'How Materialism Affects Environmental Beliefs, Concern, and Environmentally Responsible Behavior'. *Journal of Business Research* 61 (9): 885–93. <https://doi.org/10.1016/j.jbusres.2007.09.016>.
- King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.

- Klein, Naomi. 2015. 'We Are Out of Time: We Need to Take a Leap'. Moyers and Company. 2015. <https://billmoyers.com/story/we-are-out-of-time-we-need-to-take-a-leap/>.
- Leonard, Stephen. 2018. 'Outcomes for Forests at the Bonn Climate Change Conference'. CIFOR Forests News. 23 May 2018. <https://forestsnews.cifor.org/56373/outcomes-for-forests-at-the-bonn-climate-change-conference?fnl=en>.
- Lieberman, Evan. 2005. 'Nested Analysis as a Mixed-Method Strategy for Comparative Research'. *The American Political Science Review* 99 (3): 435–52.
- Mann, Charles C. 2018. *The Wizard and the Prophet: Two Remarkable Scientists and Their Dueling Visions to Shape Tomorrow's World*. London: Picador.
- Maraseni, T. N., P. R. Neupane, F. Lopez-Casero, and Timothy Cadman. 2014. 'An Assessment of the Impacts of the REDD+ Pilot Project on Community Forests User Groups (CFUGs) and Their Community Forests in Nepal'. *Journal of Environmental Management* 136: 37–46.
- Margulis, Matias E., and Tony Porter. 2013. 'Governing the Global Land Grab: Multipolarity, Ideas, and Complexity in Transnational Governance'. *Globalizations* 10 (1): 65–86. <https://doi.org/10.1080/14747731.2013.760930>.
- Mayring, Philipp. 2000. 'Qualitative Content Analysis'. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research [On-Line Journal]* 1 (2). <https://doi.org/10.17169/fqs-1.2.1089>.
- McDermott, Constance L. 2014. 'REDDuced: From Sustainability to Legality to Units of Carbon—The Search for Common Interests in International Forest Governance'. *Environmental Science & Policy* 35: 12–19.
- McDermott, Constance L., Lauren Coad, Ariella Helfgott, and Heike Schroeder. 2012. 'Operationalizing Social Safeguards in REDD+: Actors, Interests and Ideas'. *Environmental Science & Policy* 21: 63–72.
- McDermott, Constance L., David Humphreys, Christoph Wildburger, Peter Wood, Emmanuel Marfo, Pablo Pacheco, and Yurdi Yasmi. 2011. 'Mapping the Core Actors and Issues Defining International Forest Governance.' In *Embracing Complexity: Meeting the Challenges of International Forest Governance*, edited by Jeremy Rayner, Alexander Buck, and Pia Katila, 28:19–36. IUFRO World Series. Vienna: IUFRO (International Union of Forestry Research Organizations) Secretariat.
- McManus, Phil. 1996. 'Contested Terrains: Politics, Stories and Discourses of Sustainability'. *Environmental Politics* 5 (1): 48–73.
- Mercator Research Institute. 2018. 'Remaining Carbon Budget'. Mercator Research Institute on Global Commons and Climate Change. 2018. <https://www.mcc-berlin.net/en/research/co2-budget.html>.
- Michaelowa, Katharina, and Axel Michaelowa. 2017. 'Transnational Climate Governance Initiatives: Designed for Effective Climate Change Mitigation?' *International Interactions* 43 (1): 129–55. <https://doi.org/10.1080/03050629.2017.1256110>.
- Minang, Peter Akong, Meine Van Noordwijk, Lalisa A. Duguma, Dieudonne Alemagi, Trong Hoan Do, Florence Bernard, Putra Agung, et al. 2014. 'REDD+ Readiness

- Progress across Countries: Time for Reconsideration'. *Climate Policy* 14 (6): 685–708. <https://doi.org/10.1080/14693062.2014.905822>.
- Moravcsik, Andrew. 1997. 'Taking Preferences Seriously: A Liberal Theory of International Politics'. *International Organization* 51 (4): 513–53. <https://doi.org/10.1162/002081897550447>.
- Murdiyarso, Daniel, Maria Brockhaus, William D. Sunderlin, and Lou Verchot. 2012. 'Some Lessons Learned from the First Generation of REDD+ Activities'. *Current Opinion in Environmental Sustainability* 4 (6): 678–685.
- Myers, Rodd, Anne M Larson, Ashwin Ravikumar, Laura F Kowler, Anastasia Yang, and Tim Trench. 2018. 'Messiness of Forest Governance: How Technical Approaches Suppress Politics in REDD+ and Conservation Projects'. *Global Environmental Change*. <https://doi.org/10.1016/j.gloenvcha.2018.02.015>.
- Neumayer, Eric. 2013. *Weak versus Strong Sustainability: Exploring the Limits of Two Opposing Paradigms*. Fourth edition. Cheltenham: Edward Elgar.
- Newell, Peter, and Matthew Paterson. 2010. *Climate Capitalism: Global Warming and the Transformation of the Global Economy*. Cambridge: Cambridge University Press.
- Nuttall, Nick. 2017. 'Time to Go Further, Faster - Together'. UNFCCC. 2017. <https://unfccc.int/news/time-to-go-further-faster-together>.
- Ostrom, Elinor. 2010. 'Polycentric Systems for Coping with Collective Action and Global Environmental Change'. *Global Environmental Change* 20 (4): 550–557.
- Overdevest, Christine. 2010. 'Comparing Forest Certification Schemes: The Case of Ratcheting Standards in the Forest Sector'. *Socio-Economic Review* 8 (1): 47–76. <https://doi.org/10.1093/ser/mwp028>.
- Personal communication 1. 2017. Personal communication with large plantation manager.
- Personal communication 2. 2017. Personal communication with group of APROBOC members.
- Personal communication 3. 2017. Personal communication with FEPROCAMD director.
- Pistorius, Till. 2012. 'From RED to REDD+: The Evolution of a Forest-Based Mitigation Approach for Developing Countries'. *Current Opinion in Environmental Sustainability* 4 (6): 638–645.
- Plan Vivo. n.d. 'History and Timeline'. Plan Vivo. Accessed 12 June 2018. <http://www.planvivo.org/about-plan-vivo/history-and-timeline/>.
- Pur Projet. n.d. 'Insetting: What Is Insetting?' Pur Projet. Pur Projet. Accessed 27 May 2018. <http://www.purprojet.com/presentation-what-is-insetting/>.
- Ray, James Lee, and J. David Singer. 1973. 'Measuring the Concentration of Power in the International System'. *Sociological Methods & Research* 1 (4): 403–37. <https://doi.org/10.1177/004912417300100401>.
- REDD+ SES. n.d. 'Multi-Stakeholder Processes'. REDD+ Social & Environmental Standards. Accessed 11 May 2018. <http://www.redd-standards.org/key-issues/multistakeholder-process>.
- Roger, Charles, and Peter Dauvergne. 2016. 'The Rise of Transnational Governance as a Field of Study'. *International Studies Review* 18 (3): 415–37. <https://doi.org/10.1093/isr/viw001>.

- Roger, Charles, Thomas Hale, and Liliana Andonova. 2014. 'How Does Domestic Politics Condition Participation in Transnational Climate Governance?' Unpublished.
- . 2015. 'How Do Domestic Politics Shape Participation in Transnational Climate Governance?' <https://www.bsg.ox.ac.uk/sites/www.bsg.ox.ac.uk/files/documents/BSG-WP-2015-001.pdf>.
- . 2017. 'The Comparative Politics of Transnational Climate Governance'. *International Interactions* 43 (1): 1–25.
- Rohlfing, Ingo. 2008. 'What You See and What You Get: Pitfalls and Principles of Nested Analysis in Comparative Research'. *Comparative Political Studies* 41 (11): 1492–1514.
- Rosenau, James N., and Ernst Otto Czempiel. 1992. *Governance without Government: Order and Change in World Politics*. Cambridge Studies in International Relations ; 20. Cambridge: Cambridge University Press.
- Sabatier, Paul A. 1988. 'An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein'. *Policy Sciences* 21 (2–3): 129–168.
- Sanders, Anna J. P., Håkon da Silva Hyldmo, Rut Dini Prasti H., Rebecca M. Ford, Anne M. Larson, and Rodney J. Keenan. 2017. 'Guinea Pig or Pioneer: Translating Global Environmental Objectives through to Local Actions in Central Kalimantan, Indonesia's REDD+ Pilot Province'. *Global Environmental Change* 42 (January): 68–81. <https://doi.org/10.1016/j.gloenvcha.2016.12.003>.
- Scharpf, Fritz W. 1997. 'Economic Integration, Democracy and the Welfare State'. *Journal of European Public Policy* 4 (1): 18–36. <https://doi.org/10.1080/135017697344217>.
- Schleifer, Philip, and Michael John Bloomfield. 2015. 'When Institutions Fail: Legitimacy, (De)Legitimation, and the Failure of Private Governance Systems'. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2631402>.
- Schmidt, Vivien A. 2008. 'Discursive Institutionalism: The Explanatory Power of Ideas and Discourse'. *Annual Review of Political Science* 11.
- Schouten, Greetje, Pieter Leroy, and Pieter Glasbergen. 2012. 'On the Deliberative Capacity of Private Multi-Stakeholder Governance: The Roundtables on Responsible Soy and Sustainable Palm Oil'. *Ecological Economics* 83 (November): 42–50. <https://doi.org/10.1016/j.ecolecon.2012.08.007>.
- Seeberg, Michael. 2014. 'Mapping Deviant Democracy'. *Democratization* 21 (4): 634–54. <https://doi.org/10.1080/13510347.2012.755516>.
- Seyller, C., S. Desbureaux, S. Ongolo, A. Karsenty, G. Simonet, J. Faure, and L. Brimont. 2016. 'The "virtual Economy" of REDD+ Projects: Does Private Certification of REDD+ Projects Ensure Their Environmental Integrity?' *International Forestry Review* 18 (2): 231–46. <https://doi.org/10.1505/146554816818966336>.
- Shankland, Alex, and Leonardo Hasenclever. 2011. 'Indigenous Peoples and the Regulation of REDD+ in Brazil: Beyond the War of the Worlds?' *IDS Bulletin* 42 (3): 80–88.
- Simonet, G., J. Subervie, D. Ezzine-de-Blas, M. Cromberg, and A. E. Duchelle. 2018. 'Effectiveness of a REDD+ Project in Reducing Deforestation in the Brazilian Amazon'. *American Journal of Agricultural Economics* aay028. <https://doi.org/10.1093/ajae/aay028>.

- Simonet, Gabriela, Alain Karsenty, Pete Newton, Christian de Perthuis, Brian Schaap, and Coline Seyller. 2015. 'REDD+ Projects in 2014: An Overview Based on a New Database and Typology'. Working Paper 32. <http://www.chaireeconomieduclimat.org/en/publications-en/information-debates/id-32-redd-projects-in-2014-an-overview-based-on-a-new-database-and-typology/>.
- Simonet, Gabriela, Alain Karsenty, Pete Newton, Christian de Perthuis, Brian Schaap, Coline Seyller, Fabrice Bénédet, et al. 2016. 'International Database on REDD+ Projects, Linking Economic, Carbon and Communities Data Version 2.0'. Working Paper. 2016. <http://www.reddprojectsdatabase.org>.
- Spash, Clive L. 2016. 'This Changes Nothing: The Paris Agreement to Ignore Reality'. *Globalizations* 13 (6): 928–33. <https://doi.org/10.1080/14747731.2016.1161119>.
- Suddaby, Roy, David J. Cooper, and Royston Greenwood. 2007. 'Transnational Regulation of Professional Services: Governance Dynamics of Field Level Organizational Change'. *Accounting, Organizations and Society* 32 (4–5): 333–62. <https://doi.org/10.1016/j.aos.2006.08.002>.
- Sunderlin, W. D., A. M. Larson, A. E. Duchelle, E. O. Sills, C. Luttrell, P. Jagger, S. K. Pattanayak, et al. 2016. 'Technical Guidelines for Research on REDD+ Subnational Initiatives'. *Center for International Forestry Research*. <https://doi.org/10.17528/cifor/006009>.
- Szulecki, Kacper, Philipp Pattberg, and Frank Biermann. 2011. 'Explaining Variation in the Effectiveness of Transnational Energy Partnerships'. *Governance* 24 (4): 713–36. <https://doi.org/10.1111/j.1468-0491.2011.01544.x>.
- Tell It's Green. n.d. 'CarbonFix Standard'. Tell It's Green. Accessed 12 June 2018. <https://tellitsgreen.com/organic-logos/1088/>.
- Tramel, Salena. 2016. 'The Road Through Paris: Climate Change, Carbon, and the Political Dynamics of Convergence'. *Globalizations* 13 (0): 960–69. <https://doi.org/10.1080/14747731.2016.1173376>.
- Transition Network. n.d. 'Principles'. Transition Network. Accessed 13 July 2018. <https://transitionnetwork.org/about-the-movement/what-is-transition/principles-2/>.
- Turnhout, Esther, Aarti Gupta, Janice Weatherley-Singh, Marjanneke J. Vijge, Jessica de Koning, Ingrid J. Visseren-Hamakers, Martin Herold, and Markus Lederer. 2017. 'Envisioning REDD+ in a Post-Paris Era: Between Evolving Expectations and Current Practice: Envisioning REDD+ in a Post-Paris Era'. *Wiley Interdisciplinary Reviews: Climate Change* 8 (1): e425. <https://doi.org/10.1002/wcc.425>.
- UN News. 2014. 'Climate Summit: "All Hands on Deck" Declares Ban, Calling for Leadership, Concrete Action'. UN News. 23 September 2014. <https://news.un.org/en/story/2014/09/478172-climate-summit-all-hands-deck-declares-ban-calling-leadership-concrete-action>.
- UNFCCC. 2005. 'Report of the 22nd Meeting of the CDM Executive Board'. Annex 16. UNFCCC. https://cdm.unfccc.int/EB/022/eb22_repan16.pdf.
- . 2015. 'Paris Agreement'. https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

- . 2016. ‘Marrakech Partnership for Global Climate Action’. https://unfccc.int/files/paris_agreement/application/pdf/marrakech_partnership_for_global_climate_action.pdf.
- . 2017. ‘The Local Communities and Indigenous Peoples Platform Becomes Operational at COP 23’. UNFCCC. 2017. <http://www4.unfccc.int/sites/NWP/News/Pages/Indigenous-Peoples-and-Local-Communities-Platform-Update.aspx>.
- . n.d. ‘Global Climate Action - NAZCA’. Global Climate Action. Accessed 29 May 2018. <http://climateaction.unfccc.int/>.
- Vanhala, Lisa. 2017. ‘Process Tracing in the Study of Environmental Politics’. *Global Environmental Politics* 17 (4): 88–105. https://doi.org/10.1162/GLEP_a_00434.
- Ven, Hamish van der, Steven Bernstein, and Matthew Hoffmann. 2016. ‘Valuing the Contributions of Nonstate and Subnational Actors to Climate Governance’. *Global Environmental Politics* 17 (1): 1–20. https://doi.org/10.1162/GLEP_a_00387.
- Vijge, Marjanneke J. 2015. ‘Competing Discourses on REDD+: Global Debates versus the First Indian REDD+ Project’. *Forest Policy and Economics* 56: 38–47.
- Visseren-Hamakers, Ingrid J., Constance McDermott, Marjanneke J. Vijge, and Benjamin Cashore. 2012. ‘Trade-Offs, Co-Benefits and Safeguards: Current Debates on the Breadth of REDD+’. *Current Opinion in Environmental Sustainability* 4 (6): 646–653.
- Wallbott, Linda. 2014. ‘Indigenous Peoples in UN REDD+ Negotiations: “Importing Power” and Lobbying for Rights through Discursive Interplay Management’. *Ecology and Society* 19 (1): 21.
- WCED. 1987. ‘Our Common Future: Report of the World Commission on Environment and Development’.
- Wendt, Alexander. 1992. ‘Anarchy Is What States Make of It: The Social Construction of Power Politics’. *International Organization* 46 (2): 391–425.
- . 1999. *Social Theory of International Politics*. Cambridge Studies in International Relations ; 67. Cambridge: Cambridge University Press.
- WHO. 2016. ‘Framework of Engagement with Non-State Actors’. http://www.who.int/about/collaborations/non-state-actors/A69_R10-FENSA-en.pdf.
- Woods, Ngaire. 2018. ‘Does International Cooperation Require Shared Values?’ Project Syndicate. 27 June 2018. <https://www.project-syndicate.org/commentary/international-cooperation-without-shared-values-by-ngaire-woods-2018-06>.
- World Bank. 2017. ‘World Development Indicators’. World DataBank. 2017. www.databank.worldbank.org.
- WWF. n.d. ‘About WWF | WWF’. World Wide Fund for Nature. Accessed 9 March 2017. http://wwf.panda.org/who_we_are/.
- WWF, The Nature Conservancy, Fundación Natura, Asociación Red Colombiana de Reservas Naturales de la Sociedad Civil, and Parques Nacionales de Colombia. 2014. ‘Manejo Forestal Sostenible En Plantaciones En La Cuenca Del Río Bitá,

Vichada, Colombia'. Conservación de La Biodiversidad En Predios Productivos.
<http://www.horizonteverde.org.co/attachments/article/29/LIBRO%20FORESTAL%20G5%20FINAL.pdf>.

TABLE OF INTERVIEWS

Number	Affiliation	Location	Date
1	Fundación Natura 1	Bogotá, Colombia	05.07.17
2	Reforestadora El Toro	Bogotá, Colombia	10.07.17
3	Carbono y Bosques and South Pole Carbon	Bogotá, Colombia	11.07.17
4	Ecoforestal de Colombia	Bogotá, Colombia	12.07.17
5	South Pole Carbon 1	Medellín, Colombia	14.07.17
6	AGROFUTURO	Medellín, Colombia	18.07.17
7	South Pole Carbon 2	Medellín, Colombia	18.07.17
8	South Pole Carbon 3	Medellín, Colombia	21.07.17
9	BTG Pactual 1	Medellín, Colombia	21.07.17
10	BTG Pactual 2	Medellín, Colombia	24.07.17
11	Amazonia Reforestation	Bogotá, Colombia	27.07.17
12	Pur Projet	Bogotá, Colombia	27.07.17
13	Fundación Natura 2	Bogotá, Colombia	28.07.17
14	Unión Temporal Agroindustria Horizonte Verde	Bogotá, Colombia	31.07.17
15	CANAPRO 1	Bogotá, Colombia	02.08.17
16	CANAPRO 2	Puerto Carreño, Colombia	07.08.17
17	Bosques Amazónicos 1	Lima, Peru	16.08.17
18	AIDER 1	Lima, Peru	21.08.17
19	Bosques Amazónicos / AIDER 1	Lima, Peru	22.08.17
20	FUNDAVI	Juanjui, Peru	24.08.17
21	ACOPAGRO	Juanjui, Peru	25.08.17
22	APROBOC	Dos de Mayo, Peru	28.08.17
23	APAHUI	Juanjui, Peru	30.08.17
24	SERNANP	Lima, Peru	05.09.17
25	Althelia	Lima, Peru	06.09.17
26	AIDER 2	Lima, Peru	07.09.17
27	FEPROCAMD	Puerto Maldonado, Peru	13.09.17
28	AIDER 3	Puerto Maldonado, Peru	13.09.17
29	AIDER 4	Puerto Maldonado, Peru	13.09.17
30	Bosques Amazónicos 1	Lima, Peru	21.09.17

APPENDICES

1. GHOST CODING PROCESS AND INTER-CODER RELIABILITY

As a preliminary test of inter-coder reliability for the coding of REDD+ projects in my database, two environmentally-focused social science graduate students from the University of Oxford were hired as ghost coders. They coded independent samples of my database that together totalled 37 projects and 88 project developers. The coders were selected based on interest and being enrolled in a relevant graduate level degree. I explained the coding method to each of them individually, provided them with the codebook included in this Appendix that further details the coding process, and Clapp and Dauvergne (2011)'s original explanation of the environmental worldviews. Before coding their samples, each ghost coder had to code a separate, practice set and explain their thought process and rationale to give me confidence that they understood the task. For the environmental worldviews, the results of the ghost coders had a 73% match to my coding. Given four different worldviews to choose from and the fact that, as already discussed, project developers rarely perfectly define a worldview and there are plenty of grey areas, this is solid support for intercoder reliability. For the aspects of project design, the ghost coding results were less supportive. For the binary coding of the social benefits dependent variable, the match was only 38%, for ecological benefits 59%, for market financing 65%, for non-market financing 44%, and for local MRV 56%. For the non-finance-related variables, in particular, these results are not convincing.

Checking intercoder reliability is a useful contribution, but ultimately these results should be interpreted with great caution and not used to make conclusions about the validity of my results. Despite including a training process for each ghost coder, the time and resources available to implement were limited and did not allow the coders to approach anywhere near the familiarity with the data that I had developed over one year of full-time engagement with the material prior to coding the database. Additionally, as the method is an original one that I have created for this thesis, there is no existing or tested guidance for replication. I hope the preliminary ghost coding I have undertaken can be a first step towards this. By looking more closely at the ghost coding results and debriefing with the coders it was also clear that they had not approached the task with a comparable understanding of the method to my own. One example that highlight this is that between the two coders, only 4 of the 36 projects were coded as placing a high emphasis on social benefits. Their understanding of what constituted “high” was extreme, and inconsistent with what I had attempted to articulate during training and in the codebook. A second example is that both ghost coders coded a number of projects as emphasising neither market financing nor non-market financing. This, again, represents a misunderstanding on the part of the coders. All the projects are financed somehow and must have an emphasis on at least one of the two types of financing. Finally, the use of two coders on independent samples that comprised only 9% of the projects and 10% of the project developers is too small to represent a thorough test of intercoder reliability.

To summarise, with the time and resources available to me only a preliminary check of intercoder reliability was possible. The results, which are mixed, cannot be used to draw strong conclusions about the method of coding project designs. The exercise remains valuable, however, as an important contribution of this thesis is to push the envelope of the methods and data used to study ideational factors in environmental politics. As more

databases are build and quantitative analyses conducted, as a research community we will be able to build upon each other's methods, test them, and improve them. The intercoder reliability test I employed for my database represents a step in this direction. Links to the database and ghost coding samples are available in Appendix 4 for those who would like to interrogate them further.

2. ADDITIONAL TABLES AND FIGURES

Multicollinearity diagnostics

Table 23: Multicollinearity diagnostics (all independent variables)

<i>Variable</i>	<i>VIF</i>	<i>SQRT-VIF</i>	<i>Tolerance</i>	<i>R-Squared</i>
ENVIRONMENTAL WORLDVIEWS				
% Market liberal	2.56	1.60	0.39	0.61
% Bioenvironmentalist	2.62	1.62	0.38	0.62
% Social green	2.19	1.48	0.46	0.54
ACTOR TYPES				
% Host private-sector	18.16	4.26	0.06	0.94
% Int'l private-sector	25.20	5.02	0.04	0.96
% MDB	5.81	2.41	0.17	0.83
% Host subnational public	7.76	2.79	0.13	0.87
% Host national public	8.43	2.90	0.12	0.88
% Int'l national public	4.79	2.19	0.21	0.79
% IGO	2.28	1.51	0.44	0.56
% Host NGO	13.87	3.72	0.07	0.93
% Int'l NGO	13.59	3.69	0.07	0.93
% University/research	3.57	1.89	0.28	0.72
CONTROLS				
Private land tenure	2.80	1.67	0.36	0.64
State land tenure	3.18	1.78	0.31	0.69
Community land tenure	1.58	1.26	0.63	0.37
Protected area	1.37	1.17	0.73	0.27
EPI Biohabitat score	1.14	1.07	0.87	0.13
Civil liberties	1.66	1.29	0.60	0.40
GDP per capita	1.84	1.36	0.54	0.46

Mean VIF

6.22

Table 22: Multicollinearity diagnostics (% int'l private sector actors removed)

<i>Variable</i>	<i>VIF</i>	<i>SQRT-VIF</i>	<i>Tolerance</i>	<i>R-Squared</i>
ENVIRONMENTAL WORLDVIEWS				
% Market liberal	2.40	1.55	0.42	0.58
% Bioenvironmentalist	2.61	1.61	0.38	0.62
% Social green	2.18	1.48	0.46	0.54
ACTOR TYPES				
% Host private-sector	1.75	1.32	0.57	0.43
% Int'l private-sector				
% MDB	1.28	1.13	0.7817	0.2183
% Host subnational public	1.71	1.31	0.59	0.42
% Host national public	1.44	1.20	0.69	0.31
% Int'l national public	1.23	1.11	0.81	0.19
% IGO	1.12	1.06	0.89	0.11
% Host NGO	2.14	1.46	0.47	0.53
% Int'l NGO	2.43	1.56	0.41	0.59
% University/research	1.20	1.10	0.83	0.17
CONTROLS				
Private land tenure	2.80	1.67	0.36	0.64
State land tenure	3.17	1.78	0.32	0.68
Community land tenure	1.58	1.26	0.63	0.37
Protected area	1.37	1.17	0.73	0.27
EPI Biohabitat score	1.14	1.07	0.88	0.12
Civil liberties	1.65	1.29	0.61	0.39
GDP per capita	1.82	1.35	0.55	0.45

Mean VIF

1.84

Observable implications tables for main model with different exclusion criteria

Table 24: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model, 34% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 25: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model, 50% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 26: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model, 67% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Regression and observable implication tables for main model with imputed data

Table 27: Regression results [main model with imputed data, 50% exclusion criterion] (odds ratios)

VARIABLES	Social benefits	Ecological benefits	Market finance	Non-market finance	Local MRV
ENVIRONMENTAL WORLDVIEWS					
% Market liberal ^z	1.560 (0.563)	1.643 (0.786)	1.863 (1.140)	0.324 (0.225)	0.549 (0.259)
% Bioenvironmentalist ^z	1.050 (0.345)	2.771*** (0.720)	0.505* (0.181)	1.157 (0.565)	0.632 (0.215)
% Social green ^z	2.073*** (0.538)	1.362 (0.340)	0.728 (0.257)	1.092 (0.418)	0.838 (0.212)
ACTOR TYPES					
% Host private-sector	0.960 (0.031)	0.958* (0.024)	0.986 (0.061)	1.032 (0.065)	0.967 (0.025)
% Int'l private-sector	0.972 (0.031)	0.955* (0.023)	0.951 (0.043)	1.034 (0.062)	0.982 (0.026)
% MDB	0.963 (0.037)	0.946* (0.029)	0.883** (0.043)	1.060 (0.069)	0.935* (0.034)
% Host subnational public	0.978 (0.031)	0.982 (0.027)	0.932 (0.043)	1.043 (0.055)	0.976 (0.023)
% Host national public	0.966 (0.027)	0.949** (0.025)	0.931 (0.048)	1.047 (0.062)	0.951** (0.024)
% Int'l national public	0.975 (0.031)	0.959 (0.036)	0.907** (0.044)	1.097 (0.071)	0.974 (0.029)
% IGO	0.983 (0.041)	0.977 (0.030)	0.877*** (0.024)	1.282*** (0.108)	0.992 (0.033)
% Host NGO	0.992 (0.031)	0.962 (0.026)	0.974 (0.043)	1.029 (0.057)	0.998 (0.021)
% Int'l NGO	0.977 (0.028)	0.951* (0.025)	0.948 (0.041)	1.071 (0.066)	0.990 (0.026)
% University/research	0.979 (0.028)	0.961 (0.026)	0.955 (0.050)	1.055 (0.066)	0.997 (0.023)
CONTROLS					
Private land tenure	0.820 (0.254)	0.888 (0.415)	2.348 (1.890)	1.458 (0.746)	0.823 (0.496)
State land tenure	1.195 (0.382)	0.866 (0.487)	0.224** (0.164)	1.197 (0.681)	1.672 (0.660)
Community land tenure	2.321 (1.216)	1.231 (0.513)	0.424 (0.294)	0.500 (0.309)	1.806 (0.871)
Protected area	0.842 (0.354)	1.951** (0.567)	1.209 (0.745)	1.135 (0.560)	0.627 (0.274)
EPI Biohabitat score	1.002 (0.015)	1.003 (0.014)	0.989 (0.025)	1.000 (0.018)	0.982 (0.015)
Civil liberties	1.295** (0.164)	1.771*** (0.267)	1.899** (0.542)	0.912 (0.218)	0.905 (0.148)
GDP per capita	0.722* (0.136)	1.217 (0.204)	0.676 (0.210)	0.868 (0.271)	0.716 (0.153)
Constant	142.880 (436.418)	1.597 (4.883)	65,769.982** (365,835.932)	0.041 (0.315)	245.714 (880.398)
Observations	257	255	254	244	222
Prob > chi2	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.180	0.167	0.399	0.423	0.202

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

^z = Standardised z -score

Table 28: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model with imputed data, 34% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted, blue = expected as n/a but observed as positive)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 29: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model with imputed data, 50% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 30: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [main model with imputed data, 67% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Regression and observable implication tables for binary presence of worldview model

Table 31: Regression results [binary presence of worldview model, 50% exclusion criterion] (odds ratios)

VARIABLES	Social benefits	Ecological benefits	Market finance	Non-market finance	Local MRV
ENVIRONMENTAL WORLDVIEWS					
% Market liberal ^z	1.855 (0.868)	1.062 (0.591)	3.052 (2.130)	0.556 (0.374)	1.310 (0.644)
% Bioenvironmentalist ^z	1.201 (0.610)	4.880*** (1.745)	0.240** (0.159)	2.498 (1.422)	1.610 (1.110)
% Social green ^z	3.044*** (1.085)	0.790 (0.524)	1.113 (0.824)	2.525 (1.986)	1.800 (0.735)
ACTOR TYPES					
% Host private-sector	0.981 (0.028)	0.979 (0.026)	0.996 (0.054)	1.008 (0.072)	0.967 (0.035)
% Int'l private-sector	0.989 (0.028)	0.976 (0.028)	0.960 (0.035)	1.018 (0.068)	0.977 (0.029)
% MDB	0.983 (0.034)	0.962 (0.035)	0.896*** (0.033)	1.041 (0.072)	0.935* (0.037)
% Host subnational public	0.984 (0.033)	0.981 (0.030)	0.940 (0.038)	1.038 (0.059)	0.983 (0.032)
% Host national public	0.981 (0.027)	0.973 (0.029)	0.932 (0.043)	1.044 (0.070)	0.954 (0.033)
% Int'l national public	0.987 (0.029)	0.977 (0.045)	0.920** (0.038)	1.081 (0.072)	0.973 (0.037)
% IGO	0.998 (0.041)	0.979 (0.037)	0.875*** (0.031)	1.253*** (0.105)	1.003 (0.042)
% Host NGO	1.006 (0.029)	0.979 (0.031)	0.974 (0.037)	1.026 (0.066)	0.995 (0.029)
% Int'l NGO	0.988 (0.027)	0.974 (0.028)	0.946 (0.035)	1.063 (0.073)	0.987 (0.036)
% University/research	0.978 (0.029)	0.959 (0.042)	0.973 (0.048)	1.066 (0.079)	1.006 (0.032)
CONTROLS					
Private land tenure	0.928 (0.368)	0.705 (0.415)	2.601 (2.349)	0.855 (0.581)	0.732 (0.443)
State land tenure	1.293 (0.468)	0.629 (0.458)	0.252* (0.193)	0.941 (0.614)	1.783 (0.770)
Community land tenure	3.219** (1.727)	0.995 (0.566)	0.496 (0.385)	0.407** (0.172)	1.510 (0.731)
Protected area	0.695 (0.312)	1.330 (0.469)	1.348 (0.811)	0.871 (0.509)	0.419 (0.224)
EPI Biohabitat score	1.011 (0.015)	1.010 (0.014)	0.988 (0.024)	1.009 (0.023)	0.991 (0.016)
Civil liberties	1.310** (0.172)	1.989*** (0.367)	1.887** (0.528)	0.846 (0.260)	0.946 (0.186)
GDP per capita	0.792 (0.138)	1.582** (0.300)	0.656 (0.204)	0.734 (0.238)	0.659* (0.148)
Constant	2.546 (7.311)	0.010 (0.036)	28,086.631* (160,047.459)	0.332 (2.866)	122.678 (507.289)
Observations	237	191	233	223	202
Prob > chi2	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.173	0.176	0.381	0.426	0.206

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

^z = Standardised z -score

Table 32: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model, 34% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted, orange = expected as n/a but observed as negative)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 33: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model, 50% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 34: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model, 67% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironm entalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Regression and observable implication tables for binary presence of worldview model with imputed data

Table 35: Regression results [binary presence of worldview model with imputed data, 50% exclusion criterion] (odds ratios)

VARIABLES	Social benefits	Ecological benefits	Market finance	Non-market finance	Local MRV
ENVIRONMENTAL WORLDVIEWS					
% Market liberal ^z	1.886 (0.922)	1.562 (0.598)	2.229 (1.407)	0.871 (0.678)	2.348* (1.213)
% Bioenvironmentalist ^z	1.232 (0.584)	5.407*** (1.521)	0.250** (0.165)	2.371* (1.141)	1.219 (0.803)
% Social green ^z	2.990*** (1.019)	1.087 (0.585)	1.053 (0.769)	1.953 (1.417)	1.534 (0.567)
ACTOR TYPES					
% Host private-sector	0.978 (0.028)	0.977 (0.024)	0.997 (0.054)	1.012 (0.065)	0.967 (0.030)
% Int'l private-sector	0.990 (0.028)	0.975 (0.024)	0.962 (0.036)	1.018 (0.062)	0.981 (0.028)
% MDB	0.982 (0.034)	0.965 (0.027)	0.896*** (0.034)	1.038 (0.066)	0.932* (0.036)
% Host subnational public	0.987 (0.031)	0.989 (0.026)	0.940 (0.039)	1.044 (0.054)	0.987 (0.030)
% Host national public	0.980 (0.026)	0.963 (0.026)	0.931 (0.043)	1.044 (0.064)	0.954 (0.029)
% Int'l national public	0.986 (0.029)	0.965 (0.038)	0.918** (0.039)	1.081 (0.067)	0.984 (0.034)
% IGO	0.997 (0.040)	0.991 (0.031)	0.872*** (0.031)	1.243*** (0.105)	1.008 (0.044)
% Host NGO	1.005 (0.029)	0.978 (0.026)	0.972 (0.038)	1.032 (0.062)	1.004 (0.025)
% Int'l NGO	0.988 (0.026)	0.971 (0.023)	0.944 (0.035)	1.065 (0.068)	0.991 (0.032)
% University/research	0.983 (0.028)	0.960 (0.027)	0.971 (0.048)	1.060 (0.070)	1.005 (0.028)
CONTROLS					
Private land tenure	0.850 (0.298)	0.936 (0.465)	2.456 (2.048)	1.056 (0.499)	0.844 (0.538)
State land tenure	1.093 (0.349)	0.711 (0.431)	0.251* (0.184)	1.051 (0.599)	1.789 (0.736)
Community land tenure	2.477* (1.238)	1.160 (0.495)	0.448 (0.327)	0.523 (0.293)	2.127 (1.083)
Protected area	0.684 (0.304)	1.533 (0.463)	1.347 (0.778)	0.903 (0.500)	0.488 (0.272)
EPI Biohabitat score	1.005 (0.015)	1.006 (0.013)	0.988 (0.024)	0.996 (0.018)	0.987 (0.016)
Civil liberties	1.317** (0.162)	1.885*** (0.292)	1.818** (0.493)	0.932 (0.202)	0.858 (0.152)
GDP per capita	0.729* (0.130)	1.301 (0.237)	0.609 (0.184)	0.863 (0.237)	0.675** (0.128)
Constant	10.565 (28.848)	0.048 (0.148)	87,693.178** (497,193.741)	0.096 (0.754)	89.206 (344.654)
Observations	257	255	254	244	222
Prob > chi2	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.180	0.178	0.385	0.404	0.206

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

^z = Standardised z -score

Table 36: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model with imputed values, 34% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironmentalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 37: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model with imputed values, 50% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted, blue = expected as n/a but observed as positive)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironmentalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Table 38: Observed expected implications for relationship between prevalence of environmental worldviews among project developers and aspects of project design [binary presence of worldview model with imputed values, 67% exclusion criterion] (green = supported, yellow = inconclusive, red = contradicted, blue = expected as n/a but observed as positive)

	<i>Social benefits</i>	<i>Ecological benefits</i>	<i>Market financing</i>	<i>Non-market financing</i>	<i>Local MRV</i>
<i>Market liberal</i>	-	-	+	n/a	-
<i>Bioenvironmentalist</i>	n/a	+	-	n/a	n/a
<i>Social green</i>	+	n/a	-	+	+

Goodness-of-fit tests

Table 39: Hosmer-Lemeshow goodness-of-fit test $P > \chi^2$ results [main model, 34%, 50%, and 67% exclusion criteria] (red = failed test for good fit)

	34% exclusion criterion	50% exclusion criterion	67% exclusion criterion
Social benefits	0.46	0.17	0
Ecological benefits	0.55	0.08	0.74
Market financing	0	0.45	0.39
Non-market financing	0.34	0.32	0.15
Local MRV	0.57	0.56	0.25
Mean	0.38	0.32	0.31

Table 40: Hosmer-Lemeshow goodness-of-fit test $P > \chi^2$ results [binary presence of worldview model, 34%, 50%, and 67% exclusion criteria] (red = failed test for good fit)

	34% exclusion criterion	50% exclusion criterion	67% exclusion criterion
Social benefits	0.18	0.13	0.18
Ecological benefits	0.03	0.98	0.86
Market financing	0.24	0.2	0.35
Non-market financing	0.15	0.17	0.27
Local MRV	0.58	0.66	0.77
Mean	0.24	0.43	0.49

Table 41: Hosmer-Lemeshow goodness-of-fit test $P > \chi^2$ results [main model, 34%, 50%, and 67% exclusion criteria with imputed data] (red = failed test for good fit)

	34% exclusion criterion	50% exclusion criterion	67% exclusion criterion
Social benefits	0.11	0.44	0.03
Ecological benefits	0.96	0.11	0.16
Market financing	0.03	0.84	0.98
Non-market financing	0.44	0.66	0.14
Local MRV	0.32	0.75	0.78
Mean	0.37	0.56	0.42

Table 42: Hosmer-Lemeshow goodness-of-fit test $P > \chi^2$ results [binary presence of worldview model, 34%, 50%, and 67% exclusion criteria with imputed data] (red = failed test for good fit)

	34% exclusion criterion	50% exclusion criterion	67% exclusion criterion
Social benefits	0.72	0.57	0.47
Ecological benefits	0.03	0.64	0.92
Market financing	0.89	0.86	0.9
Non-market financing	0.92	0.12	0.1
Local MRV	0.85	0.48	0.09
Mean	0.68	0.53	0.50

Ordered logistic regressions: tests of proportional odds assumption

The main tests of the proportional odds assumption are the omodel and brant tests. They check the ordered regression model assumption that the relationship between each pair of outcome groups is the same. In the context of my model, this that the coefficients for the independent variables describe both the relationship between “low” and “medium” or “high” emphasis and between “medium” and “high” emphasis on each aspect of project design. Table 43 shows the p-values for the test statistics of each of these tests for each dependent variable in the ordered regression model. A statistically significant test result implies that the proportional odds assumption is violated. In Table 43, the model fails one of the tests for three of the five dependent variables (shown in yellow). In the other two, the brant test could not compute, leaving the assumption’s status unclear. Based on these results, I decided to proceed with the binary coding and logistic regression model to avoid problems with this assumption.

Table 43: Results of brant and omodel tests of the proportional odds assumption

Variable	omodel $p > \chi^2$	brant $p > \chi^2$
Social benefits	0.252	n/a
Ecological benefits	0.048	0.306
Market financing	0.438	n/a
Non-market financing	0.051	n/a
Local MRV	0.713	0.005

Generalised ordered logistic regression table

VARIABLES	(1) Social benefits	(2) Social benefits	(1) Ecological benefits	(2) Ecological benefits	(1) Market finance	(2) Market finance	(1) Non-market finance	(2) Non-market finance	(1) Local MRV	(2) Local MRV
ENVIRONMENTAL WORLDVIEWS										
% Market liberal	1.444 (0.346)	1.444 (0.346)	1.873** (0.583)	1.355 (0.358)	121.094** (279.912)	0.541 (0.507)	0.399 (0.248)	0.399 (0.248)	0.690 (0.227)	0.690 (0.227)
% Bioenvironmentalist	1.066 (0.304)	1.066 (0.304)	2.690*** (0.608)	2.690*** (0.608)	0.004*** (0.004)	0.536 (0.477)	0.310 (0.280)	3.097** (1.579)	0.540* (0.189)	0.840 (0.252)
% Social green	1.517e+11* ** (2.751e+11)	2.120*** (0.564)	1.362 (0.307)	1.362 (0.307)	0.000*** (0.000)	0.970 (0.783)	0.257*** (0.113)	1.667 (0.713)	1.057 (0.244)	1.057 (0.244)
ACTOR TYPES										
% Host private-sector	0.966 (0.037)	0.966 (0.037)	0.967 (0.026)	0.967 (0.026)	0.379*** (0.035)	1.039 (0.057)	0.845*** (0.030)	1.098 (0.097)	0.947** (0.021)	0.947** (0.021)
% Int'l private-sector	0.974 (0.035)	0.974 (0.035)	0.963 (0.026)	0.963 (0.026)	1.028 (0.052)	1.028 (0.052)	0.821*** (0.025)	1.196* (0.120)	0.960** (0.015)	0.960** (0.015)
% MDB	1.670*** (0.074)	0.966 (0.042)	0.942 (0.034)	0.942 (0.034)	0.151*** (0.011)	1.026 (0.083)	0.790*** (0.044)	1.202* (0.118)	0.925*** (0.023)	0.925*** (0.023)
% Host subnational public	0.979 (0.039)	0.979 (0.039)	0.985 (0.032)	0.985 (0.032)	1.880*** (0.183)	0.974 (0.048)	0.809*** (0.038)	1.239** (0.131)	0.953*** (0.016)	0.953*** (0.016)
% Host national public	0.971 (0.032)	0.971 (0.032)	0.953* (0.027)	0.953* (0.027)	0.050*** (0.005)	1.003 (0.058)	0.832*** (0.034)	1.182* (0.109)	0.936*** (0.019)	0.936*** (0.019)
% Int'l national public	0.980 (0.034)	0.980 (0.034)	0.958 (0.038)	0.958 (0.038)	0.048*** (0.005)	1.044 (0.090)	0.847*** (0.038)	1.262** (0.146)	0.965 (0.023)	0.965 (0.023)
% IGO	3.309*** (0.221)	0.987 (0.048)	0.980 (0.033)	0.980 (0.033)	0.065*** (0.007)	0.943** (0.026)	14.541*** (5.267)	1.442** (0.243)	0.978 (0.035)	0.978 (0.035)
% Host NGO	0.996 (0.037)	0.996 (0.037)	0.966 (0.032)	0.966 (0.032)	0.037*** (0.004)	1.017 (0.045)	0.903*** (0.027)	1.133 (0.088)	0.980 (0.015)	0.980 (0.015)
% Int'l NGO	0.978 (0.035)	0.978 (0.035)	0.958 (0.026)	0.958 (0.026)	0.646*** (0.041)	1.027 (0.052)	0.863*** (0.023)	1.176* (0.113)	0.978 (0.020)	0.978 (0.020)
% University/research	0.981 (0.032)	0.981 (0.032)	0.978 (0.026)	0.978 (0.026)	0.000 (0.000)	. (.)	0.909*** (0.033)	1.155 (0.107)	0.961* (0.021)	0.996 (0.019)
CONTROLS										

APPENDICES

Private land tenure	1.002 (0.356)	1.002 (0.356)	1.012 (0.503)	1.012 (0.503)	0.000*** (0.000)	2.075 (2.819)	0.467 (0.259)	0.467 (0.259)	0.719 (0.340)	0.719 (0.340)
State land tenure	1.336 (0.463)	1.336 (0.463)	1.003 (0.528)	1.003 (0.528)	1.377e+32* ** (3.564e+32)	0.052** (0.070)	6.507*** (3.050)	0.046** (0.059)	2.126* (0.851)	2.126* (0.851)
Community land tenure	1.633e+08* (70217984.778)	3.022** (1.661)	0.903 (0.351)	0.903 (0.351)	3.594e+37* (1.221e+38)	0.551 (0.660)	0.687 (0.695)	0.053*** (0.052)	2.907** (1.466)	2.907** (1.466)
Protect area	0.837 (0.331)	0.837 (0.331)	1.663 (0.517)	1.663 (0.517)	6.705e+13* (7.830e+13)	0.714 (0.881)	9.306*** (7.250)	0.373 (0.250)	0.822 (0.354)	0.822 (0.354)
EPI Biohabitat score	1.017 (0.016)	1.017 (0.016)	1.005 (0.015)	1.005 (0.015)	0.191*** (0.016)	1.046 (0.039)	1.005 (0.021)	1.005 (0.021)	0.996 (0.014)	0.996 (0.014)
Civil liberties	1.466*** (0.210)	1.466*** (0.210)	2.208*** (0.410)	2.208*** (0.410)	43.864*** (32.082)	1.710 (0.608)	0.939 (0.341)	0.939 (0.341)	1.076 (0.159)	1.076 (0.159)
GDP per capita	0.784 (0.147)	0.784 (0.147)	1.322* (0.208)	1.322* (0.208)	0.526 (0.327)	0.526 (0.327)	0.804 (0.245)	0.804 (0.245)	0.800 (0.198)	0.800 (0.198)
Constant	7203416.91 1*** (27692087.716)	8.053 (28.469)	0.687 (2.441)	0.169 (0.592)	1.119e+81* ** (9.193e+81)	48.157 (372.945)	3793548.988** * (20646194.281)	0.000 (0.001)	263.836 (972.856)	63.596 (230.956)
Observations	237	237	235	235	233	233	223	223	202	202

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, *

p<0.1

Coefficients for environmental worldview variables are standardized, coefficients represent changes by one standard deviation

3. CODE BOOK

This is the codebook that supports the method described in Chapter 3 for coding my database, links to which are available in Appendix 4. A modified version of this was provided to the ghost coders. Variable names reflect how they are named in the database spreadsheet.

General guidance:

Key data sources

- ID-RECCO
- Profiles on The REDD Desk and Forest Carbon Portal
- Project design documents and information notes
- Project websites and publications
- Actor websites and publications
- Audit / monitoring reports

For missing/insufficient data, please enter “ND”

Dependent variable: project design

Variable name	Explanation/Key
id_project	Project id from ID-RECCO database – DO NOT CHANGE
project_name	Title of the project
social_benefits	How much emphasis is placed on social and economic benefits for local communities as a purpose of the project?

	3 = high emphasis 2 = medium emphasis, 1 = low emphasis. E.g. job and income creation, education and training opportunities N.B. A high emphasis purpose would tend to be stated in project documents most prominently, explicitly, and frequently. It would also often have the most detail about how it will be achieved. High emphasis purposes are described as ends, not merely means to another purpose. A medium emphasis purpose would be clearly stated, but with less detail and/or frequency. A medium emphasis purpose could be a means towards achieving a high emphasis purpose e.g. a commercial timber plantation that highlights the fact that jobs are created through their enterprise (rather than a project that explicitly aims job creation). A low emphasis purpose would be entirely absent, or mentioned only briefly/in passing. Little detail would be provided on how it might be achieved and it would likely be a by-product at best, rather than an explicit purpose (e.g. the forest plantation that barely if it all mentions anything to do with job creation).
ecological_benefits	How much emphasis is placed on ecological benefits (other than carbon sequestration) as a purpose of the project? 3 = high emphasis 2 = medium emphasis, 1 = low emphasis. E.g. protection/promotion of biodiversity N.B. See above.
market_financing	How much emphasis is placed on market mechanisms as a funding source for the project? 3 = high emphasis 2 = medium emphasis, 1 = low emphasis. Market finance mechanisms include the sale of carbon credits, the sale of other products such as timber, loans, and the direct financing/investment of private sector actors.

	N.B. A high emphasis funding source would be one on which the project is dependent for the foreseeable future of the project. A medium emphasis funding source would be one that is important, but makes a secondary contribution or is only needed for a short period of the project's life. A low emphasis funding source is one that is either not part of the project or only supplementary in nature. Private funding for a project coming from a project partner that is a for-profit organisation should be considered as market financing.
non_market_financing	How much emphasis is placed on non-market mechanisms as funding sources for the project? 3 = high emphasis 2 = medium emphasis, 1 = low emphasis. Non-market financing includes donor contributions, and direct financing/investment from NGOs and public sector actors. N.B. See above.
local_mrv	How much emphasis is placed on local communities and knowledge in the project's MRV? 3= high emphasis 2 = medium emphasis, 1 = low emphasis. N.B. Local communities and knowledge would be a high emphasis if the project's MRV is designed by and largely carried out by local communities. It would also likely involve local systems of knowledge. Medium emphasis would reflect local communities and knowledge playing a part in the MRV process but not being a central component. This could often involve local communities being delegated tasks as part of an externally devised MRV system. A low emphasis would reflect local communities and knowledge playing little to no role in the MRV process for the project.
project_partners	List the id_project_developer number for each project partner. A project partner is an actor that has been significantly involved in the design of the project. Major donors should be included unless there is a good reason to suggest their funding or the prospect of their funding would have had no effect on the project's design.
ML_total, ML_privloc, ML_privint... ML_ppp	Enter the number of project partners who have been coded as having a Market Liberal environmental worldview for each actor type and the total.

	NB: - privhost = private sector (host), - privint = private sector (international) - pubhostsub = public sector (host subnational) - pubhostnat = public sector (host national) - pubint = public sector (international) - ngohost = NGO (host) - ngoint = NGO (international) - igo = IGO - uni = University / research - mdb = MDB - ppp = PPP
IN_total, IN_privhost, IN_privint... IN_ppp	Enter the number of project partners who have been coded as having a Institutional environmental worldview for each actor type and the total. NB: see above.
BE_total, BE_privhost, BE_privint... IN_ppp	Enter the number of project partners who have been coded as having a Bioenvironmentalist environmental worldview for each actor type and the total. NB: see above.
SG_total, SG_privhost, SG_privint... SG_ppp	Enter the number of project partners who have been coded as having a Social Green environmental worldview for each actor type and the total. NB: see above.
ND_total, ND_privhost, ND_privint... ND_ppp	Enter the number of project partners who have been coded as having an unknown environmental worldview for each actor type and the total. NB: see above.
unknown_partners	Code as 1 if information suggests there are other actors that cannot be identified that played an important role in project design. Code as 0 if not.
contact for more info?	Does the project need to be contacted to fill in missing information? If yes, list a contact name, email, and title.

	Otherwise leave blank. Once an email has been sent add “SENT” to this field. Once contact requirements for a project have been completed / resolved, format the cell with a strikethrough. If the actor cannot or should not be contact fill the cell as “N/A” followed by a note of the reason why e.g. “no contact info available”.
exclude	Code 1 if this project should be excluded from the database, code as 0 if not. If 1, state reason in the “comments” column.
comments	Write additional comments about the project or the coding here.
sources	List the URLs for the sources uses in coding the project. One URL per column. Don’t forget to save each as a PDF too!

Independent variables: project developers

Data type	Explanation/Key
id_project_developer	The ID’s for each project actor as assigned in the ID-RECCO database. Do not change existing IDs but add new project actors as they are discovered.
actor_name	The name of the project actor.
actor_type	The type of the project actor. Select from dropdown menu. - Private sector (host) – includes all private sector and for-profit actors operating solely in the host country. - Private sector (international) - includes all private sector and for-profit actors that operate beyond the host country. - Public sector (hostsubnational) – includes national public sector actors and departments from the host country. This includes publicly owned enterprises (more than 50% ownership). - Public sector (hostnational) – includes subnational public sector actors and departments from the host country. This includes publicly owned enterprises (more than 50% ownership). - Public sector (international) - includes public sector actors and departments from countries other than the

	host country. This includes publicly owned enterprises (more than 50% ownership). - NGO (host) – includes all NGOs that operate only within the host country. - NGO (international) – includes all NGOs that operate beyond the borders of the host country. - IGO – includes all intergovernmental organisations such as the UN and its affiliated agencies. - University / research – includes all universities and educational institutions. - MDB – includes all multilateral development banks such as the World Bank and the IADB. - PPP – includes all public-private partnerships (does not include state owned enterprises that have been partially privatised).
environmental worldview	What environmental worldview can be associated with the project actor? Select from dropdown menu.
contact for more info?	Does the project need to be contacted to fill in missing information? If yes, list a contact name, email, and title. Otherwise leave blank. Once an email has been sent add “SENT” to this field. Once contact requirements for a project have been completed / resolved, format the cell with a strikethrough. If the actor cannot or should not be contact fill the cell as “N/A” followed by a note of the reason why e.g. “no contact info available”.
comments	Write additional comments about the project or the coding here.
sources	List the URLs for the sources uses in coding each actor. One URL per column. Don’t forget to save each as a PDF too!

Contacting projects for missing information

At the end of each day projects that have NDs remaining should be emailed for further information. The draft emails in English, Spanish, Portuguese, French, and Indonesian

should be used as templates. Simply delete the bullet pointed questions as necessary and make other edits depending on what information is needed. Subject lines for emails are highlighted yellow to enable auto-forwarding of replies into folders:

ENGLISH

REDD+ project information request – [insert project / partner name]

Dear Mr/Ms/Mrs...

I'm a researcher at the University of Oxford. I am studying the design of REDD+ projects and the PROJECTNAME project is one of those in my database.

I have been looking at the publicly available information about the project online but was wondering if you might be able to provide some additional detail on a couple of points? In particular, I would like to know

- What is/are the primary focus(es) and objectives of the project?
- How is the project financed?
- How is project's monitoring, review, and verification (MRV) conducted, and who carries it out?
- Who are the other principal organisations involved in the project?

Information on these would be greatly appreciated. If you have any questions about my research or myself I would be more than happy to discuss.

Sincerely,

Ben

SPANISH

Proyecto de REDD+ solicitud de información – [insert project / partner name]

Estimado/a Sr./Sra.:

Soy investigador de la Universidad de Oxford. Estoy estudiando el diseño de proyectos de REDD+ y NOMBREDEPROYECTO es uno de los que están en mi base de datos.

He estado mirando la información sobre el proyecto que está disponible públicamente pero le escribo para solicitarle que por favor me proporcione más información sobre unos detalles. En particular, me gustaría saber

- ¿Cual(es) son el/los enfoques(s) y objetivos principal(es) del proyecto?
- ¿Cómo se financia el proyecto?
- ¿Cómo se hace el monitoreo, reporte y verificación (MRV) y quién lo diseña y lo lleva a cabo?
- ¿Quiénes son las organizaciones asociadas principales del proyecto?

Información sobre estas preguntas sería muy apreciada. Si quisiera más información sobre mi investigación o mí mismo, con mucho gusto estoy a su disposición para proveerla.

Atentamente,

Ben

PORTUGUESE

Pedido de informação sobre o projeto REDD+ – [insert project / partner name]

Prezado/a Sr./Sra.:

Meu nome é Ben Abraham e sou um pesquisador da Universidade de Oxford. Estou estudando a formulação de projetos REDD+ e NOME DO PROJETO é um dos que estão na minha base de dados.

Andei procurando a informação sobre o projeto disponível publicamente, mas gostaria de saber se seria possível esclarecer algumas questões?

Especificamente, estou interessado em saber:

- Qual/ quais é/ são o(s) foco(s) e objetivos principais do projeto?
- Como o projeto é financiado?

- Como são conduzidos o monitoramento, a revisão e a verificação do projeto, e quem é responsável por isso?
- Quais são as principais organizações associadas ao projeto?

Ficaria muito grato por essas informações. Caso tenha alguma pergunta sobre mim ou meu projeto, estou à sua disposição para fornecê-las.

Atenciosamente,

Ben

FRENCH

Demande d'information sur le projet REDD+ – [insert project / partner name]

Cher Monsieur/Madame...

Je me nomme Ben Abraham et je suis chercheur à l'Université d'Oxford. Mes recherches portent sur la conception des projets REDD + et le projet PROJECTNAME est l'un des projets qui m'intéresse.

J'ai accédé aux informations disponibles en ligne sur le projet, mais j'aimerais savoir si vous êtes en mesure de fournir des informations supplémentaires. En particulier, je souhaite savoir :

- Quels sont les objectifs et (l') aspect(s) principaux du projet?
- Comment le projet est-il financé?
- Comment le suivi, l'examen, et la vérification du projet sont-ils menés? Et qui est en charge?

Vos réponses à ces questions seront très appréciées. Si vous avez des questions sur ma recherche ou sur moi-même, je serais plus qu'heureux à vous répondre.

Cordialement,

Ben

INDONESIAN

Permintaan Informasi terkait REDD+ project – [insert project / partner name]

Kepada Yth Bapak/Ibu

Nama saya Ben Abraham, saya adalah peneliti dari University of Oxford. Saat ini saya sedang mempelajari desain proyek-proyek REDD dan PROJECTNAME adalah salah satu yang termasuk didalamnya.

Saya telah melihat dengan teliti melalui informasi yang tersedia bagi publik tentang proyek tersebut. Namun, saya berharap sekiranya Bapak/Ibu berkehendak memberikan penjelasan lebih lanjut terkait beberapa poin? Khususnya, saya tertarik untuk mengetahui

- Apa tujuan utama (bisa lebih dari satu) dari proyek tersebut?
- Bagaimana proyek tersebut didanai?
- Bagaimana pelaksanaan monitoring, review, and verifikasi (MRV), dan siapa yang melaksanakannya?

Informasi dan tanggapan Bapak/Ibu mengenai poin-poin diatas sangat saya hargai. Jika Bapak/Ibu memiliki pertanyaan tentang riset diatas ataupun tentang profil saya, saya dengan sangat senang bersedia untuk diskusi lebih lanjut.

Salam hangat,

Ben

Contacting project partners for missing information

At the end of each day projects that have NDs remaining should be emailed for further information. The draft emails in English and Spanish below should be used as templates. The questions are designed to help get at the environmental worldview of the actor if it could not be deduced from publicly available sources.

ENGLISH

REDD+ project information request – [insert project / partner name]

Dear Mr/Ms/Mrs...

I am a researcher at the University of Oxford. I am studying forest projects and the organisations that design them. ACTORNAME is one of the organisations in my database for its involvement with the PROJECTNAME.

I have been looking at the publicly available information about your organisation, but was wondering if you could provide some additional information about the philosophy that underpins your work? Specifically, I would like to know more about your purpose, goals, and motivations when it comes to engaging with environmental issues such as through the above project.

If you could send me mission statements, visions, or any further information that relates to these issues it would be greatly appreciated. Furthermore, if you have any questions about my research or myself I would be more than happy to discuss.

Sincerely,

Ben

SPANISH

Proyecto de REDD+ solicitud de información – [insert project / partner name]

Estimado/a Sr./Sra.:

Soy investigador de la Universidad de Oxford. Estoy estudiando proyectos de REDD+ y las organizaciones que los diseñan. NOMBREDEACTOR es una de las organizaciones que están en mi base de datos por su participación en NOMBREDEPROYECTO.

He estado mirando la información sobre el proyecto que está disponible públicamente pero la escribo para solicitarle que por favor me proporcione más información sobre la filosofía que apoya su trabajo? En concreto, me gustaría saber más sobre su propósito, metas, y motivaciones cuando se compromete con asuntos ambientales como a través del este proyecto.

Si pudiera enviarme declaraciones de misión, visiones, o cualquier información adicional que se relacione con estos temas, sería muy apreciada. Además, si tiene preguntas sobre mi investigación o sobre mí mismo, con mucho gusto estoy a su disposición para proveerlas.

Atentamente,

Ben

PORTUGUESE

Pedido de informação sobre o projeto REDD+ – [insert project / partner name]

Prezados (as),

Meu nome é Ben Abraham e eu sou um pesquisador da Universidade de Oxford, na Inglaterra.

Minha pesquisa é sobre projetos de REDD+ e consequentemente sobre as organizações que os desenvolvem. XXXXXXXXX é uma das organizações no meu banco de dados pelo seu envolvimento com XXXXXXXXXXXX.

Eu dei uma conferida nas informações disponíveis sobre sua organização, mas penso que talvez vocês possam me ajudar com algumas informações adicionais sobre a filosofia que sustenta o trabalho realizado por vocês?

Especificamente, gostaria de saber mais sobre seu objetivo, metas e motivações quando se trata de se envolver com questões ambientais, como através do projeto acima.

Se você pudesse me enviar declarações de missão, visões, ou qualquer outra informação que se relaciona com estas questões seria muito apreciada. Se você tiver qualquer dúvida sobre minha pesquisa ou sobre a minha pessoa eu ficaria mais que feliz em responder. Sintam-se livres para entrar em contato.

Atenciosamente,

Ben

FRENCH

Demande d'information sur le projet REDD+ – [insert project / partner name]

Cher Monsieur/ Madame..

Je me nomme Ben Abraham et je suis chercheur à l'Université d'Oxford.

Je poursuis mes recherches sur les projets REDD+ et les organisations qui les conçoivent. ACTORNAME est l'une des organisations qui m'intéresse pour sa participation au PROJECTNAME

J'ai accédé aux informations disponibles au public sur votre organisation, mais j'aimerais savoir si vous êtes en mesure de fournir des informations supplémentaires sur la philosophie qui étaye votre travail avec le projet susmentionné?

Plus précisément, j'aimerais en savoir plus sur votre but, vos objectifs et vos motivations lorsqu'il s'agit d'engagement dans des questions environnementales comme fait à travers le projet ci-dessus.

Si vous pourriez m'envoyer vos déclarations de mission, de vision ou toute autre information relatif à cette thématique, il serait fortement apprécié Si vous avez des questions sur ma recherche ou sur moi-même, je serais plus qu'heureux à vous répondre.

Cordialement,

Ben

INDONESIAN

Permintaan Informasi terkait REDD+ project – [insert project / partner name]

Kepada Yth Bapak/Ibu

Nama saya Ben Abraham, saya adalah peneliti dari University of Oxford. Saat ini saya sedang mempelajari proyek-proyek kehutanan serta organisasi yang mendesain proyek tersebut. ACTORNAME adalah salah satu organisasi yang termasuk didalamnya sehubungan dengan keterlibatan ACTORNAME dengan PROJECTNAME

Saya telah melihat dengan teliti melalui informasi yang tersedia bagi publik tentang proyek tersebut. Namun, saya berharap sekiranya Bapak/Ibu bersedia memberikan informasi lebih lanjut mengenai filosofi dibalik pekerjaan Bapak/Ibu? Khususnya, saya ingin mengetahui lebih jauh tentang tujuan, target, dan motivasi saat menangani isu-isu lingkungan salah satunya melalui proyek tersebut diatas.

Saya akan sangat berterima kasih apabila Bapak/Ibu dapat mengirimkan pernyataan visi-misi, atau informasi lainnya yang terkait dengan isu-isu diatas. Jika Bapak/Ibu memiliki pertanyaan tentang riset diatas ataupun tentang profil saya, saya dengan sangat senang bersedia untuk diskusi lebih lanjut.

Salam hangat,

Ben

4. RAW DATA

The coded database, including all .pdf files used for coding are available at <https://oxfile.ox.ac.uk/oxfile/work/extBox?id=606143AFC66030E00D>. Folders for projects and project developers are numbered according to their identification number as assigned in the database spreadsheet.

5. SEMI-STRUCTURED INTERVIEW GUIDE

Introduction

- Introduce myself and my research briefly
- Explain why I am interviewing them
- Explain the consent form, confirm degree of anonymity, and whether or not to audio record the interview
- Outline the four lines of discussion below
- Begin with who the participant is, what their role in the organisation is, how long they've been working there

Information about their organisation

- Could they provide a brief description of their organisation and its work?
- What is the mission and vision of their organisation?
- What are their organisational values?
- How is their organisation involved with the project?

Information about partner courting and project genesis

- Where did the initial idea for the project come from? Who had it?
- How did their organisation come to be involved in the project?
- Why did they choose to partner with the other project developers? Did they consider alternatives?
- What were the important considerations when contemplating joining the project?

Information about project design

- In general terms, could they tell me about the design and development process of the project?
- What was their specific organisational and personal involvement in the design of the project?
- To what degree did the project developers agree on their preferred design for the project?
- How did they envision the project ideally being designed?
- To what degree were their preferences reflected in the final design of the project?
- Was the project design process conducted in a collaborative manner?
- Who were the most influential project developers, and why?
- Were normative debates a major feature of the project design process?

Information about project implementation

- What has their involvement in the project implementation been? What roles do the other partners play?
- To what extent has the project been implemented according to the project design?
- What have been the major challenges to project implementation?
- How have normative considerations affected project implementation?
- Is there anything they would like to change about the project's implementation?

Conclusion

- Do they have any final thoughts?
- Would they be willing and able to connect me to anyone else who would have insight into the design and implementation of the project?
- Thank them for their time and confirm willingness to take follow-up questions