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Contesting Legitimacy in Global Environmental Governance - An Exploration of Transboundary Climate Risk Management in the Brazilian-German Coffee Supply Chain

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Abstract

Stronger interconnections between people, ecosystems and economies in a globalized world are changing the scope and nature of global environmental governance. One area where this is becoming increasingly evident is climate change, where there is a growing recognition that climate risks can be transboundary in nature, crossing international borders as people, goods, and capital do. This suggests that a multiplicity of actors – state and non-state – have plausible claims to be engaged in or responsible for the governance of transboundary climate risks (TCRs). However, it is presently unclear on what premises a global governance institution to do so might be constructed and the roles various actors may play therein. This absence of established roles and norms creates a space for political contestation with legitimacy at its center. In this paper, we unpack the contested nature of legitimacy by examining the governance of TCRs in agricultural supply-chains. Empirically, we analyze 41 semi-structured interviews across the Brazilian-German coffee supply chain in an effort to characterize the primary modes of governance available to manage TCRs and their perceived institutional sources of legitimacy. We identify five distinct governance pathways, each underpinned by a distinct operationalization of legitimacy. These governance pathways are not necessarily mutually exclusive; it is plausible for several to co-exist, though the relative balance between their importance in a given context may vary widely. We argue that these five pathways and the role of legitimacy in navigating their differences are transferrable to other challenges in global environmental governance. Further, we argue that legitimacy is best understood as an object of political contestation, wherein actors deploy various sources of legitimacy differently in an effort to legitimize their preferred approach to TCR management, delegitimize others, and advance their own vision of just global environmental governance.

1. Introduction

In an interconnected world, a central challenge for global environmental governance frameworks, policies, and regulations is to appropriately assign the authority for managing affairs which have cross-border ramifications. Climate change is a clear case-in-point: a number of now-industrialized economies have unlocked their prosperity through the burning of fossil fuels, while many developing countries find themselves particularly vulnerable to the adverse effects of a warming world (Roberts and Parks 2006). How should the climate change regime be structured, accounting for differences between countries, as well as public and private actors? Who should be involved in its design, and what rules or regulations might be warranted to rapidly curb greenhouse gas emissions worldwide and facilitate a climate-resilient future?

While constrained in-part by the biophysical nature of climate change, these questions are essentially political, given that their resolution depends on forging a collective view of fairness in the international community, both in terms of assigning roles to public and private actors (Mees et al. 2012), and distributing the consequences of action or inaction (Caney 2005; Shue 1995). Moreover, this challenge is inextricable from longstanding debates about public and private authority (Conca 2005; Duffy 2006; Green 2013), as well as international political economy in an unequal world (Newell 2008). It is therefore essential to consider on what basis an approach to global environmental governance is understood to be *legitimate*, as this can reveal useful information about the function of a particular regime, as well as broader insights about the evolving nature of governance in a globalizing world.

Legitimacy and its origins have become increasingly important objects of study in recent years (Tallberg et al. 2018). While domestic politics in the modern era has seen legitimacy become deeply entangled with the concept of democracy, those same standards do not neatly apply to global affairs. Instead, scholars have turned their attention to broader sources of legitimacy, ranging from employing agreed processes based on shared values, to producing effective outcomes (Scholte and Tallberg 2018). Moreover, novel global challenges

generate the possibility of multiple claims on authority in parallel and competing processes to acquire legitimacy, which have been documented in other settings (Suchman 1995). This highlights the need to consider both the origins of legitimacy, as well as the processes through which it is negotiated and claimed (Bäckstrand and Söderbaum 2018). There is yet limited academic research which considers how competing claims for legitimacy are produced in global environmental governance or how they interact.

The aim of this paper is to further unpack and empirically explore the contested nature of legitimacy in global environmental governance by examining an emerging arena of political debate: the governance of transboundary climate risks (TCRs). While climate change adaptation has long been considered a highly localized issue – to be managed at the national scale or below – there is growing recognition in the scholarly and policy communities that many climate risks can be transboundary in nature, crossing international borders as people, goods, and capital do (Challinor et al. 2017; Liverman 2016), and requiring new governance arrangements (Carter et al. 2021). From shared water resources under stress, to supply chains affected by extreme weather events, climate impacts in one country will generate risks and opportunities for actors elsewhere, creating a need for global adaptation governance (Benzie and Persson 2019; Hedlund et al. 2018). For example, in agriculture supply chains, reduced harvests both impact the livelihoods of smallholder farmers engaged in agricultural production, as well as those companies and consumers who depend on their goods. This phenomenon complicates existing tropes of vulnerability to climate change, at once revealing new risks – including for developed countries – and portraying adaptation as a global challenge where the need to build resilience is interconnected rather than borne separately (Benzie et al. 2018). Recognizing the transboundary nature of climate risk challenges the traditional framing of adaptation, and places it squarely in the purview of global environmental governance as countries grapple with previously unidentified risks or areas of shared interest (Benzie and Persson 2019).

As an emerging governance challenge, there are presently no internationally agreed frameworks, policies, or regulations for governing TCRs, nor is there consensus about which policy regimes or actors should be tasked with developing and implementing them. In many cases where shared resources are in question, states play a central role, though there are challenges to balancing the pursuit of one's interest in affairs abroad with principles of state sovereignty, especially where differences in power or complex historical relationships exist (Schrijver 1997). International organizations, such as the United Nations Framework Convention on Climate Change (UNFCCC) or the World Trade Organisation (WTO), and multilateralism may mitigate this, but it is unclear which organizations may have the appropriate mandate or expertise to do so. Likewise, deepened economic integration has seen non-state actors become increasingly engaged in global environmental governance (Biermann et al. 2009; Djelic and Sahlin-Andersson 2006), particularly with regard to supply chains and trade (Soundararajan et al. 2019). Taken together, the unstable intersection of public and private authority, grappling with an emerging issue, generates a space for political contestation wherein different approaches for governing TCRs can be advanced, challenged, or reified.

In this paper, we explore the production and contestation of legitimacy empirically for a specific case where the governance of TCRs is actively unfolding: the Brazilian-German coffee supply chain. Brazil is one of the largest and most climate-vulnerable coffee exporters in the world (Bunn et al. 2015), while Germany is both a major coffee consumer and re-exporter. Specifically, we ask: *what are the primary governance pathways for managing TCRs being considered by actors and on what grounds are they understood to be legitimate?* We analyze 41 semi-structured interviews, conducted with public and private actors across the full coffee supply chain, examining the governance options identified and their perceived sources of legitimacy. We find that, in this context, legitimacy is itself a key object of political contestation, where actors deploy various sources of legitimacy differently in an effort to legitimize their preferred approach to transboundary climate risk governance, delegitimize

others, and advance their own vision of global environmental governance. This finding contributes to an evolving literature about the role and nature of legitimacy in global environmental governance.

In the next section, we consider the most relevant theoretical advancements for the study of legitimacy in global environmental governance and identify several knowledge gaps which our work begins to address. Then, we provide a detailed overview of our case study and methodological approach. Thereafter, we identify five governance pathways for transboundary climate risks, each underpinned by distinct operationalizations of legitimacy. We then discuss these results, including their implications for future empirical work on transboundary climate risk, as well as for our theoretical understanding of legitimacy and the role that its contestation plays in global environmental governance, before offering some concluding remarks.

2. Legitimacy: Approaches, Sources, and Contestation

Legitimacy is a crucial concept for the study of global governance and international politics. Bodansky (2013) suggests that where a decision is made for a collective in an attempt to constrain a group's behavior, efforts to enforce those decisions can vary in their level of coercion, on one end of the spectrum employing "hard power" or force, and on the other "soft power" and influence. Where the aim of governance is to influence and "substitute the ruler's judgement for that of its subjects" (Bodansky 2013:325), legitimacy is a key component of brokering that substitution.

While there is broad agreement that legitimacy is essential for functional global governance architectures (Biermann and Gupta 2011), significant debate remains about its nature and how it should be studied (Agné 2018). Generally, these positions can be understood as distributed along a spectrum. Toward one end, there are a number of scholars whose work has taken a normative approach to legitimacy, or one rooted in political theory (see i.e. Beetham 2012; Grossman 2013; Keohane 2011). Here, legitimacy stems from

adherence to a particular principle or set of principles, such as democratic decision-making processes or respect for human rights. Put differently, in this understanding, to have legitimacy is to appropriately confer authority on a specific normative basis. It is then the job of the researcher to identify the relevant political principles for an institution or governance process to be legitimate, and assess whether the subject in question meets that standard. This perspective has led to concerns about a “democratic deficit” in international organizations, as much of global governance does not operate based on the same principles of electoral democracy which are hallmarks of domestic political processes (Dahl 1999; Moravcsik 2004).

Alternatively, others have increasingly advocated for a sociological approach to legitimacy, arguing that the legitimacy of a governance process comes not directly from adherence to political principles, but rather the acceptance of an audience, be they citizens in general or specifically affected parties (Weber 1978). From this perspective, building legitimacy is a social process through which authority is conferred, allowing a range of actors to be seen as appropriately governing, potentially distinct from a formal designation of authority such as a legal mandate (Rosenau and Czempel 1992). Here, legitimacy is a socially constructed phenomenon, which may or may not be based on the same principles political philosophers would anticipate. Research in this area has focused on empirical examples of legitimacy in global governance, working to identify relevant “audiences” of governance processes and explore their views of specific institutions (Anderson et al. 2019; Dellmuth and Tallberg 2015; 2020). Importantly, this process of socially constructing legitimacy is not necessarily a benign one. Social forces such as these are not separate from but rather fundamental to the exercise of power and legitimacy should be understood as something that is produced through the active negotiation of consent between ruler and ruled (Ciplet 2015; Clark 2001; Gramsci 1971).

Between these two poles, Hans Agné (2018; see also Tallberg et al. 2018) contends that a normative sociological approach to legitimacy in global governance presents an opportunity to benefit from strengths of each archetype. While sociological legitimacy has

appropriately gained traction in recent years, there remains value in employing the tools of political theory to locate sources of legitimacy, rather than doing so on a purely empirical basis. A normative sociological approach to legitimacy begins by developing an understanding of legitimacy sources using political theory, before examining the social perceptions of those sources in a particular context. Our work adopts this view and builds on this foundation.

What, then, are the relevant sources of legitimacy for the governance of transboundary climate risks? Tallberg et al. (2018) argue that sources of legitimacy can be located at the individual, institutional, or structural level. We are particularly interested in understanding the institutional sources of legitimacy for plausible governance pathways.

There exist a wide variety of conceptual tools and classification schemes for the institutional sources of legitimacy. One prominent approach is to distinguish between “input” legitimacy, or the processes through which decisions are made, and “output” legitimacy, or the effectiveness of institutions in achieving their stated goals (Scharpf 1997). It is notable that this distinction broadly corresponds with the phases of the policy cycle, but says little about qualitative nature of legitimacy in each phase. What, for example, might make a process legitimate? Its transparency or inclusivity? Its basis in legal doctrine? Likewise, what is the source of output legitimacy – the achievement of a goal or mandate, the equitable distribution of benefits, or whether that goal is achieved in a way that respects human rights? While a useful basis for further inquiry, the input/output distinction is too blunt an instrument to capture important qualitative features of legitimacy.

In an effort to move beyond this dichotomy, Dellmuth et al. (2019) have recently proposed a more nuanced framework: a matrix where one axis mirrors the input/output dimensions, and the other seeks to capture the qualitative character of legitimacy sources, spanning the democratic, technocratic, and fair (This proposed framework systematically organizes a number of important institutional sources of legitimacy offered by scholars (i.e. Bernstein and Cashore 2007; Hurd 2002; Scharpf 1997) though does not claim to be exhaustive. Procedurally, legitimacy can be rooted in democratic norms, such as participation

and accountability, technocratic norms of efficiency and utilizing relevant expertise, or fairness, as rules are applied impartially or decisions made proportionally (i.e., based on contributions). From a performance perspective, legitimacy may stem from promoting democracy itself, by effectively solving problems or producing the largest collective gains, or from respecting human dignity and distributing benefits justly. In practice, an institution may do all or none of these things well. Whether or not it is understood to be legitimate, then, depends on the active acceptance of its audience, based on some constellation of these features.

Table 1 - Institutional Sources of Legitimacy (Scholte and Tallberg 2018) (see also Dellmuth et al. 2019)

	<i>Democratic</i>	<i>Technocratic</i>	<i>Fair</i>
<i>Procedure</i>	Participation; Accountability	Efficiency; Expertise	Impartiality; Proportionality
<i>Performance</i>	Democracy promotion in wider society	Problem solving; Collective gains	Human dignity; distributive justice

Dellmuth et al.'s (2019) framework allows for systematic assessment of legitimacy sources across institutions, audiences, contexts, or time. It also raises a number of questions in need of further exploration. First, does this framework have utility for a wide range of international institutions and organizations? Much of the existing literature on). This proposed framework systematically organizes a number of important institutional sources of legitimacy offered by scholars (i.e. Bernstein and Cashore 2007; Hurd 2002; Scharpf 1997) though does not claim to be exhaustive. Procedurally, legitimacy can be rooted in democratic norms, such as participation and accountability¹, technocratic norms of efficiency and utilizing relevant expertise, or fairness, as rules are applied impartially or decisions made proportionally (i.e., based on contributions). From a performance perspective, legitimacy may stem from promoting democracy itself, by effectively solving problems or producing the largest collective gains, or from respecting human dignity and distributing benefits justly. In practice, an

¹ Scholte and Tallberg (2018) identify "Accountability" as a second indicative feature of democratic procedural legitimacy, while Dellmuth et al. (2019) use "Transparency". We have opted to use accountability, as transparency is but one element of accountability, which we understand to be a principal feature of democracy more broadly.

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Dellmuth et al.'s (2019) framework allows for systematic assessment of legitimacy sources across institutions, audiences, contexts, or time. It also raises a number of questions in need of further exploration. First, does this framework have utility for a wide range of international institutions and organizations? Much of the existing literature on legitimacy has focused on international organizations, and individual ones at that, rather than a broader set of international institutions, to include formal treaties and bodies, as well as informal cooperation mechanisms and norms (Mitchell et al. 2020). This is a particularly relevant challenge in a globalizing world – and for TCRs – as non-state actors and informal cooperation mechanisms are of especially high importance (Orsini et al. 2019). Second, do all actors have a shared understanding of each legitimacy source, or views as to which are most important for global environmental governance? In the likely event that different understandings and preferences exist, what are those differences based upon and how do actors navigate them?

On this final item, the literature on legitimation and delegitimation in global governance is instructive. Bäckstrand and Söderbaum (2018) argue that legitimation and delegitimation are two sides of the same coin, in that actors employ a variety of discursive, institutional, and behavioral techniques in an effort to either advance or challenge the legitimacy of a particular global governance institution.²

² Notably, Bäckstrand and Söderbaum (2018) focus the bulk of their attention on international organizations, in much the same way that other literature on legitimacy in global governance has, appearing to use “global

3. An Arena for Legitimacy Contestation: Transboundary Climate Risks in the Coffee Supply Chain

An important new frontier for global environmental governance is the management of TCRs. Broadly speaking, as interconnections between countries have become both more prevalent and economically important, the impacts of climate change have not been confined to national borders. This means that effects of climate change, as well as the measures required to respond, have transboundary implications. Work that has, so far, considered transboundary risks and impacts of climate change, suggests that TCR merit more attention. This body of work includes national risk assessments in Europe (Benzie et al. 2019), the United States (Smith et al. 2018), Norway (Prytz et al. 2018) and Germany (Peter et al. 2021), among others. Jointly, this work highlights potential adverse impacts from TCRs on trade, businesses and supply chains and the political and security implications. Furthermore, as Carter et al. (2021:69) note, they require intervention in terms of "development assistance, diplomacy and foreign policy".

As an emerging challenge, it is presently unclear which actors have the authority to govern these risks, or on what premises a legitimate global governance institution might be constructed. This absence of clear roles and norms, while not uncommon for novel issues in global environmental governance, creates a space for political contestation with legitimacy at its center. Thus, there is a need there for structure and clarity to identify the mechanisms via which climate change creates risks for society (Simpson et al. 2021).

In agricultural supply chains, for example, long-term changes to climatic patterns may lead to diminished yields of a particular crop (IPCC 2019), extreme weather events can disrupt trade, transport or other key logistics systems (Adams et al. 2021; Bailey and Wellesley 2017), while adaptation actions responding to the perceived manifestation of climate impacts can materially alter laws and policies relevant for agricultural production, processing, and trade

governance institution" as synonymous with "international organization." Despite this, we contend that their arguments generally hold for a broader conception of global governance institutions in line with this article's approach.

(Adams et al. 2020; Magnan et al. 2016). As such, both producing and consuming countries, as well as private actors, have concrete interests in effective TCR governance.

One pertinent example is the international coffee trade, which provides employment and income to an estimated 25 million households, or over 60 million people, of which 80% are smallholder farmers with production areas smaller than 5 hectares (ICO 2019; Sachs et al. 2019). Coffee is one of the most traded agricultural commodities in the world with roughly 7.8 million tons exported and exchanged on commodity markets in 2019, 72% of total coffee production worldwide (ICO, 2020). Likewise, coffee is highly vulnerable to climate change, which risks reducing the global area suitable for coffee production by up to 50% (Bunn et al. 2015). Smallholder farmers would be disproportionately affected by climate change, as they have fewer financial resources to use for agricultural inputs and depend heavily on rain-fed agriculture (Beuchelt and Zeller 2011). In addition to the direct impacts on smallholder farmers, the highly globalized nature of coffee trade creates transboundary effects throughout the whole supply chain, affecting actors both in producer and consumer countries (Adams et al. 2021; Ghadge et al. 2020).

From a governance perspective, the coffee supply chain is regulated at the international level by the World Trade Organization (WTO) and the International Coffee Organization (ICO), among others, as well as a patchwork of bilateral and multilateral free trade agreements and national laws. This fragmented landscape, as well as the novelty of TCRs as a phenomenon, has created a governance gap where managing transboundary climate risk is currently "no-one's job" (Benzie and Harris 2020: 5). Furthermore, the coffee supply chain itself is composed of a plethora of private producers, cooperatives, traders, roasters and retailers, who must navigate this landscape in order to stay in business. In addition, the coffee sector has a critical mass of sustainability initiatives, including certification schemes, non-governmental organizations, and associations (Levy et al. 2016).

Brazil is the world's largest coffee producer, representing nearly 29% of total exports, while Germany is the second largest importer in the world, importing 3.2B USD in 2019, a

large importer of Brazilian coffee, and an important re-exporter of roasted coffee (Barros 2019). The two countries have had a strategic partnership since 2008, which includes a high-level consultation mechanism covering a broad set of topics including the environment and climate change (Bastos et al. 2014). Brazil and Germany have also been engaged in deliberations around the EU-MERCOSUR Free Trade Agreement, which would be the largest free trade agreement for both of the participating blocs (Brunsden et al. 2019). While the parties have come to an agreement in-principle after twenty years of negotiations, final texts have not yet been produced or signed, in part because the deal has been heavily criticized throughout the EU. A key reason for this has been Brazil's management of the Amazon rainforest and recent increases in deforestation under the Bolsonaro Administration. A number of EU countries have threatened on these grounds to not sign or ratify the deal (Colli 2019).

These deliberations, importantly, cannot be separated from the broader political economic context, where coffee is largely produced in developing countries and primarily processed and consumed in developed ones, where profits tend to be larger (Sachs et al. 2019); nor the complex historical relationship between Brazil and Germany: where Germany and the EU are highly industrialized economies, Brazil is an emerging economy which, while susceptible to international pressure, is somewhat more insulated than other similar countries due to its large size. The trading relationship between the pair is based predominantly on Germany's demand for raw materials and Brazil's demand for high-quality manufactured goods in return (Bastos et al. 2014).

4. Methodology

In order to empirically explore the contestation of legitimacy in the governance of TCRs this research study draws on an extensive stakeholder mapping of the Brazilian-German coffee supply chain, including coffee producers, cooperatives, traders, roasters, and retailers, as well as relevant sustainability initiatives, certification schemes, government ministries and agencies, associations, civil society organizations and researchers. Employing a snowball

sampling technique, the authors conducted 41 semi-structured interviews with 65 experts during field visits to Brazil and Germany (January 2020 and March 2019, respectively) (Table 2). In Brazil, particular attention was focused on state of Minas Gerais, which is the largest coffee producing state in Brazil. Additional interviews were conducted in Brasilia, São Paulo and Santos, a major port for commodity exports. In Germany, interviews took place in Berlin, Bonn and Cologne, as well as Hamburg, which is a hub for European coffee roasters.

Table 2 Overview of expert interviews

Type of actor	Traders and roasters	Sustainability initiatives	Cooperatives	Association	Government and IOs	Academia
No. of interviews	7	10	3	8	12	1

Interviews focused on professional responsibilities, the relevance of climate change to respondent’s work, partnerships and collaboration with other supply-chain actors, which actors were best placed to manage TCRs and why, as well as current effectiveness of management climate risks and impacts, in order to gather the views of respondents on which actors and governance processes were perceived as legitimate and why. The authors, as appropriate, asked probing questions about potential governance arrangements, soliciting views on the prospect for more or better regulation of climate change; which actors are best placed to develop or institute those regulations, at what level, and why; potential negative outcomes from more regulations, and for whom; and whether recent regulation in the coffee sector has affected the respondent’s stance towards climate risks and impacts. Where an interview included more than one expert, each response was accredited to that specific expert. Interviews were transcribed and transcripts were verified by respondents for accuracy.

A systematic text analysis was conducted of all identified “legitimacy claims” throughout the corpus of interview material, leading to the development of a database which included basic information about the claim (i.e., legitimation/delegitimation), actor(s) involved, potential policy mechanism identified, and the institutional sources of legitimacy invoked (as per Dellmuth et al. (2019), Table 1). The authors analyzed identified 315 unique

(de)legitimation claims where interviewees explicitly or implicitly legitimized (i.e. ascribed responsibility for governing) or (i.e. opposed responsibility for governing) the potential authority of an actor or group of actors for governing TCRs. The number of (de)legitimacy claims in each interview ranged from 1 (lowest) to 16 (highest). On average, 6 claims were made per interview and were often a mix of legitimation claims (supporting some governance arrangements) and delegitimation claims (questioning others). Based on this database, authors then structured results using the actors and policy mechanisms identified, as well as the varying deployment of legitimacy sources, to identify the primary modes of governance being considered by interviewees for the governance of TCR and their respective normative foundations.

5. Governing Transboundary Climate Risks: Five Pathways and the Sources of their Legitimacy

Collectively, interviewees described five distinct governance pathways for TCRs in the Brazilian-German coffee supply chain, summarized in Tables 3-5 and described in detail below. In many cases, individual actors were engaged in multiple pathways, playing different roles in different contexts. In this sense, the five governance pathways should not be seen to be mutually exclusive but instead as plausible elements of a functioning policy regime, nor as necessarily exhaustive. The primary distinctions between governance pathways are the policy mechanisms employed in each instance, and the normative basis for their perceived legitimacy as an appropriate institution for the governance of TCRs.

Table 3 – Five Governance Pathways for Transboundary Climate Risks

	<i>Transnational Governance</i>	<i>Development Cooperation</i>	<i>International Diplomacy</i>	<i>Global Markets</i>	<i>Domestic Policy</i>
<i>Description</i>	Public and private actors cooperate to incentivize behavioral change	Donor countries support the self-determined development priorities of recipient countries	Sovereign states negotiate as equals and jointly agree on rules or regulations intended to benefit both parties	Global markets respond to consumer preferences	Governments are wholly responsible for the governance of resources and risks within their borders
<i>Key Policy Mechanisms</i>	Certification Schemes;	Development Assistance;	Bi/Multilateral Engagement;	Market Signals;	Domestic Law;

		Private Finance, Insurance, and Credit Schemes;	Capacity Building and Technology Transfer	International Agreements	Consumer Behavior	Domestic Strategies and Plans
		Public-Private Partnerships				
<i>Key Engaged</i>	<i>Actors</i>	States;	States;	States;	Consumers;	States;
		Private Companies;	Development Agencies and Banks;	International Organizations and Clubs	Private Companies	Local/Regional Governments
		CSOs/NGOs;	CSOs/NGOs			
<i>Ambition International Cooperation</i>	<i>for</i>	High	High	High	Low	Low

Table 4 – Sources of Institutional Legitimacy Deployed in Legitimation Claims across TCR Governance Pathways. Light green cells represent sources referenced in under 20% of claims, dark green cells represent sources referenced in 20% of claims or more, blank cells represent sources not referenced at all. Brief descriptions are provided for dark green cells where the same legitimacy source was used incongruently across governance pathways.

			Transnational Governance <i>n</i> = 73	International Diplomacy <i>n</i> = 40	Development Cooperation <i>n</i> = 26	Domestic Policy <i>n</i> = 31	Global Markets <i>n</i> = 15
Procedure	Democratic	Participation		Of Relevant States	Of Local Actors and Businesses		
		Accountability	To Consumers and Shareholders	To Citizens	To Recipient Country Priorities	To Citizens	
	Technocratic	Efficiency					Of the Market
		Expertise	In the Sector		In Key Technical Issues	In National Context	In the Sector
	Fair	Impartiality		Rules Apply to All Parties			Of the Market
		Proportionality					
Performance	Democratic	Democracy Promotion in Wider Society					
	Technocratic	Problem Solving					
		Collective Gains					
	Fair	Human Dignity					
		Distributive Justice					

Table 5 – Sources of Institutional Legitimacy Deployed in Delegitimation Claims across TCR Governance Pathways. Light red cells represent sources referenced in under 20% of claims, dark red cells represent sources referenced in 20% of claims or more, blank cells represent sources not referenced at all. Brief descriptions are provided for dark red cells where the same legitimacy source was used incongruently across governance pathways.

			Transnational Governance <i>n</i> = 45	International Diplomacy <i>n</i> = 26	Development Cooperation <i>n</i> = 13	Domestic Policy <i>n</i> = 33	Global Markets <i>n</i> = 13
Procedure	Democratic	Participation					
		Accountability	To Producers	To Producers/Private Sector; Corruption		To Producers/Private Sector; Corruption	
	Technocratic	Efficiency		Slow Processes	Other Priorities	Slow Processes	

		Expertise					
	Fair	Impartiality					
		Proportionality					
Performance	Democratic	Democracy Promotion in Wider Society					
	Technocratic	Problem Solving				<i>Low Enforcement</i>	
		Collective Gains					
	Fair	Human Dignity					
		Distributive Justice					

5.1 Transnational Governance

The first and most prominent governance pathway we refer to as “transnational governance.” Using the term in the political scientific sense, we understand transnationalism to mean “interactions across national boundaries when at least one actor is a non-state agent or does not operate on behalf of a national government or an international organization” (Risse-Kappen 1995: 9). In this case, interviewees envision a central role for the private sector in governing TCRs, and, to a lesser extent, public-private partnerships which would aim to create norms and standards to be adopted by key players in the coffee sector. Governance of climate impacts and risks in the supply chain should be done with existing mechanisms, which, in turn, need to be scaled-up for broader reach. As the most diverse of the governance pathways, interviewees consistently invoked the central role played by sustainability certification schemes and advocacy groups, such as Rainforest Alliance and Fairtrade, the importance of traders and roasters including Louis-Dreyfus Company and Neumann Kaffee Gruppe, as well as coffee cooperatives working on the ground with strong links to producers.

When interviewees spoke supportively of the transnational governance pathway, the most commonly cited institutional source of legitimacy was the ability of the private sector to solve problems, followed by statements about the importance of expertise in the coffee sector. The private sector is understood to be the most effective actor to govern TCRs, relying on their superior knowledge of the coffee sector and the challenges faced by businesses working to maintain profitability. Interestingly, while problem solving was seen as central to the legitimacy of transnational governance, remarkably little was said about the collective gains which might be produced in this pathway, implying that while the private sector may be well-equipped to resolve their own problems, they are not understood to produce wider benefits for society.

A high proportion of legitimacy claims also referenced the importance of accountability to consumers and shareholders, principally in an effort to supply products in line with growing interest in sustainable consumption. Large traders and roasters were seen as key actors, given their significant size relative to other players, their role as intermediaries between the markets of producing and consuming countries, and their ability to alter incentive structures to incorporate TCR management. For example, several cooperatives in Brazil called on traders to increase their share of certified coffee, creating higher demand for sustainable coffee in consuming countries.

Somewhat paradoxically, problem solving is also the most commonly invoked feature in delegitimation claims about the transnational governance pathway. Several interviewees noted that TCRs were not the most relevant challenges facing the coffee sector and private companies were unlikely to make investments in climate action. Interviewees also referred to the limited effectiveness of certification schemes in improving sustainability, either because competition among the numerous schemes has led to reducing requirements for producers to participate, or, because certification has been viewed by producers as a short-term opportunity to supply coffee to niche markets, rather than a long-term investment in sustainability. Moreover, interviewees noted that many private companies lacked transparency in their

activities and were not accountable to the farmers who produced their coffee, further undermining the legitimacy of the pathway.

Taken together, this suggests that despite the preeminence of the transnational governance pathway in the Brazilian-German coffee supply chain, there remain a number of questions about its ability to solve problems as an institution and its accountability structures. Market-based approaches to problem solving dominate this pathway, but key issues – i.e., *which* problems are addressed, and *to whom* actors are accountable – remain unresolved. Certification schemes and standards have been largely ineffective in rectifying this situation (see also Bray and Neilson 2017; Grabs 2020).

5.2 International Diplomacy

The second governance pathway, “international diplomacy,” emphasizes the role of foreign policy conducted between countries. For this pathway, interviewees referenced the importance of international negotiations as key venues for governing TCRs. Here, the fundamental premise is the equal engagement of countries in international fora, bilateral and multilateral, agreeing as sovereign states to common rules or goals. In the Brazilian-German coffee supply chain, one of the most relevant diplomatic processes is the negotiation of the EU-MERCOSUR Free Trade Agreement, where Germany and Brazil are engaged as members of their respective trading blocs in constructing the architecture for the future of trade between the regions. Notably, the role of sustainability in free trade agreements has been an important topic of scholarly and policy inquiry in recent years (i.e. Jinnah and Morin 2020) and has been a critical sticking point of the EU-MERCOSUR discussions.

Legitimation claims for the international diplomacy pathway rely on both problem solving and the promotion of collective gains more than any other governance pathway, suggesting that as an institution, the interviewees understand international diplomacy to be potentially highly effective, particularly when it comes to providing common goods. Similarly,

interviewees also noted the critical role of impartiality for international diplomacy, as countries are understood to jointly and voluntarily agree to the establishment of rules which benefit both parties and are applied equally for all involved. Participation and accountability are also referenced repeatedly, underscoring the importance for all negotiating parties to participate on equal terms, and highlighting the role of the state in promoting its national interest through diplomatic engagement, aligned with the traditional democratic conception of state accountability as a product of popular domestic support.

At the same time, both problem solving and accountability are also identified as key challenges for the international diplomacy pathway. In delegitimation claims, a number of interviewees suggested that as international diplomacy often occurs at high levels of abstraction, rules and regulations agreed may have little practical effect on the everyday circumstances for many coffee producers. Several representatives of traders and cooperatives, for example, dismissed the EU-MERCOSUR trade agreement as relevant for the governance of TCRs in the coffee supply chain, as its statute is “too coarse” for incorporating climate risk management, as one member of a Brazilian coffee cooperative expressed. Similarly, global governance institutions, such as the UNFCCC, WTO and the ICO were rarely invoked by interviewees as arenas for governance of the Brazilian-German coffee supply-chain. Efficiency also featured strongly in delegitimation claims about the international diplomacy pathway, as interviewees remarked that processes were slow and cumbersome, and depended heavily on the relationship between the administrations in power which regularly changed. For example, the EU-MERCOSUR agreement took 20 years to negotiate.

The international diplomacy pathway is rooted in an institutionalist worldview, where rules and regulations are deployed in an effort to constrain market forces and facilitate the pursuit of a shared goal, such as the EU-MERCOSUR trade deal. However, for its potential to effectively govern TCRs, activity needs to take place at much lower levels of abstraction.

5.3 Development Cooperation

The third identified pathway for governing TCRs is a “development cooperation” pathway, where states are understood to be the primary actors. This pathway is directly borne of the logic of the donor-recipient relationship, often between countries in the Global North and Global South, where the developed country is understood to be a benevolent supporter of the developing country’s needs and aspirations (Kothari 2005). In the Brazilian-German coffee supply chain, actors like the German International Development Agency (GIZ), the German Development Bank (KfW), the Federal Ministry for Economic Cooperation and Development (BMZ), and the EU aim to support the Brazilian government in achieving its self-articulated goals, often through the provision of development assistance or climate finance.

Legitimation claims for this pathway are relatively diffuse, relying on participation, accountability, expertise, and problem solving. Beginning with participation, interviewees emphasized the ability of actors in the development landscape to bring all the relevant players to the table, referring to the private sector in addition to a specific focus on the inclusion of smallholder coffee farmers and local governments. On accountability, respondents noted that the German government had a duty to support Brazilian coffee producers given the unequal terms of trade in the coffee sector, where most profit is made in developed countries where the coffee is roasted and sold (Sachs et al. 2019). In this sense, the German government could be seen to hold a degree of responsibility to the support segments of the Brazilian economy which drive the more lucrative German domestic coffee market. This line of argumentation is complemented with references to expertise and problem solving, as German development agencies are understood to have a high capacity to share relevant knowledge about climate risk management in agricultural systems and build the resilience of smallholder farmers.

In contrast, delegitimation claims of the development cooperation pathway relied heavily on efficiency, though rather than referring to number and speed of policy decisions (Scholte and Tallberg 2018), here efficiency reflected the strategic priorities of the actors

engaged. As actors in the German government have a limited amount of time and resources to pursue their goals, they preferred to allocate its development cooperation resources elsewhere, either towards climate change mitigation in Brazil, or to other countries with more significant climate adaptation needs. Representatives of German development agencies, as well as the EU Delegation in Brazil, clearly stated that development support for Brazilian smallholder coffee farmers was not a priority issue. Instead, development cooperation efforts were seen as better targeted to Least Developed Countries with lower capacity to deal climate risks, preferring instead to work with the Brazilian government on deforestation initiatives in an effort to reduce fossil fuel emissions generated through land use change. This is reflective, in part, of the historical relationship between Brazil and Germany, and their relative stature in world economic affairs. As one member of the EU delegation stated: “Brazil is not a country where we focus on development projects; we want to go in as ‘equal’ partners focusing on bigger issues, working on a peer-to-peer basis.”

The development cooperation pathway is underpinned by the notion of German government support for Brazilian-led efforts to address TCRs in the coffee supply chain. Notably, however, invocations of fairness are rare, and while accountability, expertise, and problem solving feature prominently, they are not invoked in the same way across contexts.

5.4 Domestic Policy

Whereas the three pathways above have placed international cooperation at the center of TCR governance, albeit based on distinct logics, the remaining two governance pathways challenge this notion, maintaining instead that despite the shared interest in climate risk management across borders, joint governance may be inappropriate. The “domestic policy” pathway contends that Germany and Brazil should each deal with their respective sides of the supply chain separately, implying a limited role for global governance. Actors who spoke in support of this approach underscored the idea that national governments would know best

what was needed for their particular contexts and therefore be better able to solve problems and produce collective gains. Most importantly, however, interviewees argued that it was a national responsibility to coordinate and govern domestic affairs, accountable to all citizens. In Brazil, legitimation claims pointed to the particularly strong environmental regulatory landscape in Brazil, the existence of the national coffee fund, Funcafé, which provides funding for various initiatives in the coffee sector, as well as the low-carbon agriculture (ABC) plans under implementation throughout the country. In Germany, several interviewees argued that the best opportunity for Germany to address TCRs in the coffee supply-chain was to abolish the national tax on certified and sustainable coffee (Molenaar and Short 2018).

At the same time, interviewees also challenged these same sources of legitimacy. Several actors noted that while there is a strong regulatory space in Brazil, very few laws address climate change, and the enforcement of environmental policy in Brazil leaves much to be desired. In conjunction, there remain outstanding questions about government's accountability for or ability to effectively pursue environmental protection or climate action.

5.5 Global Markets

Similar to domestic policy, the final governance pathway limits the possibility of international cooperation to manage TCRs. "Global markets," the fifth governance pathway, instead stresses non-interventionism and the minimization of any effort to manipulate markets to influence consumer behavior.

While less prominent in the Brazilian-German coffee supply chain than other pathways, the laissez-faire global markets approach still holds sway among a number of actors, particularly multinational companies. Supported for many of the same reasons as the transnational governance pathway, legitimation claims focus on the private sector's ability to innovate and solve problems, their high level of expertise and experience in the coffee business, and the ability of the market to act as an impartial distributor of goods and services

across society. As one interviewee from a large Brazilian coffee cooperative noted: “coffee can stand on its own legs without the help of the government.” In contrast, delegitimation claims focused heavily on the failures of both the private sector and governments to effectively solve the problem of smallholder farmer poverty and build resilience and improve livelihoods. Interviewees noted frequently and critically that the price of coffee, which is set on financial markets³, can perpetuate smallholder poverty.

6. Discussion and Conclusion

As few studies have been conducted which explicitly engage with the governance of TCRs, this paper proposes an empirically driven framework of five pathways which are being actively explored, negotiated, and contested in the Brazilian-German coffee supply chain. While the proposed pathways are not necessarily exhaustive nor mutually exclusive, and the balance between them in any case will be contextually specific, we contend that the pathways may be generalizable to other supply chains, issues in global environmental governance, or for foreign affairs more broadly.

These findings complement those of Steven Bernstein and Benjamin Cashore (2012) who developed a similar framework of four pathways for global environmental governance, focused on how international processes may facilitate change at the national, subnational, or firm level. While Bernstein and Cashore’s work was deductive and conceptually driven, this paper begins from the empirical and inductively validates some of their most important contributions, supporting the potential generalizability of our proposed pathways. At the same time, our proposal considers the essential role of legitimacy as fundamental to each pathway’s operating logic, advancing beyond the consideration of policy mechanisms alone.

Importantly, it is this advancement which allows for the active deliberation of the grounds on which an approach to TCR governance may be appropriate, and to assess

³ Tariffs on coffee imports play a relatively limited role in determining the market price of coffee, as tariffs are set at the national level and many large importers (i.e., the US, Canada, EU, and Japan) do not currently impose them on green coffee imports, although some EU member states, including Germany, do.

whether those conditions are indeed met in practice. First, the transnational governance pathway assigns strong weight to the private sector's ability to effectively govern TCRs. However, this pathway is the closest to business-as-usual for the sector, and the institutional initiatives on which it heavily relies have been shown to be insufficient for effective sustainability outcomes (Dzebo 2019). Second, to presume that international diplomacy occurs between truly equal states would be to overlook decades of research on international political economy, power, and the various forms of coercion which are commonplace in global environmental governance and foreign affairs (Ciplet et al. 2015; Newell 2008; Stephen and Zürn 2019). Third, while it is consistently implied that development cooperation is a benevolent exercise driven by a recipient country, a wealth of literature in development studies and development aid would call this in to question (Carbone 2007; King 2013). Lastly, neither domestic policy nor global markets pathways make any efforts to actively govern TCRs across borders, either allowing for autonomous adaptation entirely at the domestic level, or mediated solely through market forces. In short, among all three of the pathways with the highest ambition for international cooperation, serious questions exist about the accuracy of their premises.

Further, across all five pathways, it is striking that the "technocratic" sources of legitimacy dominate, while "fair" sources are rarely invoked. This suggests that the discussion of fairness in TCR governance remain in their infancy and must be further developed, both in the scholarly and policy communities. Taken together, it is clear that significant work remains to consider the constellation of governance pathways appropriate for managing TCRs in a given circumstance, on what basis, and to establish the conditions on which that legitimacy rests.

This paper has also sought to contribute to the growing literature on the critical role of legitimacy in global environmental governance, at once rooted in political principles and socially constructed by negotiation between ruler and ruled. Research to-date has not grappled with the full diversity of actors and institutions involved in global environmental

governance – focusing primarily on international organizations – nor explored how (de)legitimation processes relate to the sources of legitimacy. In many cases, scholarly work has been directed at established processes and policy regimes where existing institutions experience an incumbency advantage, rather than emerging challenges of global importance where these issues are being navigated in real-time.

We have intended to address some of these knowledge gaps. For the governance of TCRs, where few formalized institutions exist⁴ and complex relationships between public and private are central, the discursive practices of actors provide important insights as new approaches to global environmental governance are negotiated and evolve. Specifically, as actors deploy rhetorical arguments to justify or challenge the legitimacy of a governance approach, they draw on the same suite of legitimacy sources to advance their views, in line with those proposed by Dellmuth et al. (2019) but do so in markedly different ways. In other words, while actors are (de)legitimizing certain pathways, they do not always have a shared understanding or interpretation of each legitimacy source. Key questions about who should participate and how, to whom governance should be accountable, whose expertise is valuable, or what constitutes justly distributed gains all remain open for interpretation. In this way, legitimacy itself becomes a site of political contestation as actors negotiate what it means to legitimately hold the authority to govern. Even from a normative sociological perspective, the definition of each institutional source of legitimacy cannot be taken as given, but rather must be understood as socially constructed, mobilized in (de)legitimation claims to either advance or undermine a governance approach.

Moving forward, more work is required to better understand the drivers behind the use of different legitimacy sources, or their incongruent definitions, as well as how these differences are navigated and resolved. We have shown some evidence of how this may be

⁴ A notable exception is the governance of transboundary watercourses or river basins, which is better established, although the effects of climate change on these arrangements too require further study (see e.g. Milman et al. 2020). In contrast, governance frameworks for TCRs in trade and supply chains, capital, or human mobility remain in their infancy.

case-driven; the specific relationship between Brazil and Germany may be different than Germany and Rwanda, for instance, as actors will be operating in a different historical and political economic context. Moreover, what is understood to be legitimate in the coffee supply chain may not apply equally well to the rice trade, or for the movement of climate refugees, both areas equally relevant for TCR governance. While differences are certain to exist across these contexts, systematic inquiry is needed to explore precisely how structural factors condition the social construction of legitimacy across contexts, including which legitimacy sources are understood to be most compelling or essential. More research is also needed at the agent-level, identifying the mechanisms and strategies through which actors deploy their power to promote their interests or worldviews in the process of (de)legitimizing different approaches to global environmental governance.

The contestation of legitimacy is part-and-parcel of global environmental governance in a changing world. As novel challenges emerge, and institutions, policy regimes, and state and non-state actors interact in new ways, legitimacy is situated at the center of a burgeoning debate about just global environmental governance in the modern era, actively produced by parties who would seek to exert influence over others, and negotiated with those who may be subject to that authority.

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