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# The Pluriversality of Efforts to Reduce Deforestation in Brazil over the Past Decade: An Analysis of Policy Actors' Perceptions

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**Abstract:** Brazil offers a complex and unique example of tropical landscapes. The country has considerably decreased deforestation since 2004, but Reducing Emissions from Deforestation and Forest Degradation (REDD+) is arguably under question, both as a concept and as a tool to reduce greenhouse gas (GHG) emissions, as deforestation levels have increased over the last five years. This article investigates how different policy actors have perceived REDD+ over time, how they have engaged in REDD+ efforts over the past decade, and how REDD+ implementation in Brazil should move forward accordingly. We analyzed qualitative data from semi-structured interviews and actors' "stances", i.e., their positions—with regards to key issues connected to REDD+ governance and its challenges—over three different time periods (Phase 1: 2010–2011, Phase 2: 2015–2016, and Phase 3: 2019), so as to identify the practical implications of these diverse interpretations. We argue that the way actors perceive REDD+ is intimately related to the way they interpret and assign meanings towards it and, in consequence, the way they coordinate REDD+-related practices and efforts. We focus on the link between perceptions and efforts so as to comprehend the relevance that different interpretations have to both the concept and implementation of REDD+ in Brazil. Our analysis concentrates on the potential to improve the coordination and integration of REDD+ implementation and diverse actors' efforts with regards to REDD+ activities. Results suggest that actors' perceptions of REDD+ generated a plurality of meanings, highlighting a range of dialectical and ontological interactions that have, in turn, resulted in multiple REDD+ interpretations. Findings highlight that different actors have the same interests when it comes to their organizational efforts to reduce emissions from deforestation and forest degradation, suggesting that there is room for a better coordination of efforts towards this end, as well as increased collaboration.

**Keywords:** REDD+; Brazil; policymaking; deforestation; governance coordination

## 1. Introduction

Brazil offers a complex and unique example of tropical landscapes [1]. Between 2004–2017, the country sharply reduced its greenhouse gas (GHG) emission levels through a historic effort to decrease deforestation in the Amazon [2]. Land-use regulation and enforcement were central in laying

the foundations for climate mitigation measures [2] such as reducing emissions from deforestation and forest degradation and the enhancement of carbon stocks (REDD+). REDD+ implementation in Brazil, however, is under question, with deforestation once more on the rise at a time when the country also faces an unprecedented political and economic crisis, with a substantial drop in government spending on forest conservation and deforestation reduction [3,4]. This paper takes an analysis around actor perceptions to comprehend how REDD+ is interpreted and constructed by relevant actors/stakeholders, as well as provides insights into how an increased coordination among policy actors' efforts could emerge. Previous analyses warned about a possible collapse of REDD+, stemming from both conceptual and practical polarization and a lack of coordination around REDD+ implementation in Brazil [5–8]. At the same time, various multilevel actors (e.g., representatives of non-governmental organizations (NGOs), national and subnational governments, and the private sector) have been collectively constructing principles and procedures to underpin how REDD+ will be operationalized under the National REDD+ Strategy, known as ENREDD+ [9].

Our study is relevant in this context, as REDD+ funding may be the only means to reduce deforestation, considering the measures taken in the opposite direction by the current Brazilian administration, despite the country becoming the first to receive financial resources from the Green Climate Fund for having successfully reduced GHG emissions from deforestation. A large body of literature adopts a discursive approach to understanding REDD+, addressing what REDD+ should achieve and how it should be operationalized [10], the formation of coalitions [11,12], the role of institutions and belief systems [13], and how it is framed by the media [12,14], for example. While such studies illustrate the debate and show the urgent need to coordinate and integrate REDD+ actions among different actors [5,7], they provide little insight into how to address the practical aspects of REDD+ coordination on the ground. Several authors highlight that an important condition for achieving coordinated action is common understanding [15–17]. To test this claim, we focused our analysis on the link between perception and efforts to understand the relevance that different perceptions have to both the concept of REDD+ (i.e., the meaning attributed to REDD+ by different actors) and its practice in Brazil.

We specifically analyzed actors' "stances" (their positions on various statements) with regards to both the challenges of REDD+ implementation and the efforts and interests they show in relation to REDD+ over three different time frames: Phase 1 (2010–2011), Phase 2 (2015–2016), and Phase 3 (2019). By doing so, we aim to answer three questions: (i) How do different actors understand REDD+? (ii) What are the main challenges of REDD+ in Brazil? (iii) What efforts do actors make in relation to REDD+? We used a unique dataset derived from a survey conducted with policy actors engaged in the national REDD+ policy domain in Brazil as part of the Global Comparative Study on REDD+ (GCS-REDD) [18]. We concentrated on the potential for the better coordination and integration of REDD+ practices based on distinct actors' perceptions of REDD+. In doing so, we addressed the claim proposed by van der Hoff et al. [6] that a "renewed research focus" is necessary, "in order to improve efforts to reduce deforestation and coherent carbon emissions". The authors pushed for "an abandonment of a focus on the discursive competition for dominance, and a focus instead on the coexistence of distinct discourses and practices, the dialectical interactions between them, and the problems that may arise in the process" [6]. We then aimed to direct attention away from the fruitless attempts to establish a single concept (and practice) of REDD+ towards a recognition of its "pluriversality", i.e., a conceptualization of REDD+ in which the many interpretations of REDD+ have a place, resulting in more diverse but interrelated forms of implementing REDD+.

## 2. Background: Practical Aspects of REDD+ Coordination and the Role of Communication

Current policy making involves not only national governments and their rules and regulations but, also, what we call here policy actors: private organizations, nongovernmental actors, and others [5,19]. Social relations and practices are, therefore, a key factor underlying actor behaviors in terms of facilitating or constraining policy actions [20]. In the case of forest and land-use governance, there

are numerous issues to consider (e.g., deforestation, commodity chains, livelihood subsistence, and biodiversity conservation), as well as how these link and concern different actors. Links between issues are highly complex and often depend on the specific contexts in which national governments operate [21]. As a result of such complexities, forest and land-use governance has developed over time into a weak and fragmented regime, with a conflictive rather than coordinated architecture [22–26].

Many authors speak about the need for increased coordination among policy actors and their practices to achieve the goals of sustainable land use and forest management [13,24,27–30], but only a few provide practical insights into how to address the problem of coordination [7,31–33]. In many cases, the proposed solution to this weak and fragmented regime is the adoption of a more coherent governance structure, through “bottom-up” coordination approaches at the national and regional levels [21,32,34–37]. To address the challenge of coordinating efforts, it is first important to understand what is meant by this term. According to Peters [38], the coordination of efforts requires that actors move beyond simply avoiding decision-making conflicts to finding ways to cooperate that can benefit different actors. A set of efforts is coordinated, in this sense, if adjustments are made so that the adverse consequences of any one effort (for other efforts in the set) are, to a degree and in some frequency, avoided, reduced, counterbalanced, or outweighed [39,40] and that solutions are coordinated strategically to address the redundancy and gaps of the efforts [38].

There are different ways of understanding the coordination (or lack of) in the social sciences, but advocacy coalition and communicative action theories are among the most used ones. The advocacy coalition theory is one of prominence when it comes to analyzing policy changes in a multi-actor governance context [41,42] and has been used to analyze REDD+ [43,44]. Sabatier defines advocacy coalitions as “people from a variety of positions (elected and agency officials, interest group leaders, researchers) who share a particular belief system—i.e., a set of basic values, causal assumptions, and problem perceptions—and who show a non-trivial degree of coordinated activity over time” [41] (p. 139). Communicative action theory, on the other hand, has been less used and focuses on how meaning is created and enacted in policy practices. Based on the works of Jurgen Habermas in the 1960s and 1970s, communicative action emerges from “practical intent” [45,46]. There is the possibility of casting off past institutions, organizations, and patterns of behavior as a result of critically examining existing patterns and the interests of different societal actors. For Habermas [45,46], the meaning that actors attribute to concepts activates a process of transforming a policy theory into practical action. Meaning is then produced through communicative action and is always intersubjective.

With communicative action, the efforts of different policy actors are constructed through communication; as such, the “coordination” challenge is addressed through creating better processes and instruments for dialogues. In contrast, with the advocacy coalition theory, policy actors rely on conflict and contested ideas; the “coordination” challenge is instead to find opportunities for negotiation and compromise [38]. The advocacy coalition theory has been used in several studies to analyze beliefs that are distilled down into dichotomous “*pro versus anti*” statements (e.g., Weible [47]). In doing so, the advocacy coalition theory becomes a theoretical construction rather than an empirical result; that is to say, a collection of actors coordinating their behaviors is not considered the formation of a coalition in the absence of shared or contested beliefs. We stress the necessity of moving beyond theoretical dichotomies to consider the possibility of an ontological pluralism that, so far, has been rendered irrelevant to the study of forest and land-use governance.

In-line with Habermas, we argue that how different actors perceive REDD+ is intimately related to how they interpret and assign meanings to REDD+ and, in consequence, how they organize their practices and efforts towards it. Different authors have already analyzed how certain ideas gain prominence over others, as described and explained by the REDD+ discourse analysis [6,12,48–50]. We intend to contribute to this literature by showing how different perceptions have impacted the conceptualization and practice of REDD+. We call the “concept” of REDD+ the notion resulting from the process through which different actors reach (or fail to reach) agreements regarding what REDD+ is. To understand such a process, we focus our analysis on the link between the conceptual

perceptions of REDD+ and the practical efforts and responses of policy actors. Following Dake [50,51] and Dake and Wildavsky [52,53], we define “perceptions” as general social, cultural, and political attitudes towards a subject and “orienting dispositions” that guide individual and collective responses in complex situations.

Finally, we follow the assumption that responses to complex situations are the product of intersubjective cultural practices [54] and so there are many different dispositions and possible realities based on the coexistence of varied interpretations of a subject. This is especially relevant when dealing with a complex, multilayered, and tangled policy intervention such as REDD+ [5,44,55–57]. The challenge is, therefore, to devise institutional mechanisms that allow for the practical intent suggested by Habermas [45,46] and the possibility of adaptation, balancing different interests and overcoming historical dependence [33,58]. By legitimizing the various interpretations and perceptions of REDD+, and the consequent pluriversity of its concept and governance practice, we adopt a more decolonial approach to REDD+. Such an approach is extremely welcome in current times, with REDD+ being strongly criticized as a Western discursive measure for reducing deforestation [59], a type of commodification of nature [60,61], a way of green-grabbing [62–64], and a neoliberal strategy [65].

### 3. Background: The Development of REDD+ in Brazil

For over a decade now, Brazil has taken significant steps towards setting targets and developing interventions related to REDD+, including the release of ENREDD+ in 2015 [66], the submission of two forest reference emission levels [67,68], and the elaboration of two summaries of safeguarded information [66,69]. There are also numerous subnational initiatives in the Amazon, from government programs to private projects [59,70]. Many of these national and subnational initiatives receive financial support from the Amazon Fund, created in 2008 to raise and distribute voluntary REDD+ donations [71]. Such initiatives have generated positive impacts, such as increased knowledge around land tenure [72], but they remain very much based on techniques of remuneration and coercion—techniques that result in limited behavioral changes on the ground [59].

In addition, REDD+ measures and interventions are now under threat after the Norwegian and German governments’ decisions to suspend their donations to the Amazon Fund [73] in reaction to the current Brazilian administration. Brazil’s president, Jair Bolsonaro, suspended the Amazon Fund’s board of directors and its technical committee through Decree 9.759/2019 and has clearly demonstrated that the country will no longer continue its efforts to reduce deforestation [33]. As a year, 2019 was subject to the highest levels of deforestation in the last decade, with a record increase in the scale of forest fires [74]. The Bolsonaro administration has also effectively dismantled Brazil’s environmental agencies, deforestation control programs, and environmental licensing system; encouraged the predatory occupation of the Amazon; and criminalized those who defend its conservation [33].

The National Policy for Climate Change (NPCC) and the 2012 Forest Code are the two guiding umbrella frameworks for ENREDD+ implementation in Brazil. ENREDD+ aims at promoting climate change mitigation through reducing illegal deforestation and conserving and restoring forest systems and generating economic, social, and environmental co-benefits. The ENREDD+ framework also aims at integrating the efforts of three governmental plans to implement REDD+ in Brazil (see Table 1): (i) the Action Plan to Prevent and Control Deforestation in the Amazon (PPCDAm), (ii) the Action Plan to Prevent and Control Deforestation and Fire in the Brazilian Cerrado (PPCerrado), and (iii) the Plan for Low Carbon Agriculture (ABC). Although ENREDD+ has designed cross-cutting measures for integrating such actions, in practice, there are few opportunities to date to establish synergies with such plans [75]. Likewise, ENREDD+ includes a financial framework for REDD+ and a set of safeguards designed to ensure that REDD+ actions do not inflict social or environmental harm. Safeguards are based on social and environmental principles and criteria for REDD+ developed in 2010 by a group of civil society organizations. A total of eight principles and 27 criteria were developed, addressing aspects of legal compliance, rights, benefit sharing, economic sustainability, environmental conservation, participation, monitoring and transparency, and governance [76]. The first ENREDD+

safeguard summary, however, received much criticism from civil society and groups involved in the development of safeguards. One of the main issues was that federal safeguards only cover initiatives financed by the Amazon Fund that related to PPCDAm implementation [77].

**Table 1.** Plans guiding Brazil’s National Reducing Emissions from Deforestation and Forest Degradation (REDD+) Strategy.

National REDD+ Strategy	
Sectorial Plans	Strategies
PPCDAm	Monitoring and control
	Tenure regularization and territorial management
	Incentives for sustainable production
PPCerrado	Monitoring and control
	Protected areas and territorial planning
	Sustainable activities
	Environmental education
ABC Plan	Pasture recovery
	Crop-livestock-forest integration
	Tillage system
	Biological nitrogen fixation in planted forests
	Manure treatment

ENREDD+ is still very unclear in terms of the measures it will focus on to implement REDD+ and to guarantee that safeguards are in place. The detailed regulation of these issues was left to the National REDD+ Entity (CONAREDD+) and its Thematic Consultation Chambers, which are at the stage of designing specific measures and principles. At the moment, however, due to disagreements between federal and state government actors and a lack of definition about financing, benefit sharing, and safeguards for local initiatives, ENREDD+ implementation continues to face significant obstacles. There is a recognized need for policy actors at all levels to join forces to ensure a more appropriate structure and strategy for CONAREDD+ and its Thematic Consultation Chambers, as well as to clarify how ENREDD+ will be put into practice [5,7,8,78,79]. Likewise, there remains very little evidence about the potential of subnational initiatives to reduce deforestation and little coordination among national and subnational efforts [80]. Understanding how actors could achieve coordination is therefore crucial so as to draw insights into how REDD+ implementation can progress in Brazil.

The achievement of more coordinated efforts among the broad range of actors at play in such an uncertain context is impeded by different factors. Firstly, current and past administrations (2011–present) have been strongly resistant to the implementation of REDD+ and other measures to reduce deforestation [7]; secondly, there is continuing opposition from private sector actors to the realization of environmental policies [81,82]; and lastly, the parallel development of differing REDD+ discourses (sustainable development versus carbon commodification) and their materialization [6] has prevented any possible coordination of efforts. Examples of the obstacles to positive interactions between actors include, for instance, recent policy changes that threaten to derail forest conservation [4,83] and the fact that influential politicians associated with the agribusiness sector, known in Brazil as the “*bancada ruralista*” [84], successfully changed forest legislation to, among other things, absolve landowners who illegally cleared land in the past [85].

Finally, the plans upon which ENREDD+ is based (PPCDAm, PPCerrado and ABC) have had their implementations paralyzed by President Bolsonaro [4,86]; currently, the only action focused on implementing ENREDD+ is the Green Climate Fund pilot program. Brazil will receive 96.5 million USD as compensation for reducing deforestation between 2014–2015; these funds will, under a new program called Floresta+ (Forest+ in English), support actions consistent with the Nationally Determined Contribution (NDC) and the ENREDD+ guiding strategies, as well as the GCF’s objectives [87]. Brazil’s Amazon states have also been negotiating independently with the governments of Norway and

Germany and are planning to propose a financing alternative to the Amazon Fund that will benefit a consortium of the states [4].

## 4. Methods

### 4.1. Research Approach

This research is part of CIFOR's (Center for International Forestry Research) global comparative study on REDD+ on policies and processes and follows the methodologies and the research design outlined in Brockhaus and Di Gregorio [18]. Data collection for this manuscript involved three main steps: (i) identification of core policy actors (organizations) and policy events with the help of an expert panel, (ii) a social organization survey (structured questionnaire), and (iii) an in-depth interview of actors (semi-structured questionnaire).

Data collection was carried out in three different periods: Phase 1, from June 2010 to September 2011, Phase 2, from July 2015 to August 2016, and Phase 3, from March to August 2019. In Phase 1, 56 organizations participated out of the 65 organizations contacted, in Phase 2, 72 organizations participated out of the 130 organizations contacted, and in Phase 3, just 59 participated out of the 138 organizations contacted. Phase 3 data collection was quicker compared to the other phases, as actors were already familiar with our research. On the other hand, some actors declined to participate in Phase 3 on the basis that they were no longer involved in REDD+ implementation. The organizations were initially divided into 13 different categories. However, for the data analyses in this study, we selected seven organizational categories: government, private sector, national NGOs, national research institutions, international NGOs, foreign government agencies, and hybrid and multi-stakeholder groups/organizations (see Table 2). We chose to focus on these seven categories as, together, they represent over 80% of the total number of participants in the research. As such, the *n* total for our analysis was: Phase 1: *n* = 56, Phase 2: *n* = 63, and Phase 3: *n* = 53. The comparison across time periods and between different actors allowed for the evaluation of the progress and performance of REDD+, increasing our understanding of how the concept unfolded into practice and the changes and challenges linked to such a process.

**Table 2.** Number of policy actors in different phases.

Actors	Phase 1	Phase 2	Phase 3
Government	<i>n</i> = 19 (29%)	<i>n</i> = 13 (18%)	<i>n</i> = 4 (7%)
Private sector	4 (6%)	18 (25%)	13 (22%)
National NGOs	15 (23%)	8 (11%)	12 (21%)
Research institutions	6 (9%)	7 (10%)	8 (14%)
International NGOs	8 (12%)	9 (13%)	9 (16%)
Foreign government agencies	4 (6%)	5 (7%)	2 (3%)
Hybrid/multi-stakeholder groups	N/A	3 (4%)	5 (9%)

The main challenge of the research was the topic itself. During Phase 1, REDD+ was in its incipient stages of implementation, and participants were still waiting to incorporate REDD+ efforts into their practices. Although, in Phase 2, REDD+ implementation advanced, the formulation of ENREDD+ was still uncertain, and most of the actors answered our request for interview with the response that there was no REDD+ agenda at the national level, and this reflected in their lack of REDD+-related practices. We then needed to explain to them that, according to the ENREDD+ draft (which many actors were not aware of), REDD+ was an umbrella of policies and measures linked to reducing emissions from deforestation and degradation (Table 1), towards which many of them were indeed directing their efforts. Finally, in Phase 3, the main constraint was the political reality in Brazil. Currently, the environmental agenda (particularly, the climate-forest agenda) is controversial, disconnected from the federal structure management plan and economic priorities. We believe that the absence of a well-structured REDD+ agenda at the national level, especially during Phases 2 and 3,

was the main reason why some organizations declined to participate or did not answer our request to be part of the study.

#### *4.2. Research Instruments and Data Analysis*

All actors that responded were required to participate in both the structured and semi-structured questionnaires. The structured questionnaire generated statistical data and included questions about the organizations' REDD+-related efforts, their position on REDD+ issues, networks, policies, processes, and events, as well as general information about the organizations themselves. Actors were asked how far they agreed with different stance statements. To analyze their stances, we compiled actors' answers into categories of "agree" (including "strongly agree"), "disagree" (including "strongly disagree"), and "neither agree nor disagree" before we analyzed the response frequencies to identify the main challenges of REDD+ implementation. Through this, we were able to examine actors' interests, their attitudes to REDD+ governance and challenges, and their REDD+-related efforts. In doing so, we followed the communicative action theory and critically examined the existing patterns of policy actors, moving beyond theoretical dichotomies to understand how actors organize their practices towards REDD+ over time, so that efforts can be better coordinated.

The semi-structured questionnaire focused on open-ended questions concerning policy stances on REDD+ and the "3Es+" (effectiveness, efficiency, and equity, plus co-benefits). These interviews generated qualitative data and provided more detail on the main stances and different views of actors on: (i) perceptions and interests in relation to REDD+, (ii) the main challenges posed by REDD+, and (iii) governance. To understand the link between the concept of REDD+ as perceived by actors and their efforts towards it, we used the qualitative data to analyze how they define REDD+, mainly by comprehending their interests in relation to it, their interpretations of REDD+, and how such attributed meanings impact REDD+ practice. In doing so, we contributed to the communication action theory by analyzing the meaning that actors attribute to the concept of REDD+ and how this activated the process of transforming REDD+ theory into practice and implementations over time.

Analytical coding procedures were applied to produce a coherent qualitative analysis focused on semi-structured questions. NVivo Qualitative Content Analysis Software (QSR International Pty Ltd., Version 12, 2018, Melbourne, Australia,) was chosen to compile, analyze, organize, and reconfigure the data collected. Content analysis was then carried out, involving the use of analytical codes derived from the communicative action theory and focused on aspects of policy coordination that are relevant to the research focus. Responses were coded to understand the practical aspects of REDD+ governance in Brazil, the different meanings attributed to REDD+, and its main challenges. Our study was only interested in organizational perceptions and interpretations of REDD+, as opposed to individual ones. Finally, we reviewed policies, programs, and project documents to find links between REDD+ interpretations, policy measures, and actors' efforts.

### **5. Results**

#### *5.1. What Are Actors' Efforts and Interests in Relation to REDD+?*

Regarding low-emission land-use practices, when comparing the three different phases, we find that policy actors continued to concentrate efforts on three main land-use practices: forest conservation (Phase 1 = 84%, Phase 2 = 76%, and Phase 3 = 74%); agriculture land-use emission reductions (Phase 1 = 51%, Phase 2 = 67%, and Phase 3 = 74%); and the enhancement of forest carbon stocks (Phase 1 = 51%, Phase 2 = 52%, and Phase 3 = 52%). On the other hand, afforestation and reforestation saw the lowest level of efforts among all organizations overall (Phase 1 = 40%, Phase 2 = 40%, and Phase 3 = 35%). We found a slight difference among the organizations. Almost all types of organization put more effort into forest governance, but in the private sector, this is prioritized second after agricultural land-use emission reductions. Agricultural land-use emission reductions were generally the second

priority for all organizations, with the exception of national environmental NGOs, which prioritized the enhancement of forest carbon stocks in second place, after forest conservation.

Looking at policy design and the implementation of REDD+ practices, the results show that, during the first two phases, actors were more engaged in the design of subnational REDD+ strategies and policies (Phase 1 = 68%, Phase 2 = 47%, and Phase 3 = 50%) and in the design of national REDD+ strategies and policies (Phase 1 = 60%, Phase 2 = 40%, and Phase 3 = 47%), whereas, in the third phase, there was more mention of engagement with the national-level implementation of the REDD+ strategy and policies, such as monitoring, reporting, and verification (MRV) institutions (Phase 1 = 57%, Phase 2 = 40%, and Phase 3 = 54%). There was a very clear distinction in the way efforts were directed by each type of organization. Where national research institutes and the private sectors put more effort into the design and implementation of national-level REDD+ strategies and policies, governmental actors were more focused on the design of subnational-level REDD+ strategies and policies. This last activity was also the main focus of international environmental NGOs and networks, alongside international REDD+ policy design.

Emphasis should be put on the findings that relate to actors' efforts in terms of implementing REDD+ activities on the ground, including demonstration sites, where less engagement was seen in all three phases (Phase 1 = 45%, Phase 2 = 35%, and Phase 3 = 46%). Domestic NGOs stand out for their efforts in terms of implementing REDD+ activities on the ground. During the in-depth interviews in Phase 2 and Phase 3, most organizations believed that the federal government did very little to engage the major stakeholders that need to be involved and included in policy development, disregarding regional and municipal governments and, in many cases, local actors like indigenous peoples.

An analysis of thematic issues and areas of interest, in terms of REDD+ policies and measures, revealed a homogeneous pattern across all organizational types throughout all phases of the study. Biodiversity conservation is the area most organizations are interested in (Phase 1 = 68%, Phase 2 = 68%, and Phase 3 = 79%), followed by forest governance (Phase 1 = 65%, Phase 2 = 56%, and Phase 3 = 61%). Carbon finance/trading had low interest levels in all analyzed types of organizations (Phase 1 = 36%, Phase 2 = 38%, and Phase 3 = 37%). It is noteworthy that, with respect to tenure rights, although most interviewed organizations declared themselves to have "much" and "very much" interest in this area, the average effort dedicated by actors to tenure rights was less than "moderate" in all phases. National research institutes were those with greater focus on this area. The private sector and both domestic and international environmental NGOs indicated that more effort was spent on biodiversity conservation, while governmental bodies focused more on forest governance. Table 3 summarizes these findings.



**Table 3.** Overall efforts and interests in REDD+. MRV: monitoring, reporting, and verification.

Efforts and Interests	Phase 1	Phase 2	Phase 3
REDD+ and LED (low emissions development)-related land uses			
Forest conservation	84%	76%	74%
Enhancement of forest carbon stocks	51%	52%	74%
Sustainable logging practices	42%	43%	42%
Afforestation and reforestation	40%	40%	36%
Agricultural land-use emission reduction	51%	67%	35%
REDD+ policy design and implementation			
REDD+ international policy design	48%	41%	54%
Design of national-level REDD+ strategies and policies	60%	40%	50%
Design of subnational-level REDD+ strategies and policies	68%	47%	48%
National-level implementation of REDD+ strategies and policies (e.g., MRV institutions)	57%	40%	47%
REDD+ thematic issues/interest areas			
Implementation of REDD+ site activities (including demonstration sites)	45%	35%	46%
Tenure rights (land and trees)	42%	58%	79%
Biodiversity conservation	68%	68%	61%
Poverty alleviation	37%	54%	57%
Forest governance	65%	56%	52%
Community-based or joint forest management	65%	42%	52%
Adaptation to climate change	38%	54%	38%
REDD+-related carbon finance/trading	36%	38%	37%

## 5.2. What Are Actors' Perceptions of REDD+?

### 5.2.1. Governance and Challenges

During Phase 1, almost 93% of analyzed respondents were optimistic about the effectiveness of REDD+ as an option for reducing GHG emissions globally. Most policy actors, however, believed that REDD+ effectiveness would require clearer national and international rules, especially for monitoring, verifying, and reporting; benefits sharing; and penalties, particularly for countries that fail to achieve their reduction targets. Some actors stated that the tendency of most REDD+ proposals to focus on the benefits for poor and traditional communities, rather than on agribusinesses and large landholders, would undermine their effectiveness. In Phase 2, actors still predominantly believed REDD+ to be an effective GHG mitigation measure, but confidence in its effectiveness dropped (from 93% in agreement to 78%). Such a decline in actors' optimism during the second period is linked to an increasing awareness of REDD+ practices not being as simple or cheap as initially thought. In Phase 3, the results showed a higher level of agreement with the statement that REDD+ was an effective GHG mitigation measure (87%) when compared to Phase 2. Most of the surveyed organizations, however, commented that the word "globally" made a difference in their answer, because when relating their stance to the Brazilian scenario alone, respondents were not as optimistic over the future effectiveness of REDD+.

In the in-depth interviews in Phases 2 and 3, most organizations continued to highlight the lack of clear rules and transparency around REDD+ practices. Another point made by actors was in relation to the need to improve law enforcement for REDD+ to be effective. A lack of private sector participation and awareness in the design of environmental policies and low levels of civil society representation, especially that of indigenous peoples, in the design of the REDD+ national strategy, were cited as possible causes for REDD+'s ineffectiveness in Brazil. In Phase 3, actors perceived the most pressing governance challenges to be related to: "a lack of clarity of REDD+ policy and absence of political regulation" (foreign government agency); "REDD+ awareness, governance and implementation of policies" (national NGOs); "keeping REDD+ on the government's agenda" (national NGOs and the private sector); and a "lack of knowledge of what is REDD+" (the private sector, government, and national NGOs).

When comparing actors' perceptions around REDD+ governance, the vast majority of participants (Phase 1 = 86%, Phase 2 = 96%, and Phase 3 = 91%) believe that REDD+ leads to improved forest governance (e.g., addressing illegal logging, access to justice, and the rule of law). However, they also emphasized that strengthened governance is a precondition for successful REDD+ (Phase 1 = 88%, Phase 2 = 93%, and Phase 3 = 95%). It is also widely expected that REDD+ can positively impact governance without decreasing the decision-making power of forest-dependent people (Phase 1 = N/A, Phase 2 = 77%, and Phase 3 = 67%) without weakening the limited administrative governance capacity of the state (Phase 1 = 78%, Phase 2 = 83%, and Phase 3 = 88%).

Overall, the most significant challenges indicated by the majority of actors were: "achieving effective coordination between state agencies, the private sector and civil society" (Phase 1 = 86%, Phase 2 = 88%, and Phase 3 = 98%); "achieving broad consensus on changes in existing land-use plans" (Phase 1 = 74%, Phase 2 = 86%, and Phase 3 = 96%); "effective clarification in tenure rights" (Phase 1 = 75%, Phase 2 = 83%, and Phase 3 = 80%); and "negotiating with powerful special interests influencing the main drivers of deforestation" (Phase 1 = 60%, Phase 2 = 88%, and Phase 3 = 93%). The challenge that provoked the least concern among actors was "the lack of technical expertise for monitoring carbon emissions and sequestration" (Phase 1 = 46%, Phase 2 = 50%, and Phase 3 = 39%).

Participants who perceived the coordination of different actors as a challenge to REDD+ also pointed to possible solutions, including: increased involvement of the private sector (especially beef and soy producers) through subsidies that could increase their participation, a communication strategy, political will to address contradictory policies, and a change in the cultural aspects behind deforestation. As stated by a research institution representative, "forest is seen as a great frontier and a provider of environmental services" ( . . . ) "changing this perception to see the economic, biotechnological potential of the forest is a great challenge to Brazil". For two different governmental actors, the main challenge is "to balance the desires of the different actors (especially of indigenous communities, traditional communities and family farmers)". According to them, "it is necessary to think about innovative ways to engage the public, [and to] have a communication strategy".

### 5.2.2. REDD+ Interpretations

When reflecting on the link between the concept and the practice of REDD+, while analyzing the qualitative data, we found that actors' interpretations of REDD+ vary and that many of them do not attribute their conservation interests and efforts to REDD+. We observed that private sector actors are those who are the most confused about what REDD+ entails in Brazil. Although actors from national NGOs and research institutions seem to be more aware of the link between their interests and REDD+ efforts, they also call for clarification of the concept. We also identified that actors are not in full agreement in relation to the activities funded by the Amazon Fund. Some perceive them as REDD+ (mainly the private sector), while others do not (national NGOs and the government). Table 4 summarizes some of these interpretations.

Finally, when reflecting about the future of REDD+, many participants answered that, under the current political situation, REDD+ has no future. A few actors were slightly more positive about it (mainly the government) in view of the Green Climate Fund investments into the federal government's Floresta+ Initiative and international pressure for Brazil to control deforestation after the increase in fires during 2019.

**Table 4.** Examples of actors' interpretations of REDD+.

Actors	Interpretations
Private Sector	<p>"It is difficult to say that REDD+ exists in Brazil."</p> <p>"There is no central plan. It is not something defined that has taken shape."</p> <p>"The main challenge of REDD+ is a lack of knowledge of what it is."</p> <p>"The Amazon Fund represents approximately 5% of the REDD+ potential."</p>
National NGOs	<p>"REDD+ needs to be reinvented."</p> <p>"The topic itself is very technical and very difficult to understand."</p> <p>"There is a friction linked to the clarity of REDD+ and its implementation."</p> <p>"The Amazon Fund projects are not REDD+."</p>
Government	"REDD+ actions still have not achieved their potential."
Research Institutes	<p>"The term REDD+ is very loaded."</p> <p>"There is a discontinuity of REDD+ practices resulting from political changes."</p>

## 6. Discussion: Recognizing REDD+ Pluriversality

### 6.1. What Is REDD+ After All, and How Can Efforts Be Better Coordinated Towards Its Goals?

We argue that the way different actors perceive REDD+ is intimately related to the way they interpret and assign meanings to REDD+ and, in consequence, the way they coordinate efforts towards it. Over the last decade, the practice of REDD+ in Brazil materialized as a result of the process through which different actors interpreted and implemented the concept of REDD+. According to the United Nations Framework Convention on Climate Change (UNFCCC) decisions, REDD+ is about forest conservation, the sustainable management of forests, and the enhancement of forest carbon stocks [88–90]. Our results show that these are exactly the practices towards which Brazilian actors concentrate most of their efforts. However, when giving their in-depth perceptions about the challenges of REDD+, most actors highlighted a lack of clarity around the concept. As pointed out by respondents, REDD+ implementation in Brazil has been distributed across different efforts at the national (i.e., ENREDD+ and Amazon Fund) and subnational levels (i.e., voluntary projects and bilateral agreements) that are not very well-connected. This may have caused a misunderstanding of what REDD+ entails and the formation of multiple understandings and meanings attributed to REDD+. The consequence of this is uncoordinated efforts toward REDD+ goals.

The dynamics and arenas in which REDD+ efforts have taken place have coevolved with actors' practices and changed little over time. REDD+ objectives, justifications, measures, and interventions have emerged, evolved, been institutionalized, altered, or have even disappeared, while the meaning attributed to REDD+ has varied extensively across actors and time. Consequently, the transformation of the policy theory into practical action has unfolded in a pluriversal manner. This means that, although actors' efforts and practices are directly linked to the concept of REDD+, actors' interpretations of REDD+ have generated a plurality of meanings, or "interpretation over interpretation", to use Geertz's [91] term, highlighting the dialectical and ontological interactions produced through communicative action. Actors then do not perceive their efforts to be integrated under the REDD+ umbrella, and thus, they do not engage with the operational challenges that REDD+ policymakers and implementers are grappling with as they seek to embrace the possibilities of this idea. After all, it is exactly the link between the perception towards a subject and the orienting dispositions of actors that guides individual and organizational responses to complex situations [52,53] and allows for more coordination between different actors.

The implications of such findings are that coordination becomes extremely difficult as solutions to the challenges of REDD+ are not strategically addressed by actors, and their diverse efforts are not adjusted to avoid, reduce, and counterbalance the challenges of REDD+ implementation. This explains the inconsistency between REDD+ theory and practice. Land tenure, for example, was identified as one of the main challenges of REDD+, but results show that, on average, actors dedicate minimal effort to

this. There is evidence, however, that tenure clarification (mainly led by NGOs and research institutions) has been at the heart of REDD+ initiatives on the ground [92], suggesting that, in practice, attempts are being made to better address the challenges around tenure. On the other hand, land regularization and territorial management in Brazil still present many challenges [59,83] and may continue to delay the effectiveness of REDD+ implementation. In the absence of land titles, landholders usually feel too insecure to commit to and engage in long-term agreements to reduce deforestation. Additionally, the results demonstrated that actors' specific REDD+ efforts are more focused on designing policies and measures than on implementing REDD+ on the ground. While the institutionalization of REDD+ is key, lessons from a "learning by doing" approach to REDD+ [88] should also emerge from local initiatives [93].

The homogenous pattern of organizational efforts that was evident in the analysis of thematic issues and areas of interest in REDD+-related policies and measures, such as biodiversity conservation, suggests that better coordination between different organizations may be possible. The purpose of coordination is to try to achieve a greater impact collectively by having organizations plan and work together; if organizations share interest in an issue, they are likely to coordinate their efforts more easily [94,95]. Actors' efforts, in this sense, could be better coordinated by adopting the perspective of communication theory in practice. This means focusing on the diverse meanings of REDD+ and the different interests of actors that are related to them (e.g., biodiversity conservation, forest governance, and tenure rights) to design a system that supports the exchange of information among actors. The complexity of coordinating REDD+ efforts calls for increased and effective communication, practical dialogue, oriented mediation, and the detailed exchange of information. Communication and mediation are key issues for successful coordination and have been reported as effective in mitigating conflicts, increasing democratic decision-making [96] and policy performances. The goal would be to design a system that uses communication to enhance the capacity of multiple organizations to manage their efforts in a more coordinated way and apply mediation to align their interests.

## 6.2. Moving Ahead with REDD+: Lessons and Setbacks

Despite significant progress in some areas, mainstream development policies—particularly those focused on the Brazilian Amazon—still tend to be characterized by top-down decision-making, institutional fragmentation, and dichotomies of "development *versus* environment", particularly in the energy, transportation, and agribusiness sectors [4,7,83]. This can be explicitly observed in the current political arena, which promotes activities that stimulate deforestation in favor of the agricultural sector [97,98]. Our results suggest that coordination between different actors (private sector, government, and civil society) in Brazil continues to be fragile, and there are no structures in place that facilitate interactions and coordination between actors in order to achieve desirable synergies among their distinct capacities and competencies. The fact that ENREDD+ is based on governmental policies and previous national efforts leaves little space for active communication among different actors and few opportunities for aligning ENREDD+ with local initiatives being implemented at the subnational level [75]. As already argued by van der Hoff et al. [6], this has led to the parallel development and implementation of distinct REDD+ actions that are, at the same time, competing, coexisting, and collaborating on different levels.

Finally, as responses to complex situations are the product of intersubjective cultural practices [54], differences among actors also generate challenges for how to navigate diverse priorities, terminologies, epistemologies, and ways of thinking. All of these can pose significant barriers to the coordination of efforts and, thus, limit the presumed performance of actor diversity. The coexistence of a plurality of interpretations and, in consequence, of REDD+ practices then requires more diverse forms of implementing REDD+. To respond to Osborne's call for an "indigenous approach to REDD" [99], meaning an approach that addresses sustainable land use from a diversified perspective and a set of different measures, it is then important to promote knowledge-sharing, the diversity of experiences, and more communicative problem-solving. This implies the development of cross-boundary social

relations, which takes time and requires extensive opportunities for social interactions and the existence of a collaborative environment characterized by, among other things, high levels of trust and deliberation [100]. If actors are limited in their own collaboration and communication, they risk accessing incomplete information, forming erroneous perceptions about REDD+ and, consequently, not coordinating the actions that are needed to reduce deforestation.

## 7. Conclusions

This study aimed at providing useful insights for REDD+ implementation in Brazil. We investigated how different actors perceive REDD+, how they engage in REDD+ policy formation and what the challenges of REDD+ are. Our results suggest that, although actors' efforts and practices are directly linked to REDD+, their interpretations of REDD+ generated a plurality of meanings, highlighting the dialectical and ontological interactions that have resulted in the formation of multiple REDD+ concepts and practices. Our reflection on the pluriversality of REDD+ may be a useful way to challenge what Simon [101] calls "stealth unknown knowns" or the tacit forms of environmental discourses that are circulated and become the basis for technocratic, rather than democratic, forest and land-use governance. In doing so, we could better embrace the idea of diverse REDD+s and truly connect with the complex challenges that REDD+ implementation is embedded in (i.e., tenure clarification, benefit-sharing, and financing).

The findings also highlight that different actors have the same interests when it comes to their organizational efforts towards REDD+, suggesting that there is room for better coordination and collaboration among them. What is needed is increased mediation and communication, so that actors can more easily align their interests and better coordinate their efforts and activities aimed at reducing deforestation. A mediation actor or group of actors might be able to compensate, to some extent, for a lack of social processes supporting the formation of cross-boundary social relations. Communication and trust between different actors are also central to achieving coordinated efforts. Finally, improvements in social information exchange will set the grounds not just for the greater integration of REDD+ efforts but, also, for coping with the circumstances and challenges that complex forest landscapes require. In other words, the foundation for actions towards coordination are communication and reflection. Unless actors exchange information and reflect on the different meanings and practices of REDD+, they cannot know how to move forward with its implementation. To do otherwise would be to neglect its complexity.

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## References

1. Myers, N.; Mittermeier, R.; Mittermeier, C.; da Fonseca, G.; Kent, J. Biodiversity hotspots for conservation priorities. *Nature* **2000**, *403*, 853–858. [[CrossRef](#)] [[PubMed](#)]
2. West, T.A.P.; Börner, J.; Fearnside, P.M. Climatic Benefits From the 2006–2017 Avoided deforestation in Amazonian Brazil. *Front. For. Global Chang.* **2019**, *2*, 52. [[CrossRef](#)]
3. Magnusson, W.E.; Grelle, C.E.V.; Marques, M.C.M.; Rocha, C.F.D.; Dias, B.; Fontana, C.S.; Bergallo, H.; Overbeck, G.E.; Vale, M.M.; Tomas, W.M.; et al. Effects of Brazil’s political crisis on the science needed for biodiversity conservation. *Front. Ecol. Evol.* **2018**, *6*, 163. [[CrossRef](#)]
4. Reuters. Brazil Slashes Budget to Fight Climate Change as Deforestation Spikes. Available online: <https://www.reuters.com/article/us-brazil-deforestation-climate-change-a/brazil-slashes-budget-to-fight-climate-change-as-deforestation-spikes-idUSKBN2392LC> (accessed on 8 July 2020).
5. Gebara, M.F.; Fatorelli, L.; May, P.; Zhang, S. REDD+ policy networks in Brazil: Constraints and opportunities for successful policy making. *Ecol. Soc.* **2014**, *19*, 53. [[CrossRef](#)]
6. Van der Hoff, R.; Rajão, R.; Leroy, P.; Boezeman, D. The parallel materialization of REDD+ implementation discourses in Brazil. *Forest Policy Econ.* **2015**, *55*, 37–45. [[CrossRef](#)]
7. May, P.H.; Gebara, M.F.; Barcellos, L.M.; Rizek, M.; Millikan, B. *The Context of REDD+ in Brazil: Drivers, Actors and Institutions*, 3rd ed.; Occasional Paper 160; Center for International Forestry Research (CIFOR): Bogor, Indonesia, 2016.
8. Gallo, P.; Albrecht, E. Brazil and the Paris Agreement: REDD+ as an instrument of Brazil’s Nationally Determined Contribution compliance. *Int. Environ. Agreem.* **2019**, *19*, 123–144. [[CrossRef](#)]
9. Ministério do Meio Ambiente (MMA). *Comissão Nacional Para REDD+*; Resolução 1, de 11 de Julho de 2016: Estabelece Diretrizes Para a Criação de 4 Câmaras Consultivas Temáticas; MMA: Brasília, Brazil, 2016.
10. Vijke, M.; Brockhaus, M.; Di Gregorio, M.; Muharrom, E. Framing national REDD+ benefits, monitoring, governance and finance: A comparative analysis of seven countries. *Glob. Environ. Chang.* **2016**, *39*, 57–68. [[CrossRef](#)]
11. Den Besten, J.W.; Arts, B.; Verkooijen, P. The evolution of REDD+: An analysis of discursive-institutional dynamics. *Environ. Sci. Policy* **2014**, *35*, 40–48. [[CrossRef](#)]
12. Di Gregorio, M.; Brockhaus, M.; Cronin, T.; Muharrom, E.; Mardiah, S.; Santoso, L. Deadlock or transformational change? Exploring public discourse on REDD+ across seven countries. *Glob. Environ. Politics* **2015**, *15*, 63–84. [[CrossRef](#)]
13. Di Gregorio, M.; Gallemore, C.; Brockhaus, M.; Fatorelli, L.; Muharrom, E. How institutions and beliefs affect environmental discourse: Evidence from an eight-country survey on REDD+. *Glob. Environ. Chang.* **2017**, *45*, 133–150. [[CrossRef](#)]
14. Gebara, M.F.; May, P.; Carmenta, R.; Calixto, B.; Brockhaus, M.; Di Gregorio, M. Framing REDD+ in the Brazilian national media: How discourses evolved amid global negotiation uncertainties. *Clim. Chang.* **2017**, *141*, 213–226. [[CrossRef](#)]
15. Okhuysen, G.A.; Bechky, B.A. Coordination in organizations: An integrative perspective. *Acad. Manag. Ann.* **2009**, *3*, 463–502. [[CrossRef](#)]
16. Srikanth, K.; Puranam, P. Integrating distributed work: Comparing task design, communication, and tacit coordination mechanisms. *Strateg. Manag. J.* **2010**, *32*, 849–875. [[CrossRef](#)]
17. Pine, K.; Mazmanian, M. Artful and contorted coordinating: The ramifications of imposing formal logics of task jurisdiction on situated practice. *Acad. Manag. J.* **2017**, *60*, 720–742. [[CrossRef](#)]
18. Brockhaus, M.; Di Gregorio, M. *A Brief Overview: Component 1 on National REDD+ Policies and Processes*; CIFOR Infobrief 13; Center for International Forestry Research (CIFOR): Bogor, Indonesia, 2012.
19. Kjær, A.M. *Governance*; Polity Press: Cambridge, UK, 2004.
20. Bodin, Ö.; Prell, C. (Eds.) *Social Networks and Natural Resource Management: Uncovering the Social Fabric of Environmental Governance*; Cambridge University Press: Cambridge, UK, 2011.
21. Rayner, J.; Buck, A.; Katila, P. (Eds.) *Embracing Complexity: Meeting the Challenges of International Forest Governance: A Global Assessment Report*; IUFRO World Series Vol. 28; International Union of Forest Research Organizations (IUFRO): Vienna, Austria, 2010.
22. Humphreys, D. The evolving forest regime. *Glob. Environ. Chang.* **1999**, *9*, 251–254. [[CrossRef](#)]

23. Tarasofsky, R.G. *The International Forestry Regime—Legal and Policy Issues*; International Union for the Conservation of Nature and Natural Resources and World Wide Fund for Nature: Gland, Switzerland, 1995.
24. Tarasofsky, R.G. Assessing the international forest regime: Gaps, overlaps, uncertainties and opportunities. In *Assessing the International Forest Regime*; Tarasofsky, R.G., Ed.; International Union for the Conservation of Nature and Natural Resources: Gland, Switzerland, 1999.
25. Braatz, S. International Forest Governance: International Forest Policy, Legal and Institutional Framework. In Proceedings of the World Forestry Congress, Quebec City, QC, Canada, 21–28 September 2003.
26. Pülzl, H. The Politics of Forests: The (non-)Governance of Natural Resources within the United Nations. In Proceedings of the 5th ECPR General Conference, Potsdam, Germany, 10–12 September 2009.
27. Chaytor, B. *The Development of Global Forest Policy: Overview of Legal and Institutional Frameworks*; International Institute for Environment and Development and World Business Council for Sustainable Development: London, UK; Geneva, Switzerland, 2001.
28. Dimitrov, R.S. Hostage to Norms: States, Institutions and Global Forest Politics. *Glob. Environ. Polit.* **2005**, *5*, 1–24. [[CrossRef](#)]
29. Hoogeveen, H.; Verkooijen, P. *Transforming Sustainable Development Diplomacy: Lessons Learned from Global Forest Governance*; Wageningen University: Wageningen, The Netherlands, 2010.
30. Korhonen-Kurki, K.; Brockhaus, M.; Bushley, B.; Babon, A.; Gebara, M.F.; Kengoum, F.; Pham, T.T.; Rantala, S.; Moeliono, M.; Dwisatrio, B.; et al. Coordination and cross-sectoral integration in REDD+: Experiences from seven countries. *Clim. Dev.* **2016**, *8*, 458–471. [[CrossRef](#)]
31. Ravikumar, A.; Larson, A.; Duchelle, A.; Myers, R.; Gonzales Tovar, J. Multilevel governance challenges in transitioning towards a national approach for REDD+: Evidence from 23 subnational REDD+ initiatives. *Int. J. Commons* **2015**, *9*, 909. [[CrossRef](#)]
32. Larson, A.M.; Brockhaus, M.; Sunderlin, W.D. Land tenure and REDD+: The good, the bad and the ugly. *Glob. Environ. Chang.* **2013**, *23*, 678–689. [[CrossRef](#)]
33. Gebara, M.F.; Sills, E.; May, P.; Forsyth, T. Deconstructing the policyscape for reducing deforestation in the Eastern Amazon: Practical insights for a landscape approach. *Environ. Policy Gov.* **2019**, *29*, 185–197. [[CrossRef](#)]
34. Deschamps, P.R.; Larson, A.M. *The Politics of REDD+ MRV in Mexico: The Interplay of the National and Subnational Levels*; Occasional Paper 171; Center for International Forestry Research (CIFOR): Bogor, Indonesia, 2017.
35. Sanders, A.; Hyldmo, H.; Prasti, H.R.; Ford, R.; Larson, A.; Keenan, R. Guinea pig or pioneer: Translating global environmental objectives through to local actions in Central Kalimantan, Indonesia’s REDD+ pilot province. *Glob. Environ. Chang.* **2017**, *42*, 68–81. [[CrossRef](#)]
36. Myers, R.; Larson, A.; Ravikumar, A.; Kowler, L.; Yang, A.; Trench, T. Messiness of forest governance: How technical approaches suppress politics in REDD+ and conservation projects. *Glob. Environ. Chang.* **2018**, *50*, 314–324. [[CrossRef](#)]
37. Trench, T.; Larson, A.M.; Libert Amico, A.; Ravikumar, A. *Analyzing Multilevel Governance in Mexico: Lessons for REDD+ from a Study of Land-Use Change and Benefit Sharing in Chiapas and Yucatán*; Working Paper 236; Center for International Forestry Research (CIFOR): Bogor, Indonesia, 2018.
38. Peters, B. The challenge of policy coordination. *Policy Des. Pract.* **2018**, *1*, 1–11. [[CrossRef](#)]
39. Lindblom, C.E. *The Intelligence of Democracy. Decision Making through Mutual Adjustment*; Free Press: New York, NY, USA, 1965.
40. Scharpf, F.W. Games Real Actors Could Play: Positive and Negative Coordination in Embedded Negotiations. *J. Theor. Politics* **1994**, *6*, 27–53. [[CrossRef](#)]
41. Sabatier, P. An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein. *Policy Sci.* **1988**, *21*, 129–168. [[CrossRef](#)]
42. Sabatier, P. Top–Down and Bottom–Up Approaches to Implementation Research: A Critical Analysis and Suggested Synthesis. *J. Public Policy* **1986**, *6*, 21–48. [[CrossRef](#)]
43. Babon, A.; McIntyre, D.; Gowae, G.Y.; Gallemore, C.; Carmenta, R.; di Gregorio, M.; Brockhaus, M. Advocacy coalitions, REDD+, and forest governance in Papua New Guinea: How likely is transformational change? *Ecol. Soc.* **2014**, *19*, 16. [[CrossRef](#)]
44. Brockhaus, M.; Di Gregorio, M.; Carmenta, R. REDD+ policy networks: Exploring actors and power structures in an emerging policy domain. *Ecol. Soc.* **2014**, *19*, 29. [[CrossRef](#)]
45. Habermas, J. A PostScript to Knowledge and Human Interests. *Philos. Soc. Sci.* **1973**, *3*, 182–185.

46. Habermas, J. *Communication and the Evolution of Society*; Heinemann: London, UK, 1979.
47. Weible, C. Beliefs and Perceived Influence in a Natural Resource Conflict: An Advocacy Coalition Approach to Policy Networks. *Political Res. Q.* **2005**, *58*, 461–475. [[CrossRef](#)]
48. Hiraldo, R.; Tanner, T. Forest Voices: Competing Narratives over REDD+. *IDS Bull.* **2011**, *42*, 42–51. [[CrossRef](#)]
49. Pistorius, T.; Schaich, H.; Winkel, G.; Plieninger, T.; Bieling, C.; Konold, W.; Volz, K. Lessons for REDDplus: A comparative analysis of the German discourse on forest functions and the global ecosystem services debate. *For. Policy Econ.* **2012**, *18*, 4–12. [[CrossRef](#)]
50. Dake, K. Orienting dispositions in the perception of risk: An analysis of contemporary worldviews and cultural biases. *J. Cross Cult. Psychol.* **1991**, *22*, 61–82. [[CrossRef](#)]
51. Dake, K. Myths of nature: Culture and the social construction of risk. *J. Soc. Issues* **1992**, *48*, 21–37. [[CrossRef](#)]
52. Dake, K.; Wildavsky, A. Theories of risk perception: Who fears what and why? *Daedalus* **1990**, *119*, 41–60.
53. Dake, K.; Wildavsky, A. Individual differences in risk perception and risk-taking preferences. In *The Analysis, Communication, and Perception of Risk*; Garrick, B.J., Gekler, W.C., Eds.; Plenum: New York, NY, USA, 1991.
54. Haraway, D.J. *Simians, Cyborgs, and Women: The Reinvention of Nature*; Routledge: New York, NY, USA, 1991.
55. Angelsen, A.; Martius, C.; De Sy, V.; Duchelle, A.E.; Larson, A.M.; Pham, T.T. (Eds.) *Transforming REDD+: Lessons and New Directions*; Center for International Forestry Research (CIFOR): Bogor, Indonesia, 2018.
56. Arts, B.; Ingram, V.; Brockhaus, M. The performance of REDD+: From global governance to local practices. *Forests* **2019**, *10*, 837. [[CrossRef](#)]
57. McDermott, C.; Coad, L.; Helfgott, A.; Schroeder, H. Operationalizing social safeguards in REDD+: Actors, interests and ideas. *Environ. Sci. Policy* **2012**, *21*, 63–72. [[CrossRef](#)]
58. Lemos, M.C.; Agrawal, A. Environmental Governance. *Annu. Rev. Environ. Resour.* **2006**, *31*, 297–325. [[CrossRef](#)]
59. Gebara, M.; Agrawal, A. Beyond rewards and punishments in the Brazilian Amazon: Practical implications of the REDD+ discourse. *Forests* **2017**, *8*, 66. [[CrossRef](#)]
60. Osborne, T. Carbon forestry and agrarian change: Access and land control in a Mexican rainforest. *J. Peasant Stud.* **2011**, *38*, 859–883. [[CrossRef](#)]
61. Osborne, T. Tradeoffs in carbon commodification: A political ecology of common property forest governance. *Geoforum* **2015**, *67*, 64–77. [[CrossRef](#)]
62. Fairhead, J.; Leach, M.; Scoones, I. Green grabbing: A new appropriation of nature? *J. Peasant Stud.* **2012**, *39*, 237–261. [[CrossRef](#)]
63. Asiyanbi, A.P. A political ecology of REDD+: Property rights, militarised protectionism, and carbonised exclusion in Cross River. *Geoforum* **2016**, *77*, 146–156. [[CrossRef](#)]
64. DeShazo, J.L.; Pandey, C.L.; Smith, Z.A. *Why REDD Will Fail*; Routledge Focus: New York, NY, USA, 2016; 126p, ISBN 978-0-41572-926-0.
65. Cabello, J.; Gilbertson, T. A colonial mechanism to enclose lands: A critical review of two REDD+-focused special issues. *Ephemera* **2012**, *12*, 162–180.
66. Ministério do Meio Ambiente (MMA). *Estrategia Nacional de REDD+*; Portaria n. 370 de 2 de Dezembro de 2015; Federal Government of Brazil: Brasília, Brazil, 2015.
67. UNFCCC. Brazil's Submission of a Forest Reference Emission Level for Deforestation in the Amazonia Biome for Results-Based Payments for REDD+ under the UNFCCC. Available online: [https://redd.unfccc.int/files/20140606\\_submission\\_frel\\_brazil.pdf](https://redd.unfccc.int/files/20140606_submission_frel_brazil.pdf) (accessed on 7 July 2020).
68. Ministério do Meio Ambiente (MMA). *Brazil's Submission of a Forest Reference Emission Level (FREL) for Reducing Emissions from Deforestation in the Amazonia Biome for REDD+ Results-Based Payments under the UNFCCC from 2016 to 2020*; MMA: Brasilia, Brazil, 2018.
69. Ministério do Meio Ambiente (MMA). *Second Summary of Information on How the Cancun Safeguards Were Addressed and Respected by Brazil Throughout the Implementation of Actions to Reduce Emissions from Deforestation in the Amazon Biome*; MMA: Brasilia, Brazil, 2018.
70. Sills, E.; Atmadja, S.; de Sassi, C.; Duchelle, A.; Kweka, D.; Resosudarmo, I.; Sunderlin, W. (Eds.) *REDD+ on the Ground: A Case Book of Subnational Initiatives Across the Globe*; Center for International Forestry Research (CIFOR): Bogor, Indonesia, 2014; 505p.
71. Banco Nacional de Desenvolvimento Econômico e Social (BNDES). *Fundo Amazonia: Relatório de Atividades 2015*; BNDES: Brasilia, Brasil, 2016.



72. Sunderlin, W.D.; de Sassi, C.; Sills, E.O.; Duchelle, A.E.; Larson, A.M.; Resosudarmo, I.A.P.; Awono, A.; Kweka, D.L.; Huynh, T.B. Creating an appropriate tenure foundation for REDD+: The record to date and prospects for the future. *World Dev.* **2018**, *106*, 376–392. [CrossRef]
73. Boffey, D. Norway Halts Amazon Fund Donation in Dispute with Brazil. Available online: <https://www.theguardian.com/world/2019/aug/16/norway-halts-amazon-fund-donation-dispute-brazil-deforestation-jair-bolsonaro> (accessed on 8 July 2020).
74. Instituto Nacional de Pesquisa Espacial (INPE). *Monitoramento de Queimadas e Incêndios*; INPE: São José dos Campos, Brazil, 2019.
75. Alves-Pinto, H.; Latawiek, A.; Oliveira-Filho, F.; Duchelle, A.; Wunder, S.; Strassburg, B.; Scaramuzza, C. From REDD+ to Brazilian ENREDD+: A way forward. *Forests* **2016**, *7*, 1–19.
76. Bonfante, T.M.; Voivodic, M.; Meneses Filho, L. *Desenvolvendo Salvaguardas Socioambientais de REDD+: Um Guia Para Processos de Construção Coletiva*; Imaflora: Piracicaba, Brazil, 2010.
77. Ministério do Meio Ambiente (MMA). *Summary of Information on How the Cancun Safeguards were Addressed and Respected by Brazil throughout the Implementation of Actions to Reduce Emissions from Deforestation in the Amazon Biome between 2006 and 2010*; MMA: Brasilia, Brazil, 2015.
78. Gebara, M.; Thuault, A. *GHG Mitigation in Brazil's Land Use Sector: An Introduction to the Current National Policy Landscape*; WRI Working Paper; World Resources Institute: Washington, DC, USA, 2013; pp. 1–24.
79. Fatorelli, L.; Gebara, M.F.; May, P.; Zhang, S.; Di Gregorio, M. *The REDD+ Governance Landscape and the Challenge of Coordination in Brazil*; Infobrief 115; CIFOR: Bogor, Indonesia, 2015.
80. Duchelle, A.E.; Simonet, G.; Sunderlin, W.D.; Wunder, S. What is REDD+ achieving on the ground? *Curr. Opin. Environ. Sust.* **2018**, *32*, 134–140. [CrossRef]
81. Fernandes, G.W.; Goulart, F.F.; Ranieri, B.D.; Coelho, M.S.; Dales, K.; Boesche, N.; Bustamante, M.; Carvalho, F.A.; Carvalho, D.C.; Dirzo, R.; et al. Deep into the mud: Ecological and socio-economic impacts of the dam breach in Mariana, Brazil. *Natureza e Conservação* **2016**, *14*, 35–45. [CrossRef]
82. Garcia, E.; Ramos Filho, F.; Mallmann, G.; Fonseca, F. Costs, benefits and challenges of sustainable livestock intensification in a major deforestation frontier in the Brazilian Amazon. *Sustainability* **2017**, *9*, 158. [CrossRef]
83. Azevedo, A.; Rajão, R.; Costa, M.; Stabile, M.; Macedo, M.; Reis, T.; Alencar, A.; Soares-Filho, B.; Pacheco, R. Limits of Brazil's forest code as a means to end illegal deforestation. *Proc. Natl. Acad. Sci. USA* **2017**, *114*, 7653–7658. [CrossRef]
84. Fearnside, P.M. Brazilian politics threaten environmental policies. *Science* **2016**, *353*, 746–748. [CrossRef] [PubMed]
85. Soares-Filho, B.S.; Rajão, R.; Macedo, M.N.; Carneiro, A.; Costa, A.; Coe, M.T.; Rodrigues, H.O.; Alencar, A. Cracking Brazil's forest code. *Science* **2014**, *344*, 363–364. [CrossRef] [PubMed]
86. Observatório do Clima. How Threatened Is the Environment Under the Bolsonaro Administration, So Far? A Brief Context about Environmental Policy in Brazil, Sixteen Months into the Bolsonaro Administration. Available online: <http://www.observatoriodoclima.eco.br/wp-content/uploads/2020/06/Doc-Response-OC2.pdf> (accessed on 6 July 2020).
87. Ministério do Meio Ambiente (MMA). Floresta+ Program. Available online: <http://redd.mma.gov.br/en/the-formulation-of-brazil-s-proposal-floresta> (accessed on 6 July 2020).
88. United Nations Framework Convention on Climate Change (UNFCCC). *Decision-/CP.13 Bali Action Plan*; UNFCCC: Bali, Indonesia, 2007.
89. United Nations Framework Convention on Climate Change (UNFCCC). *Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*; Cancun Agreements, FCCC/CP/2010/7/Add. 1. Decision 1/CP. 16; UNFCCC: Cancun, Mexico, 2010.
90. United Nations Framework Convention on Climate Change (UNFCCC). *The Warsaw Framework for REDD+*; FCCC/CP/2013/10/Add.1. Decision 9/CP.19; UNFCCC: Warsaw, Poland, 2013.
91. Geertz, C. *The Interpretation of Cultures*; Basic Books Inc.: New York, NY, USA, 1973.
92. Duchelle, A.E.; Cromberg, M.; Gebara, M.F.; Guerra, R.; Melo, T.; Larson, A.; Cronkleton, P.; Börner, J.; Sills, E.; Wunder, S.; et al. Linking forest tenure reform, environmental compliance, and incentives: Lessons from REDD+ initiatives in the Brazilian Amazon. *World Dev.* **2014**, *55*, 53–67. [CrossRef]
93. Milne, S.; Mahanty, S.; To, P.; Dressler, W.; Kanowski, P.; Thavat, M. Learning from 'Actually existing' REDD+: A synthesis of ethnographic findings. *Conserv. Soc.* **2019**, *17*, 84–95.

94. Mulford, C.L.; Klonglan, G.E. *Creating Coordination Among Organizations: An Orientation and Planning Guide*; North Central Regional Extension Publication 80; Cooperative Extension Service, Iowa State University: Ames, IA, USA, 1982.
95. Campbell, S.P.; Hartnett, M. *A Framework for Improved Coordination: Lessons Learned from the International Development, Peacekeeping, Peacebuilding, Humanitarian and Conflict Resolution Communities*; National Defense University: Washington, DC, USA, 2005.
96. Meng, J.; Berger, B. Measuring return on investment (ROI) of organizations' internal communication efforts. *J. Commun. Manag.* **2012**, *16*, 332–354. [[CrossRef](#)]
97. Sparovek, G.; Berndes, G.; Barreto, A.; Klug, I. The revision of the Brazilian Forest Act: Increased deforestation or a historic step towards balancing agricultural development and nature conservation? *Environ. Sci. Policy* **2012**, *16*, 65–72. [[CrossRef](#)]
98. Brancalion, P.; Garcia, L.; Loyola, R.; Rodrigues, R.; Pillar, V.; Lewisohn, T. A critical analysis of the Native Vegetation Protection Law of Brazil (2012): Updates and ongoing initiatives. *Natureza e Conservação* **2016**, *14*, 1–15. [[CrossRef](#)]
99. Osborne, T. The de-commodification of nature: Indigenous territorial claims as a challenge to carbon capitalism. *Environ. Plan. E Nat. Space* **2018**, *1*, 25–75. [[CrossRef](#)]
100. Bodin, Ö.; Sandström, A.; Crona, B. Collaborative networks for effective ecosystem-based management: A set of working hypotheses. *Policy Stud. J.* **2017**, *45*, 289–314. [[CrossRef](#)]
101. Simon, G.L. The rise of disingenuous nature and neoliberal stealth unknown-knowns. *Environ. Plan. E Nat. Space* **2018**, *1*, 71–75.



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