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Nielsen, Tobias

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

The role of discourses in governing forests to combat climate change

Tobias Dan Nielsen

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Abstract Reducing emissions from forest degradation and deforestation, conserving and enhancing forest carbon stocks, and sustainably managing forests (REDD+) has emerged as one of the most anticipated climate change mitigation tools. This paper aims to understand and identify the underlying discourses that have dominated the emergence of REDD+, by identifying the key story lines in the policy and academic debates on REDD+. As such, this paper takes a step away from the “fine-tuning” of policy recommendations and instead studies REDD+ from a more theoretical approach with the intent to provide a critical analysis of the ideational structures that shape the policies that have emerged around REDD+. The analysis shows that ecological modernization and its accompanying story lines constitute a dominant notion of REDD+ as being able to manage the complexities of forest in a synergetic way, combining cost-efficient and effective mitigation with sustainable development. The paper also identifies the critical counter discourse of civic environmentalism, which criticizes this notion of REDD+ and instead promotes issues such as equity, the importance of local knowledge, and the participatory process. It argues that reducing deforestation involves trade-offs between economic, ecological, and social dimensions, also arguing that REDD+ fits overwhelmingly with the interest of the global North.

Keywords Climate change · REDD+ · International climate negotiations · UNFCCC · Payment for ecosystem services · Discourse analysis · Story line · Ecological modernization · Civic environmentalism

Abbreviations

CIFOR	Center for International Forestry Research
COP	Conference of Parties (annual UN climate summits)
FAO	Food and Agricultural Organization of the United Nations
LCA	Long-term cooperative action

T. D. Nielsen (✉)

Department of Political Science, Lund University, Box 52, 221 00 Lund, Sweden
e-mail: tobias.nielsen@svet.lu.se

MRV	Monitoring, reporting, verification
NGO	Non-Governmental Organization
PES	Payment for ecosystem services
REDD+	Reducing emissions from forest degradation and deforestation, conserving and enhancing forest carbon stocks, and sustainably managing forests
SBSTA	Subsidiary Body for Scientific and Technological Advice
TEEB	The Economics of Ecosystems and Biodiversity
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention for Climate Change
UN-REDD	United Nations collaborative program on REDD+

1 Introduction

Global efforts to stabilize the concentration of greenhouse gasses in the atmosphere have been seen to be practically impossible to achieve without reducing emissions caused by deforestation. This has placed deforestation squarely within climate abatement policy options, but also made forests governable in a new way by framing forests as crucial carbon stocks. As a result, avoiding deforestation has, over the past decade, become a central element of negotiation at the annual United Nations summits on climate change—the UN Framework Convention for Climate Change (UNFCCC) Conference of Parties (COPs). The focal point of this, so far, has been the UN-based mechanism named REDD+, which stands for “*reducing emissions from forest degradation and deforestation, conserving and enhancing forest carbon stocks, and sustainably managing forests.*” Although the policies on REDD+ are far from finalized,¹ a key notion is that REDD+ is expected to establish incentives for developing countries to REDD+ to “protect and better manage their forest resources, by creating and recognizing a financial value for the additional carbon stored in trees or not emitted to the atmosphere” (Corbera and Schroeder 2011, p. 89; see also Hufty and Haakenstad 2011; Kanowski et al. 2011; Angelsen et al. 2012). This “new” way of governing forests has been promoted as being able to break with decades of slow progress attempting to reduce rates of deforestation by appealing to a variety of interests, and potentially providing synergies between economic, environmental, and social issues (Angelsen et al. 2012; Pistorius 2012). However, despite its initial momentum at the international climate negotiations, the latest COP meetings have witness slow progress on REDD+ negotiations.² Critique and resistance to REDD+ has grown along with its status at the COP negotiations. Critics argue that REDD+ is too fixated on carbon stocks and that governing the Earth’s tropical rainforests is linked to different political, economic, technical, ecological, and social issues not fully acknowledged in REDD+ (Peskett et al. 2011; Thompson et al. 2011).

¹ There are, however, a number of activities in progress, such as REDD+ readiness projects (pilot projects) and capacity-building projects in different countries for the future implementation of REDD+ (cf. Cerbu et al. 2011; Angelsen et al. 2012). Additionally, there are also a number of international organizations working on REDD+ including the implementation of REDD+ activities and informing the negotiations of the lessons learned (UN-REDD, Forest Carbon Partnership Facility, REDD+ Partnership as well as a number of NGOs).

² In relation to this Antonio La Viña, Facilitator of UNFCCC negotiations on REDD+, stated in 2011 at Forest Day 5 at COP 17, “that we have come as far as we can with REDD+ negotiations.” (Author’s notes).

The argument that I present in this paper is that REDD+ policymaking is not “only” a matter of getting the most effective monitoring or the most effective financial incentives. A fundamental root of political conflict in negotiating REDD+ is how issues get defined—hence which aspects of social and physical reality are included and which are not (Hajer 1995, p. 43). In this light, forests do not immanently lead to a specific understanding, but can be viewed in different ways. For example, being the home to various species, people, and natural resources, or viewed primarily as crucial carbon sinks. Consequently, governing forests can then be viewed as a case of governing the carbon reservoirs, improving the livelihoods of the local populations, promoting biodiversity, or providing a cost-efficient mitigation option. All leading to different focus on what policies to implement to achieve different goals. To explore this, I move away from the REDD+ literature on identifying and “fine-tuning” policy recommendations for REDD+ according to pre-determined goals (Corbera et al. 2010; Fry 2011; Grainger and Obersteiner 2011). Instead, I explore the role of discourses and seek to understand how they shape the debates around the emergence of REDD+ in determining how we understand forest, what the focus of governing them should be, and what underlying rationales this conforms to. To explore this, this paper builds on the works of analyzing the role of discourses in environmental governance (cf. Hajer 1995; Feindt and Oels 2005; Hajer and Versteeg 2005; Zannakis 2009) and forestry (cf. Bäckstrand and Lövbrand 2006; Arts et al. 2010; Somorin et al. 2012) in order to map the key discourse and understanding the role of discourses in structuring the debates around the emergence of REDD+. As such, this is not a very fine-grained resolution of REDD+, but one aimed at presenting a general overview from which the fundamental debates about the underpinning structures of REDD+ can be observed.

The following section will introduce the paper’s discursive framework and introduce the key analytical: story lines and discursive power. This will be followed by the mapping of the key story lines of the general debates on REDD+. They will then be grouped according to previously identified environmental discourses. On the basis of this, I will examine the discursive power relations between the dominant environmental discourses and identify key aspects of this in relation to how REDD+ is being governed.

2 Discourse analysis and story lines

The definition of discourse that I will resort to in this paper is offered by Maarten Hajer: “Discourse can be defined as a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities” (Hajer 1995, p. 44). From this, we can see that the focus of discourse analysis is not on causality but on meaning. Discourses produce meaning about a physical reality, such as a place like a forest or a process like deforestation. By this is meant, that meaning is not given by the “phenomena itself,” but is established through discourses. Tropical rain forests can, for example, be seen as important instruments for low-cost climate mitigation or as sources of biological diversity, livelihood, and cultural values (Bäckstrand and Lövbrand 2006). Discourses favor certain descriptions of reality and empower certain policy tools while marginalizing others (Litfin 1994). If we see forests as important carbon sinks, certain policies will be more relevant than if we see them as sources of important biodiversity. Discourses represent the dominant perspectives, understandings, and knowledge regimes present in governance debates on REDD+. They set the boundaries around how we speak about a given phenomena and are deeply embedded in the formation of knowledge on a given issue. Consequently, REDD+

policies should not be seen as neutral tools, but instead seen as products of competing discourses and, thus, critically analyzed (Feindt and Oels 2005).

By understanding REDD+ at the intersection of various discourses, we are better positioned to understand the different constructions of meanings by policy actors, as well as how they act and rationalize such actions according to those meanings. This paper provides an overview of previously established environmental discourses by examining the presence of their discursive story lines in both the literature and practitioner's debates on REDD+. In the words of Hajer, a story line:

...is a generative sort of narrative that allows actors to draw upon various discursive categories to give meaning to specific physical or social phenomena. The key function of story lines is that they suggest unity in the bewildering variety of separate discursive component parts of a problem like acid rain. The underlying assumption is the people do not draw on comprehensive discursive systems for their cognition rather these are evoked through story lines. (Hajer 1995, p.56)

Every discourse has its key story line that attempts to attract people. As such, they are able to bring together various actors across fields with overlapping perceptions and understandings on issues such as the role of markets, equity, or scientific advice in governing REDD+ (Hajer 1995). Story lines are rhetorical devices deployed to convince listeners or readers by putting a situation in a particular light (Dryzek 2005, p. 19), but are also rhetorical fuel for promoting certain ideas, understandings, and perceptions (Smith and Kern 2007). A story line is often a rather complex chain of arguments, though one which can produce telling and attractive images while only uttering a few words or a couple of sentences (Zannakis 2009, p. 56). For example, the story line *win-win-win* (see below) is argued through a comprehensive set of reports and studies (cf. Stern Review 2006), but is simple in its message. Actors involved in the debates can use these "simplistic" story lines to present a more complex debate. However, by using specific story lines, actors also buy into the norms, values, and perceptions of the story lines (Smith and Kern 2007). Hence, story lines can be seen as powerful devices through which actors make sense of complex issues without reverting to comprehensive and cumbersome explanations, but at the same time help constitute a policy area such as REDD+ according to discursive structures. I argue that story lines are important parts of discourses because they both attract potential audiences and present the core values, norms, and ideational structures of discourses. They provide narratives that illustrate the policy rhetoric of scientists, environmentalists, politicians, or businesses. It is the story lines and their key understanding, rhetoric's and policy rationales that this paper seeks to map. By mapping them, we can identify the presence of discursive practices in the context of REDD+. In doing this, the paper provides a map of the key story lines and discourses surrounding REDD+, the understandings of the core issues of REDD+, the policy rhetoric, and the issues that emerge from them.

However, not all story lines and discourses have the same influence on REDD+. To examine this further, I will apply the concept of discursive power, e.g. the ability of a discourse to become the taken-for-granted understanding of a given issue, or in the case of REDD+ the dominant perspectives, understandings, and knowledge regime (Epstein 2008). Different discourses favor certain descriptions of reality and empower certain policy tools while marginalizing others. They represent specific knowledge regimes, which set borders around how we understand and speak about a phenomenon like deforestation, and are deeply embedded in the formation of knowledge on a given issue (ibid). The power struggles between these discourses shape how we understand and perceive what issues are most important, and subsequently, the different policy mechanisms that REDD+ should focus on to help solve them. The various discourses dominant in the REDD+ debate are

not of equal ability to shape the debates, so on the basis of the data gathered, this paper will examine the relative power of each discourse. Due to its format, this paper will not deliver a full account of the discursive power struggle within REDD+, but on the basis of the material will provide an indication of what discourse(s) dominates REDD+.

The data I have used for my analysis primarily comes from an academic literature review I gather based on literature search on LibHub, Google Scholar, and online forays for REDD+. It also includes a review of “gray literature,” including texts from the Center for International Forestry Research (CIFOR), UN-REDD, REDD-monitoring³, and Climate-I,⁴ (to name a few), as well as examining policy recommendations such as the UNFCCC negotiation text. Moreover, I conducted observations at COP 17 in Durban by attending the Subsidiary Body for Scientific and Technological Advice (SBSTA) and Long-Term Cooperative Action (LCA) negotiations—when possible, and by interviewing negotiators⁵ and attending the NGO briefings. I also conducted five informal expert interviews in 2011 and 2012. In this paper, I have provided a number of quotes from different texts and actors to illustrate the core message of the story lines and how they appear in the data I have collected. The limitations of using story line analysis are that it is not as straightforward as some other approaches with regard to displaying the exact steps and methods I have done my analysis with; by presenting these quotes, I hope to give the reader an illustration for how these story lines appear.

3 Key story lines of REDD+

3.1 Cost-efficiency

This cost-efficient reasoning in sustaining forests saw its key advocates tying together economics and climate change in influential reports by putting an economic value on ecosystem services, which include the following: Stern Review (2006), McKinsey’s Global Greenhouse Gas Abatement Curve (2006), the Eliasch Review (2007) and The Economics of Ecosystems and Biodiversity (TEEB), as well as academic papers such as Gullison et al. (2007) and Kindermann et al. (2008). All of these reports promote reducing deforestation as cost-effective to some extent, with some proponents of this rationale promoting “reducing deforestation” as a cost-efficient mitigation alternative to an otherwise expensive and daunting future climate change scenario.

Curbing deforestation is a highly cost-effective way of reducing greenhouse gas emissions. (Stern Review, Executive Summary 2006, p. xxxv)

A central element ... will be the inclusion of the forest sector in global carbon markets. In doing so, the costs of reducing global carbon emissions will be reduced substantially, and lower costs will mean that a more ambitious overall emissions target will be possible. (Eliasch 2008, p. xii)

This story line was especially dominant in the early stages of REDD+, where it was accepted as common knowledge (Stephan 2012), and it has been argued that these reports helped to propel deforestation onto the international stage by offering an interesting economic perspective to an otherwise somewhat neglected topic (Agrawal 2005; Angelsen et al. 2012).

³ www.redd-monitor.org

⁴ <http://climate-i.iisd.org/>

⁵ From Norway, Bolivia, Denmark, and the Philippines.

3.2 Win-win-win

This story line promotes the belief that REDD+ cannot only provide effective and cost-efficient emission reduction, but also improve forest conservation and reduce poverty (Hufty and Haakenstad 2011; Kanowski et al. 2011). As such, the win-win-win story line follows the notion that the environment and development can become a win-win situation, rather than a zero-sum game (Zannakis 2009). This notion has allowed REDD+ to generate support from a diverse set of actors (McDermott et al. 2011). It carries a neo-liberal rationale that emphasizes the economic and market aspects of REDD+ while also advocating for the compatibility of economics with ecology (Gullison et al. 2007; Venter et al. 2009) and its potential to contribute to poverty reduction and improved rural livelihoods (Angelsen 2008; Campbell 2009). In this light, REDD+ potentially offers a panacea solution that allows society to continue living as it does now. The win-win-win story line arguably provides one of the greatest appeals of REDD+, which in my observation is often the core “selling point” of REDD+ (cf. UN-REDD and Forest Carbon Partnership Facility homepages). This story line connects to the previous, but goes further than simply perceiving REDD+ as a cost-efficient mitigation tool (see below):

Tackling the causes of poverty through an approach that offers local communities alternatives to deforestation is an important part of efforts to reinforce and sustain action. (Stern 2006, p. 586)

3.3 Market rationale

This story line brings in the logic of the market, along with its “proven” abilities of innovation and allocation of scarce resources, to provide the best solutions to deforestation and forest degradation by internalizing environmental costs (Baker 2007). The commonly used PES schemes in the implementation of REDD+ are an example of this (Corbera and Schroeder 2011; Hajek et al. 2011; Kanowski et al. 2011). Secondly, the story line presents the role of the private sector as being pivotal in REDD+ since it offers technical innovation in resolving issues connected to REDD+, e.g. companies specializing in monitoring carbon sequestration (Corbera and Schroeder 2011; Angelsen et al. 2012). Lastly, it connects REDD+ to the carbon market, framing it as the only way to secure adequate funding:

Like it or not, if we expect real climate gains from REDD, it means a carbon market... Bilateral and multilateral funding that has been flowing thus far would not be enough to push REDD+ to the scale it needed to result in a significant reduction of emissions. (Andrea Tuttle, a director at the Pacific Forest Trust in CIFOR 2011)

The successful formation of a REDD+ governance mechanism is dependent on a successful linkage to the carbon market, which is indispensable in reaching the anticipated funding needed to run REDD+ schemes, as government funds will not be enough (Simula 2010, p. 62). The market is therefore viewed as the best method for allocating funding in REDD+ activities. Hence, it should be able to operate with the least amount of regulatory restraint, and the funding for REDD+ mechanism should come directly from a carbon market. This point is often a source of heated controversy at the COP negotiations on REDD+, with countries including Bolivia, and international organizations such as Friends of the Earth, in stark opposition.

3.4 Carbon accounting

The rhetoric of this story line portrays forests as carbon sinks, which through technical advances can be subjected to management and control. By depicting forests as reservoirs and sinks for carbon, the discourse has “paved the way for expert-oriented narratives focusing on scientifically credible measurement techniques and verification schemes” (Bäckstrand and Lövbrand 2006, p. 62). Technical terms include: carbon leakage, additionality, and baseline comparison, whereas issues connected to carbon monitoring, reporting, and verification (MRV) are at the core of this category, and have become an integral part of the REDD+ policy debates.⁶ The story line draws attention to the calculative practices that turn stocks and flows of forest carbon into objects of governance (Lövbrand and Stripple 2011). According to the rationale of this story line, a core task in realizing REDD+ is mapping the earth “system” (in this case, forest sequestration and other forest ecosystem services) and applying an administrative rationale to help guide a path toward sustainable forestry. The story line hinges on an ability to account for stocks and flows of carbon, which has arguably created a demand within REDD+ to develop (competing) guidelines for precisely measuring carbon sinks and sequestration in the world’s tropical forests. The story line can be found in the numerous guidelines and toolkits on how to manage the operationalization of different technical issues such as carbon monitoring, and on how to set reference levels. As the statement below indicates, the administrative rationale is more intrinsically argued (cf. Winrock International, UN-REDD, Meridian Institute, Forest Carbon Partnership Facility). Consequently, the story line is closely related to scientific expertise in the form of the numerous guidelines and toolkits produced by a variety of actors. This story line is often connected to the market rationale and technocratic rationale (see below) as illustrated in the following quote:

To provide REDD policymakers and practitioner communities with the information, analysis and tools they need to ensure effective and cost-efficient reduction of carbon emissions with equitable impacts and co-benefits. Tools will be developed that are tailor-made to the needs of policy formulations and strategy design, including toolkits, guidelines and manuals... (Center for International Forestry Research (CIFOR) in Paker 2009, p. 104)

3.5 Technocratic rationale

A story line directly related to the carbon accounting story line is the technocratic rationale. It contains clear liberal institutional connotations by placing an emphasis on the governance capabilities of international organizations. For example, Obersteiner et al. 2009 argue for a new institution to manage monitoring, reporting, and verifying issues connected to REDD+ (a similar proposal can be seen in Cerbu et al. 2011). It also emphasizes recommendations on how to improve the management of REDD+ by improving measurement capabilities, learning from REDD+ readiness projects or including the voices of local communities to a greater extent (see special issue on REDD+ edited by Corbera and Schroeder 2011). The key rationale of this story line is that managing nature and providing

⁶ The continuing debate about whether to use Reference Levels (RL) versus Reference Emissions Levels (REL) could be used as an example. The exact distinction is unclear to many practitioners, and the level of technical detail is so high that it leaves some practitioners not able to fully participate in the discussions (interview with observer at the Bonn SBSTA meeting 2011 on “Forest reference emission levels and forest reference levels for implementation of REDD-plus activities”).

mitigation and adaptation policies (based on expert scientific research and advice) are the means best suited for solving the issues concerning REDD+. Hence, through scientific expertise, societies are able to monitor, understand, and manage human patterns of pollution and environmental degradation. Stocks and flows of carbon are therefore constructed as administrative domains amenable to certain forms of political rationality such as government regulation (Lövbrand and Stripple 2011, p. 186). In some ways, this story line is a logical continuation of the previous carbon accounting story line. The ways in which carbon can be measured, quantified, demarcated, and statistically aggregated lead to a specific rationality, thereby placing a strong need on the role of institutions, “good governance” and effective laws to protect the environment and human well-being (Nasi et al. 2011).

3.6 Beyond markets

This story line criticizes the carbon fixation of REDD+ and can be seen to be critical to most of the previous story lines mentioned in this paper, particularly the ones promoting a market-based approach. Instead, it places a greater emphasis on alternative areas to focus on including the social dimension and biodiversity over a narrow focus on carbon sequestration:

The notion that REDD will make “forests worth more alive than dead” is wishful thinking in most cases, and worse, builds upon the misguided notion that money and finance is the solution, and that policy measures will not work and should not even be considered.... The carbon market is a seductively simple mechanism that promised to solve lots of big, complicated problems, and do so in a way that would bring “wins” to the North, who were looking for a cheap way out, and “wins” to the South, who were looking for investments. Its attractiveness and durability is in part due to its elegance: saving, or making, money for everyone while reducing emissions in a quantifiable manner, but also, in part because an entire industry has grown up around it now, high-tech CO₂ measurement, private consultancies and conservation NGOs who now have a vested interest in making it work. (Andy White, Coordinator of the Rights and Resources Initiative (Lang 2011)).

The story line projects REDD+ not as maximizing synergies (e.g. win-win-win), but as involving trade-offs between economic growth and sustainable forest management (Glück et al. 2010). Furthermore, the promise of a win-win-win scenario is a rhetorical ploy that attempts to reconcile the irreconcilable, and is designed to take the wind out of the sails of the “real” environmentalist (Hajer 1995, p.34). It is very critical toward the role of a carbon market as a means of funding for REDD+, as well as a means for the equitable distribution of resources. REDD+ oversimplifies the processes that lead to forest degradation and deforestation by simplistically blaming the communities that live in and around those forests,⁷ rather than, for example, the production processes of timber (Dauvergne and Lister 2011). It also criticizes the emphasis on market-based instruments to implement REDD+, questioning the taken-for-granted effectiveness and efficiency. Instead, there should be an emphasis on equity and legitimacy as criteria for implementation and assessments of REDD+ activities. The story line focuses on the question of which actors have the right to benefit from REDD+, highlighting a concern that a focus on effectiveness

⁷ Assigning blame is a critical tool for legitimizing REDD+ governmental efforts to control the locations and behaviors of these communities (Thomson et al. 2011:108).

and efficiency could result in unfair incentives (e.g., rewarding wealthy actors for reducing their illegal behavior), as well as increasing inequality and undermining the moral and political legitimacy of REDD+ (Peskett et al. 2011; Krause et al. 2013). An example of this has been the promotion of the three e's (effectiveness, efficiency, and equity) approach to implementing REDD+ activities (Angelsen et al. 2012).

3.7 Local not only global

This story line emphasizes the social dimension as being crucial for REDD+ governance, both in terms of empowering local stakeholders and addressing some of the underlying social drivers of deforestation (cf. Agrawal and Angelsen 2009; Ezzine-de-Blas et al. 2011; Hajek et al. 2011; Lyster 2011). Consequently, it highlights a participatory deficit in the REDD+ policy process while arguing that in order to build more effective governance structures, REDD+ has to give a voice to the groups who are affected or who have a legitimate interest or stake in REDD+ (Hajek et al. 2011). Thus, national REDD+ projects can secure higher levels of “forest carbon-related co-benefits on multiple dimensions” by taking the lessons of community forestry into account when designing REDD+ initiatives. A key argument of this story line is that local knowledge has not been adequately represented during the policy process. Furthermore, the uncertainty and risks related to climate change have led to a political demand for rational and objective knowledge, which has further minimized the role of indigenous knowledge (Hiraldo and Tanner 2011).

3.8 Biodiversity (seeing beyond the trees)

This story line also promotes the idea of looking beyond carbon and viewing tropical rainforests as purely carbon sinks, which neglects the importance of their rich biodiversity (for the survival of ecosystems, for the livelihood of local populations, but also for boosting the mitigation and adaptations possibilities of forest). The fear is that if REDD+ does not include a clause on biodiversity, the effects could be devastating. As such, REDD+ is not an “easy” mitigation tool, but it has the potential to have a catastrophic impact on biodiversity. Monoculture tree plantations that are great at carbon sequestration and storage, but do nothing to preserve the unique biodiversity of tropical rain forests, could in theory replace large areas of rain forest.⁸ Although the issue of monocultures is mentioned in the negotiation on safeguards (FCCC/CP/2010/7/Add.1), it is still a source of controversy among practitioners (Agrawal and Angelsen 2009; field notes).

3.9 North–South divide

Another key critical story line frames REDD+ in terms of the North–South divide (Cadman and Maraseni 2012), giving voice to the critiques of REDD+ by indigenous community groups, which feel they are losing control over their forestland and being overrun by the rich global North. For example, some developing countries resist the financial safeguards that REDD+ seeks to impose, arguing that it infringes upon their sovereignty (observation COP 17). This story line refers to the notion of viewing REDD+ as an example of “carbon colonialism,” thereby implying a continued indirect domination of Southern countries by the rich North (Cabello and Gilbertson 2012). Here, REDD+ is

⁸ Plantations now constitute seven percent of the total forest area (UNEP 2012).

perceived as a low-cost, emission reduction mechanism located in the South, yet one whose profitable exploitation works to the benefit of consumers and companies in the North. As a result, REDD+ becomes a “loophole” for avoiding the more costly mitigation efforts at home, while green washing and evading the historical responsibility of the current level of man-made concentrations of CO₂ in the atmosphere (White 2011). In other words, REDD+ allows the North to deflect responsibility for more costly emissions reductions while promising a “win-win” transfer of resources to the global South (McDermott et al. 2011, p.13).

This table summarizes the key story lines of REDD + that I have identified (Table 1).

4 Connecting story lines to environmental discourses and examining power relations

As mentioned earlier, story lines are the key narratives of discourses, and this section will relate the story lines in the previous section to key environmental discourses as identified in previous studies (see Zannakis 2009; Arts et al. 2010). Each story line can be related to more than one discourse, e.g. the cost-efficiency story line could be linked to neo-liberalism, ecological modernization and sustainable development (Zannakis 2009, p.70). The task for this section has been to group them according to as few discourses as possible, both

Table 1 (REDD+ story lines)

Cost-efficiency	REDD+ is a cost-effective and relatively “easy” mitigation tool
Win-win-win	Able to maximize synergies between economic development, ecology, and social issues, such as poverty eradication
Market rationale	Performance-based PES schemes Carbon market necessity Private sector pivotal
Carbon accounting	Ability to account for stocks and flows of forest carbon Forest viewed as carbon sinks Highly technical language of debates
Technocratic rationale	Turning carbon into a governable commodity Important role of institutions Emphasis on “good governance” Standardization and best practice guides
Beyond market	Critical to performance-based PES schemes Trade-offs between economic development Ecology and social issues Against linking to carbon market
Local not global	Participatory deficit Emphasis on local views, issues, and knowledge Importance of livelihood activities
Biodiversity (seeing beyond the trees)	Carbon focus neglects importance of biodiversity and ecosystems Critical to potential encouragement of monoculture plantations within REDD+
North–South divide	Carbon colonialism North deflects their mitigation responsibilities Infringement on sovereignty

to acquire a parsimonious overview, but more importantly to examine the power of key discourses. The argument here is that the more dominant the discourse, the more REDD+ story lines it captures (but also which story lines are most commonly used). The story lines of the previous section can be grouped into the ecological modernization and civic environmentalism discourses, which shows us that they are key discourses on the emergence of REDD+. The following section will present these discourses and argue which can be seen as the more dominant (e.g., hegemonic) of the two.

4.1 Ecological modernization

Ecological modernization rose in the 1980s as a challenge to the notion that modern civilization was facing a hard choice between preserving nature and economic growth, as the notion of “limits to growth” suggested at the Club of Rome in 1972. It emphasizes the role of the market and technological innovation to be able to reverse the negative impact economic development has had on the environment. It criticized the failures of “command-and-control” policies and promotes a key role of economic incentives in environmental policy making (Hajer 1995; Baker 2007). A key milestone in the institutionalization of ecological modernization in the environmental domain was the global endorsement of the Brundtland Report “Our Common Future” at the Earth Summit in Rio in 1992 (Milanez and Bührs 2007). In relation to REDD+, ecological modernization embraces the *cost-efficiency*, *win-win-win*, *market rationale*, *carbon accounting*, and *technocratic rationale* story lines. As such, it promotes the language of business and conceptualizes environmental pollution as a matter of inefficiency while operating within the boundaries of cost-effectiveness and administrative efficiency (Baker 2007). Ecological modernization suggests that the recognition of the ecological crisis actually constitutes a challenge for business, though it turns this challenge into a vehicle for its very innovation and importantly, no structural change is then needed (Hajer 1995, p. 34). The role of ecological modernization in the context of REDD+ is evident by the dominance of market-driven, techno-managerial, and carbon-focused approaches to reducing tropical deforestation and for REDD+ and that this, at least initially, has been accepted as an effective and cost-efficient mitigation tool. Looking beyond the rhetoric of an effective and cost-efficient solution with multiple benefits, many of the core ideas and proposed instruments of REDD+, such as PES schemes and carbon market finance options, as well as its reliance on science, technology, and expert-led processes, can be viewed as being inherent to ecological modernization’s approach to tackling environmental degradation (cf. Hajer 1995; Bäckstrand and Lövbrand 2006; Baker 2007; Milanez and Bührs 2007; Zannakis 2009; Arts et al. 2010).

Ecological modernization arguably represents a dominant thinking and policy practice in the negotiations on REDD+. The discursive framing of forests as carbon sinks being subject to management and control according to a specific rationale is a key feature of this (Lövbrand and Stripple 2011). Highly technical concepts, such as reference levels, additionality, MRV, have been institutionalized in REDD+ debates, even among critical NGOs (cf. reed-monitor) and on-the-ground activities (Hajek et al. 2011). This very technical level of REDD+ makes it hard to voice a different story lines to compete with science of this discourse. Moreover, the *market rationale* and *win-win-win* story lines have, in my view, become almost synonymous with REDD+, as they have become the blueprint for how to potentially operationalize REDD+, with some forest experts arguing that instruments, such as performance-based PES schemes, are what sets REDD+ aside from the limited success of previous attempts to reduce tropical deforestation (Seymour and

Angelsen 2012, p. 321). On the same note, the links to a carbon market and the promise of cheap mitigation option have been seen to draw in a new and crucial actor in efforts to reduce deforestation—namely the private sector (Simula 2010; Seymour and Angelsen 2012). Furthermore, clear lines have been drawn between ecological modernization and organizations, including the UNEP, FAO, and the World Bank (Bäckstrand and Lövbrand 2006), which are all important players in operationalizing REDD+. As such, I conclude on the basis of my analysis that ecological modernization can be seen as the dominant discourse on the emergence of REDD+. Indeed, scholars have pointed out that REDD+ offers, for the first time in history, a widespread consensus on the “problem,” e.g. carbon emissions from forest loss and an appropriate means to address it, e.g. through financial incentives (McDermott et al. 2011, p. 92). However, ecological modernization is far from homogenous, it has a particularly broad definition and scholars have pointed out the embedded tension between the neo-liberal and technocratic rationales of the discourse (Zannakis 2009) and between the market rationale and concerns for biodiversity (Hajer and Versteeg 2005).

4.2 Civic environmentalism

As the mapping of story lines indicate, ecological modernization does not tell the full story of REDD+. The more critical story lines identified in the paper represent a critical counter discourse—civic environmentalism. This environmental discourse became popular in the 1992 United Nations Conference on Environment and Development (Arts et al. 2010). Associated with this discourse is a language that talks of “stakeholders” and “participation,” both of which entered the international arena accompanied by terms, such as democratic efficiency, bottom-up approaches, and governance arrangements (Bäckstrand and Lövbrand 2006). Civic environmentalism includes a multitude of radical and more reform-oriented arguments for mitigating climate change that are critical of an overemphasis on markets and technical experts ability to solve environmental issues (ibid, p. 64). The former emphasizes the relations of the powerful and powerless. It has a strong anti-neo-liberal stand and argues that the enduring power structures of “sovereignty, capitalism, scientism, patriarchy and even modernity generate and perpetuate the environmental crisis while consolidating structural inequalities between the North and South.” (Bäckstrand and Lövbrand 2007, p. 132). The more reform-orientated arguments of civic environmentalism stress the need plurality, but that the underlying norms for this plurality should be based on equity, participation, legitimacy, and accountability (ibid). Despite its heterogeneity, the core argument of civic environmentalism that I use in the paper is the notion of a need to place a great emphasis on environmental justice, ecological sustainability, equity, local knowledge systems and the inclusion of local stakeholder participation, all of which civic environmentalism promotes as crucial for a successful environmental governance (Arts et al. 2010; Zannakis 2009).

In the case of REDD+, civic environmentalism is critical to the “logic of the market” (e.g. the PES schemes) and the narrow focus of REDD+ on carbon mitigation. Having seen forestry issues gain fame through their heavy linkage with economic efficiency during the emergence of REDD+ (Angelsen et al. 2012), the aim of civic environmentalism is to try and reclaim an influence on how forestry issues should be dealt with. The discourse argues for a broader understanding of the role of forests and their vital ecosystem services to the survival of the human race (Arts et al. 2010). In this respect, Earth is seen as a fragile ecosystem that can support life, but only to a certain limit, thereby necessitating a certain “limit to growth” rationale (Zannakis 2009). It argues for a centrality of social and

environmental safeguards that should trump the narrow focus on the commodification forest carbon fluxes. Civic environmentalism discourse could be argued to have had a marginal effect on policy (Bäckstrand and Lövbrand 2006). However, some critical perspectives on sink projects have nevertheless gained ground (Thompson et al. 2011) and symbolized by the adding of the “+” to REDD (at COP 13 in 2007), which mentions sustainable forest management. In addition, the inclusion of safeguards at the 2010 COP 16 REDD + negotiation text (UNFCCC/CP/2010/7/Add.1) can be seen as a significant change in the REDD+ negotiations up until then (Pistorius 2012), as well as the increasing emphasis on issues such as land tenure, biodiversity and the growing criticism of market financing of REDD+. The power of civic environmentalism can also be seen in the growing acceptance that REDD+ is only achievable through creating democratic, transparent and participatory projects that consider the needs and aspirations of local communities (Fry 2011; Nasi et al. 2011).

There are, in addition to this, a number of local groups and NGOs that directly oppose REDD+, and do not see any modification of REDD+ as possible or desirable. Instead these voices argue that REDD+ should be abandoned and that no matter how it is modified the neo-liberal roots of REDD+ will in the end provide more harm than good to forests, local communities, and the environment (cf. reed-monitoring). Although their views and perceptions are not as evident as other actors in the REDD+ policy and academic debate, which generally does not questioning the fundamental ideational framework of REDD+, their views are more in accordance with a radical interpretation of civic environmentalism (see above). This radical interpretation of civic environmentalism signifies a future threat to the implementation of REDD+ especially if these voices gather further momentum.

5 Conclusion

In this paper, I have shown the underlying discourses that have dominated the emergence of REDD+. The analysis shows that ecological modernization and its story lines constitute the dominant notion of REDD+ as being able to manage the complexities of forest in a synergetic way, combining cost-efficient and effective mitigation with sustainable development. The paper also identifies civic environmentalism as a critical counter discourse, which criticizes the dominant notion of REDD+ and instead promotes issues such as equity, the importance of local knowledge, and the participatory process. Instead, civic environmentalism argues that reducing deforestation involves trade-offs between economic, ecological, and social dimensions, and also arguing that REDD+ fits overwhelmingly with the interest of the global North. The dominance (and institutionalization) of ecological modernization is evident from the policy options and academic debates on REDD+ as shown in this paper. The result of a more powerful ecological modernization over civic environmentalism can be summed up as: (1) the favoring of commodification of forest carbon stocks over less easily measured social and environmental attributes that may be important to natural and social resilience; (2) a focus on global rather than local processes and financial (PES) instruments at the expense of alternative options; and (3) an over-reliance on experts and advanced technology, leading to the exclusion of locally based knowledge and a failure to foster widespread understanding and support (see also McDermott et al. 2011, p. 97). Nevertheless, the story of REDD+ has not been written yet. The negotiations are still under way and many significant issues still need to be solved if REDD+ is to be fully operationalized. The balance between the discourses can shift over time and new discourses and story lines may yet emerge.

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