



**Talking the talk of change:
REDD+ discourse in the national media**

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Talking the talk of change: REDD+ discourse in the national media

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Abstract

This paper investigates the main discourses around REDD+ as expressed by policy actors in the national media across seven REDD+ countries and assesses the extent to which these public discourses support or challenge the drivers of deforestation and forest degradation. The data are position statements of policy actors on REDD+ reported in three national print media outlets between 2005 and 2010 in each country. Using Bäckstrand and Lövbrand's (2006) classification of environmental discourses around tree planting, the paper identifies the predominance of weak ecological modernization discourse, which is characterised by simplistic, win-win storylines that do not directly challenge drivers of deforestation. Foreign actors in particular (funders and international NGOs) as well as state actors have adopted this discourse. Most of these frames fail to challenge the existing policies driving deforestation and denote a lack of engagement of state policy actors with potential trade-offs between economic, ecological and social outcomes. Policy actors that challenge the status quo, and draw attention to possible trade-offs are a minority and they do so indirectly. For example, they recognize the need for improvements in forest governance, draw attention to the possible adverse consequences of REDD+ on local livelihoods, and to a lesser extent demand improved participation and empowerment in decision making processes. The paper concludes that media discourse reveals a latent resistance to change, that might indicate doubts on the part of national policy actors about reconciling development goals with carbon emission reductions from forests.

Keywords: REDD+; forest; climate change mitigation; environmental discourse; media; business as usual; transformational change

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1. Introduction

This paper investigates the main discourses around REDD+ (Reducing Emissions from Deforestation and Forest Degradation) expressed by policy actors in the national media across seven countries and assesses the extent to which these discourses call for substantial policy reforms needed to address the drivers of deforestation and forest degradation. Environmental policies are shaped by institutions, politico-economic conditions and discourse (Hajer, 1995, Macnaghten and Urry, 1998, Newell, 2008). Environmental discourses are therefore at the core of how societies govern the environment (Dryzek, 1997). They produce, reproduce and transform the understanding of environmental problems, privileging certain understandings of their causes and specific policy solutions while excluding others (Hajer, 1995). 'Wicked problems' such as climate change are characterised by high levels of uncertainty and complexity. They are particularly prone to different interpretations and their understanding is often contested by a variety of policy actors with different environmental values, different interests and policy agendas (Rittel and Webber, 1973, Levin et al., 2012).

Reducing emissions from deforestation and forest degradation (REDD+) is a policy mechanism aimed at mitigating climate change by countering the drivers of deforestation and forest degradation. It is shaped by multiple policy actors at different scales, including the Parties to the UN Framework Convention on Climate Change, international climate experts, national government agencies, non-government organizations and REDD+ project proponents. The very understanding of the concept of REDD+, what shape it should take, and what it should achieve, is contested among these actors (Peskestt and Brockhaus, 2009, Hiraldo and Tanner, 2011).

The national media reproduce and contribute to shape such policy debates (Carvalho, 2007, Boykoff, 2008). At the same time, policy actors use the media to signal their positions to policy opponents and potential allies, and to impact policy decisions (Andsager, 2000). One way to investigate how national policy actors understand REDD+, which policy directions they privilege, and the extent to which they are concerned with tackling drivers of deforestation and forest degradation, is to investigate their opinions on REDD+ as reported in the national media. Media reports on REDD+ also determine its salience as a policy issue and contribute to popularize REDD+ policy debates, affecting the engagement and opinions of the general public (Wilson, 1995).

The aim of this paper is to investigate the discourses that underlie policy actors' statements in the national media around REDD+ and assess whether they address the institutional and policy changes needed to move from business as usual to effective national REDD+ policies and outcomes. We apply a framework developed by Bäckstrand and Lövbrand (2006) to investigate discourses around forests and climate change mitigation, and use a politico-economic framework to assess the potential for policy change of these discourse (Brockhaus and Angelsen, 2012). This approach provides us with the tools to investigate the potential of different discourses to facilitate

policy change, and identify which policy actors drive these changes (Arts et al., 2010).

The paper first presents some background about REDD+ policy reforms, and how discourse shapes policy. It then discusses the analytical methods, which rely on a content analysis of policy actors' opinion statements in the national media. The results and discussion sections investigate the main discourse categories that characterize national REDD+ domains, how they relate to three broader environmental discourses and the extent to which these discourses support either business-as-usual or transformational change. The paper concludes discussing the implications for policy changes in the REDD+ domain.

2. Policy reforms for REDD+

REDD+ has been presented as a cost-effective option for mitigating climate change. Currently, REDD+ strategies, policies and measures are being negotiated in national policy arenas. Given that drivers of deforestation and forest degradation stem not just from the forestry sector, but from a multiplicity of sectors (Kaimowitz and Angelsen, 1998), an effective national REDD+ strategy needs to include multi-sectoral policy reforms. The contribution of different sectors can be analysed by distinguishing between direct and underlying causes of deforestation and forest degradation. Agricultural expansion (including large-scale, permanent, subsistence, shifting and swidden agriculture and cattle ranching) is the main driver of deforestation, while logging (for commercial and fuel uses) is the main driver of forest degradation. Yet, infrastructure development (transport extension and roads, expansion of settlements, hydropower plants) is also a major direct cause of deforestation. Underlying causes relate to macroeconomic conditions (currency devaluations, trade policies, fuel subsidies), weak governance (lack of enforcement of regulation and property rights, corruption, rent-seeking) and other social conditions (Kaimowitz and Angelsen, 1998, Wunder, 2003, Chomitz et al., 2007, Kanninen et al., 2007, Tacconi, 2007, Hosonuma et al., 2012).

In order to move from business as usual strategies and address the drivers of deforestation and forest degradation a substantive change in incentives, discourse and power relations is required. Such a process of transformational change entails changes in economic and governance frameworks, removal of perverse incentives, and policy reforms within and beyond the forestry sector in a manner that counters the direct and the underlying causes of deforestation and forest degradation (Brockhaus and Angelsen, 2012). Conversely, business as usual is perpetuated through policies facilitating drivers of deforestation and forest degradation in various sectors or through 'political inaction', which refers to the absence of political engagement to reform existing institutions and policies that support these drivers (Bell 1994: 59 in Newell, 2000, Brockhaus et al., In press). Political inaction can occur because of disinterest in REDD+, resistance to change, or

the inability to commit and undertake specific policy reforms. Such inaction transpires through discourse. We can think about business as usual and transformational change as the two extremes of a continuum, and of different policy decisions as located somewhere along this continuum depending on the extent to which they address the direct and underlying drivers of deforestation and forest degradation (Kaimowitz and Angelsen, 1998, Brockhaus and Angelsen, 2012).

3. Media discourse and REDD+ policy making

Environmental policy decisions, including those on REDD+, are negotiated primarily through argumentation or discourse (Dryzek, 1997). Discourse here refers to a “shared way of apprehending the world” (Dryzek, 1997: 9) and is formed around common storylines that question and redefine environmental problems (Forsyth, 2003). According to argumentative policy analysis, policy processes are therefore “a struggle for discourse hegemony in which actors try to secure support for their definitions of reality” (Hajer, 1995: 59, Thompson and Rayner, 1988). These discourses frame REDD+ policy debates, limit what are considered “reasonable” options and inform policy-making processes. In so doing, discourse constructs, reproduces and transforms the very power relations among REDD+ policy actors.

As national policies are in the process of being defined, a variety of discourses on REDD+ compete to determine the direction that REDD+ should take: they diverge in terms of priorities, level of focus (international, national versus sub-national) and consideration of different stakeholders. They portray different understandings of REDD+ and lead to distinct policy proposals (Streck, 2010, Hiraldo and Tanner, 2011, Gupta, 2012). The media report such discourses and draw on existing policy processes to frame REDD+ policy issues. At the same time, the media are policy actors in their own right (Castree, 2004, Dalby, 2007, Carvalho and Burgess, 2005, Anderson, 2009). A central function of the mass media is to identify and interpret environmental issues and act as a mediator between scientists, policy actors and the public (Boykoff and Boykoff, 2007, Carvalho, 2007, Moser and Dilling, 2007, Boykoff, 2009). They shape how policy is translated to the public (Bennett, 1994) and contribute to the placement of policy issues on the political agenda (Crow, 2010). Yet, a variety of policy actors use the media to publicise their vision for REDD+ in order to influence public opinion and policy processes. For controversial policy issues, actors that have high stakes in those issues actively use the media to gather support. Exposure in the media also serves to legitimize policy actors, and let adversaries know the opinion of the opposition (Andsager, 2000). Thus, the media reflect and mediate specific frames represented in actual policy processes (Boykoff, 2007).

The analysis of the governance of forest and climate change has identified a number of competing discourses that have been variously classified (Bäckstrand and Lövbrand, 2006, Hiraldo and Tanner, 2011, Forsyth and Walker, 2008, Clapp and Dauvergne, 2005, Arts et al., 2010, Arts and Buizer, 2009, Di Gregorio et al., 2013). For example, Hiraldo and Tanner

(2011) draw on Clapp and Dauvergne (2005) to identify four main REDD+ narratives which they label: 'forest and economic growth', the 'ecological value of forest', the 'social greens'; and 'forest and governance'. However, most forest governance discourse analyses draw on the broad classification of three main discourses presented by Bäckstrand and Lövbrand (2006): ecological modernization, green governmentality and civil environmentalism. Each discourse contains a number of distinct threads allowing for some overlap between the three categories.

The discourse of ecological modernization asserts the compatibility between economic growth and environmental protection and portrays liberal market approaches as leading to win-win outcomes (Hajer, 1995, Dryzek, 2000). An important distinction within this discourse refers to weak and strong ecological modernization (Christoff, 1996). While both support market solutions, weak ecological modernization does neither challenge existing institutions nor power relations and focuses on cost-effectiveness at the expense of other socio-economic aspects such as poverty and inequality. The strong variant takes into account the need for transformation of economic relations and to some extent the advantage of democratic decision making processes.

The second discourse, green governmentality, refers to the use of knowledge on the part of governments, science experts and big business to influence policy decisions (Jasanoff and Long Martello, 2004, Dean, 2004). Sound science here becomes the legitimizing instrument to justify specific technocratic policy solutions. Not unlike ecological modernization it tends to depoliticize environmental problems. A variant of green governmentality that is less hegemonic, labelled as reflexive, recognizes to some extent the role of local knowledge and democratic participation in environmental decision making.

The third discourse, civic environmentalism, is sceptical of the win-win rhetoric and highlights trade-off between economic, ecological and social outcomes. It supports pluralism and broad participation in decision making which involves all stakeholders that have an interest in, and are affected by, relevant environmental problems and their solutions. Bäckstrand and Lövbrand (2006) identify a reformist variant of this discourse, which underlines the presence of these trade-offs and supports cooperation between state, markets and civil society including public-private partnerships (Elliot, 2002). A radical variant remains sceptical of stakeholder processes underlying partnerships and cooperation because of embedded power inequalities and tends to be more eco-centric than the reformist variant (Paterson, 2000).

Brockhaus and Angelsen (2012) identify discourse (ideas) as one out of four determinants of a politico-economic conceptual framework used to study whether REDD+ policy processes encourage the reforms needed to address the main drivers of deforestation and forest degradation. Depending on the extent to which competing discourses challenge the status quo, they can be classified along a spectrum that moves from business as usual to

transformational change. The position on this spectrum signals whether existing discourses support those policy reforms that are needed to realize REDD+ objectives. Drawing on the above framework, we suggest that weak ecological modernization discourse is closest to business as usual, because it does not directly challenge the politico-economic conditions and social structures underlying drivers of deforestation and forest degradation. Green governmentality discourse is closer than ecological modernization to the transformational change end of the spectrum, because it questions whether business as usual practices can be compatible with REDD+ outcomes. Yet, it disregards the role of underlying power structures that sustain business as usual. And finally, radical civic environmentalism calls for transformational change because it recognizes the trade-offs between economic and ecological outcomes and demands changes in the underlying power structure of society that perpetuates patterns of deforestation. Reformist civil environmentalism is less transformative and might at times be used as a rhetorical device to 'talk the talk of change' but take action only in so far as it does not upset prevailing power balances.

In the rest of the paper we assess whether the hypothesized relationship between discourses and transformation change is reflected in evidence from policymakers' statements in the national media. From this evidence we identify four characteristics of REDD+ transformational change discourse.

4. Methods

This paper investigates the statements about REDD+ attributed to specific policy actors by the national media in seven countries: Brazil, Peru, Cameroon, Indonesia, Vietnam, Nepal and Papua New Guinea (PNG). In this paper we use media accounts as a source of information about public discourse on REDD+. We analyse opinion statements, or stances, of policy actors that were reported in national newspaper articles on REDD+. The period under investigation is from December 2005, when the 11th Conference of the Parties to the UNFCCC (COP11) included 'avoided deforestation' in the UNFCCC policy agenda, until December 2010 (COP16). The analysis covers articles that appeared in 3 newspapers in each country, which were selected according to highest circulation and as representing a broad spectrum of positions (Table 1). The keyword 'reducing emissions from deforestation and forest degradation', parts of this utterance (e.g. reducing emissions from deforestation) and the acronym REDD were translated into the relevant languages and used to identify articles that discussed REDD+. A subsequent screening eliminated articles that only mentioned REDD+ with no further elaboration.

A total of 780 relevant articles were identified and analysed, and within those a total of 852 stances were identified. A standardized codebook was used to identify stances of up to two actors for each media frame (the stance of one actor and, if present, a counter stance of another actor) (Di Gregorio et al., 2012). The stances were transcribed or paraphrased (when long) into a

statement that reproduced their position on REDD+. Among a range of data that was collected for each article, the name of the organization and of the person reported as putting forward the stance, as well as the type of organization were coded. The focus of this analysis is primarily on non-media policy actors, yet journalists were identified as the source of a stance in editorial or opinion pieces, but represent a very small number of stances and are grouped under the category 'others'.

The stances were further analysed through open coding to identify broader categories of stances, which represent discursive frames, which can subsume a number of different stances under one conceptual category (Benford and Snow, 2000). The coders identified these broader frames inductively from the data, and pooled stances together under one stance category if they shared a common (or meta) narrative. Across the seven countries this resulted in the identification of 33 unique stance categories (see Appendix 1). For the in-depth analysis we focus only on those statements associated with of three most frequent stance categories in any of the seven countries. This produced a total of 15 different stance categories comprising 615 stances.

Apart from analysing these stances we also investigate which policy actors support these different discourses. To do that we aggregated 18 different types of actors under three broader organizational groups: 'domestic state actors' that refer to national or sub-national government departments or agencies; 'foreign actors' that include foreign governments, intergovernmental organisations, international NGOs and international (or foreign) research institutions; and 'domestic civil society and research', which refers to national or sub-national NGOs, community-based organizations (mainly indigenous organizations) and domestic research institutions. A residual category (others) encompasses a variety of less frequent actor groups, including domestic business actors and newspaper editors and journalists, who appear as stance holders in very few articles.

Table 1: Newspapers analysed

	Newspaper	Circulation	Comments
Brazil	<i>Folha de S. Paulo</i>	285,958/day (332,634 on Sundays)	<ul style="list-style-type: none"> • Centerpiece for Grupo Folha, a conglomerate who controls UOL, the leading internet portal in Brazil • More responsive to societal needs
	<i>O Estado de S. Paulo</i>	214,118/day (279,190 on Sundays)	<ul style="list-style-type: none"> • Owned by Grupo Estado, main competitor of Folha de S Paulo • Identified with the political and business ruling classes
	<i>O Globo</i>	241,102/day (337,301 on Sundays)	<ul style="list-style-type: none"> • Owned by Organizações Globo, the largest media group in Brazil, which also owns the largest television network
Cameroon	<i>Cameroon</i>	15,000-20,000/day +10,000 for	<ul style="list-style-type: none"> • Bilingual (French and English)

	<i>Tribune</i>	government services and subscribers	<ul style="list-style-type: none"> • Voice of the state
	<i>Le Messenger</i>	3,000-3,500/day	<ul style="list-style-type: none"> • In French • Main opposition paper
	<i>The Post</i>	3,000-4,500/day	<ul style="list-style-type: none"> • In English • Reflects the English-speaking regions
Indonesia	<i>KOMPAS</i>	500,000/day (up to 600,000 on Sundays)	<ul style="list-style-type: none"> • The most widely read newspaper and controls a number of regional syndications • The highest circulation newspaper in Indonesia and South East Asia • Middle to upper class audience • Owned by Surya Paloh, from Golkar political party • Middle to upper class audience • Muslim audience • 60% of its readers are female
	<i>Media Indonesia</i>	300,000/day	
	<i>Republika</i>	100,000/day	
Peru	<i>El Comercio</i>	467,619/day	<ul style="list-style-type: none"> • Over 50% of its reader are female • Mostly targets professionals • Under the group of El Comercio media • Slightly socialist
	<i>Gestión</i>	50,086/day	
	<i>La República</i>	94,363/day	
Vietnam	<i>Nhan Dan</i>	220,000/day	<ul style="list-style-type: none"> • Affiliated with Party Central Committee and the Department of Journalism • Targets government staff and agencies • Affiliated with the Ministry of Agriculture and Rural Development and the Department of Journalism • Targets farmers, their associations and rural development agencies • Affiliated with Ho Chi Minh Communist Youth organisation and the Department of Journalism • Targets young readers
	<i>Nong Nghiep Viet Nam</i>	70,000/day	
	<i>Tuoi Tre Thanh Pho Ho Chi Minh</i>	420,000/day	
Papua New Guinea	<i>The National</i>	48,490 /day	<ul style="list-style-type: none"> • Highest selling newspaper in PNG • Owned by Rimbunan Hijau, a Malaysia-based logging company which is also the largest logging company in PNG • The oldest newspaper in PNG • Owned by the Australia-based News Limited, a subsidiary of Rupert Murdoch's News Corporation. • In PNG's local language, Tok Pisin • Weekly newspaper • Owned by Word Publishing, a PNG
	<i>The Post-Courier</i>	26,262/day	
	<i>Wantok Niuspepa</i>	12,000/week	

			company established by the Catholic, Anglican, Lutheran and United churches
Nepal	<i>Kantipur</i>	325,000/day	<ul style="list-style-type: none"> • In Nepali language • The largest-selling which also the first commercial newspaper in Nepal • Owned and control by the government
	<i>Gorkhapatra</i>	75,000/day	
	<i>The Himalayan Times</i>	45,000/day	<ul style="list-style-type: none"> • The largest-selling English language newspaper in Nepal

5. Results

Across all seven countries a total of 780 articles published in the three national newspapers selected for analysis discussed REDD+. In most countries, media coverage of REDD+ did not commence until late 2007, which coincides with the COP 13 held in Bali. After a subsequent decline, media coverage increased in frequency until December 2009, during COP15 in Copenhagen. Total coverage of REDD+ during this five year period varied significantly between countries, from very rare (e.g. 15 articles in Cameroon and 22 in Nepal), to very frequent (e.g. 257 in Brazil and 265 in Indonesia) (Table 2).

A total of 852 stances within the 780 articles were put forward by policy actors across the seven countries. These were subsumed under a total of 33 stance categories. Some categories were shared across several of the investigated countries, some were variations on a similar narrative, while others were unique to a particular country. See appendix 1 for a complete list and frequencies of all stances.

The remainder of the analysis focuses on the three most frequent stance categories from each country, consisting of a total of 15 stance categories, and representing 72% of the 852 total stances (i.e. 615). We also distinguish between positions of agreement (548) and disagreement (67) with these stances.

Table 3 illustrates how each of these 15 stance categories on REDD+ fits within the three main discourses on forest governance identified by Bäckstrand and Lövbrand (2006). Table 4 illustrates the number and proportion of actor groups in relation to each discourse.

Table 2: Number of articles, total stances, and no. of stances within the three most frequent stance categories by country

Country	No of articles	Total no of stances	No of stances within the 15 most frequent stance categories

Brazil	257	176	122
Cameroon	15	20	17
Indonesia	265	369	230
Peru	26	20	24
Vietnam	35	34	15
Papua New Guinea	160	206	186
Nepal	22	27	21
TOTAL	780	852	615

Table 3: Main stance categories, including frequencies and agreement versus disagreement

Category	Abbreviation	Agree	Disagree
Ecological Modernization			
REDD+ (or forests) should be part of the global solution to climate change	GLOBAL SOLUTION	123	6
REDD+ should be financed by developed countries	GLOBAL FINANCIAL SUPPORT	117	2
REDD+ should be financed by a carbon offsetting market mechanism	CARBON MARKETS	42	27
REDD+ will provide co-benefits apart from combating climate change	CO-BENEFITS	27	1
REDD+ is a win-win; it can protect the forest and support income/development	WIN-WIN	10	0
REDD+ can generate large amounts of funding	FUNDING OPPORTUNITY	4	4
<i>Total</i>		<i>323</i>	<i>40</i>
Green Governmentality			
REDD+ should compensate for the opportunity cost of forest conversion	OPPORTUNITY COST	22	1
REDD+ needs greater international leadership and accountability	INTERNATIONAL LEADERSHIP	15	3
REDD+ will require major technical & financial assistance	TECHNICAL/FINANCIAL ASSISTANCE	6	0
REDD+ should be financed by domestic beneficiaries of environmental services	USER PAYS	5	2
The country should join international/multi-lateral efforts to protect forests through REDD+	JOINING GLOBAL EFFORTS	5	0
<i>Total</i>		<i>53</i>	<i>6</i>

Civic Environmentalism			
REDD+ will require major governance and institutional reform	GOVERNANCE	102	17
Respect for local rights, inclusion in decision making and empowerment are needed for communities to capitalise on REDD+	EMPOWERMENT	42	4
REDD+ funding and corruption will encourage exploitation of local community rights	EXPLOITATION OF COMMUNITIES	23	0
Money earned through REDD+ should benefit local, poor and indigenous communities	COMMUNITY BENEFITS	5	0
<i>Total</i>		<i>172</i>	<i>21</i>

The most common actor groups to put forward positions on REDD+ in the media between 2005 and 2010 are domestic state actors (40% of stances), followed by foreign actors (28%) and domestic civil society and research organizations (22%). Collectively, these groups account for 90% of all stances in the media. Although domestic state actors have more voice in the media overall, there is a clear difference in the distribution of actors' statements across the three discourses. Foreign (67%) and state actors (57%) predominantly engage in ecological modernization discourse, while domestic civil society and research organizations are more engaged in civic environmentalism (49%) (Table 4).

Table 4: Distribution of actor groups across discourses (% and total frequencies)

Discourse	Domestic state actors % (total frequency)	Foreign actors % (total frequency)	Domestic civil society and research organizations % (total frequency)	Other actors % (total frequency)
Ecological modernization	57% (132)	67% (107)	41% (44)	80% (40)
Green governmentality	11% (26)	10% (16)	10% (11)	0% (0)
Civic environmentalism	32% (74)	23% (36)	49% (52)	20% (10)
All	100% (232)	100% (159)	100% (107)	100% (50)

We will now explore the different stance categories within the three discourses, and provide specific, illustrative examples from the media coverage. In doing this, we focus on expressions of agreement with the stance categories, and mention disagreement only where numerically relevant. We will also analyse in more detail which actor groups are most

frequently associated with the different stance categories.

5.1. Ecological modernization: The win-win storyline

Of the 15 most common stance categories, we've classified six as aligning with ecological modernization. These include stances that emphasise the importance of incorporating forests into a global solution to climate change (put forward on 123 occasions), those that argue REDD+ should be financed by the industrialized world (117) or by a carbon-offset market mechanism (42), and stances that claim REDD+ will deliver: co-benefits in addition to climate change mitigation (27); a win-win solution for conservation and development (10); and large amounts of funding (4).

These six stance categories represent a total of 323 individual stances, which equates to 38% of the 852 total stances put forward in the media between 2005 and 2010; or 59 % of the 15 most frequent stance categories we've extracted here for further analysis. While we might expect such positions to be more frequent during the early days of REDD+ (before more complex realities had fully emerged), this is not the case as their frequency is almost identical in 2007, 2009 and 2010.

Overall, those stance categories we have classified under ecological modernization tend to represent broad, simplistic perspectives on REDD+, and typify win-win storylines. Such characterisations are particularly evident in those stances that claim REDD+ will deliver a win-win solution for conservation and development, or that it will deliver large amounts of funding. Weaker and stronger variations of the ecological modernization discourse can be distinguished, for example, on the extent to which the discourse considers justice-related dimensions of environmental problems. In this case, stances calling for REDD+ funding to come from industrialized countries (many of which point to fairness and equality to justify such calls) and those anticipating co-benefits (which include, among other things, poverty reduction and improved governance) could be said to lie towards the 'strong' end of this spectrum.

The stance put forward more often than any other is one that calls for "REDD+ (or forests) to be part of the global solution to climate change". This stance featured among the top three most common stance categories in five of these seven countries studied. On just five occasions did a policy actor put forward a directly conflicting view. Consider, for example, the following statement, by Paulo Adário from Greenpeace Brazil featured in the newspaper *Folha de S. Paulo* in 2007: "It is essential to take the opportunity that Bali offers to include forest conservation in the discussions on climate change as one of the solutions to deal with it" (4th December, 2007; *Folha de S. Paulo*, Brazil). At the time, it was clear that the Bali meeting would bring forward the idea of a market-based solution to deforestation, and many organizations saw this as an opportunity to include the role of forests in global climate change mitigation policies

The second most popular stance category is one that claims "REDD+ should be financed by developed countries", which incorporates global justice

and perceived trade-offs with development objectives. This stance, or variations of it, was put forward in four of the seven countries studied. Although not always explicit, the justifications for such support relate to: the need for adequate compensation to REDD+ countries for their contribution to a global public good; the argument that REDD+ leads to foregone growth and development opportunities; and the perceived historical responsibility of industrialized nations for carbon emissions. Therefore, given the clear justice-related dimensions of such stances, they could be considered as falling towards the 'strong' end of ecological modernization.

Consider, for example, the following position articulated by Indonesia's Minister of Forestry prior to the COP13 in 2007:

"For Kaban, as long as there is no commitment from developed countries to adopt REDD, global efforts to resolve climate change will remain unfair. 'If there are no ties for developed countries, developing countries will have no certainty, because the prop for developing countries is resources,' he said." (24th October 2007; Media Indonesia, Indonesia).

To some extent Kaban's statement is much more nuanced than the win-win storyline that characterises weak ecological modernization discourse, as it acknowledges the potential for trade-offs between national development objectives and global climate change objectives. This international perspective on sustainable development and "ecological democracy" typifies Bäckstrand's definition of strong ecological modernization, which overlaps somewhat with the discourse of civic environmentalism that will be discussed in subsequent sections.

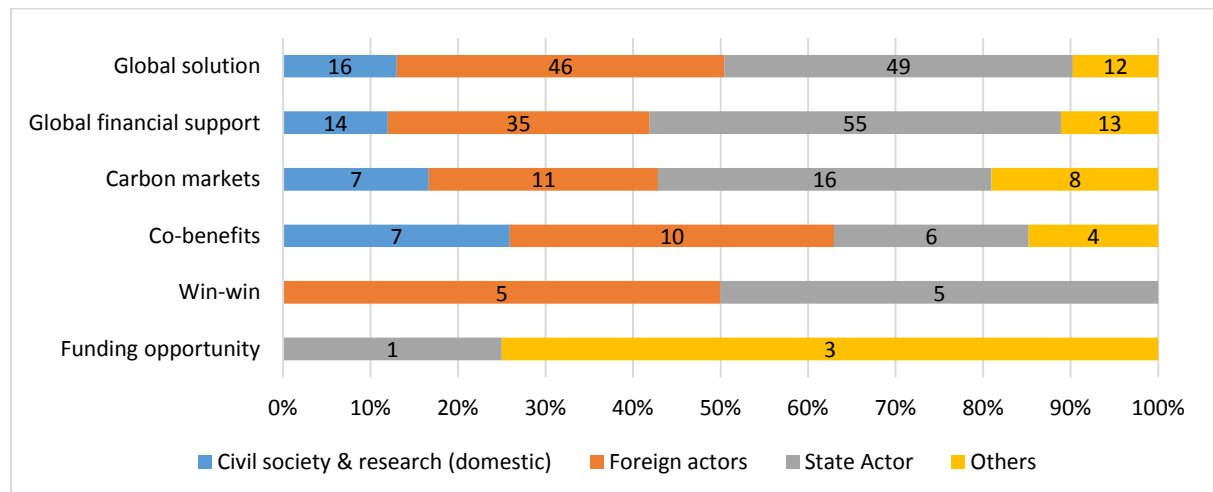
The third most frequent stance category within the discourse of ecological modernization (and fourth overall) consists of calls for REDD+ to be financed by carbon offset markets. These statements relate to the controversy that surrounds the ability of Annex 1 countries to use offsets to avoid reducing their own emissions. In many cases these stances call for linking REDD+ to carbon markets without acknowledging the risks this might entail; for example with regard to tenure, or in situations where there is unequal power or access to information between sellers and buyers/investors. In other words, these statements assume that markets can solve the problem of global emissions, without considering the need for safeguards and climate justice concerns. Such calls represent a discourse of weak ecological modernization, promoting market driven strategies that sustain existing economic and development paradigms.

Consider, for example, the following statement from the international environmental NGO Flora and Fauna International: "I strongly believe there should be a market for carbon credits and forests. This is the only mechanism that could provide local incentives" (29th October 2008; O'Globo; Brazil). Such statements suggest that markets for environmental services are the only solution to degradation, which is typical of weak ecological modernization discourse. While it is true that such a mechanism may provide local incentives

to reduce deforestation and forest degradation, such statements work within existing the parameters of market based power structures and fail to question existing institutions and power structures that drive deforestation and forest degradation in the first place. Interestingly, this is the most controversial among our stance categories, with 38% of the statements explicitly disagreeing with REDD+ carbon offsets.

But who is using ecological modernization discourse when framing REDD+ in the public domain? As per the findings across the entire population of stances, the three main actor groups account for the vast majority of stances (88%), all of which contribute to debates around the four most frequent stance categories ('global solution', 'global financial support', 'carbon markets' and 'co-benefits'). However, Figure 1 illustrates that, overall, state and foreign actors dominate ecological modernization discourse, while domestic civil society and research institutes have far less representation. Interestingly, no civil society and domestic research organization put forward stances anticipating that REDD+ will deliver a win-win solution for conservation and development.

Figure 1: Actor groups expressing ecological modernization stances



5.2. Green governmentality: The technocratic solution

In the context of REDD+ media debates, green governmentality discourse includes stances that look at domestic costs and benefits, including calls for REDD+ to compensate for the opportunity cost of forest conversion (22) and for REDD+ to be financed by domestic beneficiaries of environmental services (5); as well as those that take a global perspective, including stances calling for stronger international leadership (15), for technical and financial assistance (6), and to join global efforts on REDD+ (5). These five stance categories represent just 53 individual stances, or 6% of the 852 stances put forward in the media between 2005 and 2010, reflecting an alarming lack of scientific justifications in the early REDD+ public debates (Cronin and

Santoso, 2010).

Green governmentality discourse refers to what Bäckstrand and Lövbrand (2006, p.54) describe as “eco-knowledges” that impact “the administration of life itself—individuals, populations and the natural environment”, which we see reflected in the adoption of economic discourse, as well as in the calls for international assistance and leadership. Here science – and in most cases ‘western science’ – is presented as a legitimizing instrument to justify specific technocratic policy solutions; personified by the presence of experts embedded within emerging REDD+ architecture.

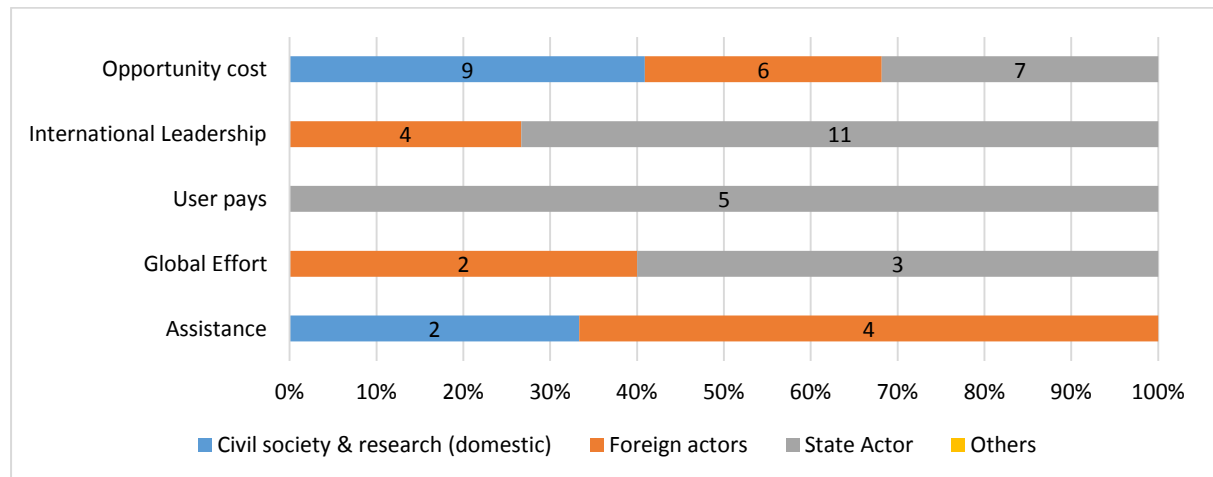
The most frequent stance category within the broad discourse of green governmentality is one that calls for REDD+ to “compensate for the opportunity cost of forest conversion”. These stances were identified exclusively in Brazilian media, accounting for 13% of Brazil’s 176 stances, and suggest new incentive structures need to be set in place to tackle deforestation. In this case, economic theory provides the justification for how REDD+ payments should be distributed. Consider, for example, the following statement from CIFOR Economist Sven Wunder: “When 80% of a serious environmental problem is caused by large landowners, then any solution will have to grant to this group some sort of compensation for losses” (25th May 2010; O Globo, Brazil). While such a position explicitly addresses the need to address drivers of deforestation, it also imposes a lens of economic rationalism with little room for alternative worldviews.

A “reflexive” vision of green governmentality that embraces an attitude of humility and self-reflection, and where ‘experts’ are conscious of the cultural assumptions they bring to their knowledge, is less evident in these stances. A number of stances do refer to the perspective of local users, for example the following from professor Britaldo Soares-Filho from the Federal University of Minas Gerais (25 May 2010, Folha de S. Paulo): “Many farmers expect to have some compensation for conserving their forests. The money can make them think twice before clearing the forest”. However, it is unclear whether these positions actually reflect local cultural understandings or are more properly understood as experts’ interpretations.

Overall the three main actor groups devote little attention to green governmentality (between 10% and 13% of their overall stances). As with the other discourses, domestic state actors are the most relevant actor group, putting forward 26 out of 53 green governmentality stances (49%). Foreign actors account for 30% of stances, and domestic civil society and research institutes 21%. The latter group engaged with only two of the five stance categories, and was dominated by research institutes, with civil society organizations had only a minor presence. Opportunity cost arguments are brought forward primarily by state actors and domestic research organizations, indicating that state actors at times use scientific arguments to support their positions in the media, and that experts contribute to shape public policy debates. Among the least prevalent stance categories, those on domestic payments for environmental services were put forward only by state actors from Vietnam and refer to schemes whereby domestic users of forest

related environmental services are required by law to compensate providers. Surprisingly, state actors are completely absent in relation to the demands to strengthen technical and financial assistance for REDD+.

Figure 2: Actor groups expressing green governmentality stances



5.3. Civic environmentalism: Reformist or radical?

Of the 15 most common stance categories, we have classified four as aligning with civic environmentalism. These include stances that consider governance and institutional reform (102 occasions) or community rights and empowerment (42) as prerequisites for REDD+, those that warn of the risk that REDD+ funding and corruption will encourage exploitation and dispossession of local people (23), and those that call for REDD+ funding to benefit poor and indigenous communities (5).

These four stance categories represent a total of 193 individual stances, or 23% of the 852 total stances put forward in the media between 2005 and 2010. These stances call for increased inclusion of marginalized groups as part of the realization of sustainable development, while a number recognise the fundamental trade-offs between economic, ecological and social sustainability, as well as between global aims and local needs. We also see that stances related to civic environmentalism become more frequent in media coverage during the latter years (2009-2010) of the period analysed.

By far the most frequent stance category here is one that acknowledges the extent to which “REDD+ will require major governance and institutional reform”. Such a position frequently encourages stronger cooperation and coordination among market, state and civil society actors, and the establishment of ‘good governance’ - rather than a radical change in existing institutions. So in this sense it could be described as reformist, rather than radical, discourse. Consider, for example, the following statement from Wiwiek Awiati from the Indonesian Center for Environmental Law (ICEL)

during the UNFCCC COP13 in 2007:

“There are classic problems in the governance structure: corruption, poor institutional and inter-sectoral coordination, and legal uncertainty. If these are not resolved, then any mechanism applied will fail” (12th December 2007; Kompas, INDONESIA).

In this case, the stance acknowledges a range of systemic flaws in Indonesia’s forestry sector that have contributed to the country’s historically high levels of deforestation, and in doing so recognises the challenges involved with implementing REDD+ at a national level. Still, such calls for improvements fall short of calling for radical reform of political, economic and social institutions.

Similarly, those stances that call for REDD+ funding to benefit poor and indigenous communities could also be said to represent reformist forms of civic environmentalism, in that they don’t necessarily question the underlying power structures that leave poor and indigenous communities marginalized.

Landing more towards the ‘radical’ end of civic environmentalism are those stances that explicitly recognise that “respect for local rights, inclusion in decision making and empowerment are needed for communities to capitalise on REDD+”. While a number of stance categories are related to local communities, including those concerned with distribution of benefits, this particular stance goes further, to argue for a fundamental transformation of existing power structures. Consider, for example, the following statement from Dorothy Tekwie from Greenpeace:

“Despite playing a leadership role internationally, the Government of PNG has not consulted with landowners and civil society and does not represent the people of PNG” (23rd November 2009; Post Courier, PNG)

This stance highlights how national relations of power create a lack of representation of weaker actors in international negotiation processes, and how this impacts on the legitimacy of REDD+ policy processes. Such stances in fact call for increased inclusion of these groups in decision making and therefore challenge existing power relations. Stances which warn of the risk that REDD+ funding, coupled with corruption, will encourage exploitation of local rights by outside actors, also reflect a similar questioning of national decision-making structures in the context of weak governance.

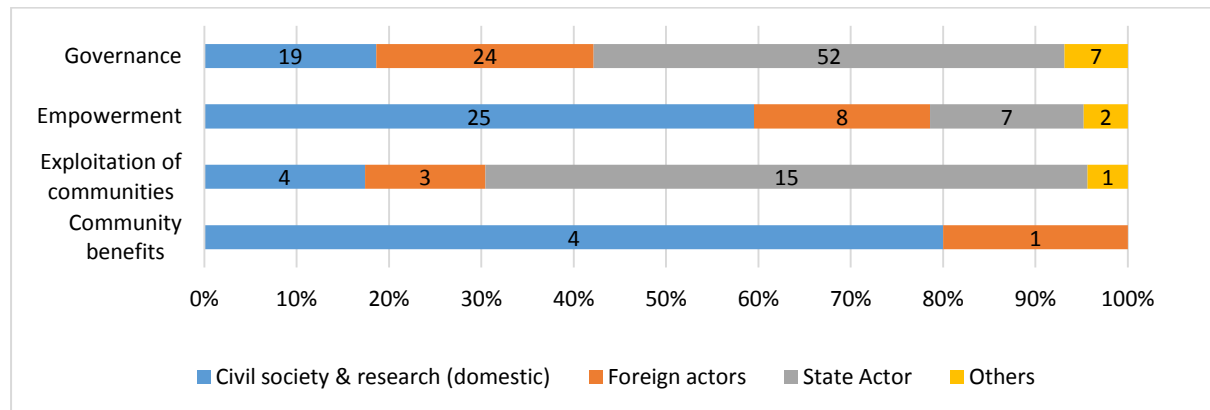
When we look at who is saying what, it is clear that domestic civil society actors become more prominent within civic environmentalism discourse than in any other discourse (49% of their stances); primarily advocating around governance reforms and empowerment issues. State actors focus more on the need to establish new institutions for REDD+ but without demanding radical change. In PNG, however, it is interesting to note the different perspectives from different levels of government. Sub-national state actors allege corruption against central state actors (‘governance’

stance), while central state actors warn against the risk of so-called ‘carbon cowboys’ (‘exploitation of communities’). Very few stances refer to the potential trade-offs between REDD+ and community benefits (5), and these are almost exclusively put forward by civil society.

Just as notable is the relatively low participation of foreign actors in civic environmentalism discourse, accounting for just 21% of all stances. This is surprising given the extent to which REDD+ has been increasingly linked to the foreign development aid agenda, and the extent to which this agenda has been increasingly focused on governance, democracy, equality and participation in recent years.

When we consider the distinction between reformist and radical civic environmentalism, and the classification of only those stances linked to ‘empowerment’ and ‘exploitation’ as radical, the prominence of civil society becomes even more conspicuous, as does the absence of foreign actors.

Figure 3: Actor groups expressing civic environmentalism stances



6. Discussion

Drawing on the conceptual framework of Brockhaus and Angelsen (2012) and on the above evidence on REDD+ public discourse, we argue that stance categories that support transformational change show at least one of these four characteristics: 1. they clearly discuss specific policy reforms needed to address drivers of deforestation and forest degradation; 2. they take into account the risks and trade-offs that a REDD+ mechanism might entail; 3. they go beyond technocratic solutions to reduce emissions and include the need for governance and institutional change; 4. they explicitly challenge existing power relations that support business as usual.

We identify two tendencies in public discourse in the REDD+ countries analysed here. First, the stance categories within the two most dominant discourses (ecological modernization and reformist civic environmentalism) reveal the dominance of public debates that for the most part avoid directly tackling drivers of deforestation and forest degradation. They do, however, recognize the need for institutional and governance reforms that can support the formulation and effective implementation of a REDD+ mechanism. The

vast majority of stances fail to challenge business as usual, with the exception of broad calls to tackle corruption and improve governance in the forestry sector. Yet, a low number of reformist civil environmentalism stances (9 stances in total) discuss policy reforms that directly address drivers of deforestation and forest degradation, such as legal and illegal logging and conversion of forest to plantation agriculture or other land uses. These stances appeared almost exclusively in the Indonesia media. Interestingly, state actors put forth 6 of these stances - although twice it is to suggest they are tackling these issues already - versus 3 put forth by civil society organizations (national and international environmental NGOs).

The second tendency is that, overall, the least prominent public discourses of green governmentality and radical civic environmentalism reveal more transformational change characteristics than the two dominant discourses. Both recognize the potential trade-offs between REDD+ and economic development goals, local access to resources and socio-economic conditions of local communities in REDD+ sites. Yet, green governmentality stances offer predominantly technocratic solutions to deforestation and forest degradation, with a minority questioning existing institutional structures. Radical civic environmentalism stances go further in challenging business as usual: they address issues of power directly. For example, the call for increased participation of local people in decision making processes on REDD+, and the need to recognize community rights to forest resources, challenge the prevailing distribution of power in national REDD+ policy arenas and raise issues related to procedural and distributional justice. These stances question underlying processes and power structures that maintain the dominance of established interests, including those behind the drivers of deforestation and degradation. Such stances directly address three of the four key aspects of transformational change identified above: they highlight the risks and trade-offs for local communities, they call for institutional reform and for changes in power structures. Yet, the fourth aspect - tackling the drivers of deforestation and forest degradation - is only indirectly addressed through the need to rebalance power structures.

Our results support existing evidence that REDD+ has brought to the forefront issues of forest governance, not just in international but also in national public policy debates (Murdiyarso et al., 2011, Buttoud, 2012, Kanowski et al., 2011, Boer, 2013, Arts et al., 2010). This prominence has led some authors to identify 'forest governance' as a new stand-alone discourse within the REDD+ domain (Hiraldo and Tanner, 2011, Arts and Buizer, 2009). The dominance of ecological modernization discourse also confirms the tendency of REDD+ policy actors to favour measurable market solutions without questioning socio-economic trade-offs. It confirms that in-depth debates on guaranteeing safeguards, such as to protect local rights and participation, which are prominent in the literature (Larson et al., 2013, Seymour and Forward, 2010, Rosendal and Andresen, 2011, Phelps et al., 2010, Mustalahti and Tassa, 2012), remain marginal in national public REDD+ debates. It also indicates that national public debates focus much more on international REDD+ design and financing, as opposed to localized experimentation and learning (McDermott et al., 2011). Most worrying is the

absence of debates around the main drivers of deforestation, particularly the absence of state and private actors from the agricultural, logging, infrastructure development, mining sectors (Di Gregorio et al., 2013, Brockhaus et al., In press). At present, national public discourses on REDD+ show only a limited potential to move beyond concerns with forest governance and instead demand more substantive political action in transforming current production processes that drive deforestation and forest degradation.

7. Conclusion

Existing literature on the evolution and transformation of discourse in the area of forestry and climate change provides substantial evidence of how discourses, institutions and interests interact, how they evolved over time and how they produce new social practices. Yet, no research has so far drawn implications on the direction of policy reforms from dominant REDD+ public discourses.

This paper has shown that, even in the absence of tangible policy outcomes, it is possible to assess the extent to which public discourse can contribute to policy reforms within and outside of the forestry sector that are needed to effectively implement REDD+. Our results indicate that the dominant public policy discourses on REDD+ in seven national domains largely fail to discuss and demand policy action that directly addresses the main drivers of deforestation and forest degradation. While public policy discourse is largely supportive of REDD+ and urges much needed improvements in forest governance, critical issues such as risks and trade-offs related to REDD+ policies, socio-economic outcomes and environmental justice concerns remain marginalized in public debates. Given the lack of attention in public discourse in these REDD+ countries to drivers and

One key contribution of this paper is to expand the use of discourse analysis from illustrating how discourse influences social practices (Hajer, 1995) to assessing the potential of public discourse to contribute to a specific direction in policy formulation. This has been achieved by combining traditional discourse analysis with a politico-economic framework that identifies characteristics of discourse that support transformational change. We argue that this approach can inform other policy domains beyond the study of REDD+.

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REFERENCES

- ANDERSON, A. 2009. Media, politics and climate change: Towards a new research agenda. *Sociology Compass*, 3/2.
- ANDSAGER, J. A. 2000. How interest groups attempt to shape public opinion with competing news frames. *Journalism and mass communication quarterly*, 77, 577-592.
- ARTS, B., APPELSTRAND, M., KLEINSCHMIT, D., PÜLZL, H., VISSEREN-HAMAKERS, I., EBA'A ATYI, R., ENTERS, T., MCGINLEY, K. & YASMI, Y. 2010. Discourses, actors and instruments in international forest governance. In: RAYNER, J., BUCK, A. & KATILA, P. (eds.) *Embracing complexity: Meeting the challenges of international forest governance: A global assessment report*. Vienna: IUFRO.
- ARTS, B. & BUIZER, M. 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest Policy and Economics*, 11, 340-347.
- BÄCKSTRAND, K. & LÖVBRAND, E. 2006. Planting trees to mitigate climate change: Contested discourses of ecological modernization, green governmentality and civic environmentalism. *Global Environmental Politics*, 6, 50-75.
- BENFORD, R. D. & SNOW, D. A. 2000. Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, 26, 611-639.
- BENNETT, W. 1994. An introduction to journalism norms and representations of politics. *Political Communication*, 13, 373-384.
- BOER, H. 2013. Governing ecosystem carbon. *Global Environmental Politics*, 13, 123-143.
- BOYKOFF, J. M. 2007. From convergence to contention: United States mass media representations of anthropogenic climate change science. *Transactions of the Institute of British Geographers*, 32, 477-489.
- BOYKOFF, M. T. 2008. The cultural politics of climate change discourse in UK tabloids. *Political Geography*, 27, 249-269.
- BOYKOFF, M. T. 2009. We speak for the trees: Media reporting on the environment. *Annual Review of Environment and Resources*, 34, 431-457.
- BOYKOFF, M. T. & BOYKOFF, J. M. 2007. Climate change and journalistic norms: A case-study of US mass-media coverage. *Geoforum*, 38, 1190-1204.

- BROCKHAUS, M. & ANGELSEN, A. 2012. Seeing REDD+ through 4Is: A political economy framework. *In: ANGELSEN, A., BROCKHAUS, M., SUNDERLIN, W. D. & VERCHOT, L. V. (eds.) Analysing REDD+: Challenges and choices*. Bogor: Center for International Forestry Research.
- BROCKHAUS, M., DI GREGORIO, M. & MARDIAH, S. In press. Governing the design of national REDD+: An analysis of the power of agency. *Forest Policy and Economics*, x.
- BUTTOUD, G. 2012. From PES to REDD: Making policy tools and economic mechanisms interact for a better forest governance. *Forest Policy and Economics*, 18, 1-3.
- CARVALHO, A. 2007. Ideological cultures and media discourses on scientific knowledge: Re-reading news on climate change. *Public Understanding on Science*, 6, 223-243.
- CARVALHO, A. & BURGESS, J. 2005. Cultural circuits of climate change in UK: Broadsheet newspapers, 1985–2003. *Risk Analysis*, 25, 1457-1469.
- CASTREE, N. 2004. Differential geographies: Place, indigenous rights and 'local' resources. *Political Geography*, 23, 133-167.
- CHOMITZ, K. M., BUYS, P., DE LUCA, G., THOMAS, T. S. & WERTZ-KANOUNNIKOFF, S. 2007. At loggerheads? Agricultural expansion, poverty reduction, and environment in the tropical forests. *World Bank Policy Research Report*. Washington DC: The World Bank.
- CHRISTOFF, P. 1996. Ecological modernization, ecological modernities. *Environmental Politics*, 5, 476–500.
- CLAPP, J. & DAUVERGNE, P. 2005. *Paths to a green world: The political economy of the global environment*, Cambridge, Mass., MIT Press.
- CRONIN, T. & SANTOSO, L. 2010. REDD+ politics in the media: A case study from Indonesia. *Working Paper 49*. Bogor, Indonesia: Center for International Forestry Research.
- CROW, D. A. 2010. Local media and experts: Sources of environmental policy initiation? *Policy Studies Journal*, 38, 143-164.
- DALBY, S. 2007. Anthropocene geopolitics: Globalisation, empire, environment and critique. *Geography Compass*, 1.
- DEAN, M. 2004. *Governmentality: Power and rule in modern society*, London, Sage Publications.
- DI GREGORIO, M., BROCKHAUS, M., CRONIN, T., MUHARROM, E., SANTOSO, L., MARDIAH, S. & BÜDENBENDER, M. 2013. Equity and REDD+ in the media: A comparative analysis of policy discourses. *Ecology and Society* [Online], 18. Available: <http://dx.doi.org/10.5751/ES-05694-180239>.
- DI GREGORIO, M., PRICE, S., SAUNDERS, C. & BROCKHAUS, M. 2012. Code book for the analysis of media frames in articles on REDD. Bogor, Indonesia: Center for International Forestry Research.
- DRYZEK, J. S. 1997. *The politics of the earth: Environmental discourses*, Cambridge ; New York, Oxford University Press.
- DRYZEK, J. S. 2000. *Deliberative democracy and beyond: Liberals, critics, contestations*, Oxford, Oxford University Press.

- ELLIOT, L. 2002. Global environmental governance. In: WILKINSON, R. & HUGHES, S. (eds.) *Global governance: Critical perspectives*. London and New York: Routledge.
- FORSYTH, T. 2003. *Critical political ecology: The politics of environmental science*, London, Routledge.
- FORSYTH, T. & WALKER, A. 2008. *Forest guardians, forest destroyers: The politics on environmental knowledge in Thailand*, Seattle, WA, University of Washington Press.
- GUPTA, J. 2012. Glocal forest and REDD+ governance: Win-win or lose-lose? *Current Opinion in Environmental Sustainability*, 4, 620-627.
- HAJER, M. A. 1995. *The politics of environmental discourse: Ecological modernization and the policy*, Oxford, Clarendon Press.
- HIRALDO, R. & TANNER, T. 2011. Forest voices: Competing narratives over REDD. *IDS Bulletin*, 42, 42-51.
- HOSONUMA, N., HEROLD, M., DE SY, V., DE FRIES, R. S., BROCKHAUS, M., VERCHOT, L. V., ANGELSEN, A. & ROMIJN, E. 2012. An assessment of deforestation and forest degradation drivers in developing countries *Environmental Research Letters*, 7.
- JASANOFF, S. & LONG MARTELLO, M. (eds.) 2004. *Earthly politics: Local and global in environmental governance*, Cambridge, Mass.: MIT Press.
- KAIMOWITZ, D. & ANGELSEN, A. 1998. Economic models of tropical deforestation: A review. . Bogor, Indonesia: Center for International Forestry Research.
- KANNINEN, M., MURDIYARSO, D., SEYMOUR, F., ANGELSEN, A., WUNDER, S. & GERMAN, L. 2007. Do trees grow on money?: the implications of deforestation research for policies to promote REDD. Bogor, Indonesia: Center for International Forestry Research (CIFOR).
- KANOWSKI, P. J., MCDERMOTT, C. L. & CASHORE, B. W. 2011. Implementing REDD+: lessons from analysis of forest governance. *Environmental Science & Policy*, 14, 111-117.
- LARSON, A. M., BROCKHAUS, M., SUNDERLIN, W. D., DUCHELLE, A., BABON, A., DOKKEN, T., PHAM, T. T., RESOSUDARMO, I. A. P., SELAYA, G., AWONO, A. & HUYNH, T. B. 2013. Land tenure and REDD+: The good, the bad and the ugly. *Global Environmental Change-Human and Policy Dimensions*, 23, 678-689.
- LEVIN, K., CASHORE, B., BERNSTEIN, S. & AULD, G. 2012. Overcoming the tragedy of super wicked problems: Constraining our future selves to ameliorate global climate change. *Policy Sciences*, 42, 123-152.
- MACNAGHTEN, P. & URRY, J. 1998. *Contested natures*, London, Sage.
- MCDERMOTT, C. L., LEVIN, K. & CASHORE, B. 2011. Building the forest-climate bandwagon: REDD+ and the logic of problem amelioration. *Global Environmental Politics*, 11, 85-+.
- MOSER, S. & DILLING, L. (eds.) 2007. *Creating a climate for change: Communicating climate change and facilitating social change*, Cambridge, UK: Cambridge University Press.
- MURDIYARSO, D., DEWI, S., LAWRENCE, D. & SEYMOUR, F. 2011. Indonesia's forest moratorium: A stepping stone for better forest governance? *Working Paper 76*. Bogor, Indonesia: Center for International Forestry Research.

- MUSTALAHTI, I. & TASSA, D. T. 2012. Analysis of three crucial elements of REDD plus in participatory forest management. *Scandinavian Journal of Forest Research*, 27, 200-209.
- NEWELL, P. 2000. *Climate for change: Non-state actors and the global politics of the greenhouse*, Cambridge, Cambridge University Press.
- NEWELL, P. 2008. The political economy of global environmental governance. *Review of International Studies*, 34, 507-529.
- PATERSON, M. 2000. *Understanding global environmental politics: Domination, accumulation and resistance*, London, Macmillan.
- PESKETT, L. & BROCKHAUS, M. 2009 When REDD+ goes national: A review of realities, opportunities and challenges. In Realising REDD+: National strategy and policy options, . In: ANGELSEN, A., BROCKHAUS, M., KANNINEN, M., SILLS, E., SUNDERLIN, W. D. & WERTZ-KANOUNNIKOFF, S. (eds.). Bogor, Indonesia: Center for International Forestry Research.
- PHELPS, J., WEBB, E. L. & AGRAWAL, A. 2010. Does REDD plus threaten to recentralize forest governance? *Science*, 328, 312-313.
- RITTEL, H. W. J. & WEBBER, M. M. 1973. Dilemmas in a general theory of planning. *Policy Sciences*, 4, 155-169.
- ROSENDAL, G. K. & ANDRESEN, S. 2011. Institutional design for improved forest governance through REDD: Lessons from the global environment facility. *Ecological Economics*, 70, 1908-1915.
- SEYMOUR, F. & FORWAND, E. 2010. Governing sustainable forest management in the new climate regime. *Wiley Interdisciplinary Reviews-Climate Change*, 1, 803-810.
- STRECK, C. 2010. Reducing emissions from deforestation and forest degradation: national implementation of REDD schemes. *Climatic Change*, 100, 389-394.
- TACCONI, L. 2007. *Illegal logging: Law enforcement, livelihoods and the timber trade*, London, Earthscan.
- THOMPSON, M. & RAYNER, S. 1988. Cultural discourses. In: RAYNER, S. & MALONE, E. (eds.) *Human choice and climate change. Volume 1. The societal framework*. Columbus, OH: Batelle Press.
- WILSON, K. 1995. Mass media as sources of global warming knowledge. *Mass Communication Review*, 22, 75-89.
- WUNDER, S. 2003. *Oil wealth and the fate of the forest. A comparative study of eight tropical countries*, London and New York, Routledge.

Appendix 1

Complete list of REDD+ stance categories (three most frequent are shaded)

Country	Stance description	Abbreviation	Total	Agree	Disagree
Brazil	REDD (or at least forests) should be part of the global solution to climate change [GLOBAL SOLUTION]	GLOBAL SOLUTION	27	25	2
	REDD should be financed by a carbon offsetting market mechanism [CARBON MARKET]	CARBON MARKET	26	17	9
	REDD should be financed by developed countries [GLOBAL FINANCIAL SUPPORT]	GLOBAL FINANCIAL SUPPORT	23	23	0
	REDD should compensate for the opportunity cost of forest conversion [OPPORTUNITY COST]	OPPORTUNITY COST	23	22	1
	REDD will enable us to value the environmental services of forests [PES]	PES	14	14	0
	REDD should include indigenous and forest dwelling communities in discussions and decision making [EMPOWERMENT]	EMPOWERMENT	12	12	0
	REDD will require major governance and institutional reform [GOVERNANCE]	GOVERNANCE	11	11	0
	REDD should not enable developed countries to pass off their own emission reductions at home [DOMESTIC RESPONSIBILITY]	DOMESTIC RESPONSIBILITY	10	10	0
	The technical and financial obstacles to implementing REDD can be overcome. The most important thing for implementing REDD is political will [POLITICAL WILL]	POLITICAL WILL	11	9	2
	REDD should include forest degradation, conservation, sustainable management and reforestation [REDD+]	REDD+	7	6	1
REDD will simply move deforestation to less carbon-rich (but still biodiversity-rich) forests [LEAKAGE]	LEAKAGE	6	6	0	
Other	OTHER	6	6	0	
			176	161	15
Country	Stance description	Abbreviation	Total	Agree	Disagree
Cameroon	REDD (or at least forests) should be part of the global solution to climate change [GLOBAL SOLUTION]	GLOBAL SOLUTION	9	8	1
	REDD will require major technical & financial assistance [TECHNICAL/FINANCIAL ASSISTANCE]	TECHNICAL/FINANCIAL ASSISTANCE	6	6	0
	REDD is a win-win; it can combat climate change and reduce poverty [WIN-WIN]	WIN-WIN	1	1	0
	REDD should be financed by a carbon offsetting market mechanism [CARBON MARKET]	CARBON MARKET	1	1	0
	REDD should incorporate a range of ecosystems & land uses [ECOSYSTEMS]	ECOSYSTEMS	1	1	0
	Other	OTHER	2	2	0
			20	19	1

Country	Stance description	Abbreviation	Total	Agree	Disagree
Indonesia	REDD should be financed by developed countries [GLOBAL FINANCIAL SUPPORT]	GLOBAL FINANCIAL SUPPORT	66	65	1
	REDD (or at least forests) should be part of the global solution to climate change [GLOBAL SOLUTION]	GLOBAL SOLUTION	65	62	3
	REDD will require major governance and institutional reform [GOVERNANCE]	GOVERNANCE	60	56	4
	REDD risks to dispossess/reduce access to forest resources and harm traditional forest users [RIGHTS]	RIGHTS	37	32	5
	REDD will require major technical capacity building [CAPACITY BUILDING]	CAPACITY BUILDING	28	24	4
	REDD should provide co-benefits apart from combating climate change [CO-BENEFITS]	CO-BENEFITS	22	21	1
	REDD programs should be formulated and managed at the national level [CENTRALISED]	CENTRALISED	23	18	5
	REDD should not compromise Indonesia's economic growth, including that generated through agricultural expansion [GROWTH]	GROWTH	23	17	6
	REDD should incorporate avoided degradation, conservation and reforestation, not just avoided deforestation [REDD+]	REDD+	17	14	3
	REDD should be financed by a carbon offsetting market mechanism [CARBON MARKET]	CARBON MARKET	17	11	6
	Other	OTHER	11	7	4
		369	327	42	
Country	Stance description	Abbreviation	Total	Agree	Disagree
Nepal	Money earned through REDD should benefit local, poor and indigenous communities [COMMUNITY BENEFITS]	COMMUNITY BENEFITS	5	5	0
	REDD can generate large amounts of funding [FUNDING OPPORTUNITY]	FUNDING OPPORTUNITY	8	4	4
	REDD (or at least forests) should be part of the global solution to climate change [GLOBAL SOLUTION]	GLOBAL SOLUTION	4	4	0
	REDD should be financed by developed countries [GLOBAL FINANCIAL SUPPORT]	GLOBAL FINANCIAL SUPPORT	4	3	1
	REDD will require major governance and institutional reform [GOVERNANCE]	GOVERNANCE	3	3	0
	REDD will require research and capacity building [CAPACITY BUILDING]	CAPACITY BUILDING	3	3	0
		27	22	5	
Country	Stance description	Abbreviation	Total	Agree	Disagree
Peru	REDD can provide co-benefits apart from combating climate change [CO-BENEFITS]	CO-BENEFITS	6	6	0
	REDD (or at least forests) should be part of the global solution to climate change [GLOBAL SOLUTION]	GLOBAL SOLUTION	5	5	0
	REDD needs greater international leadership and accountability [INTERNATIONAL LEADERSHIP]	INTERNATIONAL LEADERSHIP	4	4	0
	Natural forests should not be valued alongside plantations; REDD threatens biodiversity [NO PLANTATIONS]	NO PLANTATIONS	3	3	0

	If REDD is to go ahead, it is necessary to address land rights, corruption and bureaucracy [RIGHTS/CORRUPTION]	RIGHTS/CORRUPTION	2	2	0
			20	20	0
Country	Stance description	Abbreviation	Total	Agree	Disagree
PNG	REDD will require major institutional and governance reform [GOVERNANCE]	GOVERNANCE	45	32	13
	Local communities should be educated and empowered to capitalise on REDD [EMPOWERMENT]	EMPOWERMENT	30	30	0
	REDD should be financed by developed countries [GLOBAL FINANCIAL SUPPORT]	GLOBAL FINANCIAL SUPPORT	26	26	0
	REDD funding (inc. VCAs) will encourage corruption and exploitation [EXPLOITATION OF COMMUNITIES]	EXPLOITATION OF COMMUNITIES	27	23	4
	REDD (or at least forests) should be part of the global solution to climate change [GLOBAL SOLUTION]	GLOBAL SOLUTION	19	19	0
	REDD funding (inc. VCAs) should benefit landowners for protecting forests [LANDOWNERS]	LANDOWNERS	14	14	0
	REDD should be financed by a carbon offsetting market mechanism [CARBON MARKET]	CARBON MARKET	25	13	12
	PNG is taking a leadership role in REDD [LEADERSHIP]	INTERNATIONAL LEADERSHIP	14	11	3
	REDD should incorporate a broad scope of land use options, including plantations and agroforestry [REDD+]	REDD+	4	4	0
	Other	OTHER	2	2	0
			206	174	32
Country	Stance description	Abbreviation	Total	Agree	Disagree
Vietnam	REDD / PES is a win-win; it can protect the forest and support income/development [WIN-WIN]	WIN-WIN	9	9	0
	REDD should be financed by domestic beneficiaries of environmental services [USER PAYS]	USER PAYS	7	5	2
	Vietnam should join international/multi-lateral efforts to protect forests through REDD [JOINING GLOBAL EFFORT]	JOINING GLOBAL EFFORT	5	5	0
	REDD/PES is a good idea, but complex to implement [COMPLEX]	COMPLEX	5	5	0
	Those that preserve the forest should be compensated/rewarded [REWARD STEWARDS]	REWARD STEWARDS	2	2	0
	The definition of forests can have a significant influence on REDD design [FOREST DEFINITION]	FOREST DEFINITION	1	1	0
	Developed countries need to reduce emissions [DOMESTIC RESPONSIBILITY]	DOMESTIC RESPONSIBILITY	1	1	0
	A logging moratorium will help to reduce emissions in Indonesia [MORATORIUM]	MORATORIUM	1	1	0
	Other	OTHER	3	0	3
			34	29	5
Grand Total			852	752	100

Appendix 2

Actors speaking in the media

Brazil

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
GLOBAL SOLUTION	6	2	14	3	25	2	27
CARBON MARKET	3	5	8	1	17	9	26
GLOBAL FINANCIAL SUPPORT	10	1	11	1	23	0	23
OPPORTUNITY COST	7	9	6	0	22	1	23
PES	5	5	3	1	14	0	14
EMPOWERMENT	1	9	2	0	12	0	12
GOVERNANCE	3	2	5	1	11	0	11
POLITICAL WILL	5	3	1	0	9	2	11
DOMESTIC RESPONSIBILITY	6	2	2	0	10	0	10
REDD+	2	0	4	0	6	1	7
LEAKAGE	0	0	6	0	6	0	6
OTHER	2	4	0	0	6	0	6
Total	50	42	62	7	161	15	176

Cameroon

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
GLOBAL SOLUTION	0	5	1	2	8	1	9
TECHNICAL/FINANCIAL ASSISTANCE	2	4	0	0	6	0	6
OTHER	1	0	1	0	2	0	2
ECOSYSTEM	1	0	0	0	1	0	1
CARBON MARKET	0	0	0	1	1	0	1
WIN-WIN	0	1	0	0	1	0	1
Total	4	10	2	3	19	1	20

Indonesia

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
GLOBAL FINANCIAL SUPPORT	31	9	17	8	65	1	66
GLOBAL SOLUTION	30	7	22	3	62	3	65
GOVERNANCE	27	13	13	3	56	4	60
RIGHTS	3	15	13	1	32	5	37

CAPACITY BUILDING	12	6	5	1	24	4	28
CENTRALISED	14	2	1	1	18	5	23
GROWTH	5	3	4	5	17	6	23
CO-BENEFIT	6	7	5	3	21	1	22
CARBON MARKET	5	1	2	3	11	6	17
REDD+	7	1	4	2	14	3	17
OTHER	1	4	0	2	7	4	11
Total	141	68	86	32	327	42	369

Nepal

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
FUNDING OPPORTUNITY	1	0	0	3	4	4	8
COMMUNITY BENEFITS	0	4	1	0	5	0	5
GLOBAL FINANCIAL SUPPORT	0	1	0	2	3	1	4
GLOBAL SOLUTION	0	3	0	1	4	0	4
CAPACITY BUILDING	0	1	1	1	3	0	3
GOVERNANCE	1	0	0	2	3	0	3
Total	2	9	2	9	22	5	27

Peru

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
CO-BENEFIT	0	0	5	1	6	0	6
GLOBAL SOLUTION	1	1	3	0	5	0	5
INTERNATIONAL LEADERSHIP	1	0	3	0	4	0	4
NO PLANTATION	0	1	1	1	3	0	3
RIGHT/CORRUPTION	0	0	0	2	2	0	2
Total	2	2	12	4	20	0	20

PNG

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
GOVERNANCE	21	4	6	1	32	13	45
EMPOWERMENT	6	16	6	2	30	0	30
EXPLOITATION OF COMMUNITIES	15	4	3	1	23	4	27
GLOBAL FINANCIAL SUPPORT	14	3	7	2	26	0	26
CARBON MARKET	8	1	1	3	13	12	25

GLOBAL SOLUTION	11	3	2	3	19	0	19
LANDOWNER	1	4	2	7	14	0	14
INTERNATIONAL LEADERSHIP	10	0	1	0	11	3	14
REDD+	1	3	0	0	4	0	4
OTHER	0	1	0	1	2	0	2
Total	87	39	28	20	174	32	206

Vietnam

Stances	State Actor	Domestic civil society	Foreign actors	Others	Total Agree	Disagree	Total
WIN-WIN	5	4	0	0	9	0	9
USER PAYS	5	0	0	0	5	0	7
COMPLEX	5	0	0	0	5	0	5
JOINING GLOBAL EFFORT	3	2	0	0	5	0	5
OTHER	0	0	0	0	0	0	3
REWARD STEWARDS	1	1	0	0	2	0	2
DOMESTIC RESPONSIBILITY	0	1	0	0	1	0	1
FOREST DEFINITION	1	0	0	0	1	0	1
MORATORIUM	0	1	0	0	1	0	1
Total	20	9	0	0	29	0	34