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The economic case for prioritising governance over financial incentives in REDD+

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Abstract

This article contributes to the ongoing debate on the role of public policies and financial incentives in Reducing Emissions from Deforestation and forest Degradation (REDD+). It argues that the subordination of policies to results-based payments for emission reductions causes severe economic inefficiencies affecting the opportunity cost, transaction cost and economic rent of the programme. Such problems can be addressed by establishing sound procedural, land and financial governance at the national level, before REDD+ economic incentives are delivered at scale. Consideration is given to each governance dimension, the entry points for policy intervention and the impact on costs. International support must consider the financial and political cost of governance reforms, and use a pay-for-results ethos based on output and outcome indicators. This can be done in the readiness process but only if the latter's legal force, scope, magnitude and time horizon are adequately reconsidered. In sum, the paper provides ammunition for the institutionalist argument that UNFCCC Parties must prioritise governance reform between now and the entry into force of the new climate agreement in 2020, and specific recommendations about how this can be done: only by doing so will they create the basis for the programme's financial sustainability.

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Keywords: economic efficiency, economic incentives, multi-level governance, North-South, policy options, REDD+

Introduction

In the negotiations for a new climate change protocol that is set to enter into force by 2020 (UNFCCC, 2011b), Reducing Emissions from Deforestation and forest Degradation (REDD+) is one of the mitigation actions that enjoys most support among the Parties to the UN Framework Convention on Climate Change (UNFCCC). Initially conceived as a straightforward transfer of financial incentives to avoid deforestation in developing countries, REDD+ has evolved, at least in its conceptual form, into a complex programme which combines policy approaches and positive economic incentives to support a range of climate mitigation activities in the forest sector. The programme has an ambitious goal to reduce, halt and reverse global forest emissions (UNFCCC, 2010, 2011a), which account for 12-15% of total greenhouse gas emissions (van der Werf et al., 2009).

A lot has been written about public policies and financial incentives as two complementary but formally distinct approaches to REDD+ (Angelsen, 2008; Angelsen et al., 2009; Corbera et al., 2010; Eliasch, 2008; Munden, 2011; Streck et al., 2009; Wertz-Kanoinnikoff and Angelsen, 2009; Westholm et al., 2011), and several authors voiced explicit or implicit criticism against the *de facto* subordination of the policy approach to the economic approach in the current programme architecture (Clements, 2010; Gregersen et al., 2010; Global Witness, 2009; Karsenty and Ongolo, 2011; Kanowski e al., 2011; Robledo et al., 2008; Sandbrook et al., 2010). The present paper contributes to this debate by highlighting that the secondariness of policies compared to the incentive approach causes severe economic inefficiencies in implementation, which in turn undermine the programme's capacity to achieve its stated goal. It disputes that such problems can be addressed by prioritising policy interventions aimed at establishing a compound governance system at the national level with focus on three areas: procedural governance, land governance and financial governance. It also argues that this can be done during the 'readiness' phase only if the latter's legal force, scope, magnitude and time horizon are adequately reconsidered.

The article is organised in four parts. The first part briefly describes the approach underpinning the current design of REDD+, questioning its ideological assumptions and highlighting the disconnection between the overarching policy framework and the emerging practice. The following section illustrates the economic inefficiencies embedded in such approach. The third section explores how investing in governance can improve programme implementation. The fourth part discusses the practical and political challenges to realising governance reforms under REDD+. Finally, the conclusions elaborate on the cost-saving potential of the proposed approach, as well as on its political consequences. The economic analysis will be predominantly theoretical and qualitative.

1. Theory, practice and inconsistencies in REDD+'s current design

The standard design options in the formulation of an environmental protection programme are command-and-control regulations and economic incentives (Groosman, 2000). Regulations are promulgated by a legitimate authority with the power to forbid or restrict environmentally harmful activities and the capacity to enforce any decision to that effect. By contrast, economic incentives induce conformity with the desired conduct by appealing to the stakeholders' self-interest, or the *ex-ante* calculation of the costs and benefits of an action (Scott, 2000).

REDD+ has taken a sharply neoliberal approach in discourse by privileging financial incentives over regulatory measures (Hiraldo and Tanner, 2011; Humphreys, 2009). The argument is that, if forest carbon is given a monetary value, rational economic actors can decide between conservation and development based on opportunity-cost considerations: this way, market forces operate to balance climate objectives and other legitimate development, with limited need for complex policy arrangements (Portela et al., 2008). International REDD+ channels payments from industrialised nations to developing countries that would otherwise lack the self-interest or the capacity to reduce deforestation and degradation. This approach is consistent with the principle of common

but differentiated responsibilities enshrined in article 3(1) of the UNFCCC, and it is also more likely to deliver results given the developing countries' reluctance to allow a binding international regulation of forest use (Dimitrov, 2005; Humphreys, 2006; Humphreys, 2001; Kanowski et al., 2011). The provision of positive economic incentives is also prominent in national-level implementation, partly because repressive regulations have been ineffective in the developing countries' forest sector (Gregersen and Contrera, 2010; Kaimowitz, 2003). Early demonstration activities and international policy discussions confirm that the ultimate objective of national and sub-national REDD+ actions is to distribute payments among stakeholders in order to change their environmental management practices (Alston and Anderson, 2011; Angelsen, 2009).

The theory that economic incentives can efficiently reduce forest emissions is disproved by a host of practical problems affecting implementation that can only be solved through targeted policy actions, e.g.: social inequality, tenure insecurity, corruption, widespread illegality, regulatory deficiencies, general lack of alternatives and capacity, conflicting development policies, multiple driver dynamics and complex political economies. Realisation that these problems are widespread and would be a stumbling block facing any market or non-market effort to reduce deforestation (Angelsen, 2009; Blom et al., 2009; Clements, 2010; Gregersen and Contrera, 2010; Gregersen et al., 2010; Hall, 2010; Kanaowski et al., 2011; Robledo et al., 2008; Sandbrook et al., 2010) prompted a moderate change in discourse. A new institutionalist perspective centred on the concept of governance emerged with the introduction of a phased approach to REDD+ (Hiraldo and Tanner, 2011), whereby the transfer of international incentives builds on the prior development of ad hoc legal, institutional and capacity frameworks (Vatn and Angelsen, 2009). Developing countries enter a 'readiness' process in which they formulate national strategies, policies and measures assisted by multilateral institutions (Phase 1) (World Bank, 2011b) and then receive international support for their implementation (Phase 2) (see: FIP, 2012); payments for changes in and removals of emissions (Phase 3) are conditional upon the achievement of a status of 'readiness' (UNFCCC, 2010, article 73),

though it is unclear whether at what stage of the implementation of the preparatory strategies, policies and measures this will be achieved.

The phased approach to REDD+ has not removed the underlying inconsistency between the international design structure of the programme and the progressive identification of socio-economic problems requiring policy or regulatory interventions at the national level. This inconsistency manifests itself in a number of ways. First, the *legal force* of the readiness process gives rise to ambiguity. Both the programme's safeguard policies, included in the UNFCCC text to mitigate negative social and environmental impacts potentially arising in implementation (UNFCCC, 2010, Appendix II), and multilateral requirements for national readiness plans are couched in soft, non-legally-binding language; the monitoring, reporting and verification of safeguards was dropped in favour of an optional 'system to provide information' (UNFCCC, 2011, Appendix I); and readiness itself is only encouraged but not mandated in the UNFCCC text (2010, paragraphs 73 and 74), leaving doubts about the extent to which developing nations must conform to it in order to receive payments. Secondly, there is a problem of *scope.* When drafting national REDD+ strategies or plans, countries are asked to assess and address a number of elements, yet 'difficult' issues such as corruption, planning and tenure are either overlooked or blandly addressed (Goerg-Williams et al., 2009, 2010, 2011, 2012). This hesitation in dealing with some of the underlying causes of forest loss can severely affect the programme's effectiveness and efficiency, as it will be shown below. The third problem is the *timeframe*. The general attitude towards readiness is that policy adjustments must be implemented as rapidly as possible, so as to allow greater investments in emission reduction activities: this ignores that progress in areas like governance is built over several years or decades (Evans and Rauch, 1999; Wertz-Kanounnikoff and McNeil, 2012), creating a tension between expediency and effectiveness. Finally, there is a problem with the *magnitude* of the support provided to readiness. Financial assistance, in particular, is materially insufficient to trigger far-reaching reforms in recipient countries and it could at best support initiatives with limited

impact (for an example, see: FIP, 2012); capacity-building and technical assistance for governance are also gravely insufficient.

The lack of a clear obligation to reform forest governance structures, the absence of benchmarks to assess a country's readiness level, the limited scope and magnitude of international support for policy and regulatory action, and pressures to move quickly past the readiness process diminish the contribution of public policies and regulatory measures to REDD+ in favour of market-based implementation. The next section will provide further evidence to the argument that governance reform is a prerequisite for efficiency in REDD+.

2. Economic inefficiencies inherent to the current programme design

REDD+ is presented as a relatively straightforward, quick and cost-effective climate mitigation tool (Gullison et al., 2007; Stern, 2007; Eliasch, 2008; Kindermann et al., 2008), but the veracity of this claim is highly dependent upon the quality of the programme design. Leaving governance reforms to the discretion of recipient governments with often no capacity or political interest to carry them out (Pesket and Brockhaus, 2009; Corbera et al., 2010; Skutsch and McCall, 2010) *de facto* reduces the ability of international policy-makers to correct flaws in programme design once market forces begin to operate. Some design failures are already evident and could undermine the programme's economic efficiency, which in turn bears consequences on its effectiveness (Angelsen, 2009).

2.1. Inefficiencies relative to opportunity costs

On paper, the largest share of resources invested in REDD+ should be used to compensate the opportunity costs borne by programme participants (Boucher, 2008; Pagiola and Bosquet, 2009; Olsen and Bishop, 2009). Opportunity costs indicate the difference in net benefits between forest exploitation and the alternative land use; they

are thus defined as much by the profitability of the land-use change activity as by the profitability of the sustainable alternative land use. Ideally, REDD+ would generate capital investment that would help make sustainable economic alternatives at least as profitable as deforestation/degradation, consistent with an overarching sustainable development objective (UNFCCC, 2010, paragraphs 6, 10, 48 and 65). However, it is not uncommon to find legal, cultural, knowledge-related or infrastructural barriers to the implementation of such activities (Cohn et al., 2011; Fisher et al., 2011; Klooster, 2002; Molnar et al., 2007) which, if unaddressed, could frustrate international support in this area. REDD+ payments would then have to compensate opportunity costs as high as the entire foregone profit from deforestation/degradation.

Overcoming barriers to sustainable revenue-generating activities may ensure a long-term reduction of opportunity costs, although in the short term it is likely to delay the implementation and increase the cost of emission reduction activities (Fisher et al., 2011; PRP, 2009). Inefficiencies may occur if, in a rush to secure a carbon transaction, investors ignore such barriers. This has not been the case of some early projects using integrated social and environmental standards (CCBA, 2008; SES, 2010) and large-scale initiatives linked to REDD+ (Rival, 2012), but the evidence is still too scarce and the pressure to generate carbon offsets too little for concluding that the latter will be the standard approach. In a large-scale compliance mechanism it is imaginable that investors' interest in lowering opportunity costs will depend on the time-lag for the occurrence of the resulting profits and on the contractual arrangements defining their allocation; indeed, aside from sustainable forest management, there is little evidence that the programme will mainstream the implementation of complementary revenue-generating activities. For opportunity costs to be *systematically* minimised, regulatory and policy intervention must establish adequate programmes, processes and dedicated funding streams, as will be discussed in section 3.

2.2. Inefficiencies relative to transaction costs

Transaction costs arise from those activities that are necessary to the transparency and credibility of the programme but which do not generate emission reductions, such as: the negotiation of transaction contracts; the measuring, reporting and verification (MRV) of emissions reduction; the enforcement of contracts; and measures to prevent leakage (displacement of emissions) and to ensure permanence (reversal of emission reductions) (Allston and Anderson 2011; World Bank, 2011).

Rushing towards performance-based payments for emission reductions (phase 3) would mean facing higher transaction costs. The MRV and marketing processes carried out by international intermediaries could cost as much as 40% of the total investment both for projects (Plan Vivo, 2011) and jurisdictional-level initiatives (Viana et al., 2009). Economies of scale can reduce these costs (Böttcher et al., 2009; Angelsen et al., 2008), but scaling up implementation may affect MRV accuracy (Densham et al., 2009); this creates uncertainties that can only be addressed via conservative accounting measures which, in turn, increase total costs (Angelsen, 2008; European Commission, 2010). Furthermore, ensuring the additionality of emission reductions vis-a-vis problems of leakage and permanence is bound to push transaction expenditures further up; these so-called 'stabilisation costs' can be very high (World Bank, 2011), but would decrease with national-scale implementation (Wertz-Kanounnikoff and Angelsen, 2009). Finally, costs are also affected by inaccurate reference levels for avoided deforestation/degradation, which is a virtual estimate of the likely level of emissions in the absence of a REDD+ action. In particular, with the use 'forward-looking' levels that take into account national circumstances and development factors, REDD+ could pay for reducing emissions that would not have been generated otherwise (e.g. see the case of Guyana: MoU, 2009). The inefficiency of this approach has been recognised (Karsenty, 2009; Munden, 2011), with some observers suggesting that it could 'increase payment by a factor of between 2 and 100 times' (McKinsey, 2009). The above problems are as much of a technical nature as they are a consequence of a policy and regulatory void.

2.3. Economic rents

Under a market mechanism, private rents could capture a very large part of the resources invested in REDD+. In a hypothetical 'perfect system' payments would be targeted to the asset holder's opportunity cost; in practice, information gaps make it virtually impossible to assess opportunity costs accurately. Rents accrue from the difference between the total cost of implementing a REDD+ activity and the sum paid for it. If payments are determined by the market value of avoided or sequestered carbon emissions, there would be little or no consideration for the actual cost of a REDD+ activity at the level of credit purchase. Moreover, because the inelastic price paid by the carbon buyer generates profits for suppliers with low opportunity and implementation costs, there may be an incentive to cut expenditures to the detriment of non-mandatory social and environmental co-benefits.

Eliasch (2008) estimates that the combined level of economic rent for carbon suppliers could mop up between 41% and 55% of the total resources invested. Whether profits remain with the asset holder or are captured by financial intermediaries will depend on the specific contractual arrangements. But there are strong indications of where the balance would lie. In the case of the Rimba Raya REDD+ project in Indonesia, the Russian gas giant Gazprom was designated as the sole financial intermediary and marketer of carbon credits; a report from Reuters revealed that the company would benefit from 56% of the credit's first pricing in the secondary market (Fogarty, 2011). The enormous profit for international investors acting as financial intermediaries is only partly explained by the legitimate expectation to make returns proportional to the investment risk (CMIA, 2011), which is particularly high due to the volatility of carbon price and to governance problems in developing nations. A more decisive factor may be that the carbon market could be dominated by few financial intermediaries with the capacity to source and aggregate forest carbon credits from a multiplicity of projects and the power to dictate the price of the asset purchased – i.e. an 'oligopsony' or 'monopsony' (Munden, 2011). In this scenario, the distribution of profits could mirror

existing commodity markets allocating over 60% of the global investment to intermediaries, 30% financing project costs, 5% captured by governments, and a mere 3% covering the opportunity cost of REDD+. These figures mirror the distribution of profits and resources in other commodity markets (Munden, 2011).

It is also quite possible that government elites will act as rent-seekers in REDD+ implementation, especially in countries were most forests already belong to the State (Knox et al., 2011). This would be an even likelier prospect if untransparent and corrupt governments were to claim exclusive tenure rights over forest carbon and act as financial intermediaries. Regulatory action and targeted policies at the national level are thus needed to regulate profit allocation so as to prevent the inappropriate or illegitimate appropriation of rents by private investors or public actors.

Taken together, the inefficiencies of the current programme design are substantial and severely hamper its effectiveness, particularly considering the relative scarcity of resources (e.g. compare available cost estimates, Eliasch, 2008, with the programme's financial firepower, REDD+ Partnership, 2012). In order to maximise the efficiency of REDD+, the following leverage points can be addressed through regulatory and policy measures, as will be discussed in the next section:

- Opportunity costs can be minimised by removing barriers to the implementation of sustainable alternatives to deforestation/degradation;
- Monitoring, protection and stabilisation costs can be lowered by recognising stakeholder rights and improving their participation;
- Government rents can be reduced by improving transparency and accountability in decision-making;
- Speculative financial profits can be controlled by establishing a profit ceiling for intermediaries (private and public), or by better regulating their operations.
- Transaction costs can be reduced by setting more credible reference levels which ensure additionality;
- Transaction costs can also be lowered by bundling together projects and

programmes which creates economies of scale in MRV, financing and crediting;

3. Policy priorities for REDD+: three dimensions of a national governance system

Forest loss is a complex phenomenon with ramified consequences on various sectors of the economy and society. Therefore, regulatory and policy action in this area cannot consist of isolated, *ad hoc* interventions but it should be framed within a broader governance context. The elusive concept of 'governance' (Kaufman et al., 2010; Krahman, 2003; Mimicopoulos et al., 2007; Palmer et al., 2009), has been defined as 'the exercise of political, economic and administrative authority in the management of a country's affairs at all levels [...] comprising the complex mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights and obligations, and mediate their differences' (Plamer et al., 2009).

Across the multiple levels of operation of REDD+, the main (though not the only) interlocutors of the international community are the developing country governments bearing responsibility for the actions that are taken to reduce emissions (outputs), as well as their measured effectiveness (impacts). This is particularly so under national-level implementation. This section will focus on three specific dimensions of governance that constitute the building blocks of an archetypal national system, albeit with the caveat that there cannot be a 'one-size–fits-all' approach in this field (Angelsen et al., 2009). Some of the ideas presented here are less original than others, but attention is drawn to their mutual interconnectedness: (1) good procedural governance builds the conditions for establishing (2) a sound land governance system mapping out a country's vision for sustainable development, which is then realised using (3) a dedicated financial infrastructure and support services to distribute incentives and investments (financial governance).

3.1. Procedural governance

Just as procedural justice defines the character of a fair judicial process, procedural governance is here intended to define a fair and effective process by which decisions regarding the public sphere are taken (formulation) as well as the means through which these decisions are implemented and enforced (execution). Policy effectiveness rests on the objective quality of decisions as much as on their perceived legitimacy (Palmer et al., 2009), which in turn is strenghtened by a sound governance process. The formulation and execution of public policies in rainforest nations is often so defective that it severely limits a government's ability to function (Corbera et al., 2010; Karsenty and Ongolo, 2011; Tacconi et al., 2010; World Bank, 2006), and REDD+ payments could exacerbate these problems if adequate action is not taken upfront (Hansen et al., 2009; Phelps et al., 2010; Sikor et al., 2010; Tacconi et al., 2009; Cadman and Maraseni, 2012).

Four areas stand out, among others, as core determinants of governance quality: transparency, citizen participation, freedom from corruption and predominance of the rule of law (FAO, 2011; Mimicopoulos et al., 2007; Sheng, 2012; UNDP, 1997). Of these, only participation is consistently addressed in REDD+ readiness. Further policy and regulatory measures - such as law enforcement support programmes, judiciary reforms, anticorruption legislation and so forth - should be pursued throughout the readiness phase in synergy with existing social development programmes. These elements can also be looked at from an equity perspective, for instance as advocated in the right-based approach to REDD+ (Hiraldo and Tanner, 2011). Embedding the social dimension in programme implementation is thus essential to its effectiveness and efficiency.

Because a government's general *modus operandi* affects decisions in the land use and forest sectors, focusing on forest governance only downplays the importance of systemic institutional changes (Tacconi et al., 2009). The cross-sectoral aspect of procedural governance is particularly important in REDD+ because it provides a means for fostering cooperation (i.e. between national and international stakeholders, public authorities, interested communities and businesses) in a sector where no single actor is in a position

to unilaterally control the behaviour of the others. The national government acts as a linchpin in this complex relationship between governance levels and within a multi-stakeholder process that emphasises the role of sub-national public and private entities (Alston and Anderson, 2011; Emerson et al., 2011; Forsyth, 2009).

Improving procedural governance has an indirect effect on REDD+ in so far it creates an enabling environment for its effective and efficient implementation. More obviously, it would reduce rents and implementation costs by contrasting the illegal appropriation of resources by public or private actors; it would lower stabilisation costs by favouring the emergence of political support for REDD+ and contrasting the privatisation of the political agenda (Karsenty and Ogolo, 2011); it could also help reduce opportunity costs by helping to identify the entry points for addressing the drivers of forest loss; furthermore, given the extent of the existing conservation commitments and the emissions generated in areas formally under protection, improving developing countries' capacity to implement and enforce environmental laws and policies could go some way towards achieving the programme's goal (Wertz-Kanounikoff and Kongphan-anpirak, 2009; Kanowski et al., 2011). Instead of duplicating the work of governance programmes already in place, REDD+ could breathe new life into current international efforts raising their profile, providing additional resources and making them a political priority. There are evident limits to what can be achieved under REDD+ in this area but also concrete opportunities, as will be discussed in section 4.

3.2. Land governance

The main driver of forest loss is market demand for wood and agricultural crops (FAO, 2010; Gibbs et al., 2010). Over the long term, REDD+ must both restrain the demand for such products and make their supply more efficient using existing lands. But while internationally agreed demand-side measures could only enter into force as part of the 2020 climate agreement, supply-side measures could be introduced in developing nations before 2020 through the REDD+ readiness process.

Improving land governance can indeed make the supply of forest and agricultural products more efficient. Land governance denotes 'the policies, processes and institutions by which land, property and natural resources are managed', and it includes 'decisions about access to land, land rights, land use and land development' (Deininger and Enemark, 2010). One way to improve land governance is by supporting land administration systems, which provide the infrastructure for implementing land policies and land management strategies (Palmer et al., 2009; Williamson et al., 2010). Many developing countries would benefit from financial and technical assistance in this area (Dalal-Clayton and Dent, 1993; Dalal-Clayton et al., 2000; Deininger et al., 2010; French and Natarajan, 2008; Larson et al., 2008). Although the exact interventions needed to improve land administration can only be defined by nationally-specific diagnostics, two focus areas seem particularly relevant in this context: tenure security and spatial planning. Security of land and forest tenure – which includes the legal recognition of informal rights (through registration, certification or other means) and their protection against competing claims (Wendland, 2011) – is still very low in tropical forest regions (Almeida et al., 2012; Sunderlin et al., 2008; White and Martin, 2003). Tenure security is crucial to the effectiveness of REDD+ and other incentives that challenge unsustainable models. For example, it could address the drivers of deforestation (agricultural expansion) by attracting investments in agricultural productivity in low-carbon regions, and forest degradation (logging) by promoting community-based sustainable forest management (Sunderlin et al., 2008; Sayer et al., 2008); it could ensure permanence of emission reductions and prevent leakage by promoting participation of *de facto* forest users (Cotula and Meyers, 2009); moreover, it could provide legal certainty to the distribution of benefits and responsibilities in REDD+ implementation by defining rights over land, forests and carbon (Angelsen, 2009; Cotula and Meyers, 2009; Deininger et al., 2010; Knox et al., 2011; Mitchell and Zevenbergen, 2011). But under certain conditions tenure security can increase forest loss: e.g., the promise of secure tenure rights on 'empty' forestlands may attract migration towards the forest frontier (Pfaff et al., 2010); similarly, where secure tenure drives agricultural

intensification in the forest frontier, this may result, absent other policy interventions, in the continued conversion of forests (Carr, 2004). Removing perverse incentives of this kind is therefore as important to REDD+ as providing legal certainty to tenure.

Spatial planning introduces an element of collective rationality and resource efficiency in the way the territory is used. Two approaches are relevant for REDD+. The first is segregation, a place-based approach that relocates harmful activities into less carbon dense ecosystems. Spatial segregation is relevant for commercial drivers of land use change and is most suitable to protect relatively intact, remote areas with sparse population. Indeed, it must consider infrastructure planning so as to prevent forest access (e.g. building railways instead of roads, redesigning routes and planning protective measures when new roads open access to forest areas). Examples of segregation are the relocation of palm oil production onto degraded lands in Indonesia (Gingold et al., 2012; Ruysschaert et al., 2011) and land sparing through cattle intensification in the Brazilian Amazon (Cohn et al., 2011). In contrast, spatial policies that facilitate the integration of the human and natural subsystems at landscape level are most relevant where local people are driving deforestation and should therefore be standard practice in densely populated forest frontiers. The aim of spatial integration is to promote a transition towards ecological forms of land use which do not exclude economic development (Geisler, 2010; Whatmore and Boucher, 1992). A participatory planning process based on the registration of tenure rights and on the collective negotiation of their restriction can more easily identify alternative development opportunities at the landscape level and appropriate entry points for the best use of REDD+ funds (Goodstadt and Rosário Partidário, 2009). An example of such approach in the REDD+ context is provided by Fisher et al. (2011), whose empirical study in Tanzania showed that helping local people use their resources more efficiently inherently addresses the causes of forest loss. Not only does this lower the opportunity cost of REDD+, but it can also reduce implementation and stabilisation costs by providing a platform for stakeholder cooperation in carbon monitoring and protection, enhancing

coordination across sectors and levels of government and generating information that increases the accuracy of reference levels.

3.3. Financial governance

As explained in section 1, REDD+ privileges monetary incentives over repressive regulations to break with the unsustainable pattern of production and exploitation. Investments in procedural and land governance are thus a necessary but insufficient condition for reducing forest emissions. One of the main tasks of international REDD+ is to build a framework for the generation of dedicated financial resources (Parker et al., 2009). While this will likely be regulated by an international framework, the mechanisms that deliver finance to national and sub-national entities will probably be country- or even context-specific (Angelsen, 2009). In order to realise the change in development patterns agreed in the planning process, a transparent and equitable distribution of incentives among domestic stakeholders legitimated by secure tenure rights is key. Such result cannot be achieved by merely deregulating or liberalising the flow of international capital (Rankin, 2001); instead, public authorities can and should play a more active role of intermediation (Zadek et al., 2009). This can be done through the establishment of a dedicated financial infrastructure and the targeted provision of business development services (BDS).

The financial infrastructure – i.e. the institutions, information, technologies and rules enabling financial intermediation (World Bank, 2009) – influences how different actors gain access to funds within a jurisdiction. REDD+ will probably need its own set of rules and institutions to manage a combination of national and international grants, loans and results-based payments, dedicated funds as well as other resources which can contribute to the programme goals vis-a-vis a wide spectrum of potential beneficiaries. Its task would be to distribute resources at scale, where they are most effective, through a transparent process and at favourable conditions for the recipient (i.e. on a non-commercial basis) so as to promote compliance. Additionally, a dedicated financial

infrastructure would have the capacity to combine different funding streams for realising actions with multiple impacts (such as climate adaptation, biodiversity protection and rural development) and leverage standard investments in low profitable activities which are capable of delivering REDD+ objectives. These synergies would provide substantial savings in all cost categories.

The shape of a financial infrastructure will change according to the chosen implementation mechanism. In case of centralised management of REDD+ finance, resources could converge into a trust fund or 'green development bank' and be disbursed (as grants or low-interest loans) by financial and micro-financial institutions across the territory in such a way as to prioritise social and environmental protection over profitability (Rankin, 2001; Wenner et al., 2004; Vatn and Angelsen, 2009; Zadek et al., 2009). This could reduce opportunity and transaction costs, especially if the micro-financing model becomes economically sustainable, but particular emphasis should be placed on establishing mechanisms that ensure transparency and accountability in REDD+ revenue management so as to prevent rent-seeking behaviour by government officials. A well-known model of financial intermediation in the context of REDD+ is Brazil's Amazon Fund, a national funding entity that combines public and private resources dedicated to forest-based climate mitigation (Zadek et al., 2010). Another proposal relevant to REDD+ envisages the creation of a sustainability-oriented financial infrastructure that taps into available private capital using standardised financing schemes (i.e. without creating a new asset class such as carbon), and is backed by public resources (Munden et al., 2012).

If a country opts for a decentralised model of implementation, excessive private rents (see, for instance, the problem of 'carbon cowboys': Carbon Positive, 2009) could also be tackled by an authority that oversees the relations between local stakeholders and international investors, or a specialised ombudsman. Alternatively, regulation can establish a limit to the profit of intermediaries and impose an equitable redistribution of surpluses among stakeholders beyond that ceiling. Finally, where relocation of

commercial activities is necessary, public authorities could balance strict environmental regulations with favourable credit conditions or subsidies for relocating agri-businesses onto suitable low-carbon lands. It is crucial that these corrective measures be thought through and harmonised at the international level before market-based implementation is allowed: leaving them to the discretion of developing countries competing to secure foreign investments may cause a race to the bottom similar to other regulatory environments (Mehmet and Tavakoli, 2003).

Finally, the financial governance system should also build the conditions for the efficient and effective use of REDD+ incentives at the local level, for instance through sustainability-oriented BDS (see Wenner et al., 2004). BDS lower opportunity costs by facilitating the development of remunerative economic alternatives to deforestation, allowing a gradual shift from grant-based support to loans and the creation of an economic environment that reduces dependency from international assistance. This deviation from the results-based disbursement of incentives acknowledges that, as explained in section 2, information gaps play a major role in fostering unsustainable development models and require upfront investments in capacity building. BDS are important under any funding mechanism though their content should be tailored to the recipients' preferences and circumstances.

4. Challenges in reforming governance through REDD+

Looking at past experience (Santiso, 2000), it is clear that REDD+ cannot singlehandedly solve governance problems across the tropics, and it is hard to predict how much difference it can make. A probabilistic (rather than deterministic) perspective is warranted: there is no certainty that international support will improve governance but chances will likely increase the more resources and political capital is invested.

Nevertheless, there is much that the international community can contribute in terms of technical, financial and political support. Technical assistance for governance reform is

important to improve problem diagnostic and the formulation of possible solutions, especially in highly specialised areas such as land tenure, planning, financial infrastructure and the development of sustainable business models. Assistance to set up credible monitoring of decision-making and outcomes is crucial to address procedural governance problems (Global Witness, 2009). Financial assistance can cover the material costs and lost profits of implementing the reforms, such as establishing new institutions, strengthening monitoring and enforcement capacity, relocating activities or intensifying production in non-forested lands (see, for instance, the Ulu Masen project in Indonesia: Rafli et al., 2007).

REDD+ most important contribution is that it can generate political momentum to move forward in this area. The implicit theoretical tenet in this discussion is that States are self-interested actors which seek to maximise their individual utility, and participation in REDD+ is only possible if state interests are protected. As seen above, the programme frames State interest in merely economic terms, i.e., whether participation will bring more benefits or constraints to the economy. Two further elements affecting the acceptability of the programme are its international political significance (e.g. how much national sovereignty is eroded) and its consequences on the domestic political economy (i.e. how participation shifts power among social groups and how this affects political support). These interest variables are independent of each other or even conflicting: political economy considerations may contrast with considerations about the overall economic benefit of participation; economic incentives may convince a government to relinquish part of its sovereign control and so forth. Including governance reform in the readiness phase arguably generates long-term economic benefits for developing countries, yet these are too uncertain and distant in time; by contrast, international pressure to reform national governance would be seen as an intrusion in domestic affairs, while conferring tenure rights on local communities and empowering them with favourable financial conditions may run against the interest of powerful domestic actors. It is no surprise therefore that strong international overseeing of governance is opposed

by developing countries (Verchot and Petkova, 2010).

There are counter-arguments to this. Governance reform is often sought by stakeholders that are losing out under current arrangements: empowering them reinforces domestic pressure for change, which contributes to creating a sense of national ownership of the reform (Santiso, 2000). Because participation in REDD+ is voluntary and States are in charge of their reform process, the international community would merely act as a willing counsellor and supporter. Moreover, financial incentives can be used instrumentally as rewards for governance reform so that the rhetorical stick of political pressure is matched by a very material carrot that – quite literally - pays the political price of reform (as a comparable model, see: CPIA, 2010). In other words, the results-based ethos of the programme could be as well applied to governance assistance, though some will have to be provided upfront.

Those resources that are delivered on a pay-per-result basis need an *ad hoc* (i.e. distinct from carbon) metrics to measure governance performance. Intermediate financial rewards could be awarded based on output indicators (e.g. strategies, policies and laws adopted, institutions created, population consulted etc). Participation in the third phase of the programme, which is expected to deliver payments measured in billions of dollars (Eliasch, 2008), could be made conditional to the outcomes of governance reform (e.g. some measure of the actual transparency of decision-making processes, the progress of tenure clarification, the rule of law as perceived by stakeholders etc) but not on impacts (i.e. quantified emission reductions), since improvements in governance do not directly generate emission reductions. It is crucial that governance indicators are agreed between donor and recipient countries through a participatory multilateral process which combines technical and political elements, such as those led by the UNFCCC subsidiary bodies.

A further problem is that governance is known to change very slowly (Evans and Rauch, 1999; Wertz-Kanounnikoff and McNeil, 2012). Not only does this require a long-term international commitment to support the process, but it also creates a conflict with those

interested in progressing swiftly with REDD+ implementation. This problem must not be overstated: first, because – as said above – phase three of REDD+ will not be implemented at scale at least until 2020; second, because some countries are not too far from having the capacity to move to phase 3 (Estrada, 2012), chiefly Brazil (Wertz-Kanounnikoff and McNeil, 2012); finally, because there is scope to move ahead with REDD+ implementation even if some governance problems persist, as long as performance as a whole is deemed acceptable.

All in all, governance reform will be possible only if some support is found at all levels of governance: the international community must be willing to invest time, financial resources and political capital; national governments must have control over the process and objectives without being 'pushed' too hard; and stakeholders must feel that their interests are protected or at least duly compensated. In this light, rather than an insurmountable constraint, the UNFCCC and other international fora are to be seen as opportunities to raise the profile of these issues and to reinforce direct cooperation among willing actors, especially between the sub-national and international levels.

Conclusions

Substantial resources were invested in forest conservation in the past, with little success (Sizer, 1994). This does not mean, as some have suggested (FERN, 2011), that increasing financial resources for forest protection is unnecessary. But the provision of incentives alone is unlikely to succeed, chiefly because the limitedness of regulatory policies could greatly increase opportunity and transaction costs, while also allowing rent seekers to capture much of REDD+'s resources. This paper reinforces the institutionalist argument that REDD+ cannot be delivered by markets without previous investments in national-level governance because rushing towards results-based payments for changes in emission reductions would be a very inefficient and ineffective use of international resources. Yet, at the same time, the analysis also corroborates the social equity argument that effectiveness depends on whether investments reinforce a decentralised,

right-based approach to governance.

The absence of adequate information on current and alternative policy scenarios means that a global quantitative estimate of the potential savings generated by investments in governance cannot be provided. Such calculations are better framed within a national or sub-national context, while at this level of analysis it is only possible to make some general considerations. Some studies provide quantitative indications of readiness investments that cover the material cost of some moderate policy reforms. For instance, a UNFCCC-commissioned report (2009) estimates readiness investments to be in the range of US$ 400-700 million a year compared to US$ 3-6 billion a year for opportunity-cost compensation (for a total cost of roughly US$ 4-7 billion). Other estimates put readiness costs even lower compared to other cost categories, particularly transaction costs and rents (Eliasch, 2008; McKinsey, 2009). This suggests that even modest reductions in opportunity and transaction costs would likely offset any additional investment in readiness. Moreover, readiness expenditures are bound to be higher at the beginning, when most far-reaching changes are envisioned, gradually diminishing over time as governments strengthen their natural resource management capacity and practices. In contrast, the savings from reduced opportunity and transaction costs continue to accrue over a much longer period (i.e. the time of operation of the programme). Greater upfront investments therefore generate long-term economic efficiency as well as a more balanced approach to the sustainable development of tropical regions. In other words, investing in governance would bring the cost of REDD+ to peak earlier and at a lower level than the concurrent design, making the cost curve downward sloping rather than upward sloping as in a business-as-usual REDD+ scenario (i.e. as dictated by increasing commodity demand and population).

A further argument to support investments in procedural and land governance has to do with risk. If a global REDD+ mechanism fails to materialise after 2020, investments in carbon related technologies and institutions would be rendered useless, while investments in these areas would still have positive impacts on the environment and the

development of recipient countries (Westholm et al., 2011). This could, incidentally, still reduce forest emissions in the absence of an international legal framework.

Additionally, improving national governance systems could also alleviate potential conflicts with the development agenda. The level of public resources mobilised to date rings an alarm bell re the political commitment to reduce forest emissions: if REDD+ pursues an aggressive conservation agenda disregarding, or even competing with other policy objectives such as poverty alleviation and agricultural production, high-level political support could vanish altogether. In particular, it is likely that food security concerns will aggravate in an increasingly crowded and hungry world battered by extreme weather events, new pests and declining biodiversity (Beddington et al., 2011). Although our understanding of the ecosystem services provided by forests will increase (as a driver of global change, as a buffer against extreme weather events and as a regulator of local climate), if governments perceive that food security is at risk as a result of an 'unpredictable' food crisis, the political imperative to increase agricultural production would override any interest in protecting forests. The effect of these shocks cannot be estimated in advance, but they should be considered at least at the theoretical level. A solid governance framework must thus harmonise REDD+ environmental objectives with domestic sustainable development agendas, consistent with the shared vision of the treaty (UNFCCC, 2010, paragraphs 6, 10, 48 and 65).

Finally, it must be stressed that the phased approach of the current design of REDD+ can be maintained. In particular, as both the international legal framework for REDD+ and major forest carbon markets are not poised to be operational at least until 2020 (UNFCCC, 2011b), there is time to deal with the current problems in the readiness phase. In order to achieve this, readiness must be re-conceptualised. Its legal force must be strengthened in the negotiating text, also ensuring that thorough monitoring and verification is required and that progress to subsequent phases is conditional upon advances in readiness. The magnitude of support must be reviewed upwards so as to ensure that not only the cost of building capacity in these areas is fully covered by

international sources, but also that reluctant governments have enough incentives to implement politically difficult reforms. This can be done by providing results-based payments for governance reform using *ad hoc* and agreed metrics based on outputs and outcomes. Thirdly, the timeframe for the implementation of readiness activities must be reconsidered: readiness is not a transitory phase to allow the full implementation of REDD+, but rather a core pillar of the programme itself. As such, realistic objectives must be set over the long term and support must be planned to continue also after a country has progressed enough to enter a post-readiness phase, thereby allowing the gradual improvements in governance that can take several years. With regards to the scope of readiness, developments in areas such as technology and MRV capacity could be led by the private sector in the emerging voluntary and compliance markets. Donor countries' priority until 2020 must be the provision of political, technical and financial support in the three areas of governance described above, with a particular focus on empowering national stakeholders. The international community must not shy away from the fact that, in many cases, reforming governance will mean changing the development path of large sectors of the economy as well as the power distribution across society.

These changes might seem insufficient to some observers, for instance because they do not question the decisive role of industrialised nations' insatiable demand for forest commodities. To others, they may seem politically unrealistic in the ever tighter political space left available in UNFCCC negotiations. Both arguments are valid, but it is here argued that reconceptualising readiness so as to promote genuine governance reforms in developing countries stretches ambition to what is practically and politically achievable at this stage. The proposed approach, in fact, is a step forward in ambition that builds on the current organisational framework and that, by combining socially-equitable institutionalism with the long-term use of market incentives, addresses the concerns of most REDD+ actors (Hiraldo and Tanner, 2011). What is required is a moderate ideological shift away from neoliberal principles of a scarcely regulated and privately-led approach which are still strong in the REDD+ arena but increasingly anachronistic after

the global financial crisis. Only by wagering on the power of public policies to shape a sustainable development path will UNFCCC Parties build the future success of REDD+.

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