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An ecological landscape approach to REDD + in Madagascar: Promise and limitations?

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A B S T R A C T

This article explores diverse emerging conceptualisations of "landscape" approaches to 'Reducing Emissions from Deforestation and Forest Degradation' and related activities (REDD +) that are discernible in a growing body of academic literature and policy practice. Landscape approaches to REDD + are assumed to be better able to tackle direct and indirect drivers of deforestation, particularly those that lie outside the forest sector. In assessing this promise, our paper has a two-fold objective: first, to develop a typology of landscape approaches to REDD + discernible in the literature; and second, to assess which approach might be ascendant in the particular context of Madagascar, and whether it has the potential to address direct and indirect drivers of deforestation and forest degradation here. Our analysis of the burgeoning REDD + landscape literature yields a typology of landscape approaches, which we characterise here as economic, political and ecological. In assessing which of these approaches is discernible in Madagascar, we find that an ecological conceptualisation has emerged. While such an approach shows some promise in addressing drivers, in comparison to previous integrated conservation and development approaches (ICDP) that pre-date REDD + , it is nonetheless still limited in its ability to do so. Hurdles include lack of inter-sectoral coordination and national-level political support for combating deforestation, as well as lack of community engagement in multilevel political processes. We conclude by highlighting the promise and limitations of pursuing a landscape approach to REDD + in Madagascar, and the relevance of our analysis for other REDD + countries wherein an ecological landscape approach might be considered.

1. Introduction

Reducing emissions from deforestation and forest degradation (REDD +)[1] is a mechanism being developed under the United Nations Framework Convention on Climate Change (UNFCCC) that financially compensates developing countries for reducing greenhouse gas emissions from deforestation and forest degradation, conserving and sustainably managing forests and enhancing forest carbon stocks (UNFCCC, 2011). Over the last decade, pilot REDD + projects have proliferated in a multitude of developing countries, resulting in a patchy coverage of forest-sector projects that appear inadequate to deal with many of the drivers of deforestation and forest degradation, especially those operating beyond the local level (Weatherley-Singh and Gupta, 2015). Although many countries are now in the process of developing national REDD + strategies, implementation of such strategies is in its infancy, and a key challenge remains their ability to respond to drivers, most of which originate outside the forest sector (Salvini et al., 2014; Kissinger et al., 2012), including agricultural drivers.

In recent years, sub-national REDD + initiatives have therefore been explored and are gaining traction, including landscape approaches (Bernard et al., 2013; Pacheco et al., 2011). A landscape approach to REDD + is ostensibly intended to address drivers outside of the forest sector, as compared to project-level forest-sector focused REDD + interventions. In particular, efforts labelled landscape REDD + include involving and incentivising agricultural producers to reduce land-based greenhouse gas emissions, thereby tackling agricultural expansion as one of the main drivers of deforestation (Nepstad et al., 2013). It is assumed that landscape-oriented REDD + initiatives can complement the ongoing development and implementation of local-level projects and national-level REDD + strategies, within a nested hierarchy of approaches to REDD + . However, the assumption that landscape approaches to REDD + addresses drivers remains largely untested, and challenges remain in the development and design of such programmes

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[1] REDD + stands for: reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

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(Bastos Lima et al., 2017b; Minang and van Noordwijk, 2013), including incorporating sub-national activities into national-level frameworks (Bernard et al., 2014). Landscape approaches to REDD + are a relatively recent addition to the burgeoning academic literature in this field, with few in-depth inquiries into how and why particular landscape approaches are emerging, and whether they are better able to address deforestation and degradation drivers.

Madagascar is one country where landscape approaches to REDD + are being explored, but presents a challenging context for their development and implementation. The agricultural sector is mainly subsistence and small-scale (Conservation International, 2014), making it difficult to engage the private sector. The country is also characterised by extremely high levels of poverty, especially in rural areas (World Bank, 2010). Furthermore, despite past efforts at decentralisation, the governance structure remains extremely centralised, with weak governance capacities at regional and local administrative levels (Vaillancourt, 2008). Madagascar was initially a forerunner in the development and implementation of REDD +, with several early local-level REDD + projects (Ferguson, 2009). These early projects benefited from the long-standing interest and engagement of scientists and international donors in the country's unique and outstanding biodiversity (Myers et al., 2000), which is threatened by deforestation (Harper et al., 2007). One of the earliest examples of these REDD + projects is the Makira project located in northeast Madagascar, which began as a pilot carbon mitigation project in 2001. Due to the area's remoteness, the principal drivers of deforestation and forest degradation here are small-scale. The Makira project's long history of involving local communities in reducing deforestation and generate co-benefits make it an interesting case to study activities to combat local direct drivers. The Makira project continued to develop with the beginning of carbon credit sales in 2013, even as a political crisis stalled the development of REDD + at the national level. With other REDD + projects and national REDD + discussions recommencing, it is timely to analyse Madagascar's experiments with REDD + and the recent interest in landscape approaches.

This article has a two-fold aim. First, we analyse how landscape approaches to REDD + are being conceptualised in the academic and policy literature, and develop a typology of different conceptualisations; and second, we assess which approach to REDD + landscapes may be emerging in Madagascar, if any, and whether it is able to address both direct and indirect drivers of deforestation and forest degradation. We proceed as follows: Section 2 assesses diverse conceptualisations of landscape approaches to REDD + in the literature. We identify here a typology of such approaches, which we characterise as economic, political and ecological. Section 3 then discusses the political context for the emergence of REDD + in Madagascar, and identifies the emergence herein of an ecological landscapes approach to REDD +. Section 4 then discusses whether an ecological landscape approach to REDD + is well-positioned in this context to address indirect drivers of deforestation and forest degradation. Section 5 undertakes a similar analysis for direct drivers. Here we also draw on empirical analysis of the REDD + Makira project and its prospects of addressing direct, small-scale local drivers, viewing it as an example of the kind of project that could be scaled up in implementing an ecological landscape approach to REDD + in Madagascar.

Our analysis is based on a field visit to Madagascar, including to the Makira REDD + project, in December 2014. We draw on semi-structured interviews with 28 Makira project beneficiaries (from the communities of Ambodivoany, Marovovonana and Ambalamahogo) from 5 to 7 December 2014, and an additional 20 semi-structured interviews with stakeholders informed of REDD + developments at the national-level in Madagascar. These were conducted from December 2014 to December 2015, in person and by skype and phone. The national-level stakeholders interviewed included representatives of 4 NGOs, 3 government ministries or agencies, 3 private companies, 3 research institutes or universities, and 4 international donors (see Annex I for a list of national-level interviewees).

2. Conceptualising landscape approaches to REDD +: a typology

Greater emphasis is now being given to REDD + in UNFCCC discussions, particularly in Article 5 of the Paris Agreement negotiated during the 21st Conference of the Parties in 2015, which highlights the importance of conserving and enhancing forests. Although the UNFCCC does not refer specifically to landscape approaches to REDD + (Turnhout et al., 2017), there is a general understanding within the REDD + community that a landscape approach considers the carbon storage potential of the wider landscape, rather than just the forest, given that most deforestation drivers originate outside of the forest sector (Vanderhaegen et al., 2015). The development of landscape approaches is therefore often cited as a way of addressing drivers beyond the forest sector (Bernard et al., 2013; Pirard and Belna, 2012). With the inclusion of REDD + within the Paris Agreement, and the growing interest in landscape approaches as a means of REDD + implementation, it is timely to examine what such approaches entail, their innovative elements, and assumptions regarding their prospects to address drivers of deforestation and forest degradation.

From a review of the academic literature, it is possible to discern a number of key elements, which are increasingly associated with a landscape approach to REDD +. First, the notion of "jurisdictional REDD +" is now being used to refer to politically-determined administrative areas within which local government administrations lead on REDD + initiatives (Gari, 2013) and as a way of linking REDD + projects to sub-national or national-level strategies (Fischer et al., 2016). A related notion is that of a sub-national jurisdictional approach which emphasises an economic conceptualisation of REDD + landscapes to include land-based production systems or commodity production areas as appropriate scales at which to work with large agricultural producers to incentivise change (Nepstad et al., 2013). An ecological understanding of a landscape approach to REDD + is also now discernible as a system of landscape planning that incorporates a range of ecosystems that can store carbon and mitigate climate change, in addition to forests (Rival, 2013). Most recently, research from a development perspective is calling for REDD + to include the concept of 'territory' based on land users rights, in identifying REDD + landscapes (McCall, 2016). Drawing on these diverse conceptualisations, we identify and discuss here, a typology of landscape approaches to REDD + which we characterise as economic, political and ecological (see Fig. 1).

2.1. Economic landscape approaches

Much of the discussion about landscape REDD + in the academic literature is based on the experiences of Indonesia and Brazil (for example, Fishbein and Lee, 2015), two countries that are leading the development of REDD + activities (Cerbu et al., 2011). In both the Indonesian and Brazilian context, there is a need to address the expansion of industrial agriculture because it is the major driver of deforestation. Companies have therefore been incentivised, partly in response to public pressure (Tollefson, 2015), to reduce their negative impacts on forests through engagement in initiatives such as deforestation-free supply chains, sustainable commodity roundtables and certification schemes across their commodity production areas, an approach we term 'economic'. This landscape approach to REDD + has also developed to some extent out of a need to engage agricultural companies in the development of Nationally Appropriate Mitigation Actions (NAMAs) in order to reduce land based emissions (van Noordwijk et al., 2014). In sum, the economic approach to landscapes is being driven by large agribusiness companies, in collaboration with governments.