Geoforum 93 (2018) 48–56

Contents lists available at ScienceDirect

Geoforum

journal homepage: www.elsevier.com/locate/geoforum

Commodification of forest carbon: REDD+ and socially embedded forest practices in Zanzibar

Grete Benjaminsen*, Randi Kaarhus

Department of International Environment and Development Studies, Faculty for Landscape and Society, Norwegian University of Life Science, P.O. Box 5003, 1432 Ås, Norway

ARTICLE INFO

Keywords:
Commodification
Social embeddedness
Forest carbon
PES
REDD+
Zanzibar

ABSTRACT

In this article, we present an empirically based and critical investigation of the ways in which a Reducing Emissions from Deforestation and Forest Degradation (REDD+) project in Zanzibar takes steps to establish the systems required to produce a forest carbon commodity eligible for sale in the global carbon market. Based on long-term ethnographic fieldwork and in-depth knowledge about REDD+ processes in Zanzibar, we discuss how the commodification of forest carbon is at odds with local norms, practices and social relations at local level in Zanzibar, and show how commodification processes – in a context of highly volatile carbon markets – creates new uncertainties and relations of dependence. We argue that, by converting the local forest into a source of one single commodity for sale ('forest carbon'), the project reduces the use value of the forest for local women and men, thus undermining the longer-term rationality inherent in local norms and socially embedded forest practices. We indicate that these also include norms that serve to protect forests. In the context of contemporary debates about the functioning of REDD+ and commodification of forest carbon more in general, this article contributes to enhance current understanding of REDD+ practices and impacts at local level.

1. Introduction

From its inception in 2007, the carbon scheme known as Reducing Emissions from Deforestation and Forest Degradation – including forest conservation, sustainable management and the enhancement of forest carbon stocks in developing countries (REDD+) – was designed to offer payments to countries and projects that could demonstrate progress in the reduction of forest-related CO_2 emissions (Angelsen, 2017). With funding expected to come primarily from carbon markets (Angelsen, 2017), the initial idea underlying REDD+ was that by attaching a market value to the ecosystem services provided through carbon sequestration and storage in the forest biomass, REDD+ projects would make it possible for developed countries to buy 'carbon credits' from developing countries (Leach and Scoones, 2015: 1). Internationally negotiated targets would in this way offer actors from developed countries the opportunity to pay for initiatives to reduce forest-related emissions, and hence 'offset' their own emission reductions.

Based on the Payment for Ecosystem Services (PES) model (Angelsen and McNeill, 2012), REDD+ generated enthusiasm among policy makers and practitioners worldwide, and further triggered the initiation of hundreds of REDD+ projects in and around forests across the Global South (Fletcher et al, 2016). After a decade of difficult international climate negotiations, it has, however, become increasingly clear that the type of global carbon market that was originally envisioned has not materialized and is 'unlikely to emerge' (Angelsen et al, 2017: 718). Nevertheless, all around the world, local REDD+ projects have continued to make investments in capacity building and the establishment of systems required for carbon verification and validation, to ensure compliance with specific standards established for carbon sale.

Over the past decade, extensive research has been carried out to examine the effects of REDD+ . Studies have shown how many REDD+ projects have encountered difficulties in translating REDD+ policy models into practice. It has proven difficult to document that actual reduction in forest loss has taken place (Angelsen et al, 2017), and – accordingly – that greenhouse gas emissions have been reduced. Empirical case studies have pointed to the ways in which REDD+ projects have caused uncompensated dispossessions and inflicted social costs on local communities (e.g. Nel and Hill, 2013; Nel, 2016; Svarstad and Benjaminsen, 2017; Scheba and Scheba, 2017), triggered various forms of contestations and resistance-like behavior (e.g. Beymer-Farris and Bassett, 2012; Cavanagh and Benjaminsen, 2015; Asiyanbi, 2016), and resulted in business-as-usual outcomes (Lund et al, 2017; Benjaminsen, 2017).

* Corresponding author.
E-mail addresses: grete.benjaminsen@nmbu.no (G. Benjaminsen), randi.kaarhus@nmbu.no (R. Kaarhus).

https://doi.org/10.1016/j.geoforum.2018.04.021
Received 11 May 2017; Received in revised form 24 April 2018; Accepted 26 April 2018

Critical analysists have also discussed how market-based approaches that seek to commodify carbon may increase social conflicts, and moreover render everything but the carbon content of the forests worthless, thus obscuring other forest functions (e.g. Lohmann, 2009; Kosoy and Corbera, 2010; Bumpus, 2011; Stephan, 2012; Osborne, 2015). In *Conservation Biology*, Fletcher et al (2016: 674) furthermore argue that the difficulties associated with REDD+ implementation are 'symptomatic of inherent deficiencies in the REDD+ mechanism, itself symptomatic of contradictions in market-based conservation in general'. In a response to Fletcher et al. (2016), Angelsen et al (2017: 719) assert that it is misleading to blame the weaknesses of REDD+ on market-based approaches, claiming that only a 'tiny segment' of all REDD+ projects implemented worldwide are market-based, that is, designed in accordance with the principles of the PES-model. According to Angelsen et al. (2017), we have seen an 'aidification' of REDD+, where most projects implemented locally have adopted broadened objectives beyond those directly related to carbon sequestration and climate mitigation (see also Angelsen, 2017).

Based on an ethnographic case study of the introduction of a PES-based REDD+ project in Zanzibar, this article investigates how REDD+ implementation evolves in practice at local level. The article gives insight into a range of the dilemmas faced by local communities and project managers. Through an empirically grounded and critical account, the article contributes to broaden the empirical basis of contemporary debates on commodification of forest carbon as a key market-based approach to climate mitigation. We show how commodification of forest carbon can be at odds with – and potentially erode – socially embedded forest practices, including norms related to solidarity and reciprocity. These are norms that also serve to protect forests. We further show how the 'valuation' of forest carbon as a commodity meant for sale in a volatile carbon market involves both a quantitative verification, as well as a qualitative certification of a carbon – arguably – beneficial to women and the poor.

In the following sections, we begin by outlining key features of scholarly debates on Payment for Ecosystem Services (PES) and commodification of forest carbon. We briefly provide context to the REDD+ project implemented in Zanzibar, and elaborate on the ethnographic fieldwork on which the analysis in this article is based. We go on to demonstrate how the REDD+ project in Zanzibar was set up as a scheme, which – in line with PES principles – established the systems required to produce a forest carbon commodity eligible for sale. We proceed to discuss how local notions, practices and relationships at local level in Zanzibar – including socially embedded power structures – are incompatible with these commodification processes. In our concluding remarks, we highlight the ways in which processes of commodification of forest carbon may exacerbate tensions between local forest managers' short-term and long-term rationalities and livelihood goals, and ultimately risk aggravating local uncertainties and relations of dependence.

2. Payment for ecosystem services and the 'commodification' of forest carbon

The concept of ecosystem services, defined as 'benefits people obtain from ecosystems' (Millennium Ecosystem Assessment, 2005: vi), gained influence in global policy making through its conceptualization of tropical forests as rendering undervalued services that are fundamental for humans far beyond forest-dwelling communities in the Global South. Gaining prominence during the 1990s, the PES model was popularized with the launch of the Millennium Ecosystem Assessment in 2005 (Gómez-Baggethun et al, 2010), and promoted as an approach that could help reduce environmental degradation in developing countries.

Key actors in a PES scheme are conventionally cast as 'sellers' and 'buyers' of the ecosystem service. While critical political ecologists and geographers see PES as an example of the market-based approaches of the 'neoliberal conservation' currently dominating global environmental policies (e.g. McAfee, 1999; Fletcher et al, 2016), economists such as Wunder (2013: 231) maintain that payments for ecosystems services are 'only in exceptional cases' made through competitive markets. At a global scale, governmentally financed PES schemes typically dominate (Wunder, 2013). While the PES-model is focused on 'achieving environmental outcomes', governmentally financed programs tend to 'politically drift into win-win spheres of multiple side objectives' (Wunder, 2013: 231). Due to political influences beyond the control of the model, these governmentally financed programs end up with broadened objectives, which also include poverty reduction or other developmental concerns. In *Conservation Biology*, Angelsen et al (2017) argue along similar lines on the adoption of multiple objectives in locally implemented REDD+ projects.

More generally, the term 'commodification' is used to refer to processes whereby domains previously governed by non-market values and norms are incorporated into markets (e.g. Gómez-Baggethun, 2015). Castree (2003) has identified six elements as key to the processes of commodification – privatization, alienation, individuation, abstraction, valuation and displacement. As to the commodification of *carbon*, Osborne (2015) holds that three of these elements stand out as relevant, that is individuation, privatization and valuation. *Individuation* refers to the construction of a bounded object (Castree, 2003); in the case of a PES-based REDD+ scheme, the carbon sequestration and storage service, which thus is isolated from other forest functions (Kosoy and Corbera, 2010). Through *privatization*, an individual or group is given 'exclusive rights' to the benefits provided by the service (Castree, 2003). Finally, *valuation* refers to the process of assigning a value to the carbon sequestration and storage services.

Scholarly debates on the social effects of 'commodification' can be traced back to Marx (1967 [1867]). Marx observed that market economies – with transferable private property rights – separate persons and objects creating new forms of alienation. Later, Marcel Mauss (1966 [1925]) contrasted market economies with gift economies where symbolic ties and reciprocal relationships accompany economic transactions, and in a certain sense make objects *in*alienable. Mauss further argued that these relationships – fostering mutual interdependence and feelings of solidarity in society – would erode and eventually disappear as a result of the processes of commodification. Building on Mauss, Polanyi (1958) used the notion of 'social embeddedness' to argue that the economy, and economic transactions, should not be perceived as separate and independent from the rest of the society. Economic transactions are rather integrated in and shaped by social relationships, cultural values and moral concerns linked to reciprocity and re-distributional obligations that may be based on kin, community or solidary relationships within the larger society (see also Machado, 2011).

In a critical discussion of PES-based projects, Kosoy and Corbera (2010) furthermore draw on Marx's notion of 'commodity fetishism'. They argue that the commodification of ecosystem services blinds us to the complexity of the critical processes and social relationships underlying the process of producing ecosystem services. The commodification obscures both ecological complexities, ecosystems' non-economic values, as well as the power asymmetries underlying the trade of such services. Before we set out to employ the concepts briefly outlined above in an empirical analysis of the conversion of local forests into 'forest carbon' and how it affects social and power relationships in Zanzibar, we will present our Zanzibari case and the methods used to collect the empirical data.

3. Introducing the HIMA project in Zanzibar

The semi-autonomous polity of Zanzibar is part of the United Republic of Tanzania. The Zanzibari archipelago consists of two main islands, Unguja and Pemba, and some smaller islets. The contemporary landscape of Zanzibar is a mosaic of cultivated land (including small-scale agroforestry systems and larger – mainly governmentally