



# Contested carbon: Carbon forestry as a speculatively virtual, falteringly material and disputed territorial assemblage



Adrian Nel

Discipline of Geography, School of Agricultural Earth and Environmental Sciences, University of Kwazulu-Natal, South Africa

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## ABSTRACT

Assemblage approaches are increasingly being used to understand new socio-natural formations arising in relation to the multiple crises of capitalism, climate change and environmental degradation. The valuation of nature is key to these new formations, which the creation of new 'valued entities', through calculative practices, that can be accounted for, costed and circulated in monetised and financialised forms in order to ostensibly 'fix' certain environmental outcomes in relation to contemporary global crisis. This paper uses an assemblage approach in relation to the global transnational project of carbon forestry offsetting and REDD+ in a particular place, Uganda, arguing that it has utility in this respect. While Uganda has been named by Lang and Byakola (2005) as a 'funny place to store carbon' due to its contested land politics and history of violence its weak governance context paradoxically re-enforces the imperative for intervention. The paper argues that carbon forestry assemblages are inherently ephemeral and fundamentally contested in three ways: exhibiting a speculative virtuality, faltering materiality and disputed territoriality. Such analysis has the ability to go beyond technical and managerial, or solely political economic critiques of carbon forestry, to point at openings for alternatives.

## 1. Introduction

Carbon forestry offsetting and REDD+ interventions (as well as other biodiversity offsets for land and water) have emerged as neoliberal interventions to ostensibly address multiple crises of capitalism, climate change and environmental degradation (Castree, 2008). The valuation of nature is key to these new formations, with the creation of new 'valued entities', through calculative practices, that can be accounted for, costed and circulated in monetised and financialised forms in order to attempt to fix certain outcomes (Bracking et al., 2014). In this instance carbon forestry interventions are formulated to tackle global CO<sub>2</sub> emissions by saving forests or promoting reforestation through particularly complex, multi-scalar interventions within the global south (Mwangi and Wardell, 2012). How then might one begin to understand and engage with carbon forestry projects in their many variegated forms? How might we theorise the new social formations they cumulatively produce in places like Uganda?

While Uganda has been named by Lang and Byakola (2006) as a 'funny place to store carbon' due to its contested land politics and history of violence (tendencies prevalent elsewhere in African carbon forestry (Leach and Scoones, 2015) but arguably less pronounced) its weak governance context paradoxically re-enforcing the imperative for intervention. There are three kinds of carbon forestry interventions in

Uganda: Afforestation/Reforestation Clean Development Mechanism (A/R CDM) projects which are generally large industrial monoculture plantation initiatives; Reducing the Effects of Deforestation, Degradation (REDD+) projects, which are generally more concerned with community co-benefits; and a range of Voluntary Carbon Market (VCM) projects using the CarbonFix and Plan Vivo methodologies. Taken together these projects represent a form of market environmentalism – the extension of market logics and mechanisms to the governance of 'nature' (Castree, 2008). Such changes have been acknowledged to rework local power relations and territorial access (Sassen, 2005), and institutes new forms of Swyngedouw (2005) terms governance 'beyond-the-state'. Moreover, a number of these interventions in Uganda, particularly the A/R CDM ones, have been involved in 'green violence', the eviction of forest dependent communities (Grainger and Geary, 2011; Nel and Hill, 2013) and varied resistances (Cavanagh and Himmelfarb, 2014). In one instance Lyons and Westoby (2014) have linked historical precedent with contemporary practice with the term 'carbon colonialism'. Accordingly, the contested nature of carbon interventions is fundamental to this paper.

Assemblage approaches afford significant scope to theorise the new social formations emerging through these multiple and multifaceted interventions (Fredriksen, 2014) the complex knots that connect them together (Larner, 2011), and the constructive/destructive potentials

E-mail address: [nela@ukzn.ac.za](mailto:nela@ukzn.ac.za).

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that reside with them (Collier and Ong, 2008). Assemblage approaches are constructionist accounts of socio-spatial relations that explain extended social formations comprised of heterogeneous interacting elements (DeLanda, 2006). Such approaches have, however, only been deployed to a limited extent in relation to carbon forestry (Li, 2007; Bennett, 2009; Astuti and McGregor, 2016). In particular a focus on territorial axis of assemblage as it applies to a particular geographies is underdeveloped. For this reason I turn to Uganda, to explore how carbon forestry disjointedly coheres as an assemblage.

This paper draws on research conducted for a larger project which considered nine carbon forestry projects in the country (three of each type), and their imbrication in forestry governance changes (see Nel, 2014, 2015a, 2015b, 2016 for more details). I utilise the approach to characterise not only the ‘knots’ that cohere in a carbon forestry assemblage, but consider how it is inherently contested and problematic in three ways: Firstly, in that it exhibits a speculative virtuality, to the extent that it is engaged in/based on risky conjecture, about the proposed benefits of carbon sequestration, reduced deforestation/ degradation and carbon finance projections, rather than reality; Secondly, that it exhibits a faltering materiality, where alignments of actors in the assemblage are shaky and problematic (though some large scale timber corporates do indeed benefit materially); And thirdly, that the Ugandan assemblage exhibits a disputed territoriality, where Central Forest Reserves (CFRs) and project boundaries are fundamentally contested. Finally, before concluding on the merits of an assemblage approach, the paper discusses the implications of the disjointed assemblage for forestry governance, natural resource management and local livelihoods in the country.

## 2. Carbon forestry and assemblage in the Ugandan context

The utility an assemblage approach affords in understanding Ugandan forestry interventions can first and foremost be understood in contrast to current forestry discourses. In contemporary practitioner discourse on carbon forestry in Uganda, challenges and contestations are seen to beset forestry sector from ‘the outside’. As such it is perceived as something that could be fixed; for instance through more political will, or more carbon finance. Turyahabwe and Banana (2008) evince this view, when claiming that Uganda need only ‘operationalise, monitor and evaluate existing forest policies’ and ‘enforce rules and regulations’. However, such views naturalise the existing economic and political relations that forestry is wrapped up in, replacing history and politics with inevitability such that a unified past is assumed from which an equally unified present emerges (see also Braun, 2006, p. 196). This problematic view is heightened by the geographic imaginary inherent to carbon forestry, which sees forests in the global south as the ‘lungs of the world’ being deforested through ‘slash and burn’ subsistence agriculture which ‘affects us all’ (as depicted in a Conservation International advert from 2011).

Such totalising views obfuscate responsibility for deforestation and carbon emissions, and are also unable to engage forms of agonistic politics, which Leach and Scoones (2015) argue are a prerequisite to more progressive and engaged forestry dispensations in Africa. By contrast the approach deployed here appreciates an assemblage of carbon forestry, which includes the national management apparatus, policy dispensation, contested forest estate, and the suite of projects with interact with the aforementioned. In such an account the dynamics and processes which affect the forest sector do not beset it from an amorphous ‘outside’, but are seen to emerge from relations and interactions between the entities within the assemblage. However, rather than the resultant formation, assemblage accounts emphasises emergence, multiplicity and indeterminacy, as well as the “fragility and provisionality; the gaps, fissures and fractures that accompany processes of gathering and dispersing” (Anderson and McFarlane, 2011: 125). In effect the ‘promise’ of assemblage analysis is that assemblages are shaped, but not overdetermined by the capacity for assembled

entities to form connections that are outside the assemblage. Deleuze and Guattari (1987) term this the ‘exteriority of relations’.

While other approaches undeniably have utility in exploring carbon forestry, an assemblage approach is preferred in this context. Technocentric readings of carbon forestry projects for their part, embrace governance issues, seek to understand how carbon projects or schemes such as REDD might be ‘fixed’ or better implemented (Corbera and Schroeder, 2011; Peskett et al., 2011 for a Ugandan example). In this strain of literature there is also a focus on environmental justice issues (see Fischer et al., forthcoming; Schroeder and McDermott, 2014; Suiseeya and Caplow, 2013) with important insights into particular carbon forestry project procedural and/or distributive dimensions of justice and equity in interventions. However in focusing on outcome and process of interventions themselves, these contribution don’t speak to the contested making of carbon forestry, how carbon forestry works as a multiplicity in particular places, or the way interventions line up with broader processes of neoliberalisation, in particular in the forestry sector (Nel, 2015a). In direct contrast Marxist critiques of carbon forestry do the latter very well (see Bond and Erion, 2009; Lohman, 2009), exploring the uneven power relations and instances of accumulation by dispossession that can arise in their implementation. However they are unsuited for exploring broader forestry discourses of encroachment and deforestation, or critiquing seemingly more benign, small scale indigenous reforestation and development projects. Given the complexity and variance of carbon forestry projects, and the diverse array of actors, discourses, and logics at play, it is necessary to include post-structuralist perspectives in exploring carbon forestry in practice and in particular places.

With that said, deploying of an array of approaches within a Political ecology framework might can do just that; as do Fletcher and Breittling (2012), and Biddulph (2011) in critiquing national level PES interventions, or Cavanagh and Benjaminson (2016) when dealing with local project specifics. However, the focus, scale and scope of this research, dealing with the making of a carbon forestry dispensation – including national level interventions as well as a range of local level projects of different types – called for a dextrous approach which could pull together varied insights. An assemblage approach offers the ability of pulling different aspects of REDD+ analysis into a cohesive framework, and expands the focus of enquiry beyond individual projects, institutions, discourses or processes (including neoliberalising trajectories) to the new social formation produced.

### 2.1. Axes of assemblage analysis and their application

According to Deleuze and Parnett (2006: 52), there are two axes of ‘co-functioning’ central to the Deleuzo-Guattarian concept of assemblage; firstly between the *material (machinic content)* and *virtual (collective expressions)* and secondly between territorialisation and deterritorialisation. These are two movements between which ‘everything happens’, as heterogeneous parts come together and come apart (Anderson and McFarlane, 2011: 149). There are a number of applications of these concepts in varying combinations in the literature, and a number of ways in which they apply to the empirical case of Uganda.

On the first axis, the *material* accounts for the materiality of the assemblage components. Forests in what can be described as Uganda’s carbon forestry assemblage have intimate linkages, connections and fractures with other entities. Historically cultures of care and ecological control evolved around forests, only to become strained due to colonisation, land competition and population pressure (Doyle, 1998). Contemporarily forests interact with: landscapes; carbon financing from ‘global’ capital<sup>1</sup>; carbon contracts; state bureaucrats; carbon quantifica-

<sup>1</sup> Including donor funding from predominantly Norway (drawing from its sovereign wealth fund) and voluntary payments from individuals and companies ‘greening’ their image.

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