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Financialisation in the green economy: material connections, markets-in-the-making and Foucauldian organising actions

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Abstract

This paper explores the connections between financialisation in the green economy and the material commodification processes that underpin this economy. It argues that these connections are important and can be usefully conceived in terms of spaces of mutuality. These spaces of mutuality direct attention to the material processes of value creation at the level of real environmental assets. That these material processes appear thin, sluggish, fractured, hybridised or stalled in practice invites new modes of analytical engagement. One important mode of analysing these emergent green projects is to emphasise their status as durable processes of becoming or what could be called markets-in-the-making, by going beyond forms of market and economic reductionism. Michel Foucault's analysis of neoliberalism and his idea of "organising actions" prove useful in this regard. Foucauldian organising actions render markets-in-the-making projects visible as durable governmental apparatuses made of disparate elements that are geographically specific, historically contingent and are aligned with an overarching market telos. Drawing on an empirical case of Reducing Emissions from Deforestation and Forest Degradation plus carbon stock enhancement and sustainable forest management (REDD+) in Nigeria's Cross River, the paper analyses organising actions along four meta-processes – problematisations, visions, implementation, stabilisation. It concludes by highlighting the wider implications for work on environmental financialisation.

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1. Introduction

The green economy captures a range of economic and environmental interventions that rest on the notion that contemporary environmental and financial crises together present opportunities for growth through targeted investments in "green" projects and activities that will supposedly lead to socio-ecological sustainability (Cavanagh and Benjaminsen, 2017; Lohmann, 2016; McAfee, 2015). Financialisation[i], a critical aspect of this emergent economy, is part of a general "shift in the gravity of economic activity from production to finance", driven by the increasing possibility of abstracting financial activities from real commodities (Foster, 2007 p.1). This shift has left scholars with a fundamental disjuncture between the realm of "ungrounded" finance and the underlying material commodities (Aalbers, 2015; Bracking, 2015; Ouma, 2014, 2015, Pike and Pollard, 2009).

However, this disjuncture is tempered by claims and spaces of explicit connections between the "real" and the "virtual" in the green economy. Scholars continue to examine the nature of the relationship between the performativity of finance and underlying material environmental assets (Bracking, 2015; Büscher, 2012; Lohmann, 2016; Robertson, 2012; Sullivan, 2013a, 2013b, 2017). While virtualisation and decoupling are a striking feature of environmental financialisation (like traditional financialisation), understanding the full range of ways in which green financialisation reworks the social world entails a deepened appreciation of the material basis and socio-ecological connections. For Bracking (2015 p2351), this link between the virtual world of financial derivatives and the world of environmental commodities and assets is not to be calibrated along "an empirical scale from materiality to virtuality". Rather, it should be understood in terms of co-existence and co-production. This paper further specifies these connections in terms of spaces of mutuality made up of varied and reciprocal relations across multiple nodes.

Spaces of mutuality invite us to grapple with the depth of financialisation in the green economy by empirically scrutinising its material grounding through widespread processes by which value is negotiated and contested in places. Such an empirical engagement or what Bracking (2015 p.2347) calls "research effort to drill-down" complements the flourishing analyses of the abstract evaluative and exchange logics of financialisation in the green economy (Knox-Hayes, 2010; Callon, 2009; Bracking, 2015). Various leanings of political economy have been productive in elaborating the contours of material commodification processes. Yet, their keen attentiveness to substantive markets has also left us with a need to understand market-making processes as durable moments of their own, without a tendency towards market reductionism or economic

reductionism. Clearly, acknowledging the processual nature of markets in Marxian analysis of neoliberal natures (Fletcher and Büscher, 2017) also warrants detailed elaborations of what this might mean conceptually and empirically. Similarly, emergent theorisations of economisation still problematically privilege the role of economic and financial experts in creating markets in new domains (Callon, 2009; Çalışkan and Callon, 2009). They are less attentive to how and why a whole range of actors come to be involved in market-making processes, and the variety of ways in which they rationalise their involvement. So, how does one account for the creation of markets in new domains without being limited by blunt categorisations (with assumptions of linearity) of market success/market failure; pro-market/ anti-market inside/outside of the market?

This paper argues that a Foucauldian approach provides useful insights to these questions. A reading of neoliberalisation based on Michel Foucault's elaboration of "organising actions" is a timely intervention in economic and political geography. Though Castree (2010 p1734) once observed that "few critical geographers have so far used Foucault's work on "governmentality" to examine the neoliberalisation of nature", there is now a budding literature in this area using governmentality, sometimes reframed as "environmentality" following Arun Agrawal (e.g. Fletcher, 2010, 2013; Li, 2007, 2014; Lövbrand and Stripple, 2011; Stephan, 2013; McGregor et al., 2015). This paper contributes to this body of work by recovering Foucault's reading of neoliberalism as a specific rationality, integrating this with a general understanding of governmentality as dispositif or apparatus – aspects that are often treated separately in environmental governmentality literature. In other words, this paper addresses the question of market organisation in neoliberal policy, by posing same as a question of governmental intervention thereby stressing the geographical-historical dimension (i.e. place-based dimension) of this process and its properly social nature. This helps to address, in quite important ways, the analytical-empirical imperatives suggested by spaces of mutuality between environmental financialisation and material environmental assets.

In the rest of the article, I discuss spaces of mutuality, before elaborating on the notion of organising actions. I then turn to an empirical example of a carbon offset project, Reducing Emissions from Deforestation and Forest Degradation plus forest enhancement and sustainable forest management (REDD+). Using a case of Nigeria's Cross River, I show how the pursuit of REDD+ as a suite of organising actions entails the assembling of the conditions of possibility of markets and financialisation. I outline four meta-processes – problematisations, visions, implementation, stabilisation – that suitably capture the range of elements and practices that align around an overarching teleological discourse of market and finance. I then draw some conclusions.

2. Spaces of mutuality between financialisation and material commodification in the green economy

The virtual performativity of environmental finance has important connections with the material aspects of the social world. One way to conceptualise these connections is to think of them as constituting spaces of mutuality. Here we see the historical and the on-going role of the financial sector in creating, recreating, and sustaining the social architecture for new environmental commodities, exemplified in the pivotal roles of actors like the Chicago securities trader, Richard Sandor, and the international banker, Pavan Sukhdev (Lohmann, 2008; Knox-Hayes, 2010; Newell and Paterson, 2010). Another connecting node is evident in how these green financialisation projects seek to acquire legitimacy through claims to address specific environmental problems, thereby, connecting them – if thinly and exploitatively – to certain material environmental basis. This is true even for fraudulent carbon investments which regularly claim links to certain carbon offset projects in distant tropical forests (e.g. see Chris Lang's REDD-Monitor).[ii] These claims to environmental amelioration are an important point of difference from traditional financialisation with its exclusive tendency towards complete isolation into "black box[es]", thereby making no similar explicit claims to materiality for legitimacy (Ouma, 2015 p.227).

Yet, this mutuality is also apparent in the very nature of the commodities through which value is elicited in the green economy. These new environmental commodities (such as carbon and biodiversity offsets) are already so virtual, abstract and finance-ready that Robertson, for instance, observes that "the resemblance between carbon credits and the consolidated debt obligations is not casual" (2012 p.396; Bracking, 2015). This partly informs the tendency among critical analysts to analyse environmental financialisation in overlap with processes of commodification of nature (Sullivan, 2013a, 2013b, 2017; Robertson, 2007, 2012; Knox-Hayes, 2010). And notably, the complex layers of abstraction through which the green economy is carried on are a significant marker of reality, at once facilitating and masking "the very fact that [material] appropriation is taking place" (Lohmann, 2016 p15). For Büscher (2013), those abstractions and representations through which value is elicited also get reified as new realities (see also Sullivan, 2017).

Even when actual financialisation appears thin and commodification appears less successful in reality, the variety of (often unintended) socio-ecological impacts they precipitate can be profound (Bracking, 2015; Cavanagh et al., 2015; Leach and Scoones, 2015; Sullivan, 2017). For instance, Lohmann (2016 p12) notes that "while units of the new natures may not be successful commodities in their own right, they are often attractive as a part of risk-sensitive investment packages that include more conventional

assets such as oil timbers, water rights...". In some cases, the mere proclamation of the prospect of financialisation – as in carbon offsetting schemes like REDD+ –drives a range of material responses not least changes in resource management policies and practices, in developing countries. Linked to this is the creation of what Fletcher et al. (2016, following Borup et al., 2006) call "economies of expectation" that arise from (often empty) promises of financialisation, and which in turn shapes future possibilities of financialisation as, for instance, disillusioned local actors come to distrust and challenge projects. These processes may also reinforce existing power asymmetries in resource governance, and they may serve to foreshadow new shifts in environmental governance and conservation – for instance, as evident in the securitisation turn in forest and biodiversity conservation (Asiyanbi, 2016; Cavanagh et al. 2015; Duffy, 2014). As such, these spaces of mutuality call for a renewed focus on the ongoing neoliberalisation of the environment as an important step in understanding how the financialisation of the green economy is organised from below, how it functions and to what effects in specific places (Lawrence, 2015; Aalber, 2015).

Geographical literature is clear that the declared paradigmatic shift to commodify various socionatures anew has not materialised in places as fast-paced commodification and financialisation. What is widely observable are a variety of processes that seek to herald the market in novel spaces thereby reworking not merely the economic but the broadly social resource-making arena (see Bigger, this issue; Dempsey, 2013). These processes often appear thin, variegated and frustrated (e.g. Dempsey and Suarez, 2016; Fletcher, 2013; Fletcher et al. 2016; McAfee, 2015). Some manifest as market hybrids combining with other forms of social regulation (e.g. Cavanagh et al, 2015; McAfee and Shapiro, 2010) or as pseudo-markets which Milne and Adams (2012 p133; see also Robertson, 2007) call "market masquerades". Yet, insofar as these market-heralding processes "are rendered reasonably coherent for a significant period of time" and with specific effects, they can hardly be dismissed as outright failure (Bridge and Jonas, 2002 p.759). Indeed, as Brenner et al (2010 p.332) suggest, "empirical evidence underscoring the stalled, incomplete, discontinuous or differentiated character of projects to impose markets or their coexistence alongside potentially antagonistic projects... does not provide a sufficient basis for questioning their neoliberalised, neoliberalising dimensions". It is thus possible, indeed, desirable to analyse these neoliberal processes as substantive moments, not overwhelmingly defined in terms of their market success or failure. In other words, how might these processes be understood as forms of market-in-the-making, accounting for the range of ways in which they draw upon and shape the social world? Addressing these questions also contributes to navigating the seeming impasse in the payment for ecosystem services (PES) literature which continues to

question the neoliberal nature of projects that fail to meet certain market attributes (see

Fletcher and Büscher, 2017; Hahn et al. 2015). The next section turns to Foucault's "organising actions" and REDD+ to begin addressing these concerns.

3. Foucauldian organising actions and REDD+

For Foucault, neoliberalism as a specific, historical kind of governmentality eschews naïve market naturalism. Rather markets are to be constructed and sustained through vigilant intervention (Foucault, 2010). An important part of this intervention is what he calls "organising actions", which involve intervention not on the immediate conditions of the market per se, "but on more fundamental, structural, and general conditions of the market" (Foucault, 2010 p.139). Organising actions are the variety of responses to the reality that the market, a supposed general social regulator, is not naturally and spontaneously existing at every level of society. They are directed at creating and shaping not merely economic conditions but conditions (social, technical, human, juridical, political, ecological etc) of existence of the market. These are actions, which Foucault notes are "more interesting" and more expansive in their reach, allowing the state to intervene "on the society in its fabric and depth" (2010 p.145). While organising actions are sometimes taken to mean legal and administrative structures for markets (e.g. Fletcher, 2013), it is abundantly clear that the scope of organising actions is much broader. Precisely, the broad social domain of organising actions, he argues, is "increasingly become(ing) the object of governmental intervention" (2010, p.141). As such, Foucault notes, while governmental intervention on economic processes (i.e. regulatory actions) must be kept to the minimum, "so must it be heavy when it is a matter of this set of technical, scientific, legal, geographic, let's say, broadly, social factors" (2010, p.141).

For instance, Foucault shows the application of organising actions in response to Walter Eucken's diagnosis of the German agricultural problem in the middle of the last century. Once he had diagnosed the problem as that of not being "fully and exhaustively integrated within the market economy", Eucken would propose a variety of actions at the level of farming population, provision of technical inputs, provision of training, changing legal framework of farms and lands, adjusting soil conditions and working on the climate (Foucault, 2010 p.140). Organising actions then represent a moment in neoliberal policy where interventions on broader social domains (rather than the immediate conditions of the market) are deployed to produce or foster markets in domains where they previously were inexistent or limited.

A project like REDD+ then, is an example of organising actions, insofar as it is concerned precisely about organising conditions of existence of a national, forest-based carbon

commodity regime. This scheme aims to reduce carbon emission by transferring cash incentives (through market and non-market instruments) to developing countries to reduce deforestation rates against set baselines. Certified reduction thus generated could then be sold to developed countries or businesses, or could be inserted into bilateral emission offsetting schemes such as that ongoing between the California Air Resource Board and subnational projects in Brazil, Indonesia, Canada and Nigeria (Lueders et al., 2014). The financial industry is building a range of financial instruments around these emergent carbon commodities (see Bracking, 2015; Knox-Hayes, 2010; Callon, 2009). An example is a London-based investment company, Carbon-Plus Capital LLP which is in the process of developing financial instruments "to address the risks and opportunities in implementing REDD investments" with an ongoing interest in Nigeria and Mozambique (Carbon-Plus Capital, 2016). The company claims interest not just in carbon offsets and investments, but also in engaging with activities on the ground to ensure"equity and fairness in the flow of benefits to local communities and landowners; projects do not simply shift the problem of habitat destruction elsewhere; Carbon finance will result in emissions reductions that would not otherwise have occurred" (Carbon-Plus Capital, 2016). These kinds of claims to and engagement with material commodification processes are vital sources of legitimacy for financial entities.

A burgeoning geography of REDD+ is thus emerging, covering more than half of the 54 African countries, 18 of the 20 Latin American countries, and at least 19 countries in Asia-Pacific. Being widely implemented in three phases, the "readiness" and the "investment" phases (the third being "performance payment" phase) capture much of the groundwork required to construct a carbon commodity regime. Globally, these processes have relied on development grants totalling about US$4.5 billion in promised finance and about $1.5 billion in disbursed funds as of December 2015 (Nakhooda et al., 2015). Yet, it is the promise of an ultimate carbon trading and financialisation that infuses REDD+ with drive and optimism (Newell and Paterson, 2010, McAfee, 2016).

Despite optimism at the global policy level, the implementation of this scheme (like similar carbon forestry schemes) in locales continues to be frustrated by technical and social difficulties so that they often and increasingly appear thin, sluggish, fragmented, and even stalled in some cases (Angelsen et al., 2012; Asiyanbi, 2015, 2016; Fletcher et al., 2016; Fletcher, 2013; Lund et al., 2017; Milne and Adams, 2012; Cavanagh et al., 2015). These challenges are partly linked to the nature of carbon which proves difficult to tame and market (Loftus and March, 2015; Bumpus, 2011). Failure to really incentivise willing forest preservation for REDD+ and the need to secure property rights in newly valourised forests have invited intensified surveillance, stiffer law enforcement and the use of state military and private security (Asiyanbi, 2016; Cavanagh et al., 2015),

reflecting extensive state (re)regulation and militarization. In short, the outworking of REDD+ on the ground falls short of the smooth-sailing, fast-paced commodification ideal.

Yet, REDD+ is not bereft of a market ethos. Climate change mitigation through offsetting is market-oriented. Tropical countries and forest communities get projected as economic subjects who will respond rationally to protect forests in response to modifications in environmental variables (i.e. incentives). And the REDD+ telos is a new commodity and market exchange regime. As such, for projects like REDD+ this disjuncture between the commodification ideal and the frustrated local processes reflect but also goes beyond the inherent neoliberal contradiction between vision and outcome (see Deschenau and Paterson, 2011; Fletcher, 2013). Rather REDD+ readiness is better understood as a market-in-the-making project, driven by a suite of organising actions. If as Foucault notes, the social conditions of existence of markets are increasingly the focus of governmental intervention, then, organising actions intersect with a distinct "regime of practice" by which REDD+ gets "effectively mark(ed) out in reality" (Foucault, 2010 p.19)[iii].

Thus REDD+ represents an example in which to understand how a suite of organising actions constitute a governmental terrain having "a density and a significance of its own" (Miller and Rose, 2008 p.54). This entails tracing “how the coupling of a set of practices and a regime of truth forms an apparatus” that seeks to create carbon commodities in space and time (Foucault, 2010 p.19). As such, analysing REDD+ as organising actions holds a number of implications which inform the empirical analysis that follows. One, since organising actions involve interventions on real social and biophysical elements that are geographically specific, then analyses of organising actions are necessarily grounded, thus contributing to what Ouma calls (2014 p.162) “alternative reading ... from below”. Two, organising actions are analytically durable in themselves, making them a substantive realm of analysis that should not be subsumed under settled markets or dismissed as failed market attempts. Three, organising actions are thus directed at objectives as diverse as the domains of interventions, even though these are generally rationalised by an overall telos of heralding markets. This plurality of aims is reflective of the diversity of actor groups aligned around market-making projects. Four, governmental interventions emphasise the process of intervening rather than who does the intervention. Finally, the realisation of the overarching market goal is not inevitable. The following section illustrates these imperatives empirically through the case of a REDD+ project in Nigeria’s Cross River.

4. REDD+ as organising actions in Nigeria's Cross River

Activities leading to the commencement of REDD+ in Nigeria began in 2008, in Cross River State, one of the 37 federating units of the country. The state's 7361.7 km^2 of tropical rainforest is a significant portion of the remaining tropical rainforest in Nigeria and part of an important global biodiversity hotspot (Oyebo et al., 2010; Myers et al., 2000). By 2010, Nigeria had enlisted itself in the global network of tropical countries implementing REDD+. By 2011, the country's first REDD+ proposal had been approved by the United Nations REDD programme (UNREDD). Yet, assembling a carbon commodity regime in Nigeria goes beyond the coherent REDD+ programme policy or the conscious strategy of any individual actor or coalition (cf. McGregor et al., 2015). Analysing REDD+ as a suite of organising actions requires a focus on a broader carbon forestry apparatus in which actors converge over a range of aspirations, events, practices and technologies that align against an overarching teleological discourse of the carbon market (McGregor et al., 2015). This multiplicity is captured under four major meta-processes that emerge iteratively through a combination of insights from Foucault's analytical foci (Dean, 2010; Bryant, 2002), literature on assemblage and apparatus (Legg, 2011; Li, 2007, 2014), and empirical dimensions of REDD+ implementation in Nigeria. One is problematisations, which capture the underpinning rationalisations that present existing conditions as deficient and in need of improvement. It is on the basis of these problematisations that the regime of government emerges. Two is visions, which refer to the policy and practical aims and objectives of REDD+, as a suite of organising actions. Three is implementation, which refers to actions and practices devoted to translating visions to reality. Finally, four is stabilisation, which takes account of the durability of the emergent apparatus, explaining how it is able to endure tension and contradictions.

The rest of this paper elaborates these four processes, drawing on field data gathered between November 2013 and August 2014. It draws on in-depth interviews with purposively selected key actors who are directly involved in or affected by REDD+. These include state forestry officials, local and international non-governmental organisations (NGOs), REDD+ officials, timber traders, and forest communities in Cross River, Nigeria. In addition, analyses of REDD+ documents (specifically, the National Programme Document, the REDD+ Readiness Programme Proposal, and the Preliminary Assessment Report) were combined with everyday observation of activities of REDD+ implementers, the state forestry commission, and forest communities. Such triangulation of sources and combination of data is crucial to understanding not only the rationalities but also the layers of practices through which the REDD+ apparatus is assembled (cf. Li, 2007).

4.1 Problematisations

Neoliberalisation of the environment, like the neoliberal doctrine itself, emerged as a problematisation of other ways of doing things; a "criticism of a previous governmentality from which one is trying to get free" (Foucault, 2010 p.320). Broadly, neoliberalisation of the environment problematises lack of or inadequate economic valuation of the environment. But it is the specific, situated problematisations underpinning REDD+ in Nigeria that reflect key contextual conditions which are vital to understanding the conditions of possibility of REDD+ as a market-in-the-making project.

Nigeria's REDD+ emerged at the intersection of two strands of problematisation: one ecological and the other fiscal. An important international environment summit in Nigeria's Cross River in 2008 concluded that rates of forest and biodiversity loss in Nigeria and in Cross River were assuming a "catastrophic" proportion. The Pre-summit Note (2008 p.1-3), an important document that set the agenda for the Summit, stated the problem via a string of alarming narratives: "the recent history of Nigeria's environment has been catastrophic…. 5% of the original forest estate still stands, and a significant percentage of what is left is in Cross River State... Forests will disappear in Nigeria by 2020" (p.1-3). This document located the problem in "the long-standing system of viewing the forest as a source of revenue for government [which] is an outdated, colonial and pre-oil mentality" (Pre-Summit Note 2008 p.3). The Summit would issue a communiqué with top three recommendations, asking the state to "halt revenue target based on timber exploitation and focus on forest conservation and regeneration for possible carbon finance", "declare a two-year moratorium on logging" and "initiate action to take advantage of the carbon credit market" (Summit Communiqué, 2008 p.3).

Meanwhile, a financial crisis was also afoot in Cross River State. Consequent upon a Supreme Court ruling in 2012 which upheld the transfer of all 76 oil wells of Cross River to neighbouring Akwa Ibom State, Cross River continued to witness a decline in its oil-based revenue. To appreciate the significance of this to Cross River entails understanding the centrality of Nigeria's oil sector to all facets of its economy (Watts, 2013). Nevertheless, this precarious revenue condition was only a part of what the then State Governor, Liyel Imoke, in the 2013 budget speech described as ''very challenging and inauspicious times'' characterised by ''adverse financial conditions'' (Imoke, 2012 p.1). Cross River State owed such an enormous debt that a national daily observed in February 2015 that "Nobody seems to know the extent of Cross River State's indebtedness" (Charles, 2015 p.1). But official records from the Federal Ministry of Finance put Cross River as the third most indebted of Nigeria's 37 states, though it is but the 27th most populous. Much of these debts accumulated from public spending on

now-failing gigantic projects that were supposedly meant to position the state as a prime tourist and business destination in West Africa.

It is in response to this financial crisis that the state devised a new strategy of "creative funding" which focused on foreign direct investment, including international aid and grants. REDD+ is an important part of this strategy. The State Governor continued to reiterate government expectations of REDD+ funds, noting in both the 2011 and 2012 government's budget speeches that ''we expect to access substantial financial and technical resources from the UN-REDD'' (cf. Koch, 2016 on Tanzania). These were the earliest manifestations of what might be called an "economy of expectations" which is generative and constitutive of the particular trajectory of REDD+ in the state (Fletcher et al. 2016; Borup et al., 2006). This economy of expectations builds on not only the promise of grants from international institutions but also anticipated financialisation through the integration of Nigeria's REDD+ into the global carbon market and through bilateral arrangements.

As such, these two domains of problematisation– the ecological and the fiscal – intersect at the juncture where discourses of a financially stressed state aligned with emergent interests in the state (and beyond) to re-value forests and biodiversity as a creative source of funding that can stop alleged "haphazard" exploitation, since proponents claim that creative carbon finance is based on a seemingly compelling idea of "doing nothing" (Stephan, 2013 p.156). Between 2011 and 2013, Nigeria's REDD+ had received a sum of US dollars (USD) 4 million from the UNREDD, and USD 3.8 million from the World Bank's Forest Carbon Partnership Facility, with additional funding from the California-based Governor's Climate Forest Task Force. Though these funds are significant relative to annual timber revenue for the state (e.g. highest pre-REDD+ annual timber revenue was USD 456,250), REDD+ proponents hold that even greater funds are expected in the more advanced phases of REDD+, as the project begins to trade carbon offsets in the international market, even if such promises quietly ignore the reality of precarious carbon finance and the unreliability of the carbon market (McAfee, 2015). In any case, here are the key problematisations that underpin the whole carbon forestry apparatus. Assembling an apparatus partly in response to these problematisations goes beyond a natural emergence of solutions from a field of criticism; it entails full-fledged, elaborate visions and plans concerning the aims and ends of the apparatus. These visions are the focus of the next section.

4.2 Visions

Neoliberalisation of nature is orchestrated according to certain visions, that is, spaces of visibility within which are discernible the overarching dreams, aims and ends of the project. Dean (2010 p.44) calls these "the telos" of government. Organising actions entail multiple aims which are held together by an overarching market telos, even if the realisation of these aims is never guaranteed.

For instance, in Nigeria's REDD+, there are the formal aims spelt out in REDD+ proposal "to contribute to climate change mitigation through improved forest conservation and enhancing sustainable community livelihoods" (National Programme Document - NPD, 2011 p.11). These are linked to even more specific readiness goals: 1. Improved institutional and technical capacity at the national level and in Cross River State; 2. Framework for REDD+ extension across Nigeria prepared; 3. REDD+ readiness demonstrated in Cross River State. These, in turn, are unpacked into 14 outputs, which are then refined into "core and indicative activities, all structured into a coherent and detailed results framework" (NPD, 2011 p.11). Meanwhile, the aims espoused in everyday discourses of experts and other key proponents are often more grandiose, ambitious and totalising than checklists of programmatic outcomes. It is about a wider mission to transform individuals, populations, processes and institutions. For local implementers of the programme, the aim is to enact a shift from timber to carbon forestry by creating an all-encompassing programme that has "something in it for everyone", as the State-level REDD+ Coordinator asserts. The African Regional Coordinator for UNREDD, who has been influential in the Nigerian project declares: "REDD+ is transformational. Transformational means the following...the way the policies, the measures, the fiscality, the agricultural project, the energy policy, the behaviour of the population go, the tendency is that all these factors bring deforestation.…What is needed is to change the way development is done, the way agriculture is done.... This is transformational, it is to change the mindset." (Int. 28, UNREDD African Regional Coordinator April 2014, Calabar).

REDD+ thus aims at "transformations" in, at least two interrelated domains. The first is at the level of the mindset, that is, the ways people think about themselves in relation to things such as forests and climate (cf. McGregor et al., 2015; Li, 2007; Agrawal, 2005). The second is the broader social domain of forest governance, conservation and development (cf. McAfee, 2015). As such, proponents seek to act on "men in their relations to things" such as forest, carbon, money, law, farmlands, timber, maps, among other things (Foucault, 1991 p.95). Officials note that communities must be "fully engaged... resist(ing) with every drop of their blood whoever dares to fell the forest" (Interviews, State REDD+ Officials, December 2013, Calabar). Logging populations must

be disciplined by the Anti-Deforestation Task Force set up to enforce the logging ban for REDD+. The forestry institutions must be "restructured" and traditional foresters must emerge as "carbon forester", equipped with new tools and capabilities for rendering carbon legible, measurable, and marketable. Forestry laws must be made REDD+enabling. The forest itself must be made to appear as carbon.

Proponents project a REDD+ scheme that, as the State REDD+ Coordinator points out, "has a big promise in the sense that it's like you eating your cake and still having it....REDD+...is a window of opportunity for many people to come in". And so great are the potentials in REDD+ that proponents declare, "currently, there is no alternative to REDD+" (Interview, REDD+ Consultant November 2013, London). This optimism is richly captured in programme documents such as the Preliminary Assessment Report, and the various proposals submitted to the UNREDD, the Forest Carbon Partnership Facility and the California-based Governors' Climate and Forest Taskforce (Oyebo et al., 2010; NPD, 2011; R-PP, 2013). These documents and the optmistic discourses they espouse are products of expert knowledge in forestry, economics, remote sensing, finance, governance, law – expertise that transcend the economic and the financial. In any case, these optimistic visions and discourses find expression partly in the major practices that constitute the implementation of REDD+ as a market-in-the-making project.

4.3 Implementation

Proponents' visions of REDD+ are being implemented through two overlapping categories of practices which could be roughly and tentatively understood as "people practices" and "landscape practices". These two variously overlap and are mutually productive of each other in practice (cf. Mansfield et al., 2015). Nevertheless, this tentative categorisation is apt in laying bare some of the key dimensions of REDD+ as a suite of organising actions in Nigeria (for similar discussions on Tanzania, see Lund et al., 2017; Koch, 2016).

People practices

Enacting a carbon forestry regime entails practices to shape people's (e.g. forest communities, timber dealers, state bureaucrats) conduct. First are efforts to restructure state forestry institutions, discipline state bureaucrats and adjust forest laws. Restructuring required the strategic reconstitution of the highest cadre of the state forestry institutions to allow for the integration of NGO and transnational actors who claim expertise in REDD+ (Asiyanbi, 2015). This involved an overhaul of the Cross River

State forestry law in 2010. While REDD+ proponents saw restructuring as an

administrative imperative, forestry bureaucrats conceived it as an assault on their profession, as a forestry director laments "Forestry is conquered …. We, the vulnerable are raped every day. You sit in a meeting and someone who doesn't know anything [about forestry] would tell you that … teak is a weed" (Interview, Forestry Director, February 2014, Calabar).

Also notable are measures to steer everyday forestry practice and knowledge towards those required for a carbon forestry regime. For instance, central to a regime that seeks to create value from carbon are approaches to rendering forests visible in new ways through new calculative logics and tools for representing forest spatiality, constitution and volume (Gupta et al. 2012; Leach and Scoones, 2013). One important example is the tool for aerial visibility, including the Geographic Information System (GIS) and Global Positioning System (GPS). Recognising the lack of knowledge in the use of such tools, proponents of REDD+ intervened. The state REDD+ Coordinator observed: "to monitor the forest you must have the capacity. When we came in here, most foresters had not seen a GPS, not to talk of knowing the relevance of GIS. So we had to purchase GPS units...and trained them" (Interview, State REDD+ Coordinator January 2014, Calabar). A new GIS laboratory was also being set up in early 2014, led by the REDD+ specialist on MRV, a consultant seconded by the Food and Agriculture Organisation (FAO) under the UN-REDD arrangement.

Equally important are efforts to "change the mindset" of communities following logics similar to Agrawal's (2005) "environmentality". Since community forests are the target of the carbon forestry project, obtaining some level of community assent (no matter how) was considered vital to the project's legitimacy. Early in the project, proponents had sought community cooperation through the promise of huge financial rewards, fueling an "economy of expectations" at the local community level (Fletcher et al., 2016). A community resource manager recounts how his community had held on to those promises "they said that ... we were going to be paid and our people will be rich… When the people heard it, they were excited and were celebrating…. families started thinking of how they were going to be millionaires" (Interview, Community Leader and Resource Manager, January 2014, Calabar). More recently, proponents have also employed a dividing practice based on the use of incentives. In view of the official ban on timber extraction and the halt on forest-based revenue generation by the government, the state decided to replace community's long-standing timber "royalty" payments with a new regime of "loyalty" payment. While royalties were paid to landlord communities as a ratio of the total volume of timber extracted from their forests (some communities received as much as USD 6,250 per annum), loyalties are flat rate payments (e.g.

approximately USD 625 per community for 2013) to stimulate support for REDD+. Loyalties were paid to communities as a reward for cooperating with the state's REDD+ agenda. Communities were deemed cooperative when they kept to the terms of the logging ban or when they offered community land for tree planting, or when they expressed no dissenting views (at least in public) towards REDD+. Meanwhile, other communities, timber labourers, and timber merchants continued to be disciplined and criminalised by the militarised Anti-Deforestation Task Force (Green, 2009). The control of people goes hand-in-hand with the control of the landscape.

Landscape practices

Like Li's (2014) constitution of land as a resource, the constitution of Cross River's forest as carbon entails the deployment of relevant expertise such as aerial imaging, translation of images, interpretation, colour-coding, formula applications and numeric quantification of carbon -- at the national scale (cf. McGregor et al., 2015). An example is the 2010 carbon survey by a network of international experts from the United Nations Environment Programme's (UNEP) World Conservation Monitoring Centre (WCMC). This survey made use of satellite imagery to make the confident claim that Nigeria's biomass and soils store a total of 7.5gigaton of carbon (Ravilious et al., 2010). Rendering carbon visible in these ways entails that the forest is discursively (and ultimately materially) rid of multiple value and use, and webs of human interactions. This reflects a process of simplification and abstraction by which carbon is abstracted from all forms of bio-vitality and reduced to mere figures, images and numbers (cf. Sullivan, 2013a). For instance, the UNEP-WCMC report does not differentiate forest biomass carbon from the imminently spent (through extraction) crude-oil carbon in the Niger Delta, an area depicted as having the greatest stock of carbon in Nigeria. Yet, this process of commodifying carbon is never complete. It is challenged through social contestation and by the uncooperative nature of carbon which is difficult to tame and exchange (Robertson, 2012; Bumpus, 2011; McAfee, 2015). For instance, a critical coalition of civil society actors including Friends of the Earth Nigeria in Cross River is mobilising forest communities with the banner "our forest is not for sale", challenging the ongoing commodification of the forest as carbon (Osarogiagbon, 2011).

Once rendered visible, – however partially – the carbon forest would be territorialised through efforts to follow carbon (already made visible from above) to the ground (McGregor et al., 2015). This requires near real-time monitoring of forest carbon stock, which is as yet virtually impossible at the national level in Nigeria and other tropical countries. Such monitoring and accounting would require complex baselines which

Stephan (2013) and Karsenty (2008) observe are often laden with complexity and

uncertainties. Yet, many of these uncertainties are now taken for granted with proponents making a pragmatic shift to sub-national (also jurisdictional or nested) carbon and forest monitoring in Nigeria, as in many other REDD+ countries.

As such, scalar politics is an important landscape practice here. This entails the re-specification of scales of forest governance in line with carbon forestry imperatives. For instance, the Project Idea Note (PIN) for Nigeria's REDD+ pilots had noted: "the project is viable and attractive to carbon finance only if the project area includes the multiple community forests and forest reserves. A project considering only one of these areas would not be viable on its own" (Oyebo et al., 2010 p.89). Thus to make Nigeria's carbon forests finance-able, they needed to be up-scaled from their community ownership levels and rendered visible as clusters which are based on forest contiguity and biodiversity potential. These rescaling efforts are similar to what geographers Cohen and McCarthy (2015) describe as rescaling to ecosystem spaces, though a financialisation logic drives rescaling in this case. As such, REDD+ proponents insist that pilot REDD+ communities must be represented based on clusters and not individually or based on any pre-existing ancestral groupings. Proponents also used monetary incentives in rendering the new clusters governable, as shown in earlier discussions of 'loyalty' payments which were made at clusters levels.

Landscape practices also entail securing the emergent carbon forest. Disentangling carbon requires efforts to rid the forest of other forms of resource relations which are co-extensive with the materialities of carbon offset – for instance, timber, cane, poles, and other forest biomass. This is a prerequisite for creating and capturing value in carbon forestry (Asiyanbi, 2015; Cavanagh et al., 2015). In Cross River, the state-imposed logging seeks to achieve this purpose. The ban, while demonstrating government's 'political will', also helps to mobilise international finance for the project. Everyday protection of the carbon forest has entailed widespread criminalisation and militarisation of the forest landscape and the entire timber economy (Asiyanbi, 2016; cf. Cavanagh et al., 2015). For instance, the militarised Anti-Deforestation Task force set up for forest protection portrayed to the Financial Times the sort of logging population it was up against: "...gangster-businessmen keen to protect their multi-million dollar industry and a generation of disaffected rural youth....'There's a price on our heads'" (Green, 2009 p.2). Such framing of the forest terrain as a space of deadly danger continues to justify the employment of violence in defending the carbon forest. Wielding the new forestry laws and a network of military personnel, private security, volunteers conservationists, and informants, the Task Force has intensified surveillance, law enforcement, and legal prosecution. These measures are undermining local resource

access, long-standing forest-based economies, and resource relations between the state

and communities (Asiyanbi, 2016). Yet, ironically, the Task Force covers up (and even abets) illegal timber dealing, elite capital accumulation in the illegal timber economy, and significant expansion of commercial agricultural plantation into the forests (Uzondu, 2012; Schoneveld, 2014 cf. Bracking, 2015). While scholars ask questions of justice within these emergent outcomes (Isyaku et al., 2017; Okereke and Dooley, 2010), these various contradictions and tensions also mean that significant efforts are directed at stabilising this apparatus from within.

4.4 Stabilisation

Pursuing REDD+ as a suite of organising actions also entails stabilisation, which gives the apparatus some durability, even if a risky one (Li, 2007). Since carbon forestry is built on an overly optimistic foundation, proponents had to keep up a discursive flourish that not only effaces the risky nature of the apparatus held together here – especially the use of violence – but also reproduces and reifies even more optimistic narratives, thereby projecting an antipolitics based on optimistic promises (cf. Büscher, 2013). Optimistic narratives continue to be perpetuated through a continual reiteration of REDD+ promises in government gatherings, community meetings, NGO workshops, and other REDD+ forums. Important is the promise of finance which animates Cross River state in its financial crisis, and communities who search for "better life". Central, then, is the emergent "economy of expectations" which has important implications for the future of the project, as communities and the government gradually become disillusioned at the delayed materialisation of REDD+ promises.

Linked to the foregoing is a more material dimension of stabilisation. A great deal of REDD+ policy implementation continues mainly at the level of proposals, reports, workshops, meetings, consultancy, training, and planning, essentially what Büscher (2013) calls a "paper trail" (see Lund et al., 2017). Occasionally, they include pilot activities within pilots, showing the minimal scale of activities in relation to the overwhelmingly national scope of an ideal REDD+ (see Lund et al, 2017). This material stabilisation also involves what has been analysed elsewhere as "floating", a practical process of maintaining minimal relations among supposedly synergistic REDD+ institution, coalitions and actors in order to minimise impacts of contradiction (Asiyanbi, 2015). For instance, the Anti-deforestation Task Force and the REDD+ implementing unit of the state constantly seek to maintain a significant public distance from each other, covering up the contradiction in the promise of monetary incentive by REDD+ implementers and the deployment of violence by the Task force.

Perhaps most important in forging durability in REDD+ is the way this governmental apparatus is able to summon a variety of subjectivities across a multitude of actors. For instance, while some REDD+ communities once thought of REDD+ in terms of their interest (and some still do), others have challenged the forest protectionism underpinning REDD+ through petitions and protests (see Asiyanbi, 2016). Meanwhile, the "carbon state" emerges at the conjuncture where the aspiration of carbon forestry proponents is fused with a range of other interests and aspirations in the state, even as the state gets hybridised by NGO and transnational actors who also pursue diverse aims in REDD+, including wildlife protection, community empowerment, and the greening of state development. It is this negotiation of interests that help to stabilise REDD+ tentatively.

The four meta-processes of problematisations, visions, implementation and stabilisation thus appear as a suite of organising actions ultimately aimed at heralding a carbon offset regime. Yet, these processes show that the variety of domains, objectives, expertise, actors, actions and relations linked into a durable REDD+ apparatus cannot be reduced to or indeed analysed narrowly in terms of market success or failure. In fact, once market-in-the-making projects are geographically and historically anchored, the stakes become starker, prompting analyses that scrutinise these processes more broadly in terms of their workings and variegated impacts on the environment, institutions, communities and the broader social world, and not merely on the basis of achieving the aims of marketisation or financialisation (see Bigger, this issue; Lohmann, 2016).

5. Conclusion

This paper has argued that the link between financialisation of the green economy and underlying commodification processes is important and that this link can be usefully understood as spaces of mutuality. These spaces offer opportunities to go beyond current analytical preoccupation with abstract evaluative practices and performativity in the green economy. Taking spaces of mutuality as a starting point, this paper directs attention to the real commodification processes on the ground, arguing that the thin, hybridised, and even stalled appearance of some of these processes require new forms of analytical engagement. Among other things, such forms of analytical engagement must grapple with the properly processual nature of neoliberalisation, analysing green economy projects as durable moments of their own without a tendency towards market reductionism or economic reductionism. This requires approaches that fully account for the varied impacts of market-making processes beyond a narrow focus on success and failure. Foucault's organising actions offer important insights, helping to link an

important neoliberal policy moment, organising actions, to a general understanding of a governmental apparatus.

As the Nigerian case reveals, if organising actions involve interventions on social (e.g. state institutions, communities, civil society) and biophysical elements (forests, timber), then analyses of organising actions are necessarily grounded in place and time. The convergence of various actors (beyond the state and economic experts), and particularly the hybridisation of the state in the case study point to the importance of the process of intervening rather than who does the intervening (cf. Lund et al., 2017; McGregor et al., 2015). This also reflects the multiplicity of aims and domains of intervention (institutional structure, law, state forest revenue policy, community forest governance, forest policing, payment schemes) targeted by organising actions. That REDD+ remains open-ended also indicates the sense in which organising actions do not take for granted the realisation of the overarching market goal.

This has some implications for work on environmental financialisation. First is that spaces of mutuality represent an important conceptual arena within which to scrutinise the "epistemology of similitude" and recognise the crucial ways in which financialisation in the green economy might differ from traditional financialisation (Ouma, 2014). In market projects that supposedly address environmental despoliation (such as carbon emission or biodiversity destruction), claims to material connection are critical, given how much hope for environmental amelioration rests upon these claims. As such, current emphasis on the performativity of finance in the green economy needs to be complemented with insights from "research efforts to drill-down", while recognising that such efforts are not limited to the domain of "economic sociology", as Bracking (2015 p2341-7) notes, but cover a broader range of ongoing work including those by critical geographers, other critical scholars, and socio-environmental movements. Finally, this task of following up material connections can potentially unsettle the pretence of complexity that continues to subsume the political in financialisation to the technical domain of finance expert, thereby opening up spaces for wider debates and more political practices in finding real answers to the current socio-environmental crisis.

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[i]Financialisation refers to both the phenomenon marked by the rise of "capital markets, their intermediaries, and processes in contemporary economic and political life" and the various conceptualisations of this phenomenon by scholars (Pike and Pollard, 2009 p29). Environmental financialisation or financialisation in the green economy refers to this phenomenon (and it conceptualisation) evident in the development of derivates, options, hedge and other financial instruments in the new environmental domains of climate regulation, biodiversity conservation, and broadly ecosystem services provisioning. These are domains that typify specific forms of real subsumption of nature through the commodification of environmental disrepair.

[ii]Chris Lang's blog site, REDD-Monitor has covered several reports of bogus investment companies claiming to buy and sell carbon offsets derivates. Accessible at: http://www.redd-monitor.org/

iii Although Foucault's ideas around governmentality were framed within the historical European context, he was however clear about the sense in which governmentality was also to be understood in a general sense. Foucault referred to "diverse types of governmentality" (Foucault's 2010 p.92), observing that " We have been trying out this notion of governmentality and… seeing how this grid of governmentality, which we may assume is valid for the analysis of ways of conducting the conduct of mad people, patients, delinquents, and children, may equally be valid when we are dealing with phenomena of a completely different scale, such as an economic policy, for example, or the management of a whole social body, and so on (p.186 see also Fletcher, 2010). In effect, there is an opening up of an array of relations including those constituted in REDD+ projects and outside of Europe, to the beam of governmental understanding.