Arrested Development? The Promises and Paradoxes of "Selling Nature to Save It"

Jessica Dempsey* and Daniel Chiu Suarez†

*Department of Geography, University of British Columbia
†Department of Environmental Science, Policy, & Management, University of California, Berkeley

Mainstream environmentalism and critical scholarship are abuzz with the promise and perils (respectively) of what we call *for-profit biodiversity conservation*: attempts to make conserving biodiverse ecosystems profitable to large-scale investment. But to what extent has private capital been harnessed and market forces been enrolled in a thoroughly remade conservation? In this article we examine the size, scope, and character of international for-profit biodiversity conservation. Despite exploding rhetoric around environmental markets over the last two decades, the capital flowing into market-based conservation remains small, illiquid, and geographically constrained and typically seeks little to no profit. This marginal character of for-profit conservation suggests that this project continues to underperform as a site of accumulation and as a conservation financing strategy. Such evidence is at odds with the way this sector is commonly portrayed in mainstream environmental conservation literature but also with some critical geographical scholarship. We present a more puzzling situation: Although for-profit conservation has long been promoted as a logical, easy fix to ecological degradation, it remains negligible to and largely outside of global capital flows. We argue that this project has important consequences, but we understand its effects in terms of how it reaffirms narrowed, antipolitical explanations of biodiversity loss, instills neoliberal political rationalities among conservationists, and forecloses alternative and progressive possibilities capable of resisting status quo logics of accumulation. *Key Words: biodiversity conservation, commodification, conservation finance, environmental finance, neoliberal conservation.*

主流的环境保育主义和批判学术研究, 充斥着我们所谓的盈利导向的生物多样性保育—— 亦即企图让保育生物多样性的生态系统成为大规模投资可获益之事物——的（各自）前景与危险。但就何种程度而言, 私人资本被驾驭、市场驱力被纳入一个彻底改造的保育之中？我们于本文中, 检视以营利为导向的国际生物多样性保育的规模、范畴与特徵。尽管过去二十年来, 有关环境市场的修辞激增, 但流进以市场为基础的保育之资本仍然相当小、缺乏资金流动、在地理上受限, 并且一般寻求相当少的利润、甚至毫无利润可言。此一盈利导向的保育之边际特徵, 显示此一作为积累场域和保育融资策略的计画仍然表现平平。而此般证据, 与这个部门在主流的环境保育文献中一般被描绘的方式并不一致, 且亦与若干批判地理学术研究不尽相同。我们呈现出更为难解的情境：尽管盈利导向的保育, 长期以来被推广作为生态恶化的合理且简易的修补方式, 但它对全球资本流动而言仍是微不足道, 且大部份发生在全球资本流动的外部。我们主张, 此一计画具有重要的后果, 但我亦理解其在重申狭隘、反政治的生物多样性丧失解释方面的影响, 为保育工作者灌输新自由主义的政治理性, 并排除了能够抵抗既存的积累逻辑的另类进步之可能。 *关键词： 生物多样性保育, 商品化, 保育融资, 环境融资, 新自由主义保育。*

La corriente principal del ambientalismo y la erudición crítica están enardecidos con la promesa y peligros (respectivamente) de lo que llamamos conservación de la biodiversidad con fines lucrativos: intentos por hacer rentables a la inversión en gran escala la conservación de ecosistemas biodiversos. ¿Pero con qué alcance se ha empleado el capital privado y se han enrolado las fuerzas del mercado en una conservación plenamente rediseñada? En este artículo examinamos el tamaño, forma y carácter de la conservación internacional de la biodiversidad con fines lucrativos. A pesar de la explosiva retórica que ha rodeado los mercados ambientales durante las pasadas dos décadas, el capital que fluye hacia la conservación basada en mercado sigue siendo pequeño, sin liquidez, geográficamente restringido y que típicamente busca poca o ninguna ganancia. Este carácter marginal de la conservación lucrativa sugiere que tal proyecto sigue rindiendo muy poco como lugar de acumulación y como estrategia financiera de conservación. Esa evidencia está en desacuerdo con el modo como este sector es comúnmente retratado en la literatura principal de la conservación ambiental, aunque también con alguna erudición geográfica crítica. Presentamos una situación más enigmática: Aunque la conservación con fines lucrativos ha sido promovida desde hace mucho tiempo como un remedio lógico y fácil contra la degradación ecológica, sigue siendo insignificante entre los flujos globales de capital y en gran medida fuera de ellos. Sostenemos que este proyecto tiene importantes consecuencias, aunque entendemos sus efectos en términos de cómo el mismo reafirma explicaciones estrechas y antipolíticas de la pérdida de biodiversidad, infunde recionalidades políticas neoliberales entre los conservacionistas y excluye posibilidades alternativas y progresistas capaces de resistir el statu quo de la lógica de la acumulación. *Palabras clave: conservación de la biodiversidad, comodificación, finanzas de la conservación, finanzas ambientales, conservación neoliberal.*

Annals of the American Association of Geographers, 0(0) 2016, pp. 1–19 © 2016 by American Association of Geographers
Initial submission, June 2015; final acceptance, October 2015
Published by Taylor & Francis, LLC.

In January 2009, after the inauguration of President Barack Obama and in the midst of the financial crisis, a group of conservationists, bankers, and entrepreneurs gathered in New York City near Wall Street at the Third Biodiversity and Ecosystem Finance Conference. The event's proceedings reflected the hopes and anxieties of the moment, captured in the talks of two participants. The conference chair, co-founder of one of a new generation of firms seeking to create "a world where capital markets recognize and account for the value of nature," spoke of biodiversity markets with soaring optimism, his Microsoft PowerPoint presentation announcing exponential biodiversity market growth. Later that afternoon, a former Credit Suisse executive now working for a "boutique" sustainability firm, took the podium to argue essentially the opposite: The markets the conference chair spoke of remained not just marginal but hardly understood outside of the small community gathered in the room. "There is lots of stuff going on and lots of discussion," she remarked, "but when you think about it . . . very little is going on." Point by point, this banker popped holes in the room's heady enthusiasm. She concluded, "Until we get lots of capital in these emerging biodiversity markets, we won't make a difference. We need to get the big, big money behind this."

Six years later, what can we say about these markets: exponential growth and spectacular money-making or marginal, boutique sector? For those studying the rise of ecosystem service and biodiversity markets, it appears as though we are living through an epochal transformation. Observers cannot turn in any direction in mainstream conservation dialogues and deliberations without hearing of a new piece of nature transformed into a dollar sign. Although "nature" has always been central to accumulative, profit-making processes, many writing under the theme of neoliberal conservation now chart the rise of what we might call "for-profit biodiversity conservation" or, extending Harvey's (2003) terminology, something like "accumulation by conservation": a "newfound 'sustainable' model of accumulation for the future" (Büscher and Fletcher 2015, 273; see also Igoe, Neves, and Brockington 2010; Büscher et al. 2012; Sullivan 2013; Büscher, Dressler, and Fletcher 2014). McAfee (1999) identified the earlier emergence of many of its key elements in the rising prominence of bioprospecting in international environmental policy during the 1990s, which she characterized as "selling nature to save it."

To what extent, though, has private capital been harnessed and market forces been enrolled in a thoroughly remade conservation where "[conserved] natures are being literally conceived and put to work as money capital" (Sullivan 2014, 22)? To shed light on the actually and already existing "selling" of nature to "save it," sixteen years after McAfee's (1999) seminal essay, we examine the broad shape of what we call international for-profit biodiversity conservation. *For-profit biodiversity conservation* refers to biodiversity conservation financed through and undertaken with the aim of generating profitable returns for its investors. This article draws from a variety of sources, including industry reports, academic literature, and analyses prepared by financial consultants, to characterize the types, size, and geography of this market-based, profit-driven, and returns-generating biodiversity conservation finance.

Our principal finding regarding these investments is simple: There isn't much, at least relative to traditional and still dominant funding streams originating from philanthropic and especially state-driven conservation financing. Indeed, when looking more broadly at the economy as a whole, these flows of funds become slivers of slivers of slivers. Investment remains small, marginal, and geographically constrained, with far more talk than investor walk. The bulk of private capital circulating through biodiversity conservation projects is directed more toward so-called sustainable commodities and real assets than to new ecosystem services markets. The portrait of capital operating in this emergent sector, depicted in analyses prepared by its agents on its behalf, appears slow and clunky, with low liquidity and often low expectations of return, better pictured as moving at the speed of cold molasses rather than as zipping around the planet at the speed of light. Even where initiatives labeled as "market-based conservation" are functioning, they are often not quite performing as advertised (or perhaps feared).

The state of play regarding the scale and scope of private investment—of returns-generating, profit-oriented, biodiversity conservation finance—depicts an emergent but halting, precarious, and still largely promissory global economic sector. Such evidence is at odds with how this sector is commonly portrayed in mainstream environmental conservation literature, which depicts recent developments as a necessary and logical next step along the teleology of green capitalism. These findings also challenge claims made in the critical scholarship, especially those that interpret these developments through the specter of rapacious

commodification and financialization and as an epochal transformation of socioecological relations (i.e., Smith 2007; Robertson 2012). We present a more puzzling situation: Proponents of for-profit biodiversity conservation promote it as a least-cost fix to ecological degradation, tailor-made for austerity-bound, market-governance times, yet it remains negligible to and largely outside of global flows of capital. Our aim here is to unpack the continuing underperformance of for-profit conservation as a direct accumulation and conservation financing strategy. We draw from Butler's (2010) recent writing on performativity (and more specifically nonperformativity) in our discussion to theorize the lack of either selling or saving of biological diversity. Overall, we conclude that for-profit conservation is marked less by its ascent and more by its promissory claims and its perennial failure to actually launch.

This gap between neoliberal ideals and actual execution is widely recognized in the critical scholarship (e.g., Peck 2010) and in the neoliberal conservation literature. Recent work has begun to illustrate how many ostensibly neoliberal, market-based interventions "fail to perform as intended" (Fletcher 2014, 91), instead generating arrangements that not only encompass but require substantial public funding, command-and-control legislation, and other elements seemingly anathema to "truly" market-oriented approaches (see Fletcher [2014] for review; see also Fletcher and Breitling 2012; McAfee 2012a; Milne and Adams 2012; Shapiro-Garza 2013). We seek to augment this emerging body of research. By highlighting the arrested development of macroscale "accumulation by conservation" (Büscher and Fletcher 2015), we contribute to ongoing efforts to reassess the neoliberal turn in conservation. Indeed, as we show, profit-seeking capital remains mostly indifferent to biodiversity conservation. If the proliferation of such schemes cannot be appropriately characterized as the outcome of a class project propelled by the accumulative drive of elites (as commonly theorized in neoliberal conservation scholarship via David Harvey), we are left with difficult but important questions regarding how to interpret their emergence, how to understand their specific consequences, and how we might intervene in their potential trajectories.

To be clear, we do not suggest that neoliberal conservation is inert or benign because it is small. Rather, we draw attention to how the relentless talk of "selling nature to save it"—although limited in the realm of actual accumulation—still has consequences, as it continues to reaffirm narrowed, antipolitical explanations of biodiversity loss; to reinforce neoliberal political rationalities among conservationists; and to foreclose alternative and progressive possibilities.

We begin with a brief description of the growing array of reports calling for expanded markets and greater private capital flows, followed by a tour of the way critical scholars have characterized this turn. Next, we provide a broad overview of conservation finance flows, and examine the subset of these flows that can be understood as "for profit." We then discuss how we might better comprehend the current state of this trend.

Neoliberal Conservation

Mobilizing Private Capital to Save Nature: Promoters

International conservation activities now encompass over 100,000 protected areas covering over 15 percent of global terrestrial surface area and tens of thousands of practitioners, from student canvassers and park enforcers to bureaucratic elites and conservation biologists, working for thousands of nongovernmental organizations (NGOs), state agencies, scientific institutions, and other organizations networked together in a complex tangle of overlapping governance regimes. Although this project is diverse, the mainstream international conservation community has over the past two decades increasingly come to accept, and even to embrace, the language of the market—its vocabulary, its concepts, its policy discourse, and an assortment of institutional arrangements and market-based instruments (MBIs) ranging from commercial ecotourism, to payment for ecosystem services (PES) programs, to forest carbon and biodiversity offset schemes. Current iterations of market–environmentalist discourse (i.e., green economy, natural capital, ecosystem services, green growth, etc.) now pervade the rhetoric of environmental practitioners working around the world across a diversity of contexts and capacities. "The power of market-based environmental policy" touts one report prepared by the International Union for the Conservation of Nature (IUCN) in partnership with Shell International, "is no longer in doubt" (Bishop et al. 2008, 8).

A growing array of governance actors, emphasizing the large social costs of biodiversity loss, are now pushing to reorient private capital toward a global green economy that would conserve biodiversity (among other goals) rather than erode it. The United Nations Environment Programme's (UNEP) *Green Economy* report, for example, calls directly for more financial investment

in achieving this "global green economy transformation" (UNEP 2011, 588). The report argues that "concentrated pools of assets, such as those controlled by pension systems and insurance companies," as well the growing assets of the "high net worth community" and "sovereign wealth funds" (Bishop et al. 2008, 8), will be necessary to undertake such a transition.

One aspect of this broader vision that has gained particular traction in conservation circles involves the mobilization of private-sector capital toward initiatives that address biodiversity loss. Here, private-sector capital provides an answer to the so-called funding gap: the oft-cited many-billion-dollar shortfall between what is currently provided by biodiversity finance to fund conservation endeavors and the amounts ostensibly required to scale them up and thereby to "save nature." As Soulé (2014), a founding figure in conservation biology, recently lamented, "Conservation's share of the funding pie is puny" (70–71). Particular estimates of this funding gap—for example from academics (James, Gaston, and Balmford 2001; Bruner, Gullison, and Balmford 2004; Rands et al. 2010; Liu, Reczek, and Brown 2013), conservation organizations (e.g., Bayon and Jenkins 2010; IUCN 2010), and intergovernmental decrees (The Economics of Ecosystems and Biodiversity 2010)—vary, but each emphasizes the vast monetary scale of what is needed relative to current funding levels. This finance would be mobilized around a set of broad objectives formalized by the Convention on Biological Diversity (CBD), including the ambitious Aichi Targets.[1] Consider Figure 1, which depicts this conservation finance shortfall—in this formulation, estimated at around US$300 billion per annum—which, somewhat dramatically, takes up most of what is presented.

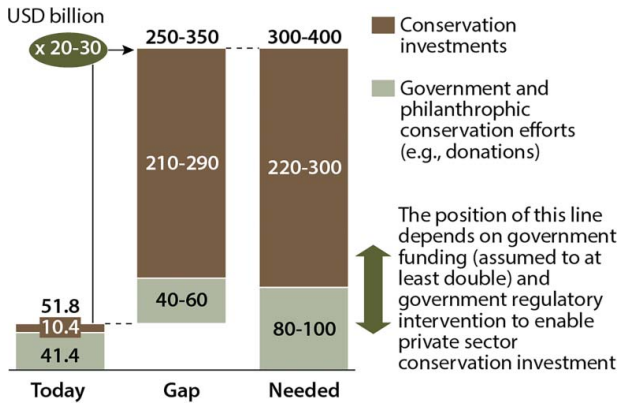

Figure 1. Demand for conservation financing. Graph depicting current and potential future funding required to close the conservation finance shortfall (Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014, 12). © Credit Suisse/WWF/McKinsey 2014, by permission. (Color figure available online.)

As we argue, Figure 1 illustrates more than just a funding gap. Such graphs instill, powerfully, a sense of anxiety over the future of conservation that is articulated by Soulé and expressed ubiquitously by a widening range of other conservation actors in policy documents, analyses, speeches, deliberations, and framing rhetoric in contexts ranging from United Nations plenary halls to World Bank workshops and university biology departments. "If traditional sources of philanthropic and government funding are plainly inadequate for the challenge" (NatureVest and EKO Asset Management Partners 2014, 3), if "a significantly larger amount of capital investment is required than the sums currently being allocated to conservation" (Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014, 3), and "[i]f current approaches to conservation are not sufficient" (Bishop et al. 2008, 10), a growing chorus of reports now asks, "What more can be done?"

The answer, they suggest, will depend on the degree to which conservationists are willing to "harness the very market forces often blamed for biodiversity loss" and to "make biodiversity conservation a viable business proposition in its own right" (Bishop et al. 2008, 10). The way forward convergent in these analyses is through the private sector (see the expanding darker shaded category in Figure 1, showing dramatic future increases in private conservation investments). Conservationists could fill this funding gap, one recent report argues, if "the main investor segments" including-high-net-worth individuals, retail, and institutional investors allocated only "1% of their new and reinvested capital to conservation" (Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014, 16). The IUCN and Shell International report highlights "growing recognition of the potential to conserve biodiversity on a commercial basis," suggesting that "if even a small proportion of private capital flows … could be harnessed for biodiversity business, the resulting contribution to conservation would be enormous" (Bishop et al. 2008, 10). In a recent series of commentaries discussing ways of *Making Conservation Finance Investable*, Huwyler et al. (2014) argue that biodiversity conservation ventures represent a "private sector investment opportunity of major proportion"—a chance to finally close the estimated US$300 billion funding shortfall. And as IUCN's former chief economist suggests, "We increasingly hear that biodiversity is beginning to be seen by business as an opportunity. … Companies large and small are

making money from conserving biodiversity while also helping to safeguard it. . . . The potential for increased investment in nature is huge" (IUCN 2010, 4).

These aspirations articulate longer standing precepts advanced by environmental economists, which aim to transform environmental "bads" like biodiversity loss into business opportunities by extending formal market relations into their management. The tenor of these findings as presented across these and other reports we reviewed is worth noting: They express and instill a palatable sense of urgency, even excitement, over the vast pools of capital waiting to be unleashed in service of biodiversity conservation.

Accumulation by Conservation (or, the Critics)

For critical scholars writing about this trend, making biodiversity conservation investable is a part not only of securing the capital needed to "save nature" but also about finding new sites for capital accumulation (see, e.g., McAfee 1999; Igoe and Brockington 2007; Büscher 2009; Brockington and Duffy 2010; Igoe, Neves, and Brockington 2010; MacDonald 2010; Arsel and Büscher 2012; Büscher et al. 2012; Sullivan 2013, 2014; Fletcher, Dressler, and Büscher 2014). Analysts building from this tradition interpret the rise of market rhetoric among practitioners as reflective of a broadly "neoliberal" repurposing of conservation around the logic of capital, which as Büscher et al. (2012) write, "shifts the focus from how nature is used in and through the expansion of capitalism, to how nature is *conserved* in and through the expansion of capitalism" (Büscher et al. 2012, 4, italics added).

Some of the work in this area links to Harvey's theorization of spatial fixes but in an environmental register, explaining market solutions as a "fix" to capital's "constant need . . . to expand its reach into new spheres of accumulation" (Arsel and Büscher 2012, 57; see also Brockington and Duffy 2010; Büscher, Dressler, and Fletcher 2014). This line of reasoning emphasizes the role that new environmental markets—in this case, structured around the management of biodiversity conservation—play in transforming nature into an "ecological" fix for capitalist crises of accumulation (Castree 2008). The proliferation of market-driven conservation strategies and tradable environmental commodities is understood (again drawing on Harvey) as a new but "similar and spectacularly productive" (Sullivan 2013, 210) wave of accumulation by dispossession (see also Büscher 2009; Brockington and Duffy 2010; Igoe, Neves, and Brockington 2010; MacDonald 2010; Arsel and Büscher 2012).

Scholars such as Smith (2007), Sullivan (2010), and Robertson (2012) write about these processes as intensifying "the commodification of life itself" (Sullivan 2010, 210) as new aspects of nature become sites of accumulation. Smith (2007) interprets the emergence of carbon trading schemes and other ecosystem service markets as signaling not only capital's pursuit of new ways to accumulate but a means of subsuming biological processes to capital (Smith draws from Boyd, Prudham, and Schurman [2001] to interpret these developments, along with biotechnology, as indicative of a shift from formal to real subsumption of nature). Robertson (2012) extends Smith's (2007) argument, interpreting the contemporary moment—characterized in particular by the commodification of ecosystem services—as the inauguration of a new social world comparable to the transformation by which individual human labors become social labor under capitalism: a fundamental break from the past, heralding new forms of accumulative processes that generate profits not only off of nature's goods but its services.

These narratives of neoliberal conservation ascribe to capital a growing appetite for new sites to invest, make money, and generate profit through biodiversity. Concurrently, mainstream conservation dialogues express increasing acceptance that there is no alternative to modernizing around a notional "green economy"—that this ideological and institutional realignment of environmental governance around capital represents a necessary and pragmatic approach to addressing ongoing ecological devastation. But to what extent and in what ways is capital seizing on the investment opportunities being presented to it in conservation—is capital biting? What is the scale and scope of *Nature, Inc.* (Fletcher, Dressler, and Büscher 2014)? Is it rapidly ascending at "ever increasing velocity" (Büscher 2014, 200) or just limping along? Is it performing as expected by both the boosters and critical analysts? We contend that a significant part of what is at stake in such analyses—both for mainstream conservation dialogues and for the critical scholarship—is the social production of neoliberal conservation and its mantra of "biodiversity as business opportunity" as a *fait accompli*: conservation as usual yielding inexorably to business as future. To the contrary, we argue that such visions remain unrealized in the present and therefore unsettled in the future.

Scale and Scope of Neoliberal Conservation

Geographers have explored myriad instances of something akin to for-profit conservation, drawing out many of its on-the-ground consequences, including inequities (e.g., Corbera, Kosoy, and Tuna 2007; Kosoy et al. 2007; Corbera and Brown 2010) and new insecurities for local people (Igoe and Brockington 2007). These studies, conducted through a political–ecological lens (see Castree [2008] for a review), highlight place-based impacts of neoliberal conservation initiatives and have been crucial to identifying the dispossessions and exclusions that attend them. Empirical work focusing directly on the upstream policy and discursive struggles over neoliberal conservation has emerged (see Holmes [2011] for review), which our research complements by providing a viewpoint into the corresponding size, scale, and nature of global for-profit conservation at stake in those struggles.

Caveats and Qualifications

Parsing these global-scale flows of profit-driven conservation capital has been hampered by definitional issues (i.e., what counts as for-profit) and challenges assembling and obtaining comprehensive data (Vatn 2014). We examine a growing gray literature that has begun to assess the potential "investibility" of this emergent sector and attempt to characterize salient features of for-profit biodiversity conservation through the accounts assembled in these studies, produced variously by financial firms, consultancies, and NGOs, supplemented with academic texts.[2] Despite acknowledged methodological issues and irrespective of variations in particular estimates, when taken together, they do begin to depict a triangulated portrait of for-profit biodiversity conservation. Our intention is to dwell less on precise estimates and to focus more on the broad outline of this sector convergent in these accounts.

This section of the article is data dense: We begin with all biodiversity finance, narrow into market-based conservation (and debates about its category boundaries), and then narrow again to outline the flows of conservation finance that are most unambiguously profit oriented.

The Size and Shape of Global Conservation Finance

The available evidence suggests relatively little for-profit investment flowing in global biodiversity conservation, especially when compared with philanthropic and especially state-driven domestic and bilateral or multilateral funding streams, which remain dominant (and when compared to the massive amounts required, as noted earlier). Figure 2 portrays the character and magnitude of existing funding flows currently being directed toward biodiversity conservation initiatives, as presented by a collaboration between Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014) in their report, *Conservation Finance: Moving Beyond Donor Funding Toward an Investor-Driven Approach*. Their analysis builds on another widely cited effort undertaken by The Global Canopy Programme, *The Little Biodiversity Finance Book: A Guide to Proactive Investment in Natural Capital*, now in its third edition, which examines the current status and prospects for scaling up conservation finance (Parker et al. 2012). These studies suggest, "Based on what can be accounted for, the global scale of funding for biodiversity and ecosystem services in 2010 is estimated to have been USD 51.5–53.4 billion" (Parker et al. 2012, 28)—most of it public funds. Indeed, the large majority of funding for biodiversity conservation is directed through domestic budget allocations (estimated at US$25.6 billion), agricultural subsidies with some intended positive conservation impact (estimated at US$7.8 billion), and overseas development aid (estimated at US$6.3 billion).[3]

Examining these figures, Huwyler et al. (2014) observe that "market-based activity generates only 20

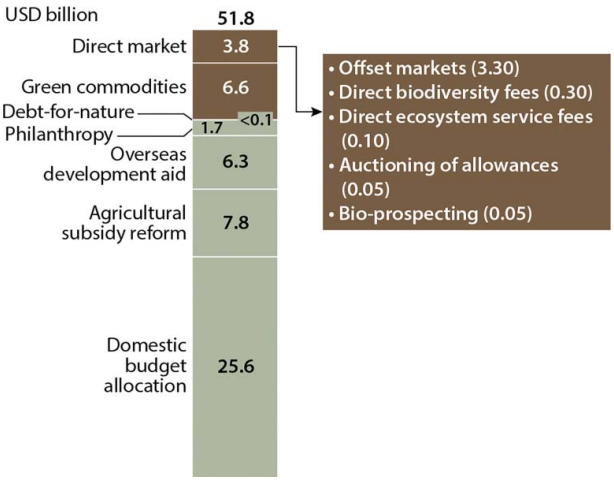

Figure 2. Breakdown of "current conservation finance," with an estimated total of US$51.8 billion per year, divided among different types of funding. Market-driven funding is represented in brown at the top of the diagram, and public and philanthropic funding is represented below in gray (Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014, 10). © Credit Suisse/WWF/McKinsey 2014, by permission. (Color figure available online.)

percent of the total, or approximately [US$] 10.4 billion" per annum. Of this amount, US$6.6 billion is listed under "green commodities," referring to commodities traded under some kind of environmental certification; for instance, fiber, fisheries, or agricultural products.[4] The next highest component comprising this market-based segment of overall conservation finance is the US$3.3 billion listed under "offset markets," the two most important elements of which are forest carbon and biodiversity offsets. The *Little Biodiversity Finance Book* notes that "by far the largest market in biodiversity offsetting is in the US" (Parker et al. 2012, 31). Indeed, according to Madsen et al. (2011), although the annual market size for biodiversity offsets was, as of 2010, estimated at roughly US$2.4 to $4 billion, most derives from aquatic and compensatory mitigation and conservation banking programs in North America (taking up an estimated US$2–3.4 billion). This leaves a much smaller proportion of this US$3.3 billion for forest carbon offsets. A recent report by Forest Trends' Ecosystem Marketplace on *State of Forest Carbon Markets*, for example, indicated a total market value of US$216 million for forestry offsets in 2012 (Peters-Stanley, Gonzalez, and Yin 2013). Other revenues stem from fees, including those originating from tourism and recreation (US$300 million), payments for ecosystem service programs (US$100 million), and auctioning of allowances (US$50 million). Finally, bioprospecting, which refers to "the search within natural ecosystems for genetic information that may be commercially valuable," generates an estimated US$50 million in finance for conservation (Parker et al. 2012).

That bioprospecting contributes a relatively miniscule US$50 million in conservation funding is worth noting. The famed 1987 Brundtland report, *Our Common Future*, predicted that the economic value of genetic resources alone would be "enough to justify species preservation" (World Commission on Environment and Development 1987, 155), suggesting that the economic value of forests harnessed through bioprospecting would be able to secure their conservation over alternative land uses such as intensive timber extraction or conversion to agriculture. Indeed, McAfee's (1999) critique of "selling nature to save it" is rooted in an analysis of the CBD, the establishment of which in 1992 created the international legal conditions for realizing the economic value of genetic resources. We emphasize that the spectacle of "selling nature to save it" has long roots. Moreover, in the prominent case of bioprospecting, the spectacular green money-making it was promising to deliver to conservation has been failing to deliver for almost thirty years.

Another recent report, *Investing in Conservation: A Landscape Assessment of An Emerging Market*, coauthored by NatureVest (itself a partnership between The Nature Conservancy and JP Morgan) and EKO Asset Management Partners (2014), directly surveyed investors actively participating in conservation finance. Through these surveys, and using a newly defined category of funding—"conservation impact investments"—they found US$23.4 billion of conservation finance flowing over the period from 2009 to 2013.[5] Of this US$23.4 billion identified under this new category, however, US$21.5 billion—the overwhelming majority (>90 percent)—is comprised of development bank financing (e.g., from the International Finance Corporation, World Bank, Asian Development Bank, etc.). The report finds a much smaller US$1.9 billion in private investment extended over this period, roughly US$380 million per year.

Despite variations in the methodologies and figures depicted in these and other reports,[6] they each explicitly reiterate in their analyses the limited nature of for-profit, private-sector investment: Most finance is being generated through more established, traditional channels of domestic government funding, development assistance, and philanthropy. The Conservation Finance Alliance (CFA 2014), in their report, *Supporting Biodiversity Conservation Ventures: Assessing the Impact Investing Sector for an Investment Strategy to Support Environmental Entrepreneurism*, concludes, "The overwhelming majority of the financial sector has yet to show interest in biodiversity conservation" (CFA 2014, 4). The Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014, 3) report acknowledges that "conservation finance, in particular from for-profit investors, has to date been small-scale," with its potential remaining largely "unrealized" (6). The NatureVest and EKO Asset Management Partners (2014, 9) report, although endeavoring to emphasize growing "interest" in biodiversity conservation ventures, also recognizes that "private investment accounted for a small share of the total" and that actual investors continue to perceive these opportunities as "immature." The *Little Biodiversity Finance Book* finds that "The scale of these markets is still relatively small" (Parker et al. 2012, 102), observing that "the majority of conservation finance is currently being generated through traditional sources" (46). At the intergovernmental level, the CBD's study of *The State of Financing of Biodiversity* states, "It is rare

that foreign direct investments participate in the provision of biodiversity and ecosystem services" and that the contribution of this type of funding source "may be deemed as nil in terms of billions of dollars" (Secretariat of the Convention on Biological Diversity 24). The general finding across these studies evaluating the prospect making biodiversity conservation "investable" indicates that the financial opportunities commonly ascribed to biodiversity conservation initiatives have not yet materialized in a significant way in terms of overall financial resourcing strategies for conservation.

Unsurprisingly, the global geographic distribution of biodiversity finance, both public and private, flows unevenly. *The Little Biodiversity Finance Book* finds that the United States, Canada, Europe, and China "generate and receive the majority of the world's biodiversity finance" (Parker et al. 2012, 109). The Global South, on the other hand, receives far less biodiversity finance: Africa receives 6 percent, Latin America and the Caribbean receive 6 percent, and Asia (not including China) receives 7 percent of overall global biodiversity finance. Moreover, the report notes that the major components of market-based conservation finance—biodiversity offsets, in which "by far" the largest market is in the United States, and green commodity production, where over 88 percent of certified forests are in North America and Euro-Russia—is both raised and delivered in the same regions: United States, Canada, and Europe. Similarly, the NatureVest and EKO Asset Management Partners (2014) report observes that 92 percent of the private investment found in their survey originated from U.S.-based investors and that across the three areas of conservation investment examined (green commodities, habitat, and water), Canada and the United States also received 82 percent of this finance.

We reiterate that the particular estimates provided in these analyses should be treated with some caution. Taken together, though, the size and shape of private, apparently market-based, and seemingly accumulation-oriented investments into biodiversity conservation do begin to depict a basic conclusion: The for-profit subset of biodiversity conservation remains small, marginal to what is flowing overall, and geographically constrained, with much finance staying put in the Global North.

Slivers of Slivers: The Hybrid Nature of Market-Based Conservation

The previous section begins to sketch the types and size of for-profit biodiversity conservation as a subset of overall conservation finance. In this section we explore the extent to which the array of institutional arrangements bearing the name of MBIs actually function as markets. We discuss scholarship problematizing the characterization of many of those initiatives that have been variously promoted, criticized, and enacted under the label of MBIs. We find a mismatch similar to the one highlighted in the previous section: Market-based conservation represents not just a sliver of conservation finance overall, but only slivers of that sliver function unambiguously in the way their market framing often implies.

Markets versus "Markets"

Ecosystem Marketplace has for years collected and disseminated information about this emerging sector (the organization aspires to be the "Bloomberg" of environmental markets). The very title of their synthesizing report, *Innovative Markets and Market-Like Instruments for Ecosystem Services* (Ecosystem Marketplace 2013), already hints at the diversity of institutional forms that currently bear the moniker of MBIs, as it attempts to identify, classify, and parse a broad assortment of existing ecosystem "markets," each with unique market profiles (or perhaps "market-like" profiles). The giant poster-size rendering of these different sectors, referred to colloquially as *The Matrix*, depicts not just a market sphere sitting in and expanding into a nonmarket sphere but a messy tangle of different hybrid forms: a kaleidoscopic assortment of hybrid quasi-markets, nonmarkets, and actual markets combining disparate actors, institutional logics, interests, purposes, and cross-purposes, some private investment, some philanthropy, and large amounts of public funding.

This conflating of market and incentive is increasingly recognized in the academic literature, especially around the question of payments for ecosystem services (PES). Analysts have begun to argue that many if not most PES schemes fail to perform like actual markets (McAfee and Shapiro 2010; Fletcher and Breitling 2012; Milne and Adams 2012; Pirard 2012; Boisvert, Méral, and Froger 2013; Fletcher 2013; Lapeyre and Pirard 2013; Muradian et al. 2013; Muradian and Gómez-Baggethun 2013; Pirard and Lapeyre 2014). Although acknowledging that "perfect markets never exist in the real world," Pirard (2012) argues, "the fact that most 'markets' referred to for B&ES [biodiversity and ecosystem services] are at the other end of the spectrum gives good reason to be cautious about MBI terminology" (62). Gómez-Baggethun and

Muradian (2015, 217) further develop this claim and point to growing data suggesting "a PES reality that has little to do with the market mechanism" (220).

One of the most famous examples of MBIs in environmental governance—and an especially illustrative case for this article—is Costa Rica's national PES program, *Pago por Servicios Ambimentales* (PSA), established in 1997. Recognizing the ambiguously market-oriented identity of such programs, Fletcher and Breitling (2012) contribute a detailed analysis of PSA, finding that this widely influential and highly publicized case, which was "explicitly promoted as a neoliberal market-based mechanism by many supporters" (405), operates more like a "subsidy in disguise, a means of supporting forest conservation through funds generated primarily via government borrowing and redistribution of tax revenue to forest owners as a form of compensation" (408). Indeed, with respect to the overall financial resources mobilized as part of Costa Rica's national PES program, Vatn (2014, 101) estimates that from 1997 to 2009, "altogether 99% of the funds were public—resources are from a national gasoline tax, money from the Global Environment Facility, and public banks (International Bank for Reconstruction and Development/World Bank and German Development Bank) and from public hydroelectric companies." *The Little Biodiversity Finance Book* makes a similar observation regarding the PES landscape overall: Many such schemes, the authors note, "are not simply government-mediated, but government-funded" (Parker et al. 2012, 66). Indeed, Pirard (2012, 62) observes that many of the instruments designated as market-based that are currently being debated in broader political and policy deliberations "do not host any process of commodification."

The array of initiatives advanced under the framework of Reducing Emissions from Deforestation and forest Degradation (REDD or REDD+) provide another important and illustrative example. Our review suggests increasing recognition that REDD no longer resembles previous characterizations of the framework as the world's largest ecosystem service market. The so-called REDD market is almost entirely dominated by public funds flowing to support readiness strategies in developing countries (Peters-Stanley, Hamilton, and Yin 2012), with bilateral country programs currently funding two thirds of all internationally supported REDD activities. As the NatureVest and EKO Asset Management Partners (2014) report observes, governments remain REDD's primary agenda setters, exemplified in particular by the outsized influence of Norway, which recently pledged US$2.6 billion over five years for REDD projects (see Streck and Parker 2012). Seymour and Angelson (2012) argue that the dominance of bilateral funding and institutions associated with traditional development aid is likely to continue. Indeed, Angelson (2013, 2) argues that it remains "highly uncertain whether carbon markets will ever become a major source of funding for REDD+." Because most of the activities and corresponding finance actuating REDD are not organized around generating financial return, the NatureVest and EKO Asset Management Partners report simply excludes most REDD projects from its analysis. In effect, "selling nature to save it," in the REDD world at least, "has generally failed to produce significant revenues and incentives for conservation" (McAfee 2015, 242).

Taken together, recent scholarship suggests that the present generation of environmental MBIs now operating are usually neither market-based nor largely returns-generating: The arrangements examined in these analyses appear to operate more like incentives or subsidies, akin to green development finance. Even Sven Wunder—the CIFOR economist who established the classic market-based definition of PES a decade ago (Wunder 2005)—was forced recently (Wunder 2015) to "revisit his original proposition in the light of new available knowledge" and re-formulate a new definition for PES which included "its disassociation from a market-like scheme" (Gómez-Baggethun and Muradian 2015, 220). Again, we do not mean to suggest that these processes are benign. We seek simply to recognize, following Pirard (2012) and others, that there is not necessarily much actual *commodification* taking place through these mechanisms. These analyses begin to reveal that "many ostensible neoliberal conservation mechanisms do not function as such in practice" (Fletcher 2013, 799), suggesting to scholars a widened theoretical field of vision to understand what is at stake in these initiatives beyond marketization: Many such instruments appear to only be "masquerading as a market" (Milne and Adams 2012, 133), where the invocation of markets remains more figurative than literal.

International For-Profit Conservation: Slivers of Slivers of Slivers

We have characterized private investment into conservation as slivers of slivers, but how do those remaining slivers—the ones subjected to such intense enthusiasm among practitioners and concern among

critical scholars—perform? We now turn our attention to the flows of finance that are the most unambiguously profit driven.

Capital Stacking

The for-profit segment of conservation finance hosts a diversity of investors. Not all seek high returns or high liquidity. Conservation's financiers range from those prioritizing impact over return (donors), others seeking merely to preserve their wealth (so-called impact investors), and those focused on generating higher returns (profit-driven investors). Financial analysts envision these types of investment as working in concert. Although only the smallest subsegments of finance flowing toward biodiversity conservation actually expect market-rate returns, recent conservation finance reports emphasize the importance of nonprofit and philanthropic sources of finance in greasing the wheels for return-oriented private investors, with the low- or no-return sources of funding assuming the "early stage risks" (NatureVest and EKO Asset Management Partners 2014, 68; see also CFA 2014; Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014). In theory, this type of funding (i.e., "cheap capital") paves the way for private-sector investors who actually expect market-rate returns: a strategy termed *capital stacking* (NatureVest and EKO Asset Management Partners 2014). Operating in this space was also found to require a willingness on the part of investors to accept low liquidity, to leave invested capital locked up while the asset matures. This lack of liquidity was cited by practitioners surveyed in the NatureVest and EKO Asset Management Partners (2014) study as an important factor in explaining the small scale of private capital engaged in this sector.

The Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014) and NatureVest and EKO Asset Management Partners (2014) reports both emphasize that the cheap(er) capital of foundations and nonprofits are the backbone of for-profit conservation. Although public and philanthropic funds are framed in these reports as a kind of stepping stone to a full-fledged, market-rate, and investment-ready sector, their authors also reiterate that more cheap capital will be needed to make private investment flow, emphasizing "a greater need for governments, foundations, and other philanthropic organizations to back early-stage conservation investments compared with even a few years ago" (NatureVest and EKO Asset Management Partners 2014, 68). The Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014, 22) report proposes that both public and philanthropic finance sectors be reworked as "venture philanthropy" that can "de-risk" second stage investments and make them "cost and capital-efficient at scale." In short, these reports call for philanthropy and public capital to subsidize private accumulation, subordinating these funding streams to the requirements of profit-driven investment.

What Kind of Assets?

Another trend relates to the kinds of assets attracting the slivers of private, profit-driven capital beginning to trickle into this space. Of the US$1.9 billion of conservation finance mobilized by private investors found in the NatureVest and EKO Asset Management Partners (2014) survey, 66 percent was directed to what they called "sustainable food and fibre projects" (green commodities), 23 percent to habitat conservation, and 11 percent to water quantity and quality projects. A majority of the largest investors represented in the survey used real asset–based strategies in their approach to conservation finance. For example, investors in habitat conservation targeted their investments toward land (58 percent), complemented by investments in nonprofits, such as loans to NGOs (21 percent) and finally in environmental credits (20 percent).

The Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014) report outlines a general three-part strategy for accumulation by conservation (see Figure 3) in its analysis that illustrates this point. This strategy entails (1) investment that secures the "underlying ecosystem," such as forests or freshwater, which would involve either outright acquisition or long-term usage rights over that asset; (2) developing the land to start generating cash flow via green commodities or ecotourism; and (3) enhancing cash flow through opportunities arising from monetizing other ecosystem services. The small, supplementary role played by this final add-on (the third column) echoes the view expressed by the NatureVest and EKO Asset Management Partners (2014) report, namely, skepticism about the scale of revenues possible through ecosystem service markets alone. One interviewee noted that easements, water credits, and carbon are not "large fungible market revenue streams" and thus cannot be considered "plain vanilla opportunities" (67). At present, new ecosystem service markets are neither perceived nor performing as large generators of profits and are viewed more as

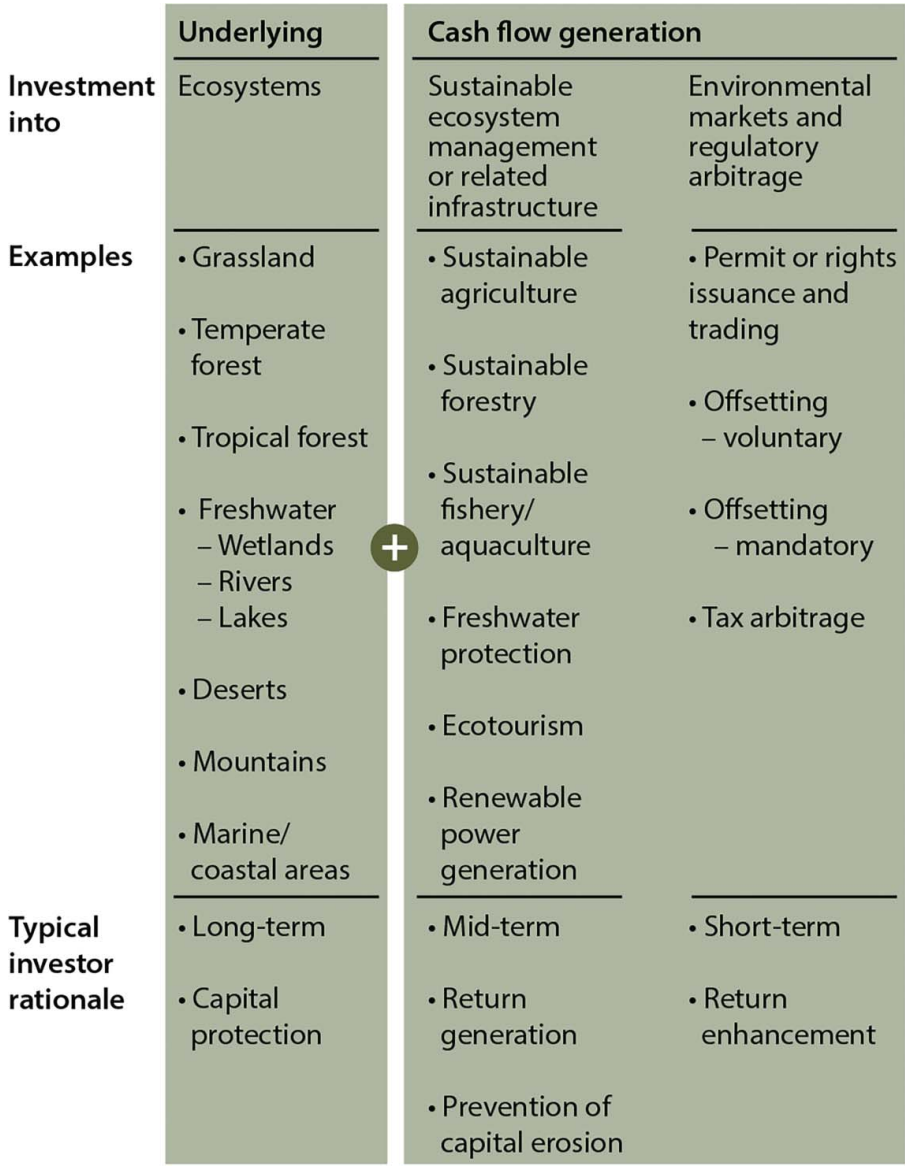

Figure 3. Classification of conservation investment modules. Credit Suisse, World Wildlife Fund, and McKinsey & Company's (2014, 25) proposed formulation of for-profit conservation investment strategies and cash flows. © Credit Suisse/WWF/McKinsey 2014, by permission. (Color figure available online.)

add-ons to the underlying asset (land or traditional commodities like fiber or outputs from food production).

The Arrested Development of For-Profit Biodiversity Conservation

The analyses we review in this article make for compelling reading not only because of the state of play in conservation finance they begin to detail but because of their overtly "performative" register (Mackenzie, Muniesa, and Siu 2007; Butler 2010; MacDonald and Corson 2012). They seek simultaneously to describe and foster the emergence of what they predict: a perennially unrealized yet ever-ascendant market-based conservation, refashioned as a sector of for-profit investment. But to what extent and in what ways is capital seizing on such investment opportunities in conservation?

The evidence provides a relatively straightforward answer to this question: The state of play regarding the scale and scope of private investment—of returns-generating, profit-oriented, biodiversity conservation finance—depicts an emergent but halting, precarious, and still largely promissory global economic sector. The reports themselves,

despite their optimistic claims, reiterate that for-profit conservation remains marginal to, overshadowed by, and deeply entwined with cheap public and philanthropic capital comfortable with low liquidity and no to low returns. Capital has had biodiversity conservation dangled before it (as the very existence of these reports implies), but so far it is not biting. Such an interpretation is at odds with the way that this sector is commonly portrayed in the mainstream environmental conservation literature as well as in much of the critical scholarship. Although obviously diverging on whether a full-fledged, profit-driven, and market-oriented conservation would be a welcome development, much of the commentary remains in alignment at least with respect to their expectations of an already known future—an ongoing and intensifying commodification of more and more aspects of nature (critics) or the ongoing internalization of externalities and correction of market failures (promoters): conservation as usual yielding to business as future. Yet the evidence we present raises questions about the extent to which for-profit biodiversity conservation has become an accumulation strategy, let alone widespread, exploding, or dominant. Highly financialized and liquid markets in conservation, although perhaps desired by proponents of market-based and profit-driven approaches, are by no means an established reality, and despite the rhetoric, remain, as ever, just around the corner.

Given the continuing marginality of new ecosystem service commodities in overall flows of for-profit conservation finance, and given that most of the private capital actually trickling into this sector has focused on so-called real assets (not on new ecosystem service markets), we caution against overstating the extent to which the commodification of life is intensifying through accumulation by conservation. What we have examined in these reports is hard to straightforwardly characterize as the latest chapter in the commodification of nature "all the way down" (Smith 2007; see also Sullivan 2010; Robertson 2012). There are, of course, clear examples of new commodity formations like wetland banking. And we are not suggesting that biological diversity could ever be conceived as purely "outside" accumulation, as socialist ecological feminists like Mies (1998) and more recently Fraser (2014) insist: The unpriced, upaid, and noncommodified labor of socioecological reproduction is and has always been functionally integral to regimes of capitalist accumulation. But the halting, precarious, and so far marginal nature of for-profit conservation suggests that it might be a stretch at this moment to consider conservation itself "an important instrument for the production of surplus value on its own" (Büscher, Dressler, and Fletcher 2014, 202). Given the apparent indifference of actual capitalists toward these schemes, it seems premature to accept that for-profit conservation has become "an integral component of capital accumulation on a global scale" (Büscher and Fletcher 2015, 277).

The Nonperformativity of For-Profit Biodiversity Conservation

What, then, are we to make of the arrested development of "selling nature to save it" (McAfee 1999)? One avenue we explore is to interpret for-profit biodiversity conservation, relative to its promotion as a direct accumulation strategy, as *nonperformative*. Our use of this term draws from recent scholarship highlighting varieties of not-exactly-performatives, including work by Butler (2010), Ahmed (2006), and Christophers (2014). All remind us to pay close attention not only when discourses successfully produce their anticipated ontological effects but also to when they fail to perform as expected. Butler (2010) emphasizes that for these theories, models, and economic precepts of the world to perform in the world, they require the right conditions—the "iterability" of wider "networks of social relations, institutionalized practices, technological instruments" and so forth (151)—which can variously underpin or disable performativity, often producing "inverse effects." A focus on failures, or nonperformativity, recovers in this dynamic a sense of agency and contingency, countering a view that "imputes a certain sovereign agency to the operation of performativity" (153) that "presumes efficacity" (153) as the real is made to conform to the virtual.

Interpreting recent deployments of natural capital discourse, MacDonald and Corson (2012, 164) characterize in similar terms "an ongoing process of reproduction, grounded in conditions of contestation, where directionality emerges from the configuration of power relations and agency continually in the making." They emphasize that "the effectiveness (i.e., its capacity to do work) of a proposition (e.g. natural capital)" is premised on its "ability to draw together a corresponding sociotechnical apparatus, … a dynamic agencement that works to (re)produce and reify nature as an array of goods and services" (164–65). They argue, however, that these dynamics "are also actually creating markets for their exchange" (161). Our findings suggest that the

other shoe has yet to drop: These visions are in important respects failing to materialize, raising major questions about where the impetus for these visions is coming from, what is driving them, and what their prospects might be. Rather than assuming that the right conditions will necessarily fall into place, allowing performativity to operate, Butler's (2010) analytical frame invites us to linger awhile on these lacked conditions and to ponder why the rhetoric of "selling nature to save it" (McAfee 1999) has so outpaced the capital flows from which it was supposed to emerge.

Working in the area of pharmaceutical pricing, Christophers (2014, 15) offers a complementary analytical frame, calling for a renewed focus on cases where economics performs but "in unexpected, even 'negative' ways," where the economic model under examination "does not appear to do (much) economic work" but does perform "political work." In contrast to the expected "positive performativity" of "the economic world coming to mirror the model, thus making the latter an even "truer" representation of the former," Christophers contemplates instances of "negative performativity . . . actively precluding, as opposed to engendering, economic change" (3). Indeed, his argument, which emphasizes that "non-economic performativity . . . is potentially more interesting, certainly less obvious, and perhaps—in view of the feasibly widened scope of effectivity—even more important," rests on a simple observation: such models and the initiatives touting them are always "*politically*, if not obviously economically, performative" (12, italics added).

Drawing from Christophers (2014), we are certainly not arguing that the discursive practices, the ongoing policy announcements, the new models, the new initiatives calling for biodiversity as business are inert, benign, or "good." Even without the "big, big money" and anticipated torrent of private-sector finance circulating with great speed in for-profit biodiversity conservation, we join many critical scholars in emphasizing that the discourse of ecosystem services and natural capital still does enormous work. Profit-driven or not, the reregulation of nature undertaken via neoliberal conservation both relies on and produces new types of territorialization (e.g., protected areas, etc.) that involve the division of resources and landscapes in ways that can displace, exclude, and dispossess. Reports of land-grabbing and evictions of forest dwellers and small-scale farmers have seriously called into question win–win (or even win–win–win and more) characterizations of neoliberal conservation offered by its proponents (e.g., Beymer-Farris and Bassett 2012; Cavanagh and Benjaminsen 2014; Rocheleau 2015). And even without much "truly" market-based activity, mechanisms like PES might have the effect of redistributing "'upward' rather than 'downward'" (Dressler, Büscher, and Fletcher 2014, 248; see also Corbera, Kosoy, and Tuna 2007; Lansing 2010; Corbera 2012; McAfee 2012a, 2012b).

The Political Performativity of Selling Nature to Save It

We also emphasize how calls for private capital to save nature produce a depoliticized formulation of biodiversity loss as narrowly revolving around the problem of *lacked capital*. Recall Figure 1 illustrating (rather dramatically) the US$300 billion gap in financing to save biodiversity. The report, and the policy narrative it consolidates through this framing, articulates what has become a defining problem and recurring preoccupation among conservationists (Suarez and Corson 2013). Halting the monoculturing of the planet requires more *money*: "There is an urgent need for the international community to develop new and innovative sources of finance," the Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014, 11) report concludes, especially funds generated by a "commercial, investor-driven market" (11). This framing is, of course, a profoundly narrowed, even antipolitical recasting of problems and solutions related to global environmental change, concealing other ways of interpreting biodiversity loss rooted in history, power relations, and uneven development (see Escobar 1998; McAfee 1999).

Although we show that neoliberal conservation discourse remains only marginally performative as an accumulation strategy, we also emphasize, following Brown (2003, 2015), that this project is deeply performative in embedding neoliberal political rationalities and cultivating neoliberal subjectivities among conservationists. Neoliberal governance, as Brown emphasizes, is not necessarily always focused on "the economy" (although it is very much about this, too) but "involves extending and disseminating market values to all institutions and social action" (Brown 2003, 3). Brown points out that the extension of formal market relations—key elements in the commodification process that remain, according to analysts, notably absent at a large scale in biodiversity conservation—are not essential for neoliberalism to rework the social domains at issue. Accordingly, Sullivan (2014, 29–30)

describes the encompassing discourse of natural capital in broader terms—as "creat[ing] patterned orders of thought and truth in the world" and as a mode of reason "rapidly becoming a hegemonic nexus of powerful symbols and signifiers for interpreting, knowing and directing the world in which we live." Similarly, Fletcher and Breitling (2012, 408) attempt to reconcile the "significant gap between vision and execution" in Costa Rica's famed PES program in their analysis by widening the scope of neoliberalism around a reformulated "neoliberal environmentality."

Through these lenses, a key effect of these reports, the sentiments they channel, the rhetoric they advance, and the future they envision is the ongoing social production of conservation—the organizations that comprise it, the philanthropic foundations who support it, the state bureaucracies that regulate and fund it, and the practitioners, scientists, and activists populating it—as "entrepreneurial" subjects, compelled to conduct their affairs through logics appropriate to businesses (see Brown 2003, 2015; Foucault 2004a, 2004b). Thus, despite its halting and marginal manifestations in the realm of actual money-making, we maintain that market–environmentalist discourse can have enormous cultural and political disciplining effects on the conservation movement and on environmental governance, effects that come into especially stark focus when considered in relation to the small amount of private-sector capital actually paying for biodiversity conservation. Returning to Figure 1, note that it is not an extrapolated projection. Rather, it is an imagined possible scenario, whose realization, its authors assert, is contingent on certain conditions among the conservation community being met. These reports come to function as an ultimatum—conservationists and conservation organizations must strive to make the work of conservation *investable*.

This subject-producing project is overt and expressed openly in the reports we reviewed: A lack of entrepreneurial culture within conservation organizations figures prominently as a barrier to accumulation by conservation. The CFA (2014), for example, observes that "the majority of activities in the environmental sector are not focused on financial sustainability, let alone generating profits or returns" (6). Conservationists are perceived as not having sufficiently credible and financially legible projects that could create the enabling conditions for them to interface with investors: "The history of culture and norms within the environmental sector" (6), they argue, remains steeped in a philanthropic mindset oriented around "hand-outs" (Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014, 23). The environmental movement, they suggest, lacks the sufficiently enterprising instinct—which has been "glaringly absent in the biodiversity conservation sector" (CFA 2014, 6)—needed to attract capital beyond "retail donors" (Credit Suisse, World Wildlife Fund, and McKinsey & Company 2014, 23), necessitating a fundamental evolution in the very "business model of NGOs" to "bring conservation finance to the next level" (23). Such change, discussed under the label of "professionalization," requires different hiring practices oriented around facilitating the scaling up of conservation finance either by training or bringing in "traditional asset managers and investment professionals" to help design projects and manage portfolios (18). To realize this vision, conservation organizations will need to "rethink their global strategy and governance" (21) to conform with the financial expectations of investors.[7]

Although this reproduction of biodiversity conservation in the image of the entrepreneurial subject remains incomplete, especially when one looks to the struggles of ecological and social justice movements (and sometimes even within the big international conservation organizations themselves), its disciplining effects are manifesting. As this neoliberal governmentality consolidates as common sense, conservation actors increasingly (and "pragmatically") divert their gaze from broader structural forces as the locus of problem solving, resulting in broad-scale yielding of consent to rules of the game once challenged and powers once resisted. As MacDonald and Corson (2012, 160) point out, the essential claims articulated in these types of reports are "nothing new." Indeed, they reiterate long-standing prescriptions derived from environmental economics. "What *is* new," they argue, "is a striking reduction in the opposition to the idea of a world defined as capital . . . through intertwined processes of professionalism and neoliberalism that have deprived environmentalism of much of its oppositional potential, and aligned it with projects of capital accumulation" (161, italics added).

To reiterate, we do not mean to suggest that mainstream conservation is innocent (on any number of fronts), nor that we should "go back" to what came before. We seek simply to emphasize one crucial effect of the turn to market-based strategies in conservation: the continued reconstitution of conservation actors as entrepreneurial subjects that come to understand conservation itself as an enterprise. The CFA (2014, 4)

imagines a brave new conservation organization: "for-profit organizations that are necessarily entrepreneurial in spirit, and exist explicitly to produce high-impact biodiversity conservation benefits while being financially sustainable." Such transformations are troublesome on their own terms but seem even more problematic when they are not even "bringing home the bacon," which is the oft-stated *raison d'etre* of these schemes. Conservation has undergone more than two decades of reimagining itself in pursuit of private-sector capital investment, yet its promise has yet to materialize. What progressive futures has conservation bargained away in chasing these slivers of slivers of slivers?

Conclusion

An initial reaction to our principal finding—a mismatch between the presumed ascendancy and apparent marginality of international for-profit conservation—might be to defer the temporality of accumulation by conservation and suppose that it simply has not occurred yet; it is on the horizon, about to explode, just around the next corner. Such an interpretation would understand the pervasive market rhetoric and associated nascent arrangements as requisite, preparatory steps—the framing, the legitimacy, the technical apparatus and institutional scaffolding—as they incrementally begin to lock that outcome into place. This eventuality is certainly possible and would be consistent with both theoretical expectations and the claims made by market proponents. We can also resist teleological scripting and pay close attention to failures as much as successes, so as to better understand the political work achieved by the dominance of (largely unprofitable) "for-profit" conservation. We suggest that critical scholars of neoliberal conservation remain alert to the ways in which theoretical expectations can become conditioned to accept or even contribute to a sense of these trends as somehow necessary or inevitable. As Fletcher and Breitling (2012) note, "The majority of the neoliberal conservation literature has focused on policy makers' vision of how they *intend* their interventions to play out" (404, italics added), which risks accepting their often sweeping claims about a newly delivered market-oriented conservation at face value. In the realm of "selling nature to save it," from bioprospecting of the late 1980s to almost two decades of ecosystem service discourse, for-profit biodiversity conservation—at least when interpreted literally in relation to the profit-making it was supposed to deliver—has remained small, marginal, and geographically constrained, failing to be the source for spectacular accumulation.

Why is it so hard to make the discourse of "selling nature to save it" perform in the accumulative sense? Why has the rhetoric so outpaced the actual extent of private capital flows actually participating in biodiversity conservation? Most immediately, capital is not flowing because conservation is not a good investment. Indeed, conservation remains in many ways a terrible investment. "Big capital," or what we might call market-rate capital, simply will not flow freely into "high-risk, low-return investments," as the investment banker stated rather bluntly in our opening vignette. Consequently, biodiversity remains off of big capital's radar (and capital continues to put its M elsewhere for its M′). We raise the possibility that the promise (or perils) of ecosystem service markets might simply go the way of bioprospecting as a force for financing biodiversity conservation, remaining on the margins and bringing little private capital into conservation.

Yet despite the apparent economic underperformance (or nonperformativity) of these slivers of capital animating for-profit conservation, we emphasize its political performativity and the cultural, discursive effects that accompany it, which continue to disseminate neoliberal norms and values among conservationists (Sullivan 2014). That the "big, big money" has yet to materialize suggests that the ramifications of for-profit conservation might have more to do with legitimizing and reinforcing status quo capitalist accumulation than actually realizing a new green phase of capitalism as gestured by those making promises of a coming accumulation by conservation. This aspect of neoliberal conservation is, we argue, extraordinarily consequential and important to foreground in our analyses. The work of market–environmentalist rhetoric, asserting the necessity, inevitability, and glittering rewards of for-profit conservation, continues to crystallize an emerging consensus among conservationists that they must now court, rather than confront, entrenched power structures, established regimes of capital accumulation, and private capital itself (Brockington and Duffy 2010; MacDonald 2010). Given the repeated and ongoing disappointment of "selling nature to save it," why do conservationists continue to insist on contorting their work, their cause, and themselves to chasing its promise when its rewards have continued to remain out of their reach? And what might be possible if they decided to try something else? At present, the presumed teleology of accumulation by conservation remains more fiction than fact.

Of course, stories are powerful and the ways they are told and heard have effects. That the major plot points of this narrative remain largely unwritten, we suggest, empowers us to imagine different endings.

Acknowledgments

We appreciate the excellent feedback from Rosemary Collard, Kathleen McAfee, many others who saw versions of this article in conferences and seminars, and the anonymous reviewers.

Funding

We thank the Social Science and Humanities Research Council for research funding. Daniel Chiu Suarez received additional funding and assistance from the International Institute for Applied Systems Analysis while undertaking this project.

Notes

1. See https://www.cbd.int/sp/targets/ (last accessed 23 November 2015).
2. A selection of reports reviewed for this article includes CFA (2014), Credit Suisse, World Wildlife Fund, and McKinsey & Company (2014), NatureVest and EKO Asset Management Partners (2014), Goldstein and Gonzalez (2014), Ecosystem Marketplace (2013), Peters-Stanley, Gonzalez, and Yin (2013), Parker et al. (2012), Secretariat of the Convention on Biological Diversity (2012), Peters-Stanley, Hamilton, and Yin (2012), Madsen et al. (2011), O'Donohoe (2010), WWF (2009), and Bishop et al. (2008).
3. Indeed, the *Little Biodiversity Finance Book* notes that "[j]ust a few major government spending programmes (or groups of programmes) in the USA, Europe, and China account for 51% of global biodiversity finance" (Parker et al. 2012, 30).
4. The estimate counts 10 percent of the total value of the products traded under these types of certification as being directed toward financing biodiversity conservation.
5. Impact investment refers to investments that seek both to generate financial profit (or at least return principal) and to create positive social or environmental impact, describing finance with motivations combining or laying somewhere between profit-driven investors and impact-driven donors.
6. Bishop et al. (2008), for example, offered their own estimates of existing conservation finance, but recognized that any "published estimates of global conservation spending almost certainly underestimate the true level of effort and resources available" (20), which is complicated further by definitional issues and data availability as noted earlier. Ecosystem Marketplace (2013) also maintains alternative sets of estimates, but as is characteristic of many of the reports we reviewed exploring this subject, definitional issues make precise cross-comparison difficult with what is presented here and in other studies.
7. According to the Credit Suisse, World Wildlife Fund, and McKinsey & Company report (2014), "The shift from donor- to investor-driven financing will bring new roles for both major conservation organizations and financial institutions. Rather than designing their own financing schemes, NGOs such as WWF could serve as advisors to the investment professionals who can structure and place these projects, making their knowledge and expertise available" (6).

References

Ahmed, S., 2006. The nonperformativity of antiracism. *Meridians: Feminism, Race, Transnationalism* 7:104–26.

Angelson, A. 2013. REDD+ as performance-based aid. *WIDER Working Paper No. 2013/135*. https://www.wider.unu.edu/publication/redd-performance-based-aid (last accessed 23 November 2015).

Arsel, M., and B. Büscher. 2012. Nature^{tm} Inc.: Changes and continuities in neoliberal conservation and market-based environmental policy. *Development and Change* 43 (1): 53–78.

Bayon, R., and M. Jenkins. 2010. The business of biodiversity. *Nature* 466:184–85.

Beymer-Farris, B., and T. J. Bassett. 2012. The REDD menace: Resurgent protectionism in Tanzania's mangrove forests. *Global Environmental Change* 22 (2): 332–41.

Bishop, J., S. Kapila, F. Hicks, P. Mitchell, and F. Vorhies. 2008. Building biodiversity business. https://portals.iucn.org/library/efiles/documents/2008-002.pdf (last accessed 23 November 2015).

Boisvert, V., P. Méral, and G. Froger. 2013. Market-based instruments for ecosystem services: Institutional innovation or renovation? *Society & Natural Resources* 26 (10): 1122–36.

Boyd, W., S. Prudham, and R. Schurman. 2001. Industrial dynamics and the problem of nature. *Society and Natural Resources* 14 (7): 555–70.

Brockington, D., and R. Duffy. 2010. Capitalism and conservation: The production and reproduction of biodiversity conservation. *Antipode* 42 (3): 469–84.

Brown, W. 2003. Neoliberalism and the end of liberal democracy. *Theory and Event* 7 (1): 1–26.

———. 2015. *Undoing the demos: Neoliberalism's stealth revolution*. Brooklyn, NY: Zone Books.

Bruner, A. G., R. E. Gullison, and A. Balmford. 2004. Financial costs and shortfalls of managing and expanding protected-area systems in developing countries. *BioScience* 54 (12): 1119–26.

Büscher, B. 2009. Letters of gold: Enabling primitive accumulation through neoliberal conservation. *Human Geography* 2 (3): 91–93.

Büscher, B., W. Dressler, and R. Fletcher. 2014. *Nature Inc.: Environmental conservation in the neoliberal age*. Tucson: University of Arizona Press.

Büscher, B., and R. Fletcher. 2015. Accumulation by conservation. *New Political Economy* 20 (2): 273–98.

Büscher, B., S. Sullivan, K. Neves, J. Igoe, and D. Brockington. 2012. Towards a synthesized critique of neoliberal

biodiversity conservation. *Capitalism, Nature, Socialism* 23 (2): 4–30.

Butler, J. 2010. Performative agency. *Journal of Cultural Economy* 3 (2): 147–61.

Castree, N. 2008. Neoliberalising nature: The logics of deregulation and reregulation. *Environment and Planning A* 40:131–52.

Cavanagh, C., and T. A. Benjaminsen. 2014. Virtual nature, violent accumulation: The "spectacular failure" of carbon offsetting at a Ugandan National Park. *Geoforum* 56:55–65.

Christophers, B. 2014. On the performativity of pill pricing: Theory and reality in the economics of global pharmaceuticalization. *Antipode* 46 (4): 1054–71.

Conservation Finance Alliance (CFA). 2014. *Supporting biodiversity conservation ventures: Assessing the impact investing sector for an investment strategy to support environmental entrepreneurism*. http://apsocialfinance.com/wp-content/uploads/2014/07/arquivo20140521115214.pdf (last accessed 14 March 2016).

Corbera, E. 2012. Problematizing REDD+ as an experiment in payments for ecosystem services. *Current Opinion in Environmental Sustainability* 4 (6): 612–19.

Corbera, E., and K. Brown. 2010. Offsetting benefits? Analyzing access to forest carbon. *Environment and Planning A* 42 (7): 1739–61.

Corbera, E., N. Kosoy, and N. M. Tuna. 2007. Equity implications of marketing ecosystem services in protected areas and rural communities: Case studies from Meso-America. *Global Environmental Change* 17:365–80.

Corbera, E., and H. Schroeder. 2011. Governing and implementing REDD+. *Environmental Science & Policy* 14:89–99.

Credit Suisse, World Wildlife Fund, and McKinsey & Company. 2014. Conservation finance: Moving beyond donor funding toward an investor-driven approach. https://www.credit-suisse.com/media/cc/docs/responsibility/conservation-finance-en.pdf (last accessed 23 November 2015).

Dressler, W., B. Büscher, and R. Fletcher. 2014. The limits of Nature^{TM} Inc. and the vital search for alternatives. In *Nature Inc: Environmental conservation in the neoliberal age*, ed. B. Büscher, W. Dressler, and R. Fletcher, 246–53. Tucson: University of Arizona Press.

The Economics of Ecosystems and Biodiversity (TEEB). 2010. *Mainstreaming the economics of nature: A synthesis of the approach, conclusions and recommendations of TEEB: The Economics of Ecosystems and Biodiversity*. Malta: Progress Press.

Ecosystem Marketplace. 2013. Innovative markets and market-like instruments for ecosystem services: The matrix 2013. http://www.ecosystemmarketplace.com/documents/acrobat/the_matrix.pdf (last accessed 23 November 2015).

Escobar, A. 1998. Whose knowledge, whose nature? Biodiversity, conservation, and the political ecology of social movements. *Journal of Political Ecology* 5:53–82.

Fletcher, R. 2013. How I learned to stop worrying and love the market: Virtualism, disavowal, and public secrecy in neoliberal environmental conservation. *Environment and Planning D: Society and Space* 31 (5): 796–812.

———. 2014. Taking the chocolate laxitive. In *Nature Inc. environmental conservation in the neoliberal age*, ed. B. Büscher, W. Dressler, and R. Fletcher, 85–107.

Fletcher, R., and J. Breitling. 2012. Market mechanism or subsidy in disguise? Governing payment for environmental services in Costa Rica. *Geoforum* 43 (3): 402–11.

Fletcher, R., W. Dressler, and B. Büscher, B. 2014. Nature Inc.: The new frontiers of environmental conservation. In *Nature Inc.: Environmental conservation in the neoliberal age*, ed. B. Büscher, W. Dressler, and R. Fletcher, 3–21. Tucson: University of Arizona Press.

Foucault, M. 2004a. *The birth of biopolitics: Lectures at the College de France 1978–1979*, ed. M. Senellart. New York: Picador.

———. 2004b. *Security, territory, population: Lectures at the College de France 1977–1978*, ed. M. Senellart. New York: Picador.

Fraser, N. 2014. Behind Marx's hidden abode. *New Left Review* 86:55–72.

Goldstein, A., and G. Gonzalez. 2014. Turning over a new leaf: State of the forest carbon markets 2014. *Forest Trends' Ecosystem Marketplace*.

Gómez-Baggethun, E., and R. Muradian. 2015. In markets we trust? Setting the boundaries of market-based instruments in ecosystem services governance. *Ecological Economics* 117:217–24.

Harvey, D. 2003. *The new imperialism*. Oxford, UK: Oxford University Press.

Holmes, G. 2011. Conservation's friends in high places: Neoliberalism, networks, and the transnational conservation elite. *Global Environmental Politics* 11 (4): 1–21.

Huwyler, B. F., J. Kaeppeli, K. Serafimova, and E. Swanson. 2014. Making conservation finance investable. http://www.ssireview.org/up_for_debate/article/making_conservation_finance_investable (last accessed 23 November 2015).

Igoe, J., and D. Brockington. 2007. Neoliberal conservation: A brief introduction. *Conservation & Society* 5 (4): 432–49.

Igoe, J., K. Neves, and D. Brockington. 2010. A spectacular eco-tour around the historic bloc: Theorising the convergence of biodiversity conservation and capitalist expansion. *Antipode* 42 (3): 486–512.

International Union for Conservation of Nature (IUCN). 2010. Saving biodiversity: An economic approach. *Why invest? How much? Who pays? World Conservation* 40 (1): 1–24.

James, A., K. Gaston, and A. Balmford. 2001. Can we afford to conserve biodiversity? *BioScience* 51 (1): 43.

Kosoy, N., M. Martinez-Tuna, R. Muradian, and J. Martinez-Alier. 2007. Payments for environmental services in watersheds: Insights from a comparative study of three cases in Central America. *Ecological Economics* 61:446–55.

Lansing, D. M. 2010. Carbon's calculatory spaces: The emergence of carbon offsets in Costa Rica. *Environment and Planning D: Society and Space* 28:710–25.

Lapeyre, R., and R. Pirard. 2013. Payments for environmental services and market-based instruments: Next of kin or false friends? http://www.iddri.org/Publications/Collections/Idees-pour-le-debat/WP1413_RLRP_PESandMBIs.pdf (last accessed 23 November 2015).

Liu, H., C. Reczek, and D. Brown. 2013. Assessing funding needs for biodiversity: Critical issues. *Journal of Health and Social Behavior* 54 (1): 1–4.

MacDonald, K. I. 2010. The devil is in the (bio)diversity: Private sector "engagement" and the restructuring of biodiversity conservation. *Antipode* 42 (3): 513–50.

MacDonald, K. I., and C. Corson. 2012. "TEEB begins now": A virtual moment in the production of natural capital. *Development and Change* 43 (1): 159–84.

MacKenzie, D. A., F. Muniesa, and L. Siu. 2007. *Do economists make markets? On the performativity of economics*. Princeton, NJ: Princeton University Press.

Madsen, B., N. Carroll, D. Kandy, and G. Bennett. 2011. *Update: State of biodiversity markets*. Washington, DC: Forest Trends. http://www. ecosystemmarketplace.com/reports/2011_update_sbdm (last accessed 14 March 2016).

McAfee, K. 1999. Selling nature to save it? Biodiversity and green developmentalism. *Environment and Planning D: Society and Space* 17 (2): 133–54.

———. 2012a. The contradictory logic of global ecosystem services markets. *Development and Change* 43 (1): 105–31.

———. 2012b. Nature in the market-world: Ecosystem services and inequality. *Development* 55 (1): 25–33.

———. 2015. The post- and future politics of green economy and REDD. In *The politics of carbon markets*, ed. B. Stephan and R. Lane, 237. London and New York: Routledge.

McAfee, K., and E. N. Shapiro. 2010. Payments for ecosystem services in Mexico: Nature, neoliberalism, social movements, and the state. *Annals of the Association of American Geographers* 100 (3): 579–99.

Mies, M. 1998. World economy, patriarchy and accumulation. In *Women in the third world: An encyclopedia of contemporary issues*, ed. N. P. Stromquist, 37–45. New York: Garland.

Milne, S., and B. Adams. 2012. Market masquerades: Uncovering the politics of community-level payments for environmental services in Cambodia. *Development and Change* 43 (1): 133–58.

Muradian, R., M. Arsel, L. Pellegrini, F. Adaman, B. Aguilar, B. Agarwal, E. Corbera, et al. 2013. Payments for ecosystem services and the fatal attraction of win–win solutions. *Conservation Letters* 6 (4): 274–79.

Muradian, R., and E. Gómez-Baggethun. 2013. The institutional dimension of "market-based instruments" for governing ecosystem services: Introduction to the special issue. *Society & Natural Resources* 26 (10): 1113–21.

NatureVest and EKO Asset Management Partners. 2014. Investing in conservation: A landscape assessment of an emerging market. http://www.jpmorganchase.com/corporate/Corporate-Responsibility/document/InvestingInConservation_Report_r2.pdf (last accessed 23 November 2015).

O'Donohoe, N., C. Leijonhufvud, and Y. Saltuk. 2010. *Impact investments: An emerging asset class*.

Parker, C., M. Cranford, N. Oakes, and M. Leggett. 2012. *The little biodiversity finance book: A guide to proactive investment in natural capital*. http://www.globalcanopy.org/materials/little-biodiversity-finance-book (last accessed 23 November 2015).

Peters-Stanley, M., G. Gonzalez, and D. Yin. 2013. *Covering new ground: State of the forest carbon markets 2013*. Washington, DC: Ecosystem Marketplace. http://www.forest-trends.org/fcm2013.php (last accessed 23 November 2015).

Peters-Stanley, M., K. Hamilton, and D. Yin. 2012. *Leveraging the landscape: State of the forest carbon markets 2012*. Washington, DC: Ecosystem Marketplace. http://www.ecosystemmarketplace.com/reports/forestcarbon2012 (last accessed 23 November 2015).

Pirard, R. 2012. Market-based instruments for biodiversity and ecosystem services: A lexicon. *Environmental Science & Policy* 19–20:59–68.

Pirard, R., and R. Lapeyre. 2014. Classifying market-based instruments for ecosystem services: A guide to the literature jungle. *Ecosystem Services* 9:106–14.

Rands, M. R. W., W. M. Adams, L. Bennun, S. H. M. Butchart, A. Clements, D. Coomes, A. Entwisle, et al. 2010. Biodiversity conservation: Challenges beyond 2010. *Science* 328:1298–1303.

Robertson, M. 2012. Measurement and alienation: Making a world of ecosystem services. *Transactions* 37:386–401.

Rocheleau, D. E. 2015. Networked, rooted and territorial: Green grabbing and resistance in Chiapas. *The Journal of Peasant Studies* 42 (3–4): 695–723.

Secretariat to the Convention on Biological Diversity. 2012. *State of financing for biodiversity: Draft global monitoring report 2012 on the strategy for resource mobilization under the Convention*. https://www.cbd.int/doc/meetings/cop/cop-11/information/cop-11-inf-16-en.pdf (last accessed 14 March 2016).

Seymour, F., and A. Angelsen. 2012. Summary and conclusions: REDD+ without regrets. In *Analyzing REDD+: Challenges and choices*, ed. A. Angelson, M. Brockhaus, W. D. Sunderlin and L. V. Verchot, 317–34. Bogor, Indonesia: Center for International Forestry Research.

Shapiro-Garza, E. 2013. Contesting the market-based nature of Mexico's national payments for ecosystem services programs: Four sites of articulation and hybridization. *Geoforum* 46:5–15.

Smith, N. 2007. Nature as accumulation strategy. *Socialist Register* 43:16–36.

Soulé, M. 2014. The "new conservation." In *Keeping the wild: Against the domestication of earth*, ed. G. Wuerthner, 66–80. Sausalito, CA: Foundation for Deep Ecology.

Streck, C., and C. Parker. 2012. Financing REDD+. In *Analysing REDD+: Challenges and choices*, ed. A. Angelsen, M. Brockhaus, W. D. Sunderlin, and L.V. Verchot, 111–28. Bogor, Indonesia: Centre for International Forestry Research.

Suarez, D. C., and C. Corson. 2013. Seizing center stage: Ecosystem services, live, at the Convention on Biological Diversity. *Human Geography* 6 (1): 64–79.

Sullivan, S. 2010. "Ecosystem service commodities"—A new imperial ecology? Implications for animist immanent ecologies, with Deleuze and Guattari. *New Formations* 69 (1): 111–28.

———. 2013. Banking nature? The spectacular financialisation of environmental conservation. *Antipode* 45 (1): 198–217.

———. 2014. The natural capital myth; or will accounting save the world? Preliminary thoughts on nature, finance and values. Leverhulme Centre for the Study of Value, Working Paper Series No. 3. http://thestudyofvalue.org/wp-content/uploads/2013/11/WP3-Sullivan-2014-Natural-Capital-Myth.pdf (last accessed 23 November 2015).

United Nations Environment Programme (UNEP). 2011. Towards a green economy: Pathways to sustainable development and poverty eradication. http://www.unep.org/greeneconomy/Portals/88/documents/ger/ger_final_dec_2011/Green%20EconomyReport_Final_Dec2011.pdf (last accessed 23 November 2015).

Vatn, A. 2014. Markets in environmental governance—From theory to practice. *Ecological Economics* 105:97–105.

Watson, J. E. M., N. Dudley, D. B. Segan, and M. Hockings. 2014. The performance and potential of protected areas. *Nature* 515 (7525): 67–73.

World Commission on Environment and Development. 1987. *Report of the World Commission on Environment and Development: Our common future*. New York: Oxford University Press.

World Wildlife Fund. 2009. *Guide to conservation finance: Sustainable financing for the planet*.

Wunder, S. 2005. Payments for environmental services: Some nuts and bolts. CIFOR Occasional Paper 42. http://www.cifor.cgiar.org/publications/pdf_files/OccPapers/OP-42.pdf (last accessed 24 November 2015).

———. 2015. Revisiting the concept of payments for environmental services. *Ecological Economics* 117:234–43.

JESSICA DEMPSEY is an Assistant Professor in the Department of Geography at the University of British Columbia, Vancouver, BC, V6T 1Z2, Canada. E-mail: Jessica.dempsey@geog.ubc.ca. Her research focuses on the political ecologies of biodiversity conservation.

DANIEL CHIU SUAREZ is a doctoral candidate in the Department of Environmental Science, Policy and Management at the University of California, Berkeley 94720-3114. E-mail: dsuarez@berkeley.edu. His doctoral research analyzes the spread of ecosystem services concepts through transnational policy networks into biodiversity conservation.