Business of biodiversity: Corporate enactment, conservation governance and the (anti-) politics of articulation

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Abstract

"Business and biodiversity" constitutes a relational field joining private sector actors with NGOs, multilateral organizations, UN agencies, governments, and academics that has reconfigured power relationships tied to transnational environmental governance. The continuing dominance of market-oriented approaches in this arena raises important questions regarding the ways in which diverse actor-networks co-produce and enact dynamic governance assemblages at the intersection of discourses, institutional forms, social technologies, and practices. In examining processes of "economic formation" relative to "business and biodiversity," the paper first presents a hybrid conceptual framework that joins elements of assemblage approaches, practice theory, actor-network theory, economic sociology, and corporate ethnography to produce a working vocabulary capable of capturing highly dynamic and relational economistic governance structures and processes. Second, it characterizes "business and biodiversity" as interconnected fields featuring particular logics, dynamic actor-networks, institutional boundaries, organizational forms, social technologies, and devices that produce economistic environmental governance-beyond-the-state. Third, drawing upon collaborative ethnographic research from the 2012 Corporate Sustainability Forum (part of Rio+20) and the 2014 World Parks Congress, the paper explores how diverse actors enact "business and biodiversity." Practices and performances at major events intensify processes of alignment, articulation, and entanglement that help to weave a field's relational tapestry. We illustrate these processes with two examples: (1) "Biodiversity, Ecosystem Services (BES) and Business" and (2) "Business and Biodiversity Offsetting." In examining the discursive, structural, processual, and performative aspects of economistic assemblage, the paper's final section explores the ways in which conservation governance activities produce both an anti-politics and a politics of articulation that perpetuates a "social life of corporate forms."

Keywords: governance, biodiversity conservation, assemblage, economization, articulation, enactment

"Thinking about the value of nature leads to other ways of thinking familiar to business analysts. For example, concepts such as *maximize returns, invest in your assets, manage your risks, diversify,* and *promote innovation* are the common parlance of business and banking. They are rarely applied to nature, but they should be."

Mark Tercek (2013: xv), President and CEO of The Nature Conservancy and former investment banker at Goldman Sachs

Introduction

In a 2010 opinion piece entitled "The Business of Biodiversity" in the journal *Nature*, Ricardo Bayon and Michael Jenkins presented an argument for making nature more visible to markets. In their view, one of the main reasons for environmental destruction worldwide stems from nature's economic invisibility. Deforestation, wetland conversion, and other transformations typically do not account for lost ecosystem services such as clean air and water, pollination, and flood control, producing an illusory positive balance sheet. The best response, according to Bayon and Jenkins, centers on instituting regulatory and voluntary economic instruments that attach monetary values to ecosystem services, thus generating counter incentives that dissuade businesses from degrading the natural capital that supports their operations. Positioning their piece to coincide with the 1st Global Business and Biodiversity Symposium, held in London during July of that year, the authors highlighted how economic valuation of ecosystem services can transform environmental degradation into restoration via techniques such as direct payments and offsetting. They pointed favorably at approaches such as "mitigation banking" and "species banking" that allow businesses to purchase credits from third party providers who can certify compensatory restoration of comparable wetland, stream, and endangered species' habitat at alternate sites.

Bayon, a partner at EKO Asset Management Partners in New York and Jenkins, president of the NGO Forest Trends based in Washington, DC, have long advocated for applying market-oriented approaches to environmental challenges such as biodiversity loss. Forest Trends, for example, maintains an online information clearinghouse called Ecosystem Marketplace. The organization also co-administers the Business and Biodiversity Offsets Programme (BBOP), which works with transnational corporations such as Shell and Rio Tinto to restore comparable areas to those degraded via oil, gas, and mineral extraction. While the core argument that the authors espoused in "The Business of Biodiversity" has become widely accepted and applied in conservation circles, market-oriented approaches to environmental protection also have provoked strong critiques (e.g., Büscher et al. 2012,

Sullivan 2013; Robertson 2004, 2006, 2007).[1] Beyond its relative merits and contradictions, however, the merger of business and biodiversity provides an important example of how what many call market environmentalism (or neoliberal conservation) is brought into being. The continuing dominance of market-oriented approaches in this arena raises important questions regarding the ways in which diverse actor-networks enact and co-produce dynamic, economistic governance arrangements at the intersection of discourses, organizational forms, institutions, and practices. While political ecology and related domains of inquiry have contributed insights regarding market-based programs, they have focused less attention on the emergence, dynamics, and relative durability of transnational, economistic governance arrangements over time.

This paper builds upon studies framed in terms of neoliberal natures, Nature Inc.™, green grabbing, and corporate social responsibility to examine processes of economic formation relative to what we frame as "business and biodiversity." We critically examine the ways in which arenas such as "business and biodiversity" shape conservation governance structures and practices. Shaping refers to incremental, often diffuse, processes that align, articulate, and entangle economistic logics, organizational forms, institutions, and practices with conservation goals and governance arrangements. These structures and practices emerge and unfold in the context of "governance-beyond-the-state" (Swyngedouw 2005), joining diverse private sector actors with an array of multilateral organizations, NGOs, and government agencies.

The paper unfolds in four parts. First, we present a hybrid conceptual framework that joins elements of assemblage approaches, practice theory, actor-network theory, economic sociology, and corporate ethnography to produce a working vocabulary that more fully describes and analyzes highly dynamic and relational economistic governance structures and processes. Building on emerging work in this area, we merge four conceptual streams: assemblage, field, performativity of markets, and enactment.[2] Assemblage captures broad processes of alignment, articulation, and entanglement of diverse elements such as discourses (or situated knowledges), institutional forms, and calculative and market devices (cf, Delueze and Guattari 1987). The related term, field, constitutes interconnected and overlapping relational arenas featuring particular logics, dynamic actor-networks, institutional forms, and practices that produce wider governance assemblages (cf, Bourdieu 1990 [1980]). Practices of assemblage are performative to the extent that the coming together of diverse elements produces the economization of people and things (cf, Çalişkan and Callon 2009, 2010). Enactment, in turn, highlights the dramaturgical performances and practices that animate economistic governance activities.

[1] Thanks to Sian Sullivan for drawing our attention to Bayon and Jenkin's 2010 opinion article in *Nature*. Her response, co-authored with Michel Pimbert and Kathy Homewood, entitled "The business of (bio)cultural diversity?" can be found at http://siansullivan.net/2010/08/08/the-business-of-biocultural-diversity/ .

[2] Our conceptual work in this paper has benefited from related efforts at the University of Manchester's Leverhulme Center for the Study of Value (see Bracking et al. 2014, Fredriksen et al. 2014, Sullivan 2014).

The second part of the paper characterizes "business and biodiversity" as overlapping fields featuring diverse practices of assemblage. We introduce two examples including: (1) "Biodiversity, Ecosystem Services (BES) and Business," and (2) "Business and Biodiversity Offsetting." In comparatively describing and analyzing different manifestations of "business and biodiversity," we outline the discursive logics, actor-networks, institutional boundaries, organizational forms, social technologies, and devices that enable economistic environmental governance-beyond-the-state. We also explore the extent to which these practices are performative.

The third section turns attention to the dynamic processes or enactments that animate "business and biodiversity." Drawing upon collaborative ethnographic research from the 2012 Corporate Sustainability Forum (part of Rio+20) and the 2014 World Parks Congress, we explore how major events intensify processes of alignment, articulation, and entanglement that help to weave the field's relational tapestry. We summarize event sessions and activities that illustrate ongoing constitutive work: (1) the launch of the Framework for Corporate Action on Biodiversity and Ecosystem Services (BES) at the 2012 Corporate Sustainability Forum, and (2) a cross sectoral discussion of business and biodiversity offsets projects at the 2014 World Parks Congress. In analyzing these two illustrations, we focus on the ways in which enactment intensifies and amplifies the performativity of assemblage.

The paper's fourth and final section explores the discursive, structural, processual, and performative aspects of assemblage in terms of the "(anti-)politics of articulation." We discuss how the processes and forms of connection associated with articulation have reconfigured power relations surrounding conservation governance over the past two decades. Additionally, we argue further that articulation associated with "business and biodiversity" generate anti-political processes and effects that sanction and enable logics, organizational forms, and social technologies that entwine the scientific and technical aspects of conservation governance with corporate managerial approaches and practices.

Assembling economistic environmental governance

The broad conceptual question animating this work is: What are the underlying constitutive processes that bring economistic environmental governance structures and processes into being? Alternatively, how do diverse actor-networks enact and co-produce dynamic, economistic governance assemblages? In this section, we present a hybrid conceptual framework focused on the ongoing production and reproduction of economistic environmental governance. We join elements of assemblage approaches, practice theory, actor-network theory, economic sociology, and corporate ethnography to produce a working vocabulary that can capture highly dynamic and relational economistic governance structures and processes. We seek to build upon emerging work in this area and broaden perspectives

associated with related literature on neoliberal natures, Nature Inc.™, green grabbing, and corporate social responsibility.

With the unfolding of the UN-sponsored Sustainable Development Goals (SDGs) and continuing efforts to imagine and materialize "the Green Economy" in the wake of the 2012 United Nations Conference on Sustainable Development (Rio+20), critical work aimed at uncovering the deep resource politics associated with conservation/development offers key perspectives on economistic environmental governance. Our focus on transnational biodiversity conservation efforts draws attention to more than two decades of activities aimed at joining the language and practice of economics with the goals of nature protection. Typically framed as "market-based approaches," such as payment for ecosystem services (PES), these practices emphasize economic incentives that seek to make nature legible and manageable. They depend upon a range of symbolic and material shifts to measure, commodify, establish markets for, and, in some cases, abstract nature through financialization (Sullivan 2013, 2014). The dominance of market-based approaches coincides with the rise of neoliberalism as a global political and economic reform agenda, producing a broad literature critically examining market environmentalism, neoliberal natures, neoliberal conservation, and Nature Inc.™ (e.g., Goldman 2005, Robertson 2004, 2006, Castree 2008a, b, Demsey and Robertson 2012, Büscher et al. 2012, 2014, Wilshusen 2014). Additionally, the combination of regional scarcities and emerging markets for natural resources like water and agricultural land has generated critical interest in "new appropriations of nature" or "green grabbing (e.g., Fairhead et al. 2012, Corson and MacDonald 2012, Corson et al. 2013). While this work draws attention to material, symbolic, and institutional transformations surrounding conservation/development, it mainly focuses on what economistic processes produce and how as opposed to how economistic governance structures and processes emerge and unfold (but see Sullivan 2013, 2014, Dempsey 2013, 2015, MacDonald and Corson 2012, Turnhout et al. 2014, Wilshusen and MacDonald, Under review).

In looking at the constitutive processes surrounding economistic environmental governance, we frame our inquiry around processes of becoming: To what extent and how are economistic approaches producing and transforming the symbolic and material make up of conservation governance? A relational understanding of environmental governance is necessarily dynamic, emergent, and contingent. The vocabulary that we rely upon to explore practices of assemblage relative to "business and biodiversity" seeks to account for this fluidity. It attends to processes of economic formation—in ways that parallel and expand upon presentations of state formation, neoliberalization, and governmentality. We present "assemblage," "field," "performativity of economics," and related terms to capture these processes.

[1] As noted above, the term *assemblage* refers generally to a coming together of diverse human and non-human elements in particular contexts, enabling complex, "rhizomic" combinations and distributed agency in response to certain desired outcomes or concerns (Deleuze and Guattari 1987, Braun 2006, 2008; Anderson and McFarlane 2011, Fredriksen et al. 2014, Fredriksen 2014). While definitionally broad and thus open to wide interpretation and debate, assemblage approaches foreground the continuous unfolding and shifting of socio-technical arrangements as well as the multi-faceted constitutive work—both human and non human—that animates social life.[3] We discuss dynamic processes of assembling, disassembling, and reassembling in terms of enactment, articulation, and entanglement.

Enactment foregrounds social performances and practices representative of a particular collectivity such as a corporation. The process of producing a collectivity often generates multiple versions with inherent contradictions—a "patchwork singularity" or "coherence-in-tension" (Mol 2002, Welker 2014). *Articulation* connotes processes and forms of connection that produce more or less stable symbolic, social, and material formations (Featherstone 2011). *Entanglement* refers to dynamic but durable interactions and interdependencies; the shifting yet ongoing interrelationships that unfold among human and nonhuman "actants," producing patterns, processes, and organizational forms (Rip 2010).

Tania Li (2007) emphasizes three characteristics of assemblage that constructively enable a dynamic, relational understanding of social processes and structures compared to related approaches such as those framed in terms of governmentality. First, it focuses on processes of becoming rather than resultant formations or structures. It further highlights the contingency of these processes through which elements assemble, disassemble, and re-assemble as constitutive work unfolds. Second, the terminology of assemblage approaches centers upon the diverse, mainly human, practices that continuously produce intersections of people and things. For example, in her study of community forestry in Indonesia, Li (2007: 265) identifies government-led practices such as "forging alignments" across diverse parties' objectives, "rendering technical" complex relationships and challenges so that technocratic responses can be applied, and "authorizing knowledge"—e.g., derived from the sciences and engineering—to enable technocratic interventions.[4] Third, assemblage approaches present a diffuse, often uncoordinated, view of agency that is both powerful in its cumulative work and non-totalizing. In this sense, practices of assemblage tend to unfold from "an existing repertoire, a matter of habit, accretion, and bricolage" (Li 2007: 265).

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[3] For a discussion on the use and mistranslation of "assemblage" from the French term "*agencement*" found in Deleuze and Guattari (1987), see Philips (2006). Regarding broad and indeterminate definitions of "assemblage," see Anderson and McFarlane (2011). On the comparison between "assemblage" and Foucault's term *dispositif*/apparatus see Legg (2011) and Li (2007).

[4] Li (2007: 286) identifies three additional practices of assemblage, including: "managing failures and contradictions," "anti-politics," and "reassembling" as contributing to the constitution of a "technical field fit to be governed and improved."

[2] In addition to the simultaneously human and nonhuman, social and technical, and textual and material processes of assemblage (MacKenzie et al. 2007), we introduce the related term, *field*, as developed by Pierre Bourdieu (1990 [1980]) to describe the ongoing production and reproduction of social relations within the context of emergent discursive and institutional domains. Bourdieu understood fields to be arenas in which human social actors converge around particular interests and organizing principles (or logics) while pursuing desired outcomes but he also saw social relationships and exchanges as deeply molded by cultural practices over time. *Logics* refer to shared meaning systems and expectations built upon a set of normative assumptions. The relations among positions and associated rule systems delineate the boundaries of a field. Formal and informal rule systems stem from organizing principles, providing parameters or *institutional boundaries* for appropriate social interaction within a field. Actors deliberate and are drawn into and out of dynamic, often competitive, power relationships that dialectically constitute the discursive and institutional boundaries of a field. From this perspective, "business and biodiversity" would feature multiple, overlapping fields, within which social actors occupy dynamic positions with differential access to power resources.

[3] A third theoretical frame, *performativity of economics*, helps to understand the unfolding of economistic environmental governance by turning attention to processes of economization in which people and things dialectically co-produce, enact, and materialize the world as economic (Callon 1998, Callon 2007, MacKenzie et al. 2007, Çalişkan and Callon 2009, 2010, Muniesa 2010). In using the terms "economization" and "economistic," as opposed to static descriptors like "economic," we intend to capture the ways in which dynamic structures and process are constituted and achieved. We view processes of economization as inclusive of related engagements characterized as "financialization," "marketization," "neoliberalization," and "corporatization." Performativity "refers specifically to the ability of economic theories, models and technologies to (re)make economic realities in their own image" (Fredriksen et al. 2014: 50). However, not all economic theories, models, and technologies are equally performative, leading to the question of how and why certain economic approaches achieve greater institutional and political support relative to others (Fourcade 2011). As we discuss in the final section of this paper, while diffuse and often uncoordinated in terms of agency, we understand the performativity of economics to be deeply political and anti-political.

Timothy Mitchell (2008) explores the contingent performativity of economics through the example of the emergence of the modern electricity industry in the mid 20th century, in which he illustrates how a complex constellation of actors, knowledge, objects, and technologies helped to constitute what we understand as "the economy." The unfolding of a nested set of regimes organized to provide electricity precipitated new technical processes, new forms of distribution and monitoring, and new forms of calculation among other novel activities.

Drawing upon a more recent example of attempts to significantly reduce urban poverty in Peru during the 1990s and early 2000s, Mitchell (2005, 2008) illustrates how neoliberal economic ideas and projects unfolded in terms of providing land title—private property rights—to poor urban dwellers in informal settlements. The World Bank sponsored program was championed by Peruvian development economist Hernando de Soto who claimed that formalized property rights would allow families to significantly increase their access to credit, which would then stimulate a wide range of entrepreneurial enterprises and income generating opportunities. While the program did not increase commercial lending to low-income households that received titles, it did appear to have the unintended impact of significantly increasing the number of hours worked outside the home. Mitchell argues that a complex convergence of people, ideas, organizations, strategies, and programs produced the conditions within which neoliberal "economic facts" could thrive.

In joining assemblage, field, and performativity of economics, we derive a similar conceptual approach to the one presented by Sian Sullivan (2014: 1), which highlights discursive, institutional, calculative and accounting, and material shifts as enabling "nature" to be viewed and transformed into "natural capital." She understands the emergence of "natural capital" as a problematic ontological move that underpins "an emerging 'green economy' assemblage" (see also MacDonald and Corson 2012, MacDonald 2013, Corson et al. 2013).

Conceptually and methodologically, we focus on: (1) spoken and written discourse to capture *logics* or situated knowledge(s), (2) the convergence of diverse actors in social networks and any related nonhuman "actants" to establish *actor-networks*, (3) institutional agreements, policies, and program standards and procedures to delineate *institutional boundaries*, (4) programmatic structure to establish *organizational form*, (5) approaches, strategies, programs, platforms, initiatives, and related activities to indicate *social technologies*, and (6) the symbolic and material actions, products, instruments, or mechanisms generated from social technologies to highlight *devices*. In the following section we use this conceptual vocabulary to comparatively describe and analyze two manifestations of "business and biodiversity": "Biodiversity, Ecosystem Services (BES) and Business" and "Business and Biodiversity Offsetting."

Producing value from nature

> "The goal is a planet where forests are being restored and protected and where farmland is being used more productively, for the sake of the systematic delivery of nontraditional 'commodities' such as carbon sequestration, salinity control, and biodiversity. It's a world

> where Mother Nature at last receives fair compensation for her labor and recognition in our formal financial accounting."
>
> Daily and Ellison (2002: 232), *The New Economy of Nature*

"Business and Biodiversity" captures the dynamic and fluid efforts of environmental NGOs, corporate sustainability coalitions, individual firms, UN agencies, and multilateral organizations such as the World Bank to enable the private sector to benefit from and contribute to the conservation and sustainable use of biological diversity. While business interests actively engaged in formal and informal deliberations tied to sustainable development and the Rio Conventions in the 1980s and early 1990s, what we refer to as "business and biodiversity" came into view more coherently in the late 1990s and early 2000s. For example, two of the main organizational drivers of activity in this arena—the International Union for the Conservation of Nature (IUCN) and the World Business Council for Sustainable Development (WBCSD)—produced a 1997 report entitled *Business and Biodiversity: A Guide for the Private Sector* that articulated a rationale for actively joining business interests with conservation efforts.[5]

"Business and biodiversity" grew with the rise of terminology such as "natural capital" and "ecosystem services" as a way of framing nature's contributions to economic development and related strategies such as payment for ecosystem services (PES) and biodiversity offsetting.[6] New markets generated by these approaches produced incentives for resource users (agriculture, forestry, tourism) and entrepreneurs (carbon traders, conservation bankers) to pursue "biodiversity" as a potential profit-making opportunity. In the face of challenges tied to creating new business models in support of biodiversity conservation—measuring, commodifying, establishing property rights, managing liability, navigating regulatory regimes—new transnational partnerships emerged to provide guidance to private firms and the international conservation/development community (Bishop et al. 2009).

Rather than a singularity, "business and biodiversity" is a constellation of networked initiatives and programs. A prominent example stems from The Economics of Ecosystems and Biodiversity (TEEB) initiative's 2010 report for business.[7] TEEB for Business was co-produced by representatives from IUCN, UNEP, a Swiss NGO Earthmind, BSR, a consortium of businesses for social responsibility, WBCSD, the Global Reporting Initiative

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[5] Other jointly produced reports that have helped to generate activity and inform initiatives tied to "business and biodiversity" include the Earthwatch Europe-IUCN-WBCSD report *Business and Biodiversity: The Handbook for Corporate Action* (2002), a publication by IUCN and Insight Investment, *Biodiversity Offsets: Views, Experience, and the Business Case* (2004), Bishop et al. (2008), *Building Biodiversity Business* (co-sponsored by Shell International and IUCN) and *The Corporate Ecosystem Services Review: Guidelines for Identifying Business Risks and Opportunities Arising from Ecosystem Change* (2012) by the World Resources Institute (WRI), the Meridian Institute, and the WBCSD.

[6] For further elaboration on the rise of ecosystem services, see Dempsey and Robertson (2012).

[7] For a critical discussion of TEEB, see MacDonald and Corson (2012).

(GRI), the multinational professional service network PricewaterhouseCoopers, and Conservation International (CI). Along with other TEEB reports, TEEB for Business was presented at multiple international meetings, such as the 1st Global Business and Biodiversity Symposium held in London in July 2010, which helped to generate momentum for similar subsequent efforts by working groups with many of the same actors. With the products of these efforts in place, conservation organizations such as IUCN and the Secretariat for the Convention on Biological Diversity (CBD) now prominently feature "business and biodiversity" on their websites and have established durable organizational structures including IUCN's Global Business and Biodiversity Programme and the CBD's Global Platform on Business and Biodiversity.

Biodiversity, Ecosystem Services (BES) and Business

Reports and initiative framed in terms of "Biodiversity, Ecosystem Services (BES) and Business" emerged prominently around 2008, helping to make biodiversity more legible to private enterprises relative to other "corporate sustainability" concerns such as climate, water, and energy. Compared to the other example in this section—biodiversity offsetting—"BES and business" constitutes a newer, more diffuse, and ephemeral field. To date, it has emerged largely via studies and reports produced by working groups such as the TEEB for Business report mentioned above.[8]

To illustrate a version of "BES and Business," we bring into view a 2012 document entitled *A Framework for Corporate Action on Biodiversity and Ecosystem Services*, produced by the United Nations Global Compact (UNGC) and the International Union for the Conservation of Nature (IUCN) in the lead up to Rio+20 in June 2012. The UNGC is a transnational network of private sector firms, non-governmental organizations, and labor organizations that claims 10,000 signatories in more than 135 countries. IUCN presents itself as "the world's oldest and largest global environmental organization" with government, NGO, private sector, and individual members (UNGC-IUCN 2012).

"BES and Business" joins three *logics*: nature as a provider of goods and services (BES), business as relying upon and impacting BES, and business as benefitting from BES planning by reducing risks and enhancing profit-making opportunities. As a provider of goods and services, biodiversity—genes, species, and ecosystems—constitutes a "life support system," offering "provisioning," "regulating," and "cultural" services. Provisioning services include goods like food and fuel while regulating services cover benefits from well functioning ecosystems such as climate stability, water retention, and pollination. Cultural services refer

[8] A more durable organizational structure that frames its work in terms of BES is the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services—IPBES. For a critical review of how IPBES elevates and extends practices of disclosure as "measurementality" in biodiversity governance, see Turnhout et al. 2014.

to non-material benefits such as spiritual values, cultural heritage, and recreation.[9] On one level, businesses rely on environmental goods and services for their products and related process. On another level, private enterprises produce "ecosystem change" via the impacts of their "operations, supply chains, and investments" (UNGC-IUCN 2012: 7). The rationale for encouraging these enterprises to account for BES emerges as "the business case," in which firms can reduce risks, increase opportunities, and thus enhance competitiveness. Different types of risk—operational, regulatory, legal, reputational, market, and financial—potentially drain profits or increase liabilities. In contrast, new opportunities from BES may allow companies to generate competitive advantages from new product lines, enhanced efficiencies, and surpassing regulatory requirements (UNGC-IUCN 2012: 8).

In addition to the UN Global Compact and IUCN, the Framework for Corporate Action on BES brought together a *working group* comprised of companies from different sectors, UN agencies, as well as representatives from civil society and academia. Private sector participation featured diverse actor types: the World Business Council for Sustainable Development (WBCSD), the International Council on Mining and Metals (ICMM), as well as private firms such as Holcim, Syngenta, Novartis, and Nestlé. The UN Conference on Trade and Development and two branches of the UN's Environment Programme—the Finance Initiative (UNEP-FI) and the World Conservation Monitoring Centre (WCMC)—represented the United Nations. The Secretariat of the Convention on Biological Diversity (CBD) was also involved. "Civil society" participation included IUCN's Commission on Environmental, Economic, and Social Policy among some other business oriented non-profit groups. The sole representative from academia, Duke University, maintains an environmental leadership program with the Global Compact.

The Framework for Corporate Action on BES functions as the *social technology* in this example by offering a voluntary "BES Management Model" designed to align corporate governance with "BES action." Emulating wider strategies for corporate sustainability, the framework proposes an integration of "BES considerations" within a firm's strategic work on "vision and mission," "value chain implementation," and "transparency and disclosure." Drawing on the TEEB for Business report, the framework invokes a series of recommendations focused on identifying, valuing, and managing BES dependencies and impacts, setting BES targets, engaging with relevant stakeholders, helping to shape relevant public policies, disclosing impacts, and establishing partnerships.

The BES Management Model (see Figure 1) provides a linear set of steps following generic administrative ordering beginning with visioning and progressing through assessment, strategic definition, implementation, monitoring, and communicating on progress. The framework elaborates further on two areas of activity: "collaboration and collective action"

[9] This formulation of ecosystem services derives from the Millennium Ecosystem Assessment (2005) and is the most common portrayal of biodiversity and ecosystem services.

and "setting goals and tracking performance." The first area emphasizes the need for strategic partnerships to help firms navigate voluntary standards associated with corporate social responsibility and sustainability. The second area aligns firms' BES goals and strategies with recognized corporate sustainability standards such as the UN Global Compact's ten principles on the environment, labor, and human rights. It further steers businesses toward established tools and platforms for monitoring and disclosing their progress toward meeting BES goals.

Figure 1: The BES Management Model about here.

As a set of voluntary recommendations, the Framework for Corporate Action on BES presents relatively light *institutional boundaries,* especially when compared to regulatory standards with formal compliance mechanisms. It provides guidance on assessing, valuing, and publicly reporting BES dependencies and impacts drawing upon standards for corporate social responsibility (CSR) and sustainability as well as agreements, protocols, and targets under the Convention on Biological Diversity. Since creating a framework with recommendations is designed to oriented businesses in a way that will encourage them to pursue concrete actions on BES, the document offers the UNGC's ten principles for corporate sustainability as a strong option for organizing goals and strategies. Broader internationally recognized voluntary standards framed as "ESG" or "environmental, social, and governance" criteria appear in guidelines like the Principles for Responsible Investment.[10] With respect to the Convention on Biological Diversity (CBD), the Framework encourages firms to orient their actions to align with the agreement's main objectives and highlights the 2010 Nagoya Protocol on Access and Benefit Sharing.

A sampling of the *devices* or instruments associated with the Framework for Corporate Action on BES suggest how "business and biodiversity" actors create tools that enable and mobilize particular activities such as those associated with assessment and disclosure. The IUCN-UNGC Framework, for example, provides a BES Management Strategy Checklist that color codes stages of the BES Management Model and enumerates sub steps within each action area. The document further highlights a range of "tools" that allow business to measure their dependencies and impacts on biodiversity. These include the Integrated Biodiversity Assessment Toolkit (IBAT), the Assessment and Research Infrastructure for Ecosystem Services Project (ARIES), the Corporate Ecosystem Services Review, and Integrated Valuation of Environmental Services and Tradeoffs (InVEST). Similarly, the Framework points to platforms for tracking performance and transparently reporting such as the "biodiversity supplement" of the Global Reporting Initiative (GRI). Similarly, members

[10] The United Nations Environment Programme's Finance Initiative (UNEP-FI) and the UN Global Compact created The Principles for Responsible Investment (PRI) in 2005 to help standardize assessment of ESG criteria by businesses (see http://www.unpri.org/).

of the UN Global Compact are required to submit regular "communication on progress" (COP).

Business and Biodiversity Offsets

The use of offsetting as a means of enabling businesses—extractive industries in particular—to pursue environmentally disruptive activities while ostensibly restoring similar biologically diverse areas elsewhere offers what advocates describe as a "last resort" and a "pragmatic alternative." As an example of economistic assemblage, offsetting provides a well-established methodology that joins conservation organizations like IUCN, Forest Trends, and Fauna and Flora International, third-party consulting firms and service providers, and major corporations such as Rio Tinto and Shell to produce multi-scalar, largely voluntary governance networks.[11] To illustrate "business and biodiversity offsetting," we turn attention to the Business and Biodiversity Offsets Programme (BBOP) as the most prominent example of a durable actor-network that seeks to advance both business and biodiversity conservation interests via offsetting.

BBOP (2015) describes itself as "a collaboration of more than 75 leading organizations and individuals including companies, financial institutions, government agencies and civil society organizations." In contract to the "BES and Business" example, BBOP presents a more durable *organizational form*, including a secretariat staffed by two environmental NGOs, Forest Trends and the Wildlife Conservation Society (WCS), and an advisory group led by an executive committee. The secretariat coordinates and implements the program's activities, working closely with the executive committee, which represents the different types of members in the advisory group: business, finance institutions, civil society, and government. Advisory group members comprise eleven "companies with biodiversity footprint to offset," twenty-five "service providers," eight "financial institutions," nineteen "governments and intergovernmental organizations," nineteen "conservation and civil society groups," and thirteen "individuals." BBOP generates a broader actor-network including funders such as the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), the IFC, the MacArthur Foundation, and the Goldman Fund among others.

The *logic* of biodiversity offsetting is predicated on the premise that negative environmental effects from a development activity can be compensated by ecological restoration or improvement at a similar, proximal site. Advocates stress that offsetting is a measure of last resort that follows attempts to avoid, minimize, and restore impacts on site (Gardner et al.

[11] A 2004 report produced by IUCN and Insight Investment, entitled *Biodiversity Offsets: Views, Experience, and the Business Case* (ten Kate, Bishop, and Bayon), provides an early attempt to encourage and articulate "business and biodiversity offsetting." It also illustrates how many of the same individual promoters appear repeatedly in the context of different reports, conferences, and programs thus playing an important role in constituting the field of "business and biodiversity."

2013, BBOP 2013).[12] The language of compensation has led to two dominant frames—No Net Loss (NNL) and Net Positive Impact (NPI)—that create action objectives. Within the context of what is called the "Mitigation Hierarchy" (discussed further below), businesses first seek to avoid, minimize, or restore their negative environmental impacts on site. If, after going through these steps, residual degradation remains, then industries are expected to compensate for damages somewhere else, achieving at least "no net loss" and ideally "net positive gain."

As with the Framework for Corporate Action on BES, the "business case" for biodiversity offsetting revolves around risk mitigation and capturing new opportunities. As BBOP's website explains:

> "Many businesses are recognizing that their biodiversity impacts can lead to significant regulatory, financial and reputational risks as governments, financial institutions, and civil society increasingly expect developers to take full responsibility for such impacts. Benefits of voluntarily undertaking a biodiversity offset for a company include improved license to operate (through a better reputation with regulators, local communities and civil society as a whole), improved competitiveness and access to finance" (BBOP 2015).

The business case points to certain *institutional boundaries* that shape activities surrounding "business and biodiversity offsetting." For example, regarding access to finance, many enterprises pursuing expensive infrastructure development projects need to adhere to global performance standards in order to attain loans. In voluntarily pursuing biodiversity offsets, businesses can satisfy the International Finance Corporation's (IFC, part of the World Bank Group) Performance Standard 6 related to biodiversity conservation. Since a significant number of lenders responsible for international project financing endorse IFC Performance Standards, companies seeking loans for infrastructure development face strong incentives to use offsets as a means of adhering to the biodiversity requirements (see BBOP 2015). Further, private sector actors confront regulatory parameters in some contexts such as the United States, the United Kingdom, and Australia. In most cases, however, offsetting is a non-compulsory option. BBOP has played a central role in producing principles, handbooks (guidelines), and case studies to provide a consistent and legible process for businesses to follow. As the main focus of its second phase of work (2009-12), BBOP culminated this process by elaborating a detailed Standard on Biodiversity Offsets (2012). The Standard ties action to other mostly voluntary regulatory activities such as environmental and social impact assessment and creation of biodiversity offset management plans.

[12] For background on biodiversity offsetting see Gardner et al. (2013). For critical discussions of offsetting linked to wetland mitigation in the U.S. see Robertson (2004, 2006). Regarding biodiversity offsetting policy in England see Sullivan and Hannis (2015). See also Maron et al. (2015).

BBOP presents multiple layers of *social technologies* including an organizational platform, a set of principles and standards, and a calculative methodology. As an organizational platform, BBOP has connected businesses, finance institutions, service providers, NGOs, governments, and intergovernmental organizations for over a decade. It constitutes one of the most active arenas for coordinating efforts at imagining, implementing, and assessing biodiversity offsets worldwide. In this sense, it plays a field-configuring role by convening virtual and in person summits and discussion groups, producing guiding documents, and joining service providers with industries pursuing offsets. Second, the Standard on Biodiversity Offsets provides a framework by which businesses, service providers, financing agencies, and others can navigate the complex process of designing, implementing, and assessing offset projects. At the same time, the Standard encapsulates a calculative methodology that allows different interested parties to translate complex ecologies to measurable impacts and commensurable tradeoffs transferrable to another site. The application of offsetting methods often leads to new technologies such as "mitigation banking" that allow businesses to buy "credits" from a third party that then takes on responsibility for achieving "no net loss" or "net positive impact."

Although a number of *devices* support BBOP, two examples illustrate instruments that significantly enable and mobilize activities with respect to "business and biodiversity offsets": the Mitigation Hierarchy and the 2012 Standard for Biodiversity Offsets. The Mitigation Hierarchy (see Figure 2) provides a framing mechanism that schematically abstracts, simplifies, and homogenizes biodiversity in ways that compartmentalize negative impacts and enable compensatory tradeoffs. In this sense it operates as a symbolic principle and a tool that businesses can use to legitimize their activities. More broadly, the Standard for Biodiversity Offsets is simultaneously a social technology and a device that combines ten principles with associated criteria and indicators aimed at generically defining best practices. Via the Standard, businesses and service providers can construct "measurable conservation outcomes" that "compensate for residual adverse biodiversity impacts" (BBOP 2012: 17).

Figure 2: The Mitigation Hierarchy about here.

Alignment, Articulation, and Entanglement

The two examples presented in this section—" BES and Business" and "Business and Biodiversity Offsets"—illustrate practices of assemblage and performativity that animate "business and biodiversity." Building from Tanya Li's (2007) work on community forestry in Indonesia, we delineate some key processes and practices of assemblage and performativity that characterize economistic, networked forms of environmental governance-beyond-the-state. How do alignment, articulation, and entanglement shape

"business and biodiversity" logics, organizational forms, institutional boundaries, social technologies, and devices? To what extent are these processes performative?

Over the last two decades the *logic* of "business and biodiversity" has spread widely alongside the rise of related discourses such as "valuing nature" (natural capital and ecosystem services) and "corporate social responsibility." While initial efforts emphasized inclusion of "business voices," increased adoption of the language of economics within conservation governance also brought business administration approaches and constructs such as "competitive advantage" and "risk management." Even as they ebb and flow, the momentum generated by initiatives such as BES and TEEB amplify business discourses as frames for action that carry over into longer standing programs such as BBOP, IUCN's Global Business and Biodiversity Programme, and the CBD's Business and Biodiversity Platform. In both of the examples cited above, actors joined discursive elements of "the business case" and "conservation and sustainable use of biodiversity" to *frame a legitimizing discourse* or "authorizing knowledge" (Li 2007: 273) in concert with voluntary reform and corporate social responsibility (see Rajak, 2011). Framing risk minimization and profit maximization as coupled with business reform ethics (e.g., "environmental stewardship") trains the ecological to the economic in ways that contain critique.

Regarding *organizational forms*, "business and biodiversity" continually generates more or less stable networks that may link to governments in addition to private sector firms, NGOs, and others but operate beyond the state. The joint UNGC-IUCN consultative group that produced the Framework for Corporate Action on BES was an ephemeral structure (like a task force) compared to BBOP, which constitutes a more formal entity supported by full time staff and governance arrangements. Processes of *network building* or "forging alignments" (Li 2007: 268) produce an array of organizational forms--partnerships, alliances, compacts, and councils—that help to generate new networks like the Net Positive Impact Alliance, formed by Rio Tinto, Shell, IUCN, and The Nature Conservancy.[13] Both the BES and the BBOP networks align and connect private sector actors with conservation organizations through projects, events, and related activities. Entanglement occurs most prominently when organizations pursue lasting partnerships such as IUCN with Rio Tinto and Shell, allowing individuals to move fluidly across the boundary between the private and non profit sectors for employment or temporary assignments (MacDonald 2010b).

While the interface between businesses and institutions such as the Convention on Biological Diversity (CBD) features considerable boundary maintenance, activities associated

[13] "The Net Positive Impact Alliance – founded by Rio Tinto, Shell, The Nature Conservancy and IUCN – examines how the private sector can reduce its environmental footprint and achieve a net positive impact for biodiversity and conservation globally. The World Bank's International Finance Corporation supports the NPI Alliance in an advisory capacity. The Alliance provides a forum where proponents of the NPI concept can experiment with different approaches and learn from each other, while striving to improve their biodiversity performance" (Aiama et al. 2015: 15).

with "business and biodiversity" also seek to align and articulate elements of the CBD with ethical standards framed in terms of corporate social responsibility (e.g., the UN Global Compact). By making biodiversity legible and fungible for businesses—translating natural capital and ecosystem services into supply chain commodities or offset bundles—the BES and BBOP examples use recommendations and guidelines to *enable voluntary incentives*. The Framework for Corporate Action on BES, for example, highlights the CBD's Nagoya Protocol on Access and Benefit Sharing, recommending that businesses should, "respect land rights and land-use rights of local stakeholders, safeguard livelihoods of local natural resource-dependent communities and involve them in decisionmaking" (UNGC-IUCN 2012: 12). Under BBOP's "business case," businesses that pursue biodiversity offsets may gain easier access to financing but may also establish more positive reputations with regulators. "Business and biodiversity" thus produces soft institutional boundaries structured around voluntary compliance via principles, standards, and best practices while deferring any compulsory regulatory considerations to local contexts.

Practices of assemblage that *produce social technologies* associated with "business and biodiversity" are simultaneously entrepreneurial, managerial, calculative, and technical. Emerging in the form of frameworks, platforms, programs, and initiatives, they represent a central medium of activity that merges profit-seeking, managing for efficiency, strategy implementation, as well as accounting for and reporting on impacts. As a set of action recommendations, the Framework for Corporate Action on BES offers a loose structure that coaches businesses through the phases of its management model. In contrast, BBOP provides a tighter voluntary standard with clear performance expectations. Both examples pivot from entrepreneurial incentives but depend—particularly in the BBOP case—on managerial, calculative, and technical procedures to establish legitimacy based primarily in voluntary participation and compliance.

With programs, initiatives, and similar social technologies as the main organizing force, *creating devices* becomes the central focus of activity associated with "business and biodiversity." These instruments or mechanisms typically employ a "how-to" orientation aimed at instigating certain types of action. The results—including knowledge products (reports, case studies, guidelines, frameworks), tools (or toolkits), standards, and protocols—animate the *entrepreneurial expression* of "business and biodiversity." For the UN Global Compact and IUCN, the Framework for Corporate Action on BES provided a product that could be promoted at conferences and meetings, capable of attracting new connections with businesses and other groups. In form and content, the Framework was very similar to previously produced guidelines such as the 2002 WBCSD-IUCN "Business and Biodiversity: The Handbook for Corporate Action" and TEEB for Business. Creating a new formulation in the lead up to Rio+20 allowed the Global Compact, in particular, to situate itself in the BES arena relative to similar networks like the World Business Council on Sustainable Development. Similarly, for BBOP, products and tools like the Standard for Biodiversity

Offsets create something that can be promoted and supported by technical services provided by member organizations such as The Biodiversity Consultancy. Moreover, in combination with the Mitigation Hierachy, the Standard and related tools function to operationalize constructs like No Net Loss and Net Positive Impact by *abstracting, simplifying, and making legible* otherwise unruly, complex ecologies—what Li (2007: 270) calls "rendering technical."

In considering how these practices of assemblage are performative, it is interesting to note how "business and biodiversity" produces nodes of interaction that develop new discourses, enroll a range of new actors, spawn new organizational forms, establish new social technologies, and produce new devices. In this sense, they create the processes, structures, and conditions through which "business and biodiversity" can be reproduced and extended. The generative effects of assemblage are typically the result of distributed agency across multiple arenas rather than the direct outcome of specific initiatives. For example, one of the recommended tools featured in the Framework for Corporate Action on BES is the Integrated Biodiversity Assessment Tool (IBAT), which is supported by the IBAT Alliance (Birdlife International, IUCN, UNEP, Conservation International, and WCMC). Similarly, all "business and biodiversity" activities rely on "valuing nature" tied to natural capital and ecosystem services accounting and reporting. The Natural Capital Coalition has emerged to coordinate and create consistency across diverse accounting methodologies, focusing much of its effort on producing the Natural Capital Protocol. In the process of reproducing and extending the field, both conservation organizations and corporations have established new partnerships to accommodate and work with one another.[14] Similarly, as social technologies such as the Standard for Biodiversity Offsets develop, third-party service providers have become more prominent, given increased demand for technical services under approaches such as "mitigation banking."

Enacting "business and biodiversity"

In addition to the processes that produce economistic governance fields, we turn in this section to the ways in which diverse actors enact "business and biodiversity" at major events to characterize the practices and performances that animate assemblage. How do alignment, articulation, and entanglement unfold in practice? We build upon ethnographies of corporate enactment and corporate social responsibility (e.g., Welker 2014, Rajak 2011) to consider how corporate and non-corporate actors engage in diverse enactments of "business and biodiversity" that produce multiple layers and manifestations of purpose and outcome relative to field logics. At the same time, the views of distributed agency presented in this section suggest how patterns and processes of assemblage generate dynamic stability over

[14] For example, Conservation International (CI) has established a Center for Environmental Leadership in Business with a thematic program focused on Responsible Mining and Energy. The multinational mining corporation BHP Billiton, in turn, has an Environment Group. The organizations have established a partnership connecting these two programs called the CI-BHP Billiton Alliance.

time. The first example focuses on a session at the 2012 Corporate Sustainability Forum (CSF) in Rio de Janeiro, Brazil and the second illustration draws from the 2014 World Parks Congress (WPC) in Sydney, Australia.

Launch of the Framework for Corporate Action on BES *at the 2012 Corporate Sustainability Forum*

The Corporate Sustainability Forum (CSF) was a four-day side event linked to Rio+20 that took place in June, 2012. It brought together some 2,700 participants with about half representing the business and investor community and the other half comprising non private sector actors from civil society, academia, governments, and the United Nations. The CSF organized approximately 120 sessions around six thematic tracks: energy and climate, water and ecosystems, agriculture and food, economics and finance of sustainable development, social development, and urbanization and cities. The carefully orchestrated panel presentations and interactive sessions encouraged measurable commitments, particularly from corporate participants (UNGC 2012).

The global launch of *A Framework for Corporate Action on BES* marked the culmination of the UN Global Compact's first focused effort on biodiversity, situating it alongside other initiatives such as "Caring for Climate" and the "CEO Water Mandate." By joining forces with IUCN, the Global Compact aligned itself with one of the world's largest and most prominent conservation organizations. The session was introduced by Gavin Power, Deputy Director of the UNGC and moderated by David Steuerman, Business and Biodiversity Programme Officer for the Secretariat of the Convention on Biological Diversity.[15] It featured six panelists including Gerard Bos, Director of IUCN's Global Business and Biodiversity Programme, Atsushi Takahashi from Fujitsu, Neil Hawkins from the Dow Chemical Company, John Groom of the transnational mining company Anglo American, Rebecca Knijnik representing the Brazilian "Movimento Empresarial pela Biodiversidade" (MEB)[16], Duncan Pollard from Nestlé, and Richard Burrett representing UNEP's Finance Initiative.

Excerpts from this session illustrate how major events generate momentum for social technologies and related devices. They further illustrate how "business and biodiversity" networks and programs facilitate the alignments, articulations, and entanglements constitutive of a broader arena of interaction. Organizations at the hub of activity surrounding the Framework—UNGC, IUCN, and to a lesser extent, MEB and UNEP-FI—

[15] The full session is available online via UN Web TV: http://webtv.un.org/watch/rio20-corporate-sustainability-forum-corporate-action-on-biodiversity-and-ecosystem-services-global-compactiucn/1693144611001 (Accessed 28 July 2015).

[16] Translates as: "Business Movement for Biodiversity." MEB is a business-oriented network focused on conservation and sustainable use of biodiversity that operates across Brazil. It joins national and transnational corporations and environmental NGOs.

had a direct stake in the document's ability to attract attention. By comparison, the corporate representatives from Fujitsu, Anglo American, and Nestlé offered testimony that illustrated how the BES Management Model might play out in practice while simultaneously promoting their companies' corporate sustainability efforts that were not necessarily directly tied to Framework.[17]

In his remarks, John Groom, a senior advisor for Anglo American, provided a narrative that illustrated how processes of assemblage unfold. In discussing the company's three strategic pillars of sustainability—operational excellence relative to environmental standards, investment in technology, and engagement with partners—his presentation demonstrated how major corporations rely upon "business and biodiversity" networks to enact parts of their social responsibility agendas. In this sense, assemblage generates standards such as UNGC's environmental stewardship strategy, the use of technology like Proteus—a mapping tool drawing from the World Conservation Monitoring Centre's global protected areas database—and diverse working partnerships with NGOs such as Fauna and Flora International or agencies like UNEP.

> We have a socioeconomic assessment tool kit, which has recently won a number of international awards for the best tool of its kind. It provides a structured approach for dealings with communities and it includes biodiversity. We have a number of formal agreements, most particularly in this context with Fauna and Flora International. They review our biodiversity action plans and we're extending a partnership to work with them on something called the high-level biodiversity risk and opportunity assessment. … [I]t provides for a consistent approach, it provides for developing our people, and we've trialed it at 13 of our mine sites.

Duncan Pollard, the Head of Stakeholder Engagement on Sustainability at Nestlé, highlighted the importance of disclosure in demonstrating corporate responsiveness to BES considerations. Citing three different types of reporting—to consumers, to the financial community, and to corporate social responsibility networks like the Global Reporting Initiative—Pollard pointed to Nestlé's efforts to reduce impacts on natural capital via practices like sourcing guidelines for major commodities that guide socially responsible decision making.

Richard Burrett, representing UNEP's Finance Initiative, emphasized how flows of finance capital can generate incentives for businesses to account for BES within the full scope of their operations. By extension, his remarks also illustrated the elevation and recirculation of basic economic theory, driving a need for value and risk accounting in monetary terms.

[17] Dow Chemical, for example, has an ongoing partnership with The Nature Conservancy.

> Now, why is the finance sector important in this? And I guess if you think back to sort of 101 capital markets, economics, I mean, fully functioning capital markets should ensure that positive value projects get financed and negative value projects do not. They should ensure that positive businesses, positive value businesses, get capital and capital does not get allocated to negative value businesses. But that makes a really big assumption, which is, are we actually factoring all the proper considerations into our decision-making? Do we really understand value at risk?

As a public performance, the CSF session featured several well-established practices that helped to project "business and biodiversity" to a friendly audience. First, it staged the launch of a "product" that elevated the Global Compact's profile relative to biodiversity conservation. Second, it allowed key actors to play certain roles. Representatives from the CBD Secretariat, IUCN, and, to a lesser extent, UNEP-FI presented themselves as translators and brokers, encouraging BES management practices that would reinforce their organizations' working relationships with corporate partners. Corporate representatives, in turn, played the role of clients who conscientiously pursue social responsibility guidelines. In the process of performing these roles, panelists reinforced and added to "the business case," framed an optimistic rendering of how BES principles get implemented in practice, and presented the stages of the management model as matters of technique.

Biodiversity Offsetting at the Business and Biodiversity Pavilion, 2014 World Parks Congress

The sixth World Parks Congress (WPC) took place in Sydney, Australia in November 2014, drawing some 5,000 participants representing governments, multilateral organizations, the private sector, academic institutions, NGOs, and indigenous peoples. IUCN convenes the Congress once each decade to consider the status and role of protected areas worldwide as a primary means of protecting biological diversity (IISD 2014). IUCN's Business and Biodiversity Pavilion at the WPC hosted some 30 events including approximately 100 representatives from companies such as Rio Tinto, Shell, DeBeers, Google, and Kering and other organizations like the International Council on Mining and Metals (ICMM), the Rockefeller Foundation, and Fauna and Flora International (IUCN 2014).

In addition to "Business and Biodiversity," the congress featured thematic pavilions on "Conservation Finance," "Nature-based Solutions," and "Protected Planet," among others. IUCN's Global Business and Biodiversity Programme, which hosted The Business and Biodiversity Pavilion, promoted approximately 110 sessions across multiple sites during the seven-day event under the heading "The Business Journey." Of those sessions, about 15 percent focused specifically on extractive industries' efforts to reduce their impacts on biodiversity in and around protected areas, typically by applying the Mitigation Hierarchy and pursuing biodiversity offsets. The processes and structures of assemblage discussed in the previous section took center stage in sessions such as: "IBAT for Business," "NNL and

NPI Approaches for Biodiversity," "Will Biodiversity Offsets Sink or Save Protected Areas?" and "Certifying Best Oil and Gas Practices Near Protected Areas."

The session "Cross Sectoral Perspectives on the Mitigation Hierarchy" brings into view the discursive and dramaturgical dimensions of assemblage. The panel was moderated by Ross Hamilton, Director of Environment and Climate Change at the International Council on Mining and Metals (ICMM) and featured four panelists: Erika Korosi, Senior Manager of the Environment Group at BHP Billiton, Mahlette Betre, Director of Responsible Mining and Energy at Conservation International's (CI) Center for Environmental Leadership in Business, Ray Victurine, Director of Business and Conservation Initiatives at the Wildlife Conservation Society (WCS), and Steven Dickinson, Group Lead on Biodiversity and Water Resources at Total. Hamilton asked the panelists to reflect on their experiences in applying the Mitigation Hierarchy including major barriers and ideas about what successful implementation might look like.

Erika Korosi portrayed BHP Billiton's adoption of the Mitigation Hierarchy as well as corporate social responsibility principles more generally as "a journey" in which the company gradually moved from "a reactive-based approach where regulation was a key driver through to a more proactive landscape approach focused on the management of biodiversity within a broader risk management context." As reportedly the world's largest mining company, it accounts for "environmental responsibility" in its charter and claims to follow the hierarchy steps including "compensatory action" or offsets in cases where "residual damages" are unavoidable.[18] Representing the multinational oil and gas company, Total, Steven Dickinson mirrored Erika Korosi's approach by citing company policies and commitments with CEO-level endorsement that "trickles down" to project sites. According to Dickinson, from the corporate perspective, the Mitigation Hierarchy is "usually well-received because it's "clear, exhaustive, and robust. It's something that people can get their head around in terms of process and setting out key principles for impact management."

Mahlette Betre's reflections on behalf of CI emphasized barriers such as a "lack of good data" on the different stages of implementation and "limited availability of experts and practitioners" that generate demand for collaborative efforts like BBOP.[19] Similar to the presentation in The Framework for Corporate Action on BES, she noted the importance of pursuing a "robust stakeholder engagement process particularly in communities in and around project sites." Similarly, Ray Victurine from WCS endorsed the potential of the Mitigation Hierarchy while pointing to certain challenges in implementing it in practice. He noted that interventions needed to start early: "How do you avoid something if you've

[18] See Kirsch (2014) for a critical examination of how transnational mining corporations such as BHP Billiton manage their relationships with critics and adversaries via sustainability strategies and other techniques.

[19] It is interesting to note that BBOP was not present at the World Parks Congress although it did organize the "first global conference on approaches to avoid, minimise, restore, and offset biodiversity loss" in London in June 2014.

already intervened?" Permanence of offsets is often difficult to ensure, thus financing mechanisms need to be available to "kick start compensatory actions early on."

As with the CSF panel on corporate action and BES, the WPC session on implementing the Mitigation Hierarchy generated momentum for and reinforced the technical/procedural instrumentality of the different elements of "business and biodiversity": discourses, organizational forms, social technologies, and devices. In the WPC session, corporate representatives projected an image of the corporation as a "good citizen" while NGO representatives portrayed their work as "watchful partners." In the process, each reinforced the managerial and technical discourse tied to the Mitigation Hierarchy, elevating it as a set of clear, largely uncontested procedures. Moreover, the enactments served to contain critique; turning attention to policies, commitments, and lessons learned where "barriers to implementation" could be surmounted by altering technique (e.g., securing better data, starting early, ensuring proper financing). The WPC session also highlighted corporate-NGO partnerships, where on stage performances characterized the alliances as a hand-in-hand journey to overcome risks and fears related to their respective constituencies.[20]

The relative performativity of pubic displays like the ones described above comes into view as an extension of practices of assemblage. While only one dimension of how "business and biodiversity" unfolds in practice, public enactments intensify and amplify assemblage, pointing to an important motivation for IUCN, UNGC and others to focus much of their work around organizing events. Conferences like the CSF and the WPC reproduce and broaden the circulation of discourses associated with "business and biodiversity" and related fields such as "corporate sustainability," helping to normalize and legitimize their use as a type of common language. In addition, events augment and reinforce social connectivity in ways that often result in the formation of new networks and initiatives. Similarly, major events create opportunities for new actors such as the third party service providers that implement many of the activities associated with the devices on offer. For example, The Biodiversity Consultancy, a member of the BBOP advisory group, presented at the WPC on the question of whether biodiversity offsets would "sink or save protected areas," helping to position the firm as an offsets service provider relative to potential corporate clients in the audience. Finally, events allow UN agencies and global conservation NGOs (e.g., UNEP, UNGC, IUCN) to reinforce and expand their positions as translators, brokers, and service providers on behalf of diverse corporate clients.

[20] An excellent example of enacting partnerships features Mahlette Betre of CI and Erika Korosi of BHP Billiton—a video clip from the WPC entitled "Park Talk." Online: https://www.youtube.com/watch?v=L884_nPa3kQ

The (anti-)politics of articulation

How do the discursive, structural, processual, and performative aspects of assemblage shape conservation governance? Certainly economistic approaches have become commonplace in conservation governance arenas, expanding with the reframing of biodiversity in terms of natural capital and ecosystem services and the rise of corporate social responsibility initiatives. However, despite significant efforts at forming networks, developing platforms, frameworks, and programs, and creating products and tools, the impact of economistic voluntary reform on corporate actions and biodiversity conservation have not been broadly assessed. In this final section, we do not seek to judge the relative merits or substantive impacts of economistic governance fields like "BES and Business" or "Business and Biodiversity Offsets." Rather, we explore how economistic assemblage simultaneously reshapes and masks the politics of conservation governance—processes and outcomes that we refer to as the "(anti-)politics of articulation." "Business and biodiversity" generates diverse enactments—multiple versions of the field—and thus multiple possibilities in terms of the politics of articulation.

As a political process and set of outcomes, "business and biodiversity" produces symbolic and material articulations that have reconfigured power relations surrounding conservation governance over the past two decades. Taken together, practices and structures of assemblage weave a relational tapestry that sanctions and enables economistic logics, privileges private sector/non profit sector partnerships and networks, and elevates voluntaristic and calculative social technologies and devices. Assemblage thus entwines the scientific and technical aspects of conservation governance with economistic and corporate-managerial approaches and practices. Both the Framework for Corporate Action on BES and the Standard for Biodiversity Offsets animate fields that join private sector and non profit sector actors, focusing activity around the production, implementation, and promotion of economistic social technologies and devices. Governments and communities—two central actors types in conservation governance historically—feature mainly as institutional boundaries or potential risks. In this sense, assemblage perpetuates a "social life of corporate forms" (cf, Welker et al. 2011) in which diverse actors produce and enact corporate social technologies that spread and move across fields.[21] "Business and biodiversity" shifts power dynamics well beyond positioning private sector actors centrally within conservation governance activities. Importantly, economistic assemblage generates broad, performative processes that have generated new vocabularies, created new spaces of work (e.g., third party service providers), reinforced and expanded action guidelines and best practices, and enabled new actor-networks.

[21] Our use of terms associated with Actor-Network Theory (ANT) and phrases such as "social life of corporate forms" suggest that social technologies and devices have agency within fields. For the most part, however, our analysis emphasizes relational *social* processes as the drivers of (anti-)politics. For a discussion of incompatibilities between ANT and political ecology, see Lave (2015).

"Business and biodiversity" generates anti-political processes and outcomes at three different levels. First, following Li's (2007: 279) findings, it reframes politically charged issues at "matters of technique." Thus, for example, in response to a question about indigenous rights at the WPC panel on the Mitigation Hierarchy, both corporate and NGO panelists centered their responses on existing company policies and the ability of the hierarchy (the device) to handle such issues. Second, following Kirsch (2014: 159-187), "business and biodiversity" has adopted and relies upon distinctively "corporate" enactments and "corporate" social technologies—particularly partnerships with conservation organizations and audit culture—that function to enhance company legitimacy and reputations, diffuse criticism, fetishize accountability, dilute narratives about biodiversity impacts, and coopt environmental NGOs (see also Rajak 2011, MacDonald 2010b). The BBOP example, in particular, positions the Mitigation Hierarchy as a means of assessing and compensating for "negative residual impacts" while masking a range of social and environmental impacts that do not fit the Standard.[22] The absence or marginalization of social movement actors and dissenting views at both Rio+20 and the WPC has come to characterize large conservation congresses (Corson et al. 2015). Corporate and NGO enactments at the CSF and the WPC exemplified the types of promotional performances and narratives that result from carefully choreographed event management. Finally, as both a practice and an outcome of assemblage, anti-politics operates at a meta or constitutive level where the array of processes and structures within a field produce highly mobile types of social technologies and devices that seem to take on a life of their own. In this sense, the "social life of corporate forms" can be anti-political when it represents, reproduces and extends "valuing nature," "the business case," managerial frameworks, and compensatory actions (offsets) as substantive reform.

Conceptually, we have emphasized assemblage as continuously unfolding processes with symbolic and material dimensions that capture both distributed agency and social structural elements. The progressive economization of these processes in the context of transnational deliberations on conservation governance has significant implications relative to the domain of biological diversity as well as other "environmental" arenas such as climate change. One implication is that major sites of assemblage—such as Rio+20 or the World Parks Congress—are dominated by promotional performances (or "spectacle") that fetishize aesthetic form over substance (e.g., Igoe 2010, MacDonald and Corson 2012). On one level this is not surprising given the show like character of major events. At the same time, spectacle tends to shift attention away from the challenging structural and distributional issues tied to resource politics. It also tends to marginalize or exclude dissenting voices.

[22] The pragmatic response to this argument centers on the negative alternative—extractive industries proceeding with business as usual with no compensatory action—and the necessity of counting certain impacts in a way that can be implemented efficiently. Our critique centers on the idea that "business and biodiversity" in whatever form manifests itself in diverse ways simultaneously.

Practices associated with "business and biodiversity" have helped to significantly amplify conservation governance as spectacle over the past two decades.

A second implication is that practices of conservation governance have become progressively more corporatized; not simply that conservation organizations are becoming more like corporations but that the full spectrum of processes and relationships tied to "business and biodiversity" privileges corporate logics, organizational forms, institutional structures, and social technologies (MacDonald 2010a, b). At the same time it is important to pay attention to the dialectical nature of assemblage where the unfolding of economistic fields produces processes and forms that are more-than-corporate (Wilshusen and MacDonald, under review).

Finally, while the reach and impact of economistic conservation approaches in terms of local and regional participation, market expansion, and monetary investment may not be as broad as initially predicted, the extent to which economistic assemblage has intensified over the past two decades suggests a transformative dynamism that privileges the language and practices of economics. On one hand, the ongoing constitutive work of ecological economists, some natural scientists, and now an array of private sector actors and their partners, has succeeded in "valuing nature;" making natural capital and ecosystem services visible and manageable for those who advocate internalizing environmental "costs" and generating nature-based income. On the other hand, however, economistic assemblage produces alienating articulations that diminish and make subservient logics, actors, and approaches that challenge its assumptions and practices. Thus by reproducing and extending a superficial sheen of legitimacy around economistic reform, conservation governance activities have become progressively more oriented toward the interests of corporations and the finance sector and less able to address the deeper politics of resource access, allocation, and distribution.

References Cited

Aiama D., S. Edwards, G. Bos, J. Ekstrom, L. Krueger, F. Quétier, C. Savy, B. Semroc, M. Sneary and L. Bennun. 2015. No Net Loss and Net Positive Impact Approaches for Biodiversity: Exploring the Potential Application of These Approaches in the Commercial Agriculture and Forestry Sectors. IUCN: Gland, Switzerland.

Anderson, B. and McFarlane, C. 2011. "Assemblage and Geography." *Area* 43(2): 124-127.

Bourdieu, P. 1990 [1980]. *The Logic of Practice*. Stanford: Stanford University Press.

Bracking, S., P. Bond, D. Brockington, B. Büscher, J. Igoe, S. Sullivan, and P. Woodhouse. 2014. "Initial Research Design: 'Human, Nonhuman and Environmental Value Systems: An Impossible Frontier?'" LCSV Working Paper Series, No. 1. Manchester: The University of Manchester. Online: http://thestudyofvalue.org/publications/ (Accessed 29 July 2015).

Bishop, J., S. Kapila, F. Hicks, P. Mitchell, and F. Vorhies. 2009. "New Business Models for Biodiversity Conservation." *Journal of Sustainable Forestry* 28: 285-303.

Büscher, B., S. Sullivan, K. Neves, J. Igoe, and D. Brockington. 2012. "Towards a Synthesized Critique of Neoliberal Biodiversity Conservation." *Capitalism Nature Socialism* 23: 4-30.

Büscher, B., R. Fletcher, and W. Dressler (Eds.). 2014. *Nature™ Inc.: Environmental Conservation in the Neoliberal Age*. Tuscon: University of Arizona Press.

Business and Biodiversity Offsets Programme (BBOP). 2012. Standard on Biodiversity Offsets. Washington, DC: Forest Trends. Online http://www.forest-trends.org/documents/files/doc_3078.pdf (Accessed 27 July 2015).

Business and Biodiversity Offsets Programme (BBOP). 2013. To No Net Loss and Beyond: An Overview of the Business and Biodiversity Offsets Programme (BBOP). Washington, DC: Forest Trends. Online http://www.forest-trends.org/documents/files/doc_3319.pdf (Accessed 27 July 2015).

Business and Biodiversity Offsets Programme (BBOP). 2015. "Who We Are: About BBOP." Online http://bbop.forest-trends.org/pages/about_bbop (Accessed 21 July 2015).

Çalişkan, K. and Callon, M. 2009. "Economization, Part 1: Shifting Attention From the Economy Towards Processes of Economization." *Economy and Society* 38(3): 369-398.

Çalışkan, K. and M. Callon. 2010. "Economization, Part 2: A Research Programme for the Study of Markets." *Economy and Society* 39(1): 1-32.

Callon, M. 1998. *The Laws of the Markets*. Oxford: Blackwell.

Callon, M. 2007. "What Does It Mean to Say That Economics is Performative?" pp. 311-257 in MacKenzie, D., F. Muniesa, and L. Sui (Eds.) *Do Economists Make Markets? On the Performativity of Economics*. Princeton: Princeton University Press.

Callon, M. and F. Muniesa. 2005. "Economic Markets as Calculative Collective Devices." *Organization Studies* 26(8): 1229-1250.

Castree, N. 2008a. "Neoliberalising Nature: The Logics of Deregulation and Reregulation." *Environment and Planning A* 40(1): 131-152.

Castree, N. 2008b. "Neoliberalising Nature: Processes, Effects, and Evaluations. *Environment and Planning A* 40(1): 153-173.

Corson, C. and K. MacDonald. 2012. "Enclosing the Global Commons: The Convention on Biological Diversity and Green Grabbing." *Journal of Peasant Studies* 39(2): 263-283.

Corson, C., K. MacDonald, and B. Neimark. 2013. "Introduction to Special Issue: Grabbing 'Green:' Markets, Environmental Governance, and the Materialization of Natural Capital." *Human Geography* 15(1): 1-15.

Corson, C., S. Brady, A. Zuber, J. Lord and A. Kim. 2015. "The Right to Resist: Subordinating Civil Society at Rio+20." *Journal of Peasant Studies*. DOI: 10.1080/03066150.2014.992884.

Daily, G. and K. Ellison. 2002. *The New Economy of Nature: The Quest to Make Conservation Profitable*. Washington, DC: Island Press.

Deleuze, G. and Guattari, F. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. London: Continuum.

Dempsey, J. and M. Robertson. 2012. "Ecosystem Services: Tensions, Impurities, and Points of Engagement within Neoliberalism." *Progress in Human Geography* 36(6): 758-779.

Dempsey, J. 2013. "Biodiversity Loss as Material Risk: Tracking the Changing Meanings and Materialities of Biodiversity Conservation." *Geoforum* 45: 41-51.

Dempsey, J. 2015. *Enterprising Nature: Economics, Markets and Finance in Global Biodiversity Politics*. London: Wiley-Blackwell.

Fairhead, J., M. Learch, and I. Scoones. 2012. "Green Grabbing: A New Appropriation of Nature?" *Journal of Peasant Studies* 39(2): 237-261.

Featherstone, D. 2011. "On Assemblage and Articulation." *Area* 43(2): 139-142.

Fredriksen, A. 2014. "Assembling Value(s): What a Focus on the Distributed Agency of Assemblages Can Contribute to the Study of Value." LCSV Working Paper Series No. 7. Manchester: The University of Manchester. Online: http://thestudyofvalue.org/publications/ (Accessed 29 July 2015).

Fredriksen, A., S. Bracking, E. Greco, J. Igoe, R. Morgan, and S. Sullivan. 2014. "A Conceptual Map for the Study of Value: An Initial Mapping of Concepts for the Project 'Human, Nonhuman and Environmental Value Systems: An Impossible Frontier?' LCSV Working Paper Series No. 2. Manchester: The University of Manchester. Online: http://thestudyofvalue.org/publications/ (Accessed 29 July 2015).

Fourcade, M. 2011. "Cents and Sensibility: Economic Valuation and the Nature of "Nature"". *American Journal of Sociology* 116(6): 1721-77.

Gardner, T., A. von Hase, S. Brownlie, J. Ekstrom, J. Pilgrim, C. Savy, R. Stephens, J. Treweek, G. Ussher, G. Ward, K. ten Kate. 2013. "Biodiversity Offsets and the Challenge of Achieving No Net Loss." *Conservation Biology* 27(6): 1254-1264.

Goldman, M. 2005. *Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization*. New Haven: Yale University Press.

Igoe, J. 2010. "The Spectacle of Nature and the Global Economy of Appearances: Anthropological Engagements with the Images of Transnational Conservation." *Critique of Anthropology* 30(4): 375-397.

IISD. 2014. IUCN World Parks Congress 2014 Bulletin. Online http://www.iisd.ca/iucn/wpc/2014/html/crsvol89num16e.html (Accessed 30 July 2015).

IUCN. 2014. Building Bridges: News and Views on Conservation & Private Sector. December. Online https://www.iucn.org/knowledge/news/newsletters/building_bridges/december_2014_.cfm (Accessed 30 July 2015).

Kirsch, S. 2014. *Mining Capitalism: The Relationship between Corporations and Their Critics*. Berkeley: University of California Press.

Lave, R. 2015. "Reassembling the Structural: Political Ecology and Actor-Network Theory." Pp. 213-223 in Perreault T., G. Bridge, and J. McCarthy (Eds.). *The Routledge Handbook of Political Ecology*. New York: Routledge.

Legg, S. 2011. "Assemblage/Apparatus: Using Deleuze and Foucault." *Area* 43(2): 128-133.

Li, T. 2007. "Practices of Assemblage and Community Forest Management." *Economy and Society* 36(2): 263-293.

MacDonald, K. 2010a. "Business, Biodiversity and New 'Fields' of Conservation: The World Conservation Congress and the Renegotiation of Organizational Order." *Conservation and Society* 8(4): 256-275.

MacDonald, K. 2010b. "The Devil Is In the (Bio)Diversity: Private Sector 'Engagement' and the Restructuring of Biodiversity Conservation." *Antipode* 42(3): 513-550.

MacDonald, K. 2013. "Grabbing Green: Cynical Reason, Instrumental Ethics and the Production of 'The Green Economy.'" *Human Geography* 6(1): 46-63.

MacDonald, K. and C. Corson. 2012. "'TEEB Begins Now': A Virtual Moment in the Production of Natural Capital." *Development and Change* 43(1): 159-184.

MacKenzie, D., Muneisa, F. and Sui, L. (eds.). 2007. *Do Economists Make Markets? On the Perfomativity of Economics*. Princeton: Princeton University Press.

Maron, M., A. Gordon, B Mackey, H. Possingham, and J. Watson. 2015. "Stop Misuse of Biodiversity Offsets." *Nature* 523: 401-403.

Mitchell, T. 2005. "The Work of Economics: How a Discipline Makes Its World." *European Journal of Sociology* 46(2): 297-320.

Mitchell, T. 2008. "Rethinking Economy." *Geoforum* 39(3): 1116-1121.

Mol, A. 2002. *The Body Multiple: Ontology in Medical Practice*. Durham: Duke University Press.

Muniesa, F. 2010. "The Problem of Economics: Naturalism, Critique and Performativity." CSI Working Paper Series No. 20. Paris: Centre de Sociologie de l'Innovation.

Phillips, J. 2006. "Agencement/Assemblage" *Theory, Culture & Society* 23(2-3): 108-109.

Rajak, D. 2011. *In Good Company: An Anatomy of Corporate Social Responsibility*. Stanford, CA: Stanford University Press.

Rip, A. 2010. "Processes of Entanglement." Pp. 381-392 in M. Akrich, Y. Barthe, F. Muniesa, and P. Mustar, eds. *Débordements: Mélanges Offerts à Michel Callon*. Paris: Presses des Mines.

Robertson, M. 2004. "The Neoliberalization of Ecosystem Services: Wetland Mitigation Banking and Problems in Environmental Governance." *Geoforum* 35: 361–373.

Robertson, M. 2006. "The Nature that Capital Can See: Science, State, and Market in the Commodification of Ecosystem Services." *Environment and Planning D: Society and Space* 24: 367-387.

Robertson, M. 2007. "Discovering Price in All the Wrong Places: The Work of Commodity Definition and Price under Neoliberal Environmental Policy." *Antipode* 39(3): 500-526.

Sullivan, S. 2013. "Banking Nature? The Spectacular Financialisation of Environmental Conservation." *Antipode* 45(1): 198-217.

Sullivan, S. 2014. "The Natural Capital Myth; or Will Accounting Save the World?" Working Paper Series No. 3. Leverhulme Centre for the Study of Value. University of Manchester, UK. Online: http://thestudyofvalue.org/publications/ (Accessed 20 July 2015).

Sullivan, S. and M. Hannis. 2015. "Nets and Frames, Losses and Gains: Value Struggles in Engagements with Biodiversity Offsetting Policy in England." Ecosystem Services Online: http://dx.doi.org/10.1016/j.ecoser.2015.01.009i (Accessed 20 July 2015).

Swyngedouw, E. 2005. "Governance Innovation and the Citizen: The Janus Face of Governance-Beyond-the-State." *Urban Studies* 42(11): 1991-2006.

ten Kate, K., J. Bishop, and R. Bayon. 2004. Biodiversity Offsets: Views, Experience, and the Business Case. Gland: IUCN and Insight Investment.

Tercek, M. and J. Adams. 2013. *Nature's Fortune: How Business and Society Thrive by Investing in Nature*. New York: Basic Books.

Turnhout, E., K. Neves, and E. de Lijster. 2014. "'Measurementality' in Biodiversity Governance: Knowledge, Transparency, and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services." *Environment and Planning A* 46(3): 581-597.

United Nations Global Compact. 2012. Rio+20 Corporate Sustainability Forum: Overview and Outcomes Summary Report. New York: UNGC. Online https://www.unglobalcompact.org/library/1041 (Accessed 28 July 2015).

United Nations Global Compact and International Union for the Conservation of Nature. 2012. *Framework for Corporate Action on Biodiversity and Ecosystem Services*. New York: UNCG. Online: http://www.unglobalcompact.org/docs/issues_doc/Environment/BES_Framework.pdf (Accessed 24 January 2014).

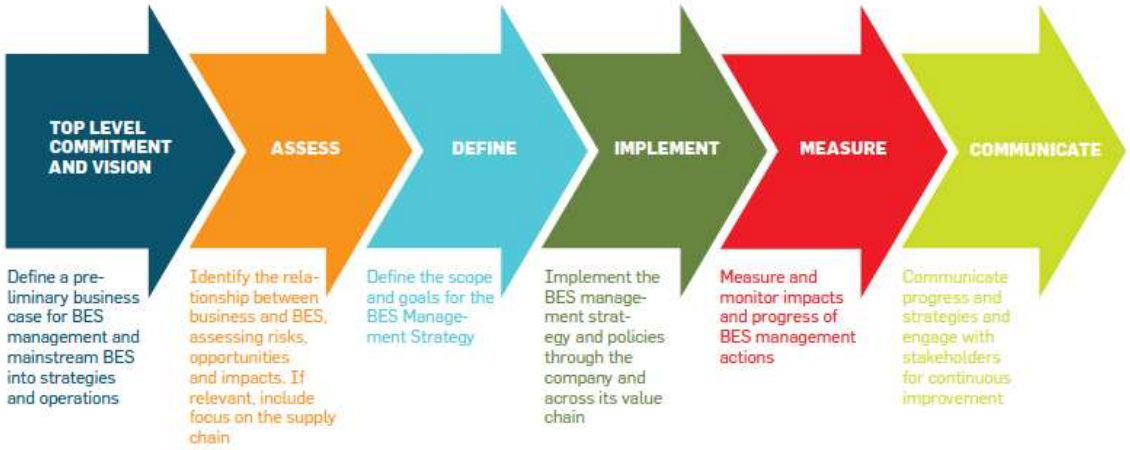
Welker, M., D. Partridge, and R. Hardin. 2011. "Corporate Lives: New Perspectives on the Social Life of the Corporate Form." *Current Anthropology* 52 (Supplement 3): S3-S16.

Welker, M. 2014. *Enacting the Corporation: An American Mining Firm in Post-Authoritarian Indonesia*. Berkeley, CA: University of California Press.

Wilshusen, P. 2014. "Capitalizing Conservation/Development: Dissimulation, Misrecognition, and the Erasure of Power." Pp. 127-157 in Büscher, B., R. Fletcher, and W. Dressler, Eds. *Nature™ Inc: Environmental Conservation in the Neoliberal Age*. Tuscon: University of Arizona Press.

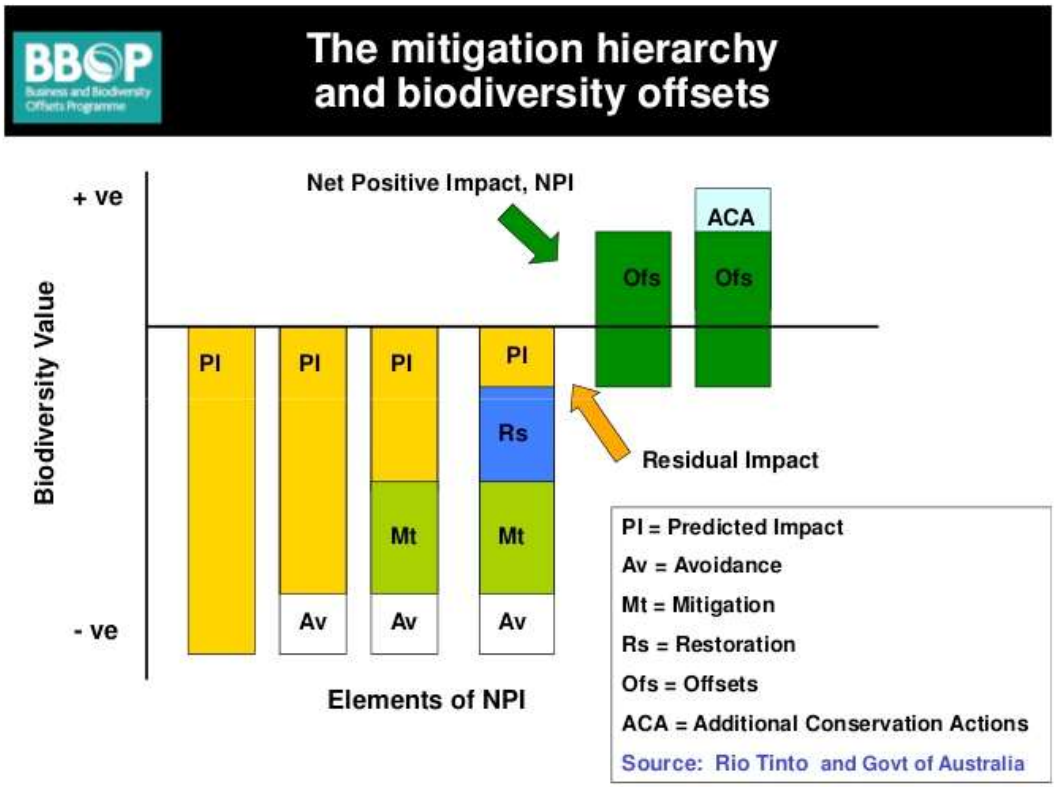
Wilshusen, P. and K. MacDonald. Under review. "Fields of Green: Corporate Sustainability and the Production of Environmental Governance." Unpublished manuscript.

Figure 1: BES Management Model



Source: UNGC-IUCN (2012).

Figure 2: The Mitigation Hierarchy



Source: BBOP (2013)