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CERTIFIED POLITICAL ECOLOGY

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Introduction

Recent years have witnessed an explosion of certified environmental products and qualities ranging from agronomic and forestry activities such as 'bird-friendly®', shade-grown, sustainable, and organic – applied to diverse products such as coffee, shrimp, timber, carbon (sequestration), and hunting – to industrial processes such as waste management and mining, and to services such as ecotourism. Hundreds of thousands of 'nature workers' – farmers, foresters, fishers, and craftspeople – presently labor to apply 'environmental' standards, and they in turn find their compliance assessed by a burgeoning global certification service sector involving tens of thousands of personnel working in certification agencies, NGOs, national regulatory boards, and ISO working groups. As we detail in a subsequent section on certification types, certified qualities have drawn a good deal of scholarly attention as well, not least within political ecology.

The goal of our contribution is to examine the contours of an emerging political economy of nature work centered on inspections and audits, labor practices, and institutional frameworks, and examine its relevance to political ecology from three perspectives: First, from a policy standpoint, certification has become an ineluctable aspect of contemporary conservation initiatives. In both numbers of personnel and areal extent of certified conservation activities – linking price incentives to the performance of environmental labor – the participation in certified environmental activities is on par with other forms of conservation. Second, from a governmentality perspective, certification protocols are productive of nature. Certification may, in this sense, be viewed as a process through which environmental qualities are pegged to commodities, creating new arenas of environmental decision-making and valorizing particular environmental tasks and spaces while devaluing others. Third, and most importantly with respect to the perennial political ecology concern for environmental justice, the certification service economy organizes 'conservation work', providing jobs for millions of small producers, inspectors, and accreditors. However, the combination of low payments for this work and high certification costs often shifts the economic burden of conservation from (wealthier) consumers to (poorer) producers.

In the field, farmers have deemed environmental certification to be an 'ecological neocolonialism'. This pithy expression captures a commonly experienced sense of injustice:

much of the power to define which activities are environmentally appropriate is vested in the hands of standards boards whose environmental governance authority is backed by transnational economic organizations such as the ISO (International Organization for Standardization; e.g., Guide 65 – now ISO 17065) and the WTO (World Trade Organization; via the TBT agreement), and rests, in its north–south context, on deeper histories of neocolonial engagements (see Freidberg 2003). This use of regulatory standards to shape the work of nature is thus enabled by the use of certification to control market access: it is not possible to deal in internationally-traded quality goods, such as organic food or carbon credits, without implementing certification protocols. Seen from a farmers' perspective, and within the context of these economic relations, the performance of activities necessary to comply with quality standards is not 'voluntary', but rather a question of economic necessity. In this chapter we provide an overview of certification and then explore the aspects noted above in three case studies. First, we examine the *policy implications* of the global expansion of certification as a form of environmental policy, then we examine *governmentality* in the context of certified organic coffee production, and finally we consider the *environmental justice* implications of carbon credits production in the context of certified carbon forestry.

What is certification?

Taking a schematic view (see Figure 32.1), certification triangulates between an (environmental) standards board, the site or field where the particular 'quality' (e.g., organic, shade-grown) is imparted into the product, and a site of 'consumption' (e.g., retail consumer or governmental agency). A 'chain of custody', using inspectors and governed by a certifying office, links sites of production with buyers.

Four elements of a quality certification structure include:

A *standards board* sets the norms that govern the production of environmental qualities. Given the importance of environmental policies, many environmental standards, like food standards, are governed at least in part by governmental agencies and linked to national and multilateral environmental policies. Such is the case for organic standards, which are also subject to governmental scrutiny as a food, and carbon offsets, which are a key component in global climate action. Other environmental standards, however, may be governed by NGOs, such as 'wild-caught' shrimp, dolphin-free tuna, and bird-friendly coffee among others. The content of standards may be set through participatory methods, as was the case with early organic food standards (Gonzalez and Nigh 2005), or through state action based upon scientific research and lobbying (Dietsch et al. 2004). Standards generally set a minimum 'bar', or lowest permissible standard, and then require producers to demonstrate compliance.

Commodity producers receive standards information from standards boards, such as the USDA NOSB (United States Department of Agriculture, National Organic Standards Board), and then perform the work required to have their commodities conform to environmental standards. Producers, particularly in the Global South, are typically organized into cooperatives or unions, for as detailed below, environmental qualities work is time-consuming, costly, and technically difficult, requiring strong organizations to facilitate norms compliance.

Certifying agencies inspect practices used to produce qualities in the field and along the supply chain, here described as a 'chain of custody'. It is important to note that environmental qualities are 'certified' because there is no way to tell whether the commodity contains an environmental 'value' except through inspections. A buyer cannot tell whether a coffee bean is organic, a shrimp 'wild-caught', or a tree has 'captured carbon' by looking at it: in this regard, a certification 'audit trail' provides the buyer with a guarantee that a purchased commodity (e.g., cup of
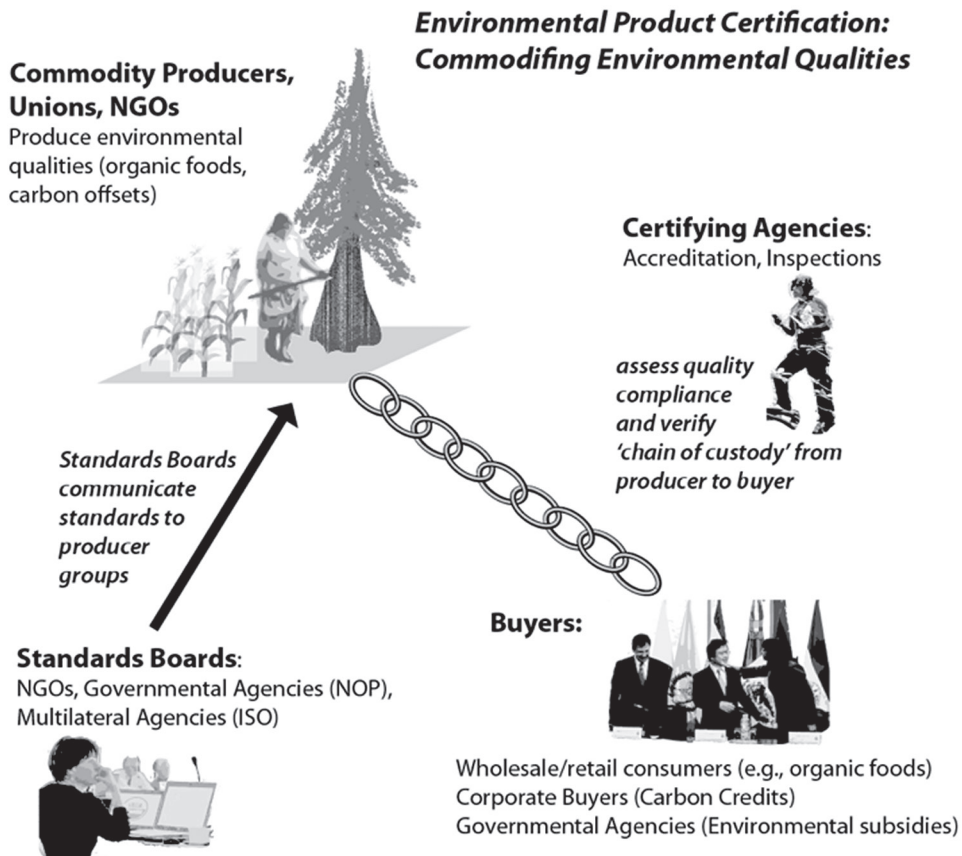
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Figure 32.1   Components of a certification system for environmental qualities (source: by author).

coffee) was produced using practices that *also* produced environmental qualities. A field inspector undertakes certifications, checking to see whether producers are in compliance with the minimum standards set by the standards board.

Finally, *buyers* pay a price premium to producers to compensate them for their environmental work. Although we may typically imagine the buyer to be a retail consumer, perhaps sipping coffee in a roadside café, environmental qualities are more likely financed via purchases from wholesalers such as coffee roasters (e.g., Green Mountain, see Lyon 2010) or brokers tied to cap–and–trade schemes such as carbon offsets (Peters–Stanley and Yin 2013) and wetlands conservation (Lave 2012), and by subsidies from governmental agencies seeking to combine conservation work with social welfare and export promotion (e.g., McAfee and Shapiro 2010). In these instances, the premiums may be paid based on conservation work (e.g., environmental services), or as per–hectare crop payments to avoid WTO restrictions on commodity price supports (e.g., as in the case of Mexican organic acreages).

To summarize the relations set out in Figure 32.1, this particular configuration is known as 'third-party' certification, termed a 'Type 1' certification under ISO 17065 (ISO is the acronym for the Geneva–based International Organization for Standardization). This standard sets out

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'norms' for certification that require a clear delineation of responsibilities for the production of qualities, a high degree of institutional separation between the various actors, and the absence of 'conflicts of interest'. However, as a practical matter things are rarely so simple. The variation in commodity types, in institutional settings, and in state and multilateral regulatory interest leads to a wide divergence in actually existing certification schemes that draw on additional forms of quality assessment including – to draw upon Gereffi et al.'s typology (2001, see also Dunn 2004) – *first-party quality control*, in which a company sets and verifies its own standards (e.g., McDonald's internal assessment of cheeseburger 'quality'); *second-party verification*, in which company–defined standards are *verified* by an external company (e.g., Starbucks' coffee 'practices'); and *fourth-party regulation*, in which a governmental agency sends auditors (e.g., meat packing inspections).

What are the policy implications of environmental product certification?

These messy, varying, real–world applications of certification have implications with respect to conservation policy. First, to give some sense of the wide diversity in environmental certifications, we analyzed the Ecolabel Index (www.ecolabelindex.com). Though far from comprehensive, and representing but a snapshot of a rapidly evolving certified goods sector, this list currently tracks over 400 ecolabels in 197 countries. Our tally (Figure 32.2) encountered a surprising diversity of items, with about 74 percent labeling specific products and the remaining 26 percent general sustainability and lifecycle certifications. Of specific products, food items are the most common environmental certification, while energy and building codes run a close second.
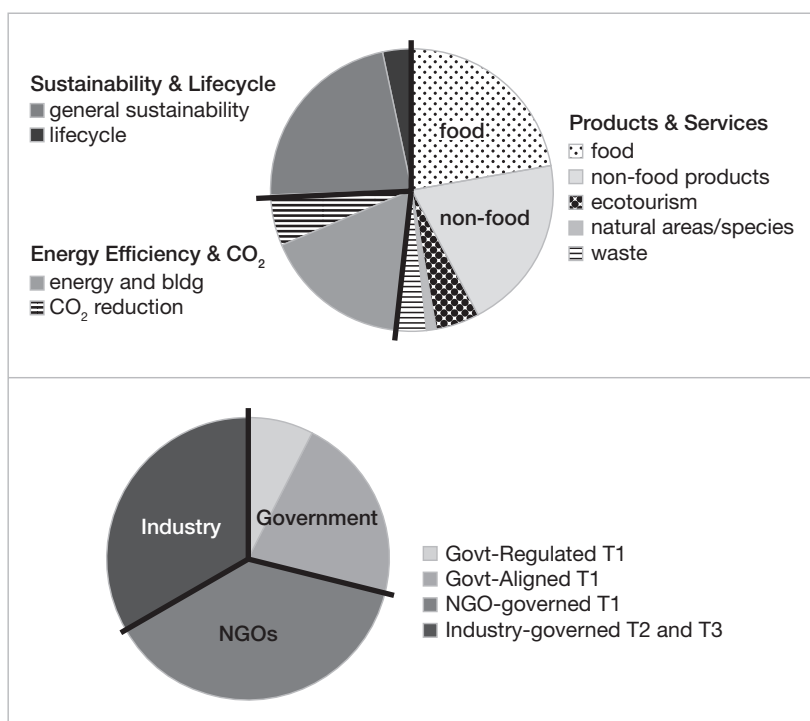

Figure 32.2 Environmental certifications by category (source: by author).

These are followed by diverse products including forest resources, flowers, cotton and wool fibers, and beauty products which comprise 20 percent, and environmental services such tourism, natural and green space protection, and waste management at 5 percent.

However, a categorical division such as that outlined above fails to account for the provenance and form of certifications, namely, *who sponsors* the certification (and whether they are subject to governmental oversight), and *how* the certification is performed. Even provided data limitations, the contemporary distribution is quite striking: a sector once dominated by NGO-based certifications such as Fairtrade, organic and biodiversity crop, and timber certifications (such as the FSC), and governmental initiatives such as Energy Star, is now increasingly populated by new certifications underwritten by governmental agencies (e.g., Estonian Tourism Ministry) or single companies (e.g., Starbucks Cafe Practices, Naturally Sephora). In addition, the second pie chart of Figure 32.2 identifies a second concern, namely, the difficulty in identifying the institutional arrangements that underlie ecolabels: although most of the labels ostensibly meet the highest, Type 1 certification level, only a third are NGO-backed. Another third are aligned with government agencies (primarily food, energy, and tourism) and about a third appear to be industry-backed second-party certifications. A key point of Figure 32.2, then, regards the lack of clarity in certification type.

The rise in certifications is matched by an increase in scholarship. Of these, many support earlier crtiques of 'voluntary' controls (Guthman 2007; McCarthy 2006), showing that certified products have at best an uneven track record with regard to conservation (Ponte and Cheyns 2013; Quaedvleig et al. 2014; Elder et al. 2013). However, although conservation goals go unmet, as our two case studies in the next section show, certification as a practice continues to shape environmental institutions, rural environmental interactions, and by extension biological and physical environments (Naylor 2014; Hatanaka 2014; Mancini 2013; Kimura 2012; Wilson and Curnow 2013; Arora and Hofman 2013; Brown 2013; Mansfield 2004). Does this proliferation lead, as Riisgaard (2012) argues, to a 'race to the bottom' in which lax standards are dominant? Whether laxity in standards does prevail may depend upon whether the environmental activist concerns that drove standards expansion in the 1990s – for instance, in certified foods, fibers, forest products, and fisheries (Wilson 2013; Raynolds 2012; Ponte 2012; Klooster 2010; Bacon 2010; Eden and Bear 2010; Dolan 2010; Lyon et al. 2010; Bassett 2010) – continues apace with new grassroots NGO Type 1 certifications, such as the recent cases of aquaculture (Vandergeest and Unno 2012), shrimp (Konefal and Hatanaka 2011), dolphin-free tuna (Baird and Quastel 2011), Japanese women's cooperative certification (Kimura 2012), and Tanzanite (Schroeder 2010).

However, as depicted in Figure 32.2, the bulk of new certifications in the Ecolabel Index are either government-associated (e.g., Slovak ecolabeling, Ukranian Green Crane, Estonian Eco-Tourism, Brazilian ABNT) or private initiatives (e.g., Sephora cosmetics, Nike shoes, FedEx *Earthsmart* label, Procter & Gamble *Future Friendly*). Government-aligned labels appear to be driven by two dynamics. In some cases, novel labels are tied into export-promotion programs (Rangnekar 2011) that vary from government-supported certifications (e.g., Japan (Hall 2010)), to fully government-organized 'third-party' certifications, for instance in China (Buckingham and Jepson 2013). In other cases, new certifications are prompted by government-sponsored health and conservation schemes, such as the cases of Chilean certified firewood (Conway 2013) and EU-wide, Kyoto Protocol prompted carbon-conserving building efficiency standards.

Private labels, on the other hand, are often initiated to enhance the 'green' credentials (greenwash) of particular products or to shield industries from scrutiny by substituting industry-controlled labels in the place of existing public labels. Pickren (2014) for instance makes a

persuasive case that the electronics recycling industry worked to substitute a relatively lax 'Responsible Recycling' standard in the place of the more stringent NGO-backed e-Stewards standard, with the objective of reducing scrutiny and increasing industry profitability at the expense of environmental quality. This 'replace and market' strategy may explain the widespread duplication – and in some cases multiplication – of competing environmental certifications for cut flowers, tourism, cotton, industrial building materials, and mining among others. The next section analyzes these certification politics and practices in the context of case studies of organic coffee and carbon sequestration. Both represent important policy initiatives – reducing the environmental impacts of agriculture and combating global climate change, respectively – and yet each has also come to represent the extension of 'command and control' strategies that seek to prescribe 'appropriate' environmental practices and burden producers with new tasks.

Case studies: environmental certifications and working natures

In addition to a consideration of policy implications this chapter also examines the manner in which environmental certifications *as a labor practice* work to alter the geography of human–environment interactions. As Figure 32.1 shows, labor that shapes the particularities of environmental interactions occurs in an expanded number of locations, ranging from standards boards at which the specific environmental conservation tasks are determined (e.g., permissible fertilizer applications), to producer organizations that systematize required tasks and balance these against productivity-enhancement, to inspectors who assess the quality of conservation efforts, and finally to producers themselves. The following two case studies of organic coffee and carbon sequestration illustrate many of the tensions, ironies, and ultimately the political ecologies that converge to reconstruct human–environmental relations at the point of production.

Example 1: organic agriculture as a form of governmentality

Taken from a political ecology perspective, organic coffee farming, paradoxically, raises a number of social and ecological concerns. The processes of certification bind together networks of environmental workers – field inspectors, peasant technical workers, and farmers – into a social structure that performs organic farming activities, which in turn satisfy the policy dimensions of organic agriculture by putting a particular set of organic conservation norms into practice. This 'labor of nature' has a number of positive social and ecological effects. Socially, the participation in organic product networks provides new forms of paid, skilled labor, and for reasons noted below, is attractive to women farmers (Lyon et al. 2010). From a governmentality perspective, these new forms of labor are associated with changes social identification: farmers appreciate their role in environmental production and the new class of professional eco-workers who coordinate tens of thousands of producers in a spatially-extensive conservation network that provides diverse environmental services (Mutersbaugh 2004).

However, if certified sustainable agriculture is to realize its full potential as a conservation strategy, it must be economically and ecologically sound and spread benefits to areas of high conservation value. In this regard, a number of points of tension are evident. From a *social* standpoint, the expectation that certified products will bolster conservation efforts has generally brought an expanded state role, for instance in subsidizing economic incentives to link organic agro-forestry schemes to carbon sequestration or biodiversity conservation (see also Buckingham and Jepson 2013). Nevertheless, despite, or perhaps in part *because* of this state involvement (and additional costs associated with bureaucratic liaisons) farmers still find costs high and returns low

(Bacon 2010; Mutersbaugh 2005; Jaffee 2007) – as signaled by high attrition rates for poorer producers (Mutersbaugh 2005) – and local administrators must perform unpaid work such as arranging inspections and managing documents. This combination of high farmer costs and high administrative overhead means that only relatively well-off farmers in wealthy villages – or those possessed of strong indigenous or cooperative governance mechanisms capable of providing low-cost administrative labor (see Mutersbaugh 2004; Wilson 2013) – are able to implement certified organic agriculture.

From a conservation standpoint, certification does not necessarily incorporate the best of ecological practices. To begin, cultivation practices built upon the norms created in the USDA National Organic Program, EU, or Japanese norms do not easily incorporate the biodiversity knowledge of indigenous producers who recognize the importance of cultivating biodiversity and have created local cultivation systems in which the horticultural complexity far outstrips any found in conventional agriculture. In an interesting illustration of governmentality, the institutional structure of certification, with its origins in state-sponsored regulatory frameworks, creates the conditions in which certifying agencies and inspectors operate outside of the rule of either standards boards or local agro-ecological knowledge, imposing tasks such as soil conservation measures, water quality control, and coffee cultivation activities not sanctioned by organic standards boards. These tasks may adversely impact existing biodiversity by disrupting existing indigenous systems of biodiversity management.

To conclude, the processes depicted in Figure 32.1 are open to interpretation and in practice become a question of negotiation in the fields, farmer organizations, and certifying agencies. This negotiation is productive of environmentalist subjectivities and our research has found that this engenders a strong sense of environmental citizenship (Otto 2014; Mutersbaugh 2004). Governmentality unfolds in a context of unequal power relations rooted in both to the north–south neocolonial dynamics noted above and in the power of large-scale organic producers (in coffee, these comprise organic coffee haciendas of more than 100 hectares) which advocate for simple, routinized, and uniform organic standards offering little protection to biological diversity. In this context, organic inspectors often lack sufficient information on coffee agro-forestry systems and local environmental variation, which leads them to suggest inappropriate conservation schemes or to favor increased production schemes at odds with those advocated by local farmers who, as the local 'makers' of political ecologies (Neumann 2005), do share a knowledge of biodiversity.

Example 2: environmental justice in certified carbon forestry: capturing carbon, losing respect

In our final case, we examine the environmental justice implications of 'carbon forestry' and related certification programs that originated from the need to certify projects designed to measure whether or not such projects are able to capture and limit CO2 emissions via afforestation and reforestation activities (see also Chapter 23, this volume). As we show below, however, forest carbon certification 'on the ground' has expanded from its original environmental purpose – certifying CO_2 reductions achieved by carbon projects – to verify 'pro-poor' elements that would ensure that global environmental benefits are matched to local community benefits. In this example, as in the previous section on organic agriculture, we are interested in a grounded political-ecological analysis that examines how community-level participation in carbon forestry projects can be both a benefit and a burden. Concluding with a brief example of a village-based community extension officer in southern Mexico, we make two points: first, we show how certification processes organize the 'nature work' of participants in a manner that

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not only reconstitutes their relationship to the natural environment – particularly the certified product – but also to their broader community; second, we portray a problem of environmental justice in which the marketization of the carbon captured in trees as carbon credits results in a transfer of risk from Global Northern consumers to Global Southern producers who can ill afford it (cf. Chapter 45, this volume).

The genesis of contemporary forest carbon certification may be found in the Kyoto Protocol's compliance-oriented Clean Development Mechanism (CDM), Joint Implementation (JI) and International Emissions Trading (ET) mechanisms, and parallel voluntary markets, the latter of which is of particular concern to us in our grounded political-ecological study. Voluntary carbon credits, referred to as Verified Emissions Reductions (VERs), are worth one ton of captured CO_2, and are, on the whole, significantly smaller than compliance markets in terms of the volume of carbon credits traded, having represented only 0.1 percent of total global carbon markets in 2010 (Hamilton et al. 2010). Within the voluntary markets context, REDD (Reducing Emissions from Deforestation and Forest Degradation), which is designed to pay local communities to engage in activities aiming to limit deforestation, to sustainably manage existing forests, and to promote reforestation, has emerged as an influential carbon forestry framework, capturing 9 percent of the voluntary market share for carbon credits transacted 'over the counter' (OTC) – i.e. not on a formal exchange – in 2012 (Peters-Stanley and Yin 2013).

The expansion of voluntary carbon markets has engendered a parallel unfolding of carbon certifications designed to ensure that forest carbon projects achieve their climate change mitigation imperative of sequestering CO_2. Within the landscape of voluntary carbon certification, however, so-called 'co-benefits' standards have emerged to meet the wishes of carbon credit buyers who desire to purchase credits that not only contribute to climate change mitigation, but also to social development (Peters-Stanley and Yin 2013). These standards are varied, and include names such as 'Climate, Community and Biodiversity Standards', 'The Gold Standard', 'Social Carbon', and 'Plan Vivo'. The certification work tied to these emergent co-benefits frameworks is complex and requires the formation of labor processes that organize the 'nature work' of participants, thereby reconstituting their relationship to the natural environment and to broader communities in which projects are implemented. In an effort to examine environmental justice issues tied to co-benefits carbon certification within voluntary markets we turn to the case of Scolel' Te in southern Mexico.

Scolel' Te (meaning 'Tree that Grows' in the local Tzeltal language), originated in 1994 and 1995, and currently enrolls over 1,100 farmers representing 77 communities and eight Mayan languages in Chiapas and Oaxaca. From 1998, the Scolel' Te project grew from 47 farmers in six communities located in Chiapas' Central Highlands region to, in 2014, over over 1,100 farmers representing 77 communities and eight Mayan languages in the Central Highlands and Lacandón regions of Chiapas and including some in the neighboring state of Oaxaca (Osborne 2010; Esquivel and Quechulpa 2010; Brown and Corbera 2003; Otto 2014). Scolel' Te carbon forestry is managed by the NGO AMBIO and is organized under the Plan Vivo Standard, which – in a twist that has become characteristic of certification networks – is in turn governed by a Scottish charity, the Plan Vivo Foundation. While standards emphasize a variety of items across forest carbon projects (e.g., the protection of biodiversity and the promotion of clean water sources), the Plan Vivo Standard has been recognized for its design which promotes smallholder participation. It includes a variety of participatory exercises such as Plan Vivo mapping, for instance, in which farmers are asked to determine the parameters of their participation in the program. However, in the case of Scolel' Te, farmers are also recruited by AMBIO to work as extension officers, and the manner in which this work confronts the socio-

political dynamics and power structures of participating villages is complex – a fact that is shown through the statement of one extension officer regarding his relationship to fellow community members who had become dissatisfied with the project:

> The [carbon forestry] project has not gone well. We have not received the money we are owed. When I leave the house, people ask me 'where is our money?' and 'what have you done with our money?' Some accuse me of having stolen it, and they won't stop asking about it. I prefer not to leave my house because I do not want to answer their questions anymore. It is easier to stay home.

This quote indicates the nature of the relationship of the community-based extension officer to disgruntled project participants within his community who had come to question the validity of the program. In the end, his relationship to fellow community members came to be mediated by his work in Scolel' Te in a manner that not only complicated his social interactions, but also his participation in the program (see Otto 2014). Ironically, from an environmental justice perspective, the same co-benefits standards that provided certainty to buyers also played a role in undermining the ideals of social development and environmental conservation that carbon credit purchasers desired.

So what *did* happen to the money? As the above quote indicates, farmers view their participation in the carbon capture project as environmental work, identifying Scolel' Te as an employment opportunity in the face of scarce alternatives and framing their relationship with AMBIO within an employer–employee dynamic. AMBIO, however, sells carbon credits in the voluntary market: although AMBIO's work is supported by Mexican government and international grants, the work of farmers and village-based inspectors is financed by the sale of carbon credits. If the credits are not sold, the producers are not paid. AMBIO strives to sell these units, but confronts a saturated market in which buyers have preferred to purchase credits from 'poorer' and more 'biodiverse' producers in other world regions. Thus while farmers may understand their relationship in wage terms, PES institutions constitute farmers as market subjects. Ironically, then, the acts that certify a carbon credit and bring it to market also result in a hidden transfer of risk to the most vulnerable actors in the carbon value chain – the carbon value may be guaranteed, but the return to labor is not (see also Beymer-Farris and Bassett 2012).

Conclusion

If one environmental justice critique leveled by organizations of the Global South were to be applied to this instance of carbon forestry, it would be the charge of 'ecological neocolonialism' (see Mutersbaugh 2005). As in the case with neocolonialism broadly writ, the 'ecological' variant operates to facilitate transfer of both financial and environmental risk from Global Northern consumers (who, needless to say, bear responsibility for the bulk of global environmental degradation) to peoples of the Global South. In this case, the marketized carbon credits produced by the community failed to sell, leaving community members with significant economic losses, and the extension officer noted in the quote above with a devastating loss of personal prestige: producers in the Global South incurred significant risk and losses in a market-based conservation project to the benefit Global Northern consumers.

What, then, does environmental certification bring to political ecology? First, and most simply, it calls attention to the need for empirical and theoretical engagement with the remarkable expansion of environmentally-oriented qualities, institutionalities, certification agencies, and mechanisms, all of which are engaged in reimagining what constitutes

environmental conservation. This rapid expansion of qualities parallels a sharp increase in political-ecologically informed studies of quality, yet, as we show in the introduction, much remains to be done. Political ecology would assert the necessity of environmental conservation practices based upon norms of social justice, without which conservation initiatives must inevitably fail, but as recent studies have shown, the rapid expansion in certified environmental qualities does not necessarily provide enhanced environmental protection: even highly regulated cases often shift the risks and costs of conservation from Northern consumers to Southern producers. As we show in this chapter, the marketization of environmental qualities transfers risk from Northern carbon credit consumers to Southern producers who, as a condition of market access, must perform environmental conservation tasks without a guarantee of compensation.

Second, certification studies would argue for the importance of governmentality to political ecology, that is to say, the need to examine the governmental institutions that set the conditions for those certification practices through which environmental qualities are constituted, produced, and assessed. For instance, political ecology has rightly championed the importance and theoretical sophistication of local environmental knowledge (see Chapter 18, this volume). Certification studies would argue that the notion of 'local knowledge' needs be expanded to include the inspectors, certifying agencies and standards boards that constitute quality, as well as sites such as ISO where certification protocols both constrain and enable the constitution of environmental quality. To carry this point forward, the knowledge politics of certification, a form of governmentality undertaken under ISO norms, makes no provision for democratic processes. Indeed, transnational certification norms forbid producers from engaging directly in the elaboration of standards on the premise that such exchanges would constitute a 'conflict-of-interest' in which farmers might attempt to alter norms and standards to their economic benefit (Mutersbaugh 2005).

Third and finally, certification studies favor the recent engagement in political ecology with theories of more-than-human geographies, assemblage, and environmental subjectivities, arguing for the inclusion of certification protocols as a form of governmentality that shapes the performance of labor and contributes to the formation of environmental subjectivities, albeit in often contradictory ways, as demonstrated in the conflicts over labor, environmental quality, and certification performance in our two case studies.

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