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Decolonial environmental justice in landscape restoration

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4.1 Introduction

This chapter focuses on possible ways of enhancing justice in international landscape restoration interventions. The main contribution of this chapter is the application of a decolonial environmental justice (DEJ) framework to landscape restoration. The framework enables us to identify the major barriers to justice in large-scale, international restoration projects and to suggest strategies to strengthen non-imposing, de-/anti-colonial approaches. The key argument is that restoration projects, no matter the intentions, will not succeed if they ignore or violate local notions of justice, knowledge systems, as well as institutional and belief systems. The DEJ framework highlights the importance of epistemic justice, self-determination, and self-governance, among others, leading to a set of recommendations that are different from, yet related to other relevant perspectives (e.g., Osborne et al. 2021).

The chapter proceeds as follows. Section 4.1 provides a general introduction to the concept of landscape restoration, followed by an outline of some of the major actors and logics of international political initiatives for landscape restoration. Section 4.2 provides a brief history of community engagement in nature conservation and, more recently, in landscape restoration, emphasizing the importance of engaging local communities in such initiatives. Section 4.3 proposes an environmental justice (EJ) framework from a decolonial perspective, and Section 4.4 identifies some of the major barriers to effective, just, and equitable restoration. Finally Section 4.5, drawing on these empirical and theoretical insights, highlights the key conditions to enable a more just, equitable, and locally empowering landscape restoration, providing some examples of existing efforts, and Section 4.6 concludes the chapter.

A landscape comprises a mosaic of different land uses (e.g., forests, agroforests, farmlands, mangroves, wetlands, grasslands), goes beyond a human/nonhuman dichotomy, and focuses on more-than-human beings (Abram 1997; McGregor et al. 2020). Drawing on Chazdon et al. (2017, 126) we define landscape restoration as “the process of regenerating or restoring socioecological systems that have lost some, or all of its functions and values, which may include agricultural productivity, watershed functions, biodiversity as well as cultural diversity and cultural values.” Despite this broad definition, we limit our analytical focus to landscape restoration initiatives that promote tree planting or natural regeneration for the purpose of landscape restoration. Second, given our focus on justice and local communities, we place particular

attention on landscape restoration initiatives that affect, involve, and directly or indirectly concern local peoples and communities.

An estimated 294.5 million people live on land that has potential for landscape restoration in the Global South (Erbaugh et al. 2020). These millions of mainly smallholder farmers, as well as Indigenous Peoples, make daily decisions that shape landscapes. Global reviews of restoration potential indicate that at least 74% of this potential area for restoration falls under “mosaic restoration,” that is, areas with varied population densities where forests are combined with smallholder agriculture, settlements, and other land uses (Erbaugh et al. 2020; Minnemeyer et al. 2011). These landscapes are comprised of secondary forests, farmlands, grazing lands, water bodies, urban areas, and other land uses (Minnemeyer et al. 2011). Promoting landscape restoration in such conditions requires an in-depth understanding of historical, political, and justice-related conceptualizations and considerations across various scales and societal groups, and by extension, across different ontologies and epistemologies, including but not limited to indigenous ones (Winter 2021).

Globally, political momentum for landscape restoration is growing, as demonstrated by the recent launch of the United Nations Decade on Ecosystem Restoration (2021–2030), the Bonn Challenge—i.e., the commitment to restore 350 Mha by 2030—and the New York Declaration on Forests. These have in turn spurred regional and national commitments, such as the African Forest Landscape Restoration Initiative (AFR100)—to restore 100 Mha in Africa by 2030—and the 20x20 Initiative—to restore 20 Mha of degraded land in Latin America and the Caribbean by 2020—among others. These political declarations on restoration, for the most part, emphasize the importance of planting trees as conceived by international and state actors, donor agencies, and the scientific elite (i.e., for climate change mitigation and biodiversity protection), whereas local communities’ roles, knowledge systems, cultural and political agency, as well as vulnerabilities remain peripheral (Erbaugh et al. 2020; Fleischman et al. 2020). Examples include the World Economic Forum’s one trillion¹ trees campaign, the Trillion Trees Initiative,² the Ethiopian government pledge to plant five billion³ trees under the Green Legacy, and most recently, the “30x30 target” under the Convention on Biological Diversity, aiming to protect at least 30% of the Earth’s surface by 2030 (Waldron et al. 2020)⁴ (for an overview of international forest and landscape restoration initiatives, see Chapter 3).

Even if initiatives include general statements regarding the importance of communities or community benefits, most international and state-orchestrated tree planting programs adopt a large-scale approach to planting trees, climate mitigation, and biodiversity protection with little attention to social and cultural aspects (Chapter 3). Under these conditions, important questions remain unaddressed, such as: Why and for whom are the trees being planted? What types of trees—e.g., native or exotic—support which functions and purposes? Where are they being planted and who owns the land? Who sacrifices for landscape restoration and how are the benefits distributed? What are the (un)intended consequences and how are they being addressed? (Elias et al. 2021; Fleischman et al. 2020; Holl and Brancalion 2020). Large-scale tree planting initiatives tend to either establish monoculture plantations or use a few exotic species with little local socioecological significance; they often fail to include local communities in their planning and decision-making processes, or to prioritize

local livelihoods (Erbaugh et al. 2020; Holl and Brancalion 2020; McElwee and Nghi 2021). Consequences include aggravating biodiversity loss (e.g., through monocultures), reducing water availability for farming, increasing competition with crops for light, nutrients, or water (e.g., by introducing fast-growing trees in agricultural lands), and other negative effects on ecosystem services (Elias et al. 2021; Holl and Brancalion 2020).

Seeing trees and other vegetation solely as “natural climate solution” (Griscom et al. 2017) risks overestimating their potential for solving a climate crisis that is rooted in the historical use of fossil fuels (Bastin et al. 2019), shifting attention away from the need to curb emissions by industrialized countries (Holl and Brancalion 2020). It perpetuates a simplistic notion of trees as carbon sinks instead of as part of complex ecosystems that store as well as release carbon (Fleischman et al. 2020). It also ignores that these ecosystems provide food, water, fiber, and income, which are foundational for rural livelihoods in the Global South (Erbaugh et al. 2020). In addition, seeing nature in this way represents a form of epistemic injustice, violating many local and Indigenous Peoples’ relational onto-epistemologies (Gebara 2020; McGregor 2014; Whyte 2017; Winter 2021). This raises critical questions about who sets the agenda for restoration, through which governing institutions (traditional, state), with what priorities (carbon sequestration, biodiversity conservation, local livelihoods, customary practices), and with what “acceptable” trade-offs.

The current landscape of restoration initiatives is rooted in similar institutional settings, driven by international actors and interests prioritizing conservation and climate (Hope 2021; Kashwan 2017; Kashwan et al. 2021). Thus, the potential negative effects of externally designed restoration projects on local people (and vice versa) are often overlooked or even seen as a necessary trade-off. A blanket goal of “protecting” at least 30% of land and ocean for “nature” (Waldron et al. 2020) is a good example of a socially and culturally blind approach that risks socioecological violence and injustice. Prioritizing nature conservation over the people living there fails to account for potentially significant losses for local peoples—in terms of cultural identities, heritages, territories, livelihoods, and access to farmlands, grazing lands, or fisheries—and may violate their right to prior consultation and consent. Such initiatives often lead to local sacrifices, placing the burden and consequences of restoration on local actors in favor of ecological values as defined by the global community, the prime beneficiary (Agrawal et al. 2021).

Restoration initiatives that take this approach are highly unlikely to succeed as they risk being met with both active and passive local resistance. In India⁵ for example, indigenous communities actively resisted the government’s efforts to “restore” their land with teak plantations, which they deemed to be of little ecological or cultural significance (Kashwan 2017). In Kenya, farmers resisted the Plantation Establishment and Livelihood Improvement Scheme with deliberate but secretive killing of seedlings and young trees. Other forms of passive resistance, what Scott (1985) refers to as “weapons of the weak,” include sabotage, feigned ignorance, and use of arson. Similarly, fortress conservation models, which are characterized by “protected area management” through the forceful exclusion and/or eviction of local communities from protected areas in order to achieve biodiversity or climate change goals, have faced outright defiance and resistance, including protests. Examples include

conservation and protected areas in Tanzania (Brockington 2002; Kijazi 2015) and elsewhere (Büscher et al. 2012).

Addressing questions of where, on whose lands, and what species are planted requires looking not only at species diversity and suitability for different ecological and climatic conditions (soil, precipitation, and altitude, at present and with future changing climate), but also their suitability for local sociocultural, sociopolitical and socioeconomic conditions. Asking why and for whom trees are being planted means dealing with the diversity of interests, ideas, concerns, logics, and ideologies of different groups defined by wealth, age, gender, ethnicity, caste, autochthony, migration, and other social differentiations within a community (Larson et al. 2019). It also implies taking into account the complexities associated with the local institutions that define land rights and tree ownership, the power relations between different groups in the community, and the imbalances in access and use rights (Colfer et al. 2021; Monterroso et al. 2019; Ribot and Peluso 2003). If these aspects are not addressed, tree planting and restoration can exacerbate inequalities, violence, and injustices, especially when benefits to land restoration are skewed in favor of socioeconomically dominant groups through elite capture, thereby entrenching systemic injustices.

4.2 A historical account of community engagement

We understand “community” as a group that is diverse with varying degrees of heterogeneity across cultures, ethnicities, socioeconomic statuses, and politics. Communities include people not only of different genders, ages, castes, races, wealth, ethnicities, religions, etc., but also with different interests, ideas, worldviews, and ideologies. All of these factors can affect their means, powers, and abilities to influence and shape the world around them, including decisions to manage, govern, and use the natural environment (Agrawal and Gibson 1999; Ribot and Peluso 2003). Within a community, different people are likely to be affected in different ways by land degradation. For example, rural women who collect firewood and water are disproportionately affected by the scarcity of trees used for fuel and the loss of local water sources, as they have to travel longer distances in search of these resources (Nchanji et al. 2021). Youth are disproportionately affected by the loss of local jobs and income sources. Indigenous peoples are disproportionately affected when protected area policies prohibit their access to places they consider their home (Arsenault et al. 2019; Dawson et al. 2021; Whyte 2014).

The composition of rural communities is also relevant and needs to be taken into consideration. While many Indigenous Peoples and traditional communities have lived in the same place for generations, others were displaced during the colonial and postcolonial era, through enslavement as well as assimilation policies, and have made their home in new locations and ecosystems. For instance, in Latin America highland Indigenous Peoples (e.g., from the Andes) have moved into lowland tropical forests, while different native tribes from across what is now known as the United States of America were placed in Native reservations. Nonindigenous farmers may have less of a collective identity and have often moved into new ecosystems, especially rainforests,

spontaneously or through planned colonization (Larson 2010) and “trans-migration” policies (Elmhirst 1999).

Finally, power asymmetries between different segments of communities should be noted, as they influence inclusion and exclusion in restoration initiatives and other forest and nature protection projects (Nchanji et al. 2021; Ramcilovic-Suominen and Kotilainen 2020). It is common for international environmental policy initiatives, including those of landscape restoration, to be designed and implemented with little consideration of this heterogeneity, or local social and cultural complexity, including but not limited to power dynamics; this ends up altering the social and political fabric, governing structures, and decision-making processes (Hope 2021; Kashwan et al. 2021; Mansourian 2021).

Restoring nature and landscapes has been an integral part of local community interactions with ecosystems for millennia (Dawson et al. 2021; McGregor et al. 2020). Community engagement in formal land restoration projects is also not new. Early schemes for granting tenure over forest lands to local communities, such as those in India and Nepal beginning in the 1970s, were as much about granting prescribed management responsibilities and labor requirements as they were about rights (Larson and Pulhin 2012; Saxena 1997). In these cases, tenure and rights over land were often granted for degraded areas with the responsibility to restore the land through reforestation (Saxena 1997). These were some of the first (formal) community-based “restoration” policies.

A wave of initiatives promoting participation in natural resource management and conservation swept most of the Global South in the 1980s and 1990s in forestry, wildlife, marine ecosystems, and related fields (Blaikie 2006; Ribot and Larson 2013). While these approaches took a variety of forms in different countries and contexts, their aim was to involve local communities (in the broad sense of the term) in decision-making, implementation, and benefit sharing around natural resource management. Nevertheless, the issues being addressed, from the definition of the problems to the solutions and implementation goals, were often externally defined. “Participation” in many of these activities focused on how to reach, inform, or train local people, and primarily how to obtain their consent for implementing the various interventions for sustainable resource or forest management. For these reasons, and notwithstanding some initiatives that better aligned program and local objectives, participation of this kind has been referred to as the “tyranny of participation” (Kothari 2001) and “symbolic violence” rather than participation that is empowering (Ojha et al. 2009). Over the years there has been a growing awareness of the importance of more substantive and meaningful participation (e.g., Colfer 2004; Colfer et al. 2021).

Around the same time, in the 1980s and 1990s, decentralized forest management was also emerging, but was more politically motivated, aimed at expanding democracy, accountability, and responsiveness in natural resource management and reversing central governments’ capture of resources that occurred during colonial and postcolonial regimes. Colonial and postcolonial state management in much of the Global South is characterized by state or public ownership of land, forests (sometimes even individual trees on farms), wildlife, and fisheries, denying local communities access to resources (Blaikie 2006; Ribot et al. 2006; Ribot and Larson 2013). Nevertheless, many central governments saw decentralization as an opportunity to

devolve responsibilities to subnational governments and local communities—but seldom authority, resource rights, or legal tenure (Ribot et al. 2006). The key lessons from this wave of decentralizations that are pertinent for restoration are government tendency toward maintaining control, local community need for continued bargaining over rights (Larson and Soto 2008), and responsabilization of local people (Mustalahti and Agrawal 2020), which often results in more responsibilities and less rights (Ramcilovic-Suominen and Mustalahti 2022).

By the 2000s, international attention to “rights-based approaches” was growing. This is evident in progress on indigenous land tenure rights through International Labor Organization Convention 169 (passed in 1989) on indigenous and tribal peoples and, more recently, by the 2007 United Nations Declaration on the Rights of Indigenous Peoples. Nevertheless, like decentralization reforms, many forest (and forest land) tenure reforms aimed at Indigenous Peoples and other customary communities, especially those outside of Latin America, prioritized granting responsibilities to communities rather than substantive rights (Larson and Pulhin 2012). More recent trends, however, show an increase in more substantive “ownership rights” being granted to Indigenous Peoples from 2013 to 2017 in comparison with the previous 5-year period (RRI 2018). The Rights and Resources Initiative (RRI) classifies ownership as legal recognition for an unlimited duration of rights of access, withdrawal, management, exclusion, due process, and due compensation. In practice, however, there is wide variation in local ideas about territory and nature; even the idea of “ownership” itself can be an imposition (Arsenault et al. 2019; Gebara 2020; McGregor 2014; McGregor et al. 2020; Temper 2019). Importantly, states claim legal authority of over two-thirds of the global forest area, much of which is also claimed by Indigenous Peoples and local communities (RRI 2018).

The concept of land restoration therefore unfolds against the backdrop of previous efforts to prescribe roles and responsibilities to communities and indigenous groups, and the ongoing challenges and power dynamics in granting tenure rights and in decision-making over nature.

4.3 Environmental justice and decolonial environmental justice

In this section we outline a three-dimensional EJ framework, followed by a short introduction to decoloniality and DEJ, summarized in the Table 4.1. The three-dimensional EJ framework emphasizes participation, distribution, and recognition as the three key justice dimensions, distinguishing between procedural, distributional, and recognitional justice (Fraser 2009; Schlosberg 2007; Walker 2012). *Procedural justice* concerns participation—who participates in decision-making processes and project implementation—as well as representation—who is represented in the decisions and who is not (Fraser 2009). This also relates to the question of how nominally participating actors *represent* the interests and concerns of the entire constituency or concerned group (Fraser 2009; Sikor 2013), which is particularly challenging for multi-stakeholder processes. *Distributional justice* relates to the distribution of burdens, costs, harms, or risks (e.g., pollution, waste, exposure to toxins, etc.) and of benefits and opportunities (e.g., access to green spaces, clean air, water, economic

Table 4.1 Operationalizing and questioning the three dimensions of environmental justice

Types of justice	Environmental justice (EJ)	Decolonial EJ (DEJ)
Procedural	Participation/representation	Self-governance
Recognitional	Recognition	Self-recognition, self-determination
Distributional	Fair distribution of costs and benefits (of nature)	Questions the duality of humans and nature, and other binaries

opportunity, etc.) (Schlosberg 2007). Finally, *recognitional justice* emphasizes the importance of recognizing people's identities and cultures and highlights the harms of mis-recognition and mistreatment due to identity and belonging. Recognition in decision-making processes and their outcomes therefore relates to or enables both procedural and distributional justice (Fraser 2009; Schlosberg 2007).

As a critique to EJ, DEJ draws on the theory of decoloniality. To outline this theory we draw on decolonial scholars, including Fanon (1967), Mignolo (2008), Maldonado-Torres (2007), and Quijano (2000). Decoloniality is most widely defined as a critique of modernity. To decolonize implies to undo various harms of colonialism and coloniality, together with undoing or abolishing the very structures that help reproduce them (Fanon 1963, 1967). It also means to reverse the various forms of violence and oppression from colonialism and coloniality that persist today, including extractivism and cultural domination. Discussing decoloniality, therefore, brings to focus the concept of coloniality. Coloniality as a concept implies that the colonial logics, mindsets, and economic and power structures did not stop with the end of formal colonization, which refers to the moments in history when former colonies, at least most of them, gained independence. Hence, while political colonization ended, coloniality—that is, the colonial mindsets, logics, metaphysics, values, ontologies, and relationships with the rest of nature, and with previously colonized peoples—continues to exist to the present day and is the very foundation of our global political and economic system. Coloniality is reproduced by and manifests itself through various phenomena, including global capitalism, patriarchy, continued imperialism, modernity as we know it; it is also very visible in global relations and environmental governance (Hickel et al. 2021; Sultana 2022). Various forms of coloniality are discussed in the literature, even if all of them cannot be disentangled from one another, including coloniality of mind (epistemology), being (ontology), and power (politics) (Escobar 2007; Fanon 1963, 1967). By extension then, we talk about decoloniality and the need to decolonize these same entities—mind, being, power—which implies decolonizing the political, the epistemic, and the ontological spheres (Escobar 2007; Fanon 1963, 1967; Mignolo 2007; 2008; Quijano 2000). Decoloniality of mind (Fanon 1967) and imaginary (i.e., cultures, meanings, significations, categories, worldviews, etc.) (Latouche 2015) refers to decolonizing the epistemic and ontological spheres. Decoloniality of the material or political implies undoing concrete

political, cultural, and economic colonial structures and harms. This includes, for instance, land restitution and autonomous representation (Tuck and Yang 2012).

Drawing on decolonial and postcolonial theories, several scholars (Alvarez and Coolseat 2018; Rodríguez and Inturias 2018; Temper 2019) have critiqued the EJ theory, including the three-dimensional EJ framework, on various grounds. One of the main critiques is that the EJ theory is based on Western or Eurocentric (we use these terms interchangeably) epistemology and ontology, which decolonial scholars argue (re)produces onto-epistemic injustices and marginalizations as they delegitimize and/or render invisible other ways of knowing and other knowledge systems (Escobar 1998; Mignolo 2008; Quijano 2000; de Sousa Santos 2008; Whyte 2017; 2020). A second major critique concerns political authority, which decolonial scholars argue is reserved only for state authority in the EJ framework. This does not mean that non-state actors (e.g., nongovernmental organizations, local people, or businesses) do not participate and/or are not represented or recognized, but that the means and terms of participation, representation, and recognition are defined by the state (Pellow 2018). Scholars argue that neither participation nor recognition go far enough to ensure the self-governing authority of informal (i.e., non-state) traditional institutions, and their legal systems and structures (Alvarez and Coolseat 2018), which represents a form of political denial or oppression (Blaser et al. 2010; Rodríguez 2020; Temper 2019). The problem occurs when external notions of justice are applied in spaces with different ontologies, epistemologies, and legal and political structures, leading to epistemic injustice and political denial, or to what Alvarez and Coolseat (2018, 6) call “coloniality of justice.”

DEJ has thus emerged as a critique and response to the three-dimensional EJ framework. Drawing on Alvarez and Coolseat (2018) as well as Temper (2019), we describe DEJ in direct relation to the three-dimensional EJ framework. Concerning *distributional justice*, DEJ suggests the need to rethink the very idea of objectifying and distributing nature, and with that the need to rethink the Eurocentric human-nature duality. Scholars have also highlighted the contradiction in the idea of equal distribution of harm as a precondition for justice: not only does equal exposure to pollution (for example) not serve justice, but also, it diverts attention from the need to address the sources of the harm (pollution) itself (Alvarez and Coolseat 2018). The critique is of an onto-epistemological nature, as the idea of distributional justice rests upon the Eurocentric view of a human-nature duality and assumes that the (rest of) nature is a resource that can be owned and distributed among humans. Nature in this view is objectified and seen as separate from humans, which violates many Indigenous People’s relational views on nature—for example, ones of responsibility, kinship, trust, consent, and/or reciprocity (McGregor 2014; Whyte 2017). DEJ suggests the need to rethink, transcend, and deconstruct the human-nature dualism (see also Gebara 2020). This position is gaining prominence, also among non-decolonial and nonindigenous scholars of environmental policy (e.g., Biermann 2020). DEJ argues, rather than discussing how to distribute burdens and opportunities, there is a need to take a step back and focus on the questions of epistemology and ontology when theorizing justice, with an aim to ensure that people draw on their own worldviews.

Concerning *recognition*, while of course recognizing other cultures and identities is very important, DEJ scholars argue that recognition is limited, does not lead to self-determination, and can even be counterproductive (Alvarez and Coolseat 2018). Self-determination, also referred to as self-recognition (Coulthard 2014), can be defined as the right to identify and conceptualize one's own desires, struggles, needs, and interests on one's own and outside of the dominant conceptualizations, categories, and knowledge and legal systems. Self-determination is not possible within the limits of the dominant epistemic, ontological, and legal domains; seeking to achieve it, as recognition justice suggests, can have counterproductive results by unintentionally further marginalizing already marginalized positions, cultures, and struggles for independence and autonomy (Coulthard 2014). This can happen when dominant groups—elites, academics—even those with the best of intentions, are unaware of local conceptualizations, categories, cosmologies, knowledge, and legal systems. While self-determination is closely related to epistemic or cognitive justice (Rodriguez 2020), it is also a matter of reimagining, reclaiming, and reaffirming one's own ideas of the self through cultural practices, spirituality, politics of difference, and politics of alternatives (Coulthard 2014; Temper 2019).

Finally, concerning *procedural justice*, the DEJ perspective argues that participation and representation only ensure that decision-making processes conform with the dominating actors' "rules of the game." DEJ argues what is needed is the recognition of self-governance authority, implying that an authority other than state (i.e., indigenous and other traditional authorities) would have the right to make decisions about how to govern their territories. To give an example, various forestry and natural resource protection projects are implemented in contexts of legal pluralism, where both formal (or state) and informal (or customary) governing structures coexist (Lund 2011). External and top-down restoration initiatives typically work closely with state actors, who naturally promote and make use of state laws and often ignore customary governing structures, rendering them irrelevant or, worse still, illegal. For instance, Ramcilovic-Suominen et al. (2021) find that Hmong people in Laos do not always wish to participate in forestry projects, which they feel ignore their worldviews and traditional institutional structures.

We argue that DEJ allows for ontologically and epistemologically different ideas and logics, different political, legal, and governing structures to coexist along with the dominant Eurocentric ideas and dominant state-centric authority and institutions (Alvarez and Coolseat 2018; Rodriguez 2020; Rodriguez and Inturias 2018). It is more sensitive and responsive to the cultural and legal plurality and therefore more applicable to culturally and legally diverse or pluralistic societies, which is often where landscape restoration is de-facto implemented. It is also better equipped to recognize intended and unintended mechanisms of subordination and marginalization through the imposition of Eurocentric worldviews and therefore more applicable to non-Western and postcolonial societies and cultures (Alvarez and Coolseat 2018; Temper 2019). For these reasons, we find the DEJ better positioned to support the cause of advancing justice; we also find it useful to apply this framework in the context of international environmental policy and governance, including forest and landscape restoration. Nonetheless, we do not argue that it is a substitution for the three-dimensional EJ framework in all cases, nor do we argue for its universal applicability.

4.4 Major barriers to just and effective landscape restoration

Four major barriers to just and effective international landscape restoration are derived from an analysis of landscape restoration using a DEJ perspective. The analysis focuses on tensions between global and local levels; it does not look at barriers within the local level, such as the domination and marginalization of certain societal groups or inequalities within a community regarding gender, class, or age.

The first barrier for just and effective restoration in international landscape restoration initiatives concerns *prioritizing global over local knowledge systems, logics, and politics*. Nature and restoration mean different things to different peoples, societies, and cultures, as well as to different actors within the groups. These meanings depend not only on their immediate concerns and interests, but also on their ideas and worldviews regarding their place and relation with the rest of nature (Arsenault et al. 2019; Gebara 2020). In Eurocentric philosophies of life and modern ecological sciences, such as restoration ecology, the need for restoration is commonly explained in two ways: (i) the need for “returning to some original pristine state of nature” (Bradshaw 1996; Bradshaw and Chadwick 1980), or (ii) for “regaining ecological functionality to provide ecosystem services and enhance human well-being across degraded landscapes” (Chazdon et al. 2017). The former is problematic as it separates people and ecosystems, even if they have coexisted and co-shaped each other for millennia. The latter can be described as a utilitarian and anthropocentric approach, which prioritizes human well-being in ecosystem restoration. Neither places significant, if any, attention on relational ontology that promotes coexistence and reciprocal relations between humans and other species and forms of life (Winter 2021).

In contrast to the perspectives prominent in modern Eurocentric ecological sciences, for many indigenous and traditional communities restoration is not separate from their knowledge systems, worldviews, experiences, and relations with nature. In other words, it is integrated into their day-to-day interactions, their livelihoods and cultural practices, rather than a separate activity that they need to suddenly attend to. There is strong evidence that many such communities, guided by their traditional knowledge and practices, have maintained socioecological vitality and resilience—that is, the vitality and resilience of their ecosystems as well as their cultures, well-being, and local economies (Dawson et al. 2021; Fleischman et al. 2020; Kashwan et al. 2021; McGregor 2014; McGregor et al. 2020; Sinclair and Joshi 2000). It is thus crucial for restoration efforts not to separate or exclude local people from their territories and practices; rather, they need to empower local communities, counter the processes that undermine their culture, knowledge, and traditional practices; and to partner with them.

Global restoration initiatives need to recognize local communities’ roles, agency, and knowledge systems and to draw on these when designing and implementing landscape restoration efforts. Examples of traditional/indigenous knowledge that have been applied in restoration include the use of the fast-growing tree Balsa (*Ochroma pyramidale*)—to accelerate succession toward mature forests and to control invasive species—by the Lacandon Maya of Southern Mexico (Douterlungne et al. 2010). Farmer Managed Natural Regeneration, a widespread approach in the West African Sahel, is built around traditional management of trees in African savannas, including

selecting suitable species that provide beneficial relationships with crops and livestock and tree management practices, such as thinning, coppicing, pruning, etc. Coupled with livestock management and other enabling policy interventions, their approach presents greater promise as a restoration practice in arid and semi-arid areas compared to tree planting (Chomba et al. 2020).

The second barrier concerns the *tendency to target small-scale forest use and livelihood activities rather than large-scale degradation drivers*. The drivers of land degradation are multiple and interconnected. Initiatives for conservation, or landscape restoration, ignore large-scale systematic and for-profit drivers while disproportionately focusing on small-scale drivers (see Lambin et al. 2001). They ignore the key drivers of deforestation and land degradation, which may include national policy (e.g., resettling villagers from highlands to lowlands, fostering large-scale land investments and driving forest degradation and insecure land tenure). As local people resist policies and projects with harmful effects, this resistance in turn leads to attacks and violence against them, with over 1,733 documented deaths of land and environmental defenders, between 2012 and 2021 (Global Witness 2022).

Different drivers originate at different scales, from global to local, and have varied temporal and spatial dimensions; undesired effects take time to emerge and often emerge in places far from the original action or initiative (Ingalls et al. 2018). Local communities often have a good understanding of the relevant drivers pertinent to their areas, including at times the external ones (Crossland et al. 2018). Global restoration initiatives need to recognize this and may consider incorporating local communities in identifying and mapping the drivers to be tackled rather than bringing a predefined list of problems/drivers and solutions. The global drivers, for example, global demand for wood or other deforestation-causing commodities (soy, coffee, cocoa, palm oil, etc.), manifest in increased logging and corporate seizures of land, of which communities are painfully aware, though the complexity of these indirect drivers may be harder to discern. The large-scale, market- and policy-triggered drivers are surely harder to tackle and are often ignored, in part due to the vested interests of powerful political and corporate actors. One must also consider the externally funded project's tight time schedules (Ramcilovic-Suominen 2019), one important aspect that must change for better long-term success.

The third barrier for just and effective landscape restoration relates to *the risk of offshoring burdens of global landscape restoration to local communities*. Studies show that the benefits of restoring degraded lands outweigh the costs (Nkonya et al. 2016; Waldron et al. 2020). While we do not want to argue whether this is always the case, the question is: benefits and costs for whom? Waldron et al. (2020) claim that the benefits of expanding protected areas, focusing only on forests and mangroves, would be between 170–534 billion USD per year by 2050, mainly from avoided flooding, climate change, soil loss, and coastal storm damage. This estimate is based on the assumption that these restoration efforts will be successful, which is by no means guaranteed. The question that receives less attention is who bears the burdens and losses for generating this sum, and how is this sum shared. More importantly, what is at stake for local communities is far more than the money—their cultures, territories, heritages, and ways of life (Whyte 2014; 2020) cannot be compensated for.

It is unrealistic to expect local communities to participate in and sustain restoration efforts by contributing labor, time, and land to a restoration process that has been designed mostly “from outside,” with a view of benefits that may differ from local perspectives. However, different groups and individuals within a local community expect different kinds of benefits and therefore what constitutes a benefit or a cost should be defined locally. For example, pastoralists and herders may desire feed and fodder for their livestock, while crop farmers may want to curb soil erosion and increase crop productivity; both may be in conflict initially with the goal of an international project developer to increase the climate mitigation potential of the landscape. Many rural people have immediate livelihood needs and cannot always wait (only) for long-term benefits. As demonstrated by various examples of restoration practices that are codesigned with local people—such as watershed restoration that applies cross-jurisdictional planning with communities in Latin America and Asia (Armitage 2005; Sabatier et al. 2005), or restoration codesigned with local women and in line with local traditions (Mukasa et al. 2022)—global restoration efforts must go beyond short-term project payments to farmers to conserve or plant trees. The bottom line is that global restoration practices need to ensure that local people are not the ones to sacrifice their livelihoods for ecological restoration while someone else defines the objectives and rules of the game. This does not mean that international actors have no role to play but that their current role and space of influence needs to be discussed and redistributed downward.

Finally, the fourth barrier to just landscape restoration is that the *state actors and structures are perceived as the only legitimate source of authority, while customary institutions are ignored*. Typically, international environmental policy and governance initiatives are negotiated, implemented, and enforced by relying on the nation-state as the main source of authority and legitimacy. This does not necessarily mean that the non-state actors do not participate but that participation and representation are conceptualized within the dominant state political authority and structures. Assigning the political authority to the state only is embedded within the foundation of international environmental governance, where representative rather than direct democracy is a rule of the game; therefore, only states have voting rights. Adhering to this principle, however, becomes an issue given legal pluralism (Tamanaha 2007) and parallel authorities in postcolonial countries, which leads to domination and denial of indigenous and other traditional sources of political authority (Lund 2011; Ubink 2011). Bias against customary and collective systems has led many countries to prioritize individual land rights, sometimes leading to the breakdown of the local and customary institutions that support sustainability. Such biases continue even in countries that have passed laws recognizing community rights, where states still fail to provide enabling conditions to exercise those rights (Aggarwal et al. 2021). Procedures for rights recognition tend to be cumbersome, confusing, and expensive (Notess et al. 2020).

In many countries, customary and statutory rules and authorities coexist. As a result, in the case of Mali, Niger, and Senegal, for example, the communities’ rights to land were separated from their rights to trees, and the rights to trees from the rights to tree products, such as fruits, leaves, and nuts (McLain et al. 2018). The 2017 Malian Agricultural Land Policy recognizes customary rights to extract resources on agricultural land, but the rules of exploitation are contradicted by the state’s forest policy.

This legal plurality, where statutory and customary laws coexist, often include overlaps and contradictions, making it difficult to clarify the rights, roles, and responsibilities of the local communities in land restoration. Ensuring user rights to trees is possible, however, as has been seen in Niger for example. Gradually granting greater user rights to those who plant, tend, and work toward regenerating the land is becoming more common as well.

4.5 How to avoid reproducing past injustices

While we do not deconstruct landscape restoration as a neocolonial project (as is often done for nature conservation initiatives (Büscher et al. 2012; Hope 2021; Kashwan et al. 2021), we do, however, argue that landscape restoration as promoted in the international restoration policy initiatives alludes to a neocolonial, top-down, and “interventionalist” project (Chapter 3). These initiatives are in fact embedded within the institutional and organizational settings that uphold neocolonial approaches to nature conservation (Hope 2021; Kashwan et al. 2021), hence the risk of reproducing injustices and violence is great. As we adopt a DEJ perspective, it would be counterintuitive to suggest a blueprint for external actors to follow in designing landscape restoration projects. Besides, decolonial and locally just restoration is embedded within diverse and varied contexts, with particular landscapes and particular everyday practices, interactions, and relationalities within these landscapes; it therefore should not be designed as a “one-size-fits-all” solution. Rather, it is important to consider how to engage in these diverse contexts, what Sarmiento Barletti et al. (2020, 15) refer to as “designing for engagement.” What we offer is a set of questions for practitioners to reflect upon, when designing and implementing landscape restoration initiatives, and for scholars to reflect on when analyzing landscape restoration from a decolonial perspective. We also propose key conditions for avoiding reproducing injustices and neocolonial approaches in landscape restoration policy and practice.

Applying a decolonial lens to global environmental policy more broadly (Ramcilovic-Suominen 2022; Rutazibwa 2018) to global environmental policy, specifically landscape restoration, allows us to identify the following questions for reflection and analytical inquiry:

- i. *Colonial mindsets, logics, and structures*: To what extent does the landscape restoration initiative question and attempt to unsettle or dismantle the mindsets, mandates, logics, structures, and binaries (e.g., developed/undeveloped, superior/inferior) established by, rooted in, and instituted within imperial and colonial structures?
- ii. *Geography*: Who decides on the location of a landscape restoration initiative and to what extent do the deciding actors depend directly and immediately on the land for their subsistence and livelihoods?
- iii. *Motivation and key objectives*: Who defines and decides upon the key motivations and objectives of a landscape restoration initiative: global actors, domestic state actors, different groups of local people?

- iv. *Interests, concerns, and needs*: Whose interests, concerns, and needs does the initiative serve and whose does it neglect or violate: those of global actors, local communities, dominant groups, or those of the marginalized groups?
- v. *Costs, benefits, and trade-offs*: Who defines what is considered a cost and what is a benefit (e.g., goods, services, products, and/or end results) in a landscape restoration initiative, and who decides how these are provided or denied across scales and among societal groups?
- vi. *Modes of operation*: To what extent are the modes of operation and the actual restoration process (e.g., planting species, restoration techniques) defined by those who are to be directly affected by the initiative?
- vii. *Institutions and knowledge systems*: To what extent are the institutional structures and knowledge systems that are used to design, negotiate, and implement the restoration process distinct from the customary knowledge systems and institutional structures?

Drawing from the DEJ perspective (Section 4.3), and the identified major barriers for justice (Section 4.4), we propose three conditions as key for ensuring justice and local empowerment in landscape restoration. This does not mean that these are the only conditions worth ensuring in landscape restoration, nor does it mean that following these conditions will resolve all the challenges, needs, and goals in landscape restoration. It means that they are important for promoting and facilitating what we argue to be the key precondition for a decolonially just landscape restoration. Our suggestions advance and relate to the various justice dimensions, including procedure and recognition, but go beyond to highlight the importance of epistemic justice, self-determination struggles (identity, culture, territorial rights), and self-governance of traditional governing authority (application of traditional legal and institutional structures). These are exemplified in existing efforts and initiatives, with which some of the authors are directly familiar. Often, however, the existing examples do not reflect the issue in question (e.g., locally defined benefits and trade-offs in Subsection 4.5.2), and in some cases we lack examples from practice altogether (e.g., for landscape restoration that nurtures self-determination and self-governance).

4.5.1 Landscape restoration is embedded in local knowledge systems and agency

Due to the evidence that Indigenous Peoples and their knowledge systems play a key role as stewards of the environment (Corrigan et al. 2018; Dawson et al. 2021; Kashwan et al. 2021), there is a renewed interest in traditional and indigenous knowledges, which certainly is important and something to celebrate. While there is a lot of potential in incorporating traditional forms of knowledge (Arsenault et al. 2019), the interaction and cocreation between local and external/scientific actors and knowledges needs to be done with a fair amount of care, mindful of risks such as indigenous knowledge appropriation and commodification (Arsenault et al. 2019; McGregor 2014; Whyte 2017).

In this context it should be kept in mind that local knowledge is embedded and cannot be disentangled from local people's daily interactions with their environment

or from their legal systems. Hence, the cultural, epistemic, and political (i.e., cultural livelihood practices and relations with the environment and the governing structures) are closely intertwined. Epistemic justice and the right to rely on their knowledges is associated with local political empowerment, control over territory, and the ability to influence key decisions (Blaser et al. 2010; Whyte 2014). It relates to local political agency, concerns, and interests.

Co-defining the meanings, objectives, underlying motivations, and logics together with local communities at the very beginning of the landscape restoration process ensures that these initiatives are in line with the traditional knowledge rooted in the given place and the people of that place. Grounding an initiative in traditional and/or indigenous knowledges from the beginning should also ensure that such knowledge systems have equal footing with the more dominant ones, such as scientific knowledge. This does not imply that the latter is less relevant but simply different. Incorporating traditional knowledge is often done at a later stage of a policy or project initiative, where it is approached as “local wisdom” that requires scientific validation, hence rendering it as “less than” scientific knowledge (Winter 2021). We want to highlight that epistemic justice implies epistemic plurality, the coexistence of different epistemic and ontological systems rather than hierarchies between them. Box 4.1 presents examples of existing tools and approaches for the integration of indigenous and local knowledge systems in restoration practices.

Apart from the concerns related to the coexistence of local/global, internal/external, one should keep in mind that the members of the same community may have different concerns and interests, despite a shared onto-epistemological orientation. Local communities may be diverse and heterogenous, consisting of different ethnicities, languages, and socioeconomic classes (Agrawal and Gibson 1999). Those with more/less power and resources (i.e., “local elites”), but also those of a certain

Box 4.1 Examples of existing tools and approaches for the integration of indigenous and local knowledge systems in restoration practices

Landcare is an example of a community-based and -led approach to sustainable landscape management (Catacutan et al. 2009, 2015). Landcare is an established movement in the Philippines, South Africa, and Uganda. Landcare groups undertake community vision mapping to define how they would like to see their productive and restored landscape. In this way the community defines their own landscape vision and can determine what actions need to take place to achieve this vision using their local capacities and help from external actors.

Several other tools and approaches have been developed to support community participatory mapping and option identification and cocreation. For example, (i) combination of local knowledge with structured stakeholder engagement for inclusively designing a more diverse set of agroforestry options in the Democratic Republic of Congo (Dumont et al. 2019) and (ii) participatory mapping of degraded lands through community perception or integrating geographic information system (GIS) maps (Petri et al. 2019).

Box 4.2 Examples of existing tools for integrating gender in restoration initiatives

Tools that have been developed by scientists to capture and address gender differences in development/scientific interventions, particularly in agriculture include:

- i. the Gender and Inclusion Toolbox: Participatory Research in Climate Change and Agriculture,⁶
- ii. the Gender and Climate Change Research in Agriculture and Food Security for Rural Development training guide,⁷ and
- iii. the Gender Box for addressing gender bias in forest management.⁸

For multi-stakeholder forums and processes in landscape management, Getting it Right⁹ supports participation for women and Indigenous Peoples.

While these tools demonstrate the recognition and will to address gender disparities in decision-making about and access to resources and benefits, they are often externally defined, technocratically framed, and administered as a “protocol” that is likely to make significant changes to socioculturally held norms and practices at the local level. Other tools, such as those for inclusive landscape management¹⁰ and for gender and social inclusion¹¹—aimed in part to be self-administered for reflection in multi-stakeholder processes or partnerships—have been codeveloped between researchers and these diverse stakeholder groups, including with indigenous women in Peru, to analyze their participation in the governance of their communities and territories.

gender or ethnicity, will have more/less ability to exercise their agency (Lund and Saito-Jensen 2013). Hence, attention needs to be paid to power relations, identities, interests, and levels of marginalization (Tole 2010). For example, in communities where social and cultural norms prescribe lower priority to women, or to marginalized ethnic groups (in the cases of ethnically mixed communities), it can be challenging to ensure that the interests and preferences of the marginalized groups are considered (Agarwal 2001). Similarly, women and migrant communities tend to have more insecure land and resource tenure rights, which reduces their ability to benefit from restoration (and other) decisions (Jhaveri 2021; Larson et al. 2019). The same is observed in terms of different age groups, ethnicities, religions, sexual orientations, and the like. Reconciliation within the same community, where needed, and ensuring that the voices and concerns of traditionally marginalized groups are heard while recognizing and respecting the local norms is a challenge to be navigated (Evans et al. 2021). Some existing efforts and examples are given in Box 4.2.

4.5.2 Benefits and trade-offs are locally defined and decided upon

Putting to use local peoples’ knowledges and their cultural and political agency is important, not only in terms of procedural and epistemic justice but also in terms of

distributional effects, when deciding who benefits from an initiative and in what ways. Climate change is certainly a key concern, and should be treated as such, but using it to legitimise various trade-offs in relation to local livelihoods and ways of life, as is commonly done at the international policy level, is missusing the emergency to justify violence (Cramb et al. 2009; Ramcilovic-Suominen and Nathan 2020). Besides, local knowledge systems and ways of life promote rather than hinder regenerative practices that are *also* climate friendly (Dawson et al. 2021; Kashwan et al. 2021). We recommend supporting such regenerative and place-based practices rather than importing external ideas of “climate-smart” technologies, which, once again, empower external actors.

Regarding benefits and trade-offs, externally defined benefits, such as monetary compensations for performance, hardly represent a sufficient motivation for local and Indigenous Peoples to join an initiative, as Dawson et al.’s (2021) synthesis of literature shows. They are also oriented to the short-term motivations and can disrupt local livelihoods (Ramcilovic-Suominen and Kotilainen 2020). Defining benefits and trade-offs locally, however, does not imply that everyone will benefit in the same manner; internal deliberations and negotiations are power-laden processes that may not lead to an ideal outcome or a solution that satisfies all. Often the limitations of groups are structurally embedded in laws and cultural norms and practices. Nonetheless, local deliberation over benefits and sacrifices builds local ownership and commitment to an initiative; it is an important element that adds continuity even when things do not go as planned.

Benefits versus trade-offs in landscape restoration will vary from one sociopolitical, cultural, and ecological space to another. Nevertheless, the existing literature suggests they are often related to at least one of the following issues: (i) degradation drivers and (ii) land tenure rights. Section 4.4 identifies the tendency of international policy mechanisms to target small-scale rather than large-scale degradation drivers and livelihood activities, such as traditional shifting cultivation (Cramb et al. 2009), while ignoring the larger and more profitable agricultural expansions (Ramcilovic-Suominen and Nathan 2020). Targeting such drivers not only delegitimizes and denies local knowledge but also diminishes important sources of local livelihoods (Dressler et al. 2016). Local community mapping of degradation drivers and cocreation of mechanisms for addressing these can be a first step in the right direction. Tools such as participatory mapping of land degradation (Box 4.2) can be applied to provide an opportunity for communities to indicate where degradation is occurring and to come up with suitable restoration options, where feasible.

Many countries and initiatives have undertaken efforts to secure community tenure rights (RRI 2018), but progress has been disappointing (Aggarwal et al. 2021). There is nothing simple about the process. Challenges include competition over land, bias against customary and collective tenure rights, technical and capacity deficits, among many others (see Larson and Springer 2016). Competition over access to and control over land refers to multiple demands on the same land, from both outside and inside communities, which can lead to elite capture. Even if communities have secure rights, it does not mean everyone within the community does; women, for example, are often also subject to local community and household rules and norms that restrict access to land and resources; even where national laws protect women’s

land rights, these are often poorly implemented (Jhaveri 2021; Monterroso et al. 2019). Increasingly, countries are embracing joint land ownership and titling in the name of husband and wife through land certification that provides legal rights to both spouses; examples include Rwanda and Ethiopia.

While tenure remains an important challenge under the current international governance regime, when examined through a DEJ lens, the notion of tenure and property may invoke epistemic injustices, imposing a Western conception of ownership (McGregor et al. 2020; Temper 2019). This relates to conflicts of worldviews or ontologies (Escobar 1998; 2007) and it is against relational ontology where we are a form of nature other forms of nature, such as trees and land with abundant life endowed into it cannot be owned by us (Winter 2021). From a DEJ perspective, the priority should therefore be a better alignment with and consideration of the local human–nature relations and the traditional legal systems in which such relations are engraved. Depending on the local imaginaries of justice, this may expand to include justice for nonhuman species (Tschakert et al. 2021; Winter 2021).

4.5.3 Self-determination and self-governance are promoted

Self-determination and self-governing authority as defined in Section 4.4 cannot be realized under the externally designed international and state policies, no matter how well intended they might be (Escobar 1998; Mignolo 2008; Quijano 2000; Whyte 2017, 2020). Self-determination and self-governance should primarily be approached as a political right, which is obviously tightly linked to culture and tradition. Advancing self-determination and self-governing authority would require, for example, that the traditional indigenous and/or customary authorities and their ruling structures and legal practices be strengthened (provided they are in place) or established (if not) as a valid form of legal authority under international governance regimes. This calls for nothing short of decolonization of and in international governance, which is essentially an institution rooted in colonial mindsets and power hierarchy (Ziai 2012, 2016), and for repatriation of indigenous lands (Tuck and Yang 2012). These are also necessary preconditions for self-determination of Indigenous Peoples and self-governance of indigenous lands is on the agenda, which we believe is a “must” if decoloniality is to be more than a metaphor.

Such progressive ideas significantly expand the narrow and more common approaches where local people are recognized as “equal” and called to participate within externally derived policy initiatives and structures. Keeping the historical context in mind, it is important to remember that many colonized people in settler-colonial countries (e.g., the USA, Canada, and Australia) and in postcolonial countries in Africa and Asia, for example, are likely to still perceive these structures as ones of oppression and remnants of colonial rule (Blaser et al. 2010; Pellow 2018; Whyte 2014, 2020).

While this broad and highly political agenda may appear distant from policy initiatives such as landscape restoration, it is the foundation for devising decolonial and just landscape restoration. For example, it suggests that relying solely on statutory legal traditions when it comes to issues such as rights, benefit sharing, income, or

management activities is highly problematic. We return to property and tenure as an example of this. State policies and legal frameworks define legal ownership over forests and other nature entities, framing land and life on it as objects deprived of agency, rights, and roles. Following this logic, the individuals will care better for such objects if they have property rights over these—an approach promoted widely and globally that has led a number of countries to clarify rights to various “commodities,” including carbon in forests (Streck 2021). Although they may be well intended, in many cases and places the imposition of property rights over nature is a legacy of colonialism and an act of domination of state legal structures over indigenous ones (Rodríguez and Inturias 2018; Temper 2019). Moreover, in situations where tenure is the only formally recognized way to ensure long-term rights and access to land and other “resources,” local and indigenous communities opt for it and, in some cases, abuse their indigenous status to appropriate land (Astuti and McGregor 2017). As the evidence grows of the importance of Indigenous and/or traditional and customary institutions and arrangements for biodiversity and climate (Corrigan et al. 2018), notions of indigenous knowledge and even epistemic justice are increasingly recognized and called for (IPBES 2019). Yet they remain at the margins of concrete policy initiatives, including landscape restoration.

4.6 Conclusion

In this chapter we define landscape restoration rather broadly to include regeneration and restoration of various socioecological system functions and values, which may include agricultural productivity, watershed functions, and biodiversity as well as cultural diversity and cultural values. Our focus is limited to landscape restoration initiatives that propose tree planting for landscape restoration purposes.

Using the DEJ perspective, we identify some common barriers to, and propose several enabling factors for, locally just landscape restoration. DEJ challenges the universality of justice principles, including participation, distribution, and recognition, highlighting the need to deconstruct and go beyond these concepts and ideas. It highlights the importance of epistemic justice, self-determination struggles, and self-governance, of going beyond the dominant categories and conceptualizations, knowledges, and legal systems. These are preconditions for justice that does not oppress (Alvarez and Coolseat 2018).

Given our foci on landscape restoration processes that affect, involve, or in any other way concern local communities, as well as our DEJ perspective, the identified barriers for justice emphasize exclusively the tensions between global and local levels rather than local-level challenges (e.g., including domination and marginalization of certain societal groups, gender bias, class, and other inequalities within a community), the existence of which we acknowledge. Similarly, the DEJ perspective arguing for the decoloniality of knowledge and of political authority, for the promotion of self-determination and self-governance, and for an open exploration about benefits and sacrifices is better positioned to emphasize the potentials of locally defined problems and solutions over globally defined ones. DEJ emphasizes the importance of seeking to establish and, where needed, regenerate and reclaim marginalized identities,

cultures, knowledges, and authorities. Acknowledging that these approaches are not without their own hurdles, the authors believe that they are necessary for challenging cultural and political domination in international development and sustainability efforts (Ziai 2016). Despite the usefulness of this framework for landscape restoration policies, we recognize that our analysis does not directly address the important aspects of future generations and justice for other-than-human species. Such concerns are crucial in terms of landscape restoration, and we call for future studies to expand our analytical scope to include justice for future humans, and to go beyond human dimensions in their analyses of justice (Tschakert et al. 2021). Indigenous justice framings are particularly useful in this endeavor (McGregor et al. 2020; Whyte 2020; Winter 2021).

This chapter sheds light on options and possibilities for what can be done to shift current landscape restoration projects toward more locally owned and just initiatives that enhance local empowerment, epistemic justice, and local people's self-determination and self-governance. In this chapter, we include reference to some currently existing tools and approaches that are used to promote equitable landscape restoration, including integrating local knowledge, community visioning and mapping of degradation drivers, and a gender-balanced approach to restoration. While these examples are important steps forward, they also show that there is much left to do for a just, decolonial landscape restoration that empowers local actors to exercise their agency and governing structures.

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Notes

1. <https://www.1t.org>
2. <https://trilliontrees.org/home>
3. <https://www.africanews.com/2020/05/13/green-legacy-initiative-ethiopia-targets-5-billion-trees-this-year/>
4. The '30x30' initiative has faced significant resistance: <https://politicalecologynetwork.org/2021/02/04/200-ngos-and-experts-warn-against-un-plan-to-protect-30-percent-of-the-planet-by-2030/>; <https://openlettertowaldronetal.wordpress.com>
5. <https://undark.org/2020/01/06/india-indigenous-trees/>
6. https://cgspace.cgiar.org/bitstream/handle/10568/45955/CCAFS_Gender_Toolbox.pdf?sequence=7
7. <https://www.fao.org/3/md280e/md280e00.htm>
8. https://www.cifor.org/publications/pdf_files/OccPapers/OP-82.pdf
9. <https://www.cifor.org/knowledge/publication/7973/>
10. <https://www.cifor.org/toolboxes/tools-for-managing-landscapes-inclusively/>
11. <https://www.cifor-icraf.org/news/feature/gender-and-social-inclusion/>

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