

Transform, not reform: Transformative change to stop the biodiversity crisis

Lorah Steichen

Biodiversity is declining at a catastrophic pace, imperiling the ecosystems essential to all life on Earth. The drivers of this destruction are well known: extractive land use change is the leading cause – posing a greater threat to species than all other drivers combined.¹ Despite clear evidence and decades of international action, pressures on nature continue to grow. Efforts to halt the destruction of biodiversity have largely failed to address its root causes, resulting in outcomes that are incremental, insufficient, and/or ineffective. The Kunming-Montreal Global Biodiversity Framework (KMGBF), adopted by Parties to the Convention on Biological Diversity (CBD) in 2022, aims to catalyze urgent and transformative action – but like previous efforts, it will falter unless it directly confronts the underlying drivers of biodiversity destruction.

Acknowledging the urgency and scale of the crisis, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) warned in 2019 that reversing this trajectory requires *transformative change* – “a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values”.² But how can such a transformation be achieved?

Two recent major IPBES assessments – the Transformative Change Assessment and the Nexus Assessment – offer key insights as to *why* states continue to fall short of biodiversity goals and fail to implement the structural changes required.³ Adopted in 2024 by 147 member states,⁴ the Transformative Change Assessment focuses

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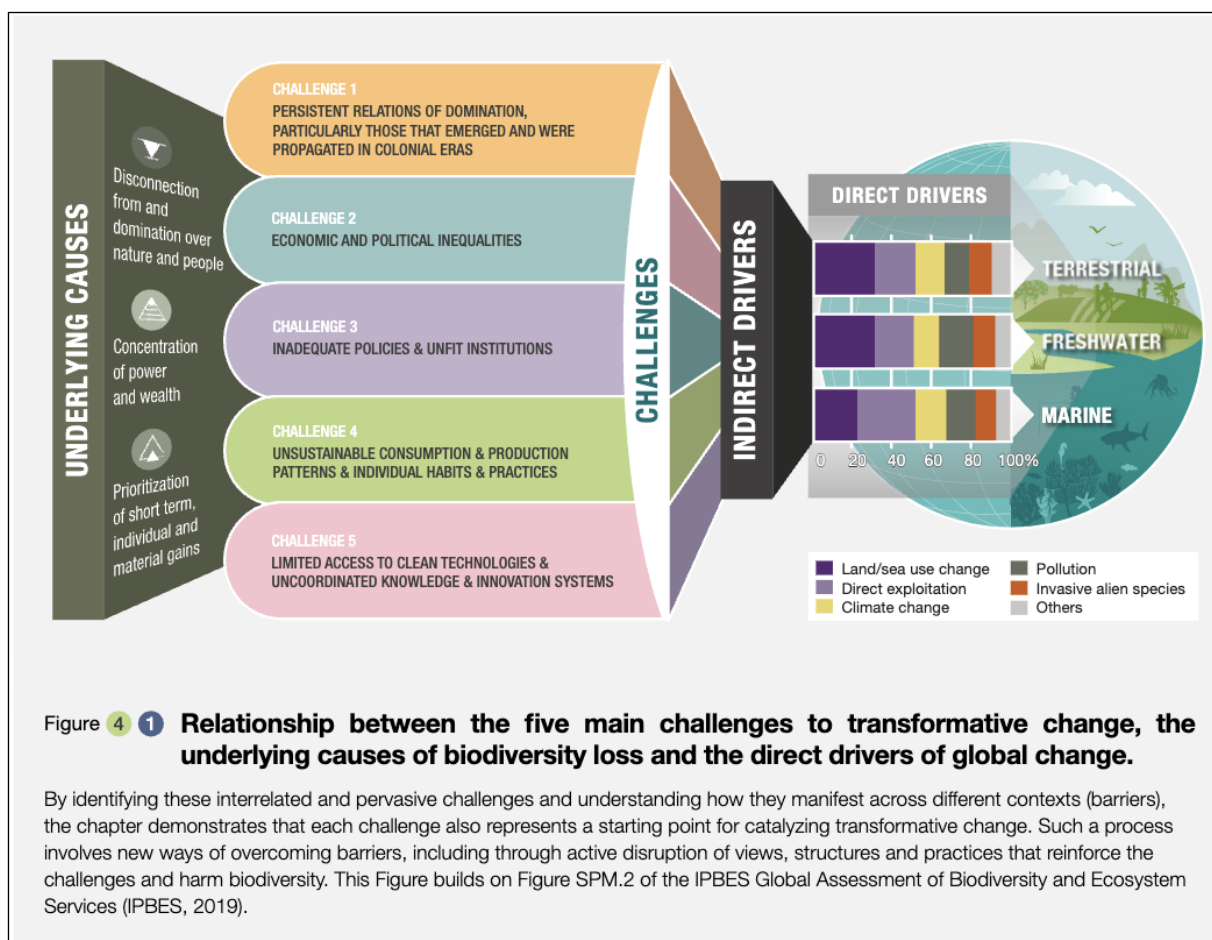
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on what transformative change means, how it occurs, and how to promote it for a just and sustainable world, while the Nexus Assessment explores the interwoven nature of biodiversity destruction, water scarcity and quality, food insecurity, health risks, and climate change, and proposes integrated solutions. Together, these reports underscore that achieving transformative change demands intersectional approaches, as the root causes of the interlinked crises they examine are fundamentally the same and must be tackled in a coordinated, systemic way.

The assessments affirm that persistent failures stem from a prevailing focus on proximate or direct drivers of biodiversity destruction (e.g., habitat destruction) while deeper, systemic drivers remain largely unaddressed. These root causes lie “beneath the surface of what is immediately obvious but nevertheless have significant links to the origin of observed problems”.⁵ For example, while states often respond to biodiversity destruction with measures such as expanding protected areas, effectively addressing the crisis requires confronting the underlying political and economic forces that drive state decisions to continue extractive land use change in the first place.⁶

The Transformative Change Assessment emphasizes three key underlying causes of biodiversity destruction: a) disconnection from and domination over nature and people; b) concentrated power and wealth; and c) prioritization of short-term, individual, and material gains. While “historical patterns of colonialism are reproduced in current economic structures that stimulate mobility of natural resources from low-income to high-income countries”, unequal distributions of power and wealth are kept in place by the pursuit and prioritization of short-term benefits for the few, over long-term, collective well-being.⁷ Vested interests, backed by substantial financial and political power, fight to maintain these structures, often co-opting or neutralizing attempts to enact change. Efforts to address these underlying causes are impeded by key barriers that prevent the translation of evidence and concern about biodiversity destruction – of which there is no shortage – into meaningful, systemic change (outlined in the figure below).



Source: Figure 4.1 in Chapter 4 of the IPBES Transformative Change Assessment⁸

One of the key reasons state efforts to address biodiversity destruction have fallen short is their overriding emphasis on reforming – rather than fundamentally changing – dominant systems. The Transformative Change Assessment argues, “Reformist responses related to biodiversity that attempt to reduce impact while leaving underlying drivers intact can become barriers to transformative change by creating a fallacy of action while legitimizing and obscuring the underlying drivers of biodiversity destruction.”⁹ In other words, responses which “tinker at the edges” are not only weak, but often end up legitimizing, entrenching, or even expanding the very systems that drive biodiversity destruction.

A common pattern is the treatment of biodiversity destruction as a technical issue, understood as a problem of inadequate information or institution or to be fixed with new market mechanisms or blended finance, rather than a crisis rooted in social, economic, and political systems. For example, biodiversity offsetting schemes often permit the very activities that imperil ecosystems while giving the impression of environmental protection. Likewise, environmental impact assessments have frequently failed to influence project approvals while risk and disclosure reforms designed to quantify corporate exposure to losses from environmental change have done little to redirect finance away from unsustainable activities. “Non-state, market-driven governance” has resulted in both weak outcomes and “strengthened underlying drivers of inequality and biodiversity destruction by advancing corporate power over land use”.¹⁰ These types of activities may create the appearance of action, but they often reinforce the status quo, in turn acting as barriers to transformative change (see figure below).



Source: Figure 4.5 in Chapter 4 of the IPBES Transformative Change Assessment¹¹

Persistent and pervasive relations of domination across global economic and political inequalities – which fall along gendered, racialized, and geographic lines – act as systemic constraints to, and block, transformation. Governments often justify extractive activities that cause biodiversity decline by appealing to the national or public interest. However, these activities are typically implemented in ways that fail to ensure local economic benefits, environmental protection, or Indigenous Peoples’ rights. Contrary to narratives of universal or local benefit, such policies tend to serve the interests of the privileged and powerful along longstanding colonial lines. The Transformative Change Assessment highlights how global power imbalances, especially in the international monetary and financial system, exacerbate structural inequalities. These dynamics, including disparities within and between income-rich and income-poor countries, further entrench inequalities by impeding policy autonomy and preventing institutional change needed for equitable distribution.¹² Addressing biodiversity destruction thus requires confronting underlying drivers such as the global debt architecture, transnational tax regime, and trade agreements. Without the transformation of these dominant economic and financial paradigms, achieving biodiversity goals will remain out of reach.

The Nexus Assessment goes as far as to say that strategies not traditionally focused on or explicitly aimed at biodiversity, such as transforming economic and financial systems, can often yield greater biodiversity benefits than conservation measures conventionally designed for that purpose. A recent study underscores this disconnect: while biodiversity policy experts express strong support for structural changes to the political economic “rules of the game”, most of the policy interventions they propose – on issues like sovereign debt, trade imbalances, capital mobility, and tax justice – are rarely, if ever, integrated in mainstream biodiversity policy discussions.¹³ In line with the Nexus Assessment’s call for coordinated and systemic action, the most effective way to address biodiversity destruction and interconnected crises is to confront the underlying structural constraints that cut across sectors and crises – whether it’s biodiversity destruction, water scarcity and quality, food insecurity, health risks, or climate change. This requires curbing the power of corporate actors, financial elites, and the governments that enable them, while redistributing power to those most affected by ecological collapse, including Indigenous Peoples, local communities, and other rights-holders.

Upholding rights and equity is foundational to achieving sustainable and just outcomes for people and nature. The Nexus Assessment finds that while “Promoting rights and equity leads to positive outcomes for people and nature ... wider scaling and support is critical for improved justice and gender equality.”¹⁴ This includes advancing equitable land and food systems – such as gender-inclusive tenure, agroecological practices, and Indigenous food systems – and rights-based approaches to conservation including land tenure and resource rights. Political and economic transformations are often essential to create the enabling conditions for these approaches to take root and flourish.

While both IPBES assessments offer important insights, their recommendations appear to embrace a “do-everything” approach: an expansive list of ideas that, while well-intended, lack clear guidance on prioritization or the clearest pathways to transformation. The Transformative Change Assessment’s critique of reformist responses is especially salient here. What is needed at this juncture is not simply a proliferation of ideas, but a more focused political strategy that confronts entrenched power structures rather than settling for incremental reforms.

The scale and interconnected nature of the crises demand a focus on interventions that disrupt structural inequalities and are capable of shifting power relations. This requires real mechanisms for redistribution, achieved through tax and debt justice, democratizing economic institutions like the IMF, World Bank, and credit rating agencies, and payments for ecological debts, among other existing proposals. These efforts must also go beyond surface-level equity and rights language, and instead firmly uphold land rights, curb the concentration and financialization of the food system, and actively dismantle the extractive logics embedded in global trade and investment regimes. These are not just policy ideas; they represent strategic leverage points for systemic change. The challenge is not the absence of solutions, but the coordination needed to advance those capable of disrupting the structures that sustain inequality and ecological crises.

Highlights from the IPBES Transformative Change Assessment and the Nexus Assessment

This section distills key data and findings from the IPBES Transformative Change Assessment and the Nexus Assessment, with a particular focus on how the assessments understand the systemic barriers that continue to impede progress towards effectively stopping biodiversity destruction.

Transformative Change Assessment

The Transformative Change Assessment focuses on what transformative change means, how it occurs, and how to promote and accelerate it for a just and sustainable world.¹⁵ Key findings include:

1. Transformative change for a just and sustainable world is necessary, urgent, and challenging, but possible.
2. Previous efforts have not been able to halt and reverse global trends in biodiversity loss – and in many cases have further entrenched existing problems – because they have not addressed the underlying causes. Both small and large-scale changes can contribute to transformative change, but they must focus on the underlying causes of biodiversity decline.
3. Core underlying causes of biodiversity loss are 1) disconnection from and domination of nature and people; 2) concentration of power and wealth; and 3) prioritization of short-term, individual, and material gains.
4. Transformative change is impeded at multiple scales by views, structures, and practices that are complex, power-laden, systemic, persistent and pervasive.
5. Achieving transformative change requires systemic shifts in institutions, economies, governance, and societal values.

The underlying causes of biodiversity loss

The Transformative Change Assessment provides a description of underlying causes¹⁶ of biodiversity loss and nature's decline that has been synthesized from an assessment of available evidence:

1. Disconnection from and domination of nature and people: “biodiversity loss and nature's decline are being driven by political and economic structures and systems that have historical links with colonialism, slavery and growth-driven economies.”
2. Concentrated power and wealth: “historical patterns of colonialism are reproduced in current economic structures that stimulate mobility of natural resources from low-income to high-income countries and represent one of the key factors maintaining substantial parts of the global population in a state of poverty.”
3. Prioritization of short-term, individual, and material gains: “Unequal distributions of power and wealth coincide with and are kept in place by prioritization of short-term, individual and material gains ... the primary focus of several policies and measures on short-term agendas and the satisfaction of immediate interests and gains at the expense of, or willfully ignoring, long-term impacts and needs.”¹⁷

Four key principles to address the underlying causes of biodiversity loss and guide the process of transformative change are: 1) equity and justice, 2) pluralism and inclusion, 3) respectful and reciprocal human-nature relationships, and 4) adaptive learning and action.

Challenges that impede or prevent transformative change

The Transformative Change Assessment highlights the key barriers that prevent the translation of evidence and concern about biodiversity loss into meaningful, systemic change:

1. Relations of domination over nature and people, especially those that emerged and were propagated in colonial eras and that have persisted over time;
2. Persistent economic and political inequalities, which fall along gendered, racialized, and geographic lines and contribute to maintaining the status quo;
3. Inadequate policies, including reformist approaches, and unfit institutions;
4. Unsustainable consumption and production patterns, including individual habits and practices but also production and consumption systems; and
5. Limited access to clean technologies, and uncoordinated knowledge and innovation systems.

Challenge	Example of how this challenge impedes transformative change
1. Relations of domination over nature and people	<ul style="list-style-type: none"> - views of biodiversity as separate from humans, to be controlled, managed, and exploited – understanding nature as a commodity - legitimize and perpetuate political economic systems and capitalist structures that facilitate the concentration of control over resources among a small number of people - systems of classification and stratification which normalize and reproduce inequalities that enable large-scale wealth accumulation and justify maldistributions of wealth, land and power and unequal conditions of labour
2. Persistent economic and political inequalities	<ul style="list-style-type: none"> - inequalities in the international monetary and financial systems, including within and between rich and poor countries and between public and private spheres - power dynamics which impede the policy autonomy of states - concentrated corporate and financial power - industry lobbying promotes deregulation, including the deregulation of environmental impact assessments to downplay ecological and social impacts, maintenance of harmful subsidies, reduction of duties/taxes
3. Inadequate policies and unfit institutions	<ul style="list-style-type: none"> - lack of accountability in biodiversity policies - neoliberal (re)structuring of state policies, including liberalization and austerity, which shift from state-led to market-based approaches - reformist responses to biodiversity loss that attempt to reduce impact while legitimizing and obscuring underlying drivers - institutional misfits that create oversights for dealing with biodiversity loss and, as a result, limit the effectiveness of biodiversity-focused policies
4. Unsustainable consumption and production patterns	<ul style="list-style-type: none"> - tensions or contradictions between economic and biodiversity goals - inequities in global consumption, which exceed the capacity of ecosystems to produce resources and absorb waste - lack of technical capabilities for managing and reducing waste, and inadequate recycling infrastructure for recovery of raw materials - business conglomerates have an interest in minimizing regulation and maintaining economic policies which incentivize environmental harms - system lock-ins such as path dependencies, export orientation, compartmentalized and/or short-term thinking
5. Limited access to clean technologies, and uncoordinated knowledge and innovation systems	<ul style="list-style-type: none"> - entrenched extractive technological systems - poor availability of or access to sustainable technologies - ineffective coordination of knowledge and innovation systems - inappropriate knowledge transfer - marginalization of Indigenous and local knowledge - unregulated emergent technologies

Transformative change vs. reformist approaches

The Transformative Change Assessment concludes that overcoming these challenges requires more than reformist approaches. Reformist approaches that reinforce challenges to transformative change:

1. Entrench and/or expand biodiversity-harming practices and structures;
2. Create an illusion of action and delegitimize; and
3. Obscure efforts to transform views, structures, and practices to curb biodiversity loss.

Strategies for transformative change

Governments continue to make ambitious commitments to address biodiversity loss but consistently fall short of meeting existing targets. Current policies and actions have failed to halt or reverse global biodiversity decline. In addition to persistent implementation gaps, the Transformative Change Assessment finds that current multilateral environmental agreements “rarely contain goals and actions that address the underlying causes and they do not always establish clear links between the actions and outcomes that they prescribe and the actual sources of the problems”.¹⁸ These underlying causes also fuel inequities and injustices. Those who have benefited the most from environmentally harmful economic activities also tend to hold greater power and resources to act. Advancing equity and justice requires mobilizing their capacity to drive meaningful change.

Each one of the challenges outlined above offers an entry point for transformative action. The Transformative Change Assessment identifies five main strategies, each with multiple actions and instruments that have the potential to facilitate, catalyze and/or support transformative change by addressing the direct and indirect drivers and underlying causes of biodiversity loss and nature’s decline:

1. Adopt conservation practices that are inclusive, well resourced, focused on places of high value to nature and people, and recognize the rights of Indigenous Peoples.
2. Transform the sectors that drive land use change and heavily contribute to biodiversity loss – including the agriculture and livestock, fisheries, forestry, infrastructure, mining and fossil fuel sectors.
3. Transform dominant economic and financial paradigms so that they prioritize nature and social equity over private interests.
4. Involve diverse stakeholders in decision-making and addressing governance challenges through inclusive, accountable and adaptive governance systems, while also co-creating new knowledge systems, worldviews, and values that recognize human-nature interdependencies and ethics of care.
5. Shift dominant societal views and values to recognize and prioritize human-nature interconnectedness.

Nexus Assessment

Environmental, social, and economic crises are interconnected, making separate attempts to address them ineffective. IPBES addresses this in the Nexus Assessment. This report explores the interwoven nature of biodiversity loss, water scarcity and quality, food insecurity, health risks, and climate change, and proposes integrated solutions. While not a central focus, relevant energy system aspects are also assessed in relation to their connections with biodiversity, water, food, health, and climate change adaptation and mitigation.

Key findings include:

1. *Environmental, social and economic crises are deeply interlinked*
Biodiversity loss, food and water insecurity, health risks, and climate change are tightly interlinked and often compound one another – making siloed responses ineffective and counterproductive.
2. *Interlinked challenges require interlinked solutions*
Fragmented governance of biodiversity, water, food, health, and climate change, with different institutions and actors often working on disconnected and siloed policy agendas, has resulted in both conflicting objectives and duplication of efforts.
3. *Coordinated actions across sectors lead to better outcomes*
When policies are designed to work together – rather than in isolation – they can deliver stronger results

for biodiversity, water, food, health, and climate. Numerous highly synergistic response options are already available to actors in multiple sectors for sustainably managing across nexus elements.

4. *Short-term economic priorities undermine biodiversity and equity*
Societal, economic, and policy decisions that prioritize short-term financial returns for a few undermine biodiversity and other essential systems, resulting in unequal human well-being outcomes. These burdens disproportionately affect developing countries, Indigenous Peoples and local communities as well as the most vulnerable populations in higher-income countries.
5. *Transforming governance and financial systems is essential*
Existing governance and financial systems fail to manage the complex links across multiple crises, while perpetuating inequality. Nexus approaches – which address underlying drivers and root causes – offer a pathway to better policy alignment, inclusion of diverse actors and values, and more effective, equitable outcomes across sectors and scales. At the same time, closing finance gaps for biodiversity requires reforms to economic and financial systems.
6. *Dominant socioeconomic systems require transformation*
Negative trends in biodiversity, water, health, and climate change stem from economic and societal value systems that prioritize short-term gains and private financial returns, often benefiting only a small segment of society. Addressing these challenges requires inclusive and equitable decision-making that involves those most affected, alongside broader economic and financial reforms.

Unequal impacts and equity dimensions of nexus interactions

A critical insight of the Nexus Assessment is that negative trends in biodiversity, water, health, and climate change are the result of economic and societal systems that prioritize short-term financial gains for a limited few, incentivizing harmful investments while underfunding actions that sustain nature. Existing policies and international agreements have largely been ineffective in reducing these economic pressures. Private sector financial flows are estimated to cause \$5.3 trillion in biodiversity damage annually while public subsidies that incentivize such harmful activities amount to approximately \$1.7 trillion per year. While the economic impacts of biodiversity loss vary between countries and regions, developing countries tend to face higher relative impacts, where there are also greater barriers to mobilizing sustainable financial flows – often compounded by high debt burdens.

The assessment finds that the financing gap for biodiversity may reach up to \$1 trillion per year, while additional investments required to achieve the Sustainable Development Goals are estimated at a minimum of \$4 trillion per year. Urgent action is needed to transform economic and financial systems – by shifting foundational values and structures and addressing the dominance of narrow interests – in order to create the conditions for significantly increased investment in biodiversity and other interconnected priorities.

The impacts of changes in biodiversity, water, food, health and climate are unevenly distributed: people in developing countries are disproportionately affected by the degradation of nexus elements, and land inhabited by Indigenous Peoples is more affected by degraded nexus elements than other areas:

1. Over half of the global population live in areas with degradation of at least one nexus element. These burdens disproportionately affect developing countries, Indigenous Peoples, and the most vulnerable populations in high-income countries.
2. Indigenous lands face significant pressures from illegal and unregulated extraction – causing serious implications on nexus elements essential to livelihoods. This is compounded by losses of language and culture, and exclusion from research, decision-making, and funding.
3. When recognized and supported, Indigenous Peoples and local communities effectively manage conserved areas and food systems, delivering nexus-wide benefits.

Advancing transformational nexus approaches

Currently, many options exist for sustainable management across nexus elements. The assessment highlights that approaches *not traditionally focused on biodiversity* – such as transforming economic and financial systems – can often deliver greater biodiversity benefits than those specifically designed for that purpose.

Transformation of economic and financial systems can involve:

1. Strengthening decision-makers' capacity to understand and respond to links between economic and ecological systems;
2. Reforming fiscal and regulatory environments – the “rules of the game” – to shift incentives by making harmful activities more costly;
3. Aligning economic and financial systems with biodiversity goals, including removing harmful subsidies and incentives;
4. Pursuing transformational changes, such as adopting metrics beyond GDP and ensuring inclusion of diverse values and marginalized voices in decision-making;
5. Improving access to financial resources, with a focus on developing countries and Indigenous Peoples and local communities that face systemic barriers to financing;
6. Addressing structural challenges, including existing debt burdens and the need for just and equitable transitions.

Another central part of transformational change is ensuring rights and equity, which benefit both people and nature. The assessment advocates for several response options to promote rights and equity:

1. Equitable land and food systems, supported through gender-inclusive tenure and agroecological practices;
2. Indigenous food systems, grounded in reciprocal worldviews, which supply healthy and sustainable food while contributing to biodiversity and climate action;
3. Health-related response options, such as universal health coverage, which uphold rights and well-being; and
4. Rights-based approaches to conservation, grounded in access to and management of natural resources, land tenure, and recognition of the rights of nature.

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Endnotes

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- ¹¹ IPBES, “IPBES Transformative Change Assessment: Chapter 4. Overcoming the challenges of achieving transformative change towards a sustainable world”, p. 178.
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