

Loss and damage finance should apply to biodiversity loss

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Global biodiversity loss has been disproportionately driven by consumption of people in rich nations. The concept of ‘loss and damage’ – familiar from international agreements on climate change – should be considered for the effects of biodiversity loss in countries of the Global South.

For decades, countries across the Global South have been calling on rich countries to accept responsibility for greenhouse gas emissions that have increased global temperatures and resulted in irreversible damage across the world, even before the United Nations Framework Convention on Climate Change (UNFCCC) was formally agreed in 1992. At the 2022 UNFCCC conference of the parties (COP27), a landmark agreement was finally reached to establish new “funding arrangements for responding to loss and damage associated with the adverse effects of climate change”¹. The intention is that rich countries contribute to the fund, which is then channelled to poorer countries to address losses and damages linked to climate change – a kind of ‘polluter pays’ approach.

A month after the COP27 climate conference ended, the long-delayed COP15 of the Convention on Biological Diversity took place in December 2022. There, there were similarly heated discussions as to who should pay to halt and reverse the loss of biodiversity, and

countries of the Global South were adamant that rich countries should shoulder more of the financial burden. Alongside the adoption of a new framework of goals and targets for reversing biodiversity loss (the Kunming-Montreal Global Biodiversity Framework (GBF)²), a decision on resource mobilization³ included the establishment of a Global Biodiversity Framework Fund to support implementation of the GBF. This fund is intended to contribute to the mission of the GBF to halt and reverse biodiversity loss – but it stops short of financial provision for the effects of biodiversity loss. Here, we explore the merit of applying the loss and damage concept to the nature finance debate.

Loss and damage in the context of climate change

There is no formal definition of loss and damage. A working definition used by the UNFCCC describes it as, “the actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems”⁴. Others have described it as the losses and damages that occur after mitigation and adaptation options have been applied because limits to adaptation have been reached⁵. These limits include soft limits, by which social, economic, technical and political factors make certain adaptation options unavailable⁶.

Loss and damage can take many forms and will vary both with the context in which they occur and with different types of climate hazards experienced – from sudden extreme weather events, such as floods and droughts, to slow-onset processes such as sea-level rise or desertification. Although some countries have experienced climate



Fig. 1 | Local fishers on the coast of Mauritania.

hazards, such as seasonal hurricanes and cyclones, for centuries, climate change has altered the intensity, frequency and location in which these hazards occur and thus the damages they inflict. Losses and damages are generally categorized as economic (loss of resources, goods and services that are commonly traded in markets and thus can be quantified and valued) and non-economic (not traded in markets and therefore difficult to quantify and value)⁷. They can also be immediate, direct impacts (including the loss of lives, livelihoods, assets and infrastructure) or longer-term secondary impacts (such as disruption of health and education services, loss of cultural heritage or identity, forced migration, breakdown of social cohesion, stress and other mental health effects). The scale and seriousness of these impacts will vary depending on various interlinked contextual factors, including physical exposure to climate hazards, the level of poverty and/or economic development, the quality and resilience of infrastructure, social and economic inequalities, the presence or absence of essential services, the state of institutions and governance arrangements, and so on. These impacts are being felt disproportionately by communities across the Global South.

Applying the principle of loss and damage to biodiversity loss

The key rationale for providing reparations related to loss and damage from climate change is based on justice. Rich countries are responsible for, and have disproportionately benefited from, historic emissions that have caused the global temperature increases that are now manifesting in multiple types of damage, primarily in poorer and more vulnerable countries who have contributed the least to climate change. These losses and damages require reparation – in line with the polluter pays principle.

There is no direct biodiversity equivalent to the Global North–Global South, cause-and-effect nature of climate change impacts, but there are some uncomfortable similarities. Two of the key drivers of biodiversity loss are habitat loss and degradation in terrestrial ecosystems, and over-exploitation in aquatic ecosystems⁸. These drivers are, to a large part, fuelled by consumption in rich countries and, in many cases, the effects are felt in developing countries. For example, one of the UK government's official biodiversity statistics covers the impact of UK consumption on global biodiversity. Analysis shows that UK consumption of crop, cattle-related and timber commodities in 2018 (the latest year for which data are available) was associated with an estimated 35,977 ha (equivalent to more than 43,000 football fields) of tropical deforestation⁹. Similarly, industrial fishing by EU fleets in West Africa to satisfy demand from EU consumers has been associated with overfishing and the depletion of stocks of both target and non-target fish¹⁰ (Fig. 1). As one author group has put it, “developed countries are major net importers of embodied biodiversity loss, associated with commodities coming from developing countries”¹¹.

For climate change, countries of the Global South experience impacts disproportionately to their contribution to emissions – so the application of the polluter pays principle seems clear. When it comes to biodiversity impacts, however, Global South countries may, in many cases, have willingly entered into agreements with rich countries to meet their biodiversity consumption demands. These trade deals can fuel national and local economic development and may be embraced by governments and individual producers alike. It could be argued, therefore, that there is no injustice and that all parties involved are polluters.

But consideration has to be given to the power imbalances at play in terms of unequal negotiating power both between rich and poorer countries (particularly where the latter need to prioritize economic

development opportunities and foreign investment¹²) and between powerful commercial interests and small farmers or fishers. These imbalances, which often originate in historical colonial relationships and have become entrenched in neocolonial financial dependency, leave Global South countries – and particularly people living in poverty within Global South countries – at a disadvantage. Power imbalances may also be exacerbated by the structural adjustment programmes imposed by the International Monetary Fund and the World Bank on many low-income countries in the 1980s that forced them to liberalize and privatize, providing an opportunity “for global mining, farming and forestry companies to exploit natural resources in developing countries on a massive scale”¹³.

Even if trade agreements are willingly entered into, it is clear that biodiversity loss – driven primarily by consumption in the Global North – can and does result in economic and non-economic losses for people in the Global South. In the case of the EU fishing fleet in West Africa, there has been a considerable negative impact on local communities who are reliant on fish for income and for food, resulting in poverty, unemployment, declining health and social stress in the local communities, and forced migration of young people in the search for work¹⁴. Similarly, in the case of soy production in Latin America for international exports, although positive economic benefits have been highlighted by many local farmers, the loss of forest areas has decreased the availability of forest resources and, as such, limited alternative income opportunities as well as access to energy sources and cultural values¹⁵.

In other words, just as emissions generated by rich countries can cause climate-linked problems for countries across the Global South, so too can consumption in rich countries cause biodiversity-linked problems in these countries. Although discussions on global biodiversity financing have emphasized the need for rich countries to pay to conserve and restore biodiversity and to eliminate activities that may cause further harm (see, for example, the ‘Ten Point Plan for Financing Biodiversity’ to which over 40 countries have signed up¹⁶), they have not considered channelling funds to the Global South specifically in recompense for the social and economic effects of biodiversity loss that has been driven by richer countries (although conservation and restoration will of course help to prevent future, and/or reduce current, losses and damages).

Paying for the impacts of biodiversity loss as part of climate change loss and damage

Given the challenges that have been associated with reaching an agreement on biodiversity financing to date, it may be unrealistic to seek to expand the scope further and make a case that there should be a dedicated loss and damage fund for biodiversity in the same way that one will soon exist for climate change. However, if the appropriate mechanisms are put in place to account for non-economic losses and damages, then some of the damages associated with biodiversity loss could potentially be addressed through the climate loss and damage fund.

Climate change is a key driver of biodiversity loss⁸. Indeed, biodiversity loss can be considered as one of the types of loss and damage from climate change that could or should be eligible for loss and damage funding⁵. Because biodiversity is difficult to quantify in monetary terms, it is considered as a type of non-economic loss and damage. But biodiversity loss can also lead to further economic as well as non-economic impacts. This is particularly true for people who are marginalized or living in poverty, who often depend more

directly on natural resources and the services that nature provides to meet their immediate livelihood needs, and who also cannot afford substitutes for natural resources and services that were previously freely available¹⁷. Economic losses and damages linked to biodiversity loss include reduced crop productivity, reduced food and nutritional security, reduced income and reduced bio-trade opportunities. Non-economic losses and damages include loss of cultural values, loss of traditional knowledge, loss of territory and negative health impacts. Moreover, biodiversity loss increases future vulnerability to climate change, and thus is likely to lead to further spiralling losses and damages.

It is not yet clear how the mechanism for paying for loss and damage from climate change will work in practice. But it does seem clear that paying for the damages associated with biodiversity loss could and should be part of this. An option could be to earmark some funding within the climate change loss and damage framework for helping communities to absorb and (where possible) recover from the losses and damages caused by biodiversity loss resulting from climate change.

Towards 'consumer pays'

Biodiversity loss – and its associated economic and non-economic impacts – is clearly a form of loss and damage associated with climate change. But just as importantly, consumption in rich countries is a major contributor to biodiversity loss in the Global South and it is clear that the resulting losses and damages are felt by communities throughout these countries. The principle of consumer pays for biodiversity loss is perhaps less obvious than that of polluter pays for climate change, but we argue that there is a case for richer countries effectively paying compensation for their consumption. Going forward and based on the parallels between international negotiations on climate and biodiversity finance, there would be a case for countries of the Global South countries to push for loss and damage-type discussions through the GBF Fund or other nature finance mechanisms. At the very least, opening up the debate about the justice issues associated with biodiversity loss could help to enhance the delivery of the GBF, recognizing the imperative not only of halting and reversing biodiversity loss but also tackling rampant consumerism as one of the key drivers of that loss.

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Competing interests

The authors declare no competing interests