

The ongoing biodiversity loss and how it can be stopped

A reading of the *IPBES Global Assessment on Biodiversity and Ecosystem Services*

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Seven years after its official launch, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), sometimes called the "IPCC for biodiversity", released its *Global Assessment Report on Biodiversity and Ecosystem Services* on May 6, 2019.¹

Almost 15 years have passed since a synthesis of knowledge was published on the global state of biodiversity, namely the *Millennium Ecosystem Assessment* in 2005. Global biodiversity governance is reaching the end of two decades of very ambitious commitments to preserve biodiversity, taken at the level of the Convention on Biological Diversity (CBD). The IPBES report underlines once again that global trends remain alarming, while some are deteriorating. At a time of ongoing negotiations regarding the future global biodiversity governance framework, which is to be adopted at the end of 2020 at the CBD COP15 in Kunming, China, IDDRI identifies and highlights a number of points in the *Global Assessment* that it considers particularly striking, pointing to avenues for action.

¹ <https://www.ipbes.net/>

KEY MESSAGES

The *Global Assessment* shows that biodiversity collapse on the continents is primarily due to land use changes related to agriculture, particularly linked to the increased consumption of animal products. Regarding oceans, pressure from fisheries is the main cause of the decline. This suggests the adoption of commitments relating to food and agricultural systems.

The political progress that has been achieved relates mainly to the adoption of texts. However, the implementation of such texts is lacking, calling for some political efforts to be shifted towards their practical realisation.

Part of the solution will be based on "indigenous peoples and local communities", for whom the report highlights their numerical significance and their major role in biodiversity preservation. This suggests designing modes of economic and social development that both protect and rely on these populations.

Upcoming negotiations for the renewal of the CBD post-2020 framework could address the issue of objectives that target food and agriculture in particular. This is also the case for the WTO negotiations on fishery subsidies, as well as the negotiations on the implementation of the 2030 Agenda.

1. A GENERAL TREND

There is no need to re-examine the abundance of alarming statistics from the *Global Assessment on Biodiversity and Ecosystem Services* report (hereafter the *Global Assessment*), which includes evidence of accelerated species extinction and warns of the possible extinction in the coming decades of somewhere between 500,000 and one million species.

Furthermore, it is important to note that the *Global Assessment* does not identify any positive trends at the global level. This indicates that the problem of biodiversity loss stems from a general worldwide trend, and is not compensated for by achievements with single species, such as the giant panda, the California condor, or certain whales. The *Global Assessment* helps to identify the dynamics underlying this general trend, which this Issue Brief tries to make as clear as possible in an action-oriented perspective.

2. A GLOBAL ROOT CAUSE IS REVEALED: LAND USE CHANGE FOR AGRICULTURE

Ongoing biodiversity loss has many causes, including pollution, urbanisation (which today accounts for a land area of 3% at most, but is expected to triple by 2030, see Chapter 2, 2.1.4.3), resource overexploitation (illegal in particular), climate change, and the influx of invasive alien species. But most analyses show that the main cause is land use change, which tops the list in all regions and habitats. This refers either to the changing way that land and natural resources are used (for example, an intensive crop replacing a humid grassland, a planted forest replacing a primary forest), and/or the replacement of natural habitat with a radically different habitat (e.g. replacing a forest with cropland) (chapter 2, 2.2.6). Today, more than half of land is heavily modified in this way (Chapter 2, 2.1.13.1).

However, the report shows that these changes are mainly related to agriculture, which has grown considerably in terms of area and intensification, and is continuing to grow (Chapter 2, 2.1.5.2.1). Agriculture represents one third of the world's land surface area today. Since 1980, 55% of the increase in agriculture has been at the expense of "intact" forests, and 28% to the detriment of secondary (managed) forests. In addition to its growth in terms of area, the impacts of intensive production are also highlighted. For example, pesticide concentrations exceed regulatory limits worldwide in more than 50% of cases (Chapter 3, 3.4.6.). Since the 1980s, agricultural intensification has resulted in a doubling of water and pesticide use, a threefold increase in fertilizer use, and a tenfold increase in poultry density, but has not eased the pressure on land use (Chapter 2, 2.1.11.2).

Other causes are equally important. Thus, the role of climate change today is mainly to exacerbate the other drivers (except in relation to coral reefs, where it is already having a major impact). In fact, the relative impact of these other causes varies according to the regions of the world.

This testifies to the fact that the main "structural cause", which should receive the most attention, is that of the model of agricultural development and production, or to be more precise, the choice between the models of agricultural development.

3. WHY SUCH LAND USE?

To explain these findings, and to re-examine their root causes, the report highlights three main causes that are exacerbating each other: (1) population growth; (2) the emergence of new middle classes, the hundreds of millions being lifted out of poverty, who are reaching higher consumption levels; (3) and finally, the pursuit by all of a material-intensive lifestyle. "Unsustainable" consumption was once limited to a rich minority, but is now becoming more widespread and increasing in volume. This growth is making the biophysical limits of the globalised food and agricultural system ever more visible. In general, the most developed countries remain the highest consumers of raw materials per capita, and their raw material imports are partly responsible for the biodiversity loss in developing countries. Indeed, globalisation is driving a parallel homogenisation of food and agricultural production, as well as the loss of local specificities. As a result, the number of people who consume more meat, fish, milk, eggs and sugar-based products of the food and agriculture industry has significantly increased, and per capita consumption has not been reduced, which largely explains the ongoing pressure on land area for food (Chapter 2, 2.1.4.4.1. et 2.1.13.). The consumption of animal products accounts for one third of crops through cereals for animal feed, and a total of three quarters of the land used for agriculture (*id.*, 2.1.11.2.). Industrial fisheries cover 55% of oceans (*ibid.*, 2.1.11.1.). These developments have been accelerated by economic, social and technical choices. For example, funds from tax havens account for more than two-thirds of foreign capital invested in Brazilian soybeans and cattle farming, and have financed 70% of the fleet involved in illegal or unregulated fisheries (Chapter 2, 2.1.6.4.3.).

Ultimately, it is the increase in consumption up to very high levels of calorie intake per capita, and particularly the proportion of animal products in this total calorie intake, that appears to be the largest and most ubiquitous explanation for habitat loss, which is generally the main cause of biodiversity loss, and resource overexploitation, which is a major cause of ocean depletion (*ibid.*, 2.1.11.1.).

4. PROGRESS HIGHLIGHTED BY THE GLOBAL ASSESSMENT: IS IT ONLY ON PAPER?

Chapter 3 assesses the extent to which countries have made general progress in relation to the Aichi Targets, set for 2020 in response to the threats, and in the framework of the CBD, which cover both means (e.g. reducing subsidies harmful to biodiversity) and results (e.g. protecting and restoring forests).

Indicators that appear both positive (moving in the right direction), and supported by reliable measures ("significant" indicators), indicate five key advancements:

- There are improvements to biodiversity protection in the texts: ratification of the Nagoya² and Cartagena³ Protocols has progressed, so has their translation into national legislation, the writing of "national strategies for biodiversity", and above all the allocation of an increasing extent of "protected areas". The objective of granting protection status to 17% of land area and 10% of ocean is nearing completion (Aichi Target 11).
- There is progress in raising awareness.
- Forest area is increasing.
- Volumes and production areas "under environmental labels" are increasing, especially for fish and timber.
- Trade in threatened and protected species is decreasing.

Significant indicators are decreasing for all other Aichi Targets, particularly those related to the sustainable use of biodiversity and space, the removal of harmful subsidies, the ecological footprint of economic activity, pollution, ecosystem restoration, etc. In addition, the positive developments noted above are sometimes less promising than they appear: the level of protection actually implemented in protected areas is low (Chapter 3); the increase in forest area is not necessarily an improvement for biodiversity, as lost natural forests are largely replaced by plantations (Chapter 2); despite the increase in organic labels, the volumes of pesticides used are increasing worldwide and there is no slowing of deforestation (Chapter 2), and labels do not seem to have a significant effect on over-fishing or deforestation (*id.*, 2.1.7.). Globalisation of agri-food markets, and the economic concentration downstream in the value chains, have been identified as major factors in the resistance to the effectiveness of this type of approach (Chapter 2, 2.1.6.).

It should be noted, however, that some of the indicators and measures of "positive" progress are not mentioned here because they are considered "non-significant".

This assessment of the achievement of objectives gives the impression that most of the progress is focused on what might be called "formal protection", i.e. the texts. The rest of the report shows that this is insufficient to resist pressures, notably those generated by the globalised agri-food industrial system.

One possible interpretation of these findings is that governments are responding to growing public pressure by adopting texts and instruments that are increasingly ambitious in principle, but that implementing these texts proves difficult, because their practical application would call into question the development policies of economic sectors as they are currently conceived. It is also striking to note that the difficulties faced by biodiversity conservation, particularly in protected areas,

are largely due to the non-application of the law: uncontrolled pollution, illegal trafficking, infringement of the land rights of indigenous peoples and local communities, etc. This leads to the conclusion that a proportion of the efforts, and the commitments of States, should be redirected towards the effective implementation of existing texts, and the support of their practical application, especially regarding development assistance.

5. AN ESSENTIAL DIMENSION OF BIODIVERSITY CONSERVATION: THE HABITAT OF INDIGENOUS PEOPLES AND LOCAL COMMUNITIES

The importance of indigenous peoples and local communities,⁴ in relation to the above-mentioned observations, is particularly striking in the report, going well beyond the attention generally given to the issue by public opinion. The report shows their importance in the global equation that will have to be solved if we want a diversified and resilient planet. Indigenous peoples represent about 5,000 groups and between 300 and 370 million people. Local communities represent even more numerous and diverse populations, all of which can represent up to 1.5 billion people, i.e. up to 20% of the present global population (Chapter 2, 2.1.4.4.2.). However, their hunting, cultivation, breeding and fishing practices are generally favourable to biodiversity conservation, and can even enhance it (*id.*); they often practice types of agroecology, sustainable forest management and the selection of traditional varieties to protect soils (Chapter 2, 2.1.5.1.). In parallel, it is likely that a large part of the problems affecting poor regions comes from the disruption of ancestral adaptation strategies to local conditions. However, due to the loss of their habitats, and policies leading to their sedentarization (permanent settlement), these peoples and communities are in decline, which contributes to biodiversity loss (Chapter 4, 4.1.4.).

The reading of this report suggests that a central question to be addressed is that of their preservation and support, and therefore of the forms of economic and social development to be devised, which could preserve their specificities and at the same time enable them to achieve the human development indices that they feel are desirable. Today, these issues are mostly addressed through the prism of the remuneration for the potential biological discoveries that could be made by cosmetic or pharmaceutical companies in the ecosystems preserved by these peoples and communities. To us, the issue

² <https://www.cbd.int/abs/>

³ <https://bch.cbd.int/protocol>

⁴ There is no precise definition in legal texts. These terms refer to individuals and communities that are either self-defining as such, or are members of local communities that maintain a connection to places and to nature through lifestyles, cultural identities, institutions and ecological knowledge.

seems much broader, and we need to challenge the development and cooperation policies in a deeper way, with the aim of preserving the diversity that links humans and other species.

6. WHAT NEXT? NEGOTIATIONS AND POLITICAL PROCESSES

- In the agreement negotiations that should renew the objectives and commitments of parties to the CBD after 2020: it has been shown above that to tackle the root causes of biodiversity loss, the future international framework should find ways to influence food and agricultural production models, as well as other key factors of economic development. This could include advocating for specific food-related goals, particularly regarding industrial animal products consumption and the policies that influence it. And similarly, regarding agriculture, this could be achieved through indicators adapted, on the one hand, to address the various pressures caused by intensive models (pesticides, synthetic fertilisers, changes in agricultural land use, etc.), and on the other hand to support different types of agroecology. If “voluntary contributions” from States party to the CBD emerge, then targeted and regionally adapted commitments on these issues would be essential.
- At the same time, this implies that it is important to acknowledge the significance of non-state actors in the agriculture and food production sectors, along with their discussion and commitment fora, in relation to the Action Agenda that was launched to support the CBD’s intergovernmental mechanism, which has yet to be developed. However, to ensure that commitments are not superficial, their precision, monitoring and transparency of implementation will

be essential.⁵ We could imagine structuring this discussion according to major world regions, and/or by grouping the producing and exporting countries, together with sectoral players acting in specific commodities value chains.

- Discussions are underway at the World Trade Organisation on harmful subsidies, especially for fisheries. In this framework, States have an opportunity to solve part of the problem through negotiations on harmful subsidies.
- Going beyond the issue of access and benefit-sharing from the use of genetic resources, it will be crucial that development policies, and therefore development assistance, understand the crucial importance of indigenous peoples and local communities, design development trajectories that protect them (especially in terms of land), enable them to improve the human development indices adapted to their needs, and truly implement the existing relevant principles, such as those of the Escazú Agreement⁶ in Latin America.
- Finally, the full implementation of the 2030 Agenda for Sustainable Development is key for biodiversity, because the report underlines the essential relationship between the development model, particularly agriculture and food production, and biodiversity. We also know, for example, that actions to strengthen the empowerment of women (education in particular) in developing countries are key, and will remain so, to the population dynamics of regions that will experience the strongest growth in the decades ahead.

⁵ The “Sharm el-Sheikh to Kunming Action Agenda for Nature and Peoples” was officially launched during CBD COP14: www.cbd.int/action-agenda. See the following text for further discussion: Rankovic, A., Maljean-Dubois, S., Wemaere, M., Laurans, Y. (2019). An Action Agenda for biodiversity: Expectations and issues in the short and medium terms, IDDRI, *Issue Brief* N°04/19.

⁶ Barchiche, D., Hege, E., Napoli, A. (2019). The Escazú Agreement: an ambitious example of a multilateral treaty in support of environmental law? IDDRI, *Issue Brief* N°03/19.

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