

## IPBES after Kuala Lumpur: Assessing knowledge on underlying causes of biodiversity loss is needed

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The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) recently released its first assessments during its fourth plenary meeting in Kuala Lumpur, Malaysia. How these first works will influence debates on biodiversity policies, and potentially support their implementation, will now be a point of attention for the conservation community. Thanks to its original structure and its desire to mobilize a vast diversity of knowledge, IPBES is a historic opportunity to synthesize available knowledge on the causes, rooted in human collective action, that are behind biodiversity loss. The release of the pollination assessment provides the occasion to identify challenges and opportunities to better integrate knowledge on public policies, economic processes and other underlying factors in future IPBES works. The released assessment, albeit identifying a series of direct drivers to pollinator decline, does not actually cover “indirect drivers” or “underlying causes” of biodiversity loss with the same depth of analysis. Addressing these topics will require the development of innovative interdisciplinary work among ecological and social sciences, and is crucial in order to find relevant policy options to halt biodiversity loss. There are several windows of opportunity, in the near future, to enhance the focus of IPBES on knowledge about the underlying causes of biodiversity loss.

### RECOMMENDATIONS

#### 1. While preparing the next IPBES work programme, governments should:

- Request and prioritize an *ad hoc* thematic assessment on existing policies and instruments having an effect on biodiversity worldwide;
- Emphasize the focus on “indirect drivers” in all their other assessment requests;
- Ensure that “indirect drivers”, and particularly policies and existing solutions for their implementation, are sufficiently covered in all scoping documents, with a dedicated chapter.

#### 2. IPBES should actively reinforce the contribution of social sciences to its work:

- Works on biodiversity-impacting policies worldwide should not be considered as policy prescriptive on the basis that they synthesize research on on-going or past governmental action; they are necessary to support effective implementation of biodiversity policies;
- Governments and stakeholder organizations should nominate a higher number of social scientists so that they can be in a capacity to contribute to, and also coordinate, such interdisciplinary works;
- Similarly, the proportion of social scientists selected as IPBES experts and coordinating lead authors should be increased.

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## 1. IPBES AND THE IMPLEMENTATION CHALLENGE

IPBES has the overall objective of “strengthening the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development”. Compared to previous international assessment mechanisms on biodiversity,<sup>1</sup> IPBES innovates in its ambition to integrate a great diversity of academic and non-academic knowledge. Besides, its functions are not limited to producing assessments, as it possesses three other functions: *knowledge generation catalysis*, *policy support* and *capacity building*.<sup>2</sup> Taken together, these characteristics make IPBES a useful and innovative tool to build the necessary knowledge base to address the challenge of implementing biodiversity policies worldwide.

Indeed, almost twenty-five years after the Convention on Biological Diversity was signed, and with five other international conventions focusing on biodiversity issues,<sup>3</sup> as well as numerous expertise mechanisms developed over the years, both the problem and the need to act seem well acknowledged internationally. The CBD’s Strategic Plan 2011-2020 and its Aichi Targets, are another example of international commitment. Why then, despite this recognition, is biodiversity still eroding?

Synthesizing knowledge on this precise question would, actually, be a major contribution from IPBES to biodiversity governance. Alongside research on the state of biodiversity and its direct drivers, what is critically needed now is to understand what hampers the implementation of conservation policies and why given policies fail or succeed in halting biodiversity loss worldwide. Examples of questions that need an international synthesis effort include: What is the net effect on biodiversity of often contradictory sectoral domestic policies? How much does spending for conservation weigh compared to environmentally harmful incentives? What do studies tell us about the conservation efficacy of different types of instruments (legal, economic, technical) in the field?

1. For instance : the *Global Biodiversity Assessment*, the *Global Biodiversity Outlooks*, the *Millennium Ecosystem Assessment* and its declinations, *The Economics of Ecosystems and Biodiversity*.

2. Decision UNEP/IPBES.MI/2/9, Appendix 1.

3. Six international conventions focus on biodiversity issues: the CBD, the Convention on Conservation of Migratory Species, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the International Treaty on Plant Genetic Resources for Food and Agriculture, the Ramsar Convention on Wetlands, and the World Heritage Convention.

Answering such questions would require focusing on factors usually qualified as “indirect drivers” or “underlying causes” of biodiversity loss, which are typically the object of CBD’s Aichi Targets 1-4. These underlying causes are linked to the functioning of human societies and refer to phenomena that are the traditional domains of investigation of social scientific research. IPBES could represent a historical occasion to develop innovative interdisciplinary work to synthesize available knowledge on policies and instruments having an effect on biodiversity worldwide.

## 2. CRITICAL BLINDSPOTS AND DISCIPLINARY GAPS IN THE IPBES POLLINATION ASSESSMENT

To achieve this vision, a series of obstacles would need to be overcome first, as revealed by IPBES’ first thematic assessment. The assessment on pollinators, pollination and food production provides a welcome synthesis on the state of world pollinators and what is known of their contribution to agriculture. It identifies a series of “direct drivers” threatening pollinators (land-use change, intensive agricultural management and pesticide use, environmental pollution, invasive alien species, pathogens and climate change), which is in itself an important progress in current policy debates. It leaves aside, however, knowledge on important underlying causes such as agricultural trade and policies that are only cursorily addressed in four short paragraphs at the end of Chapter 2. Even though contradictions among sectoral public policies and associated phenomena such as environmentally harmful subsidies are increasingly recognized as major causes behind continuous biodiversity loss,<sup>4</sup> knowledge thereof is barely mentioned throughout the pollination assessment. In the summary for policymakers (SPM), the word “subsidy” does not even appear. International trade governance strongly influences the production of agricultural commodities, however evidence about this is neither mentioned. When it comes to the possible responses to halt pollinators decline (e.g. Table SPM.1 in the SPM), even though the assessment identifies categories such as “transforming agricultural landscapes”, it does not mention the contextual conditions that would enable such changes, nor the factors that are currently involved in blocking change.

4. James A. N., Kevin J., & Balmford A. (1999). Balancing the Earth’s accounts. *Nature*, 401, 323–324; Centre d’analyse stratégique (2012). *Les aides publiques dommageables à la biodiversité*, rapport de la mission présidée par Guillaume Sainteny, Paris, La Documentation française, 418 p.

How could this be explained? The request to address indirect drivers was present in the scoping approved by governments: the chapter outline states that Chapter 2 “will include an assessment of indirect drivers of change, including trade and policies in areas such as agriculture and spatial planning”.<sup>5</sup> There was, however, a lack of experts from social sciences able to tackle such research questions in the group of authors. An analysis of the disciplinary affiliation of the 85 authors—coordinating lead authors (CLAs), lead authors (LAs) and contributing authors (CAs)—shows that less than 10% of authors were social scientists. Among them are three anthropologists, two economists, one ethnographer, one geographer and one scholar from education sciences, for a total of eight. Only 2 out of 17 CLAs come from social sciences. Chapter 2, on drivers, counted no social scientist among its authors. Chapter 6 on responses counted only one. The dearth of social sciences in the pollination assessment, and the “fast track” dimension of the assessment that likely urged to make quick progress in the drafting, plausibly explain that subsidies and other topics have not been considered as a priority for this thematic assessment.

### 3. CHALLENGES AND OPPORTUNITIES TO ENHANCE THE FOCUS ON UNDERLYING CAUSES OF BIODIVERSITY LOSS IN FUTURE IPBES WORKS

This analysis suggests three challenges to undertaking ambitious syntheses on underlying causes of biodiversity loss in IPBES works: (i) transition towards a “solutions” mindset; (ii) give more emphasis to underlying causes in IPBES work programme; and (iii) recruit a higher number of social scientists.

(i) Besides alerting on environmental issues, international environmental expertise is increasingly asked to thoroughly explore knowledge on available solutions.<sup>6</sup> Here, policy relevance means, *inter alia*, synthesizing works that take current or past policies as objects for scrutiny, and pointing out to social contradictions and choices that lie behind the drivers of biodiversity loss. While such assessments might highlight the responsibilities of governments, assessments should not be considered as policy prescriptive on this basis. While moving towards the domain of solutions, the normative and potentially critical dimension of research (both from natural and social sciences)

should be acknowledged and openly debated to express results in a balanced way.<sup>7</sup>

(ii) In practice, given the number and complexity of direct and indirect drivers and their interactions, both families of drivers should systematically be addressed in a dedicated chapter in any thematic assessment. This would maximize chances to analyze the available literature and non-academic sources for each driver family, and also help identify and discuss knowns and unknowns on their interlinkages. In addition, given methodological developments required to produce exhaustive syntheses addressing “indirect drivers” or “underlying causes”, a dedicated thematic assessment during the next work programme would be appropriate. The general scope of such an assessment could be to synthesize knowledge on policies and instruments having an effect on biodiversity worldwide. This would constitute an important contribution from IPBES to advancing collective knowledge on these issues and making it available to policymakers, and would probably strengthen interdisciplinary work in IPBES and structure a core of expertise in social sciences.

(iii) To achieve its general objective, IPBES will need to recruit more experts from social sciences, in a capacity to contribute to or coordinate interdisciplinary work on the impact of policies and other indirect drivers on biodiversity. The current efforts undertaken by the governing bodies of IPBES to proactively reach out to social scientists<sup>8</sup> is a promising trend. Answering challenges (i) and (ii) would also highlight topics covered by social sciences and would render IPBES assessments more attractive to social scientists. In assessing available knowledge on underlying causes of biodiversity loss, important knowledge gaps might be revealed. Here, one of the four functions of IPBES, i.e. *knowledge generation catalysis*, could help engage dialogues with key scientific organisations, policymakers and funding organisations and promote the development of new research to fill the identified knowledge gaps.

In the current IPBES work programme (2014–2018), there are windows of opportunity to further address the underlying causes of biodiversity loss and select relevant experts from social sciences. As for the next work programme, several windows of opportunity to answer the three challenges will open during its preparation. Taking the assessment

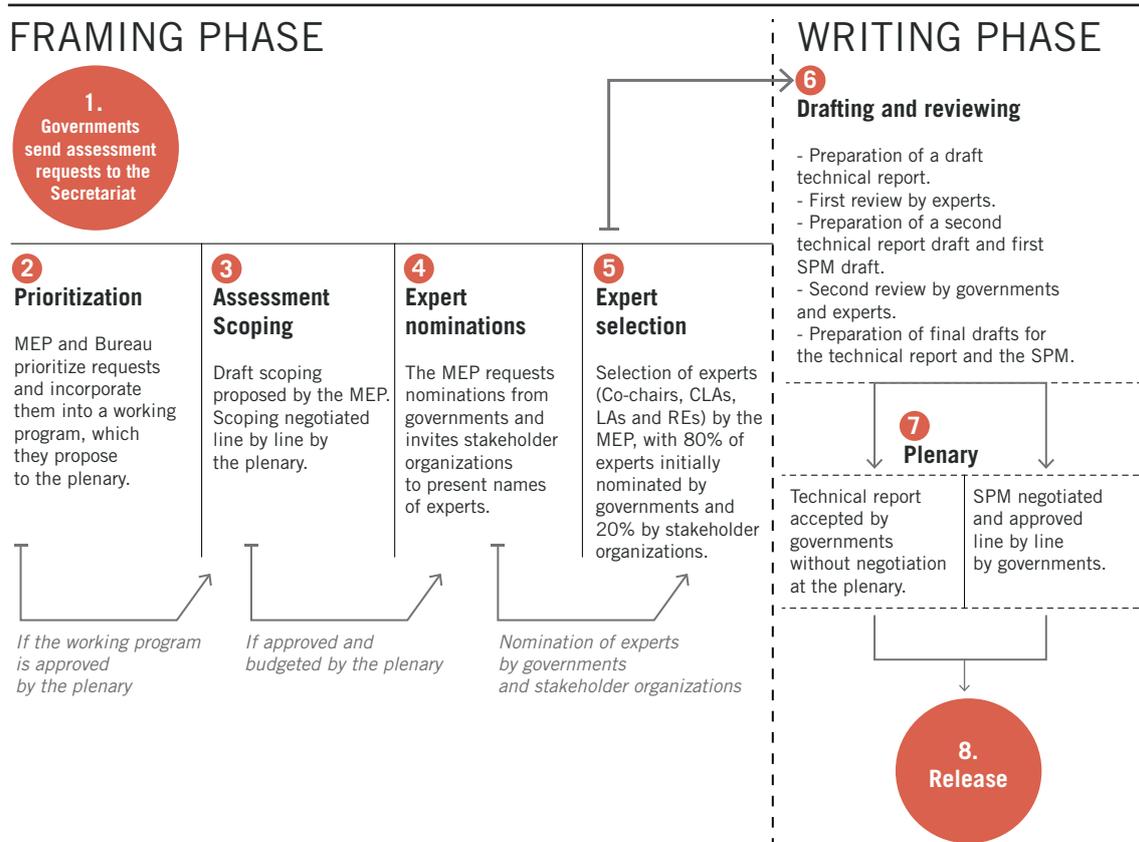
5. Decision IPBES-2/5: Work Programme for the period 2014–2018, p. 24.

6. Carraro, C., Edenhofer, O., & Flachsland, C. (2015). The IPCC at a crossroads: Opportunities for reform. *Science*, 96, 1–2.

7. Treyer, S., Billé, R., Chabason, L., & Magnan, A. (2012). Powerful International Science–Policy Interfaces for Sustainable Development. *Policy Brief*, N°06/12, IDDRI, Paris, 4 p.

8. Larigauderie, A., Stenseke, A., Watson, R.T. (2016). IPBES reaches out to social scientists. *Nature*, 532, 313.

Figure 1. Schematic view of the IPBES assessment production process



Note: MEP - Multidisciplinary Expert Panel; CLA - Coordinating Lead Author; LA - Lead Author; RE - Review Editor; SPM - Summary for Policymakers

production process as a reference (see Figure 1), these opportunities are summarized as follows:

*A. During the framing phase:*

a. While preparing IPBES next work programme (post-2018), governments should put strong emphasis on “underlying causes” or “indirect drivers” in all their assessment requests. An ad hoc thematic assessment on existing policies and instruments having an effect on biodiversity should be requested and prioritized. While drafting the next work programme, the Multidisciplinary Expert Panel (MEP) and the Bureau should ensure ample space is given to “indirect drivers”. During negotiations on scoping documents, governments should ensure that “indirect drivers” are given enough attention and the object of a dedicated chapter (steps 1-3 on Figure 1).

b. During expert nominations and selections, IPBES governing bodies and partners should perform active outreach towards social scientists (individuals but also organizations, such as professional societies), and governments and stakeholder organizations should ensure to nominate a higher number of social scientists. Similarly,

there should be more CLAs coming from social sciences, especially in the most relevant chapters (steps 4-5).

*B. During the writing phase:* Authors should put more emphasis on the social scientific literature. All CLAs and LAs should mobilize CAs from social sciences when needed. If assessed works point towards governmental responsibility (e.g. harmful subsidies), such conclusions should not be considered as “policy prescriptive”, as the information is based on assessed literature. The same goes for the plenary during SPM approvals (steps 6-7).

To give biodiversity a chance, diagnostics are needed on what slows down or hampers the implementation of biodiversity policies. An ambitious knowledge synthesis effort by IPBES on the underlying causes of biodiversity loss would help find relevant policy options. A lot of knowledge on existing policies and instruments affecting biodiversity is available and waiting for IPBES to grasp it, and such effort should be supported by governments. ■