A breakthrough approach to addressing the causes of biodiversity loss

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A simplified framework of the interactions between nature and people could potentially change the manner in which biodiversity assessments will be conducted in the future. This framework will go one step further than the previous large-scale environmental assessments in that it will embrace different disciplines and knowledge systems. In doing so, it is also expected to stimulate new thinking and thus provide new contexts for discovery. 1Known as the "conceptual framework" of IPBES, it is publishing January 13th in the open access journal *PLOS Biology*. The framework is the first public product of the Intergovernmental Platform on Biodiversity and Ecosystems Services (IPBES), a body that aims to track the ecological health of the planet and help avert catastrophic change in ecosystems.

To achieve this ambitious vision, the platform will build on existing work and conduct a series of biodiversity assessments that will inform policy decisions. The framework was developed to help the platform's work look at human-driven biodiversity changes in a fully integrated manner and, in particular, to address the underlying causes of those changes in order to inform decision making. The framework stands out from previous assessments, among other characteristics, by incorporating traditional knowledge and social sciences.

The [conceptual framework](#) of IPBES is the product of more than two years of consultative work among specialists from different disciplines and knowledge systems. Following this work, the framework was submitted for online review and incorporated comments from more than

100 governments and numerous non-governmental organizations.

"The conceptual framework is an intellectual meeting and listening point, with categories that people of all walks of life can understand and relate to. At the same time it has enough depth to accommodate the nuances of all these different ways of knowing the world. This was never been tried at this large scale before. It will be a formidable learning-by-doing exercise," said Professor Sandra Díaz, first author of the *PLOS Biology* article.

This landmark approach captures the relationships between the natural world and humankind in only six main elements: nature, nature's benefits to people, anthropogenic assets (such as knowledge, technology, financial assets, and built infrastructure), indirect drivers of change (such as institutions and governance systems), direct drivers of change, and good quality of life. Above all, it goes further than the previous biodiversity assessments by incorporating knowledge systems other than western science.

"The development of the IPBES conceptual framework has been a momentous achievement, as it will pave the way for new ways of thinking. Despite our enthusiasm, however, we do not underestimate the epistemological and practical challenges that lie ahead," said Professor Zakri Abdul Hamid, Chair of IPBES.

Undoubtedly, the ability of the conceptual framework to provide new insights will be tested as IPBES undertakes its first assessments. Despite the outcomes, this model might have implications for the ways in which we will do science in the coming years, as it emphasizes the need for convergence of different principles and knowledge systems to solve concrete practice and policy problems.

  More information: Díaz S, Demissew S, Joly C, Lonsdale WM,

Larigauderie A (2015) A Rosetta Stone for Nature's, Benefits to People. *PLoS Biol* 13(1): e1002040. DOI: 10.1371/journal.pbio.1002040