



Grantham Research Institute
on Climate Change
and the Environment

Submission to call for evidence: Dasgupta Review on the Economics of Biodiversity

Alexandra Pinzón, Simon Dikau and Nick Robins

November 2019

The Grantham Research Institute on Climate Change and the Environment was established in 2008 at the London School of Economics and Political Science. The Institute brings together international expertise on economics, as well as finance, geography, the environment, international development and political economy to establish a world-leading centre for policy-relevant research, teaching and training in climate change and the environment. It is funded by the Grantham Foundation for the Protection of the Environment, which also funds the Grantham Institute – Climate Change and the Environment at Imperial College London. More information about the Grantham Research Institute can be found at: www.lse.ac.uk/grantham/

About this submission

This paper was submitted to the Dasgupta Review on the Economics of Biodiversity – Call for Evidence on 6 November 2019. This independent global review was announced by Her Majesty's Treasury in the United Kingdom in March 2019, to “assess the economic value of biodiversity and to identify actions that will simultaneously enhance biodiversity and deliver economic prosperity”. The review is being led by Professor Sir Partha Dasgupta and will report ahead of the 15th meeting of the Conference of the Parties to the Convention on Biological Diversity in China in October 2020.

The authors have responded to the questions on which they have the most relevant expertise.

More information about the Dasgupta Review can be found at:

www.gov.uk/government/publications/the-economics-of-biodiversity-call-for-evidence

About the authors

Alexandra Pinzón is a Policy Fellow in conservation finance at the Grantham Research Institute on Climate Change and the Environment.

Simon Dikau is a Research Officer in sustainable development and sustainable finance at the Grantham Research Institute on Climate Change and the Environment.

Nick Robins is Professor in Practice in sustainable finance at the Grantham Research Institute on Climate Change and the Environment.

This paper was first published in November 2019 by the Grantham Research Institute on Climate Change and the Environment.

© The authors, 2019

Suggested citation: Pinzón A, Dikau S, Robins N (2019) *Submission to call for evidence: Dasgupta Review on the Economics of Biodiversity*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science.

Dasgupta Review on the Economics of Biodiversity – Responses to selected questions

Part 4: Actions to tackle biodiversity loss and support economic prosperity

Question 16 (Fiscal Policy and Regulation): What are strong examples of fiscal and regulatory policy instruments that have simultaneously enhanced biodiversity and supported economic prosperity? What is the best evidence on the impact and effectiveness of these actions? The review is interested in examples at all scales, including regulation, planning, taxation and government spending, including subsidies.

Response: It has been increasingly recognised that the full resources and expertise of the global financial system will be needed to respond to the existential threat of climate change and wider environmental crises such as the decline in biodiversity, the human and ecological impacts of air and water pollution, as well as the degradation of natural resources (Dikau et al., forthcoming). A growing number of central banks, along with financial supervisors across banking, insurance, pensions and securities, are accepting that not only climate change, but also the creation of a sustainable financial system, have implications for their roles and mandates (NGFS, 2018). The necessity to address climate change has led central banks and supervisors to establish the Network for Greening the Financial System (NGFS), under which central banks and supervisors have begun to investigate and coordinate their response.

So far, the focus of central banks has primarily been on how climate change may directly affect their mandated objectives and specifically their financial and monetary stability objectives. It has been increasingly acknowledged that climate change can affect the financial stability of individual financial institutions as well as of the system as a whole (Bank of England, 2018, 2015; Carney, 2015; NGFS, 2019a; Pereira da Silva, 2019). The incorporation of climate risks into micro- and macroprudential supervision has therefore been widely debated and first steps to calibrate policy measures accordingly have been taken (NGFS, 2019b).

Similarly, it has been progressively accepted that climate change has implications for central banks' core responsibility, the safeguarding of price stability, which can potentially be affected by climate change-related shocks in the form of a demand or supply shock (Cœuré, 2018).

Finally, the scaling-up of green finance has been a NGFS priority research objective to which central banks have found different approaches, including through the 'greening' of central bank portfolios, the development of green financial markets and the intervention into the allocation of credit (Dikau and Volz, 2019).

These specific policy areas in which central banks address climate change, namely, monetary policy, micro- and macroprudential regulation and the scaling up of green finance, are also relevant with regard to biodiversity. Central banking instruments could be calibrated to take firms' commitment to protecting biodiversity into account, for example through regulating loans that finance harmful activities. These interventionist policy measures are potentially more relevant in the emerging market and developing economies context, where central banks are often equipped with mandates that task them to support general (sustainable) development. Some of these central banks have also taken first steps to discuss and implement financial regulation that takes environmental protection and biodiversity into account (Dikau and Ryan-Collins, 2017).

Question 18 (Private Sector and Finance): What are the most effective actions that the private sector generally, and finance sector specifically, can take and have taken that both enhance biodiversity and deliver economic prosperity? What actions should government take to enable the private sector and finance to take these actions? What evidence exists on the impact on biodiversity loss and economic prosperity of rules on financial disclosure, standards and certification schemes, and policies affecting investment decisions?

Response: The private and financial sectors should explicitly factor biodiversity risks and opportunities into their economic decisions. Biodiversity is vital for economic activity. However, there is evidence that key economic sectors in high biodiversity countries are major drivers of biodiversity loss via natural capital conversion (IPBES, 2019). Agricultural expansion, for instance, is partly driven by growing international demand, which is expected to keep momentum with population growth, technology and improvements in market access (FAO, 2018). Besides natural capital conversion, production practices also have impacts on biodiversity. Major producing countries of internationally traded agri-commodities [such as soy and palm oil; see Global Forest Atlas, 2019] also have high biodiversity and natural capital stocks. Argentina and Brazil, for example, are major global producers of soy, which is mostly exported and is associated with 33 per cent and 10 per cent of their natural capital conversion, respectively (Pendrill et al., 2019).

Agriculture is financed by companies, investors and other financial institutions. Financial vehicles can be anything from loans to equities, corporate bonds to sovereign bonds. To date analysis of the relationship between natural capital and financial performance has focused on equity, with few strides in fixed income and an even more immature understanding of the relationship between the state of natural assets, their ecosystem services and future financial performance for sovereign bonds. In the particular case of sovereign debt, investors are exposed to risks that need to be better understood and, for this reason, they might be financing policies contrarian to the Sustainable Development Goals (SDGs) in high biodiversity stock countries.

Credit rating agencies are the primary source of debt payment capacity analysis for investors and define cost of capital for sovereign issuers and local issuers. While credit rating agencies incorporate several factors in their analysis, their explicit focus remains on the near-term financial performance of high natural capital stock countries and their political context. Investors are starting to recognise their role on halting biodiversity loss (Foll, 2019), yet the focus is very much on companies. There are issues stemming from limited analysis linking biodiversity loss to financial impacts and, at sovereign level, the intricacies of limited disclosure on what is being funded by investors and the potential impacts of these activities.

The UK government should promote more analysis of these biodiversity risks from the financial community and convene other issuers of sovereign bonds to ensure sovereign financial alignment with the SDGs. The objective should be aligning investors' environmental objectives with the use of proceeds by these issuers.

References

- Bank of England (2018) *Transition in thinking: the impact of climate change on the UK banking sector*. London: Bank of England Prudential Regulation Authority
- Bank of England (2015) *The impact of climate change on the UK insurance sector: a climate change adaptation report*. London: Bank of England Prudential Regulation Authority
- Carney M (2015) 'Breaking the tragedy of the horizon – climate change and financial stability.' Speech to Lloyd's, London. www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability
- Cœuré B (2018) *Monetary policy and climate change*. Presented at the Conference 'Scaling up Green Finance: The Role of Central Banks', Bundesbank, Berlin
- Dikau S, Robins N, Täger M (forthcoming) Building a sustainable financial system: The state of practice and future priorities, *Financial Stability Review*. Madrid: Banco de España
- Dikau S, Ryan-Collins J (2017) *Green central banking in emerging market and developing country economies*. New Economics Foundation. <https://neweconomics.org/uploads/files/Green-Central-Banking.pdf>
- Dikau S, Volz U (2019) Central banking, climate change, and green finance, in: Sachs J, Woo WT, Yoshino N, Taghizadeh-Hesary F (Eds.) *Handbook of Green Finance*. Springer, Singapore, pp. 81–102.
- Foll J (2019) *Biodiversity crisis: The role of investors in resolving species extinction – Part 1*. AXA Investment Managers. https://realassets.axa-im.com/content/-/asset_publisher/x7LvZDsY05WX/content/biodiversity-crisis-the-role-of-investors-in-resolving-species-extinction-part-1/23818
- Food and Agriculture Organisation [FAO] (2018) *The State of Agricultural Commodity Markets 2018*. <http://www.fao.org/3/I9542EN/i9542en.pdf>
- Global Forest Atlas (2019) Webpages on 'Soy Agriculture': <https://globalforestatlas.yale.edu/land-use/industrial-agriculture/soy-agriculture> and 'Palm Oil': <https://globalforestatlas.yale.edu/land-use/industrial-agriculture/palm-oil>
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [IPBES] (2019) *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. https://www.ipbes.net/system/tdf/ipbes_7_10_add.1_en_1.pdf?file=1&type=node&id=35329
- Network for Greening the Financial System [NGFS] (2019a) *Technical supplement to the First comprehensive report – Macroeconomic and financial stability*. Paris: NGFS, Banque de France
- Network for Greening the Financial System [NGFS] (2019b) *First comprehensive report – A call for action*. Paris: NGFS, Banque de France
- Network for Greening the Financial System [NGFS] (2018) *First progress report*. Paris: NGFS, Banque de France
- Pendrill F, Persson M, Godar J, Karstner T (2019) Deforestation displaced: trade in forest-risk commodities and the prospects for a global forest transition. *Environmental Research Letters*, 14(5) <https://iopscience.iop.org/article/10.1088/1748-9326/ab0d41>
- Pereira da Silva LA (2019) Research on climate-related risks and financial stability: an "epistemological break"? Presented at the Conference of the Central Banks and Supervisors for the Network for Greening the Financial System (NGFS), Paris