



PRESS RELEASE

UN biodiversity report identifies risks and uncertainties of novel strategies to tackle climate change

- *Use of geoengineering techniques is being explored as a potential additional means to limit magnitude of climate change.*
- *Both conventional climate change mitigation and greenhouse gas removal appear necessary in order to achieve Paris Agreement.*

31 OCTOBER 2016 – The Convention on Biological Diversity (CBD) has published a detailed assessment of the implications of using climate geoengineering to limit global warming. Approaches considered include the large-scale removal of greenhouse gases from the atmosphere, as assumed in nearly all climate models that limit the increase in mean global temperature to below 2°C.

“A rapid transition to a low-carbon economy is the priority to reduce greenhouse gas emissions and in turn reduce the adverse impacts of climate change, including impacts on biodiversity,” said CBD Executive Secretary, Bráulio Ferreira de Souza Dias, in the foreword of the new report.

“However, given the current atmospheric greenhouse gas concentrations, their long atmospheric residence times and the relatively limited action to date to reduce future emissions, the use of geoengineering techniques has been suggested and is being explored as a potential additional means to limit the magnitude of climate change.”

The report, *CBD Technical Series 84: Update on climate geoengineering in relation to the Convention on Biological Diversity: Potential impacts and regulatory framework*, was prepared with support from the UK Natural Environment Research Council (NERC). Twenty-seven key messages are presented, relating to the effectiveness, potential impacts, and current governance mechanisms for both greenhouse gas removal (‘negative emissions’) and sunlight reflection methods (‘solar radiation management’), with focus on possible environmental consequences.

“Mitigation and geoengineering are often considered as two very different policy responses to climate change, with the first being desirable and the second undesirable,” said Phillip Williamson (NERC and the University of East Anglia), the report’s lead author. “Yet definitions overlap, and both would now seem necessary to achieve the goals of the Paris Agreement, entering into force in early November.”



Convention on
Biological Diversity

Secretariat of the Convention on Biological Diversity
United Nations Environment Programme
413 Saint-Jacques Street, Suite 800, Montreal, QC, H2Y 1N9, Canada
Tel : +1 514 288 2220 Fax : +1 514 288 6588
secretariat@cbd.int www.cbd.int



A key requirement of the Agreement is to balance the global sources and removals of greenhouse gases in the second half of this century, with implicit need for active extraction of carbon dioxide or other greenhouse gases from the atmosphere. Most of the low emission scenarios developed by the Intergovernmental Panel on Climate Change assume a major expansion of bioenergy linked to carbon capture and storage. The CBD report concludes that the feasibility, effectiveness and impacts of that method, and other carbon removal techniques, are highly uncertain, and that their potential consequences for biodiversity warrant further scientific attention.

The regulatory framework for geoengineering is reviewed in the report by Ralph Bodle (Ecologic Institute, Berlin). As noted previously by the CBD, the report emphasised the need for science-based, global, transparent and effective governance for geoengineering, particularly for activities with potential to cause significant adverse transboundary effects, and those deployed in areas beyond national jurisdiction and in the atmosphere.

NOTES FOR EDITORS

CBD Technical Series 84: Update on Climate Geoengineering in relation to the Convention on Biological Diversity: Potential Impacts and Regulatory Framework is available online at: www.cbd.int/doc/publications/cbd-ts-84-en.pdf

For additional scientific information on the report, contact Dr Phillip Williamson, School of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ, UK (p.williamson@uea.ac.uk; tel +44 1603 593111 (office), +44 7749 092287 (cell).

The report's key messages were included in an Information Paper prepared for the nineteenth meeting of the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA-19), online at www.cbd.int/doc/meetings/sbstta/sbstta-19/information/sbstta-19-inf-02-en.pdf. The main text of *CBD Technical Series 84* is closely similar to the SBSTTA-19 Information Paper; however, some updates have been made, and 260 new references have been added.

A decision by CBD Parties relating to climate geoengineering is expected to be made at the UN Biodiversity Conference¹ in Cancun, Mexico, between 2 and 17 December 2016. The draft decision for discussion reaffirms the CBD's previous decisions on climate-related geoengineering, and its encouragement to Parties to promote the use of ecosystem-based approaches to climate change adaptation and mitigation. The draft decision also notes that "more transdisciplinary research and sharing of knowledge among appropriate institutions is needed in order to better understand the impacts of climate-related geoengineering on biodiversity and ecosystem functions and services, socio-economic, cultural and ethical issues and regulatory options" (www.cbd.int/doc/meetings/cop/cop-13/official/cop-13-02-en.pdf; p. 122).

Two additional CBD reports relevant to biodiversity and climate change will be published prior to the CBD COP 13 meeting: a synthesis report on ecosystem-based adaptation (*CBD Technical Series 85*) and a report on the contribution of ecosystems (other than forests) to mitigation (*CBD Technical Series 86*).

The Natural Environment Research Council (NERC, www.nerc.ac.uk) is the UK's largest funder of independent environmental science, training and innovation, delivered through universities and research

¹ Thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity, eighth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety and second meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access and Benefit-Sharing, 4 to 17 December 2016; High-level Ministerial Segment of the meetings, 2 to 3 December 2016, Cancun, Mexico.

centres. NERC provided co-support for the production of *CBD Technical Series 84* without editorial control.

NERC, together with the Engineering & Physical Sciences Research Council (EPSRC), the Economic & Social Research Council (ESRC), and the Department for Business, Energy & Industrial Strategy (BEIS), is currently inviting research bids for a £8.5m programme of research to improve our knowledge of the options for removing carbon dioxide (CO₂) and other greenhouse gases from the atmosphere at a climatically-relevant scale, giving interdisciplinary attention to the environmental, technical, economic, governance and wider societal aspects of such approaches on a national level and in an international context (www.nerc.ac.uk/research/funded/programmes/ggr/).

The Ecologic Institute (<http://ecologic.eu>) is a private, independent organization that conducts inter- and transdisciplinary environmental research. The experts at Ecologic Institute also prepare political analyses and function as consultants.

The Convention on Biological Diversity (CBD)

Opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entering into force in December 1993, the Convention on Biological Diversity is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 196 Parties so far, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services, including threats from climate change, through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit Sharing are supplementary agreements to the Convention. The Cartagena Protocol, which entered into force on 11 September 2003, seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. To date, 170 Parties have ratified the Cartagena Protocol. The Nagoya Protocol aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies. It entered into force on 12 October 2014 and to date has been ratified by 88 Parties. For more information visit: www.cbd.int. For additional information, please contact: David Ainsworth on +1 514 287 7025 or at david.ainsworth@cbd.int; or Johan Hedlund on +1 514 287 6670 or at johan.hedlund@cbd.int.
