Currently, there is no comprehensive science-based, global, transparent and effective framework for geoengineering.
The Parties to the Convention on Biological Diversity (CBD) recognized that there remain significant gaps in the understanding of the impacts of geoengineering on biodiversity, while also noting the relevance of other treaties and organizations for filling such gaps. A highly authoritative group of experts, among them Dr. Ralph Bodle, Senior Fellow at Ecologic Institute, contributed to the publication's first part, entitled "Impacts of Climate-Related Geoengineering on Biological Diversity." A team of authors from Ecologic Institute, consisting of Dr. Ralph Bodle as leading author, Gesa Homan, Simone Schiele, and Elizabeth Tedsen wrote the publication's second part entitled "The Regulatory Framework for Climate-Related Geoengineering Relevant to the Convention on Biological Diversity." The publication is available for download [2].

Attachments

- Geoengineering in Relation to the Convention on Biological Diversity: Technical and Regulatory Matters [pdf, 2.2 MB, English]

Main Link

Publication: Geoengineering in Relation to the Convention on Biological Diversity [pdf, 2.17 MB, English]

Ecologic Related Articles

- Regulatory and Governance Options for Geoengineering
- Governance of Geoengineering
- International Regulatory Framework for Geoengineering
- Jahrbuch Ökologie 2011
- Der Rechtliche Rahmen von Geo-Engineering - Wer darf am Thermostat drehen?
- Schöner Leben im Labor?

Citation


Language

English

Author(s)

Dr. Ralph Bodle, LLM
Gesa Homann LLM
Simone Schiele
Elizabeth Tedsen JD

Author(s)

Phillip Williamson
Robert Watson
Georgina Mace
PART I

Chapter 1: Mandate, Context and Scope of Work

1.1 Mandate
1.2 Context for the consideration of potential impacts of geoengineering on biodiversity
1.3 Relevant guidance under the Convention on Biological Diversity
1.4 Scope of techniques examined in this study
1.5 Structure of the study
1.6 Key sources of information

Chapter 2: Definition and Features of Geoengineering Approaches and Techniques

2.1 Definition of climate-related geoengineering
2.2 Features of proposed geoengineering techniques

Chapter 3: Overview of Climate Change and Ocean Acidification and of Their Impacts on Biodiversity

3.1 Overview of projected climate change and ocean acidification
3.2 Observed and projected impacts of climate change, including ocean acidification, on biodiversity
3.3 The role of biodiversity in the Earth system and in delivering ecosystem services
3.4 Projected socio-economic and cultural impacts of climate change, in biodiversity context
Chapter 4: Potential Impacts on Biodiversity of Climate Geoengineering Achieved by Sunlight Reflection Methods

4.1 Potential impacts on biodiversity of generic SRM that causes uniform dimming
4.2 Potential impacts of SRM on biodiversity at the technique-specific level

Chapter 5: Potential Impacts on Biodiversity of Carbon Dioxide Removal Geoengineering Techniques

5.1 General features of CDR approaches
5.2 Direct ocean fertilization
5.3 Modification of upwelling and downwelling
5.4 Geochemical sequestration of carbon dioxide
5.5 Restoration, afforestation, reforestation, and the enhancement of soil carbon
5.6 Biological carbon capture and storage in land biomass
5.7 Chemically-based carbon dioxide capture and storage
5.8 Sequestration of greenhouse gases other than carbon dioxide

Chapter 6: Social, Economic, Cultural and Ethical Considerations of Climate-Related Geoengineering

6.1 Introduction
6.2 Available information
6.3 General social, economic and cultural considerations
6.4 Specific social, economical and cultural considerations of geoengineering technologies as they relate to biodiversity

Chapter 7: Synthesis

7.1 Changes in the drivers of biodiversity loss
7.2 The question of scale and its implications for feasibility and impacts of geoengineering techniques
7.3 Gaps in knowledge and understanding

Annex I: Summary of Selected Definitions of Climate-Related Geoengineering

Annex II: Additional information on Options for Definitions of Climate-Related Geoengineering

Annex III: Report Authors, Editors and Contributors

References

PART II

Key Messages
Chapter 1: Introduction

1.1 Mandate and scope
1.2 Criteria for identifying gaps
1.3 Definition of geoengineering
1.4 Method and structure
1.5 Elements of the current international regulatory framework

Chapter 2: Generally Applicable International Law and Principles

2.1 State responsibility and liability of private actors
2.2 Prevention of transboundary harm to the environment
2.3 Duty to undertake an environmental impact assessment
2.4 Precautionary principle or approach
2.5 Article 39 of the Charter of the United Nations
2.6 Other concepts
2.7 Summary assessment of customary rules

Chapter 3: Specific Treaty Regimes and Institutions

3.1 The Convention on Biological Diversity
3.2 UNCLOS—United Nations Convention on the Law of the Sea
3.3 London Convention and London Protocol
3.4 United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol
3.5 Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol
3.6 ENMOD Convention
3.7 Space law
3.8 Antarctic treaty system
3.9 OSPAR Convention
3.10 LRTAP—Convention on Long-range Transboundary Air Pollution
3.11 Human rights law

Chapter 4: Institutions

4.1 United Nations Security Council
4.2 United Nations General Assembly
4.3 Intergovernmental Panel on Climate Change
4.4 United Nations Environment Programme
4.5 World Meteorological Organization
4.6 Intergovernmental Oceanographic Commission

Chapter 5: Rules Governing Research

5.1 The regulatory framework for research
5.2 Scientific research in international treaty law

Chapter 6: Conclusions

Annex I: Abbreviations and Acronyms

Annex II: Treaties and Instruments Cited

Annex III: Technologies and their Potential Regulation

Annex IV: Report Authors, Editors and Contributors

References