

1. Record Nr.	UNINA9910797366603321
Titolo	Climate intervention : carbon dioxide removal and reliable sequestration // Committee on Geoengineering Climate, Technical Evaluation and Discussion of Impacts, Board on Atmospheric Sciences and Climate, Ocean Studies Board, Division on Earth and Life Studies, National Research Council of the National Academies
Pubbl/distr/stampa	Washington, District of Columbia : , : The National Academies Press, , [2015] ©2015
ISBN	0-309-30532-2 0-309-30530-6
Descrizione fisica	1 online resource (140 p.)
Disciplina	551.5112
Soggetti	Environmental engineering Climate change mitigation - Evaluation Global warming - Prevention Carbon dioxide mitigation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (pages 113-127).
Nota di contenuto	Carbon Dioxide Removal -- Assessment of Possible Carbon Dioxide Removal and Long-Term Sequestration Systems -- Social Context -- Way Forward -- Appendix A: Statement of Task for the Committee -- Appendix B: Committee Biographies -- Appendix C: Acronyms and Abbreviations.
Sommario/riassunto	"The signals are everywhere that our planet is experiencing significant climate change. It is clear that we need to reduce the emissions of carbon dioxide and other greenhouse gases from our atmosphere if we want to avoid greatly increased risk of damage from climate change. Aggressively pursuing a program of emissions abatement or mitigation will show results over a timescale of many decades. How do we actively remove carbon dioxide from the atmosphere to make a bigger difference more quickly? As one of a two-book report, this volume of Climate Intervention discusses CDR, the carbon dioxide removal of

greenhouse gas emissions from the atmosphere and sequestration of it in perpetuity. Climate Intervention: Carbon Dioxide Removal and Reliable Sequestration introduces possible CDR approaches and then discusses them in depth. Land management practices, such as low-till agriculture, reforestation and afforestation, ocean iron fertilization, and land-and-ocean-based accelerated weathering, could amplify the rates of processes that are already occurring as part of the natural carbon cycle. Other CDR approaches, such as bioenergy with carbon capture and sequestration, direct air capture and sequestration, and traditional carbon capture and sequestration, seek to capture CO₂ from the atmosphere and dispose of it by pumping it underground at high pressure. This book looks at the pros and cons of these options and estimates possible rates of removal and total amounts that might be removed via these methods. With whatever portfolio of technologies the transition is achieved, eliminating the carbon dioxide emissions from the global energy and transportation systems will pose an enormous technical, economic, and social challenge that will likely take decades of concerted effort to achieve. Climate Intervention: Carbon Dioxide Removal and Reliable Sequestration will help to better understand the potential cost and performance of CDR strategies to inform debate and decision making as we work to stabilize and reduce atmospheric concentrations of carbon dioxide."--
