

1. Record Nr.	UNINA9910460901803321
Titolo	Climate intervention : reflecting sunlight to cool earth // 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 Academy Press, , [2015] ©2015
ISBN	0-309-31483-6
Descrizione fisica	1 online resource (234 p.)
Disciplina	551.5271
Soggetti	Environmental geotechnology Global warming Climatic changes Electronic books.
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 193-213).
Nota di contenuto	Front Matter; Preface; Acknowledgments; Contents; Summary; 1 Introduction; 2 Climate Intervention by Modifying Earth's Albedo; 3 Technical Analysis of Possible Albedo Modification Techniques; 4 Governance of Research and Other Sociopolitical Considerations; 5 Way Forward; References; Appendix A: Statement of Task for the Committee; Appendix B: Committee Biographies; Appendix C: Planned Weather Modification; Appendix D: Volcanic Eruptions as Analogues for Albedo Modification; Appendix E: Discussion of Feasibility of Albedo Modification Technologies; Appendix F: Acronyms and Abbreviations
Sommario/riassunto	"The growing problem of changing environmental conditions caused by climate destabilization is well recognized as one of the defining issues of our time. The root problem is greenhouse gas emissions, and the fundamental solution is curbing those emissions. Climate geoengineering has often been considered to be a "last-ditch" response to climate change, to be used only if climate change damage should

produce extreme hardship. Although the likelihood of eventually needing to resort to these efforts grows with every year of inaction on emissions control, there is a lack of information on these ways of potentially intervening in the climate system. As one of a two-book report, this volume of Climate Intervention discusses albedo modification - changing the fraction of incoming solar radiation that reaches the surface. This approach would deliberately modify the energy budget of Earth to produce a cooling designed to compensate for some of the effects of warming associated with greenhouse gas increases. The prospect of large-scale albedo modification raises political and governance issues at national and global levels, as well as ethical concerns. Climate Intervention: Reflecting Sunlight to Cool Earth discusses some of the social, political, and legal issues surrounding these proposed techniques. It is far easier to modify Earth's albedo than to determine whether it should be done or what the consequences might be of such an action. One serious concern is that such an action could be unilaterally undertaken by a small nation or smaller entity for its own benefit without international sanction and regardless of international consequences. Transparency in discussing this subject is critical. In the spirit of that transparency, Climate Intervention: Reflecting Sunlight to Cool Earth was based on peer-reviewed literature and the judgments of the authoring committee; no new research was done as part of this study and all data and information used are from entirely open sources. By helping to bring light to this topic area, this book will help leaders to be far more knowledgeable about the consequences of albedo modification approaches before they face a decision whether or not to use them."--

---