

Can Science Fix Climate Change A Case Against Climate Engineering New Human Frontiers Series By Hulme Mike 2014 Paperback

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Climate Change

There is now clear scientific evidence that emissions from economic activity, particularly the burning of fossil fuels for energy, are causing changes to the Earth's climate. A sound understanding of the economics of climate change is needed in order to underpin an effective global response to this challenge. The Stern Review is an independent, rigorous and comprehensive analysis of the economic aspects of this crucial issue. It has been conducted by Sir Nicholas Stern, Head of the UK Government Economic Service, and a former Chief Economist of the World Bank. The Economics of Climate Change will be invaluable for all students of the economics and policy implications of climate change, and economists, scientists and policy makers involved in all aspects of climate change.

Climate Intervention

#1 NEW YORK TIMES BESTSELLER * "The Uninhabitable Earth hits you like a comet, with an overflow of insanely lyrical prose about our pending Armageddon."--Andrew Solomon, author of The Noonday Demon
With a new afterword
It is worse, much worse, than you think. If your anxiety about global warming is dominated by fears of sea-level rise, you are barely scratching the surface of what terrors are possible--food shortages, refugee emergencies, climate wars and economic devastation. An "epoch-defining book" (The Guardian) and "this generation's Silent Spring" (The Washington Post), The Uninhabitable Earth is both a travelogue of the near future and a meditation on how that future will look to those living through it--the ways that warming promises to transform global politics, the meaning of technology and nature in the modern world, the sustainability of capitalism and the trajectory of human progress. The Uninhabitable Earth is also an impassioned call to action. For just as the world was brought to the brink of catastrophe within the span of a lifetime, the responsibility

to avoid it now belongs to a single generation--today's. Praise for *The Uninhabitable Earth* "The Uninhabitable Earth is the most terrifying book I have ever read. Its subject is climate change, and its method is scientific, but its mode is Old Testament. The book is a meticulously documented, white-knuckled tour through the cascading catastrophes that will soon engulf our warming planet."--Farhad Manjoo, *The New York Times* "Riveting. . . . Some readers will find Mr. Wallace-Wells's outline of possible futures alarmist. He is indeed alarmed. You should be, too."--*The Economist* "Potent and evocative. . . . Wallace-Wells has resolved to offer something other than the standard narrative of climate change. . . . He avoids the 'eerily banal language of climatology' in favor of lush, rolling prose."--Jennifer Szalai, *The New York Times* "The book has potential to be this generation's *Silent Spring*."--*The Washington Post* "The Uninhabitable Earth, which has become a best seller, taps into the underlying emotion of the day: fear. . . . I encourage people to read this book."--Alan Weisman, *The New York Review of Books*

After Geoengineering

The warming of the Earth has been the subject of intense debate and concern for many scientists, policy-makers, and citizens for at least the past decade. *Climate Change Science: An Analysis of Some Key Questions*, a new report by a committee of the National Research Council, characterizes the global warming trend over the last 100 years, and examines what may be in store for the 21st century and the extent to which warming may be attributable to human activity.

Ready for Hillary?

Part I of this report is a synthesis that highlights eight selected themes, each of which relates to diagnoses, recommendations, and important lines of debate or inquiry. Part II describes the diagnoses and 39 recommendations from the eight working groups.

Climate Change

The author argues that it is time for man to at least consider climate engineering—including putting reflective particles in the atmosphere to combat global warming—but it must be considered cautiously and not be implemented until all side effects are known.

Don't Even Think About It

Climate change is a complex and dynamic environmental, cultural and political phenomenon that is reshaping our relationship to nature. Climate change is a global force, with global impacts. Viable solutions on what to do must involve dialogues and decision-making with many agencies, stakeholder groups and communities crossing all sectors and scales. Current policy approaches are inadequate and finding a consensus on how to reduce levels of greenhouse gases in the atmosphere through international protocols has proven difficult. Gaps between science and society limit government and industry capacity to engage

with communities to broker innovative solutions to climate change. Drawing on leading-edge research and creative programming initiatives, this collection details the important roles and agencies that cultural institutions (in particular, natural history and science museums and science centres) can play within these gaps as resources, catalysts and change agents in climate change debates and decision-making processes; as unique public and trans-national spaces where diverse stakeholders, government and communities can meet; where knowledge can be mediated, competing discourses and agendas tabled and debated; and where both individual and collective action might be activated.

The Discovery of Global Warming

Climate Change: Evidence and Causes is a jointly produced publication of The US National Academy of Sciences and The Royal Society. Written by a UK-US team of leading climate scientists and reviewed by climate scientists and others, the publication is intended as a brief, readable reference document for decision makers, policy makers, educators, and other individuals seeking authoritative information on the some of the questions that continue to be asked. Climate Change makes clear what is well-established and where understanding is still developing. It echoes and builds upon the long history of climate-related work from both national academies, as well as on the newest climate-change assessment from the United Nations' Intergovernmental Panel on Climate Change. It touches on current areas of active debate and ongoing research, such as the link between ocean heat content and the rate of warming.

Coming Climate Crisis?

With Broecker as his guide, award-winning science writer Robert Kunzig looks back at Earth's volatile climate history so as to shed light on the challenges ahead. Ice ages, planetary orbits, a giant 'conveyor belt' in the ocean it's a riveting story full of maverick thinkers, extraordinary discoveries and an urgent blueprint for action. Likening climate to a slumbering beast, ready to react to the smallest of prods, Broecker shows how assiduously we've been prodding it, by pumping 70 million tonnes of CO₂ into the air each year. Fixing Climate explains why we need not just to reduce emissions but to start removing our carbon waste from our atmosphere. And in a thrilling last section of the book, we learn how this could become reality, using 'artificial trees' and underground storage.

Unstoppable

“Thoughtful, informative, and darkly entertaining. It’s the best treatment of this important (and scary) topic you can find.” —Elizabeth Kolbert Right now, a group of scientists is working on ways to minimize the catastrophic impact of global warming. But they’re not designing hybrids or fuel cells or wind turbines. They’re trying to lower the temperature of the entire planet. And they’re doing it with huge contraptions that suck CO₂ from the air, machines that brighten clouds and deflect sunlight away from the earth, even artificial volcanoes that spray heat-reflecting particles into the atmosphere. This is the radical and controversial world of geoengineering, which only five years ago was considered to be “fringe.” But as

Jeff Goodell points out, the economic crisis, combined with global political realities, is making these ideas look sane, even inspired. Goodell himself started out as a skeptic, concerned about tinkering with the planet's thermostat. We can't even predict next week's weather, so how are we going to change the temperature of whole regions? What if a wealthy entrepreneur shoots particles into the stratosphere on his own? Who gets blamed if something goes terribly wrong? And perhaps most disturbing, what about wars waged with climate control as the primary weapon? There are certainly risks, but Goodell believes the alternatives could be worse. In the end, he persuades us that geoengineering may just be our last best hope—a Plan B for the environment. His compelling tale of scientific hubris and technical daring is sure to jump-start the next big debate about the future of life on earth. "Goodell explores with infectious curiosity and thoughtful narration this strange, promising, and untested suite of climate fixes."
—BusinessWeek "A quick, enjoyable read through a complex, timely topic. And after you read it, you'll never look at the sky or the ocean—or Earth, really—in quite the same way again." —The Christian Science Monitor

The Uninhabitable Earth

"Hope Jahren is the voice that science has been waiting for." —Nature "A superb account of the deadly struggle between humanity and what may prove the only life-bearing planet within ten light years, written in a brilliantly sardonic and conversational style." —E. O. Wilson "Hope Jahren asks the central question of our time: how can we learn to live on a finite planet? The Story of More is thoughtful, informative, and—above all—essential." —Elizabeth Kolbert, author of The Sixth Extinction Hope Jahren is an award-winning scientist, a brilliant writer, a passionate teacher, and one of the seven billion people with whom we share this earth. In The Story of More, she illuminates the link between human habits and our imperiled planet. In concise, highly readable chapters, she takes us through the science behind the key inventions—from electric power to large-scale farming to automobiles—that, even as they help us, release greenhouse gases into the atmosphere like never before. She explains the current and projected consequences of global warming—from superstorms to rising sea levels—and the actions that we all can take to fight back. At once an explainer on the mechanisms of global change and a lively, personal narrative given to us in Jahren's inimitable voice, The Story of More is the essential pocket primer on climate change that will leave an indelible impact on everyone who reads it.

Fixing Climate

Decisively cutting through the hyperbole on both sides of the debate, distinguished NASA climatologist Claire L. Parkinson brings much-needed balance and perspective to the highly contentious issue of climate change. Offering a deeply knowledgeable overview of global conditions past and present, the author lays out a compelling argument that our understandings and models are inadequate for confident predictions of the intended and unintended consequences of various projects now under consideration to modify future climate. In one compact volume, Parkinson presents a coherent synopsis of the 4.6-billion-year history of climate change on planet Earth—both before and after humans became a significant factor—and explores current concerns regarding continued global warming and its

possible consequences. She ranges over the massive geoengineering schemes being proposed and why we need to be cautious about them, the limitations of current global climate models and projections, the key arguments made by those skeptical of the mainstream views, and the realistic ways we can lessen destructive human impacts on our planet. While discussing all of these polarizing topics, the author consistently shows respect for the views of alarmists, skeptics, and the vast majority of people whose positions lie somewhere between those two extremes. The book clarifies some of the most contentious points in the climate debate, and in the process treats us to a fascinating discussion interweaving Earth history, science, the history of science, and human nature. Readers will be rewarded with a genuine understanding of a complex issue that could be among the most important facing humankind in the coming decades.

Weathered

The need for expert judgment -- Assessing acid rain in the United States: the National Acid Precipitation Assessment Program -- Assessing ozone depletion -- Assessing the ice: sea level rise predictions for the West Antarctic Ice Sheet, 1981-2007 -- Patrolling the science/policy border -- What assessments do -- Conclusion

Can Science Fix Climate Change?

The United States is often perceived as sceptical, if not hostile, to the need to address man-made climate change. However, a careful examination of the evidence reveals a number of policy actions designed to investigate, mitigate, and adapt to climate change have been implemented. Laws, regulatory action, and court rulings have led to advances in climate science, action to reduce levels of greenhouse gas emissions and efforts to prepare for the potential consequences of climate change. In this important book Chris Bailey explains and details the challenges and achievements of US climate change policy from its origins to the present day.

Climate Change and Museum Futures

Climate change is not 'a problem' waiting for 'a solution'. It is an environmental, cultural and political phenomenon which is re-shaping the way we think about ourselves, our societies and humanity's place on Earth. Drawing upon twenty-five years of professional work as an international climate change scientist and public commentator, Mike Hulme provides a unique insider's account of the emergence of this phenomenon and the diverse ways in which it is understood. He uses different standpoints from science, economics, faith, psychology, communication, sociology, politics and development to explain why we disagree about climate change. In this way he shows that climate change, far from being simply an 'issue' or a 'threat', can act as a catalyst to revise our perception of our place in the world. Why We Disagree About Climate Change is an important contribution to the ongoing debate over climate change and its likely impact on our lives.

The Citizen's Guide to Climate Success

Climate is an enduring idea of the human mind and also a powerful one. Today, the idea of climate is most commonly associated with the discourse of climate-change and its scientific, political, economic, social, religious and ethical dimensions. However, to understand adequately the cultural politics of climate-change it is important to establish the different origins of the idea of climate itself and the range of historical, political and cultural work that the idea of climate accomplishes. In *Weathered: Cultures of Climate*, distinguished professor Mike Hulme opens up the many ways in which the idea of climate is given shape and meaning in different human cultures – how climates are historicized, known, changed, lived with, blamed, feared, represented, predicted, governed and, at least putatively, re-designed.

US Climate Change Policy

Climate change seems to be an insurmountable problem. Political solutions have so far had little impact. Some scientists are now advocating the so-called 'Plan B', a more direct way of reducing the rate of future warming by reflecting more sunlight back to space, creating a thermostat in the sky. In this book, Mike Hulme argues against this kind of hubristic techno-fix. Drawing upon a distinguished career studying the science, politics and ethics of climate change, he shows why using science to fix the global climate is undesirable, ungovernable and unattainable. Science and technology should instead serve the more pragmatic goals of increasing societal resilience to weather risks, improving regional air quality and driving forward an energy technology transition. Seeking to reset the planet's thermostat is not the answer. Climate change seems to be an insurmountable problem. Political solutions have so far had little impact. Some scientists are now advocating the so-called 'Plan B', a more direct way of reducing the rate of future warming by reflecting more sunlight back to space, creating a thermostat in the sky. In this book, Mike Hulme argues against this kind of hubristic techno-fix. Drawing upon a distinguished career studying the science, politics and ethics of climate change, he shows why using science to fix the global climate is undesirable, ungovernable and unattainable. Science and technology should instead serve the more pragmatic goals of increasing societal resilience to weather risks, improving regional air quality and driving forward an energy technology transition. Seeking to reset the planet's thermostat is not the answer.

Climate Intervention

What if the people seized the means of climate production? Climate engineering is a dystopian project. But as the human species hurtles ever faster towards its own extinction, geoengineering as a temporary fix, to buy time for carbon removal, is a seductive idea. We are right to fear that geoengineering will be used to maintain the status quo, but is there another possible future after geoengineering? Can these technologies and practices be used as technologies of repair, to bring carbon levels back down to pre-industrial levels? Are there possibilities for massive intentional intervention in the climate that are democratic, decentralized, or participatory? Is there a scenario where the people can define and enact geoengineering on our own terms? These questions are provocative, because they go against a binary that has become common sense: geoengineering is assumed to be on the side of industrial agriculture, inequality and ecomodernism, in

opposition to degrowth, renewable energy, sustainable agriculture and climate justice. After Geoengineering rejects this binary, to ask: what if the people seized the means of climate production? Both critical and utopian, the book examines the possible futures after geoengineering. Rejecting the idea that geoengineering is some kind of easy work-around, Holly Buck outlines the kind of social transformation that would be necessary to enact a programme of geoengineering in the first place.

False Alarm

This three-volume set presents entries and primary sources that will impress on readers that what we do—or don't do—today regarding climate change will dramatically influence what life on this planet will be like for untold numbers of generations. • Provides readers with a clearly written description of global-warming science and its role in shaping a body of knowledge regarding a worldwide issue that affects everyone • Suggests remedies for this serious problem, most notably a rapid rise in the implementation of wind power generation and a coming revolution in solar energy • Impresses on readers that what Americans and the citizens and governments of other nations around the globe do over the next decades will determine the future of this planet for many tens of thousands of years to come • Includes primary documents sourced from major scientific journals and from the many reports on recent climate change from governmental organizations, including the Intergovernmental Panel on Climate Change (IPCC) and World Meteorological Organization (WMO), both part of the United Nations; and the U.S. government's National Climate Assessment

The Story of More

Climate change is occurring. It is very likely caused by the emission of greenhouse gases from human activities, and poses significant risks for a range of human and natural systems. And these emissions continue to increase, which will result in further change and greater risks. America's Climate Choices makes the case that the environmental, economic, and humanitarian risks posed by climate change indicate a pressing need for substantial action now to limit the magnitude of climate change and to prepare for adapting to its impacts. Although there is some uncertainty about future risk, acting now will reduce the risks posed by climate change and the pressure to make larger, more rapid, and potentially more expensive reductions later. Most actions taken to reduce vulnerability to climate change impacts are common sense investments that will offer protection against natural climate variations and extreme events. In addition, crucial investment decisions made now about equipment and infrastructure can "lock in" commitments to greenhouse gas emissions for decades to come. Finally, while it may be possible to scale back or reverse many responses to climate change, it is difficult or impossible to "undo" climate change, once manifested. Current efforts of local, state, and private-sector actors are important, but not likely to yield progress comparable to what could be achieved with the addition of strong federal policies that establish coherent national goals and incentives, and that promote strong U.S. engagement in international-level response efforts. The inherent complexities and uncertainties of climate change are best met by applying an iterative risk management framework and making efforts to significantly reduce

greenhouse gas emissions; prepare for adapting to impacts; invest in scientific research, technology development, and information systems; and facilitate engagement between scientific and technical experts and the many types of stakeholders making America's climate choices.

Contemporary Climate Change Debates

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.

Drawdown

"At last--a global plan that actually adds up."--James Hansen, former director, NASA Goddard Institute for Space Studies The world must reach negative greenhouse gas emissions by 2050 to avoid the most catastrophic effects of climate change. Yet no single plan has addressed the full scope of the problem--until now. In The 100% Solution, Solomon Goldstein-Rose--a leading millennial climate activist and a former Massachusetts state representative--makes clear what needs to happen to hit the 2050 target: the manufacturing booms we must spur, the moonshot projects we must fund, the amount of CO₂ we'll have to sequester from the atmosphere, and much more. Most importantly, he shows us the more prosperous and equitable world we can build by uniting the efforts of activists, industries, governments, scientists, and voters to get the job done. This is the guide we've been waiting for. As calls for a WWII-scale mobilization intensify--especially among

youth activists--this fully illustrated, action-oriented book arms us with specific demands, sets the stakes for what our leaders must achieve, and proves that with this level of comprehensive thinking we can still take back our future.

Americans and Climate Change

Environmental educators face a formidable challenge when they approach climate change due to the complexity of the science and of the political and cultural contexts in which people live. There is a clear consensus among climate scientists that climate change is already occurring as a result of human activities, but high levels of climate change awareness and growing levels of concern have not translated into meaningful action. *Communicating Climate Change* provides environmental educators with an understanding of how their audiences engage with climate change information as well as with concrete, empirically tested communication tools they can use to enhance their climate change program. Starting with the basics of climate science and climate change public opinion, Armstrong, Krasny, and Schuldt synthesize research from environmental psychology and climate change communication, weaving in examples of environmental education applications throughout this practical book. Each chapter covers a separate topic, from how environmental psychology explains the complex ways in which people interact with climate change information to communication strategies with a focus on framing, metaphors, and messengers. This broad set of topics will aid educators in formulating program language for their classrooms at all levels. *Communicating Climate Change* uses fictional vignettes of climate change education programs and true stories from climate change educators working in the field to illustrate the possibilities of applying research to practice. Armstrong et al, ably demonstrate that environmental education is an important player in fostering positive climate change dialogue and subsequent climate change action. An open access version of this book is available through Cornell Open.

Informing an Effective Response to Climate Change

A unique anthology of *Race Today* (1973-88), featuring original contributions from C. L. R. James, Selma James, Linton Kwesi Johnson and Darcus Howe

Losing Earth

Hillary Rodham Clinton was the first First Lady to have her own office in the West Wing of the White House and the only First Lady ever to be subpoenaed to testify before a grand jury. Upon leaving the White House, she was elected as the first female Senator for New York, then served as one of America's most popular Secretaries of State. Will she now become the first female President of the United States? Hillary is poised to decide whether she will launch a fresh attempt to take the highest office in the world and make history in doing so. But what is Hillary really like? Will she run? Can she win? What can the world expect from Hillary if she does get back to the White House? What sort of President would she be? Robin Renwick, who was the British ambassador in Washington when the Clintons arrived in the White House, seeks to answer these questions and more in this vivid portrait

of one of the most polarising and central figures in recent US political history.

The Oxford Handbook of Climate Change and Society

By 1979, we knew all that we know now about the science of climate change - what was happening, why it was happening, and how to stop it. Over the next ten years, we had the very real opportunity to stop it. Obviously, we failed. Nathaniel Rich's groundbreaking account of that failure - and how tantalizingly close we came to signing binding treaties that would have saved us all before the fossil fuels industry and politicians committed to anti-scientific denialism - is already a journalistic blockbuster, a full issue of the New York Times Magazine that has earned favorable comparisons to Rachel Carson's *Silent Spring* and John Hersey's *Hiroshima*. Rich has become an instant, in-demand expert and speaker. A major movie deal is already in place. It is the story, perhaps, that can shift the conversation. In the book *Losing Earth*, Rich is able to provide more of the context for what did - and didn't - happen in the 1980s and, more important, is able to carry the story fully into the present day and wrestle with what those past failures mean for us in 2019. It is not just an agonizing revelation of historical missed opportunities, but a clear-eyed and eloquent assessment of how we got to now, and what we can and must do before it's truly too late.

Storms of My Grandchildren

Global climate change is one of America's most significant long-term policy challenges. Human activity--especially the use of fossil fuels, industrial processes, livestock production, waste disposal, and land use change--is affecting global average temperatures, snow and ice cover, sea-level, ocean acidity, growing seasons and precipitation patterns, ecosystems, and human health. Climate-related decisions are being carried out by almost every agency of the federal government, as well as many state and local government leaders and agencies, businesses and individual citizens. Decision makers must contend with the availability and quality of information, the efficacy of proposed solutions, the unanticipated consequences resulting from decisions, the challenge of implementing chosen actions, and must consider how to sustain the action over time and respond to new information. *Informing an Effective Response to Climate Change*, a volume in the *America's Climate Choices* series, describes and assesses different activities, products, strategies, and tools for informing decision makers about climate change and helping them plan and execute effective, integrated responses. It discusses who is making decisions (on the local, state, and national levels), who should be providing information to make decisions, and how that information should be provided. It covers all levels of decision making, including international, state, and individual decision making. While most existing research has focused on the physical aspect of climate change, *Informing an Effective Response to Climate Change* employs theory and case study to describe the efforts undertaken so far, and to guide the development of future decision-making resources. *Informing an Effective Response to Climate Change* offers much-needed guidance to those creating public policy and assists in implementing that policy. The information presented in this book will be invaluable to the research community, especially social scientists studying climate change; practitioners of decision-making assistance, including advocacy organizations, non-profits, and

government agencies; and college-level teachers and students.

America's Climate Choices

Shows readers how we can all help solve the climate crisis by focusing on a few key, achievable actions.

The Political Economy of Aid in Palestine

Just as World War II called an earlier generation to greatness, so the climate crisis is calling today's rising youth to action: to create a better future. In UNSTOPPABLE, Bill Nye crystallizes and expands the message for which he is best known and beloved. That message is that with a combination of optimism and scientific curiosity, all obstacles become opportunities, and the possibilities of our world become limitless. With a scientist's thirst for knowledge and an engineer's vision of what can be, Bill Nye sees today's environmental issues not as insurmountable, depressing problems but as chances for our society to rise to the challenge and create a cleaner, healthier, smarter world. We need not accept that transportation consumes half our energy, and that two-thirds of the energy you put into your car is immediately thrown away out the tailpipe. We need not accept that dangerous emissions are the price we must pay for a vibrant economy and a comfortable life. Above all, we need not accept that we will leave our children a planet that is dirty, overheated, and depleted of resources. As Bill shares his vision, he debunks some of the most persistent myths and misunderstandings about global warming. When you are done reading, you'll be enlightened and empowered. Chances are, you'll be smiling, too, ready to join Bill and change the world. In Unstoppable: Harnessing Science to Change the World, the New York Times bestselling author of Undeniable: Evolution and the Science of Creation and former host of "Bill Nye the Science Guy" issues a new challenge to today's generation: to make a cleaner, more efficient, and happier world. Praise for UNDENIABLE: "With his charming, breezy, narrative style, Bill empowers the reader to see the natural world as it is, not as some would wish it to be. He does it right. And, as I expected, he does it best." -Neil deGrasse Tyson, Ph.D, host of COSMOS "Bill Nye, 'the Science Guy,' has become a veritable cultural icon.[T]he title of his new book on evolution[is] 'Undeniable,' because, yes, there are many Americans who still deny what Darwin and other scientists long ago proved." -Frank Bruni, The New York Times "With a jaunty bow tie and boyish enthusiasm, Bill Nye the Science Guy has spent decades decoding scientific topics, from germs to volcanoes, for television audiences. In his new book, Nye delights in how [evolution] helps to unlock the mysteries of everything from bumblebees to human origins to our place in the universe." -National Geographic "When it comes to Bill Nye, 'Science Guy' doesn't even begin to cover it. When he's not being summoned to act as a voice of reason for news outlets or leading meetings as CEO of the Planetary Society, he is living the life of a best-selling author. His recently published book, 'Undeniable: Evolution and the Science of Creation,' enlightens readers while using a conversational, educational tone. After all, it's his ability to break down even the most complicated topics into bite-size pieces that made him such a hit on his '90s children's show 'Bill Nye, the Science Guy.'" -The Boston Globe "Mr. Nye writes briskly and accessibly[and] makes an eloquent case for evolution." -The Wall Street Journal "Because [Bill Nye is] a scientist, he has no doubts that the 'deniers' of evolution are flat wrong. And

because he's a performer, his book is fun to read and easy to absorb." -The Washington Post "Ignite your inner scientist when Nye, known for delivering geeky intel with clarity and charm, takes on one of society's most hotly debated topics (yes, still)." -Time Out New York

Unholy Fury

Contemporary Climate Change Debates is an innovative new textbook which tackles some of the difficult questions raised by climate change. For the complex policy challenges surrounding climate migration, adaptation and resilience, structured debates become effective learning devices for students. This book is organised around 15 important questions, and is split into four parts: What do we need to know? What should we do? On what grounds should we base our actions? Who should be the agents of change? Each debate is addressed by pairs of one or two leading or emerging academics who present opposing viewpoints. Through this format the book is designed to introduce students of climate change to different arguments prompted by these questions, and also provides a unique opportunity for them to engage in critical thinking and debate amongst themselves. Each chapter concludes with suggestions for further reading and with discussion questions for use in student classes. Drawing upon the sciences, social sciences and humanities to debate these ethical, cultural, legal, social, economic, technological and political roadblocks, Contemporary Debates on Climate Change is essential reading for all students of climate change, as well as those studying environmental policy and politics and sustainable development more broadly.

A Case for Climate Engineering

Despite for many years receiving the highest per capita aid worldwide, the economies of the West Bank and Gaza Strip have failed to achieve any lasting developmental outcomes and suffer from major weaknesses which undermine their very survival. This book argues that the dominant, mainstream approach to the study of aid and aid effectiveness is theoretically and empirically inadequate for a comprehensive understanding and analysis of the workings of aid in developing countries, particularly those undergoing conflict. This book examines the nature of donor operations in Palestine, highlighting the political and ideological determinants of aid allocation and effectiveness, and focussing on the role of trade-related donor assistance in Palestine, more commonly known as Aid for Trade. It discusses how such trade-related assistance is only another instance of donors working 'around' the conflict, as opposed to taking it into account; and how aid to Palestine cannot bring about significant improvement as long as the Palestinian economy is fundamentally affected by Israeli occupation, settlements and blockade. It argues that unless restructured and more carefully targeted, aid can only act as a temporary relief mechanism. Furthermore, the book sheds light on critical areas within Palestinian territories that are in need of development and require significant and immediate attention at both national and international level.

Can Science Fix Climate Change

"This publication provides the latest scientific knowledge on a series of climate change topics relevant to Australia and the world. It draws on peer-reviewed literature contributed to by thousands of researchers. Climate change is the greatest ecological, economic, and social challenge of our time. Climate change research over many years shows links between human activities and warming of the atmosphere and oceans. This warming has caused changes to the climate system, such as changes in rain and wind patterns, and reductions in Arctic sea ice. Climate change adaptation involves taking action to adapt to climate change and to plan and prepare for the risk of future change. Climate change mitigation refers to actions that aim to limit greenhouse gases in the atmosphere, either by reducing emissions or by increasing the amount of carbon dioxide stored in natural sinks."--Publisher description.

How to Cool the Planet

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.

The 100% Solution

Climate change seems to be an insurmountable problem. Political solutions have so far had little impact. Some scientists are now advocating the so-called 'Plan B', a more direct way of reducing the rate of future warming by reflecting more sunlight back to space, creating a thermostat in the sky. In this book, Mike Hulme argues against this kind of hubristic techno-fix. Drawing upon a distinguished

career studying the science, politics and ethics of climate change, he shows why using science to fix the global climate is undesirable, ungovernable and unattainable. Science and technology should instead serve the more pragmatic goals of increasing societal resilience to weather risks, improving regional air quality and driving forward an energy technology transition. Seeking to reset the planet's thermostat is not the answer. Climate change seems to be an insurmountable problem. Political solutions have so far had little impact. Some scientists are now advocating the so-called 'Plan B', a more direct way of reducing the rate of future warming by reflecting more sunlight back to space, creating a thermostat in the sky. In this book, Mike Hulme argues against this kind of hubristic techno-fix. Drawing upon a distinguished career studying the science, politics and ethics of climate change, he shows why using science to fix the global climate is undesirable, ungovernable and unattainable. Science and technology should instead serve the more pragmatic goals of increasing societal resilience to weather risks, improving regional air quality and driving forward an energy technology transition. Seeking to reset the planet's thermostat is not the answer.

Climate Change: An Encyclopedia of Science, Society, and Solutions [3 volumes]

In the early 1970s, two titans of Australian and American politics, Prime Minister Gough Whitlam and President Richard Nixon, clashed over the end of the Vietnam war and the shape of a new Asia. A relationship that had endured the heights of the Cold War veered dangerously off course and seemed headed for destruction. Never before—or since—has the alliance sunk to such depths. Drawing on sensational new evidence from once top-secret American and Australian records, this book portrays the bitter clash between these two leaders and their competing visions of the world. As the Nixon White House went increasingly on the defensive in early 1973, reeling from the lethal drip of the Watergate revelations, the first Labor prime minister in twenty-three years looked to redefine ANZUS and Australia's global stance. It was a heady brew, and not one the Americans were used to. The result was a fractured alliance, and an American president enraged, seemingly hell bent on tearing apart the fabric of a treaty that had become the first principle of Australian foreign policy.

Here to Stay, Here to Fight

• New York Times bestseller • The 100 most substantive solutions to reverse global warming, based on meticulous research by leading scientists and policymakers around the world “At this point in time, the Drawdown book is exactly what is needed; a credible, conservative solution-by-solution narrative that we can do it. Reading it is an effective inoculation against the widespread perception of doom that humanity cannot and will not solve the climate crisis. Reported by-effects include increased determination and a sense of grounded hope.” —Per Espen Stoknes, Author, *What We Think About When We Try Not To Think About Global Warming* “There's been no real way for ordinary people to get an understanding of what they can do and what impact it can have. There remains no single, comprehensive, reliable compendium of carbon-reduction solutions across sectors. At least until now. . . . The public is hungry for this kind of practical wisdom.”

—David Roberts, Vox “This is the ideal environmental sciences textbook—only it is too interesting and inspiring to be called a textbook.” —Peter Kareiva, Director of the Institute of the Environment and Sustainability, UCLA In the face of widespread fear and apathy, an international coalition of researchers, professionals, and scientists have come together to offer a set of realistic and bold solutions to climate change. One hundred techniques and practices are described here—some are well known; some you may have never heard of. They range from clean energy to educating girls in lower-income countries to land use practices that pull carbon out of the air. The solutions exist, are economically viable, and communities throughout the world are currently enacting them with skill and determination. If deployed collectively on a global scale over the next thirty years, they represent a credible path forward, not just to slow the earth’s warming but to reach drawdown, that point in time when greenhouse gases in the atmosphere peak and begin to decline. These measures promise cascading benefits to human health, security, prosperity, and well-being—giving us every reason to see this planetary crisis as an opportunity to create a just and livable world.

The Economics of Climate Change

A capricious beast ever since the days when he had trudged around fossil lake basins in Nevada for his doctoral thesis, Broecker had been interested in sudden climate shifts. Here is his most surprising and important calculation.

Why We Disagree about Climate Change

The director of the Climate Outreach and Information Network explores the psychological mechanism that enables people to ignore the dangers of climate change, using sidebars, cartoons and engaging stories from his years of research to reveal how humans are wired to primarily respond to visible threats.

Communicating Climate Change

Dr James Hansen, the world's leading scientist on climate issues, speaks out for the first time with the full truth about global warming: the planet is hurtling to a climatic point of no return. Hansen - whose climate predictions have come to pass again and again, beginning in the 1980s when he first warned US Congress about global warming - is the single most credible voice on the subject worldwide. He paints a devastating but all-too-realistic picture of what will happen if we continue to follow the course we're on. But he is also a hard-headed optimist, and shows that there is still time to take the urgent, strong action needed to save humanity.

Climate Change Science

A systematic examination by the best writers in a variety of fields working on issues of how climate change affects society, and how social, economic, and political systems can, do, and should respond.

Discerning Experts

Read Free Can Science Fix Climate Change A Case Against Climate Engineering New Human Frontiers Series By Hulme Mike 2014 Paperback

The New York Times-bestselling "skeptical environmentalist" argues that panic over climate change is causing more harm than good. Hurricanes batter our coasts. Wildfires rage across the American West. Glaciers collapse in the Arctic. Politicians, activists, and the media espouse a common message: climate change is destroying the planet, and we must take drastic action immediately to stop it. Children panic about their future, and adults wonder if it is even ethical to bring new life into the world. Enough, argues bestselling author Bjorn Lomborg. Climate change is real, but it's not the apocalyptic threat that we've been told it is. Projections of Earth's imminent demise are based on bad science and even worse economics. In panic, world leaders have committed to wildly expensive but largely ineffective policies that hamper growth and crowd out more pressing investments in human capital, from immunization to education. False Alarm will convince you that everything you think about climate change is wrong -- and points the way toward making the world a vastly better, if slightly warmer, place for us all.

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