

Paper On Global Warming

Argues that global warming is a natural, cyclical phenomenon that has not been caused by human activities and that its negative consequences have been greatly overestimated.

In this clear and cogent book, Victor explains why the Kyoto Protocol is unlikely to enter into force and how its failure will offer the opportunity to establish a more realistic alternative."--BOOK JACKET.

How economic analysis can help us design economic policies to address the looming challenges of global warming As scientific and observational evidence on global warming piles up every day, questions of economic policy in this central environmental topic have taken center stage. But as author and prominent Yale economist William Nordhaus observes, the issues involved in understanding global warming and slowing its harmful effects are complex and cross disciplinary boundaries. For example, ecologists see global warming as a threat to ecosystems, utilities as a debit to their balance sheets, and farmers as a hazard to their livelihoods. In this important work, William Nordhaus integrates the entire spectrum of economic and scientific research to weigh the costs of reducing emissions against the benefits of reducing the long-run damages from global warming. The book offers one of the most extensive analyses of the economic and environmental dynamics of greenhouse-gas emissions and climate

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change and provides the tools to evaluate alternative approaches to slowing global warming. The author emphasizes the need to establish effective mechanisms, such as carbon taxes, to harness markets and harmonize the efforts of different countries. This book not only will shape discussion of one of the world's most pressing problems but will provide the rationales and methods for achieving widespread agreement on our next best move in alleviating 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 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.

- 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

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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

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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.

Climate change presents perhaps the most profound challenge ever confronted by human society. This volume is a definitive analysis drawing on the best thinking on questions of how climate change affects human systems, and how societies can, do, and should respond. Key topics covered include the history of the issues, social and political reception of climate science, the denial of that science by individuals and organized interests, the nature of the social disruptions caused by climate change, the economics of those disruptions and possible responses to them, questions of human security and social justice, obligations to future generations, policy instruments for reducing greenhouse gas emissions, and governance at local, regional, national, international, and global levels.

#1 NEW YORK TIMES BEST SELLER • In this urgent, authoritative book, Bill Gates sets out a wide-ranging, practical—and accessible—plan for how the world can get to zero greenhouse gas emissions in time to avoid a climate catastrophe. Bill Gates has spent a decade investigating the causes and effects of climate change. With the help of experts in the fields of physics, chemistry, biology, engineering, political science, and finance, he has focused on what must be done in order to stop the planet's slide to

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certain environmental disaster. In this book, he not only explains why we need to work toward net-zero emissions of greenhouse gases, but also details what we need to do to achieve this profoundly important goal. He gives us a clear-eyed description of the challenges we face. Drawing on his understanding of innovation and what it takes to get new ideas into the market, he describes the areas in which technology is already helping to reduce emissions, where and how the current technology can be made to function more effectively, where breakthrough technologies are needed, and who is working on these essential innovations. Finally, he lays out a concrete, practical plan for achieving the goal of zero emissions—suggesting not only policies that governments should adopt, but what we as individuals can do to keep our government, our employers, and ourselves accountable in this crucial enterprise. As Bill Gates makes clear, achieving zero emissions will not be simple or easy to do, but if we follow the plan he sets out here, it is a goal firmly within our reach.

Climate Forcing of Geological Hazards provides a valuable new insight into how climate change is able to influence, modulate and trigger geological and geomorphological phenomena, such as earthquakes, tsunamis, volcanic eruptions and landslides; ultimately increasing the risk of natural hazards in a warmer world. Taken together, the chapters build a panorama of a field of research that is only now becoming recognized as important in the context of the likely impacts and implications of anthropogenic climate change. The

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observations, analyses and interpretations presented in the volume reinforce the idea that a changing climate does not simply involve the atmosphere and hydrosphere, but also elicits potentially hazardous responses from the solid Earth, or geosphere. *Climate Forcing of Geological Hazards* is targeted particularly at academics, graduate students and professionals with an interest in environmental change and natural hazards. As such, we are hopeful that it will encourage further investigation of those mechanisms by which contemporary climate change may drive potentially hazardous geological and geomorphological activity, and of the future ramifications for society and economy.

Climate Change as Social Drama looks at the cultural sociology of climate change in public communication.

#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*

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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

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emotion of the day: fear. . . . I encourage people to read this book."--Alan Weisman, *The New York Review of Books*

The Warming Papers
The Scientific Foundation for the Climate Change Forecast
John Wiley & Sons

Chosen for the 2011 ASLI Choice - Honorable Mention (History Category) for a compendium of the key scientific papers that undergird the global warming forecast. Global warming is arguably the defining scientific issue of modern times, but it is not widely appreciated that the foundations of our understanding were laid almost two centuries ago with the postulation of a greenhouse effect by Fourier in 1827. The sensitivity of climate to changes in atmospheric CO₂ was first estimated about one century ago, and the rise in atmospheric CO₂ concentration was discovered half a century ago. The fundamentals of the science underlying the forecast for human-induced climate change were being published and debated long before the issue rose to public prominence in the last few decades. *The Warming Papers* is a compendium of the classic scientific papers that constitute the foundation of the global warming forecast. The paper trail ranges from Fourier and Arrhenius in the 19th Century to Manabe and Hansen in modern times. Archer and Pierrehumbert provide introductions and commentary which places the papers in their context and provide students with

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tools to develop and extend their understanding of the subject. The book captures the excitement and the uncertainty that always exist at the cutting edge of research, and is invaluable reading for students of climate science, scientists, historians of science, and others interested in climate change.

Essay from the year 2016 in the subject Politics - International Politics - Environmental Policy, grade: 97, language: English, abstract: As a consultant in energy and sustainable development for the UN, your role is to provide a guideline and information on issues connected to the oil and gas production and applications as one of the major causes for climate change and global warming. For this reason, sustainable development of oil and gas industries is an important factor, for example in how oil and gas companies are able to divert into cleaner sources of sustainable energy and the consequent impacts on the environment, in general and the climate, in particular. Currently, the greatest worry among the environmentalists and the UN is the huge concern regarding the present rising levels of the earth's temperatures. Among their top concern is the continued effects of greenhouse gases to the atmosphere that continually contribute to the global warming of the earth. More so, the increased and exploitative usage of the fossil fuels in the modern industries contributes to the increase in the global temperatures. The reason of the worries is the fact that the over-accumulation of

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the carbon IV oxide in the atmosphere continually deteriorates the climatic balance of the earth. Additionally, the top reasons causing the worries of the global warming effects on the Earth arise from the provision that the factors leading to the global warming and causing the upsetting climatic changes are synthetic and human beings contribute a huge role to the destruction of the atmosphere. The following write-up aims to focus on the various contributing factors of the climate change and those causing global warming. More so, the paper will address the challenges and benefits that would arise if the conventional energy producers would consider seeking greener or renewable sources for their energy, with a particular focus on oil and petroleum companies. In addition, the paper will have s

The latest report from the Intergovernmental Panel on Climate Change (IPCC) reflects the growing international consensus that the earth's climate is being changed by anthropogenic greenhouse gasses. Evidence presented by the IPCC and others points to the potential for increasingly dangerous weather, new disease outbreaks, regional water shortages, the loss of habitat and species, and other disturbing developments that could have profound social and economic impacts. Opinions on what should be done, however, remain sharply divided within and among countries. Though monumental in its efforts, the Kyoto Protocol

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has left much to be agreed upon and achieved, with the world's largest emitter of carbon dioxide—the United States—rejecting it. In *Global Warming: Looking Beyond Kyoto*, some of the best-known and respected authorities in climate policy provide a comprehensive agenda for global collective action. Representing both industrialized and developing nations, the contributors present a thought-provoking examination of the economic, social, and political context of climate policy within their countries. With Kyoto's emissions targets set to expire in 2012, these authors call for a multilateral approach that goes beyond the mitigation-focused Kyoto policies, balancing them with strategies for adaptation. They also stress the importance of generating policies that work within a time frame commensurate with that of climate change itself. Informed, insightful, and even-handed, this book gives a new impetus to the increasingly important global climate policy debate. Contributors include R.K. Pachauri (Energy Resources Institute and the IPCC), Richard S. Lindzen (Massachusetts Institute of Technology), Stefan Rahmstorf (Potsdam Institute for Climate Impact Research), Stephen H. Schneider and Thomas Heller (Stanford University), Robert Mendelsohn and William D. Nordhaus (Yale University), Gernot Klepper and Sonja Peterson (Kiel Institute for World Economics), Robert N. Stavins (Harvard University), Alexander Golub (Environmental Defense), Howard Dalton (U.K.

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Department for Environment, Food and Rural Affairs), John Stone (Carleton University, Ottawa), Jyoti Parikh (Integrated Research and Action for Development), and Shen Longhai (China Energy Conservation Association)

The award-winning book is now revised and expanded. In 2001 an international panel of distinguished climate scientists announced that the world was warming at a rate without precedent during at least the last ten millennia, and that warming was caused by the buildup of greenhouse gases from human activity. The story of how scientists reached that conclusion—by way of unexpected twists and turns—was the story Spencer Weart told in *The Discovery of Global Warming*. Now he brings his award-winning account up to date, revised throughout to reflect the latest science and with a new conclusion that shows how the scientific consensus caught fire among the general world public, and how a new understanding of the human meaning of climate change spurred individuals and governments to action.

Climate change poses many challenges that affect society and the natural world. With these challenges, however, come opportunities to respond. By taking steps to adapt to and mitigate climate change, the risks to society and the impacts of continued climate change can be lessened. The National Climate Assessment, coordinated by the U.S. Global Change Research Program, is a mandated report

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intended to inform response decisions. Required to be developed every four years, these reports provide the most comprehensive and up-to-date evaluation of climate change impacts available for the United States, making them a unique and important climate change document. The draft Fourth National Climate Assessment (NCA4) report reviewed here addresses a wide range of topics of high importance to the United States and society more broadly, extending from human health and community well-being, to the built environment, to businesses and economies, to ecosystems and natural resources. This report evaluates the draft NCA4 to determine if it meets the requirements of the federal mandate, whether it provides accurate information grounded in the scientific literature, and whether it effectively communicates climate science, impacts, and responses for general audiences including the public, decision makers, and other stakeholders. Buy this cool Environmental Protection Journal or Notebook as gift for your family 120 lined pages 6x9 inches matte cover

Documents the troubling influence of a small group of scientists who the author contends misrepresent scientific facts to advance key political and economic agendas, revealing the interests behind their detractions on findings about acid rain, DDT, and other hazards.

Comprehensive and up-to-date information on Earth's most dominant year-to-

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year climate variation The El Niño Southern Oscillation (ENSO) in the Pacific Ocean has major worldwide social and economic consequences through its global scale effects on atmospheric and oceanic circulation, marine and terrestrial ecosystems, and other natural systems. Ongoing climate change is projected to significantly alter ENSO's dynamics and impacts. El Niño Southern Oscillation in a Changing Climate presents the latest theories, models, and observations, and explores the challenges of forecasting ENSO as the climate continues to change. Volume highlights include: Historical background on ENSO and its societal consequences Review of key El Niño (ENSO warm phase) and La Niña (ENSO cold phase) characteristics Mathematical description of the underlying physical processes that generate ENSO variations Conceptual framework for understanding ENSO changes on decadal and longer time scales, including the response to greenhouse gas forcing ENSO impacts on extreme ocean, weather, and climate events, including tropical cyclones, and how ENSO affects fisheries and the global carbon cycle Advances in modeling, paleo-reconstructions, and operational climate forecasting Future projections of ENSO and its impacts Factors influencing ENSO events, such as inter-basin climate interactions and volcanic eruptions The American Geophysical Union promotes discovery in Earth and space science for the benefit of humanity. Its publications

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disseminate scientific knowledge and provide resources for researchers, students, and professionals.

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. An updated and accessible account of what science knows about climate change, incorporating the latest scientific findings and policy initiatives. Most of us are familiar with the term climate change but few of us understand the science behind it. We don't fully comprehend how climate change will affect us, and for that reason we might not consider it as pressing a concern as, say, housing prices or unemployment. This book explains the scientific knowledge about global climate change clearly and concisely in engaging, nontechnical language, describes how it will affect all of us, and suggests how government, business, and citizens can take action against it. This completely revised and updated edition incorporates the latest scientific research and policy initiatives on climate change. It describes recent major legislative actions, analyzes alternative

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regulatory tools including new uses of taxes and markets, offers increased coverage of China and other developing nations, discusses the role of social media in communicating about climate change, and provides updated assessments of the effects of climate change. The book first explains the basic scientific facts about climate change and its global impact. It discusses the nature of scientific consensus and the strong consensus of mainstream science on climate change. It then explores policy responses and corporate actions in the United States and the rest of the world, discusses how the communication of climate change information by journalists and others can be improved, and addresses issues of environmental justice—how climate change affects the most vulnerable populations and regions. We can better tackle climate change, this book shows us, if we understand it.

Evaluates trade-offs and uncertainties inherent in achieving sustainable energy, analyzes the major energy technologies, and provides a framework for assessing policy options.

In accessible journalistic prose, author Lynas distills what environmental scientists predict about the consequences of human pollution for the next hundred years, degree by degree. At 1 degree Celsius, most coral reefs and many mountain glaciers will be lost. A 3-degree rise would spell the collapse of the Amazon rainforest, disappearance of Greenland's ice sheet, and the creation of deserts across the Midwestern United States and southern Africa. A 6-degree increase would eliminate most life on Earth, including much of humanity. Based on

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authoritative scientific articles, the latest computer models, and information about past warm events in Earth history, this promises to be an eye-opening warning that humanity will ignore at its peril.--From publisherdescription.

This Food Policy Report presents research results that quantify the climate-change impacts mentioned above, assesses the consequences for food security, and estimates the investments that would offset the negative consequences for human well-being.

"Surging sea levels are inundating the coasts." "Hurricanes and tornadoes are becoming fiercer and more frequent." "Climate change will be an economic disaster." You've heard all this presented as fact. But according to science, all of these statements are profoundly misleading. When it comes to climate change, the media, politicians, and other prominent voices have declared that "the science is settled." In reality, the long game of telephone from research to reports to the popular media is corrupted by misunderstanding and misinformation. Core questions—about the way the climate is responding to our influence, and what the impacts will be—remain largely unanswered. The climate is changing, but the why and how aren't as clear as you've probably been led to believe. Now, one of America's most distinguished scientists is clearing away the fog to explain what science really says (and doesn't say) about our changing climate. In *Unsettled: What Climate Science Tells Us, What It Doesn't, and Why It Matters*, Steven Koonin draws upon his decades of experience—including as a top science advisor to the Obama administration—to provide up-to-date insights and expert perspective free from political agendas. Fascinating, clear-headed, and full of surprises, this book gives readers the tools to both understand the climate issue and be savvier consumers of science media in general. Koonin takes readers behind the headlines to the more nuanced science itself,

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showing us where it comes from and guiding us through the implications of the evidence. He dispels popular myths and unveils little-known truths: despite a dramatic rise in greenhouse gas emissions, global temperatures actually decreased from 1940 to 1970. What's more, the models we use to predict the future aren't able to accurately describe the climate of the past, suggesting they are deeply flawed. Koonin also tackles society's response to a changing climate, using data-driven analysis to explain why many proposed "solutions" would be ineffective, and discussing how alternatives like adaptation and, if necessary, geoengineering will ensure humanity continues to prosper. *Unsettled* is a reality check buoyed by hope, offering the truth about climate science that you aren't getting elsewhere—what we know, what we don't, and what it all means for our future.

Climate change is occurring, is caused largely by human activities, and poses significant risks for--and in many cases is already affecting--a broad range of human and natural systems. The compelling case for these conclusions is provided in *Advancing the Science of Climate Change*, part of a congressionally requested suite of studies known as America's Climate Choices. While noting that there is always more to learn and that the scientific process is never closed, the book shows that hypotheses about climate change are supported by multiple lines of evidence and have stood firm in the face of serious debate and careful evaluation of alternative explanations. As decision makers respond to these risks, the nation's scientific enterprise can contribute through research that improves understanding of the causes and consequences of climate change and also is useful to decision makers at the local, regional, national, and international levels. The book identifies decisions being made in 12 sectors, ranging from agriculture to transportation, to identify decisions being made in response to

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climate change. Advancing the Science of Climate Change calls for a single federal entity or program to coordinate a national, multidisciplinary research effort aimed at improving both understanding and responses to climate change. Seven cross-cutting research themes are identified to support this scientific enterprise. In addition, leaders of federal climate research should redouble efforts to deploy a comprehensive climate observing system, improve climate models and other analytical tools, invest in human capital, and improve linkages between research and decisions by forming partnerships with action-oriented programs.

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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. While the IMF has been involved in the climate debate since at least 2008, a

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systematic account of how to integrate climate change into surveillance has been lacking to date. This paper seeks to fill the gap. It argues that domestic policy challenges related to climate change—such as adaptation efforts for climate vulnerable countries, or policies to deliver a country’s Nationally Determined Contribution under the Paris climate accord—are covered by the IMF’s bilateral surveillance mandate and therefore valid topics for Article IV consultations wherever these challenges cross the threshold of macro-criticality. Climate change mitigation is a global policy challenge and therefore falls under multilateral surveillance. The paper proposes a pragmatic approach that focusses especially on the mitigation efforts of the 20 largest emitters of greenhouse gases.

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

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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.

This original book considers one of the most extraordinary scientific and political stories of our time: how in the 1980s a handful of scientists came to believe that mankind faced catastrophe from runaway global warming, and how today this has persuaded politicians to land us with what promises to be the biggest bill in history. Christopher Booker interweaves the science of global warming with that of its growing political consequences, showing how just when the politicians are threatening to change our Western way of life beyond recognition, the scientific evidence behind the global warming theory is being challenged like never before. The book exposes the myth that the global warming theory is supported by a 'consensus of the world's top climate scientists'. It shows how the UN's Intergovernmental Panel on Climate Change is run by a small group of 'global

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warming' zealots, who have repeatedly rigged evidence to support their theory. But the politicians, pushed by the media, have so fallen for its propaganda that, short of dramatic change, our Western world now faces an unprecedented disaster.

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