

PREFACE

In interactions on the Web or at public talks and exhibitions, we have found a hunger among the public for more context and information about climate change that is not being satisfied by newspapers, television, or the occasional documentary. Elsewhere, photographers have begun documenting the effects of current climate change and have created images that bring home the depth and immediacy of the problem. Stemming from a 2005 gallery exhibition, "Photographers' Perspectives on Global Warming," in New York, this book is a marriage (it is hoped a happy one) between the image makers and the investigators. We have selected images on their intrinsic merit, and we have used the text to provide the background necessary to understand what is being seen and discussed. This is not a textbook, nor just a collection of pretty pictures. Instead, our aim is to provide an accessible summary of the state of the science and a visual record of what it means.

Interest in human-induced climate change as a public issue has a long and varied history. It goes back at least to Swedish chemist Svante Arrhenius's first calculation of the effect of increasing greenhouse gases on temperature in the late nineteenth century. It was recognized as an environmental problem by President Johnson as early as 1965. NASA scientist James Hansen's testimony to Congress in the summer of 1988 made newspaper headlines, while the Rio Earth Summit in 1992 and the 2006 release of Al Gore's film documentary *An Inconvenient Truth* have heightened public concerns. In previous decades, the issue rose in the public consciousness temporarily, only to be subsumed as more immediate concerns vied for media attention. Scientifically, however, the study of climate change has proceeded at a steady pace, and evidence of human modification of the climate has been mounting rapidly.

With the 2007 publication of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, a group of scientists sponsored by the United Nations and the World Meteorological Organization, the case for global warming has become "unequivocal," with a "very likely" dominant role for humans causing it.

But what lies behind these definitive statements? Where are the key observations and theoretical insights that climate scientists rely on? Are there remaining

issues? What does climate change portend? These are questions now asked daily at the water cooler, in the newsroom, and in Congress.

The scope of climate change is truly vast, and no one author can do justice to its varied aspects. Accordingly, we have brought together experts on atmospheric science, oceanography, paleoclimatology, the polar regions, technology, and politics to each address their realm of expertise.

On a similar note, the photographers on this project also have diverse backgrounds. While they all work in documentary photography, largely for magazines, their specialties range from wildlife and nature to portraits and scientific imagery. Unfortunately, there are spatial and temporal limits to what a photographer can capture. The fascinating patterns of ocean circulation or the scale of Arctic ice melt are beyond the reach of traditional photography. So, for many of these subjects we use some of the exceptional imagery now obtained from space. Some photographs were taken from the NASA space shuttle, and some from the orbiting satellites that are more commonly used for weather forecasting or research.

Additionally, we have a number of first-person accounts from people at the front lines of climate research that clearly demonstrate how the field has transcended its origin as a dry academic discipline.

In putting this book together, we hope to impress, educate, intrigue, and maybe motivate. Please let us know if we have succeeded.

Gavin Schmidt
Joshua Wolfe
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