



Press Release

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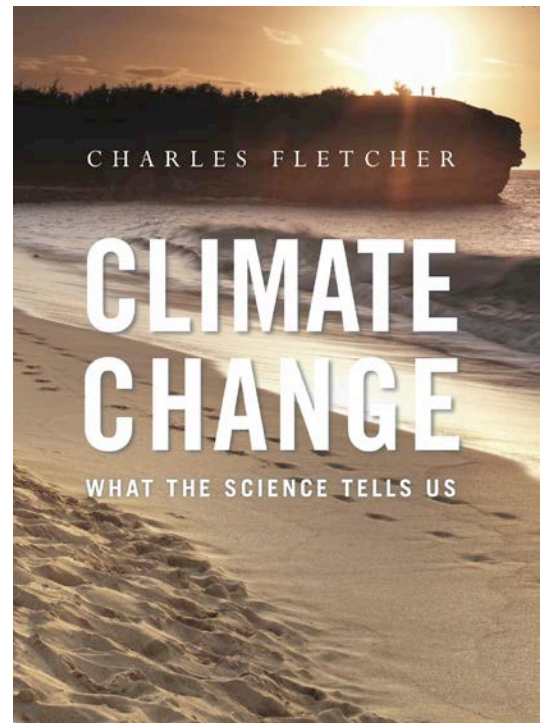
University of Hawaii scientist publishes first climate change textbook for college students

Honolulu, HI – Dr. Charles Fletcher, Associate Dean and Professor of Geology and Geophysics at the University of Hawaii at Manoa's School of Ocean and Earth Science and Technology, released this month the first edition of "Climate Change: What the Science Tells Us" (published by J. Wiley and Sons, Hoboken, NJ). Fletcher offers the first real textbook to present the science surrounding climate change at the right level for an undergraduate student.

"Our climate is changing NOW in rapid and dangerous ways. But by and large, we are not teaching the current generation of students about the reality of this phenomenon," stated Fletcher. "Without this knowledge, our ability to manage the impacts of a changing climate is limited."

This text places strong emphasis on the peer-reviewed scientific literature in reporting the impacts of climate change on the ocean, terrestrial ecosystems, the water cycle, human communities, hazardous weather patterns, and potential future Earth systems. The text offers detailed discussion of greenhouse gases, oceanic and atmospheric processes, paleoclimate, the human fingerprints of climate change, global climate models, sea level rise, climate impacts on economic sectors, and dangerous weather patterns associated with climate change.

For over 30 years Dr. Fletcher has studied and published research on the impacts of coastal hazards on human communities, the geologic history of sea level change in the Atlantic and Pacific, and the geologic proxies that characterize Earth's climate over the past half-million years. His familiarity with the natural record of climate coupled with a focus on the fundamental data and observations that constitute the



Book cover for Dr. Charles Fletcher's *Climate Change: What the Science Tells Us*.
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science of global warming, results in a comprehensive and detailed treatment of the problem of climate change.

Fletcher's polished writing style makes this an entertaining read while the pedagogical support and organization help students better identify and understand key concepts, ideas and terms. Each chapter is organized with learning objectives, student exercises, videos, and scientific citations to promote further learning, and creative thinking problems to underpin classroom discussion.

"Earth's climate has always changed. Modern climate change does not, however, fit geologic history," noted Fletcher. "In the past half century, the rate and extent of climate change has been extraordinary. Despite extensive searching, no known natural processes can account for the present climate trend of extremely rapid warming of the temperature of the lower atmosphere. Furthermore, industrial exhaust, deforestation, and large-scale agribusiness are known producers of heat-trapping gas in the atmosphere. It is only logical to hypothesize that there is a strong likelihood that these human activities are causing the extraordinary warming. Vigorous testing of this hypothesis demonstrates that modern climate change is a consequence of human-caused global warming; in fact, among scientists, this has been known for decades."

More than other books, *Climate Change* exposes the general public, decision makers, and students to the processes of peer-reviewed scientific publishing, and connects published science papers to current events. This shows that even the boldest statements of climate scientists are backed up by the scientific system of skeptical peer review. Skeptical peer review is the process scientists use to filter strongly developed research from weak research. The process of peer review invokes critical thinking by competitive, judgmental scientists to gauge the appropriateness of research results to be published for widespread reading.

In the classroom, this text can stand alone as the backbone of a semester-long class, or it can accompany any curriculum that touches on Earth processes where the instructor wants students to delve deeper into climate change. Its content will augment many classes, including geomorphology, climatology, historical and physical geology, meteorology, earth science, oceanography and marine science, environmental science, planning, civil engineering, environmental law, American studies, political science, sociology, and many others.

Today's scientists know that if strong action to counteract climate change is not successfully achieved, within one generation the world will be a place characterized by intense heat waves, widespread disease, drought, food shortages, and deadly super storms. The early signs of these disasters are already evident. "Climate Change: What the Science Tells Us" brings this reality into the college classroom.

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Climate Change: What the Science Tells Us, by Dr. Charles Fletcher, is available in paperback and Wiley E-Text formats at <http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002419.html>

The School of Ocean and Earth Science and Technology at the University of Hawaii at Manoa was established by the Board of Regents of the University of Hawai'i in 1988 in recognition of the need to realign and further strengthen the excellent education and research resources available within the University. SOEST brings together four academic departments, three research institutes, several federal cooperative programs, and support facilities of the highest quality in the nation to meet challenges in the ocean, earth and planetary sciences and technologies.

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