EARTH*Transformed*

William F. Ruddiman

It's a question that has embroiled climate scientists for more than a decade: not *if* human activity impacts the environment, but when did that impact start to be significant? Was it in the mid-19th century, as long believed, with the Industrial Revolution producing a huge increase in greenhouse gas emissions? Or did it begin thousands of years earlier, with the discovery and spread of agriculture?

In this brief, engaging volume, well-known paleoclimatologist William Ruddiman gets to the heart of one of today's most vigorous scientific debates. Starting with compelling evidence concerning mysterious concentrations of greenhouse gases dating back thousands of years, Professor Ruddiman shows how the scientific community is on the verge of a dramatic new way of thinking about the relationship between Earth's climate and its human inhabitants.

About the Author

William F. Ruddiman was initially trained as a marine geologist. His subsequent work over many years has explored several different aspects of the field of paleoclimatology. Since entering "semi-retirement" in 2001, his research has concentrated on the climatic role farmers played during the last several thousand years by clearing land, raising livestock, and irrigating rice paddies. Professor Ruddiman is a fellow of the Geological Society of America and the American Geophysical Union. In 2010, he received the Charles Lyell Medal from the Geological Society of London. In 2012, he received the Distinguished Career Award from the American Quaternary Association.

He lives on a hillside in the Shenandoah Valley with his wife, Ginger, and an ever-changing bunch of dogs.

About the Cover Image

Terraced rice paddies climbing steep hillsides in southeast Asia represent a dramatic example of one human transformation of Earth's surface. Immense amounts of labor have gone into constructing these terraces. Intensive labor is also required to plow, level, and repair them, and to plant, weed, and harvest the rice by hand. Terraces like these first appeared in southeast Asia between 2000 and 1000 years ago. (*AP Photo/Xinhua, Yu Xianqquan*)



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