

James Hansen retires from NASA

Outspoken climate scientist gives up NASA post for advocacy role.

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02 April 2013

Pre-eminent climatologist James Hansen will step down this week from his post at NASA to focus on campaigning to reduce greenhouse-gas emissions.

Hansen has spent 46 years at the agency's Goddard Institute for Space Studies (GISS) in New York, which he has directed since 1981. His numerous contributions to the field of climate science have led some to call him "the grandfather of global warming". In recent years, however, Hansen has devoted much of his energy to lobbying for stronger government action against climate change, blurring the lines between his roles as scientist and advocate.

Hansen's early work spawned many of the concepts that scientists rely on today to gauge how much warming the planet can withstand. Among them is the use of radiative forcing to compare the impact of different warming agents¹, and the inclusion of factors other than carbon dioxide, such as methane and black soot, in calculating total warming. Hansen was also one of the first scientists to worry that a modest temperature rise, of as little as 1 °C above recent levels, could harm the planet². "He didn't just define the field, he also redefined it on a regular basis," says Gavin Schmidt, deputy chief at NASA GISS.

Furthermore, Hansen pushed NASA for more and better Earth observations to improve climate models. "He was extremely forthright on the need for repeated and accurate measurements of the Earth system, constantly pressing for more *in situ* and satellite observations," says Schmidt.

"Even though his training was as a climate modeller, he was equally aware that observations were key," says Thomas Stocker of the University of Bern in Switzerland, who co-chairs the physical-science working group of the Intergovernmental Panel on Climate Change.

But Hansen's prescient insights into the dangers of global warming caused him to become increasingly vocal about the urgent need to curb emissions. In 1988, Hansen gave a startling testimony to a US Senate committee, warning that Earth was warming and that human activities — such as burning coal — were in part to blame. But it wasn't until 2005, when the administration of former US president George W. Bush tried to censor him for speaking out on his concerns about climate change, that Hansen intensified his activism. Hansen has lobbied politicians and business leaders for stricter climate policies. He has also been arrested several times when protesting, most recently at a rally against the proposed Keystone XL pipeline, which would carry crude oil from Canada to the US Gulf Coast.

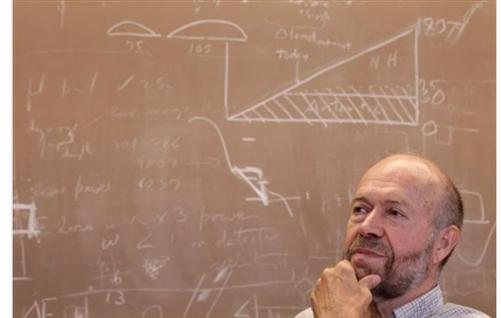
Opposing the construction of the Keystone XL pipeline is just one of the issues that Hansen will focus on when he leaves NASA, he told *The New York Times*, which broke the news of his retirement on Monday. He also plans to continue scientific research.

NASA is now beginning its hunt for Hansen's successor at GISS — a difficult task, says Michael Oppenheimer, a geoscientist at Princeton University in New Jersey.

"We can't look for an individual to replace him. Hansen is just one of a handful of people who built the whole foundation of current climate science," Oppenheimer says. "What we should really be looking to replace is his willingness to speak out against those who tried to silence him; that was heroic and not everyone can do it."

Nature | doi:10.1038/nature.2013.12725

References



Mary Altaffer/AP

NASA climate scientist James Hansen has campaigned to expand nuclear power and prevent development of oil from Canadian tar sands.

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1. Hansen, J. E. & Lacis, A. A. *Nature* **346**, 713–719 (1990).
 2. Hansen, J. *et al.* *Atmos. Chem. Phys.* **7**, 2287–2312 (2007).