

Nicola Ranger

Scientific Advisor, Department for International Development (DFID)

Government climate change advisor describes NERC PhD as “transformative”

Nicola Ranger’s NERC-funded PhD and Parliamentary Office of Science and Technology (POST) Fellowship launched her on a highly successful career as a government scientific advisor on climate change. Since completing her PhD and POST Fellowship in 2005, Nicola has worked in government, industry, and academia, where she has used the knowledge of atmospheric science that she gained during her PhD to make a significant contribution to international climate change policy.



Career timeline

1999 – 2002 BSc (Honours) in Physics

University of Warwick

2002 – 2005 NERC-funded PhD in Atmospheric Physics

Imperial College London

2005 NERC-funded POST Fellowship

Parliamentary Office of Science and Technology

2005 – 2006 Policy Analyst

Stern Review on the Economics of Climate Change, HM Treasury

Nicola was the only atmospheric scientist working on the Stern Review, which showed authoritatively that the financial benefits of acting to mitigate climate change outweigh the costs.

2006 – 2007 Scientific Advisor, Climate and Energy: Science and Analysis

Department for Environment, Food and Rural Affairs (Defra)

Nicola produced oral and written briefings on climate science for government ministers, which influenced UK policy on international emissions targets. She also represented the UK on the Intergovernmental Panel on Climate Change (IPCC).

2007 – 2009 Senior Research Analyst, Climate Change and Disaster Risk Management

Risk Management Solutions (RMS) Inc.

In her first year, Nicola’s team brought in £200k from climate change projects. They were also the first to combine a climate model and an insurance catastrophe model, which has been used to evaluate the financial benefits of adaptation and contributed to the World Bank’s World Development Report in 2010. Nicola won the runner-up prize in the Lloyd’s of London Science of Risk competition in 2011 for one of her academic papers.

2009 – present Senior Research Fellow, Grantham Research Institute for Climate Change and the Environment

London School of Economics and Political Science

Nicola led research into the 2° international target for climate change, which helped

inform the UK's policy goals concerning the 2020 emissions target. Nicola also worked on the National Adaptation Programme, which will help UK businesses, local authorities and society become more resilient to the impacts of climate change.

2013

Scientific Advisor, Climate and Environment Team, Research and Evidence Division

Department for International Development (DFID)

Nicola has been seconded to DFID to design research programmes worth £10m that will help developing countries be more resilient to natural disasters resulting from climate change, for example floods and droughts.

Nicola knew before she began her PhD that her aim was to work in policy. "I always wanted to be a scientific advisor in government," she says, "That was my dream." She enjoyed her PhD because it gave her the opportunity to learn about research and to contribute at the forefront of science. "It was a very important period in my life," she says, "I had the chance to really develop my interest in atmospheric science and get a better idea of what I wanted to do."

Nicola also enjoyed working with experts in the field and meeting people at conferences. The contacts she made during her PhD have been very important in her career, and include her first employer. Even now, Nicola still draws on the expertise of scientists she met during her PhD. "The contacts I developed at the time I still go back to whenever I need information on climate change and climate science," she says.

The knowledge of atmospheric physics and the ability to evaluate scientific evidence that Nicola gained during her PhD underlie all of her work. "After doing a PhD you've developed much more of an intuition about how to use science, how to judge the quality of research, and how to identify which pieces are the useful pieces of knowledge versus the noise," she says. "The whole process of using evidence and evaluating evidence I think is the most important thing I took from it." The more general skills she developed during her PhD, including presentation and project management skills, have also proved highly valuable.

Nicola enjoys her job because it allows her to use her knowledge of climate science to make a real impact on key government climate change policies. Nicola's PhD and POST Fellowship were an important step in helping her to reach this position. "My PhD was really transformative in my career," she says.