

## GLOBAL SUSTAINABILITY

### A Nobel Cause

Humankind faces an extremely complex set of challenges in the twenty-first century: climate stabilization, energy security, sustainable land use, and equitable development. If some nine billion people are to live a decent life on our crowded planet we will require, above all else, a steady and affordable supply of freshwater, food, fibres and fuel – the natural capital that forms the basis for a continuous generation of wealth. Yet we are unlikely to achieve global sustainability without a ‘Great Transformation’, making all facets of society more respectful of the existing planetary boundaries.

In an unprecedented attempt to address this transformation, the first Interdisciplinary Nobel Laureate Symposium on Global Sustainability in Potsdam brought together many of the world’s pre-eminent thinkers. Nobel laureates in physics, chemistry, medicine, economics and peace, top-level political leaders, representatives of major NGOs, and renowned experts on sustainability met to discuss scientific and political strategies for reconciling human civilization with its physical and ecological support systems. The resulting book gives the reader access to highly stimulating discussions on some of the most important environmental, economic and ethical questions of our time. This publication features both advanced mainstream concepts and innovative transformational approaches presented by some of today’s finest minds.

With its mixture of thought-provoking essays and scientific texts, this book will capture the attention and imagination of everyone interested in sustainability issues. It follows a radically interdisciplinary approach through a broad range of contributions, covering the latest findings of climate impact research, environmental economics, energy resource analysis, ecosystems science, and other crucial fields.

**Hans Joachim Schellnhuber** is Professor of Theoretical Physics at Potsdam University and Director of the Potsdam Institute for Climate Impact Research (PIK). He is also Chair of the German Advisory Council on Global Change and was appointed Chief Government Advisor on Climate and Related Issues during Germany's G8 and EU presidencies in 2007. From 2001–5 he was Research Director of the British Tyndall Centre for Climate Change Research. He is an elected member of, inter alia, the German National Academy (*Leopoldina*) and the US National Academy of Sciences. In 2004 he was awarded a CBE by Queen Elizabeth II, and in 2007 received the German Environment Prize.



**Mario Molina** studied physical chemistry and obtained his PhD at the University of California, Berkeley. In 1974, well before the first measurements of the Antarctic ozone hole, he co-authored a paper that described how chlorofluorocarbon (CFC) gases, widely used in industry at that time, destroy the atmospheric ozone layer. In 1995 Molina was honoured with the Nobel Prize in Chemistry for his work on ozone depletion. As Professor of Chemistry and of Earth, Atmospheric, and Planetary Sciences at the Massachusetts Institute of Technology, Molina continued his research on man-made changes in atmospheric chemistry. In 2004 he joined the faculty at the University of California in San Diego.

**Nicholas Stern** is IG Patel Professor of Economics and Government at the London School of Economics and Political Science, and Chairman of the Grantham Research Institute on Climate Change and the Environment. Stern was head of the UK Government Economic Service from 2003–7 and Chief Economist of the World Bank from 2000–3 and of the European Bank for Reconstruction and Development from 1994–99. He authored the Stern Review on the Economics of Climate Change, reporting to the UK Prime Minister and the Chancellor of the Exchequer from 2005–7. He was knighted for services to economics in 2004, and was appointed to the UK House of Lords as Lord Stern of Brentford in 2007.



**Veronika Huber** is Scientific Personal Assistant to Hans Joachim Schellnhuber, Director of the Potsdam Institute for Climate Impact Research. Previously, she worked on her doctoral thesis at the Institute for Freshwater Ecology and Inland Fisheries in Berlin and gained experience in climate policy at the UN Environmental Programme in Nairobi. She studied biology at École Normale Supérieure in Paris and at the universities of Konstanz and Potsdam.

**Susanne Kadner** has a research background in biology, chemistry and oceanography. She has worked for the Parliamentary Office of Science and Technology (POST) in London, the German Advisory Council on Global Change (WBGU), and as G8-consultant to Hans Joachim Schellnhuber in his position as German Chief Government Advisor on Climate and Related Issues. She now works in the Technical Support Unit of the Intergovernmental Panel on Climate Change's Working Group III.



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