

ST. JAMES'S PALACE NOBEL LAUREATE SYMPOSIUM

The **St James's Palace Nobel Laureate Symposium** was convened by the **University of Cambridge Programme for Sustainability Leadership (CPSL)** in association with the **Potsdam Institute for Climate Impact Research (PIK)** under the Patronage of **The Prince of Wales**. It was hosted at **St James's Palace**, the **Royal Society** and the **Science Museum**.

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The **St James's Palace Symposium** built on the foundation of a first Nobel Laureate Symposium on Global Sustainability hosted by Chancellor Merkel in Potsdam, Germany, in October 2007.

St James's Palace Nobel Laureate Symposium Advisory Group

Polly Courtice LVO, Prof Sir Richard Friend, Jonathon Porritt CBE, Prof Chris Rapley CBE, Lord Rees of Ludlow PRS OM, Prof Hans Joachim Schellnhuber CBE, Mike Peirce (Symposium Director)

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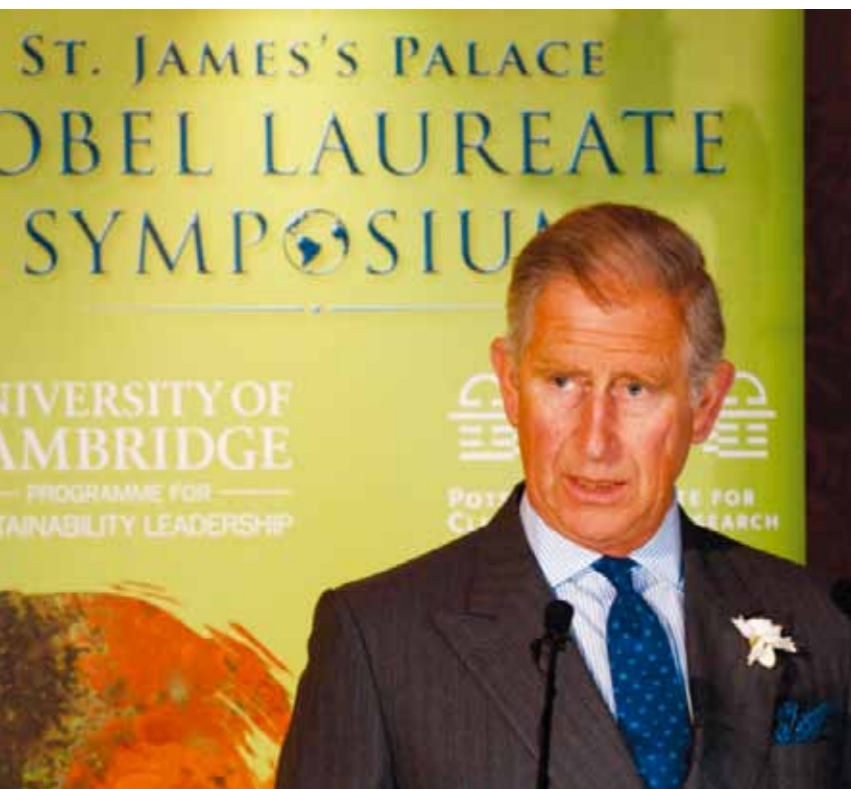
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The St. James's Palace Memorandum
May 2009



*The fierce
urgency of
now...*



The three-day Symposium focused on the climate crisis and its implications, with particular attention paid to the economic and development challenges facing the world. The meeting was convened to bring to bear on the climate debate the expertise of some of the finest minds of our time. As the Patron of the Symposium, HRH The Prince of Wales, stated at its opening: "Nobel Laureates, of course, are chosen for having 'conferred the greatest benefit on mankind'. There could surely be no greater benefit to mankind at this moment in history than to lead the way towards a framework for addressing the inter-related economic, environmental, social, ethical and climate challenges that face our societies."

Nobel Laureates participating in the Symposium spanned award-winners in Chemistry, Economics, Literature, Peace and Physics. Several of the Laureates, including US Secretary of Energy Steven Chu, contributed a profound understanding of the technology and policy context of global warming; others brought to the discussion the specialist knowledge of their own field and the quality of the scientific method behind their outstanding achievements.

Somehow, global decision-makers need to be persuaded that strong, committed and coordinated action is needed now, not in 10 years' time or even in 5, otherwise we will have little left on which to base our economies.

HRH The Prince of Wales

The St James's Palace Nobel Laureate Symposium was a landmark event in a landmark year. Held in May 2009, six months in advance of the UNFCCC Convention of the Parties in Copenhagen, twenty Nobel Laureates joined an expert group of scientists, policy-makers, political scientists, economists, business leaders, investors and activists.

The strength of the group attending the Symposium was recognised by the Rt Hon Ed Miliband MP, UK Secretary of State for Energy and Climate Change, who with the Chairman of the Intergovernmental Panel on Climate Change, Dr Rajendra Pachauri, gave the closing speeches: "One of the things that makes this gathering so important is the sense of a conversation and a challenge shared across borders and across disciplines, starting in Potsdam, refreshed in London and taken home at the end of this conference back to each of your countries around the world."



If one distinctive feature of the meeting was its inter-disciplinarity and international reach, a second was the analytical rigour of the Laureates. As Lord Rees of Ludlow, President of the Royal Society, stated in his introductory address: "Nobel-class scientists... are the most discerning and critical audience one could imagine. Therefore current ideas on climate change will be 'battle tested' by some of the sharpest minds in other fields." Prof. Hans Joachim Schellnhuber, founder of the Symposium series has noted: "After the cold war, mutually assured disarmament was the logic of good global governance. Facing the global climate challenge, mutually assured emissions reductions should become the logic."

The Symposium's programme focused on three key challenges facing the world today: rainforest protection and restoration, low-carbon energy infrastructure and the nature of a global deal on climate change. These three themes formed the basis of the St James's Palace Memorandum that was signed on the final day of the Symposium (see overleaf).

In its headline statement, the St James's Palace Memorandum calls "for a global deal on climate change that matches the scale and urgency of the human, ecological and economic crises facing the world today. It urges governments at all levels, as well as the scientific community, to join with business and civil society to seize hold of this historic opportunity to transform our carbon-intensive economies into sustainable and equitable



systems. We must recognise the fierce urgency of now." The final statement, borrowed from Martin Luther King's Brooklyn Junction speech, is a clarion call to action from some of the world's greatest thinkers.

Since the event, many other Nobel Laureates have supported this initiative, including three recent winners of the Nobel Peace Prize: Dr Mohamed ElBaradei, Mikhail Gorbachev, and His Holiness the Dalai Lama, and three winners of the Nobel Prize in Literature: John Coetzee, Nadine Gordimer and Doris Lessing.

For more information on the Symposium including individual presentations and a film of the event, please visit: www.nobelcause.org



Earth used to be infinite for humans, and has become finite, and the waste we are producing is overburdening the earth.

Professor Yuan Tseh Lee, Nobel Prize in Chemistry 1986



The St James's Palace Memorandum calls for a global deal on climate change that matches the scale and urgency of the human, ecological and economic crises facing the world today. It urges governments at all levels, as well as the scientific community, to join with business and civil society to seize hold of this historic opportunity to transform our carbon-intensive economies into sustainable and equitable systems. We must recognize the **fierce urgency of now.**

Climate risk avoidance, energy security, sustainable land use, moderate population growth and equitable economic development constitute a key set of interacting challenges for humankind in the 21st century. The evidence is increasingly compelling for the range and scale of climate impacts that must be avoided, such as drought, sea level rise and flooding leading to mass migration and conflict. The robust scientific process by which this evidence has been gathered should be used as a clear mandate to accelerate the actions that need to be taken. Political leaders cannot possibly ask for a more robust, evidence-based call for action.

In a time of financial and economic crisis, the participants in the St James's Palace Nobel Laureate Symposium underline that the world will have lost the opportunity to meet the global sustainability challenge if it fails to direct wisely current economic recovery resources and embark on a path towards a low carbon economy. Decarbonising our economy offers a multitude of benefits, from addressing energy security to stimulating unprecedented technological innovation. A zero carbon economy is an ultimate necessity and must be seriously explored **now.**

Milestones of the Great Transformation

Building on the Potsdam Memorandum and recent advances in the scientific understanding of climate change, the participants in the St James's Palace Symposium emphasise three key requirements: an effective and just global agreement on climate change, low-carbon energy infrastructure, and tropical forest protection, conservation and restoration.

1) Delivering an effective and just global agreement on climate change

Firm political leadership is crucial now. Leadership is primarily required from developed countries, acknowledging their historical responsibility as well as their financial and technological capacity. However, all countries will need to implement low carbon development strategies. **In this spirit of trust, every country must act on the firm assumption that all others will also act.**

A long-term commitment under the United Nation Framework Convention on Climate Change (UNFCCC) is urgently required **now.** The global agreement in Copenhagen must include the following elements:

- Acknowledging the compelling evidence of science, we should confine the temperature rise to 2° Celsius to avoid unmanageable climate risks. This can only be achieved with a peak of global emissions of all greenhouse gases by 2015 and at least a 50% emissions reduction by 2050 from a 1990 baseline. This in turn means that developed countries have to aim for a 25-40% reduction by 2020. A robust measure for assessing emissions reductions is a total carbon budget, which should be accepted as the base for measuring the effectiveness of short-term (2020) and long-term (2050) targets.
- Carbon prices must be adopted across large parts of the global economy, combined with measures to reduce the price of low-carbon energy, especially in developing countries. Funds raised should be used to provide the necessary financial support for adaptation.
- The priority of developing countries to overcome poverty while ensuring sustainable development must be acknowledged.

2) Delivering a low carbon energy infrastructure

Decarbonising our society requires an increase in energy conservation and efficiency and a revolution in our energy infrastructure **now.**

The required technological innovations will not be achieved without an unprecedented partnership between government and business.

Actions in the following areas are needed:

- Clear policy frameworks aimed at fostering innovation and the demonstration, scale-up and roll-out of low-carbon technologies. This must include globally coordinated investment frameworks linked to economic recovery, with the emphasis on 'green growth'.
- A significant increase of investment in developed countries for research, development and deployment.
- Technology sharing and financial support, through mechanisms such as globally supported feed-in tariffs for renewable energy, to help developing countries leapfrog to a low carbon economy.
- "Smart grids" - connecting renewable energy sources over large areas and implementing novel energy storage technologies.

3) Delivering tropical forest protection, conservation and restoration

Tropical forests provide the ecosystem services essential for human well-being and poverty alleviation. In addition, deforestation and forest degradation contribute substantially to climate change and global biodiversity loss at the genetic, species and landscape level. Both locally and globally, protecting boreal and tropical forest cover is an essential tool for the mitigation of, and adaptation to, climate change. **Without a solution to protecting rainforests, there is no solution to tackling climate change.**

The Nobel Laureate Symposium Series on Global Sustainability

The Nobel Laureate Symposium Series on Global Sustainability was initiated in 2007 in Potsdam and continued by the St James's Palace Symposium in spring 2009. This Symposium series unites Nobel Laureates of various disciplines, top-level representatives from politics and NGOs, and renowned experts on sustainability. In Potsdam, the participants called for a Great Transformation that would bring about the technical, economic, political and cultural changes required to meet the double challenge of environmental destabilisation and continuing under-development in poorer countries.

An emergency package is needed now to provide substantial funding to tropical forest nations to help them halt deforestation and embark on alternative economic development paths. The package should include:

- Accelerating a long-term UNFCCC agreement on halting deforestation and on forest restoration, including innovative financing mechanisms from public and private sources.
- Building capacity and implementing mechanisms for verification and national governance structures that can support and reward the maintenance of rainforest regions. Developing countries need to take independent responsibility for tropical forest protection, conservation and restoration.

The Contribution of Science

The solutions to the extraordinary environmental, economic and human crises of this century will not be found in the political arena alone. Stimulated by the manifesto of Bertrand Russell and Albert Einstein, the first Pugwash gathering in 1957 united scientists of all political persuasions to discuss the threat posed to civilisation by the advent of thermonuclear weapons. Global climate change represents a threat of similar proportions and should be addressed in a similar manner. There should be an acceleration and integration of global sustainability studies to encourage the active involvement of all scientists in these matters, championing the process of robust scientific study. All scientists should be urged to contribute to raising levels of public knowledge on these threats to civilisation, and to engage in a massive education effort to popularise the principles of this Memorandum.

We know what needs to be done.
We cannot wait until it is too late.
We cannot wait until what we value most is lost.



The St James's Palace Memorandum has been signed by the following Nobel Laureates:

Prof. Peter Agre
Chemistry 2003, USA

Prof. Kenneth Arrow
Economic Sciences 1972, USA

Prof. Françoise Barré-Sinoussi
Medicine 2008, France

Prof. Paul Berg
Chemistry 1980, USA

Prof. Mario Capecchi
Medicine 2007, USA

Prof. John Coetzee
Literature 2003, South Africa

Prof. Paul Crutzen
Chemistry 1995, Germany

Prof. Johann Deisenhofer
Chemistry 1988, Germany

Dr. Mohammed ElBaradei
Peace 2005, Austria

Prof. Claude Cohen-Tannoudji
Physics 1997, France

Prof. Peter Doherty
Medicine 1996, Australia

Prof. Richard Ernst
Chemistry 1991, Switzerland

Prof. Gerhard Ertl
Chemistry 2007, Germany

Former President
Mikhail Gorbachev
Peace 1990, Russia (Former USSR)

Dr. Nadine Gordimer
Literature 1991, South Africa

Prof. Paul Greengard
Medicine 2000, USA

Prof. David Gross
Physics 2004, USA

Prof. Robert Grubbs
Chemistry 2005, USA

Prof. Roger Guillemin
Medicine 1977, USA

Prof. Lee Hartwell
Medicine 2001, USA

Prof. Alan Heeger
Chemistry 2000, USA

Prof. Dudley Herschbach
Chemistry 1986, USA

Prof. Sir Anthony Hewish
Physics 1974, UK

Prof. Roald Hoffmann
Chemistry 1981, USA

Prof. Sir Aaron Klug
Chemistry 1982, UK

Prof. Walter Kohn
Chemistry 1998, USA

Prof. Masatoshi Koshiha
Physics 2002, Japan

Prof. Sir Harold Kroto
Chemistry 1996, UK

Prof. Yuan Tseh Lee
Chemistry 1986, USA

Dr. Doris Lessing
Literature 2007, UK

Prof. Wangari Maathai
Peace 2004, Kenya

Prof. Toshihide Maskawa
Physics 2008, Japan

Prof. Eric Maskin
Economic Sciences 2007, USA

Prof. Sir James Mirrlees
Economic Sciences 1996, UK

Prof. Mario Molina
Chemistry 1995, USA

Prof. Roger Myerson
Economic Sciences 2007, USA

Prof. Dr. Erwin Neher
Medicine 1991, Germany

Prof. Ryoji Noyori
Chemistry 2001, Japan

Prof. Sir Paul Nurse
Medicine 2001, UK

Prof. Douglas Osheroff
Physics 1996, USA

Dr. Rajendra Pachauri on
behalf of IPCC
Peace 2007, India

Prof. John Polanyi
Chemistry 1986, Canada

Prof. David Politzer
Physics 2004, USA

Prof. Burton Richter
Chemistry 1976, USA

Prof. F. Sherwood Rowland
Chemistry 1995, USA

Prof. Carlo Rubbia
Physics 1984, Italy

Prof. Hideki Shirakawa
Chemistry 2000, Japan

Prof. Burton Richter
Chemistry 1976, USA

Prof. F. Sherwood Rowland
Chemistry 1995, USA

Prof. Carlo Rubbia
Physics 1984, Italy

Prof. Hideki Shirakawa
Chemistry 2000, Japan

Prof. Jens Christain Skou
Chemistry 1997, Denmark

Prof. Wole Soyinka
Literature 1986, Nigeria

Prof. Jack Steinberger
Physics 1988, USA

Prof. Sir John Sulston
Medicine 2002, UK

Prof. Susumu Tonegawa
Medicine 1987, Japan

Prof. Klaus von Klitzing
Physics 1985, Germany

Prof. Sir John Walker
Chemistry 1997, UK

Prof. Torsten Wiesel
Medicine 1981, USA

Prof. Harald zur Hausen
Medicine 2008, Germany

The two defining challenges of this century will be managing climate change and overcoming world poverty. We succeed or fail on those two things together.

Lord Nicholas Stern, London School of Economics

