

THE STOCKHOLM MEMORANDUM

TIPPING THE SCALES
TOWARDS SUSTAINABILITY
18 MAY 2011

3rd
Nobel Laureate Symposium
on Global Sustainability

Transforming the World in an Era of Global Change
Stockholm, Sweden, May 16-19 2011



Delegates of The 3rd Nobel Laureate Symposium on Global Sustainability together with members of the UN High-level Panel on Global Sustainability on the stairs of the Royal Swedish Academy of Sciences. The Stockholm Memorandum, developed and signed by Nobel Laureates during the Symposium, was discussed and handed over to the Panel which is preparing the 2012 UN Conference on Sustainable Development in Rio de Janeiro (Rio +20).



PHOTOGRAPHY: SFD NOBEL LAUREATE SYMPOSIUM/STEFAN NILSSON

I. Mind-shift for a Great Transformation

“We are the first generation facing the evidence of global change. It therefore falls upon us to change our relationship with the planet, in order to tip the scales towards a sustainable world for future generations.”

The Earth system is complex. There are many aspects that we do not yet understand. Nevertheless, we are the first generation with the insight of the new global risks facing humanity.

We face the evidence that our progress as the dominant species has come at a very high price. Unsustainable patterns of production, consumption, and population growth are challenging the resilience of the planet to support human activity. At the same time, inequalities between and within societies remain high, leaving behind billions with unmet basic human needs and disproportionate vulnerability to global environmental change.

This situation concerns us deeply. As members of the 3rd Nobel Laureate Symposium on Global Sustainability we call upon all leaders of the 21st century to exercise a collective responsibility of planetary stewardship. This means laying the foundation for a sustainable and equitable global civilization in which the entire Earth community is secure and prosperous.

Science indicates that we are transgressing planetary boundaries that have kept civilization safe for the past 10,000 years. Evidence is growing that human pressures are starting to overwhelm the Earth's buffering capacity.

Humans are now the most significant driver of global change, propelling the planet into a new geological epoch, the Anthropocene. We can no longer exclude the possibility that our collective actions will trigger tipping points, risking abrupt and irreversible consequences for human communities and ecological systems.

We cannot continue on our current path. The time for procrastination is over. We cannot afford the luxury of denial. We must respond rationally, equipped with scientific evidence.

Our predicament can only be redressed by reconnecting human development and global sustainability, moving away from the false dichotomy that places them in opposition.

In an interconnected and constrained world, in which we have a symbiotic relationship with the planet, environmental sustainability is a precondition for poverty eradication, economic development, and social justice.

Our call is for fundamental transformation and innovation in all spheres and at all scales in order to stop and reverse global environmental change and move toward fair and lasting prosperity for present and future generations.

II. Priorities for Coherent Global Action

We recommend a dual track approach:

- a) emergency solutions now, that begin to stop and reverse negative environmental trends and redress inequalities in the inadequate institutional frameworks within which we operate, and
- b) long term structural solutions that gradually change values, institutions and policy frameworks. We need to support our ability to innovate, adapt, and learn.

Nobel Laureates Peter Doherty, Mario J. Molina, Carlo Rubbia and Jim Mirreles during The 3rd Nobel Laureate Symposium on Global Sustainability.



PHOTOGRAPHY 3RD NOBEL LAUREATE SYMPOSIUM/STEFAN NILSSON

1. Reaching a more equitable world

Unequal distribution of the benefits of economic development are at the root of poverty. Despite efforts to address poverty, more than a third of the world's population still live on less than 2 US dollars per day. This needs our immediate attention. Environment and development must go hand in hand. We need to:

- Achieve the Millennium Development Goals, in the spirit of the Millennium Declaration, recognising that global sustainability is a precondition of success.
- Adopt a global contract between industrialized and developing countries to scale up investment in approaches that integrate poverty reduction, climate stabilization, and ecosystem stewardship.

2. Managing the climate – energy challenge

We urge governments to agree on global emission reductions guided by science and embedded in ethics and justice. At the same time, the energy needs of the three billion people who lack access to reliable sources of energy need to be fulfilled. Global efforts need to:

- Keep global warming below 2°C, implying a peak in global CO₂ emissions no later than 2015 and recognise that even a warming of 2°C carries a very high risk of serious impacts and the need for major adaptation efforts.
- Put a sufficiently high price on carbon and deliver the G-20 commitment to phase out fossil fuel subsidies, using these funds to contribute to the several hundred billion US dollars per year needed to scale up investments in renewable energy.

3. Creating an efficiency revolution

We must transform the way we use energy and materials. In practice this means massive efforts to enhance energy efficiency and resource productivity, avoiding unintended secondary consequences. The “throw away concept” must give way to systematic efforts to develop circular material flows. We must:

- Introduce strict resource efficiency standards to enable a decoupling of economic growth from resource use.
- Develop new business models, based on radically improved energy and material efficiency.

4. Ensuring affordable food for all

Current food production systems are often unsustainable, inefficient and wasteful, and increasingly threatened by dwindling oil and phosphorus resources, financial speculation, and climate impacts. This is already causing widespread hunger and malnutrition today. We can no longer afford the massive loss of biodiversity and reduction in carbon sinks when ecosystems are converted into cropland. We need to:

- Foster a new agricultural revolution where more food is produced in a sustainable way on current agricultural land and within safe boundaries of water resources.
- Fund appropriate sustainable agricultural technology to deliver significant yield increases on small farms in developing countries.

5. Moving beyond green growth

There are compelling reasons to rethink the conventional model of economic development. Tinkering with the economic system that generated the global crises is not enough. Markets and entrepreneurship will be prime drivers of decision making and economic change, but must be complemented by policy frameworks that promote a new industrial metabolism and resource use. We should:

- Take account of natural capital, ecosystem services and social aspects of progress in all economic decisions and poverty reduction strategies. This requires the development of new welfare indicators that address the shortcomings of GDP as an indicator of growth.
- Reset economic incentives so that innovation is driven by wider societal interests and reaches the large proportion of the global population that is currently not benefitting from these innovations.

6. Reducing human pressures

Consumerism, inefficient resource use and inappropriate technologies are the primary drivers of humanity's growing impact on the planet. However, population growth also needs attention. We must:

- Raise public awareness about the impacts of unsustainable consumption and shift away from the prevailing culture of consumerism to sustainability.
- Greatly increase access to reproductive health services, education and credit, aiming at empowering women all over the world. Such measures are important in their own right but will also reduce birth rates.

7. Strengthening earth system governance

The multilateral system must be reformed to cope with the defining challenges of our time, namely transforming humanity's relationship with the planet and rebuilding trust between people and nations. Global governance must be strengthened to respect planetary boundaries and to support regional, national and local approaches. We should:

- Develop and strengthen institutions that can integrate the climate, biodiversity and development agendas.
- Explore new institutions that help to address the legitimate interests of future generations.

8. Enacting a new contract between science and society

Filling gaps in our knowledge and deepening our understanding is necessary to find solutions to the challenges of the Anthropocene, and calls for major investments in science. A dialogue with decision-makers and the general public is also an important part of a new contract between science and society. We need to:

- Launch a major initiative on the earth system research for global sustainability, at a scale similar to those devoted to areas such as space, defence and health, to tap all sources of ingenuity across disciplines and across the globe.
- Scale up our education efforts to increase scientific literacy especially among the young.

H.R.H. Crown Princess Victoria of Sweden, who inaugurated the Symposium, greets Nobel Laureate Nadine Gordimer.



PHOTOGRAPHY 3RD NOBEL LAUREATE SYMPOSIUM/STEFAN NILSSON



Nobel Laureate Mario J. Molina signs the Stockholm Memorandum at the Royal Swedish Academy of Sciences.

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PETER AGRE
Nobel Prize in Chemistry 2003

WERNER ARBER
Nobel Prize in Physiology
or Medicine 1978

PAUL J. CRUTZEN
Nobel Prize in Chemistry 1995

PETER DOHERTY
Nobel Prize in Physiology
or Medicine 1996

MURRAY GELL-MANN
Nobel Prize in Physics 1969

NADINE GORDIMER
Nobel Prize in Literature 1991

DAVID GROSS
Nobel Prize in Physics 2004

PETER GRÜNBERG
Nobel Prize in Physics 2007

WALTER KOHN
Nobel Prize in Chemistry 1998

HAROLD KROTO
Nobel Prize in Chemistry 1996

YUAN T. LEE
Nobel Prize in Chemistry 1986

JIM MIRRLEES
Sveriges Riksbank Prize for
Economic Sciences in Memory
of Alfred Nobel 1996

MARIO J. MOLINA
Nobel Prize in Chemistry 1995

DOUGLASS NORTH
Sveriges Riksbank Prize for
Economic Sciences in Memory
of Alfred Nobel 1993

DOUGLAS OSHEROFF
Nobel Prize in Physics 1996

ELINOR OSTROM
Sveriges Riksbank Prize for
Economic Sciences in Memory
of Alfred Nobel 2009

CARLO RUBBIA
Nobel Prize in Physics 1984

AMARTYA SEN
Sveriges Riksbank Prize for
Economic Sciences in Memory
of Alfred Nobel 1998

JOHN SULSTON
Nobel Prize in Physiology
or Medicine 2002

MUHAMMAD YUNUS
Nobel Peace Prize 2006

THE STOCKHOLM MEMORANDUM was signed by Nobel Laureates on May 18th 2011 at the conclusion of The 3rd Nobel Laureate Symposium on Global Sustainability, held in Stockholm, Sweden. It was handed over in person to the UN High-level Panel on Global Sustainability, which is preparing the 2012 UN Conference on Sustainable Development in Rio de Janeiro (Rio +20).

The Nobel Laureate Symposium Series on Global Sustainability was initiated in 2007 in Potsdam, Germany, and continued in 2009 with the St James's Palace Nobel Laureate Symposium in London. The series unites Nobel Laureates of various disciplines, top-level representatives from politics and civil society, and renowned experts on sustainability.

www.globalsymposium2011.org

www.nobel-cause.de

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