3rd
Nobel Laureate Symposium
on Global Sustainability

Transforming the World in an Era of Global Change

Stockholm, Sweden, May 16-19 2011

# The Stockholm Memorandum

## Tipping the Scales towards Sustainability

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**The Nobel Laureate Symposium Series on Global Sustainability was initiated in 2007 at 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.*

## I. Mind-shift for a Great Transformation

The Earth system is complex. There are many aspects that we do not yet understand. However, 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 Symposium 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 makes clear 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 within the current inadequate institutional framework, 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.

### 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 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$^{o}$C, implying a peak in global CO2 emissions no later than 2015 and recognise that even a warming of 2$^{o}$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.
- 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 research initiative on the earth system and 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.

*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.*

# More information

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