

Meeting the Climate-Change Challenge Avoiding the Unmanageable & Managing the Unavoidable

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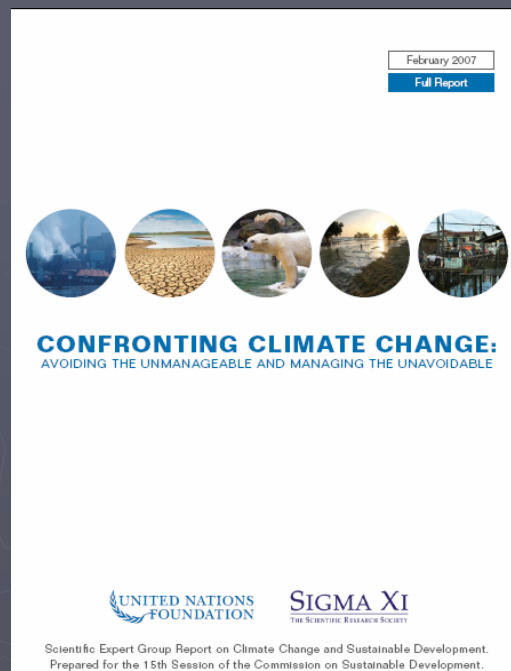
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These remarks draw heavily upon the February 2007 report of the UN Foundation / Sigma Xi Scientific Expert Group (SEG) on Climate Change and Sustainable Development prepared for the 15th Session of the CSD.



Facing the dangers from climate change...

...society has only three options:

- Mitigation, meaning measures to reduce the pace & magnitude of the changes in global climate being caused by human activities.
- Adaptation, meaning measures to reduce the adverse impacts on human well-being resulting from the changes in climate that do occur.
- Suffering the adverse impacts that are not avoided by either mitigation or adaptation.

Concerning the three options...

- We're already doing some of each.
- What remains to be determined is what the future mix will be.
- Minimizing the amount of suffering in that mix can only be achieved by doing a lot of mitigation and a lot of adaptation.
 - A “mitigation only” strategy won't work because it's already too late to avoid substantial climate change.
 - An “adaptation only” strategy won't work because most adaptation measures become more costly and less effective as the magnitude of the changes to which one is trying to adapt gets larger.

That's why the SEG gave its report the subtitle...

AVOIDING THE UNMANAGEABLE

AND

MANAGING THE UNAVOIDABLE

i.e.

MITIGATION

AND

ADAPTATION

SEG mitigation strategy

- Aim to avoid global-average surface temperature increase of more than 2-2.5°C above pre-industrial
- Start with “win-win” solutions – those bringing economic & environmental benefits besides climate-change mitigation -- including:
 - increasing efficiency in the transportation and commercial/residential buildings sectors
 - expanding use of biofuels in transportation
 - avoiding deforestation and promoting reforestation & afforestation
- Add incentives and/or requirements for needed supplemental measures that are costlier:
 - carbon price to promote shift to renewables, nuclear
 - additional incentives or requirements for CO₂ capture & sequestration at coal power plants

SEG mitigation recommendations for the UN

- Promote through the UNFCCC a post-2012 global climate-change regime incorporating
 - concentration targets & emissions trajectories compatible with not exceeding 2-2.5°C above pre-industrial T
 - performance metrics suitable for developing as well as industrialized countries
 - early imposition of prices on CO₂ emissions everywhere
 - mechanisms for CO₂-revenue transfer from high-income, high-emitting countries & consumers to low-income, low-emitting ones
- Draw on capacities and clout of UN agencies to
 - Promote a 3-4X increase in global public/private investments in energy technology research, development, demonstration, and accelerated deployment, emphasizing partnerships.
 - Advance public & policy-maker education on climate-change impacts & solutions related to the agencies' missions.

SEG adaptation strategy

- Identify & understand key vulnerabilities, including
 - health, food production, water resources, coastal communities, biodiversity
- Expand adaptation research focusing on
 - critical thresholds, multiple stresses, adaptive management, ocean chemistry, opportunities opened by climate change
- Harness & enhance existing institutional capacity for the task of planning for and adapting to climate change
 - with emphasis on UN & other international institutions
 - starting with an inventory of relevant organizations & instruments
- Improve early-warning systems, contingency planning, & information systems for resource management
- Integrate adaptation concerns into social networks

SEG adaptation recommendations for the UN

- Inventory & evaluate the incorporation of adaptation concerns & programs in existing UN organizations
 - identifying needs/opportunities for improvements & additions
 - establishing increased communication & data-sharing
- Conduct vulnerability analyses & monitoring, including
 - focused efforts to identify regions & sectors of high vulnerability
 - assistance to vulnerable regions in monitoring & capacity-building
- Integrate adaptation into ongoing development efforts by
 - using 2006-2007 CSD focus on climate and 2008 International Year of Planet Earth to integrate adaptation into Agenda 21 action plans and national sustainable-development strategies
 - convening experts engaged in existing development information-sharing initiatives to create a global adaptation information clearinghouse

Adaptation recommendations (continued)

- Refocus UN diplomatic, scientific, and technological capabilities to encompass additional adaptation work, such as
 - strengthening the proposed five-year program on adaptation in the UNFCCC, including the efforts on altered cropping patterns, water conservation, germ-plasm preservation, & weather-disaster response
 - accelerating the development of drought-, salt-, and flood-tolerant crop varieties
 - promoting expedited development of improved forecasting models and early-warning systems
- Develop an operational plan for environmental refugees

Even more than with mitigation measures, adaptation measures tend to be “win-win”

- Measures to improve water conservation & water management have great value even in the absence of climate-driven increases in stress on water systems.
- Strengthening public-health and environmental-engineering defenses against climate-linked increases in the geographic extent & virulence of certain diseases will also reduce damage from disease more generally.
- Strengthening buildings and infrastructure against floods, storms, & storm surges expected to increase under climate change provides protection that would be valuable even absent such increases, and also provides protection against other types of extreme events (earthquakes, tsunamis).

More broadly...

“The best way to address climate-change impacts is by integrating adaptation measures into mainstream sustainable-development and poverty-reduction strategies.”

- SEG, *Confronting Climate Change*, p 82

Some key references

UN Scientific Expert Group on Climate Change & Sustainable Development, *Confronting Climate Change: Avoiding the Unmanageable and Managing the Unavoidable*, United Nations Foundation, February 2007 <http://www.unfoundation.org/SEG/>

Intergovernmental Panel on Climate Change, *Climate Change 2007: Climate Change Impacts, Adaptation, and Vulnerability, Summary for Policy Makers*. April 2007. <http://www.ipcc.ch/>

Intergovernmental Panel on Climate Change, *Climate Change 2007: Mitigation. Summary for Policy Makers*. May 2007. <http://www.ipcc.ch/>