A Two-Pronged Climate Strategy

A SENSIBLE STRATEGY TO MINIMIZE THE DAMAGES FROM ANTHROPOGENIC CLIMATE change has two objectives: mitigate the pace and ultimate magnitude of the changes that occur and adapt to the changes that cannot be avoided. To underline this two-pronged approach, the recent report *Confronting Climate Change*, prepared for the United Nations (UN) by an international panel we co-chaired, was subtitled *Avoiding the Unmanageable and Managing the Unavoidable* (www.unfoundation.org/SEG/). On 27 February 2007, we presented UN Secretary-General Ban Ki-moon with this urgent call for new levels of commitment and coordination by the UN and its member states to avoid the worst climate-change dangers while there is still time.

The Scientific Expert Group (SEG) on Climate Change and Sustainable Development was organized by the scientific research society Sigma Xi and the UN Foundation at the request of the UN Department on Economic and Social Affairs. Our 18 expert members come from 11 countries and a wide range of disciplines and institutions. Unlike the Intergovernmental Panel on Climate Change (IPCC), which may not make recommendations for action, the SEG was invited to tell the UN what it should do to address the climate-change challenge, and after over 2 years of work, it did.

The group’s unanimous recommendations focus equally on mitigation and adaptation. The SEG concludes that unmanageable changes in the future are avoidable only if the world community acts now. Global carbon dioxide emissions must level off by 2015 or 2020 at little more than their current level and then decline to no more than a third of that level by 2100. Emissions of methane and black soot must also be controlled. This can be done with a mix of existing and new technologies, with many subsidiary benefits. We recommend several urgent goals: improved efficiency in the transportation sector and in the energy efficiency of buildings; expanded use of biofuels; and, very important, the design and deployment of coal-fired power plants capable of environmentally sound retrofits for carbon capture.

Equally important is our capacity to adapt to unavoidable change by improving preparedness and response strategies to meet the needs of the world’s poor, who will bear the heaviest burden of climate change. The summary of the new IPCC report on *Impacts, Adaptation and Vulnerability*, expected this week, makes it clear that the future will be very different from the past and that changes under way challenge our land management regimes and our ability to maintain ecosystem services. Climate-resilient energy-efficient cities must become the norm, and institutions must be strengthened to cope with weather-related disasters and climate-change refugees, whose numbers may reach tens of millions in the future. Building on land less than 3 feet above sea level is certainly not sustainable. Preserving a major proportion of the poorly known biological diversity of the world requires curbing the rates of climate change but also needs enhanced and innovative efforts to save surviving species.

Global climate has already changed noticeably, with more than half of the increase in temperature since preindustrial times occurring since 1970. Heat waves; ice melt; shifting ranges of plants and animals; sea-level rise; and droughts, floods, and wildfires are increasing, as expected. Even if emissions were completely halted today, the total temperature increase from greenhouse gases already in the atmosphere would be approximately 1.5°C globally. Unless we can keep global average temperature from exceeding 2° to 2.5°C above preindustrial levels, we may reach tipping points that could produce intolerable human impacts. Business as usual could have us 3° to 5°C above preindustrial temperatures by 2100—a temperature jump equaling that from the height of the last ice age to the present warm period. Unless the world acts now, we will fail miserably to meet the UN Millennium Development Goals, fail to improve the fate of the poor, and fail to achieve global sustainability. The human race, now numbering 6.5 billion people, has never faced a greater challenge, and there is no time for further delay.

Rosina M. Bierbaum and Peter H. Raven

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