



Climate Change Policy in the Light of Uncertainty

Scientists highlight that the risks related to global change and its potential impacts on human well-being are so high that the lack of full scientific certainty should not stand in the way of taking severe and bold actions right now. An integrated approach to risk management and environmental monitoring in its widest sense will be crucial for the future management of the problem.

It is now widely agreed that environmental policy should be based on sound science. This implies that uncertainty, which inevitably accompanies scientific findings, should be taken into account in political considerations of the environment-related issues. However, scientific uncertainty largely contributes to a large debate over the appropriate policy response and is often used as a reason for postponing measures to prevent environmental degradation.

In this context, a group of American scientists has recently reviewed the case of global climate change from both scientific and political perspectives.

The scientists agreed that there is no doubt about the global warming itself and its links to anthropogenic activities, but there remains considerable uncertainty about the actual warming rate and the precise nature and magnitude of the consequences of climate change. However, they underline that very high risks for human health are associated to climate change, including increased direct impacts of heat and of rises in sea level; intensified air- and water-borne harmful agents; the emergence of environmental refugees; and redistribution of vector-borne diseases to areas not previously affected. With this regard, the magnitudes and the ranges of uncertainties are not arguments against immediate and extensive action.

Therefore, the scientists highlight the urgent need for a well concerted multidisciplinary approach to environmental monitoring and surveillance that will be crucial for the management of risks posed by climate change. Such approach would include not only measurement of physical-chemical features of the environment, but also the responses of biological systems to changing climate conditions and the dynamics of the health and well-being of human populations.

The authors also suggest that no individual technology or policy will achieve the effort needed over many decades to efficiently manage climate change related risks. Therefore, they suggest an integrated policy response based on the precautionary principle and a combination of the following components:

- 1) strong reduction of greenhouse gas emissions and aggressive energy research and development,
- 2) support of the processes leading to better understanding of climate change and its impacts,
- 3) support of the technological, institutional and social capacity for mitigation and adaptation, development and application of appropriate public health, governmental, and administrative procedures,
- 4) control of the size, distribution, and behaviour of populations,
- 5) reduction of deforestation and illegal land use.

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