



## **Workshop 1 – Is scientific consensus sufficient to act?**

### **Introduction**

The scientific consensus represents the position generally agreed upon at a given time by most scientists specialized in a given field. But there are still many uncertainties involved in climatic models that invite scientists to think more about atmospheric phenomena and find the causes of climate change. These uncertainties confuse policy makers for taking any concrete or immediate action. The scientific results are based on only 50 years of measured data and depend upon a visionary approach for interpreting the past scenario and future predictions. Due to the lack of certainty of results, there are a lot of possible interpretations, which confuse the climate change issue for taking action. But the scientists believe that in case of uncertainties, action can be taken based on possibilities. So there is a need to take the actions for saving our planet. For taking the decision, the workshop was arranged, which has the following discussion.

### **Discussion**

The discussion was started with the question: What would be the consensus? And what would be the framework of action?

For finding the answer for the question “Is Scientific consensus sufficient to act?” we broke the question to three connected questions

- A) Is the climate of the world changing?
- B) Is the world actually changing its climate?
- C) Will climate change the world? And if so, in what way?

All these questions seem very easy to answer, but after discussion, we found that it is not very simple to arrive at a consensus that is agreed by all the participants.

Conflicted key issues include:

- i) Absence of absolute scientific certainty, e.g. detection of anthropogenic climate change from natural variability and long term change
- ii) Always the possibility that current models are still missing something important.

We do not have a unanimous YES, because there is no certainty on the complex scientific issues. The other possibility is that we cannot significantly say NO, because the evidence is in-



creasingly persuasive that there are real sinks of really bad consequences of climate change. So there are several key arguments that must keep in mind.

The strongest hurricane that has ever been recorded in the United States, the hottest summer in Europe since systematic climate recording started in 1864, heavy flooding in many parts of the world that has never occurred before. Are they just occasional phenomenon? Most scientists agree that the reason behind these extreme events is the climate change which is led by the global warming effect.

1. Precautionary Principle

“Scientific uncertainty should not be used as an excuse for inaction, when there is a likelihood of serious environmental damage resulting from no action“

2. Carbon dioxide accumulates and is removed from the atmosphere very slowly. Even if we were to reduce the rate of carbon dioxide emission, there would still be some emission and the carbon dioxide mixing ratio would continue to rise, albeit more slowly.

3. If greenhouse gas accumulation ultimately leads to environmental damage, the effects will fall disproportionately on developing countries, who are least equipped to adapt, even though the emission largely originated in the “Annex I” countries. This is an ethical question of equity and environmental justice, not to mention the danger of reprisals by those who feel they are victims of some injustice.

**Conclusion**

This led us to conclude, even with the current levels of uncertainty, that the scientific consensus is sufficient to require action. But not the social consensus. We did agree that more effective communication to a wide range of public audiences is essential as we move forward, and this communication must make it clear to people how they may personally be affected and that their personal actions can make a difference.

So, after all, the consensus is sufficient to act. But according to the participants' views, it is not only sufficient, but also necessary to act. When scientists set up an experiment in the laboratory to test a hypothesis such as the ones considered in this workshop, the experiment has to be reproducible if the result is to be valid and accepted by other scientists.

In the case of the Earth's climate, the experiment can never be reproduced, because we have only one atmosphere to experiment with. And if we really foul up the experiment, the sample is



so badly damaged that it is no longer usable. We cannot return it to the manufacturer and expect to get a free replacement.

The precaution, risk management, and our ethical obligation to all the creatures with whom we share – or will share – this planet make it necessary that we bias the outcome of the great climate experiment so as not to jeopardize the continuing well-being of human society and the larger biosphere for the foreseeable future.