

Thank you for the opportunity to address you once again. As you may recall, a number of issues related to the IPCC and to the Framework Convention on Climate Change were dealt with at the UN Special Session of the UN General Assembly held in New York this past June. The setting for COP-3 has changed somewhat as a result. What I wish to do now is to recall some of the remarks that I have made to earlier SBSTA sessions which may be particularly relevant to your work and elaborate on some of them.

You need concrete information that is relevant regarding expected future changes of climate and ways and means for adaptation to and mitigation of a human-induced climate change. I wish to supply such information and be as specific as possible. I will base my remarks strictly on the conclusions in the Second Assessment Report and the three technical papers (TP) that have already been completed in order not to step outside the IPCC mandate. For your information, an additional Technical Paper on "Implications of Proposed Carbon Dioxide Emissions Limitations" will be completed in September 1997. At that time, the IPCC Special Report on Regional Impacts of Climate Change will also become available.

Now, let me make my remarks on issues before you.

- The IPCC concluded in the SAR that "the balance of evidence suggests a discernible human influence on global climate". It was also pointed out that in the SAR "our ability to quantify the human influence on global climate is currently limited because the expected signal is still emerging from the noise of natural variability, ...". The full range of the climate sensitivity to changing radiative forcing should therefore be included in considerations of greenhouse warming.
- The radiative forcing due to the enhanced greenhouse gas concentrations so far (of about 2.45 W/m^2 in 1990) corresponds to an ultimate (equilibrium) change of the global mean temperature by 0.7-2.1 degrees C. However, two factors introduce delays in realizing this change:
 - i. The enhanced concentrations of aerosols that are due primarily to sulphur compounds, emitted when burning oil and coal, bring about a negative radiative forcing. This forcing is estimated to be $0.6-1.6 \text{ W/m}^2$, i.e., it presently counteracts 25-60% of the global forcing due to enhanced concentrations of greenhouse gases (cf. Technical Paper No. 3). It is important to bear in mind that this negative forcing is not evenly distributed over the earth.
 - ii. The inertia of the climate system which delays the realization of the net change of radiative forcing in terms of a climate change (e.g., global warming) by a few decades. The realized change is expected to be only 50-70% of the equilibrium temperature which would correspond to the enhanced net radiative forcing.

The net effect of these two circumstances implies that the observed changes are expected to be merely 20-55% of the equilibrium temperature changes, i.e., 0.2-1.1 degrees C. It is noteworthy that the observed change of the global mean temperature during the 20th century, 0.3-0.6 degrees C, falls within this range.

- The projections of expected future changes of radiative forcing and climate are summarized by the IPCC as follows: "For the mid-range IPCC emissions scenario IS92a assuming the "best estimate" value of climate sensitivity and including the effects of future increases of aerosols, models project an increase in global mean surface air temperature relative to 1990 of about 2 degrees C by 2100. This estimate is approximately one third lower than the "best estimate" made in 1990. This is due