

Review

Special issue on **Climate and Global Warming**
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The environment of instant and global communication coupled with the tendency of the media to highlight record breaking aspects of an event, has dramatically enhanced public awareness of climate changes to such an extent that occurrence of severe floods, droughts and other major weather anomalies are considered as signals of irreversible climate change due to global warming. Most of the articles in the special issue are intended for professionals in the area of climate except for the first two review articles. The special issue contains a set of eighteen articles dealing with the major aspects of climate and global warming. The articles focussed on the following six areas : (i) Global warming and sustained development—reviews; (ii) Observed regional climate variability on different time scales and the detection of global warming signal; (iii) Dynamics of climate variability; (iv) Long range forecasting of seasonal Indian monsoon rainfall; (v) Climatological circulation of ocean, and (vi) Atmospheric chemistry.

The review articles not only provide to the statesmen, policy makers and planners the scientific basis to assess the impact of enhanced green house gases on climate change and its socio-economic implication but also clarify many misconceptions prevailing even amongst the expert. Intense global warming and the associated major shifts of precipitation belts in the coming years has been predicted by the General Circulation Models. The base for reliability of these predictions can only be provided by verifying the model predicted, size of global warming and climatic change over the last century, which is of the same magnitude as natural climate variability.

More reliable information on the low frequency variability of regional rainfall and other circulation features is a pre-requisite requirement to isolate the regional climate change. The largest number of papers in the special issue are devoted to this aspect covering India, Malaysia and East Africa regions and concluded that no statistically significant trends have been observed in the rainfall so far. Same conclusions have been arrived at by examination of past tide gauge records in a paper. The earth's climate is a dynamic system and hence changes are the essence of the system. This is the message conveyed to the common readers by a paper dealing with evolution of India's monsoon climate on the geological time scales. The use of non-conventional data in the study of climate variability is the topic of the last paper in the issue. Long range forecasting (LRF) of seasonal monsoon rainfall has a long tradition in India. For this purpose, various statistical models have been developed, using regional and global parameters as predictors. It is established that statistical relation between a predictor and the monsoon rainfall varies with time. Four articles in the issue present the various aspects of LRF. The articles are topical in the sense that efforts are made in India to develop schemes for LRF of monsoon rainfall for smaller temporal spatial scales.

The four papers deal with the physical basis for low frequency oscillations and climate change. It is known that the ocean plays an important role in the climate variability. Only one article describes the computer simulation of climatological circulation of Bay of Bengal by using a simple model. The article on atmospheric chemistry presents the method to determine rate constants for the trace gas reactions.

The editor of special issue deserves to be congratulated for its efforts to bring out the volume on a topical theme.

—S. K. MISHRA