

The Need for Climatic Analysis and Weather Forecasting

Utpal Kumar De*

Department of Economics, North-Eastern Hill University, Shillong, India

*Corresponding author: Utpal Kumar De, Department of Economics, North-Eastern Hill University, Shillong, 793022, Meghalaya, India, Tel: +91-364-2723182 (O); +91-364-2726182 (R); +91-9436102066 (M); E-mail: utpalkde@gmail.com; de_u@yahoo.com

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Editorial

Climate change has become an important issue of research for understanding the long term as well as short term behaviour of weather. Large number of world bodies came together to discuss about the pattern of climate change across the region and its worldwide impact. Also scientists have been trying to relate the changing weather pattern with various possible reasons identified through the scientific and technical causal relations of various earth matters. At one point of time, there was a doubt whether the climate phenomenon is the effect of various socio-economic interventions on the environmental resources or it is a natural phenomenon that happens on its own rule in a cyclical manner. Over the years, arguments of the human interventions gain prominence over the counterarguments. The human interventions, however, depend on the growing human needs of diversified nature. Thus, various weather factors have been isolated and examined with reference to the variation in various agricultural, industrial, forest based and numerous other activities. On these burgeoning activities human control can be applied through the control of greed and planned development activities.

We have been trying to predict the future weather conditions and its possible impacts on the human activities, their performances and on the overall human wellbeing. It has been realised that human interventions manifested through the application of various production and consumption technology, agricultural expansion, industrial progress with rising pollution in all forms, urbanisation and unparallel growth of slums, extensive deforestation on a large scale, etc. can affect the environment and overall climatic conditions at the local as well as global level. These in turn affect the productive capacity of the environment and intensify various weather disorders. It is true that the poorer are more sufferers due to their significant dependence on nature for livelihood security and they are more vulnerable to these extreme weather behaviours due to their lack of accessibility to various mitigating instruments [1,2]. Thus, prediction of weather components becomes imminent for the appropriate warning and rising capability for disaster preparedness.

In our previous study we observed a two-way causal relation between the environmental quality and socio-economic development of the human population [3]. The planned use of natural resources like land and forest can produce sustainable economic growth and human welfare. Nature based tourism without destructing nature can generate income for the poorer and help poverty alleviation, instead of adding conditions for the global warming or damaging water resources [4-9]. Also, it has been found that people give much higher value to the amenity services of the environment and thus for their preservation [10]. Therefore, from the point of view of natural resource utilisation, planned allocation of resources, and choice of appropriate technology and consumption habits mean a lot for deferring climate disorder cycles.

As a natural process, progress of civilization and population explosion, uncompromised by cleaner technology, create conditions for the global warming like situation. Once the disorder in one of the variables starts at one corner, the other variables start showing their erratic behaviour due to interrelations among various climatic components [11]. Hence, if the process of irregularity in precipitation, seasonal disorder, extreme weathers and many other unforeseen natural events recur, then it leads to loss of lives and property. Thus, the long term mitigation measures for a moderate climate may not be enough to tackle the short term adverse impacts and adaptation in various forms become inevitable. From the farmers' point of view, use of newer technology for making cultivation of some desired crops possible that was not possible in earlier conditions, generation and use of extreme weather resistant varieties, changing time of sowing, preserving seedlings and diversifying cropping activities, etc. are among various options that are found to be adopted to moderate the adverse impacts of extreme climatic behaviour. Therefore, the focus of the studies related to climate change is not only for the sake of academic excellence; rather, it is for the prediction with as much as possible accuracy and to forecast the possible natural events. In the process the obstacles to the process of development that arise from the natural disorders or extreme weather conditions can be removed. From an individual's point of view, the climate change is beyond her/his control, but at least in the short run appropriate measures can be undertaken to moderate those adverse impacts, provided the proper adaptation capacity is build up.

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