CURRENT SCIENCE

Volume 71 Number 10 25 November 1996

CORRESPONDENCE

Role of DST

Farooqui *et al.* (*Curr. Sci.*, 1996, **70**, 482–483) state at great length that the DST is efficiently encouraging young scientists; within 3–4 months most of the applications are adjudicated. As a contrast, let me record the experience of an old scientist. After working on cephalopods at the Eastern coast for many months at my personal expense and obtaining some results, I submitted an application for a very modest grant for a project to be executed in collaboration with a Central Government organization. In spite of reminders I heard nothing from DST. After about a year I requested a friend to enquire at Delhi. Several times he did so and the answer was, – 'Oh, well, we remember that a reply has been despatched but that a copy of it is not available at the moment.' After another year or so, I despatched a copy of the project to DST explaining everything and requesting them to initiate the project as a new one. This time I received a very prompt reply explaining that (about two years ago) a negative decision had been taken. No referee's report was included. By that time the results obtained were in press in the form of a paper and during these two and a half years I have been paying my expenses for food and journey from my pension.

I then applied to the West Bengal DST and a positive decision was communicated to me within two months.

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Long-range forecasts of the total monsoon rainfall of India

The total rainfall over India during the south-west monsoon period, June to September, averaged over a period of more than a hundred years is 85 cm. It is usually called the *normal.* For the last 9 successive years, India had the good fortune of having a normal monsoon, which technically means within plus or minus 10% of 85 cm of rainfall. It is creditable that the India Meteorological Department (IMD) successfully forecasted normal monsoon for all these years. For this purpose, IMD had developed a long-range forecast model called Multiple Power Regression Model, involving 16 global antecedent parameters – 6 Indian and 10 outside India. They are oceanographic, and meteorological – surface and upper air.

Since 1890, on demand from the Government of India, IMD has been supplying long-range forecasts of the total monsoon rainfall over India, with varying degrees of success. Since 1920s they were based on multiple regression models originally developed by Sir Gilbert Walker. Their success has been less than that of the present model.

It may be mentioned that India is 'top' in this field.

These long-range monsoon forecasts are for the use of the Ministry of Finance and the Ministry of Agriculture of the Government of India. When a bad monsoon is envisaged, the Finance Ministry has to make financial allotments for meeting scarcity cum famine conditions. Industrial production will be adversely affected due to reduction in hydel power generation and fall in the availability of agricultural raw products. The Ministry of Agriculture has to make arrangements for the dispersal of buffer stocks of food grains to the provinces and districts, for the supply of quick harvesting seeds for a second sowing, etc. An analysis of the past available data shows that a poor monsoon of the kind we had in 1972 or 1986 would result in a loss of around Rs 20,000 crores to the nation (at the present prices). The Finance Ministry therefore needs a long-range forecast of the following monsoon rainfall a month or two ahead of the onset of the monsoon.

In the early days, these long-range monsoon forecasts were not issued to the public, lest a forecast of poor monsoon should encourage hoarding of food grains by dealers. Later the government decided that these forecasts be published, so that there may be no hoarding at least when a normal or a good monsoon is anticipated.

Of late, a few non-meteorological scientists have severely criticized the IMD saying that such forecasts are of no use for the farmers. Apparently, they do not realize that these forecasts are not meant for the farmers. The IMD gives short-range forecasts for farmers in the *Farmer's Weather Bulletin.* The meteorological community inside and outside IMD is trying hard to evolve models for providing long-range rainfall forecasts for smaller areas of the size of meteorological sub-divisions and for shorter periods of one month ahead. Let us all wish them success.

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