



‘Reservoirs not managed using a scientific, decision-support system’

Posted at: 27/08/2018

Highlights

As Kerala grapples with the aftermath of unprecedented rains and inundation, Secretary, Ministry of Earth Sciences M. Rajeevan explained the challenges of forecasting floods in the State with relatively small rivers prone to flash floods, inaction at the local level despite weather alerts and dam management.

Weather-modeling- rain forecast models capture the possibility of such heavy rains in Kerala

- As far as Kerala is concerned, in August had two spells — on the 4th and the 14th — and both of these were captured by short range weather prediction system. Each of them were forecast three days in advance. The India Meteorological Department gave a forecast for heavy rains district-wise — in the form of orange and red alerts.
- In Kerala the rivers are relatively small. For instance, if it rains in a hilly region, it can flood within 25 minutes and in an hour the water will come. Rivers like Cauvery and Narmada have huge basins and such inundations are much slower.

But from the earth sciences perspective, can't these flows be observed via satellites and forecasts prepared?

- IMD don't have the mandate. This is entrusted to the CWC. IMD have 11 flood warning offices such as in Ahmedabad, Bhubaneshwar etc...
- They interact with the CWC everyday during the monsoon.
- Every river is divided into basins and we give a two to three day forecast for each basin and we give a quantity — the average rainfall over the basin and how much is likely — and run them in weather models to generate a forecast.
- This is given to the CWC and they in turn use it to estimate how much water is likely in a river.
- Local meteorology offices there used to give CWC 'Nowcasts' (forecasts valid for two hours). This is based on how convective clouds form and the way they move. All these products are being given. However they have to be intelligently used by the recipient.
- Not to blame individuals, institutions or government but it's a fact that in India, none of our reservoirs are managed using a scientific, decision-support system. It's left to a few individuals to take a decision.
- Dams are managed by States and they worry about their own personal requirements such as, hydro-power management.



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