

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 964
TO BE ANSWERED ON THURSDAY, MARCH 09, 2017**

UNCERTAINTIES IN WEATHER PATTERNS

964. SHRI PARIMAL NATHWANI:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether it is a fact that the country is facing uncertainties in weather patterns for the last three years;**
- (b) if so, the details thereof;**
- (c) whether Government has taken any steps to provide the information to individuals, farmers, fishermen etc regarding changes in the weather and its likely impact; and**
- (d) if so, the details thereof and if not, the reasons therefor?**

ANSWER

**MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)**

- (a-b) No Sir. However, Monsoon rainfall over India varies on different spatial and temporal scales. Extreme rainfall events that occur at some isolated places (viz., heavy rainfall over Uttrakhand, 2013; Jammu & Kashmir, 2014; Tamilnadu and Andhra Pradesh in 2015) are highly localized and are largely part of the natural variability of the Indian monsoon system itself. Moreover, the report of Inter-governmental Panel on Climate Change (IPCC) and our country's own assessment using regional climate models indicate that extreme rainfall and heat wave events are likely to be more frequent in future. Although, the monsoon rainfall at all India level does not show any trend, areas of increasing and decreasing trends at regional level are discerned.**
- (c-d) The Gramin Krishi Mausam Seva (GKMS) of ESSO-IMD has been successful in providing crop specific advisories to farmers at district level twice weekly through different print/visual/Radio/ IT based wider dissemination media including short message service (SMS) and Integrated Voice Response System (IVRS). Agrometeorological Advisories are sent to 24.3 million farmers currently across the country through SMS that contains abrupt changes if any, in weather and its impact on crops.**

Indian National Center for Ocean Information Services (INCOIS) uses the latest information technology tools to reach out to user communities (including fishermen community). INCOIS is providing daily updated seven day forecast on few wave parameters (including wave heights) to fishermen through various dissemination modes using tools such as mobile phones (text SMS, voice SMS in local languages and English); Electronic Display Boards at the Fish Landing Centres. INCOIS is providing specialized services on winds, waves, currents and tides for nearly 600 fish landing centers presently and likely to increase in future. INCOIS also developed Android based Mobile apps to provide this information to Fishermen community.

In addition to this, INCOIS also provides Potential Fishing Zone (PFZ) Advisories that directs fishermen directly to fish aggregating locations instead of searching for fish shoals in sea and thereby provides cost-effective fishing operations for them.

High Wave Alerts cautioning fishermen not to venture out into sea during bad weather conditions is also provided through these modes. Information dissemination on wave heights is also supported by NGOs for last mile connectivity. Information is also passed to all the concerned using Local TVs, FM radios, All India Radio, Whatsapp, Facebook and emails.
