

GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1962**  
ANSWERED ON 12/12/2024

**EFFECT OF LA NINA**

**1962. Shri C. Ve. Shanmugam:**

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) whether Government is aware that La Nina effect is impacting Indian agricultural activities;
- (b) if so, the details thereof;
- (c) whether Government has made a study on this effect;
- (d) if so, the details thereof; and
- (e) the efforts taken by Government to neutralize La Nina effect?

**ANSWER**

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR  
MINISTRY OF SCIENCE AND TECHNOLOGY  
AND EARTH SCIENCES  
(DR. JITENDRA SINGH)

- (a) Yes.
- (b) La Niña, a climate phenomenon characterized by notably cooler sea surface temperatures (SST) in the central and eastern Pacific Ocean, can significantly impact the Indian monsoon. In general, during a La Niña event, normal to above-normal rainfall is received over India during the southwest monsoon season. Most parts of the country receive above-normal rainfall during the La Nina years, except extreme north India and some areas over Northeast India, where rainfall below normal is likely during the La Nina years. Also, below-normal temperatures are generally observed during the winter season during the La Nina years. While excessive rainfall during La Nina can lead to flooding, crop damage, and livestock loss, it can also benefit rainfed agriculture and groundwater levels. Increased rainfall associated with La Niña can sometimes lead to lower temperatures over the Indian region, which might affect the growth and development of certain Kharif crops.
- (c)-(e) Yes. The Ministry has been conducting regular studies on monsoons and associated rainfall and temperature patterns in the country, including those during the La Niña period. The India Meteorological Department (IMD) continuously monitors the Sea Surface Temperature (SST) changes globally, especially in the Pacific and Indian Oceans. IMD also prepares forecasts using climate model and issue the El Niño–Southern Oscillation (ENSO/IOD) bulletin every month (<https://www.imdpune.gov.in/cmpg/Product/Enso.php>). Additionally, the IMD issues agriculture-specific advisories to help farmers prepare for extreme weather events associated with La Niña, such as heavy rains or droughts. These advisories may include recommendations on crop selection, irrigation practices, and flood preparedness.

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