



## Unseasonal Rain and Impacts

This editorial is based on [Tackling unseasonal rain](#) which was published in The Hindu Businessline on 04/05/2023. It talks about impact of unseasonal rain and measures to minimize the impact of unseasonal rain in India.

**For Prelims:** [Pradhan Mantri Fasal Bima Yojana](#), [Pradhan Mantri Krishi Sinchai Yojana](#), [Soil Health Card Scheme](#), [El Nino and La Nina](#)

**For Mains:** Impact of Unseasonal rain in India, Measures to minimize impact.

Unseasonal rains in India have once again highlighted the vulnerabilities of our agricultural sector. While rain is generally seen as a blessing, unseasonal rains can be a curse for farmers already reeling under the impact of low crop prices, rising input costs, and changing weather patterns.

Unseasonal rains can have a cascading effect on the overall inflationary trend. The impact of unseasonal rain is not just limited to the agricultural sector but also extends to other sectors of the economy.

### What are the Causes of Unseasonal Rains?

- **Climate Change:**
  - Climate change can result in unpredictable weather patterns, including unseasonal rain.
  - Global warming, weak western disturbances and strong subtropical jet stream are the causes of recent unseasonal rains.
- **El Nino:**
  - [El Nino](#) is a weather phenomenon that occurs when warm water from the western Pacific Ocean flows eastward.
  - This can result in drought conditions in some regions and unseasonal rain in others.
- **La Nina:**
  - [La Nina](#) is a weather phenomenon that occurs when cool water from the eastern Pacific Ocean flows westward.
  - This can result in excess rainfall in some regions, including unseasonal rain.
- **Atmospheric Instability:**
  - Atmospheric instability can also result in unseasonal rain. When there is a sudden change in atmospheric pressure, it can result in precipitation, even during non-monsoon seasons.
- **Human Activities:**
  - Human activities such as deforestation, urbanization, and pollution can also contribute to unseasonal rain.
  - Deforestation can disrupt the water cycle, while urbanization and pollution can affect the microclimate, resulting in unseasonal rain.

### What is the Impact of Unseasonal Rains?

- **Agricultural Sector:**
  - Unseasonal rains can lead to crop loss and impact post-harvest crops, leading to a rise in prices of perishable commodities such as vegetables and fruits.
  - Farmers already reeling under the impact of low crop prices, rising input costs, and changing weather patterns are adversely affected.
- **Construction Sector:**
  - Disruption caused by unseasonal rains can lead to a rise in prices of key raw materials such as cement and steel.
- **Consumption Patterns:**
  - The rise in prices of essential commodities can lead to a fall in the overall demand for non-essential goods and services.
- **Social Impact:**
  - Unseasonal rain can have a social impact, especially on the vulnerable sections of society such as small farmers, daily wage laborers, and migrant workers.
- **Political Impact:**
  - Unseasonal rain has a significant political impact as well, especially in the context of the upcoming state and national elections.
  - The ruling political party often faces criticism from the opposition for not doing enough to address the concerns of farmers.
  - Political blame game happens, with each party trying to score points over the other.

## What are Government Measures to Protect Farmers?

- The government has launched several initiatives such as the [Pradhan Mantri Fasal Bima Yojana](#) (PMFBY), [Pradhan Mantri Krishi Sinchai Yojana](#) (PMKSY), and Soil Health Card Scheme (SHC) to address the concerns of farmers.
  - **PMFBY:** It is a crop insurance scheme launched by the Government of India in 2016 to provide financial support to farmers in case of crop failure or damage due to natural calamities, pests, or diseases. Under this scheme, farmers have to pay a nominal premium, and the remaining amount is paid by the government. The premium rates are fixed based on the type of crop, location, and the level of coverage chosen by the farmer. The scheme covers all food and oilseed crops and commercial and horticultural crops.
  - **PMKSY:**
    - It is a flagship scheme of the Government of India that aims to provide water to every field and improve water use efficiency in the country.
    - The Pradhan Mantri Krishi Sinchai Yojana aims to boost irrigation infrastructure and promote water-use efficiency.
    - The scheme has four components:
      - **Accelerated Irrigation Benefit Programme:** This component aims to provide financial assistance to states for completing their incomplete irrigation projects
      - **Har Khet Ko Pani:** This component aims to provide water to every field by ensuring water conservation and efficient use through micro-irrigation, water harvesting, and other such techniques.
      - **Per Drop More Crop:** This component aims to enhance water use efficiency by promoting micro-irrigation techniques like drip and sprinkler irrigation.
      - **Watershed Development:** This component aims to conserve rainwater by promoting watershed development activities like afforestation, horticulture, and pasture development.
  - **SHC Scheme:**
    - Under the Soil Health Card scheme, soil samples are collected from farmers' fields and analyzed in laboratories to assess the soil's nutrient status.
    - Based on the analysis, a soil health card is generated for each farmer, which provides information about the soil's nutrient status, as well as recommendations for the application of fertilizers and other soil amendments

## What is the Multi-Pronged Approach to Address the Issue?

- **Short-term Measures:**
  - Centre and States can provide compensation for crop loss, supply seeds and fertilizers at subsidized rates.
  - **Minimum Support Price** could be increased.
- **Long-term Measures:**
  - Structural reforms in the agricultural sector can make it more resilient to changing weather patterns.
  - Promote crop diversification, encourage the use of modern technologies and farming practices, and strengthen the supply chain infrastructure to reduce wastage and post-harvest losses.
- **Mitigating Climate Change:**
  - India needs to take a proactive approach towards mitigating its impact. This requires a coordinated effort between the Centre and States, civil society organizations, and the private sector.

## Conclusion

- The impact of unseasonal rain is not just limited to the agricultural sector but also extends to other sectors of the economy. A multi-pronged approach involving both short- and long-term measures is needed to address the issue. Mitigating climate change is crucial to ensure the resilience of the agricultural sector. The government has launched several initiatives to address the concerns of farmers, but greater coordination between the central and state governments is needed.

### **Drishti Mains Question**

Discuss the impact of unseasonal rain in India on the agricultural sector and on the Indian economy. What are the measures that can be taken to address this issue?

## UPSC Civil Services Examination Previous Year's Question (PYQs)

### **Prelims:**

**Q. With reference to 'Indian Ocean Dipole (IOD)' sometimes mentioned in the news while forecasting Indian monsoon, which of the following statements is/are correct? (2017)**

1. IOD phenomenon is characterised by a difference in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.
2. An IOD phenomenon can influence El Nino's impact on the monsoon.

**Select the correct answer using the code given below:**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans: (b)**

**Exp:**

- The Indian Ocean Dipole (IOD) is an atmosphere ocean coupled phenomenon in the tropical Indian Ocean (like the El Nino is in the tropical Pacific), characterised by a difference in Sea-Surface Temperatures (SST).

- A 'positive IOD' is associated with cooler than normal sea-surface temperatures in the eastern equatorial Indian Ocean and warmer than normal sea-surface temperatures in the western tropical Indian Ocean.
- The opposite phenomenon is called a 'negative IOD' and is characterised by warmer than normal SSTs in the eastern equatorial Indian Ocean and cooler than normal SSTs in the western tropical Indian Ocean. Also known as the Indian Nino, it is an irregular oscillation of sea-surface temperatures in the Indian Ocean in which the western Indian Ocean becomes alternately warmer and colder than the eastern part of the Indian Ocean. Hence, statement 1 is not correct.
- The IOD is one aspect of the general cycle of global climate, interacting with similar phenomena like the El Nino-Southern Oscillation (ENSO) in the Pacific Ocean. An IOD can either aggravate or weaken the impact of El Nino on Indian monsoon. If there is a positive IOD, it can bring good rains to India despite of an El Nino year. Hence, statement 2 is correct.
- Therefore, option (b) is the correct answer

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### **Mains**

**Q.** The frequency of urban floods due to high intensity rainfall is increasing over the years. Discussing The reasons for urban floods, highlight the mechanisms for preparedness to reduce the risk during such events. **(2016)**

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