



## Food Security & Current Scenarios

*This editorial is based on [“Climate Change Threatening Food Security”](#) which was published in *The Hindu BusinessLine* on 24/05/2022. It talks about how food security is related to the changes that are taking place globally along with the measures that can be taken to tackle this situation.*

**For Prelims:** Food Security, Climate Finance, La Nina, Free Ration Scheme, Indian Meteorological Department (IMD), Heat waves.

**For Mains:** Climate Change and Food Security, Food Security - Impact of Russia- Ukraine War, Measures to tackle Food Security Amid Changing Climate.

The unexpected [Russia-Ukraine war](#) in Europe **disrupted all the supply chains** and sparked shortages of everything from wheat to barley, edible oils, and fertilisers. However, the more profound, **long-term concern is [climate change](#)** as well as the impacts that will affect crops and food self-sufficiency as the temperature rises.

The government also understands that in the wake of the [Covid-19 pandemic](#) people's spending power has fallen acutely and for some, hunger is an ever-growing distress. Hence, the government has also extended the [free-ration scheme](#) for six months till end-September 2022.

Looking at the larger canvas, India, as the [third-biggest greenhouse gas emitter](#) and one of the most vulnerable countries to climate change, has a serious interest in making economic growth **less carbon intensive**.

### How is Climate Change Related to Food Security?

- **Climate Change and Food System Interlinks:** The climate crisis impacts all parts of the global food system — from **production to consumption**.
  - It **destroys land and crops, kills livestock, depletes fisheries**, and cuts off transport to markets which further impacts food production, availability, diversity, access, and safety.
    - At the same time, food systems also impact the environment and are a **driver of climate change**. Estimates show that the food sector emits around 30% of the world's greenhouse gases.
- **Global Issue:** Along with India and Pakistan many other countries are having extreme heat events. France experienced **record temperatures of 30-35°C** on several days in May 2022.
  - Also, rainfall was down by a third from normal and this would **impact winter cereals** like wheat and barley.
- **Decline in Grain Output:** Other parts of the world too, like Canada and the US, have experienced **unusually dry, warm weather** over the last two-three years.

- The other big uncertainty is whether [La Nina](#) will go into the third year and further hit grain output in America.

## What is the Current Situation of Climate Change & Food Security?

- [The Indian Meteorological Department \(IMD\)](#): It had declared March 2022 the hottest month since record-keeping began 122 years ago.
- **Consistently Above Average Temperature**: According to research, temperatures were consistently rising 3°C-8°C **above average**, breaking many decadal and some all-time records in several parts of the country.
  - India experienced **around 300 forest fires** near the month of April 2022.
  - It also offered some predictions about **the future [heat waves](#)** in the subcontinent.
- **Extreme Weather and Its Impact**: Extreme weather events that were once supposed to occur once-in-100 years, are now 30 times more likely than before (or between every three-to-five year).
  - Also, **March 2022 was one of the driest recorded months**, and 2022 April's rainfall was also way below normal in north India's crop-growing regions.
    - In parts of Kerala, unseasonal rains forced cultivators to wade through watery fields to harvest paddy which **results in low-quality crops**.
- **Overseas Sales Ban**: The extreme heat wave coupled with the extremely low rainfall affected the growth of wheat in much of India's grain basket of Punjab, Haryana, and Western Rajasthan, and Uttar Pradesh.
  - Crop yields are down by 20% and that led to the **government withdrawing its offer to "feed the world"** as the spot prices for export wheat had risen as much as 60% month-on-month but eased after the [government's overseas sales ban of wheat](#).

## What is the Impact of the Russia-Ukraine War on Food Security?

- **Price Inflation**: A crucial portion of the world's wheat, corn, and barley is trapped in Russia and Ukraine because of the war, while an even larger portion of the world's fertilisers is stuck in Russia and Belarus.
  - The result is that **global food and fertiliser prices are rising**. Since the invasion, wheat prices have increased by 21%, barley by 33%, and some fertilisers by 40%.
- **Impact on Fertiliser Markets**: Sanctions have also hit Russia's closest ally, Belarus, a leading producer of potash-based fertiliser, critical for many major crops, including soybeans and corn.
  - According to a report, the direct impact of the war on fertiliser markets will first be felt in the food-production seasons in **India and Brazil**.
- **Surge in Fuel Prices**: The Russia-Ukraine conflict is responsible for rising fuel prices because supply chains, particularly those of crude oil, have been disrupted which raises even more pressure on the already stressed global supplies and low storage levels around the world.

## How can We Ensure Food Security Amid Changing Climate?

- **Technology Development**: Government can develop new seeds and improve the technology which will help to fix the problem of grain storage, improve irrigation coverage, make more effective use of fertiliser and manage soil better.
  - It's also required to **make agriculture economically viable and profitable**.
- **Building Resilience for the Poor**: Adaptation and resilience-building for poor and vulnerable communities are critical for food security.
  - Considering the fact that the adverse impacts of climate extremes on people and nature will continue to increase with rising temperatures, there is a **strong emphasis on the urgency of scaling up action and support** (finance, capacity-building, and technology transfer), to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change in line with the best available science.
- **Sustainable Food Systems**: Sustainability has to be achieved in production, value chains, and consumption. **Climate-resilient cropping patterns have to be promoted**. Instead of giving input subsidies, cash transfers can be given to farmers for sustainable agriculture.
- **Multi-Pronged Approach for Tackling Climate-Hunger Crisis**: Creating resilient livelihoods and food security solutions by protecting and improving the livelihood of vulnerable communities.

- Promoting a resilient agriculture sector by creating sustainable opportunities, access to finance, and **innovation for small-holder farmers**, with climate information and preparedness.
- Building capacity and knowledge of civil society and governments for vulnerability analysis to increase food security by **addressing the link between food security and climate risk**.
- **Role of India:** India has a huge role to play with its ongoing and now substantial policy work at the national and state levels.
  - It has to transform its food systems to make them **more inclusive and sustainable** for higher farm incomes and nutrition security.
  - Diversification of cropping patterns towards millets, pulses, oilseeds, and horticulture is needed for **more equal distribution of water**, and sustainable and climate-resilient agriculture.
- **Adaptation Finance:** The recent pledges made by the developed countries on enhancing **climate finance** to support adaptation in developing countries is a welcome gesture.
  - However, the current climate finance for adaptation and base of stakeholders remains insufficient to respond to worsening climate change impacts.
  - Multilateral development banks, other financial institutions, and the private sector shall **enhance finance mobilization** to deliver the scale of resources needed to achieve climate plans, particularly for adaptation.

## Conclusion

With progress made on renewable installations, the adoption of **Electric Vehicles (EVs)**, and turning India into a green energy powerhouse, the Indian Government is making a start. At the same time, it is also an urgent need to lift millions out of poverty and it is mandatory to address this situation now as declining agricultural productivity will result in higher food prices and will mean more economic hardships.

### **Drishti Mains Question**

“The existing crises that are taking place globally are influencing food security in a direct or indirect manner.” Discuss.