Daily News Juice

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1. Bharat Forecast System to Sharpen Local Rain Alerts

IMD Adopts Advanced Forecasting Model

The India Meteorological Department (IMD) has officially adopted the Bharat Forecast System (BFS) to deliver more accurate and localized rain forecasts, down to the panchayat level.

More Accurate Short- and Medium-Term Forecasts

- The BFS will significantly improve 3-day and 7-day forecasts.
- Long-range forecasts (monthly or seasonal) will not see major changes yet.

Precision technology

The BFS developed by the Indian Institute of Tropical Meteorology, aims at improving weather forecast models

EXISTING FORECAST MODELS

Use square grids of 12-km sides to map a region

- Use equal-sized grids to map regions
- Able to give
 block-level forecasts
 5 days ahead

BF\$ MODEL

- Breaks down a region into 6-km sides for mapping, leading to a four-fold improvement
- Uses a triangular-cubic octahedral structure
- Able to give forecasts up to the level of panchayats

Developed by IITM with Improved Technology

• The Indian Institute of Tropical Meteorology (IITM) developed BFS.

• The system has been tested since 2002 and shows notable accuracy in predicting heavy rainfall events.

• The model now uses 6 km x 6 km grids, compared to the earlier 12 km x 12 km, improving forecast resolution by four times.

Forecasts Now Reach Panchayat Level

Previously, forecasts were provided at the block level. With BFS, forecasts can now reach the panchayat level, covering small clusters of villages.

New Grid System Enhances Forecast Accuracy

• BFS uses a new triangular-cubic octahedral grid.

• This offers higher resolution in tropical regions, which are more prone to weather volatility, making forecasts more relevant for India.

`Thunderstorm Forecasts Still Limited

The BFS won't yet improve sudden severe thunderstorm predictions. To address this, 34 new Doppler Weather Radars will be installed across India within a year.

Relevance: GS Prelims & Mains Paper III; Environment Source: Indian Express

2. What Are Sugar Boards?

Introduction

'Sugar boards' are visual displays in schools showing how much sugar is present in popular food items like soft drinks and packaged juices.

For example:

• A 300 ml soft drink = 8 teaspoons of sugar

• A 125 ml mango drink = 5 teaspoons of sugar

These boards:

• Help students understand the sugar content in everyday foods.

- Show health risks linked to high sugar intake.
- Promote healthier food choices.
- Are part of a Do-It-Yourself (DIY) activity involving students.

CBSE's Directive

- Over 24,000 CBSE schools have been instructed to install sugar boards.
- Schools are encouraged to submit reports and photos of the activity by July 15.
- The initiative aims to raise awareness among nearly 2 crore students and their families.

Why Are Sugar Boards Needed?

The National Commission for Protection of Child Rights (NCPCR) pushed for sugar boards in all schools (not just CBSE).

• Type-2 diabetes, once rare in children, is now increasing due to high sugar intake and the easy availability of sugary snacks.

• Estimated cases of Type-2 diabetes in Indian children: 397 per lakh, second only to China.

Key Facts:

- Children aged 4–10 get 13% of calories from sugar.
- Ages 11–18 get 15%, which is 3 times the recommended limit (5%).



Where Does India Stand on Regulation?

• FSSAI (Food Safety and Standards Authority of India) is working on defining High Fat, Salt, and Sugar (HFSS) content in school meals.

• As of now, there's no fixed definition for HFSS in school food.

• India currently follows WHO guidelines:

o Limit sugar intake to 25 grams per day (6 teaspoons).

• Experts believe Indian standards should be stricter due to higher genetic risks for heart disease.

What's Next?

- NCPCR plans to extend this initiative to tackle high salt and trans-fat foods.
- Workshops will be held by paediatricians in schools.
- Parent-teacher meetings will include discussions on healthy eating.
- Data on children with diabetes is being collected from hospitals.

Relevance: GS Prelims & Mains Paper III; Environment Source: The Hindu

3. Why Covid cases are rising, but there is no need to worry?

What is triggering the increase in cases?

The health authorities pointed out that periodic waves of Covid-19 — like other endemic respiratory diseases — were expected throughout the year.

SARS-CoV-2, the virus responsible for Covid-19, has not disappeared, but it no longer behaves like an unpredictable emergency — rather, it has become part of a recurring cycle of illnesses, similar to the flu.

Several factors could be contributing to the rise in cases:

1. Waning immunity: Protection from vaccination or past infection decreases with time, leaving individuals more vulnerable to reinfection.



2. New variants: Like other viruses, SARS-CoV-2 continues to mutate. Some of these new variants may spread more easily or evade immunity to a greater extent, triggering fresh surges.

3. Seasonal patterns: Respiratory viruses, including SARS-CoV-2, often spread more efficiently in colder or more humid periods. Notably, several cities in India are currently experiencing a rise in other viral flu infections, which may reflect broader seasonal trends in respiratory illness.

4. Not enough testing: Reduced surveillance in many countries, including India, means rising case numbers may remain undetected for longer. Covid-19 is now considered endemic, and testing and genome sequencing efforts have been scaled back, delaying the identification of outbreaks.

5. High-risk groups: Individuals with weakened immune systems or severe comorbidites remain especially vulnerable. With relaxed public health measures, they face a greater risk of severe outcomes during periodic waves.

Which new variants have emerged, and which one is currently widespread? Three categories of variants are closely monitored.

• Variants of Concern (VOC) are those that spread more easily, cause more severe illness, present different symptoms, evade the immune system, or reduce the effectiveness of vaccines and treatments. No variant is currently classified as VOC.

• Variants of Interest (VOI) include those with mutations that are suspected or known to significantly alter their behaviour compared to the original strain. These changes may impact the spread of the virus or the way it interacts with the immune system.

• Variants Under Monitoring (VUM) are those that experts are observing to see if they might pose a greater risk in the future. The WHO is currently monitoring eight SARS-CoV-2 variants, including one VOI — JN.1 — and seven VUMs.

In India, the virus in most samples sequenced over the past couple of months has been identified as either BA.2 or JN.1. Health officials have said there is no indication that they are more transmissible or cause more severe disease compared to earlier variants.

Relevance: GS Prelims & Mains Paper III; Science & Technology Source: Indian Express

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