



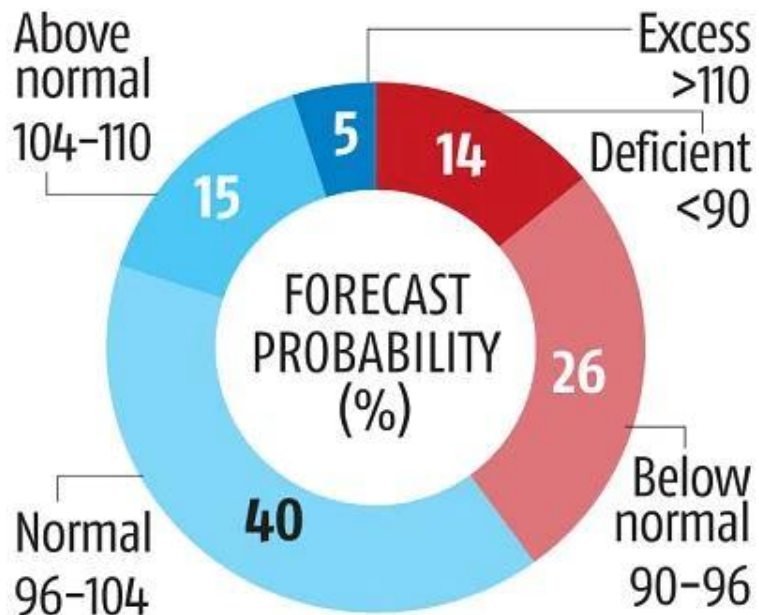
Time for change

The IMD must update some processes and stress on shorter forecasts

A 'normal' monsoon:

1. The India Meteorological Department (IMD) has forecast a 'normal' monsoon for this year or 99% of the Long Period Average (LPA) of 87 cm.
2. The IMD has a multi-stage monsoon forecast system. The April forecast usually has little detail on how much rain is expected during each of the monsoon months, and whether the rain will be lopsided or evenly distributed geographically.
3. The IMD usually shares this detail in late May or early June, just around the time the monsoon is imminent over Kerala.
4. The forecast in April is thus only a general indicator and of little public utility.

MONSOON FORECAST



Note: Long-period average (LPA) for the four-month southwest monsoon season is estimated at 87 cm
Source: IMD

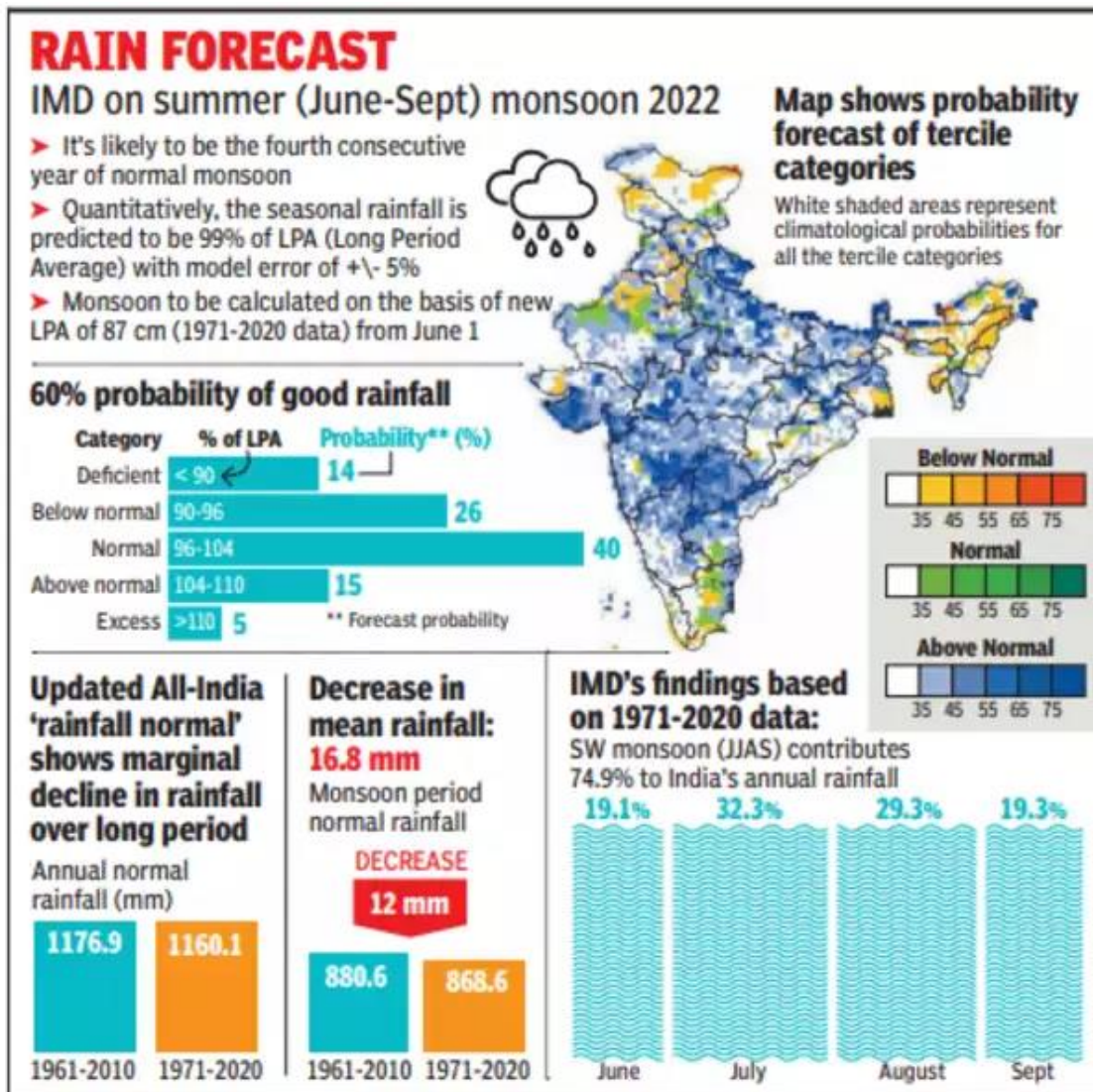
Global weather phenomenon:

1. A normal monsoon forecast this year is also predicated on the absence of an El Niño, a warming of the Central Pacific linked to the drying up of monsoon rains.
2. However, another ocean parameter called the Indian Ocean Dipole, the positive phase of which is associated with good rains, has also been forecast to be 'neutral' or unhelpful for the monsoon.



The Long Period Average (LPA)

1. There has also been another significant bit of information made public. The IMD has changed its definition of the LPA, which is an indication of the average rainfall over a 50-year interval and, as per the norms of the World Meteorological Organization to which India is a signatory, should be updated every 10 years.
2. For myriad reasons, the IMD stuck with an LPA number of 89 cm (the average monsoon rain from 1951-2000) until 2018, when it was updated to 88 cm (to reflect the average from 1961-2010).





Cause of Concern:

1. To count for the 1971-2020 interval, the number is 87 cm. While on the surface, it might look like India is losing just a centimetre of rainfall every decade, it must be remembered that this conceals wide shifts in rainfall when computed at the State and district levels as the monsoon rain is highly uneven.
2. The IMD explains the loss of a centimetre every decade as part of a natural cycle of the monsoon where 30 years of less rain, or a 'dry' epoch, is followed by 30 years of a 'wet epoch'.
3. India began a dry epoch in the 1970-80 decade, the IMD says; it is now in a neutral phase and will enter a wet epoch in the decade, 2030-2040.
4. The IMD has presented research over the years documenting the changes in the weather and rainfall in recent years down to sub-district levels and has said that global warming, in its tendency to heat the oceans, has certainly had a role to play.
5. Much like the update to the average, the IMD must update some processes and lay stress on shorter forecasts, a month or a fortnight ahead, rather than maintain anachronistic traditions of long-range forecasts that are neither accurate nor useful.

The status of India's National Cyber Security Strategy

Urgent Need for Cyber Security Strategy:

1. As per American cybersecurity firm Palo Alto Networks' 2021 report, Maharashtra was the most targeted State in India — facing 42% of all ransomware attacks.
2. The report stated that India is among the more economically profitable regions for hacker groups and hence these hackers ask Indian firms to pay a ransom, usually using cryptocurrencies, in order to regain access to the data.
3. One in four Indian organisations suffered a ransomware attack in 2021. Indian organisations witnessed a 218% increase in ransomware — higher than the global average of 21%.

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4. Software and services (26%), capital goods (14%) and the public sector (9%) were among the most targeted sectors. An increase in such attacks has brought to light the urgent need for strengthening India's cybersecurity.

The National Cyber Security Strategy:

Conceptualised by the Data Security Council of India (DSCI) the report focuses on 21 areas to ensure a safe, secure, trusted, resilient, and vibrant cyberspace for India.

The main sectors of focus of the report are

1. **Large scale digitisation of public services requires build in security:** There needs to be a focus on security in the early stages of design in all digitisation initiatives
2. **Supply chain security:** There should be robust monitoring and mapping of the supply chain of the Integrated circuits (ICT) and electronics products. y.
3. **Critical information infrastructure protection:** The supervisory control and data acquisition (SCADA) security should be integrated with enterprise security. A repository of vulnerabilities should also be maintained.
4. **Digital payments:** There should be mapping and modelling of devices and platforms deployed, transacting entities, payment flows, interfaces and data exchange as well as threat research and sharing of threat intelligence.
5. **State-level cyber security:** State-level cybersecurity policies and guidelines for security architecture, operations, and governance need to be developed.

To implement cybersecurity in the above-listed focus areas, the report lists the following recommendations:

1. **Budgetary provisions:** A minimum allocation of 0.25% of the annual budget, which can be raised up to 1% has been recommended to be set aside for cyber security.
2. **Research, innovation, skill-building and technology development:** A national framework should be devised in collaboration with institutions like the National Skill Development Corporation (NSDC) and ISEA (Information Security Education and Awareness) to provide global professional certifications in security.

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3. **Cyber security services:** The DSCI further recommends creating a 'cyber security services' with a cadre chosen from the Indian Engineering Services.
4. **Crisis management:** For adequate preparation to handle a crisis, the DSCI recommends holding cybersecurity drills that include real-life scenarios with their ramifications.
5. **Cyber insurance:** It recommends developing cyber insurance products for critical information infrastructure and to quantify the risks involving them.
6. **Cyber diplomacy:** Cyber diplomacy plays a huge role in shaping India's global relations.
7. **Cybercrime investigation:** It also suggests charting a five-year roadmap factoring possible technology transformation, setting up exclusive courts to deal with cybercrimes and removing the backlog of cybercrimes by increasing centres providing opinion related to digital evidence under section 79A of the IT act.
8. **Advanced forensic training:** It suggests advanced forensic training for agencies to keep up in the age of AI/ML, blockchain, IoT, cloud and automation.

Implementation:

1. The Centre clarified that it has "formulated a draft National Cyber Security Strategy 2021 which holistically looks at addressing the issues of security of national cyberspace."
2. Without mentioning a deadline for its implementation, the Centre added that it had no plans as of yet "to coordinate with other countries to develop a global legal framework on cyber terrorism."