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THE HINDU Page 5

# CYCLONE TEJ

## (Syllabus: GS Paper 3 – Disaster Management)

# Tej now extremely severe cyclone over the Arabian Sea; yellow alert issued for eight districts in Kerala

**The Hindu Bureau**
THIRUVANANTHAPURAM

**Kerala is likely to receive isolated heavy rainfall triggered by the weather system**

The very severe cyclone, Tej, that formed over the Arabian Sea on Sunday intensified into an extremely severe cyclone. The cyclone, which is moving north-westwards, is likely to cross the Yemen coast close to Al Ghaidah in the early hours of Tuesday as a very severe cyclonic storm with wind speed of 125-135 kmph gusting to 150 kmph.

Kerala is likely to receive isolated heavy rainfall triggered by the weather systems over the Arabian Sea and the Bay of Bengal. A yellow alert has been issued for eight districts from Kollam to Palakkad, warning of isolated heavy rains on Monday. However, the typical northeast monsoon rain will be absent at least for the next few days in the State as the present weather system over the Bay of Bengal is likely to upset the flow of northeasterlies.

Meanwhile, the depression formed over the Bay of Bengal is likely to intensify into a deep depression in 24 hours and subsequently a cyclonic storm by Tuesday, according to a weather bulletin issued by the India Meteorological Department (IMD) on Sunday. The IMD is monitoring the situation.

It is likely to move towards the Andhra coast during the next 12 hours and then recurve and move north-eastwards towards Bangladesh and adjoining the West Bengal coast during the subsequent three days.

Fishermen are advised to not venture into the southwest and west-central Arabian Sea till Wednesday as gale wind speed is likely to reach up to 150-160 kmph gusting to 175 km in the west-central Arabian Sea on Monday.

**Context**: Recently, the **very severe cyclone Tej** intensified into an extremely severe cyclone as it continued its northwestward movement, posing a significant threat to the Yemen coast near Al Ghaidah with **wind speeds of 125-135 kmph**, gusting to 150 kmph.

- **According toIndia Meteorological Department (IMD)**, the cyclonic storm that is brewing over the Arabian sea will cross over the Yemen-Oman coasts between Al Ghaidah (Yemen) and Salalah (Oman) around the early hours of October 25.

### Cyclone Tej

- **About**: Cyclone Tej, the initial post-monsoon cyclone of the 2023 Arabian Sea season, has been designated by India.
- **Origin**: As a low-pressure system in the southeastern Arabian Sea, Cyclone Tej recently developed into a depression.
- Presently, **Cyclone Tej is tracking a west-northwest course** towards the Maharashtra coastline, and it is anticipated to reach land near Mumbai within the coming days.
- Cyclone Tej could bring about substantial rainfall and potent winds, leading to storm surges and coastal inundation.

### Cyclone

- A cyclone is a **large, rotating storm system centered around an area** of low pressure. Cyclones can develop in various ocean basins, but their prevalence is highest in tropical regions.
- Cyclones can bring about a range of hazards, such as powerful winds, storm surges, and intense precipitation.

### Types of Cyclones

- **Tropical Cyclones**: These are the most frequently encountered type of cyclone, emerging above warm, tropical seas. They are recognized by their strong winds, substantial rainfall, and storm surges.
- **Extratropical Cyclones**: These cyclones take shape over cooler waters and lack the intensity of tropical cyclones. They are characterized by strong winds, heavy rainfall, and even snowfall in some cases.
- **Midlatitude Cyclones:** These cyclones form in the midlatitude regions and share characteristics with their extratropical counterparts, including robust winds, substantial rainfall, and the potential for snow.

PIB Oct 21

# PROJECT UDBHAV
(Syllabus: GS Paper 2 – Government Schemes)

## HON'BLE RAKSHA MANTRI LAUNCHED 'PROJECT UDBHAV' : A COLLABORATIVE INITIATIVE BY INDIAN ARMY AND USI OF INDIA

**Context**: Union Defence Minister of India unveiled '**Project Udbhav**' during the inauguration of the Indian Military Heritage Festival.

**Project Udbhav**

- **About:** It is a collaboration between the **Indian Army and the United Service Institution** of India (USI), a defence services think tank.
- **Initiative of:** It is a visionary **initiative by the Indian Army that seeks to integrate** age-old wisdom with contemporary military pedagogy.
- **Meaning:** '**Udbhav', which translates** to 'origin' or 'genesis', acknowledges the vintage scriptures and writings of our Nation, that **span centuries in the past and contain profound knowledge** that can benefit modern military strategies.
- **Objective:** To synthesise **ancient wisdom with contemporary military practices**, forging a unique and holistic approach to address modern security challenges.
- **Ancient root:** India's ancient knowledge system, **rooted in a 5000-year-old civilizational legacy**, boasts a repository of intellectual texts and manuscripts.
  - Project Udbhav, according to the Ministry of Defense (MoD), seeks **to facilitate a profound understanding** of these systems and their enduring relevance in the modern era.
  - The initiative builds upon earlier research by the Army Training Command, resulting in the compilation of the **'Compendium of 75 Stratagems' based on ancient Indian** scriptures.
- **Inspiration from:** The **project draws inspiration from revered texts like Chanakya's Arthashastra**, which emphasizes the importance of strategic partnerships and diplomacy, aligning with contemporary practices.
  - Similarly, **Thirukkural, the classical Tamil text**, champions ethical conduct in all endeavors, i**ncluding warfare, aligning with modern codes** of ethics and principles of the Geneva Convention.

**INDIAN EXPRESS** Page 12

# SOUTH CHINA SEA

**(Syllabus: GS Paper 2 – IR)**

## China and Philippines trade charges on crash in South China Sea

**REUTERS**
BEIJING/MANILA, OCTOBER 22

CHINA AND the Philippines traded accusations over a collision in disputed waters of the South China Sea as Chinese vessels blocked Philippine boats supplying forces there on Sunday in the latest of a series of maritime confrontations.

The two countries have had numerous run-ins in the South China Sea in recent months, especially in the disputed Second Thomas Shoal, part of the Spratly Islands. The Philippines has sent supplies to troops stationed on a rusted World War Two-era transport ship used as an outpost on the shoal, prompting China's coastguard to repeatedly deploy vessels to block the resupply.

China's coastguard said there had been a "slight collision" between one of its ships and the Philippine boat while the coastguard was "lawfully" blocking the boat from transporting "illegal construction materials" to the warship. Manila responded by condemning "in the strongest degree" the Chinese vessel's "dangerous blocking manoeuvres".

China's "dangerous, irresponsible and illegal actions" were "in violation of Philippine sovereignty", Manila's Task Force for the West Philippine Sea said in a statement.

Beijing claims sovereignty over almost the entire South China Sea, including parts of the exclusive economic zones of Brunei, Indonesia, Malaysia, the Philippines and Vietnam. The Permanent Court of Arbitration in 2016 said China's claims had no legal basis.

The US expressed support for the Philippines, denouncing China's "disruption of a legal Philippine resupply mission".




**Context**: Recently, **China and the Philippines have traded accusations** over a collision in the **disputed waters of the South China Sea**, highlighting the escalating tensions in the region.

**South China Sea**

- It is one of the **world's busiest waterways** and plays a crucial role in global trade and merchant shipping.
- **Location**: The South China Sea is a marginal sea of the Western Pacific Ocean
- **Bordering Countries**: The People's Republic of China, the Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.
- **Straits**: Taiwan Strait, connecting to the **East China Sea**; the Luzon Strait, linking to the **Philippine Sea**; straits surrounding Palawan, connecting to the **Sulu Sea**; the Strait of Singapore, providing access to the **Strait of Malacca**; and the Karimata and Bangka Strait, connecting to the Java Sea.
- **Reason for Dispute**: The South China Sea disputes involve claims over maritime territories and islands by various sovereign states in the region.
- **Countries Party dispute**: China, Brunei, Taiwan, the Philippines, Vietnam, Malaysia, Indonesia etc.
- **Claims Over Islands**
- **The Paracel Islands**: Claimed by China, Taiwan and Vietnam.
- **The Spratly Islands**: Claimed by China, Taiwan, Malaysia, Vietnam, Brunei and the Philippines.
- **The Scarborough Shoal:** Claimed by the Philippines, China and Taiwan.

DTE

Oct 22

# AMAZON RIVER

(Syllabus: GS Paper 3 – Env and Eco)

# Drought in the Amazon: A tragedy announced




**Amazon River**

- **About:** It is the greatest **river of South America** and the **largest drainage system in the world** in terms of the volume of its flow and the area of its basin.
- **Course**: Its excursion begins in the Andes Mountains, high in the Andes.
- **Coverage Areas**: The Amazon River Basin spans across several South American countries including Venezuela, Suriname, Peru, Guyana, Brazil, Ecuador, Colombia, and Bolivia.
- **Distance**: 6,400 kilometers
- **Tributaries**: It contains about 1,100 tributaries.
  - Among the numerous notable tributaries are the Rio Negro, the Madeira River, and the Xingu River.

**Context**: **Recently, the Amazon, which holds 20 percent of all freshwater** in the world, has **faced an alarming water crisis**, leaving most houses in the region without running water due to a record severe drought.

**Key Points of Study**

- **Drought in the Amazon has led to historically low water** levels in many tributaries, with the main stem of the Amazon river dropping daily, causing a significant transformation of the landscape.
- **Abnormal warming of the Atlantic Ocean**, combined with El Niño, is contributing to the **severity and potential prolongation** of the drought.
- **Experts warn** that if the anomalous warming of the Atlantic continues, the extreme drought in the **Amazon may persist until mid-2024.**
- The drought is causing a human and environmental tragedy, particularly affecting socio-economically vulnerable populations in the Western Amazon region.
- **Large-scale deforestation, illegal timber exportation**, cattle grazing, and soybean plantations have contributed to the loss of water sources in the region, worsening the drought's impact.
- The **Amazon's resilience is at risk**, potentially leading to desertification and a point of no return for the rainforest.

**HINDUSTAN TIMES** Page 1

# AIR QUALITY INDEX

**(Syllabus: GS Paper 3 – Env and Eco)**

# Air plummets to red zone as pollution season sets in

Contribution of farm fires to city's pollution that stood at 16% on Sunday is set to rise to nearly 30% today

Jasjeev Gandhiok
letters@hindustantimes.com

**NEW DELHI:** The annual onslaught of pollution appears to have gripped Delhi again as the air quality index (AQI) jumped to the "very poor" level for the first time this season on Sunday, aided by a combination of factors which included low temperature, calm winds, and local as well as external sources of pollution which included rising farm fires in northern states, officials said.

AIR WE BREATHE

Delhi clocked an AQI of 313 on Sunday, according to the Central Pollution Control Board's (CPCB) bulletin—a sizeable rise from Saturday's AQI reading of 248 (poor). This is also the first time in more than five months that Delhi's AQI was "very poor", with it last recorded in this category on May 17, when the AQI was 336 due to dusty

continued on >11



Walkers in early morning haze at a park in southwest Delhi's Dwarka on Sunday. VIPIN KUMAR/HT PHOTO

## 13 areas already mapped may not be the only hotspots in city

Jasjeev Gandhiok
letters@hindustantimes.com

**NEW DELHI:** Delhi has at least four more pollution hotspots than the 13 sites originally designated, according to average concentration of particulate matter known as PM2.5 over the last year, which has been as bad or worse at these locations when compared to the demarcated ones.

PM2.5 readings at Nehru Nagar (near Lajpat Nagar) in south Delhi, Lodhi Road in central Delhi, Patparganj in the east and Alipur in the north suggest they should be added the list of 13 regions that will force local administration to take additional measures to curtain pollution.

"Our action has been focused on these 13 locations. We may revise the list of hotspots again, particularly if other locations are recording such high levels," a Delhi Pollution Control Committee official said, asking not to be named, but added that no review has been underway till now.

>P3

**Context**: Delhi's **air quality index (AQI) has recently reached the "very poor"** level for the first time this season due to low temperatures, calm winds, and rising farm fires in neighbouring states.

### Key Points

- One of the primary **reasons for the abrupt spike in pollution** levels was a **recent jump in farm fires** in northern states.
- Farm fires in **Punjab and Haryana are also contributing** to the spike in pollution levels.
  - There were a t**otal of 265 farm fires reported in Punjab and Haryana** — the most in a single day so far this season — according to satellite data from National Aeronautics and Space Administration (NASA).
- The Central Pollution Control Board (**CPCB) classifies an AQI between** as "good", "satisfactory", "moderate", "poor", "very poor", and "severe" based on 0-400 and above.

### Air Quality Index

- **Air Quality Assessment**: AQI is a tool for assessing the safety of the air you breathe.
- **Monitoring and Reporting**: Organizations responsible for AQI reporting measure the concentration of **6 diverse air pollutants** - Particulate matter (PM2. 5 and PM10), Ozone (O3), Carbon Monoxide (CO), Nitrogen Dioxide (NO2), Sulphur Dioxide (SO2), Lead (Pb) and Ammonia (NH3) at various monitoring stations.
- **National Air Quality Index (NAQI)**: The widely employed NAQI, issued by the Central Pollution Control Board, provides a 24-hour average.
- **Unit of Measurement**: AQI is measured in micrograms per cubic meter ($\mu g/m^3$).

PIB

Oct 21

# SPECIAL PURPOSE VEHICLE
(Syllabus: GS Paper 3 – Sci and Tech)

# Focus on SPV model to manufacture fighters, tanks, copters, missiles

**Context**: The **defense ministry has recently** shifted research funds to the private sector, enabling collaborative design of military platforms through a **Special Purpose Vehicle (SPV)** for projects like **fighters, tanks, missiles, and helicopters.**

- Under SPV model a Indian govt agency will **lead the project and select private companies** to develop major technologies and components for the system.

**Special Purpose Vehicles (SPVs)**

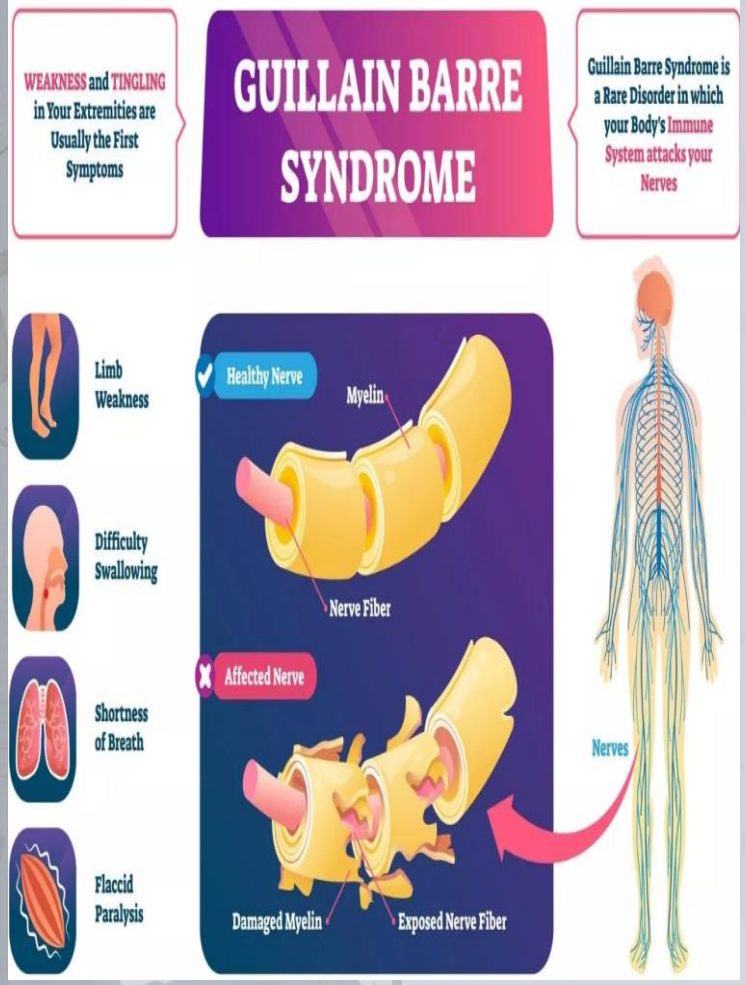
- **About**: A SPV is a legal entity created for a well-defined, sole, and narrow purpose.
- **Formation**: Typically, SPVs are **established as companies with the specific goal** of achieving one or a group of narrowly defined objectives by their promoters.
- **Purpose**: SPVs are primarily formed to segregate a company's assets or activities from its main operations.
- **Isolation of Assets:** Assets or activities are transferred to the SPV, creating a distinct entity that provides investors or lenders with a greater sense of security and comfort.
- **Risk Mitigation and Insurance:** SPVs and the sponsoring company, often the parent company, are protected against the risk of bankruptcy through insurance.

**Objectives of SPVs**

- **Securitization**: Banks utilize SPVs for securitizing loans, converting them into tradeable securities.
- **Risk-sharing**: SPV formation allows companies to legally isolate the risks associated with a particular project.
- **Property Sale**: When property sales taxes are higher than capital gains taxes, companies can establish SPVs to own the properties for sale, thereby reducing tax liabilities.
- **Asset Transfer**: For assets that are difficult to transfer directly, a company can create an SPV to take ownership. Subsequently, the SPV can be sold as part of mergers and acquisitions processes.

## GUILLAIN-BARRE SYNDROME
(Syllabus: GS Paper 3 – Sci & Tech)

# Risk of Guillain-Barre syndrome 6 times higher after Covid infection




**Context: In a recent study from Israel, a** connection was found between Covid-19 infection and a higher likelihood of being diagnosed with **Guillain-Barre syndrome (GBS) within six weeks**.

**Guillain-Barre Syndrome (GBS)**

- **About**: This is a rare autoimmune disorder where the body's immune system mistakenly attacks the peripheral nerves.
- It is more common in adults and males but can affect people of all ages.
- **Symptoms:** Initial signs of this syndrome often **manifest as sensations of weakness or tingling,** typically originating in the legs and potentially extending to affect the arms and facial areas.
  - In certain individuals, these sensations may progress to paralysis in the legs, arms, or facial muscles.
- **Causes**: It is frequently preceded by an infection.
  - This infection can be **either bacterial or viral** in nature.
  - The most commonly associated infections encompass **Campylobacter jejuni, Epstein-Barr virus (EBV)**, cytomegalovirus (CMV), **and the bacteria responsible for pneumonia** and urinary tract infections.
- **Treatment**: There is **currently no cure available for this condition**, with the primary treatment being the administration of intravenous immunoglobulin (IVIG). IVIG is derived from donated blood containing beneficial antibodies.

ECONOMIC TIMES

Oct 22

# INDO-PACIFIC ECONOMIC FRAMEWORK

(Syllabus: GS Paper 2 – IR)

# India moots biofuel alliance among 14 members of IPEF

**Context:** India has proposed collaboration on **biofuels within the Indo-Pacific Economic Framework (IPEF)** on the lines of the G20 Global Biofuels Alliance to ensure energy security, affordability and accessibility through sustainable biofuels

**Indo-Pacific Economic Framework (IPEF)**

- **About**: It is a US-led initiative with the primary objective of strengthening economic partnership among participating countries.
- **Aim**: To enhance resilience, sustainability, inclusiveness, economic growth, fairness, and competitiveness in the Indo-Pacific region.
- **Launch**: The IPEF was officially launched in 2021 and started with a dozen initial partner countries.
- **Partners**: These partners collectively represent a substantial 40% of the world's Gross Domestic Product (GDP).
- **Members:** Currently, India and 13 countries located in the Pacific Ocean are its members.
    - Australia, Brunei, Fiji, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States, and Vietnam.

**Global Biofuel Alliance**

- **About:** It is an initiative by India as the G20 Chair. The Alliance intends to **expedite the global uptake of biofuels** by facilitating technology advancements, intensifying the utilization of sustainable biofuels, and shaping robust standard setting and certification through the participation of a wide spectrum of stakeholders.
- **Aim:** To serve as a catalytic platform, fostering global collaboration for the advancement and widespread adoption of biofuels.
- **Function:** The alliance will also act as a central repository of knowledge and an expert hub.
- **Countries involved:** India, Singapore, Bangladesh, Italy, USA, Brazil, Argentina, Mauritius and UAE.

LIVEMINT

Page 2

# PMFBY

## (Syllabus: GS Paper 2 – Government Schemes)

# Govt plans ₹30,000 cr push to expand crop cover portal

Aim to include ponds, tractors, livestock and palm trees to make it a comprehensive platform

Puja Das
puja.das@livemint.com
NEW DELHI



Expanding PMFBY will enable farmers to access new schemes, as it will not be limited to crop insurance but other insurance requirements as well. AFP

The government plans to earmark ₹30,000 crore to expand the Pradhan Mantri Fasal Bima Yojana (PMFBY) portal into a comprehensive platform that will extend insurance coverage beyond crops to include assets such as ponds, tractors, livestock, and palm trees, two officials said.

This initiative will be driven by the AIDE app, launched in July, to ensure door-to-door enrolment, making crop insurance more accessible and convenient for farmers.

Through this app, insurance intermediaries will not only enrol farmers for crop insurance, but also extend coverage to 40 million farmers for non-subsidized schemes.

"We are planning to build a platform. It's a transition from being a portal to a platform. AIDE app is already there for farmers, through which insurance intermediaries enrol farmers for crop insurance. While they enrol the farmers for a subsidized scheme, which is PMFBY, farmers may also want some of their other rural products that are not subsidized to be covered by insurance. If the portal is converted into a platform, farmers will be able to get insurance coverage for their non-subsidized agricultural assets," one of the two officials said on condition of anonymity.

"Based on the subsidized platform, we will try to get schemes enroled onto our platform where farmers of certain regions will be given choices to opt for other schemes," the official added.

PMFBY, a central government-sponsored crop insurance scheme which integrates all stakeholders on one platform has been revamped with the incorporation of new technological initiatives like YES-Tech, WINDS portal and AIDE app, marking a turning point for crop insurance in India.

Following the restructuring of PMFBY, insured area in 2022-23 rose by 12% as compared to the previous year, reaching more than 49.7 million hectares, and is expected to hit an all-time high 57.5-60 million hectares insured acreage in the 2023-24 Kharif season.

**12%** increase in the overall insured area in FY23

Besides, several states, including Andhra Pradesh re-enlisted in the scheme, while others are planning to re-join due to the universal approach under the restructured PMFBY scheme to cover all farmers in the respective states. After the revamping and the government settling long pending claims of ₹765 crore since 2018-19 Kharif season, Jharkhand has finally decided to re-enter the scheme from Kharif 2024-25 season. The number of insurers participating has also risen, with 15 taking part in the 2023 tender cycle, compared to 11 in 2020.

**60 mn** hectares, reach of scheme likely in 2023-24 season

"If it turns out the way we are planning, it will help in insurance penetration, and offer a platform to companies to sell. More importantly, we will know what the farmers need," he said.

"If we do it for one or two years, we will come to know what type of insurance farmers in a certain region want. We can build it into a scheme for subsidy. So, it becomes a sandbox under PMFBY to get new schemes by knowing the market demand. It will not be limited to crop insurance, but other insurance requirements and enrolments as well," the official added.

"It will be a sandbox within the existing Fasal Bima Yojana, and allow non-subsidized schemes to come in, as well as judge the demand. It will also allow 40 million farmers in the country to approach the government and tell it the products they wish to have insurance coverage for," the second official said. "It is at a very early stage and is being drafted. Therefore, it will be difficult to comment on exactly how much capex will be required. However, as per the initial discussion, it could be ₹ 30,000 crore," the second official said.

Queries to the agriculture and farmer's welfare ministry remained unanswered till press time.

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**Context**: The **government recently announced its intention** to allocate ₹30,000 crore to modernize the **Pradhan Mantri Fasal Bima Yojana (PMFBY) portal**, transforming it into a comprehensive platform that expands insurance coverage to **encompass assets like ponds, tractors, livestock, and even palm trees**.

- This initiative will be **driven by the AIDE app, launched** to ensure **door-to-door enrolment**, making crop insurance more accessible and convenient for farmers.
- Through this app, insurance **intermediaries will not only enrol farmers** for crop insurance, but also extend coverage to farmers for non-subsidized schemes.

**Pradhan Mantri Fasal Bima Yojana (PMFBY)**

- **Launched**: On 18th February 2016 by the Prime Minister.
- **Nodal Ministry**: Ministry of Agriculture.
- **Aim**: to provide financial support to farmers suffering crop loss/damage arising out of natural calamities.
- **Objective**: It provides a comprehensive insurance cover against failure of the crop thus helping in stabilising the income of the farmers.
  - To encourage farmers **to adopt innovative and modern agricultural** practices.
  - To ensure **flow of credit to the agriculture sector**.
- **Coverage**: All Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available and for which requisite number of Crop Cutting Experiments (CCEs) are conducted under General Crop Estimation Survey (GCES).
- **Eligibility**: **Sharecroppers and tenant farmers growing** notified crops in the notified areas are eligible for coverage.
- **Implemented by**: empanelled general insurance companies.
- **Selection of Implementing Agency (IA)** is done by the concerned State Government through bidding.

PIB

Oct 22

# KASTURI COTTON BHARAT

(Syllabus: GS Paper 3 – Economics)

## Union Textiles Minister Shri Piyush Goyal Launches Website of "Kasturi Cotton Bharat"

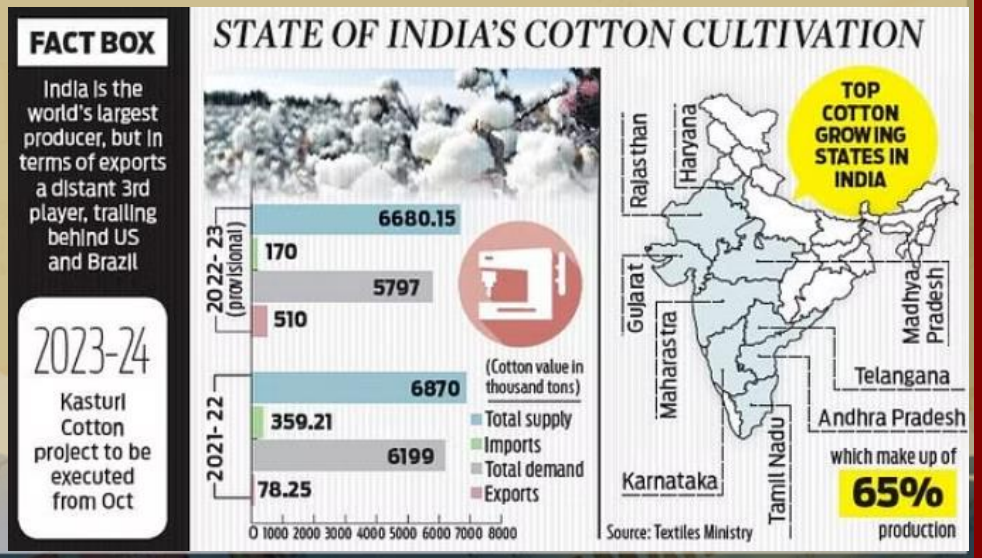
**Context:** The Union Minister of Textile, Commerce & Industry, Consumer Affairs and Food & Public Distribution recently **launched the website of Kasturi Cotton Bharat**.

### Kasturi Cotton Bharat

- **About:** 'Kasturi Cotton' is an initiative of the Government of India (MoTextile), Textile Trade Bodies and Industry with the objective to brand Indian cotton by adopting certain standards and specifications in cotton farming, sourcing, optimising the supply chain, and processing for textiles. It includes traceability, and sustainability measures, reflecting the fashion trend in the developed markets.
- **Aim:** To increase exports of raw cotton and value-added products such as yarn and textiles, and create premium value for domestic cotton.
- **Announced:** On the eve of World Cotton Day on 7th October 2020.

### Cotton

- **About**: It is one of the **most important commercial crops** cultivated in India and accounts for around 25% of the total global cotton production.
- **Species of Cultivated Cotton**: Gossypium arboreum and Herbaceum (Asian cotton), G.barbadense (Egyptian cotton) and G. hirsutum (American Upland cotton).
- **Major States**: Punjab, Haryana, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Telangana, Andhra Pradesh, Karnataka and Tamil Nadu.
- **BT Cotton**: It is a **genetically modified organism (GMO)** or genetically modified pest resistant plant cotton variety, which produces an insecticide to combat bollworm.



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