



Daily Current Affairs



To The Point by Dhananjay Gautam

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District & State-Level FRA Cells: Boosting Implementation of Forest Rights Act, 2006

Context: In a major move to **accelerate the implementation** of the **Forest Rights Act (FRA), 2006**, the **Union Ministry of Tribal Affairs** has approved the creation of **324 district-level** and **17 state-level FRA cells**. These have been established under the **Dharti Aba Janjatiya Gram Utkarsh Abhiyaan (DAJGUA)** — an administrative initiative aimed at strengthening tribal rights and improving grassroots governance in forest areas.



What Are FRA Cells?

The **FRA Cells** are **administrative support units** created to **facilitate and fast-track the implementation** of the Forest Rights Act. Though not formed under the FRA law itself, they function under the **supervision of the Ministry of Tribal Affairs**, with a primary role of supporting stakeholders at various levels of the claim process.

Key Functions of FRA Cells:

- **Assist claimants and Gram Sabhas** in filing and processing **individual and community forest rights claims**
- **Maintain and manage FRA-related data** at the district and state level
- **Support capacity building** of stakeholders including SDLCs, DLCs, and state officials
- **Accelerate the disposal of pending claims**, especially those stuck after **District Level Committee (DLC)** approvals
- Ensure administrative **coordination without interfering** with the statutory roles of **Gram Sabhas, SDLCs, DLCs, or state authorities**

Why FRA Cells Are Crucial Now:

As of now, approximately **14.45% of the 51.11 lakh FRA claims** filed across **21 states and Union Territories** remain pending. The new FRA cells are meant to focus especially on **states with high pendency**, such as:

- **Assam:** Over **60%** of claims still pending
- **Telangana:** Around **50.27%** claims yet to be processed

In contrast, states like **Chhattisgarh, Madhya Pradesh, Maharashtra, and Jharkhand** have demonstrated better performance, with **relatively low pendency**.

The **highest number of district-level FRA cells** has been sanctioned in:

1. **Madhya Pradesh**
2. **Chhattisgarh**
3. **Telangana**
4. **Maharashtra**
5. **Assam**
6. **Jharkhand**

About the Forest Rights Act (FRA), 2006:

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The **Forest Rights Act**, officially titled the *Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act*, was enacted in **2006** to address the **historic injustices** faced by forest-dwelling communities.

Key Provisions:

- Grants **legal recognition** to **individual and community forest rights**
- Empowers **Scheduled Tribes (STs)** and **Other Traditional Forest Dwellers (OTFDs)** to access, manage, and conserve forest resources
- Covers nearly **150 million people**, **40 million hectares** of land, and over **1.7 lakh villages**

Challenges and Concerns:

While the initiative has been welcomed for its intent, experts have raised several **critical concerns**:

- **Parallel Governance Structure**: FRA Cells operate **outside the statutory framework** of the FRA, creating a risk of **dual authority** that could **dilute accountability**.
- **No Legal Backing**: Unlike **Sub-Divisional Level Committees (SDLCs)** and **District Level Committees (DLCs)** constituted under the Act, FRA cells **lack statutory legitimacy**.
- **Bureaucratic Overlap**: Potential for **duplicated roles** and confusion between **administrative and legal responsibilities**.

Additional Insights and Way Forward:

- **Digital Tools and Data Management**: FRA Cells can help usher in **digitization of claim records**, creating **centralized dashboards** for monitoring progress and **ensuring transparency**.
- **Training and Outreach**: These cells can play a pivotal role in **educating tribal communities** about their rights and simplifying the claim process.
- **Environmental Significance**: By recognizing community rights, FRA promotes **community-based forest conservation**, an approach increasingly recognized as **key to climate resilience** and **sustainable forest governance**.

Conclusion:

The launch of FRA Cells under the **Dharti Aba Janjatiya Gram Utkarsh Abhiyaan** marks a proactive step towards ensuring **speedier and more efficient implementation** of the **Forest Rights Act, 2006**. However, the **success of this initiative** will depend on how well it complements the **statutory mechanisms**, respects the authority of **Gram Sabhas**, and maintains **transparency and accountability**.

2

Agri Stack & Digital Agriculture Mission: Transforming Indian Farming Through Data

Context: The **Ministry of Agriculture & Farmers' Welfare** recently organized a **National Conference on Agri Stack** under the umbrella of the **Digital Agriculture Mission (DAM)**. The event aimed to highlight the evolving role of **digital infrastructure** in transforming India's agricultural landscape and ensuring **precision-driven governance** in the farm sector.



What is Agri Stack?

Agri Stack is an integrated **digital ecosystem** designed to unify and streamline agricultural services through the power of **data and technology**. It brings together key data elements like:

- **Farmer Identity**
- **Land Ownership Records**
- **Crop Data**
- **Scheme Benefits**

By integrating these datasets, Agri Stack aims to deliver **personalized and targeted support** to farmers, improving efficiency and transparency across various government schemes.

Key Integrations:

- **PM-KISAN** (income support)
- **PMFBY** (crop insurance)
- **Kisan Credit Card (KCC)**
- **MSP Procurement Systems**

This system allows for **seamless verification**, reduced duplication, and faster benefit delivery.

Highlights from the Conference:

- The Ministry emphasized **digitization of land records** and **Aadhaar seeding** as essential for **accurate farmer identification**.
- Introduction of the **Digitally Verifiable Credential (DVC)** or **Kisan Pehchan Patra**, enabling farmers to generate authenticated digital credentials tied to specific **land parcels and crop cycles**.
 - These DVCs are **integrated with DigiLocker** and are **dynamically updated** with changes in land ownership.
- Launch of **Special Central Assistance (SCA) Guidelines**, earmarking ₹6,000 crore to support states:
 - 4,000 crore for **Farmer Registries**, including mechanisms for **legal heir succession**
 - 2,000 crore for **Digital Crop Surveys**, distributed on a **first-come, first-served basis**
- Unveiling of an **AI-powered multilingual chatbot** trained on Agri Stack data, built using **Google Gemini**, to address farmer queries with precision.

Digital Agriculture Mission (DAM): The Broader Vision



The **Digital Agriculture Mission** is a government initiative to modernize Indian agriculture through **cutting-edge digital tools** and **data-based decision-making**. It acts as an **umbrella framework**, supporting digital initiatives at both the **central and state levels**.

Two Core Pillars of DAM:

1. **Agri Stack** – a farmer-centric **Digital Public Infrastructure (DPI)** to deliver targeted services
2. **Krishi Decision Support System (Krishi-DSS)** – an analytical system combining:
 - **Satellite data**
 - **Soil, weather, and water resource mapping**
 - **Remote sensing-based crop health monitoring**

These systems will together enable **informed decision-making**, better **resource allocation**, and enhanced **risk management**.

Benefits of the Digital Agriculture Mission:

- **Digital Authentication:** Enables farmers to access services without physical documentation or multiple visits.
- **Greater Transparency:** Ensures **accurate targeting** of schemes like crop insurance, subsidies, and loans.
- **Improved Crop Monitoring:** Real-time data on crop health and yield aids in **disaster response, insurance processing, and agricultural planning**.
- **Tailored Advisory Services:** Supports **customized guidance** for sowing, pest control, irrigation, and crop management using real-time inputs.
- **Efficient Value Chains:** Strengthens **supply chain management** by integrating farm-level data with market access and logistics.

Additional Insights: Global Context

India's Agri Stack vision aligns with global trends in **AgTech** (Agricultural Technology), where countries are increasingly investing in:

- **Digital land registries**
- **AI-based crop prediction**
- **Blockchain for traceability**
- **IoT-enabled precision farming**

India's push for **Digital Public Infrastructure (DPI)** in agriculture could make it a **global leader** in **data-driven farming governance**, especially benefiting **small and marginal farmers** who comprise over **85%** of the farming community.

Conclusion:

The Agri Stack, backed by the **Digital Agriculture Mission**, is set to **redefine the future of Indian agriculture** by placing **data at the heart of governance**. As technology increasingly bridges the gap between the government and farmers, initiatives like these hold the potential to **empower millions**, boost **rural incomes**, and ensure **climate-resilient, sustainable agriculture** for years to come.

3

Rudrastra Drone: India's Next-Gen Battlefield Game-Changer

Context: India's indigenous military capabilities took a leap forward with the successful **test of the Rudrastra drone** by the **Indian Army**. Developed by **Solar Aerospace and Defence Limited (SDAL)**, this advanced **hybrid VTOL drone** is now being hailed as a **force multiplier** in future warfare scenarios, particularly in challenging terrains and high-risk zones.



What is Rudrastra?

Rudrastra is a state-of-the-art **hybrid Vertical Take-Off and Landing (VTOL) drone**, designed for **precision strike missions, surveillance, and real-time battlefield intelligence**. Combining the agility of a helicopter with the speed and range of a fixed-wing aircraft, Rudrastra represents a new class of **multi-role unmanned combat aerial systems (UCAS)**.

Key Features of Rudrastra:

- **Hybrid VTOL Design:** Capable of **vertical take-off and landing** like a chopper, but cruises like a plane—allowing it to operate in **rugged or confined areas**.
- **Stealth and Versatility:** Low acoustic signature and compact form make it **hard to detect**, ideal for **covert missions**.
- **Armed with Smart Warheads:** Specifically designed for **anti-personnel roles**, enabling **high-precision targeting** of enemy troops, bunkers, and camps.
- **Combat Range:** Can **engage targets over 50 km** away, ensuring safe distance operations.
- **Extended Range and Endurance:** Achieved a **maximum range of 170 km** and an impressive **flight time of nearly 90 minutes** during trials at the **Pokhran test range**.
- **Real-Time Surveillance:** Equipped with **high-resolution live video relay systems** for **real-time intelligence** and situational awareness.
- **Airburst Munition Capability:** Successfully demonstrated a **low-altitude airburst**, effective for **wide-area damage**—ideal for disrupting enemy formations or destroying entrenched positions.
- **Autonomous Return Function:** Returns safely to base even after completing complex missions, minimizing operational risks.

Strategic Importance of Rudrastra:

Rudrastra is a **tactical stand-off weapon** that allows **deep-strike capability** without putting soldiers in harm's way. It is specially designed to penetrate **hostile environments**, strike high-value targets like:

- **Enemy artillery units**
- **Terrorist camps**
- **Forward operating bases**

The drone's ability to conduct missions **deep inside enemy territory** makes it a **game-changer** for **asymmetric and hybrid warfare**.

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**Additional Insights: Rudrastra in Global Context**

With increasing global interest in **combat drones**, India's Rudrastra places it among countries like the **US (MQ-9 Reaper)**, **Israel (Heron TP)**, and **Turkey (Bayraktar TB2)** in terms of **advanced unmanned aerial systems**. However, Rudrastra's **hybrid VTOL advantage** offers superior **deployment flexibility**, especially in **mountainous and border regions** where runway-based drones face limitations.

Conclusion:

The **Rudrastra drone** showcases India's growing capability in **indigenous defense technology** and **unmanned warfare solutions**. By merging **innovation, autonomy, and lethal precision**, Rudrastra is set to play a crucial role in **modern battlefield dynamics**, enhancing India's preparedness in both **conventional and unconventional conflict zones**.



4 Totapuri Mangoes: The Iconic South Indian Fruit Facing Fresh Borders Dispute

Context: In a recent move that has stirred interstate tensions, the **Andhra Pradesh government** has **banned the entry of Totapuri mangoes** from other states into **Chittoor district**, a major mango hub. This decision has sparked objections from **Karnataka**, where Totapuri cultivation is also widespread. The restriction is seen as an attempt to **protect local farmers and mango processing industries**, but it has also triggered concerns about **market competition and supply chain disruptions**.



About Totapuri Mangoes: A Juicy South Indian Favorite

The **Totapuri mango**, often recognized by its **distinct beak-like tip** (inspired by the "tota" or parrot), is a **signature mango variety of South India**. It is cultivated primarily in the **Chittoor district of Andhra Pradesh**, as well as in **border regions of Karnataka and Tamil Nadu**.

Other Names:

- **Ginimoothi**
- **Sandersha**
- **Banglora**

Known for its **elongated shape, fibrous pulp**, and **tangy-sweet taste**, Totapuri is not typically eaten ripe like Alphonso or Banganapalli. Instead, it is **valued for its juice and pulp**, making it the **preferred variety for processed mango products** such as:

- Mango drinks (e.g., Maaza, Frooti)
- Concentrates and squashes
- Mango puree exports

Climatic and Soil Requirements:

Totapuri mangoes flourish in **specific agro-climatic conditions**, making certain regions of South India especially suited for their cultivation:

- **Soil:** Prefers **well-drained loamy soils** with a **neutral to slightly acidic pH**
- **Climate:** Thrives in **tropical climates** with **moderate to high temperatures**, and a defined **dry spell before flowering**

This climate profile makes southern peninsular India ideal for Totapuri farming.

Nutritional Benefits of Totapuri Mangoes:

Totapuri mangoes are not just delicious—they're also **nutrient-rich**, offering a range of health benefits:

- **Vitamin C:** Boosts **immunity**, aids in **iron absorption**, and promotes **skin health**
- **Vitamin A:** Essential for **eye health** and supports the **immune system**



- **Minerals:** Contains **potassium, calcium, and magnesium**, important for **heart function, bone strength, and muscle activity**
- **Antioxidants:** Helps fight **free radicals**, supports **cell repair**, and slows down **skin aging**

Economic Significance and Market Reach:

Totapuri mangoes are a **backbone of India's mango processing industry**. A significant share of India's **mango pulp exports**—especially to the **Middle East, Europe, and the U.S.**—comes from Totapuri. The fruit is harvested in **bulk**, making it ideal for:

- **Agro-industrial processing**
- **Juice manufacturing**
- **International trade**

Chittoor district alone processes **hundreds of thousands of metric tonnes** of mangoes each year, with **Totapuri accounting for a large portion** of the supply.

Conclusion: The **Totapuri mango** is more than just a summer delight—it's a **cornerstone of South India's agricultural economy** and a vital ingredient in India's **global fruit export identity**. As Andhra Pradesh and Karnataka navigate the current trade tensions, it's crucial that **interstate cooperation prevails** to ensure farmers, industries, and consumers all continue to benefit from this **beloved and versatile mango variety**.

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5 Surinsar-Mansar Wildlife Sanctuary: A Natural Gem of Jammu & Kashmir

Context: In a significant conservation step, the **Jammu and Kashmir government** has recently **constituted a Divisional Level Committee** to oversee and monitor the **Eco-Sensitive Zone (ESZ)** around the **Surinsar-Mansar Wildlife Sanctuary**. This move aims to protect the fragile ecosystem surrounding the sanctuary and ensure **sustainable development** in its vicinity.

About Surinsar-Mansar Wildlife Sanctuary:

The **Surinsar-Mansar Wildlife Sanctuary** is one of the most picturesque and ecologically rich protected areas in the **Union Territory of Jammu and Kashmir**. The sanctuary derives its name from the **twin lakes—Surinsar and Mansar**—that lie about **16 km apart**, forming natural landmarks at either end of the sanctuary.

Spread across the districts of **Jammu, Udhampur, and Samba**, the **major portion** of the sanctuary falls within **Jammu district**. These twin lakes were also recognized as **Ramsar Wetlands of International Importance** in **2005**, highlighting their global ecological value.

Geography and Landscape:

- The sanctuary is characterized by a **hilly terrain**, consisting of **moderate to steep slopes**, interlaced with **seasonal streams and drainage channels**. It is a vital part of the **Tawi River catchment area**, playing an essential role in **groundwater recharge and watershed conservation** in the region.

Rich and Diverse Vegetation:

The sanctuary is a botanical treasure trove, featuring a variety of forest types such as:

- Northern dry mixed deciduous forests**
- Himalayan sub-tropical scrub forests**
- Subtropical pine forests**
- Lower Siwalik Chir Pine forests**
- Dodonea-dominated scrub forests**

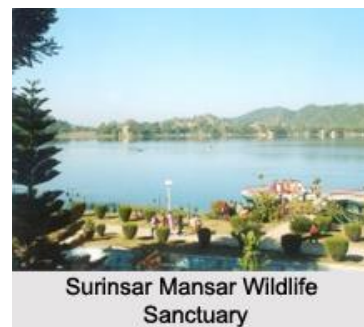
Major Plant Species:

- Pinus roxburghii* (Chir Pine)
- Acacia catechu* (Khair)
- Mallotus philippensis* (Kamala tree)
- Cassia fistula* (Indian laburnum)
- Zizyphus jujuba* (Ber)
- Dalbergia sissoo* (Indian Rosewood)
- Emblica officinalis* (Amla)

These forest types not only support biodiversity but also **act as carbon sinks**, helping in **climate regulation**.

Wildlife: A Refuge for Iconic Species

The sanctuary shelters a variety of **wild fauna**, many of which are **ecologically important** or **threatened**. Key animal species include:



Surinsar Mansar Wildlife Sanctuary



- **Blue bull (Nilgai)** – the largest Asian antelope
- **Indian jackal**
- **Indian barking deer**
- **Leopard** – apex predator of the region
- **Wild boar**
- **Indian fox**

This diversity makes the sanctuary an important corridor for wildlife movement and **habitat conservation** in the Shivalik range.

Ecological Importance and Ramsar Recognition:

Both **Surinsar and Mansar lakes**, located within and adjacent to the sanctuary, are **natural freshwater bodies** that support a variety of **aquatic life, migratory birds**, and **local livelihoods** through fishing, tourism, and religious activities. Their **designation as Ramsar sites** reflects their **international significance** in wetland conservation.

Additional Insights:

- The sanctuary is not only a **biodiversity hotspot**, but also a **cultural and religious site**, with Mansar Lake being associated with Hindu mythology.
- The area is popular for **eco-tourism, boating**, and **nature trails**, drawing visitors from across North India.
- Its protection is crucial for maintaining the **ecological balance** of the Siwalik region and promoting **sustainable tourism**.

Conclusion:

The **Surinsar-Mansar Wildlife Sanctuary** stands as a symbol of **nature's resilience and beauty** in Jammu & Kashmir. With rich biodiversity, scenic landscapes, and crucial ecological roles, it serves both as a **wildlife haven** and a **cultural landmark**. The government's move to monitor and protect its **eco-sensitive zones** is a step in the right direction to ensure that **development and conservation go hand in hand**.

6

Emperor Penguins: Antarctica's Majestic Birds on the Brink

Context: A recent scientific study has once again raised alarms for the **Emperor Penguin**, revealing that this **iconic Antarctic species** is increasingly at risk due to **climate change**. As rising global temperatures continue to **melt Antarctic sea ice**, these resilient birds are losing the very platform they depend on for breeding, nurturing their young, and survival.



About Emperor Penguins: The Giants of the Penguin World

The **Emperor Penguin** (*Aptenodytes forsteri*) is the **tallest and heaviest penguin species** on Earth, uniquely adapted to thrive in one of the **harshest climates** on the planet. They are the **only penguins** that breed during the **Antarctic winter**, braving sub-zero temperatures and ferocious blizzards.

- **Evolutionary History:** These penguins evolved nearly **one million years ago**, adapting over millennia to extreme cold.
- **Distribution:** Native to **Antarctica**, they are found across the continent and nearby **sub-Antarctic islands**.

Breeding & Habitat:

- **Breeding Season:** Emperor penguins breed between **April and November**, forming large colonies on **sea ice** between **66° to 78° south latitude**.
- **Ice Dependency:** They are the **most ice-adapted** of all penguin species, spending their entire lives **on and around the Antarctic ice shelf** and surrounding **Southern Ocean**.

Unique Physical and Behavioral Traits:

- **Appearance:** Adults are marked by a sleek **black-and-white body** with elegant patches of **yellow and orange** on the **head, neck, and upper chest**.
- **Size and Weight:** Males are typically heavier, with adults standing up to **1.2 meters (4 feet)** tall and weighing between **20 to 40 kg**, depending on the season.
- **Thermal Adaptation:**
 - Two thick layers of feathers
 - A generous **fat reserve**
 - **Shorter flippers and beaks** to reduce heat loss
- **Social Behavior:** To endure extreme cold, they **huddle in massive groups**, often shifting positions so each bird gets a turn in the warmer center.
- **Diving Ability:** They are **record-holders among birds**, diving to **depths of up to 550 meters (1,800 feet)** and remaining underwater for over **20 minutes** in search of fish, krill, and squid.

Lifespan and Reproduction:

- **Lifespan:** Typically **15 to 20 years**, though some may live longer in the wild.



- **Parental Roles:** After laying a single egg, **females transfer it to the male**, who incubates it on his feet under a flap of skin while the female returns to sea to feed—an extraordinary act of **parental endurance**.

Conservation Concerns:

- **IUCN Status:** Currently listed as **Near Threatened** on the **IUCN Red List**.
- **Primary Threat:** **Melting sea ice** due to **global warming** is the greatest danger to Emperor Penguin populations.
- **Habitat Loss:** With **sea ice forming later and melting earlier**, chicks may perish before they can fledge. Reduced ice also affects **krill populations**, the penguins' primary food source.

Did You Know?

- Emperor Penguins can tolerate temperatures as low as **-60°C (-76°F)** and wind speeds exceeding **200 km/h (124 mph)**.
- In 2023, satellite images revealed **mass chick deaths** across several colonies due to **early ice breakup**.

Conclusion:

The **Emperor Penguin**, with its regal stature and extreme survival skills, is a **symbol of Antarctica's wilderness**. Yet, even these remarkable birds are not immune to the **escalating impacts of climate change**. Protecting their fragile habitat is not only crucial for their future but also serves as a **powerful indicator** of the health of our planet's **polar ecosystems**.

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