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News Summary (EM)

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TGPSC News Summary

Telangana's Clean Cities Campaign: Citizen-Led Urban Sanitation under SBM-U 2.0

Source: [Press Information Bureau](#)

Relevance: TGPSC Group-I Paper-III: Governance, Social Issues and Public Health

Important Keywords

Prelims

- SBM-U 2.0, IEC, Urban Local Bodies, Source Segregation, Home Composting, Amrut Mitra, Self-Help Groups

Mains

- Behaviour change, citizen-led sanitation, community ownership, urban resilience, sanitation-worker welfare, women-led environmental action

Why in News?

Telangana has highlighted the outcomes of its **100-Day Information, Education and Communication Action Plan** implemented under **Swachh Bharat Mission-Urban 2.0**.

- The campaign used citizen mobilisation, household awareness, public-health measures and Urban Local Body action to improve cleanliness and promote lasting sanitation behaviour.

What is Telangana's Clean Cities Campaign?

The campaign was a time-bound urban sanitation programme conducted from **June 2 to September 10, 2025** across Telangana's Urban Local Bodies.

Its central objective was to convert awareness into everyday practice by encouraging citizens to:

- Segregate waste at source
- Adopt home composting
- Maintain public spaces
- Participate in local cleanliness activities
- Support healthier and safer urban neighbourhoods

The programme treated sanitation not merely as a municipal function, but as a shared responsibility of citizens, workers, women's groups and local institutions.

Major Interventions under the 100-Day Action Plan

1. Household Waste Management

- Door-to-door campaigns reached **27.09 lakh households**.

The outreach promoted:

- Separation of wet and dry waste
- Home composting
- Responsible disposal



- Reduction of neighbourhood littering

This was important because efficient waste processing depends on segregation at the household level.

2. Citizen Mobilisation

- Around **36,900 citizens** participated in Swachhata rallies covering approximately **250 kilometres**. The rallies created public visibility and encouraged community ownership of urban cleanliness.

3. Women-Led Environmental Action

Under **Amrut Mitra-Women for Trees**:

- **24,708 saplings** were planted
- **10,704 women SHG members** participated

The initiative linked women's collective action with urban greening and environmental responsibility.

4. Sanitation-Worker Welfare

- Health camps covered **25,386 frontline sanitation workers**.

The camps recognised that urban cleanliness must be accompanied by:

- Occupational health protection
- Medical support

- Worker dignity
- Safer working conditions

5. Drainage and Disease Prevention

- The campaign facilitated the cleaning of **18,351 kilometres of stormwater drains and nallahs**.

It also included:

- Seasonal disease awareness in about **15.02 lakh homes**
- Cleaning of **621 drinking-water overhead tanks**

These measures supported flood prevention, safer drinking water and control of waterborne and vector-borne diseases.

6. SHG Livelihood Support

- Loans worth **₹1,045.04 crore** were disbursed to **8,546 Self-Help Groups**.
- SHG products were displayed at fairs and street-food festivals, generating sales of approximately **₹77.12 lakh**.
- This connected sanitation outreach with women's financial empowerment and local livelihoods.

एक कदम स्वच्छता की ओर

Telangana's Clean Cities Campaign under Swachh Bharat Mission–Urban 2.0

Swachh Bharat Mission–Urban (SBM-U)

Launched: 2 October 2014

Nodal Ministry: Ministry of Housing and Urban Affairs (MoHUA)

Objectives:

- Make urban India Open Defecation Free (ODF).
- Achieve 100% scientific management of municipal solid waste.
- Initially covered 4,041 statutory towns.

SBM-U 2.0

Launched: 1 October 2021

Duration: Five years, up to October 2026.

Vision: Make all cities "Garbage Free" and institutionalise Swachh behaviour among citizens.

Coverage & Implementation

Implemented by MoHUA through:

- States and Union Territories
- Urban Local Bodies (ULBs)

Covers all statutory towns (Census 2011) and those added subsequently.

Broader Significance

- ✓ Promotes scientific waste management and sustainable urban sanitation.
- ✓ Improves quality of life and ease of living.
- ✓ Supports achievement of SDGs 2030.
- ✓ Contributes to long-term urban transformation.

Why in News?

Telangana highlighted the outcomes of its 100-Day IEC Action Plan under SBM-U 2.0. The campaign used citizen participation, awareness and ULB action to improve cleanliness and promote lasting sanitation behaviour.

Major Interventions under 100-Day Action Plan (2 June – 10 Sept 2025)

- Household Waste Management**
 - Reached 27.09 lakh households.
 - Promoted waste segregation, home composting and responsible disposal.
- Citizen Mobilisation**
 - 36,900 citizens participated in Swachhata rallies.
 - Covered around 250 km, creating public awareness.
- Women-Led Environmental Action**
 - 24,708 saplings planted under Amrut Mitra – Women for Trees.
 - 10,704 women SHG members participated.
- Sanitation-Worker Welfare**
 - Health camps covered 25,386 frontline sanitation workers, ensuring health support and worker dignity.
- Drainage & Disease Prevention**
 - 18,351 km of stormwater drains and nallahs cleaned.
 - Disease awareness in 15.02 lakh homes.
 - 621 drinking-water overhead tanks cleaned.
- SHG Livelihood Support**
 - Loans worth ₹1,045.04 crore to 8,546 SHGs.
 - SHG products displayed at fairs and food festivals; sales of ~₹77.12 lakh.

Follow-up 99-Day Action Plan (March – June 2025)

Focus Areas

- Garbage-free streets
- Source segregation
- Home composting
- Safe drinking water
- Heat mitigation
- Grievance redressal
- Citizen participation

Key Activities & Participation

- Outreach to more than 6.5 lakh households.
- 194 cleanliness drives.
- Health camps for sanitation workers.
- Swachhata rallies and pledge campaigns with 22,000+ citizens.

Key Takeaway

- ✓ The campaign turned awareness into everyday action.
- ✓ Citizen participation, worker welfare and infrastructure cleaning were the key pillars.
- ✓ It supports the goal of clean, healthy and sustainable cities.

Segregate Waste

Plant Trees

Conserve Water

Protect Health

Participate Actively

Follow-up 99-Day Action Plan

Building on the earlier campaign, Telangana launched a **99-Day Action Plan from March to June 2026**.

Its focus included:

- Garbage-free streets
- Source segregation
- Home composting
- Safe drinking water
- Heat mitigation
- Grievance redressal
- Citizen participation

Major activities included:

- Outreach to more than **6.5 lakh households**
- **194 cleanliness drives**
- Health camps for sanitation workers
- Swachhata rallies and pledge campaigns

involving more than **22,000 citizens**

The follow-up plan indicated an effort to move from a one-time campaign towards continuous urban service improvement.

Significance

Behavioural change:

- The programme recognised that sanitation infrastructure works only when citizens consistently follow responsible waste practices.

Integrated public health:

- Drain cleaning, water-tank maintenance and disease awareness linked cleanliness with health protection.

Women's leadership:

- Women SHGs participated in



environmental action and livelihood activities.

Worker-centred sanitation:

- Health camps brought attention to the welfare of frontline sanitation personnel.

Urban resilience:

- Cleaning drainage networks supported flood mitigation and reduced disease risks.

Local governance:

- The campaign strengthened cooperation between Urban Local Bodies and communities.

Way Forward

- Make IEC campaigns continuous and ward-based.
- Link awareness drives with reliable door-to-door segregated waste collection.
- Expand composting and material-recovery facilities.
- Ensure regular health checks, insurance and

protective equipment for sanitation workers.

- Use SHGs as local sanitation educators and monitoring partners.
- Integrate drain maintenance with urban flood-management plans.
- Publish ULB-level cleanliness and service-delivery dashboards.
- Strengthen citizen grievance redressal and neighbourhood-level accountability.

Conclusion

Telangana's campaign demonstrates that sustainable urban sanitation requires more than municipal cleaning operations. It depends on household practices, citizen participation, worker welfare, women's involvement and effective Urban Local Bodies. The initiative can become a durable model only if campaign-based mobilisation is converted into routine public behaviour and accountable local governance.

Musi River Rejuvenation Project: Telangana Cabinet Approves ₹7,345-Crore Phase-I Works

Source: [Deccan Chronicle](#)

Relevance: TGPSC Group-I Paper-II: Telangana Geography and Regional Development

Important Keywords

Prelims

- Musi River, Himayat Sagar, Osman Sagar, Bapu Ghat, Gandhi Sarovar, Transferable Development Rights, Detailed Project Report

Mains

- Urban river rejuvenation, flood mitigation, riverfront development, rehabilitation and resettlement, sustainable urban waterway, public participation, integrated urban planning

Why in News?

The Telangana Cabinet has granted administrative approval for the first phase of the **Musi River Rejuvenation Project** at an estimated cost of **₹7,345.12 crore**. Phase-I covers a **21-km stretch** of the river and marks the formal beginning of



implementation of the riverfront development initiative. The government plans to complete technical sanction and tender-related procedures before awarding contracts for the works.

What is the Musi River Rejuvenation Project?

The project is an urban river-restoration and riverfront-development initiative intended to transform the Musi into a cleaner, safer and more sustainable urban waterway.

The Phase-I Detailed Project Report focuses on:

- Ensuring continuous flow of fresh water
- Developing modern riverfront infrastructure
- Strengthening flood-mitigation measures
- Improving the ecological and urban condition of the river corridor
- Rehabilitating families and structures affected by project implementation

The project combines river restoration with urban infrastructure, flood management and planned redevelopment.

MUSI RIVER

The Musi River is a major tributary of the Krishna River and flows through Hyderabad in Telangana.

About Musi River

- Also known as **Muchukunda** or **Musunuru River**.
- It is part of the **Krishna River system** in the Deccan Plateau.
- Hyderabad was founded along its banks by **Muhammad Quli Qutb Shah** in the late 16th century.

Course

- **Origin:** Anantagiri Hills near Vikarabad, Telangana.
- Formed by the confluence of:
 - **Esi rivulet:** 8 km
 - **Musa rivulet:** 13 km
- Flows eastward through Hyderabad.
- Joins the **Krishna River near Wazirabad** in Nalgonda district.
- **Total length:** About 240 km.

Important Water Structures

- **Osman Sagar**
- **Himayat Sagar**
- **Hussain Sagar** was constructed on a tributary of the Musi.
- The river has **24 irrigation diversion weirs**, locally called **kathwas**.

Historical Importance

- Several historic bridges, mosques and buildings are located along its banks.
- These reflect **Qutb Shahi and Nizam-era architecture**.



Key Features of Phase-I

Project cost:

- The Cabinet approved an expenditure of **₹7,345.12 crore** for Phase-I.

Total length:

- The first phase covers approximately **21 km**.

Fresh-water flow:

- The project seeks to maintain continuous fresh-water flow in the Musi.

Riverfront infrastructure:

- Modern public and riverfront infrastructure is proposed along the selected stretches.

Flood mitigation:

- The plan includes measures to reduce flood risk and improve management of

the river corridor.

Implementation schedule:

- The government intends to fast-track technical sanctions, tender invitations and contract awards.

Project Area and Alignment

- Phase-I begins from the streams originating from **Himayatsagar** and **Osmansagar**, which converge near **Bapu Ghat at Langar Houz**.

It comprises two stretches:

Stretch-A

- Extends from **Himayatsagar**
- Covers approximately **9.2 km**

Stretch-B

- Extends from **Osmansagar or Gandipet**
- Covers approximately **11.8 km**
- Both stretches converge near the proposed **Gandhi Sarovar** at Bapu Ghat.



- This alignment connects the two major reservoir-fed streams with the proposed central riverfront-development zone.

Institutional and Administrative Measures

Creation of new posts:

- The Cabinet approved the creation of **147 posts** for project implementation and maintenance.

Deputation of personnel:

- Officials may be deputed from other government departments to support execution and management.

Detailed Project Report:

- The draft DPR was submitted by Singapore-based consultancy **Meinhardt**, working with an international consortium that includes **Cushman & Wakefield and RIOS**.

Tender process:

- The government plans to issue technical sanction and the Notice Inviting Tenders before finalising contracts.
- These measures seek to create a dedicated administrative structure for the project.

Rehabilitation and Land-Acquisition Measures

- Large urban river projects often involve displacement, land acquisition and relocation. The Cabinet therefore approved several rehabilitation measures.

Housing for riverbed residents:

- Families residing in the Musi riverbed are to be allotted **double-bedroom houses**.

Compensation for landowners:

Affected landowners may be provided either:

- **Transferable Development Rights**, or
- Suitable monetary compensation

Relocation of structures:

- Structures situated on defence land required for the Gandhi Sarovar project are to be shifted, with the State government taking responsibility for relocation.
- These measures seek to balance urban redevelopment with rehabilitation and compensation.

Proposed Gandhi Sarovar

- The proposed **Gandhi Sarovar** near Bapu Ghat is expected to form a central component of Phase-I.
- The two project stretches from Himayatsagar and Osmansagar will converge in this area.

Its development is linked with:

- Riverfront infrastructure
- Water-flow management
- Landscape and public-space development
- Relocation of affected structures
- Integration of the surrounding urban area

The project seeks to make this zone a major focal point of the rejuvenated river corridor.

Musi Experience Centre

The Chief Minister directed officials to establish a **Musi Experience Centre** on **Necklace Road-P.V. Narasimha Rao Marg**, near Hussainsagar.

The centre is intended to:

- Explain the project's overall vision
- Display proposed development components
- Inform the public about implementation plans
- Collect feedback and suggestions
- Build public awareness and participation

Such a centre can improve transparency and provide a platform for citizen engagement.

Significance of the Project

Urban river restoration:

- The project seeks to revive a river corridor affected by urbanisation and environmental degradation.

Flood resilience:

- Flood-mitigation works can reduce vulnerability of low-lying settlements and infrastructure.

Improved urban infrastructure:

- Planned riverfront development may support better roads, public spaces and civic amenities.

Environmental improvement:

- Continuous fresh-water flow and river management may improve the ecological condition of the corridor.

Public-space creation:

- Riverfront development can create accessible recreational and cultural spaces for residents.

Integrated planning:

- The project brings together water management, land use, housing,

transport and urban design.

Economic potential:

- Improved infrastructure may attract investment, tourism and commercial activity along the corridor.

Participatory governance:

- The experience centre and feedback mechanism may help involve citizens in project planning.

Way Forward

- Prevent untreated sewage and solid waste from entering the river.
- Conduct detailed environmental and social-impact assessments.
- Protect the natural floodplain and river-carrying capacity.
- Ensure rehabilitation before displacement.
- Provide fair and transparent compensation to affected landowners.
- Establish clear coordination among all implementing departments.

Conclusion

The approval of Phase-I of the Musi River Rejuvenation Project marks an important step in Telangana's urban-development agenda. Its success, however, will depend on whether the initiative goes beyond riverfront beautification to achieve genuine **pollution control, ecological restoration, flood resilience and humane rehabilitation**. A transparent, participatory and environmentally sensitive approach can help transform the Musi into a sustainable urban waterway while protecting the rights of affected communities.

Doddi Komarayya: The First Martyr of the Telangana Peasant Armed Struggle

Source: [Deccan Chronicle](#)

Relevance: **Paper-VI - Telangana Movement and State Formation**

Important Keywords

Prelims Keywords

- Doddi Komarayya, Telangana Peasant Armed Struggle, Kadavendi, Nizam rule, desh mukhs, vetti, Andhra Mahasabha, Communist Party of India

Mains Keywords

- Peasant resistance, anti-feudal struggle, bonded labour, land rights, social justice, self-respect, rural oppression

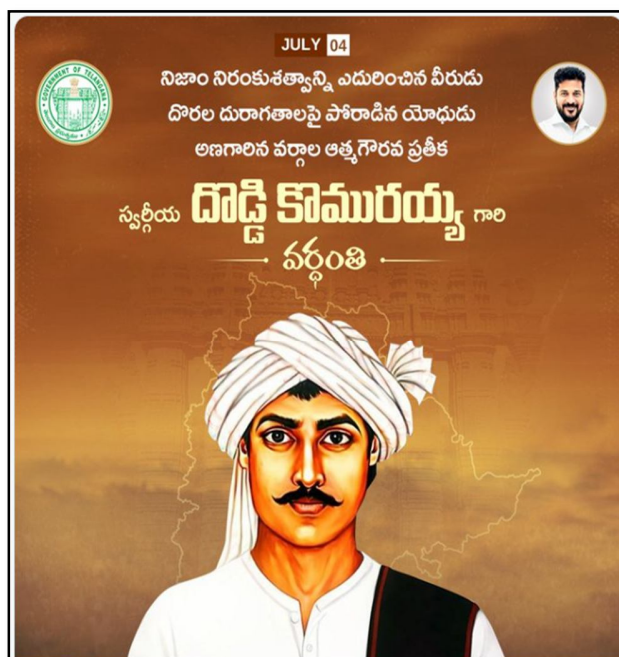
Why in News?

Telangana Chief Minister **A. Revanth Reddy** paid tributes to **Doddi Komarayya** on his **80th death anniversary**, remembering him as a warrior who fought against oppression, injustice and exploitation. Doddi Komarayya is recognised as the **first martyr of the Telangana Peasant Armed Struggle**. His death at the young age of **19** became a turning point in the struggle against the autocratic rule of the Nizam and the exploitation of feudal landlords.

Who was Doddi Komarayya?

- Doddi Komarayya, also spelled **Komaraiah, Komraiah or Komurayya**,

was a young peasant from **Kadavendi village**, now associated with the Jangaon region of Telangana.



- He was born into a poor shepherd family belonging to the **Kuruma/Golla/Yadava community**. His birth is widely associated with **3 April 1927**, though some accounts place it in the early 1920s.
- Komarayya's political awakening was shaped by the atmosphere of peasant resistance in Telangana. His elder brother **Doddi Mallayya**, a village-level leader associated with the **Communist Party** and the **Andhra Mahasabha**, influenced him deeply and drew him towards the growing movement against feudal exploitation.



Feudal Oppression in Kadavendi

- Kadavendi was part of a deeply unequal rural order under the Nizam's rule. The region was dominated by powerful **deshmukh** families who controlled land, labour and village life.
- The **Visunuru family of deshmukhs** exercised strong control over the area. **Ramachandra Reddy of Visunuru** held authority over nearly **60 villages and 40,000 acres of land**, reflecting the scale of feudal power in the region.
- In Kadavendi, **Janamma**, also known as **Janakamma or Dorasani**, was remembered for her harsh rule. Peasants faced forced labour, arbitrary fines, heavy rents and physical punishments.
- The system denied peasants basic dignity. They had little control over land, water or their own labour. This oppressive environment created the conditions for organised rural resistance.

Role of Andhra Mahasabha and Peasant Mobilisation

- The Telangana Peasant Armed Struggle grew out of the anger of peasants against feudal exploitation and the Nizam's autocratic rule.
- Organisations such as the **Andhra Mahasabha** and the **Communist Party of India** played an important role in mobilising peasants across Telangana.

The movement demanded:

- Abolition of **vetti**, or forced labour
- End to arbitrary landlord power

- Protection of peasants from exploitation
- Land rights and dignity for rural communities
- Distribution of land to the landless
- Social equality and self-respect

Doddi Komarayya became part of this wider wave of political awakening. His life symbolised the courage of ordinary peasants who challenged an entrenched feudal order.

Martyrdom on 4 July 1946

- On **4 July 1946**, Doddi Komarayya led a protest procession through Kadavendi village against the tyranny of Janamma.
- The procession moved towards her fortified mansion, known as a **gadi**, while peasants raised slogans such as "**Jai Andhra Mahasabha.**"
- During the protest, a hired gunman named **Miskin Ali** opened fire. Komarayya was shot in the stomach.
- Even as he fell, he continued to raise the slogan of the peasant movement. His death transformed a local protest into a powerful symbol of resistance.
- His martyrdom ignited the armed phase of the Telangana Peasant Movement and gave momentum to a struggle that later spread across a wide region.

Significance of His Sacrifice

First martyr of the armed struggle:

- Doddi Komarayya is remembered as the first martyr of the armed phase of the Telangana Peasant Movement.

Spark for wider rebellion:

- His death transformed localised protests

into a wider armed resistance against feudal oppression.

Symbol of peasant courage:

- Coming from a poor shepherd family, Komarayya represented the courage of marginalised rural communities.

Fight against bonded labour:

- The movement associated with him challenged **vetti**, a system that forced peasants into unpaid and exploitative labour.

Land and dignity:

- The struggle demanded land for the landless and dignity for the oppressed.

Legacy of social justice:

- Komarayya's martyrdom continues to represent the values of justice, equality and self-respect.

Relevance for Social Justice

- Doddi Komarayya's legacy is important because his life connects history with continuing questions of social justice.
- His struggle reminds society of the need to resist:
 - Feudal domination

- Landlessness
- Bonded labour
- Caste and community-based marginalisation
- Rural exploitation
- Denial of dignity and self-respect
- The Telangana Peasant Armed Struggle was not only a political revolt. It was also a social movement for dignity, land and freedom from exploitation.
- Komarayya's sacrifice shows how ordinary individuals from oppressed communities can become symbols of historic transformation.

Conclusion

Doddi Komarayya occupies a special place in Telangana's history as the **first martyr of the Telangana Peasant Armed Struggle**.

Born into a poor shepherd family in Kadavendi, he rose as a symbol of resistance against Nizam-era autocracy and feudal exploitation. His martyrdom on **4 July 1946** gave momentum to a wider struggle for land, dignity and social justice.

Even after eight decades, his life continues to inspire generations to uphold **justice, equality, courage and self-respect**.

Vikram-1: India's First Private Orbital Rocket to Carry Multiple Test Payloads

Source: [Deccan Chronicle](#)

Relevance: TGPSC: Science and Technology, Hyderabad-based Innovation Ecosystem

Important Keywords

Prelims Keywords

- Vikram-1, Skyroot Aerospace, SCOPE, SOLARAS, CubeSat, robotic arm, space debris removal

Mains Keywords

- Private space sector, technology demonstration, commercial space missions, in-orbit servicing, orbital sustainability

Why in News?

Hyderabad-based **Skyroot Aerospace** announced that **Vikram-1**, India's first private orbital vehicle, will carry multiple technology demonstration payloads during its flight. The payloads include **SCOPE**, Skyroot's in-house payload; **SOLARAS**, a CubeSat by Grahaa Space; **Embrace**, a robotic arm by Cosmoserve Space; in-orbit demonstration payloads by Germany-based **Dcubed GmbH**; and symbolic artistic payloads honouring India's scientific legacy.

What is Vikram-1?

- Vikram-1** is Skyroot Aerospace's private orbital launch vehicle. It is named after **Dr Vikram Sarabhai**, the father of India's space programme.
- The rocket represents an important step in India's private space journey, where start-ups are moving beyond component manufacturing into launch vehicles, payload integration and technology demonstration missions.

Payloads on Vikram-1

Vikram-1 will carry a combination of scientific, technological, commercial and symbolic payloads.

SCOPE by Skyroot Aerospace

- SCOPE** is Skyroot's own in-house payload. It is designed to validate



Vikram-1, India's first privately developed orbital-class rocket, is expected to be launched some time between July 12 and August 4, 2026. | Photo Credit: Photo for representation



onboard spacecraft systems and mission technologies during the Vikram-1 flight.

SOLARAS by Grahaa Space

- **SOLARAS** is a **1U CubeSat** developed by Karnataka-based **Grahaa Space**. It will demonstrate indigenous satellite technology in orbit.

Embrace Robotic Arm by Cosmoserve Space

- **Embrace** is a robotic arm developed by **Cosmoserve Space**. It will remain attached to Vikram-1's payload deck during its demonstration.
- The technology is linked with future applications such as **space debris removal, in-orbit servicing and orbital sustainability**.

uD3PP and mD3RN by Dcubed GmbH

- These are in-orbit demonstration payloads developed by Germany-based **Dcubed GmbH**. They are meant to validate space technologies under orbital conditions.

Scientific Tribute and Symbolic Payloads

Vikram-1 will also carry payloads that combine creativity, heritage and national pride.

Cosmic Bloom

- **Cosmic Bloom**, developed by **Cosmos Diamonds**, carries diamond jewellery mounted on an aluminium base plate.

Microart Tribute

Skyroot will carry an **18K gold rocket model** containing micro-sculptures of three renowned Indian scientists:

- **Sir C.V. Raman**
- **Dr Vikram Sarabhai**
- **Dr A.P.J. Abdul Kalam**

Each micro-sculpture measures around **700 × 980 microns**, making it smaller than a grain of rice and small enough to fit in the eye of a needle.

The artwork is credited to Telangana-based artist **Ajay Kumar Mattewada**.

Conclusion

Vikram-1 brings together private launch technology, start-up innovation, international payload collaboration and India's scientific heritage.

- By carrying payloads such as **SCOPE, SOLARAS, Embrace, Dcubed demonstrations, Cosmic Bloom and Microart**, the mission reflects the growing maturity of India's private space ecosystem.
- If successful, Vikram-1 will strengthen India's position in the emerging commercial space economy and mark a major milestone for private orbital launch capability.

UDISE+ Report: Telangana Records Higher Enrolment Despite Fewer Schools

Source: [Deccan Chronicle](#)

Relevance: TGPSC Group-I/II: Telangana Education Sector, Welfare and Governance

Important Keywords

Prelims Keywords

- UDISE+, Gross Enrolment Ratio, Pupil-Teacher Ratio, dropout rate, digital

libraries, Aadhaar seeding

Mains Keywords

- School education, gender parity, education infrastructure, learning access, teacher availability, digital education governance

Why in News?

The **Unified District Information System for Education Plus report for 2025-26**, released by the Union Education Ministry, shows that **Telangana's school enrolment increased by 2.9%** even as the number of schools declined. The report also highlights that **girls have outperformed boys in enrolment ratios at every level of education**, while teacher availability becomes relatively tighter at the higher secondary stage.



What is UDISE+?

UDISE+ is a national education data platform maintained by the Union Ministry of Education.

It collects school-level data on:

- Enrolment
- Teachers
- Infrastructure
- Dropout rates
- Gender indicators

- Digital facilities
- Basic amenities

It helps governments track the condition of school education and design evidence-based policy interventions.

Key Findings for Telangana

- Telangana had **43,154 schools in 2024-25**, which declined to **41,762 schools in 2025-26**.
- At the same time, student enrolment increased from **74,57,851 to 76,76,413**, marking a rise of **2.9%**.
- Teacher numbers also increased from **3,57,911 to 3,70,756**.
- This means that the State is educating more students with fewer schools, while also improving teacher availability in absolute numbers.

Enrolment and School Consolidation

- The average enrolment per school increased from **173 students to 184 students**.
- This indicates that school consolidation may have reduced the number of schools, but student concentration per school has increased.
- Telangana had earlier recorded **2,245 zero-enrolment schools**, one of the highest numbers among States. The latest report places this number at **zero**, suggesting progress in addressing non-functional or empty schools.
- Single-teacher schools also reduced from **5,001 to 4,793**.
- These trends indicate a shift towards



better utilisation of school infrastructure, though continued monitoring is needed to ensure that school consolidation does not reduce access for children in remote areas.

Girls' Enrolment Advantage

- One of the most important findings is that girls have performed better than boys in **Gross Enrolment Ratio** across all levels.

The Gross Enrolment Ratio for girls stood at:

- **118.4** at primary level
- **112.4** at upper primary level
- **107.9** at secondary level
- **86.3** at higher secondary level

For boys, the corresponding figures were:

- **115.9** at primary level
- **108** at upper primary level
- **102.4** at secondary level
- **77.8** at higher secondary level
- A Gross Enrolment Ratio above 100 generally indicates that students outside the official age group are also enrolled at that level.
- Telangana's overall enrolment ratios were also far above the national average at primary, elementary, secondary and higher secondary levels.

Dropout and Teacher Availability

- Telangana recorded a **secondary-level dropout rate of 5.8%**, lower than the national average of **9.5%**.

The gender-wise dropout pattern also shows better performance:

- Boys' dropout rate: **7.2%**

- Girls' dropout rate: **4.3%**

Both are lower than national figures.

The State's **pupil-teacher ratio** stood at:

- **18** at primary level
- **11** at upper primary level
- **9** at secondary level
- **26** at higher secondary level

The higher secondary level has the highest pupil-teacher ratio among these categories, showing that teacher availability is relatively more stretched at this stage.

Infrastructure and Digital Facilities

- Telangana performs well on basic school infrastructure. Electricity reaches **99.6% of schools**, while toilets for both boys and girls are available in more than **95% of schools**.
- A striking feature is the reported presence of **digital libraries in 92.4% of Telangana schools**, compared to the national figure of **7.1%**. This wide gap also underlines the need for clarity and uniformity in how digital libraries are defined across States.
- However, sustainability-linked facilities need improvement.
- Only **55.1% of schools** have kitchen gardens, and solar panels are available in just **7.1% of schools**.
- Aadhaar seeding among enrolled students stands at **94.7%**, indicating a high level of digital identity linkage in school records.

Policy Meaning

- The UDISE+ findings show that



Telangana has made progress in enrolment, girls' participation, basic infrastructure and digital facilities.

- However, the State must ensure that school consolidation does not weaken neighbourhood access, especially for rural and disadvantaged children.
- The relatively high pupil-teacher ratio at higher secondary level also requires attention because this stage is crucial for transition to higher education, skill development and employability.
- The next phase of education reform should focus on quality of learning,

subject-specific teachers, digital access with actual usage, and sustainability-linked school infrastructure.

Conclusion

The UDISE+ 2025-26 findings present a broadly positive picture of Telangana's school education system. Higher enrolment despite fewer schools, girls' stronger participation, lower secondary dropout and improved infrastructure reflect progress in access and governance. The real task now is to convert these gains into better learning outcomes, stronger higher secondary education, equitable school access and future-ready digital education.

Telangana Invites Canadian Investors for Global Investors Summit

Source: [Deccan Chronicle](#)

Relevance: TGPSC Telangana Economy, Governance, Urban Development, Infrastructure, International Relations, Current Affairs

diplomacy, FDI, Urban governance, Infrastructure development, Green economy, Solarisation, Knowledge economy, Innovation ecosystem, Job creation, Global investment partnerships

Important Key Words

Prelims

- Canada's High Commissioner Chris Cooter, A. Revanth Reddy, Telangana Global Investors Summit, Musi River Development Project, Hyderabad Metro Rail Expansion, Future City, Global Capability Centres, Firan Technology Group, CIBC, CPP Investments, CtrlS Datacenters

Mains

- Sub-national diplomacy, Economic

Why in News?

Canada's High Commissioner to India, **Chris Cooter**, met Telangana Chief Minister **A. Revanth Reddy** to strengthen trade and investment ties. Telangana invited Canadian companies to participate in the **Telangana Global Investors Summit 2026**, while Canada invited a Telangana delegation to visit Canada.

Key Highlights of the Meeting

- The meeting between **Chief Minister A. Revanth Reddy** and **High Commissioner Chris Cooter** focused on

expanding cooperation in:

- **Trade, Investment, Innovation, Infrastructure, Urban development, green economy, Education, Defence and aerospace**



- The Chief Minister welcomed the growing Canadian engagement in Telangana and invited Canadian companies and institutions to explore opportunities through the upcoming **Telangana Global Investors Summit**.
- The High Commissioner appreciated Telangana's **forward-looking vision**, focus on **job creation**, and availability of a large **talent pool**.

Major Areas of Canada-Telangana Collaboration

1. Musi River Development Project

- The Chief Minister highlighted the State government's commitment to rejuvenating the **Musi River**.
- The project is being viewed not only as an environmental and urban renewal initiative but also as part of a larger strategy to create an **alternate economy**

along the riverfront.

It may support:

- Urban regeneration
- Riverfront economy
- Tourism and recreation
- Environmental improvement
- Better quality of life in Hyderabad

2. Hyderabad Metro Rail Expansion

The discussions also covered the **Hyderabad Metro Rail expansion**.

Metro expansion is significant for:

- Reducing urban congestion
- Improving public transport
- Supporting sustainable mobility
- Connecting emerging economic zones
- Strengthening Hyderabad's urban infrastructure

3. Future City Initiative

The proposed **Future City** initiative was also discussed as a major area for possible collaboration. The project reflects Telangana's ambition to create a modern urban growth centre based on:

- Innovation
- Sustainability
- Global investment
- Advanced infrastructure
- Knowledge-based industries

4. Solarisation and Green Economy

The Chief Minister sought Canada's support for Telangana's **solarisation efforts** and plans for promoting a **green economy**.

This is important because renewable energy and green infrastructure can support:

- Climate-friendly growth
- Energy security
- Sustainable urbanisation



- Green jobs
- Low-carbon development

Canadian Investment Footprint in Telangana

The High Commissioner highlighted several recent developments that show the growing **Telangana-Canada economic footprint**.

Firan Technology Group

- **Firan Technology Group** has decided to establish a **manufacturing facility**, indicating growing industrial cooperation between Canada and Telangana.

CIBC Global Capability Centre

- **CIBC** has opened a **Global Capability Centre** in **Hyderabad**, strengthening the city's role as a hub for global business services.

CPP Investments and CtrlS Datacenters

- **CPP Investments** entered into a strategic partnership with **Hyderabad-based CtrlS Datacenters**.
- **CPP Investments** has committed up to **1 billion Canadian dollars**.
- This highlights Telangana's growing importance in **data infrastructure, digital economy and global investment flows**.

Telangana's Sectoral Strengths

Chief Minister Revanth Reddy highlighted Telangana's success story across key sectors.

Information Technology

- **Hyderabad** continues to be one of India's leading **IT hubs**, attracting

global technology companies and digital enterprises.

Life Sciences

- Telangana has a strong presence in **pharmaceuticals, biotechnology, healthcare innovation and life sciences research**.

Defence and Aerospace

- The State is emerging as an important centre for **defence and aerospace manufacturing**, supported by skilled manpower and industrial infrastructure.

Global Capability Centres

- **Hyderabad** has become a preferred destination for **Global Capability Centres of Fortune-500 companies**.

This dominance is supported by:

- Skilled talent availability
- Strong urban infrastructure
- Technology ecosystem
- Business-friendly environment
- Global connectivity

Knowledge Hub and University Collaboration

- The Chief Minister outlined plans to transform Telangana into a **global knowledge hub**.
- He stated that several leading global universities are showing interest in setting up campuses in **Hyderabad**.
- He also proposed the idea of a group of **Canadian universities** establishing a **multi-university campus** in **Hyderabad**.



This can help Telangana in:

- Internationalising higher education
- Attracting foreign academic institutions
- Promoting research and innovation
- Creating skilled human capital
- Supporting start-ups and knowledge industries

Telangana Global Investors Summit

- The Chief Minister invited Canadian companies, investors and institutions to participate in the **second edition of Telangana's Global Investors Summit**, scheduled for **December 2026**.
- The summit is expected to provide a platform for exploring business opportunities in:
 - Energy, Urbanisation, Defence, Aerospace, Infrastructure, Green economy, Data centres, Education, Innovation-led industries
- A Canadian trade delegation is also expected to visit Telangana in the coming months for detailed discussions in areas such as **energy, urbanisation, defence and aerospace**.

Significance

- **Sub-national Diplomacy:** Strengthens Telangana's role in attracting foreign investment and international partnerships.
- **Infrastructure Development:** Global collaboration can accelerate projects like the Musi River Development Project, Metro Rail expansion and Future City.
- **Green Economy:** Supports Telangana's renewable energy, solarisation and sustainable development goals.
- **Knowledge Hub:** A proposed Canadian multi-university campus can boost Hyderabad's education and innovation ecosystem.
- **Employment Generation:** Investments in GCCs, manufacturing, data centres, defence, aerospace and education can create skilled jobs.

Conclusion

The Canada-Telangana dialogue strengthens economic cooperation by promoting investment, infrastructure, clean energy, education and innovation. Greater Canadian participation can boost foreign investment, job creation and sustainable development, reinforcing Telangana's position as a leading global investment destination.

Telangana School Education Performance Improves in PGI 2025-26

Source: [The Hindu](#)

Relevance: TGPSC Group-I Mains Paper-III: Indian Society, Constitution and Governance

Important Key Words

Prelims

- Performance Grading Index 2.0, PGI-

S, PGI-D, Ministry of Education, UDISE+, PARAKH Rashtriya Sarvekshan 2024, PM POSHAN Portal, PRABAND Portal, Vidyanjali Portal, National Education Policy 2020, Sustainable Development Goals, Prachesta-3

Mains



- School education governance, learning outcomes, equity in education, infrastructure improvement, evidence-based policymaking, district-level education monitoring, NEP 2020 implementation, human capital development

- Interventions needed for improving learning and governance
- It is aligned with the goals of **National Education Policy 2020** and **Sustainable Development Goals**.

Telangana's Performance in PGI 2025-26

- Telangana has shown steady improvement in school education performance.

Academic Year	Telangana PGI Score
2022-23	489.3 / 1000
2023-24	511.9 / 1000
2024-25	552.2 / 1000
2025-26	599.7 / 1000

In **2025-26**, Telangana was placed in the **Prachesta-3 band** with a score of **599.7 out of 1000**.

Telangana shares the same band with:

- Karnataka
- Andhra Pradesh
- Tamil Nadu

The top performers include:

- Chandigarh
- Delhi
- Kerala
- Punjab
- Maharashtra
- Odisha

This improvement indicates better performance in school education indicators, though the State still has scope to improve further in learning outcomes, governance and infrastructure quality.

PGI-S Framework for States and UTs

- The **PGI for States/UTs** evaluates school education performance across **70 indicators** with a total weightage of **1000**

Why in News?

- The **Ministry of Education** released the **Performance Grading Index 2.0 for States/UTs and Performance Grading Index for Districts for 2025-26**. Telangana's school education performance improved, with the State placed in the **Prachesta-3 band**. Telangana scored **599.7 out of 1000** in 2025-26, improving from **552.2** in the previous year. The report evaluates school education on indicators such as **learning outcomes, access, infrastructure, equity, governance and teacher training**.

What is Performance Grading Index?

- The **Performance Grading Index** is an evidence-based assessment framework developed by the **Department of School Education and Literacy, Ministry of Education**.
- It evaluates the performance of **States, Union Territories and districts** in school education.
- The index was introduced in **2017** to help governments identify:
 - Key strengths in school education
 - Gaps in implementation
 - Areas requiring policy attention



points.

These indicators are grouped under two broad categories:

1. Outcomes

- This category measures the actual results achieved in school education.

2. Governance and Management

- This category measures the administrative and governance capacity of the education system.

The framework covers six domains:

1. Learning Outcomes and Quality
2. Access
3. Infrastructure and Facilities
4. Equity
5. Governance Processes
6. Teachers' Education and Training

Weightage in PGI-S

- **Equity:** 260 marks
- **Learning Outcomes and Quality:** 240 marks
- **Infrastructure and Facilities:** 190 marks
- Remaining weightage is distributed across access, governance processes and teacher education/training.

Data Sources

The PGI-S framework uses data from:

- UDISE+
- PARAKH Rashtriya Sarvekshan 2024
- PM POSHAN Portal
- PRABAND Portal
- Vidyanjali Portal

This makes PGI an evidence-based tool for monitoring school education reforms.

PGI-D Framework for Districts

- The Ministry of Education has also extended the PGI exercise to the district level through the **Performance Grading**

Index for Districts.

- The purpose of **PGI-D** is to assess districts on common parameters and shift attention towards outcome measurement of educational policies.

The PGI-D framework has:

- Total weightage: 600 points
- Indicators: 70
- Categories: 6
- Domains: 11

Six Categories of PGI-D

- Outcomes
- Effective Classroom Transaction
- Infrastructure Facilities and Student Entitlements
- School Safety and Child Protection
- Digital Learning
- Governance Process

Eleven Domains of PGI-D

- Learning Outcomes and Quality
- Access Outcomes
- Teacher Availability and Professional Development Outcomes
- Learning Management
- Learning Enrichment Activities
- Infrastructure, Facilities and Student Entitlements
- School Safety and Child Protection
- Digital Learning
- Funds Convergence and Utilisation
- Attendance Monitoring Systems
- School Leadership Development

Data Sources for PGI-D

PGI-D uses data from:

- UDISE+

- PARAKH Rashtriya Sarvekshan 2024
- PRABANDH Portal

This district-level grading helps governments design localised interventions.

Significance of PGI

Evidence-Based Governance

- PGI helps States and districts identify specific gaps using measurable indicators instead of general assumptions.

NEP 2020 Implementation

- It supports the goals of **National Education Policy 2020**, especially quality learning, equity, access and governance reforms.

Focus on Learning Outcomes

- By measuring learning outcomes and quality, PGI shifts attention from mere enrolment to actual educational achievement.

District-Level Accountability

- PGI-D enables district-wise comparison and helps identify weak-performing districts for targeted action.

Equity-Oriented Approach

- The high weightage for **equity** ensures focus on inclusive education for children from disadvantaged sections.

Improved Policy Planning

- PGI supports better planning in infrastructure, teacher training, school safety, digital learning and student entitlements.

Key Policy Takeaways for Telangana

- Telangana's score improvement from **489.3 in 2022-23** to **599.7 in 2025-26** shows progress in school education governance.

However, to move into higher performance bands, the State should focus on:

- Improving learning outcomes and foundational literacy
- Strengthening teacher training and classroom practices
- Enhancing school infrastructure and facilities
- Improving digital learning access
- Strengthening attendance monitoring systems
- Ensuring equity in education outcomes
- Using PGI-D data for district-level reforms

Telangana can use PGI as a diagnostic tool to move from input-based reforms to outcome-based education governance.

Conclusion

Telangana's improved performance in **PGI 2025-26** reflects progress in school education indicators such as access, infrastructure, equity, governance and teacher training. The rise in score from **489.3 in 2022-23** to **599.7 in 2025-26** indicates a positive trend. However, achieving higher education quality requires deeper reforms in learning outcomes, teacher capacity, digital learning and district-level governance. A strong evidence-based education system will support **inclusive development, human capital formation, good governance and Viksit Bharat 2047**.

Telangana's Interest Payment Burden and Fiscal Stress

Source: [The Hindu](#)

Relevance: TGPSC Telangana Economy

Important Key Words

Prelims

- CAG, State Finances Report 2024–25, Interest Payment, Committed Expenditure, Ways and Means Advances, RBI, Revenue Deficit, Own Tax Revenue, Non-Tax Revenue, Debt Servicing

Mains

- Fiscal stress, debt sustainability, committed expenditure, revenue deficit, fiscal prudence, State borrowing, quality of expenditure, fiscal federalism

payments on borrowings and other liabilities. The State government spent **12.74%** of its total expenditure on interest payments in **2024–25**.

- According to the **Comptroller and Auditor General of India**, Telangana is among the States where interest payments consume a relatively high share of expenditure. This indicates that a significant part of government spending is being used for debt servicing instead of developmental expenditure.

Key Fiscal Indicators

Indicator	Telangana Position
Interest payment share in 2024–25	12.74% of expenditure
Interest payment in 2024–25	₹29,679 crore
Budget projection for interest payment	₹19,369 crore
Interest payment in first two months of current fiscal	₹4,658 crore
Salary payment in first two months	₹8,324 crore
Pension payment in first two months	₹4,758 crore
Non-tax revenue in 2024–25	₹16,772 crore
Share of non-tax revenue from land/property sale and miscellaneous receipts	71%
WMA dependence	363 out of 365 days

Why in News?

- Telangana spent **12.74% of its expenditure** on **interest payments** during **2024–25**.
- The State was among **11 States** that spent more than **10%** of expenditure on interest payments.
- The **CAG State Finances Report 2024–25** shows that Telangana faces pressure due to rising debt servicing obligations.
- Interest payments became a major part of **committed expenditure**, next only to salaries and higher than pension payments.

Key Findings on Telangana's Finances

- Telangana's public finances show rising pressure due to higher interest



What is Interest Payment?

- **Interest payment** is the amount paid by the government on its borrowings and other liabilities.
- When a State government borrows money for expenditure, it must repay the principal amount and also pay interest. If borrowings rise sharply, interest payment also increases.

High interest payment is a concern because:

- It reduces fiscal space for welfare and development schemes.
- It increases pressure on the State Budget.
- It indicates a higher debt-servicing burden.
- It may force the government to borrow more to meet regular expenditure.

What is Committed Expenditure?

Committed expenditure refers to expenditure that the government is obligated to make regularly.

It mainly includes:

- Salaries
- Pensions
- Interest payments

In Telangana, interest payments were reported as higher than pension payments and next only to salaries in committed expenditure. This is important because high committed expenditure limits the government's flexibility to spend on education, health, infrastructure, irrigation and welfare.

Ways and Means Advances and Fiscal Stress

- Telangana had to rely heavily on **Ways and Means Advances** from the **Reserve Bank of India**.
- **Ways and Means Advances** are

temporary advances given by the RBI to States to manage short-term mismatches between receipts and payments.

- The CAG report observed that **Telangana, Rajasthan and Andhra Pradesh together availed 62% of the total WMA**. Telangana depended on this financial accommodation for **363 out of 365 days** in the year.
- This shows pressure on cash management because the State's regular receipts were not sufficient at all times to meet expenditure needs.

Revenue Position of Telangana

Telangana has strengths as well as weaknesses in revenue mobilisation.

Strengths

- Telangana was among the **seven States** whose **Own Tax Revenue** exceeded **60%**.
- The State reported high **non-tax revenue** of **₹16,772 crore**.

Concerns

- Around **71% of non-tax revenue** came from the sale of land and property and miscellaneous receipts.
- Such revenue may not be stable every year.
- The State reported a **revenue deficit**, as receipts formed only about **90% of revenue expenditure**.

This means the State's revenue receipts were not enough to fully meet its revenue expenditure.

Conclusion

Telangana's high interest payment burden reflects pressure on State finances due to rising borrowings and committed expenditure. While the State has

strong own tax revenue, revenue deficit and heavy dependence on Ways and Means Advances show the need for careful fiscal management. Sustainable public finance requires balancing welfare commitments with debt sustainability, revenue

mobilisation and productive capital expenditure. This is essential for Telangana's long-term economic growth and good governance.

Nexon Geochem-Giredmet MoU: India's Push for Rare Earth Permanent Magnet Manufacturing

Source: [BusinessLine](#)

Relevance: TGPSC Paper-V - Science & Technology

Important Key Words

Prelims

- Nexon Geochem, Giredmet, Rosatom, Rare Earth Elements, NdFeB Magnets, Neodymium-Iron-Boron, Permanent Magnets, Sintered Magnets, Rare Earth Oxides, Critical Minerals, Electric Vehicles, Wind Turbines

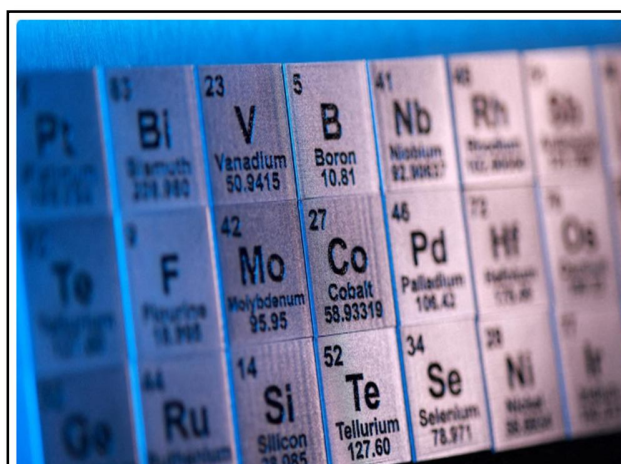
Mains

- Critical mineral security, rare earth supply chain, technology transfer, Atmanirbhar Bharat, clean energy manufacturing, EV ecosystem, renewable energy supply chains, India-Russia technological cooperation

Why in News?

Hyderabad-based **Nexon Geochem** has signed a **Memorandum of Understanding** with Russia's **State Research and Design Institute of Rare Metal Industry**, known as **Giredmet**, for joint research and development in rare and rare-earth metal

processing and **NdFeB rare-earth permanent magnet technologies**. The partnership aims to establish an integrated rare earth oxide-to-magnet manufacturing platform in India, beginning with a scalable **sintered NdFeB permanent magnet facility in Hyderabad**.



What are NdFeB Permanent Magnets?

- NdFeB magnets** refer to **Neodymium-Iron-Boron rare earth permanent magnets**. They are among the strongest commercially available permanent magnets.
- These magnets are called “permanent” because they retain their magnetic properties for a long period without requiring continuous electric current.



- NdFeB magnets are important because they provide high magnetic strength in compact size. This makes them essential for advanced clean energy and mobility technologies.

They are used in:

- Electric vehicle motors
- Hybrid electric vehicle propulsion systems
- Wind turbine generators
- Offshore wind turbines
- Electronics
- Industrial automation
- Defence and strategic technologies

About Nexon Geochem-Giredmet Partnership

- Nexon Geochem is an advanced materials company based in **Hyderabad**. It aims to create a full-cycle platform from **rare earth oxide inputs** to **finished magnet production**.
- The company has signed an MoU with **Giredmet**, Russia's State Research and Design Institute of Rare Metal Industry.
- Giredmet is part of **Rosatom State Atomic Energy Corporation** of Russia. It has nearly a century of expertise in rare metals research, high-purity separation, processing technologies and advanced material systems.

The MoU covers:

- Joint R&D in deep-processing technologies for rare and rare-earth metal raw materials
- Development of **NdFeB rare-earth**

permanent magnet technologies

- High-purity rare earth metals and compounds
- Finished materials for electronics, chemical and nuclear industries
- Analytical control methodologies
- Scaling technologies from laboratory to pilot production
- Joint academic and educational programmes
- As an immediate goal, Nexon Geochem plans to set up a **sintered NdFeB permanent magnet manufacturing facility in Hyderabad**.
- The company is targeting **1,200 mtpa production capacity** of NdFeB permanent magnets by FY33.

Why Permanent Magnets are Strategically Important

Rare earth permanent magnets are not ordinary industrial inputs. They are strategic materials for the clean energy and digital economy.

1. Electric Mobility

- Electric vehicles require high-performance motors. NdFeB magnets are used in **electric synchronous traction motors** for battery electric vehicles and hybrid electric vehicles.

2. Renewable Energy

- Permanent magnets are key components in **direct-drive generators** used in wind turbines, especially offshore wind turbines.

3. Semiconductor and Electronics Ecosystem

- Rare earth materials support several electronics and precision technology applications.

4. Strategic Supply Chains

- Countries are trying to reduce dependence on concentrated global supply chains for rare earths and magnets.

5. Clean Energy Transition

- Without reliable access to permanent magnets, growth in EVs, wind energy and advanced manufacturing can face supply bottlenecks.

India's Demand and Market Potential

- India's demand for rare earth permanent magnets is increasing due to **EV adoption** and **renewable energy deployment**.

Indicator	2026	2031 Projection
Domestic consumption of permanent magnets	7,500 mtpa	12,500 mtpa
Market size	₹5,625 crore	₹20,625 crore
Average price	₹7,500 per kg	₹16,500 per kg
Growth rate	30% CAGR	18% CAGR

Significance of the MoU

1. Strengthening Critical Minerals Value Chain

- The partnership can help India move from raw material dependence to value-added manufacturing in rare earth magnets.

2. Reducing Import Dependence

- India currently depends heavily on imported high-performance permanent

magnets. Domestic production can reduce vulnerability.

3. Supporting EV and Renewable Energy Sectors

- NdFeB magnets are essential for **electric vehicles** and **wind turbines**. Local production can support India's clean energy targets.

4. Boosting Hyderabad's Advanced Manufacturing Profile

- The proposed facility in Hyderabad can position Telangana as a hub for rare earth materials and advanced manufacturing.

5. India-Russia Technology Cooperation

- The MoU reflects India-Russia cooperation beyond defence and energy into **critical minerals and advanced materials**.

6. Moving Towards Technological Sovereignty

- The collaboration aims to build indigenous capability in rare earth processing, magnet production and material science.

Conclusion

The Nexon Geochem-Giredmet MoU is significant because rare earth permanent magnets are becoming critical to the future of clean energy, electric mobility and advanced manufacturing. By aiming to build an integrated rare earth oxide-to-magnet platform in Hyderabad, the partnership can help India reduce import dependence and strengthen its critical minerals value chain. If implemented effectively, it can support **Atmanirbhar Bharat**, energy transition, EV manufacturing and India's long-term technological self-reliance.

Centre's Push on Oilseeds and Oil Palm: Boost for Telangana's Farm Economy

Source: [Deccan Chronicle](#)

Relevance: TGPSC Agriculture and Allied Sectors

Important Key Words

Prelims

- Oil Palm, *Elaeis guineensis*, National Mission on Edible Oils–Oil Palm, NMEO-OP, National Food Security Mission, National Food Security and Nutrition Mission, Crude Palm Oil, Fresh Fruit Bunches, Banganapalli? no, Palm Kernel Oil, Crop Diversification, Oil Extraction Rate

Mains

- Edible oil security, crop diversification, import substitution, farm income, irrigation-led agriculture, processing infrastructure, water-use sustainability, assured procurement, Centre-State coordination



What is Oil Palm?

- Oil palm**, scientifically known as *Elaeis guineensis* Jacq., is a perennial oil-yielding crop.
- It is native to **West Africa** and is popularly known as **African oil palm** or **red oil palm**.
- It is considered one of the most productive edible oil crops in the world because it gives much higher oil output per hectare compared to many other oilseed crops.
- Palm oil is obtained from the **fleshy mesocarp of the fruit**, which contains around **45–55% oil**.
- It is also rich in antioxidants and vitamins, especially **vitamin E**.
- Another product, **palm kernel oil**, is obtained from the **kernel of the stony**

Why in News?

The Centre's renewed focus on **oilseeds and edible oil palm** under the **National Food Security Mission (Oilseeds)** and the **National Mission on Edible Oils–Oil Palm** is expected to strengthen Telangana's farm economy. Telangana has emerged as a front-runner in oil palm area expansion, supported by irrigation availability, processing infrastructure, private sector participation and crop diversification efforts.

seed. It is a source of **lauric oil** and also has edible value.

Oil Palm in Telangana

Oil palm area expansion has become one of the important agricultural programmes of Telangana. With improved irrigation potential and the need for crop diversification, the State is promoting oil palm cultivation in mission mode.

The major objectives are:

- To increase the availability of **vegetable oils** in the State.
- To reduce dependence on imported edible oils by improving domestic production.
- To promote **crop diversification** towards high-value and demand-based crops.
- To provide farmers with a long-term income option.

Oil palm is seen as suitable for Telangana because it offers high oil yield per hectare, assured market support and processing-based value addition.

Centre's Push through Oilseed and Oil Palm Missions

The Centre is promoting oilseeds and oil palm through two important policy instruments.

National Food Security Mission – Oilseeds

- The **National Food Security Mission**, now restructured as the **National Food Security and Nutrition Mission**, aims to improve productivity in key crops, including oilseeds.

It focuses on:

- Improved seeds
- Better agronomic practices
- Farm-level support
- Yield improvement
- Productivity enhancement

National Mission on Edible Oils–Oil Palm

- The **National Mission on Edible Oils–Oil Palm** was approved in **2021** as a **Centrally Sponsored Scheme**.

It aims to:

- Expand oil palm cultivation area
- Increase domestic **Crude Palm Oil** production
- Reduce edible oil import dependence
- Support plantation development
- Promote seed gardens
- Strengthen processing infrastructure
- Encourage private sector participation
- Under the Mission, oil palm is promoted as a long-term income option for farmers.

Telangana's Performance

Telangana has emerged as a national leader in oil palm cultivation and ranks **second in the country** in terms of area under the crop.

Key Data on Oil Palm in Telangana

Indicator	Details
Crop promoted	Oil Palm
Major purpose	Edible oil production and crop diversification
State position	National leader; second in area under oil palm
Financial support to farmers	₹50,918 per acre
Support covers	Planting material, maintenance, intercropping for four years and drip irrigation

Present FFB price	₹21,456 per MT, February 2026
Bearing area	About 68,600 acres
Crude palm oil production in 2024-25	Around 70,000 MT
Oil Extraction Rate	Around 20%
Processing facility	30 TPH oil palm mill at Narmetta, Siddipet
Investment in Narmetta mill	₹300 crore
Expandable capacity	Up to 120 TPH
Additional mills	Six more under progress

Fresh Fruit Bunches Production

Year	FFB Production
2023-24	2.77 lakh MT
2024-25	2.51 lakh MT
2025-26	3.71 lakh MT projected

The slight decline in 2024-25 was linked to seasonal and bearing-related factors. Production is expected to rise sharply in 2025-26 as more area comes into the bearing stage and productivity improves.

Significance for Telangana

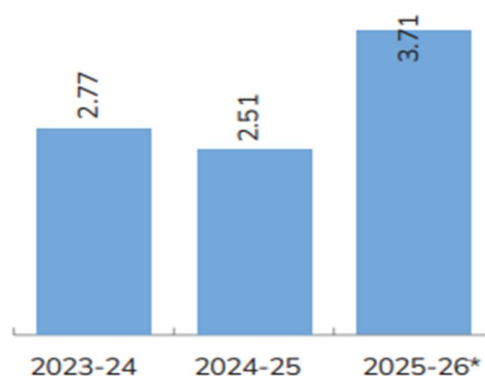
1. Edible Oil Security

- India imports a large share of its edible oil requirement. Oil palm cultivation can help reduce import dependence by increasing domestic production of **Crude Palm Oil**.

2. Crop Diversification

- Telangana is promoting diversification away from traditional crops towards demand-based and high-value crops. Oil palm supports this strategy.

Fig. 5.19 Oil Palm Fresh Fruit Bunches Production in Telangana between 2023-24 to 2025-26 (in Lakh MTs)



Source: Department of Horticulture, Government of Telangana; * as on 27.01.2026

3. Farmer Income

- Oil palm provides long-term income potential once it reaches the bearing stage. Assured pricing and procurement support can improve farmer confidence.

4. Processing-Based Rural Economy

- Oil palm requires nearby processing facilities because **Fresh Fruit Bunches** must be processed quickly. This creates scope for rural agro-processing, employment and private investment.

5. Irrigation-Led Agricultural Transformation

- With increased irrigation potential, Telangana can use oil palm in suitable areas where water availability and processing access are reliable.



6. Centre-State Coordination

- The success of oil palm expansion depends on cooperation between the Centre, State government, processors, seed suppliers and farmers.

Conclusion

The Centre's push on oilseeds and oil palm can provide a major boost to Telangana's farm economy. Oil palm offers high edible oil yield, long-

term income potential and scope for agro-processing-led rural development. Telangana's progress in area expansion, farmer support and processing infrastructure shows strong potential. However, long-term success will depend on careful planning, water sustainability, assured procurement, quality seedlings, extension support and balanced crop diversification. If implemented responsibly, Telangana can become a model State for India's edible oil security and sustainable farm diversification.

Amazon Web Services Data Centre in Telangana: Push for Bharat Future City and Telangana Rising 2047

Source: [The Hindu](#)

Relevance: TGPSC Telangana Economy, IT Sector, Industrial Development.

Important Key Words

Prelims

- Amazon Web Services, Bharat Future City, Telangana Rising 2047, Telangana Rising Global Summit 2025, Data Centre Park, Aloor, Single Window Mechanism, Viksit Bharat 2047, CURE-PURE-RARE Regions

Mains

- Investment-led growth, data centre infrastructure, AI-led demand, ease of doing business, sector-specific policies, industrial facilitation, planned urban development, State economic vision

Why in News?

The foundation stone for Amazon Web Services' data centre was laid at Bharat Future City on the outskirts of Hyderabad on July 15, 2026. The project follows a framework agreement signed with AWS during the Telangana Rising Global Summit 2025 for an investment of ₹60,000 crore.

Key Highlights of the AWS Data Centre Project

- The Amazon Web Services data centre is being developed at Bharat Future City, located on the Hyderabad periphery.
- The project follows a framework agreement signed during the Telangana Rising Global Summit 2025, involving an investment of ₹60,000 crore.
- Amazon has committed to invest around US \$7 billion over 14 years. The State government is seeking a larger investment of ₹1 lakh crore from



Amazon to support Telangana's long-term economic targets.

- The project is linked to Telangana's ambition of becoming a **US \$1 trillion economy by 2034** and a **US \$3 trillion economy by 2047**.

Telangana Rising 2047 Vision

- The Telangana government has launched the **Telangana Rising 2047** policy as a long-term development framework.
- The State has also introduced sector-specific policies in areas such as **health and education**. These policies are aimed at attracting global investors, reducing policy uncertainty and avoiding selective granting of permissions or incentives.

The policy approach focuses on:

- Sector-specific development
- Investor facilitation
- Faster permissions
- Single window mechanisms
- Confidence-building among investors
- The Telangana government has linked its growth vision with **Viksit Bharat 2047**, under which India aims to become a **US \$30 trillion economy by 2047**.
- Telangana aims to contribute at least **10%**, or around **US \$3 trillion**, to India's GDP by 2047.

Bharat Future City and Investment Strategy

- **Bharat Future City** is being developed as a world-class destination for

investments and infrastructure.

- Amazon Web Services is expected to become an **anchor industry** in the upcoming city. Its presence can help attract further investments from **Fortune 500 companies** and other global firms.
- The State government is positioning Bharat Future City as a major investment zone with modern infrastructure and investor-friendly facilities.
- The broader aim is to create an investment ecosystem that can compete with major global destinations, including China.

CURE, PURE and RARE Regional Model

The State has referred to a layered development model through **CURE, PURE and RARE regions**.

This approach aims to avoid urban problems often seen in large metro cities, such as:

- Pollution
- Traffic congestion
- Pressure on infrastructure
- Unplanned concentration of growth

Through this model, Telangana seeks to promote planned development and create better facilities for investors.

Data Centre Park at Aloor

- Telangana is planning a dedicated **data centre park at Aloor**.
- The park is expected to provide comprehensive facilities needed for data centre operations, especially:
 - Uninterrupted power
 - Reliable water supply

- Supportive infrastructure
- Facilities for data centre expansion
- Power and water are critical requirements for data centres. The Aloor data centre park is therefore being developed as part of Telangana's strategy to attract large-scale digital infrastructure investments.

Significance of the Project

1. Supports Telangana Rising 2047

- The project aligns with Telangana's goal of becoming a **US \$1 trillion economy by 2034** and a **US \$3 trillion economy by 2047**.

2. Anchor Investment for Bharat Future City

- Amazon Web Services can act as an anchor industry and attract other major global companies to Bharat Future City.

3. Strengthens IT and Data Centre Ecosystem

- The project reinforces Telangana's position as a preferred destination for IT and data centre investments.

4. Boosts AI-Linked Infrastructure

- As artificial intelligence gains prominence, data centre infrastructure becomes more important for future economic growth.

5. Improves Investor Confidence

- Monthly review meetings, sector-specific policies and single window mechanisms can help address investor requirements faster.

6. Promotes Planned Development

- The CURE-PURE-RARE model reflects an attempt to avoid congestion, pollution and excessive pressure on metro infrastructure.

Challenges

Policy Paralysis

- The State has identified policy paralysis as a barrier to investment-led growth.

Selective Permissions and Incentives

- A "pick and choose" approach in granting permissions and incentives can weaken investor confidence.

Urban Congestion and Pollution

- The government aims to avoid problems such as pollution and traffic congestion faced by metro cities.

Infrastructure Requirement

- Data centres require uninterrupted power and reliable water supply. The Aloor data centre park is being planned to address these requirements.

Need for Industry Support

- The State's goal of becoming a **US \$3 trillion economy by 2047** requires strong participation from global industry partners.

Conclusion

The **Amazon Web Services data centre at Bharat Future City** is an important project in Telangana's investment and digital infrastructure strategy. It is linked to the State's larger vision of becoming a **US \$1 trillion economy by 2034** and a **US \$3 trillion economy by 2047**. The project can strengthen Telangana's position as a preferred destination for data centre investments, especially as artificial intelligence gains prominence. Its success will depend on timely implementation, investor facilitation, reliable power and water supply, and planned development of Bharat Future City.

Project K-100: Narayanpet's Push for Climate-Resilient Farming

Source: [The Hindu](#)

Relevance: TGPSC: Agriculture, Rural Development

Important Key Words

Prelims

- Project K-100, Narayanpet, Kosgi Division, Crop Diversification, Climate-Resilient Agriculture, Mulching, Staking Method, Farm Ponds, El Niño

Mains

- Sustainable agriculture, income-oriented farming, climate adaptation, water conservation, farmer demonstration model

Why in News?

Project K-100, also called the 100 Farmers - 100 Innovative Activities Programme, was launched in Narayanpet district to promote crop diversification, climate-resilient farming and income-oriented agriculture. The initiative aims to develop Kosgi division as a model hub of innovative and sustainable farming practices.

What is Project K-100?

Project K-100 is a district-level agricultural initiative under which 100 selected farmers will adopt 100 different innovative farming activities. These activities will create live demonstration models in:

- Agriculture
- Horticulture
- Floriculture
- Livestock and fisheries
- Natural farming

The purpose is to help farmers learn directly from field-level examples and adopt practices that improve productivity, reduce cultivation costs and enhance farm income.



Modern Practices Promoted

The initiative highlights the use of modern and practical cultivation methods.

At Mallareddypally village in Kosgi mandal, the following practices were reviewed:

- Mulching** in brinjal and green chilli cultivation
- Staking method** in tomato cultivation
- Floriculture** as an income-oriented farming activity

These methods are useful for improving crop management and encouraging farmers to move beyond traditional cropping patterns.



Crop Diversification

Crop diversification means shifting from the cultivation of a single traditional crop to growing a wider variety of crops such as **pulses, oilseeds, millets, fruits, vegetables and other horticultural crops**. It may also include the integration of allied activities such as dairy, poultry and fisheries.

Need for Crop Diversification

- **Higher Farm Income:** It encourages farmers to move beyond subsistence farming towards high-value and remunerative crops.
- **Resource Conservation:** Replacing water-intensive crops such as paddy and wheat with millets, pulses and oilseeds helps conserve groundwater and maintain soil health.
- **Risk Reduction:** Growing several crops reduces losses caused by crop failure, pest attacks, adverse weather and price fluctuations.
- **Soil Fertility:** Leguminous crops such as pulses naturally add nitrogen to the soil and reduce dependence on chemical fertilisers.
- **Nutritional Security:** A diverse cropping pattern improves the availability of nutritious food.

Forms of Crop Diversification

1. **Change in Cropping Pattern:** Farmers introduce crop rotation and grow pulses, oilseeds, vegetables and millets instead of repeatedly cultivating the same crop.
2. **Integration of Allied Activities:** Crop farming is combined with dairy, poultry, livestock rearing and fisheries. These activities provide additional income and employment throughout the year.

Major Challenges

- Assured procurement and Minimum Support Price are mainly available for paddy and wheat.
- Small and marginal farmers may prefer food grains for household consumption.
- Horticultural and commercial crops require greater investment, technical knowledge and storage facilities.
- Lack of processing units, transport, cold storage and organised markets discourages diversification.

Climate-Resilient Farming Focus

The project has gained importance due to anticipated **El Niño conditions**, which may increase climate-related risks for agriculture.

Farmers are encouraged to adopt:

- **Alternative crops**
- **Drought-tolerant varieties**
- **Short-duration crops**
- **Farm ponds**



- Rainwater harvesting
- Water conservation practices

These measures can reduce crop loss risks during dry spells and uncertain rainfall.

Crop Diversification and Farmer Income

- Project K-100 encourages farmers to complement traditional crops with **vegetables, horticultural crops, floriculture and other high-value crops**.
- This can help reduce dependence on a single crop and improve income stability. Seed distribution, including **vegetable and cotton seeds**, was also taken up as part of the programme.
- Around **120 farmers** from **Kosgi, Maddur, Kothapally and Gundumal mandals** participated in the launch event and awareness programme.

Significance

- Promotes **climate-resilient agriculture** at the district level.
- Encourages **crop diversification** beyond traditional crops.
- Creates **live demonstration models** for farmer learning.
- Supports **income-oriented agriculture** through high-value crops.

- Encourages **water conservation** through farm ponds and rainwater harvesting.

Challenges

- Climate risks linked to **El Niño** may affect crop productivity.
- Farmers may need technical support to shift from traditional crops.
- Farm ponds and water conservation works require timely implementation.
- Demonstration models must be scaled to more villages for wider impact.

Way Forward

Project K-100 should be supported through regular field guidance, seed support, farmer training and monitoring of demonstration models. Successful practices from the selected farmers can be replicated in other mandals to promote sustainable and remunerative agriculture across Narayanpet district.

Conclusion

Project K-100 is a practical local initiative for promoting **crop diversification, climate resilience and sustainable farm income**. By using 100 farmers as demonstration leaders, the project can help spread modern cultivation practices and prepare farmers for climate uncertainties such as El Niño.

India's First ILCA Open International Sailing Championship in Hyderabad

Source: [Deccan Chronicle](#)

Relevance: **Telangana Current Affairs, Sports,**

Important Key Words

Prelims

- ILCA Open International Sailing

Championship, Hyderabad Sailing Week 2026, Yachting Association of India, EME Sailing Association, MCEME, Hussain Sagar, ILCA 7, ILCA 6, ILCA 4

Mains

- Sports infrastructure, competitive

sailing, women's participation in sports, military institutions and sports promotion, youth development, international sporting events

Why in News?

India's first **ILCA Open International Sailing Championship** concluded in **Hyderabad** after a week-long competition at **Hussain Sagar**. The event brought together **124 sailors**, including international participants, and was held alongside the **Yachting Association of India's 40th Hyderabad Sailing Week 2026**.

About the Championship

- The **ILCA Open International Sailing Championship** was organised in Hyderabad as India's first international championship under this format.

- The competition was held at **Hussain Sagar**, a well-known water body associated with sailing activity in Hyderabad. The event strengthened the city's position as a venue for competitive sailing.
- It was conducted alongside the **40th Hyderabad Sailing Week 2026**, organised under the framework of the **Yachting Association of India**.

Organising Institutions

- The championship was hosted by the **EME Sailing Association**.
- It was conducted under the aegis of the **Military College of Electronics and Mechanical Engineering, Hyderabad**.

The event was organised in association with:

- International Laser Class Association





- Yachting Association of India
- EME Sailing Association
- Military College of Electronics and Mechanical Engineering

This shows the role of defence-linked institutions in promoting organised and competitive sports in India.

Participation and Categories

- The event brought together **124 sailors**, including overseas participants.
- Sailors came from **19 sailing clubs and institutions**, including:
 - Army sailing establishments
 - Navy sailing establishments
 - Civilian sailing institutions
 - Overseas participants
- A total of **19 women and girls** participated in the championship.
- The races were conducted across the following categories:
 - ILCA 7
 - ILCA 6 – Men and Women
 - ILCA 4 – Boys and Girls

This made the event inclusive across age and gender categories within competitive sailing.

Importance for Hyderabad and Indian Sailing

- The successful conduct of India's first **ILCA Open International Sailing Championship** at Hussain Sagar is an important milestone for Indian sailing.
- The event adds to Hyderabad's sporting profile and reinforces the city's association with water sports. Hosting an international sailing event also gives

Indian sailors exposure to competitive racing standards and interaction with overseas participants.

- The championship also strengthens the legacy of **Hyderabad Sailing Week**, which has completed its **40th edition** in 2026.

Role of EMESA and MCEME

- The **EME Sailing Association** has contributed to sailing for nearly four decades.
- Its association with **MCEME** has helped develop sailing talent and build institutional support for the sport.
- Over the years, EMESA has produced:
 - Olympians
 - Arjuna Awardees
 - Accomplished sailors
- The championship therefore reflects both continuity and expansion in India's sailing ecosystem.

Conclusion

The conclusion of India's first **ILCA Open International Sailing Championship** in Hyderabad marks an important moment for Indian sailing. With **124 sailors**, participation from **19 clubs and institutions**, international representation, and races across **ILCA 7, ILCA 6 and ILCA 4** categories, the event strengthened Hyderabad's place in competitive sailing. It also highlighted the continuing contribution of **EMESA** and **MCEME** in nurturing sailing talent and promoting discipline-oriented sports.



Telangana Indiramma Housing Scheme in Hyderabad: Affordable High-Rise Housing for Urban Poor

Source: [The Hindu](#)

Relevance: TGPSC Group-I Mains: Paper-III - Indian Society, Constitution and Governance

Important Key Words

Prelims

- Indiramma Indlu, Indiramma Housing Scheme, Core Urban Region, CURE Area, Hyderabad, Telangana Housing Board, MeeSeva, Earnest Money Deposit, Outer Ring Road, Affordable Housing

Mains

- Urban housing, inclusive urban development, housing affordability, beneficiary contribution model, high-rise affordable housing, urban poor welfare, transparent beneficiary selection

Why in News?

The Telangana government launched the Indiramma Housing Scheme for Hyderabad Core Urban Region (CURE) on 20 July 2026. The scheme aims to construct affordable houses in high-rise buildings across 16 Assembly constituencies in Hyderabad, with applications open from 21 July to 10 August 2026.

About the Indiramma Housing Scheme in Hyderabad

- The Indiramma Indlu Housing Scheme

in Hyderabad is an affordable housing initiative aimed at providing flats to eligible residents of the Core Urban Region.

- The houses will be constructed in **multi-storey towers**. Each flat will have a **carpet area of 400 square feet** and a **built-up area of 528 square feet**.
- The scheme was launched at the **Dr. B.R. Ambedkar Telangana State Secretariat** in Hyderabad.

Key Features of the Scheme

- The scheme applies to **Hyderabad CURE area**.
- Houses will be built in **high-rise buildings**.
- Flats will have **400 sft carpet area** and **528 sft built-up area**.
- The government aims to construct **one lakh affordable houses in one year**.
- The scheme has initially been launched in **16 Assembly constituencies** based on land availability.
- It will be extended to other constituencies soon.
- No separate charges will be collected for land.
- The State Cabinet approved construction of these houses in May 2026.
- The government has indicated that a separate announcement for **Middle**

Income Group people may be made soon.



Eligibility Criteria

Applicants must satisfy the following conditions:

- The applicant should be a resident of **Hyderabad CURE area** for the last **10 years**.
- The applicant or the family should not own a **house, flat or plot** within the **Outer Ring Road** or **CURE area**.
- Annual household income should be up to **₹6 lakh**.
- The applicant should not have received similar housing benefits earlier.
- False declaration, suppression of facts or duplicate applications may lead to rejection.

This eligibility framework is intended to ensure that the scheme benefits genuinely housing-deprived urban households.

Application Procedure

Applications will be received from **21 July to 10 August 2026**.

Applicants can submit forms through:

- MeeSeva Centres
- MeeSeva portal
- MeeSeva WhatsApp service: 8096958096

The application must be submitted along with:

- ₹100 application fee
- ₹10,000 Earnest Money Deposit

The **₹10,000 EMD** will be refunded if the applicant is not selected. If selected, the EMD will be adjusted into the beneficiary's contribution.

Selection and Verification Process

- The selection process has multiple stages to ensure transparency.
- First, applications will be scrutinised by checking documents and payment details. After this, a **360-degree verification** will be conducted to examine income, family details and duplicate applications.
- If demand is higher than the available number of flats, beneficiaries will be selected through a **lottery system**.

After selection, the process will include:

- Provisional allotment
- Field verification
- Stage-wise payments
- Registration
- Final handover of the flat

This process seeks to reduce duplication, prevent false claims and ensure fair allotment.

Financial Structure

The estimated cost of constructing a **528 sft flat** is **₹11 lakh**.

The cost-sharing structure is:

Component	Amount
Government subsidy	₹5 lakh

Beneficiary contribution	₹6 lakh
Total estimated cost	₹11 lakh

The beneficiary contribution of **₹6 lakh** can be paid in four instalments:

- ₹1 lakh
- ₹2 lakh
- ₹2 lakh
- Balance amount

The government has clarified that **land charges will not be collected** from beneficiaries.

Conclusion

The launch of the **Indiramma Housing Scheme in Hyderabad CURE area** is an important urban welfare measure by the Telangana government. By providing **₹5 lakh subsidy**, constructing **528 sft built-up flats**, and using a structured application and verification process, the scheme aims to expand affordable housing in Hyderabad. Its success will depend on transparent beneficiary selection, timely construction, affordability of beneficiary contribution and effective post-allotment management.

IICT-ISRO Collaboration to Develop Eco-Friendly Blowing Agents

Source: [The Hindu](#)

Relevance: TGPSC Group-I Paper-V - Science and Technology and Data Interpretation

Important Key Words

Prelims

- CSIR-IICT, VSSC, ISRO, HydroFluoro-Olefins, HFOs, Blowing Agents, Ozone Depletion Potential, ODP, Global Warming Potential, GWP, Fluorochemicals, Anhydrous Hydrogen Fluoride, HF, Fluoroorganics Laboratory

Mains

- Indigenous technology development, green chemistry, eco-friendly fluorochemicals, strategic applications, import substitution, technology commercialisation, environmentally compliant materials, self-reliance in specialty chemicals

Why in News?

The CSIR-Indian Institute of Chemical Technology, Hyderabad, and ISRO's Vikram Sarabhai Space Centre have signed an MoU to develop **indigenous technology for next-generation, environmentally sustainable blowing agents** for advanced strategic applications. The collaboration aims to develop **HFO-based eco-friendly blowing agents** and reduce India's dependence on **imported specialty fluorochemicals**.

What is the IICT-ISRO Collaboration?

- The collaboration brings together **CSIR-IICT's expertise in fluorochemical synthesis and process development** with **VSSC's application-specific requirements and technical evaluation capabilities**.
- The objective is to create an **indigenous, eco-friendly blowing agent technology** for advanced strategic applications. The programme is also expected to move

towards **commercialisation** with process development and technical support.

- **What are Blowing Agents?**
- **Blowing agents** are chemicals used to create gas bubbles in materials, especially foams. They help produce materials that are **lightweight, insulating and suitable for specialised applications**.



They are important because they influence:

- material structure
- insulation performance
- weight reduction
- durability
- environmental impact
- performance in advanced applications
- Conventional blowing agents have often raised environmental concerns due to high **Global Warming Potential** or ozone-related impact. Therefore, industries are shifting towards cleaner alternatives.

What are HydroFluoro-Olefins?

HydroFluoro-Olefins, or **HFOs**, are next-generation environmentally sustainable fluorochemicals.

They are important because they have:

- **Zero Ozone Depletion Potential**
- **Ultra-low Global Warming Potential**
- ability to replace conventional high-GWP alternatives
- relevance in sustainable and high-performance materials

The global shift towards HFOs is being driven by **stricter environmental regulations** and the demand for **sustainable industrial materials**.

Why HFO-Based Blowing Agents are Important

Environment-Friendly Alternative

- HFO-based blowing agents reduce harm to the ozone layer and have lower climate impact compared to older high-GWP chemicals.

Support for Green Chemistry

- They promote cleaner industrial chemistry by replacing environmentally harmful fluorochemical alternatives.

Strategic Applications

- They are useful in advanced strategic sectors where specialised, lightweight and high-performance materials are required.

Import Substitution

- Developing this technology indigenously can reduce India's dependence on imported specialty fluorochemicals.

Role of CSIR-IICT and VSSC

CSIR-IICT, Hyderabad provides expertise in:

- advanced fluorochemical synthesis
- process development
- scale-up
- specialised infrastructure
- safe handling of anhydrous Hydrogen Fluoride

VSSC, ISRO provides:

- application-specific requirements
- technical evaluation capabilities
- support for strategic application-oriented development

The safe handling of anhydrous Hydrogen

Fluoride is a critical capability because it is required for synthesising next-generation fluorochemicals.

Conclusion

The collaboration between CSIR-IICT, Hyderabad, and VSSC, ISRO marks an important step in developing indigenous, eco-friendly and strategically relevant chemical technologies. By focusing on HFO-based blowing agents with zero ozone depletion potential and ultra-low global warming potential, the initiative supports environmental sustainability, technological self-reliance and advanced material development.

Hyderabad Becomes Fastest-Growing GCC Hub in India

Source: [Deccan Chronicle](#)

Relevance: TGPSC Telangana Economy,

Important Key Words

Prelims

- Global Capability Centres, GCCs, Hyderabad, BFSI, Nasscom GCC Landscape Report 2026, AI, Generative AI, Semiconductors, Engineering R&D, Cybersecurity, Cloud Computing, Data Analytics

Mains

- Innovation-led growth, software sector transformation, high-value employment, skilled workforce, world-class infrastructure, investment-friendly ecosystem, product engineering, global leadership functions

Why in News?

Hyderabad has emerged as one of the fastest-growing Global Capability Centre hubs in India, attracting 197 GCCs in the last two-and-a-half years since December 2023. According to data released by the State Information Technology department, more than 70 GCCs chose Hyderabad in 2024, 84 commenced operations in 2025, and 43 GCCs came forward in the first half of 2026. The number is expected to cross 100 by the end of 2026.



What are Global Capability Centres?

Global Capability Centres, or **GCCs**, are captive centres established by multinational parent companies to meet their own business needs.

They are used for:

- research
- product development
- innovation
- technology operations
- engineering
- global business functions

GCCs are different from ordinary service-based IT companies because they are not mainly dependent on external client contracts. They support the parent company's internal innovation and business requirements.

Difference Between IT Companies and GCCs

Traditional IT Companies	Global Capability Centres
Provide software services to other businesses	Captive centres of multinational companies
Work on contract-based projects	Work for parent company requirements
Focus mainly on service delivery	Focus on research, products and innovation
Client-driven model	Parent-company-driven model
Conventional software services	Advanced innovation and leadership functions

The rise of GCCs marks a shift in Hyderabad's technology sector from conventional IT services to **high-value innovation-led work**.

Hyderabad's GCC Growth Trend

Hyderabad's GCC growth has been rapid in recent years.

Period	GCC Growth in Hyderabad
2024	More than 70 GCCs chose Hyderabad
2025	84 GCCs commenced operations
First half of 2026	43 GCCs came forward
Last 2.5 years	197 GCCs attracted
Expected by end of 2026	More than 100 GCCs for the year

This shows that Hyderabad is becoming a major destination for **technology, innovation and global business operations**.

Why Hyderabad is Attracting GCCs

1. Skilled Workforce

- Hyderabad has strong human resources in technology, engineering, finance, life sciences and digital services.

2. World-Class Infrastructure

- The city offers infrastructure suitable for large multinational operations and expanding office spaces.

3. Favourable Business Environment

- A supportive business environment and proactive government measures have made Hyderabad attractive for GCCs.

4. Alternative to Bengaluru's Urban Challenges

- Though Bengaluru continues to have the highest number of GCCs, traffic congestion and other challenges there are encouraging companies to consider Hyderabad.



5. Strong Sectoral Base

- Hyderabad has strengthened its position in **BFSI, life sciences, semiconductors, engineering and digital services.**

Key Sectors of GCC Expansion

Hyderabad is attracting investments in several advanced sectors:

- Banking, Financial Services and Insurance
- Artificial Intelligence
- Generative AI
- Life sciences
- Semiconductors
- Engineering R&D
- Cybersecurity
- Cloud computing
- Data analytics
- Global business services
- Digital services

According to the **Nasscom GCC Landscape Report 2026**, more than **50% of newly established BFSI GCCs in India** have chosen Hyderabad, making it a leading destination in this segment.

Major Developments in 2026

In the first half of 2026, several global companies either set up new centres, expanded existing operations, or planned new operations in Hyderabad.

Prominent developments include:

- L'Oréal** established its first GCC in India and its first **Beauty Tech Hub** in Hyderabad.
- T-Mobile** expanded its technology and engineering operations.
- Novartis** expanded its largest global operations hub outside Switzerland.
- Voya Financial** expanded its technology and operations centre.
- Astera Labs** established a new engineering and product development centre.
- Bluepace** launched a new GCC.

Other global companies such as **Zurich Insurance, Roche Diagnostics, ABB, BASF, Regeneron, Silicon Labs, Nestlé, Reckitt, Uber, Warner Bros. Discovery, American Airlines, InvoiceCloud, Omnicom and Maximus** have commenced, expanded, or are planning operations in Hyderabad.

Conclusion

Hyderabad's emergence as India's fastest-growing **Global Capability Centre hub** reflects a major transformation in the city's technology economy. With **197 GCCs attracted in two-and-a-half years**, strong growth in **BFSI**, and expanding investments in **AI, semiconductors, life sciences, engineering R&D and digital services**, Hyderabad is moving from a conventional IT services destination to a global centre for **innovation, product engineering and leadership functions.**

Telangana and the E20 Push: Biofuel Policy as a Rural-Industrial Opportunity

Source: [Deccan Chronicle](#)

Relevance: TGPSC Telangana Economy, Agriculture, Rural Development, Industrial Policy, Environment

Important Key Words

Prelims

- E20 Petrol, Ethanol Blending, Biofuel, Grain-Based Distillery, Maize Feedstock,

Cleaner Fuel, Octane, Oil Marketing Companies

Mains

- Energy transition, rural industrialisation, farm-linked demand, biofuel economy, cleaner mobility, import substitution, vehicle compatibility, scientific policy-making

Why in News?

The Centre recently defended the use of **E20 petrol**, which involves blending **20% ethanol with petrol**. It clarified that there is **no proposal at present to raise ethanol blending beyond 20%**. Any future increase will depend on **scientific studies** and consultations with **automobile manufacturers, oil companies and research institutions**. For Telangana, the E20 push is significant because ethanol production and farm-linked demand are

expected to expand in districts such as **Medak, Sangareddy, Nizamabad and Peddapalli**.

What is E20 Petrol?

- **E20 petrol** refers to petrol blended with **20% ethanol**. Ethanol is a biofuel that can be produced from agricultural feedstock such as **maize, damaged grain and other biomass-based inputs**.
- The objective of ethanol blending is to reduce dependence on conventional fossil fuel, promote cleaner combustion and support domestic biofuel production.
- The government has stated that E20 is a **tested and safer fuel**. It also offers **higher octane**, cleaner combustion and lower emissions.





Telangana's Opportunity from E20

For Telangana, the E20 programme is not only an energy policy but also a potential **rural-industrial development opportunity**.

Ethanol production activity is already visible in parts of:

- Medak
- Sangareddy
- Nizamabad
- Peddapalli

These areas have grain-based distilleries and allied processing units that are becoming part of the biofuel supply chain.

If ethanol demand remains steady, these districts can benefit through:

- expansion of distillery capacity
- stronger demand for local agricultural produce
- better market linkages for farmers
- growth of storage and logistics services
- employment in agro-processing and transport

Thus, the E20 shift can create a link between **energy security, agriculture and rural industry**.

Industrial and Rural Linkages

1. Benefit to Ethanol Units

- Grain-based distilleries and allied processing units can benefit from assured demand for ethanol. This can encourage new investment and capacity expansion in Telangana's biofuel sector.

2. Farm-Linked Demand

- Farmers supplying **maize, damaged grain and other feedstock** may gain from a stronger local market. This is especially relevant in regions where agriculture and agro-processing are already linked.

3. Support to Rural Economy

- The policy can support rural income if procurement systems are efficient and payments are timely. Farmers can benefit only when the supply chain is transparent, predictable and remunerative.

4. Growth of Allied Services

Ethanol blending requires a supporting ecosystem.

This can generate demand for:

- transporters
- storage operators
- quality-testing facilities
- logistics firms
- fuel movement and blending services

5. Biofuel Hub Potential

- With proper coordination between feedstock procurement, distillery capacity and logistics, Telangana can emerge as an important **biofuel hub**.

Benefits of the E20 Push

1. Cleaner Fuel Transition

- E20 supports cleaner combustion and can help reduce emissions compared to conventional petrol.

2. Reduced Crude Oil Dependence

- Blending ethanol with petrol can reduce crude oil imports and save foreign exchange.

3. Support to Farmers

- Ethanol demand creates an additional market for agricultural produce and damaged grains, improving farm-linked income opportunities.

4. Rural Industrialisation

- Biofuel production can encourage decentralised industrial activity in non-

metro districts.

5. Employment Generation

- The ethanol value chain can create jobs in farming, procurement, distillation, testing, transport, storage and blending.

6. Value Addition in Agriculture

- Instead of depending only on traditional crop markets, farmers can connect with industrial demand through biofuel feedstock.

Conclusion

The E20 push has opened a new opportunity for Telangana by connecting **clean fuel policy with rural industrial growth**. While consumer concerns about mileage and vehicle compatibility need clear communication, the policy can benefit ethanol producers, farmers, transporters and allied service providers. If implemented with efficient procurement, timely payments and scientific regulation, E20 can become a meaningful development lever for Telangana's agriculture-linked industrial economy.

Tughluq Coins in Warangal: Numismatic Evidence of Medieval Political Authority

Source: [Deccan Chronicle](#)

Relevance: TGPSC Telangana History, Kakatiya Kingdom, Warangal, Medieval Deccan, Numismatics

Important Key Words

Prelims

- Ghiyath al-Din Tughluq, Adil Coin, ½ Paika, Warangal, Sultanpur, Kakatiya Kingdom, Kapaya Nayaka, Daulatabad, Numismatics

Mains

- Coinage and sovereignty, Delhi Sultanate expansion, Kakatiya decline, administrative control, medieval Deccan, material sources of history

Why in News?

A rare copper Adil / ½ Paika coin of Ghiyath al-Din Tughluq has drawn attention for its historical

value. The coin was minted at **Warangal**, which was renamed **Sultanpur** after its conquest by the Delhi Sultanate in 1323 CE.



Key Features of the Coin

The coin provides direct evidence of Tughluq authority in Warangal after the fall of the Kakatiya kingdom.

Feature	Details
Coin type	Copper Adil / ½ Paika
Ruler	Ghiyath al-Din Tughluq
Period	1320-1325 CE
Weight	2.09 grams
Mint location	Warangal, renamed Sultanpur
Obverse inscription	"Adl Ghiyathi"
Reverse inscription	"bi-Sultanpur"

The inscription "**bi-Sultanpur**" is historically important because it confirms the name given to Warangal during Tughluq rule.

Historical Background

- Warangal was an important centre of the **Kakatiya kingdom**. In 1323 CE, it came under the control of the **Delhi Sultanate**.
- After the conquest, Warangal was renamed **Sultanpur**. Later, in 1336 CE, local leaders led by **Kapaya Nayaka** drove out the Tughluq forces, and the city came to be known again as **Warangal**.
- This transition marks one of the major political changes in medieval Telangana.

Why the Coin is Important

1. Evidence of the Fall of the Kakatiyas

- The coin is a material record of the collapse of the **Kakatiya kingdom** and the establishment of Tughluq rule in Telangana.

2. Proof of Warangal's Renaming

- The inscription "**bi-Sultanpur**" confirms that Warangal was known as **Sultanpur** during that period.

3. Symbol of Political Authority

- By minting coins locally, the Tughluq rulers asserted their authority over newly acquired territory.

4. Record of Administrative Change

- The coin reflects the administrative changes introduced after the Delhi Sultanate extended its control into Telangana.

5. Numismatic Testimony

- It is not merely a relic of medieval trade; it is a numismatic source that helps reconstruct political history.

Conclusion

The rare copper **Adil / ½ Paika** coin minted at Warangal is an important historical source. Its inscription "**bi-Sultanpur**" confirms Warangal's renamed identity under Tughluq rule and records the political shift that followed the fall of the Kakatiya kingdom. It shows how coinage functioned as a tool of authority, administration and territorial control in medieval India.

World Applied Anthropology Congress 2026: Climate Change, Migration and Human Resilience

Source: [The Hindu](#)

Relevance: TGPSC Climate Migration, Sustainable Development, Social Issues,

Important Key Words

Prelims

- World Applied Anthropology



Congress 2026, ICRISAT, Anthropological Association for Humankind, Hyderabad Declaration, Climate Change, Migration, Applied Anthropology

Mains

- People-centred adaptation, inclusive migration governance, climate resilience, evidence-based policymaking, sustainable development, interdisciplinary collaboration

Why in News?

The **World Applied Anthropology Congress 2026** concluded at the **International Crops Research Institute for the Semi-Arid Tropics, Hyderabad**. The three-day congress was organised by the **Anthropological Association for Humankind** and brought together scholars, policymakers, civil society representatives and international delegates. A major outcome of the event was the adoption of the **Hyderabad Declaration on Climate Change and Migration**, which calls for **people-centred, inclusive and evidence-based approaches** to climate adaptation and migration governance.

About the Congress

- The World Applied Anthropology Congress 2026 was a three-day international academic and policy platform held at **ICRISAT, Hyderabad**.
- The congress brought together around **140 participants**, including nearly **30 international delegates**. Scholars and experts from more than **60 universities**

and research institutions participated, along with representatives from civil society organisations and government departments.

The event included:

- keynote lectures
- panel discussions
- thematic sessions
- research presentations
- interactive dialogues

The participation of academics, policymakers, scientists and civil society representatives shows the growing importance of interdisciplinary approaches in dealing with climate and migration-related challenges.

Theme of the Congress

The congress was held under the theme:

- **“Interwoven Worlds: Anthropological Engagement with the Global and Local Challenges of Climate Change and Migration.”**

This theme highlights that climate change and migration are not isolated issues. They are connected with livelihood, culture, identity, displacement, adaptation, governance and social justice.

- The phrase **global and local challenges** is important because climate change is a global phenomenon, but its impacts are experienced differently by local communities.

What is Applied Anthropology?

Applied anthropology refers to the practical use of anthropological knowledge to solve real-world human problems.



It studies people, communities, cultures and social systems, and applies this understanding to areas such as:

- migration
- climate adaptation
- livelihood security
- public policy
- health and development
- community resilience

In the context of climate change, applied anthropology helps policymakers understand how communities experience environmental stress,

migration pressure and adaptation challenges.

Climate Change and Migration Link

Climate change can influence migration by affecting the basic conditions of human life.

1. Livelihood Stress

- Changes in rainfall, temperature and local ecosystems can affect agriculture, water availability and rural livelihoods.

2. Displacement Risks

- Climate-related events may force



vulnerable communities to move temporarily or permanently.

3. Unequal Impact

- Poor, marginalised and climate-sensitive communities often face higher risks because they have fewer resources to adapt.

4. Social and Cultural Impact

- Migration is not only an economic issue. It affects family structures, community networks, identity and social stability.
- Thus, climate migration requires a human-centred approach, not merely an administrative or security-oriented approach.

Hyderabad Declaration

A key outcome of the congress was the adoption of the **Hyderabad Declaration on Climate Change and Migration**.

The Declaration calls for:

1. People-Centred Approaches

- Policies must place affected communities at the centre of climate adaptation and migration planning.

2. Inclusive Governance

- Migration governance should include vulnerable communities, civil society, experts and local institutions.

3. Evidence-Based Policy

- Decisions must be guided by research, field data and community-level realities.

4. Climate Adaptation

- The Declaration emphasises adaptation strategies that strengthen the resilience of people and communities.

5. Human Resilience

- It recognises that sustainable development must focus on the capacity of communities to respond to climate and migration-related stress.

Conclusion

The World Applied Anthropology Congress 2026 highlighted the deep connection between **climate change, migration and human resilience**. The adoption of the **Hyderabad Declaration** marks an important step towards people-centred, inclusive and evidence-based approaches. As climate risks increase, applied anthropology can play a crucial role in shaping humane, sustainable and locally grounded policy responses.

Eco-Tourism and Tiger Conservation in Telangana: Building a Community-Based Tiger Economy

Source: [The Hindu](#)

Relevance: TGPSC Environment, Tiger Reserves, Wildlife Sanctuaries, Eco-Tourism, Tribal Livelihoods

Important Key Words

Prelims

- International Tiger Day, Amrabad Tiger Reserve, Kawal Tiger Reserve, Chenchu Tribe, Tiger Economy, Eco-



tourism, Forest Rights Act, Nallamala Forests, Deccan Ecosystem

Mains

- Community-based conservation, conservation-linked livelihood, responsible eco-tourism, anti-poaching strategy, participatory forest governance, habitat protection, local livelihood security

Why in News?

On **International Tiger Day** (July 29), Telangana presents two sharply different tiger conservation stories. In southern Telangana, the **Amrabad Tiger Reserve** has emerged as a model of successful conservation. In northern Telangana, the **Kawal Tiger Reserve** continues to face challenges such as tiger disappearances, poaching and forest pressure.

Telangana's Contrasting Tiger Conservation Story

Telangana's tiger conservation landscape shows a clear north-south divide.

Amrabad Tiger Reserve: Southern Success

- The **Amrabad Tiger Reserve** has seen a strong increase in tiger numbers. It is located in the **Nallamala forest range** and is known for rugged terrain, deep valleys and dense forests. It shelters Bengal tigers, Indian pangolins, wild dogs and several bird species.
- The reserve also has cultural and heritage value through **prehistoric rock paintings** and the sacred **Uma Maheshwaram Temple**.

Kawal Tiger Reserve: Northern Concern

- The **Kawal Tiger Reserve** in northern Telangana has faced concerns related to tiger disappearances and poaching. It is part of the **Deccan ecosystem** and serves as a corridor for tigers moving from Maharashtra.
- Kawal has dense teak forests and riverine ecosystems and supports species such as tigers, leopards, sloth bears, sambar deer and Indian bison. However, conservation outcomes remain weak due to socio-economic and governance challenges.

Why Amrabad is a Success Model

The success of Amrabad is linked to the role of the **Chenchu community**.

Community Participation

Members of the Chenchu community support conservation as:

- wildlife watchers
- fire prevention helpers
- habitat protection partners
- monitoring support workers

This has helped create local ownership over tiger conservation.

Lower Pressure on Forest Land

- The Chenchu community has limited dependence on agriculture as a tool of economic advancement. Under **Forest Rights Act** settlements, many families received small landholdings, indicating relatively lower pressure for forest conversion.



Conservation as Partnership

- Amrabad shows that tiger conservation improves when local communities are not treated as outsiders, but as partners in forest protection.

Why Kawal is Facing Challenges

Northern Telangana has a different socio-economic setting.

Agriculture-Based Livelihoods

- A large section of the local population depends on agriculture. This creates pressure for expanding cultivated land.

Forest Felling and Habitat Pressure

- The drive for economic uplift has led to forest clearing for agricultural expansion in some areas.

Poaching and Tiger Disappearances

- Kawal has witnessed concerns over poaching and tiger disappearances, weakening conservation confidence.

Weak Community Incentive

- If local people do not benefit from tiger conservation, wildlife protection may be seen as a restriction rather than an opportunity.

This is why experts emphasise a **Tiger Economy** based on eco-tourism and conservation-linked livelihoods.

Telangana's Eco-Tourism Potential

Telangana has rich wildlife, dense forests, rivers, hills, waterfalls, sanctuaries, national parks and biodiversity parks. These landscapes provide a strong base for **responsible eco-tourism**.

Major Wildlife and Eco-Tourism Sites

1. Kawal Tiger Reserve

- Located in the Adilabad region, it is part of the **Deccan ecosystem** and serves as a tiger corridor from Maharashtra. Its teak forests and riverine habitats make it an important biodiversity zone.

2. Amrabad Tiger Reserve

- Located in the Nallamala forests, it is the **largest tiger reserve in South India**. It combines wildlife, rugged terrain, cultural sites and forest-based tourism potential.

3. Eturnagaram Wildlife Sanctuary

- One of the oldest wildlife sanctuaries in Telangana, it has mixed deciduous forests and the perennial **Godavari River**. It also has tribal communities that coexist with nature.

4. Pakhal Wildlife Sanctuary

- Located around **Pakhal Lake**, it supports leopards, wild boars, nilgai and migratory birds. The lake adds aquatic biodiversity value.

5. Kinnerasani Wildlife Sanctuary

- Located near the **Kinnerasani River**, it has dense forests, wildlife diversity and scenic landscapes linked with the Kinnerasani Dam.

6. Manjeera Wildlife Sanctuary

- A major wetland ecosystem, it supports marsh crocodiles, freshwater turtles and migratory birds such as painted storks and pelicans.

7. KBR National Park

- Located in Hyderabad, it acts as a green lung of the city and supports peacocks, pangolins, birds, reptiles and insects.



8. Mahavir Harina Vanasthali National Park

- Known for its **blackbuck population**, it also supports chitals, porcupines and migratory birds.

9. Shamirpet Deer Park

- A nature-based recreation site with deer, peacocks and birdwatching opportunities near Shamirpet Lake.

10. Mrugavani National Park

- A small but important national park near Hyderabad, with spotted deer, wild boars, monitor lizards and an eco-tourism centre for education.

These sites show that Telangana has the natural base to promote eco-tourism as a conservation and livelihood tool.

How Eco-Tourism Helps Conservation

1. Creates Local Livelihoods

- Eco-tourism can provide jobs to local youth as guides, watchers, drivers, hospitality workers and local service providers.

2. Builds Local Support for Tigers

- When wildlife becomes a source of income and pride, communities are more likely to support tiger protection.

3. Reduces Poaching Incentives

- Conservation-linked income can reduce

dependence on illegal activities such as poaching.

4. Supports Habitat Protection

- Local communities can help in fire prevention, monitoring, reporting suspicious activities and protecting forest areas.

5. Promotes Conservation Education

- Eco-tourism centres and guided experiences can increase public awareness about biodiversity.

6. Strengthens Ecological Balance

- Protected areas conserve endangered species and maintain ecological stability when tourism is properly regulated.

Conclusion

Telangana's tiger conservation story shows that wildlife protection cannot succeed through enforcement alone. The success of **Amrabad Tiger Reserve** highlights the value of community partnership, while the challenges in **Kawal Tiger Reserve** reveal the danger of poaching, habitat pressure and weak local incentives. A responsible **eco-tourism-based Tiger Economy** can turn local communities into stakeholders, protect tiger habitats and strengthen Telangana's rich natural heritage.

Hyderabad Start-up Ecosystem: Talent, Infrastructure and the Challenge of Scaling

Source: [Deccan Chronicle](#)

Relevance: TGPSC Telangana Economy,

Important Key Words

Prelims

- Hyderabad Start-up Readiness Index 2026, Start-up Ecosystem, Venture Funding, Global Capability Centres, Innovation Infrastructure, Growth Capital

Mains

- Innovation-led growth, start-up scaling, urban innovation ecosystem, talent economy, institutional support, market access, venture capital

Why in News?

Hyderabad has been recognised as a strong start-up and innovation ecosystem in the **Hyderabad Start-up Readiness Index 2026**, released by **Endiya Partners**. The report highlights that the city has built strong foundations through **talent, infrastructure and institutional support**, but start-ups now need better **growth capital and market access** to scale. The index is based on responses from **216 founders, investors, corporates and ecosystem stakeholders**.

Hyderabad's Start-up Ecosystem

- Hyderabad has emerged as one of India's important innovation centres over the last decade. The city is home to more than **10,000 start-ups** and has attracted over **\$3 billion in venture funding** across more than **384 deals since 2014**.
- It also hosts more than **355 Global Capability Centres**, accounting for nearly **20% of India's GCC base**. This shows that Hyderabad is not only a start-up hub, but also a major centre for enterprise innovation, technology services and corporate capability building.





Major Strengths of Hyderabad

The report identifies three major competitive advantages of Hyderabad.

1. Strong Infrastructure and Connectivity

- Infrastructure and connectivity emerged as Hyderabad's biggest advantage. Good urban infrastructure, transport connectivity and business facilities make the city attractive for start-ups and technology companies.

2. Availability of Talent

- Hyderabad has a strong pool of engineering, technology and enterprise talent. This helps start-ups build products, manage operations and scale teams efficiently.

3. Cost Efficiency

- Compared to some larger start-up hubs, Hyderabad offers better cost efficiency. This allows early-stage companies to manage operations with lower pressure on capital.

4. Institutional Support

- The city has built a supportive ecosystem through public institutions, start-up platforms, investors, corporates and policy support. Such institutional backing helps founders move from idea stage to growth stage.

Key Gaps in the Ecosystem

Despite strong foundations, the report identifies two key areas requiring attention.

1. Access to Growth Capital

- Start-ups need capital not only at the

idea stage but also at the scaling stage. Limited access to growth capital can prevent promising companies from expanding into larger markets.

2. Market Access

- Many start-ups struggle to reach customers, enterprises and global markets. Without strong market access, even good products may not become globally competitive businesses.

3. Need for Deeper Collaboration

- The next phase of growth requires stronger collaboration among **founders, investors, corporates and policymakers**. Innovation ecosystems grow faster when capital, talent, markets and institutions work together.

Role of Global Capability Centres

Hyderabad's large base of **Global Capability Centres** is a major advantage.

GCCs bring:

- enterprise technology expertise
- global business exposure
- skilled employment
- innovation culture
- demand for advanced digital solutions
- collaboration opportunities for start-ups

For start-ups, GCCs can become important partners, customers and innovation collaborators. This can help Hyderabad move from a start-up creation hub to a **scale-up and global innovation hub**.

Significance for Telangana and India

1. Innovation-Led Economic Growth



- Hyderabad's start-up ecosystem can support Telangana's shift towards a knowledge-driven economy.

2. Employment Generation

- Start-ups and GCCs create jobs for skilled youth in technology, management, design, data and enterprise services.

3. Strengthening India's Digital Economy

- A strong Hyderabad ecosystem adds to India's overall start-up and innovation capacity.

4. Regional Competitiveness

- Hyderabad's combination of talent, infrastructure and cost efficiency strengthens its position among major Indian start-up hubs.

5. Global Relevance

- With better access to capital and markets, Hyderabad can produce globally competitive companies.

Conclusion

Hyderabad has built a strong start-up ecosystem through **talent availability, infrastructure, cost efficiency and institutional support**. The city now stands at a crucial stage where the focus must shift from start-up creation to start-up scaling. Better access to **growth capital, market linkages and corporate collaboration** will determine whether Hyderabad can create the next generation of globally relevant companies.