# APTI PLUS OAS GAZETTE

## **JULY 2025**







**App for Revenue Services** 



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Pattachitra from Odisha gains Global Spotlight



**Greater Flamingo Sanctuary** in Dhanushkodi



Odisha bans Refined Sugar, restricts Salt in School Meals

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# **APTI PLUS OAS GAZETTE**

**JULY 2025** 

A House Journal of APTI PLUS



OPSC CURRENT AFFAIRS		
APPOINTMENTS	5	
AWARDS	6	
BOOKS & AUTHORS [CURRENT]	8	
BOOKS & AUTHORS [STATIC GK]	8	
SPORTS	8	
IMPORTANT DAYS	11	
ODISHA CURRENT AFFAIRS	13	
PROTECTED AREAS OF ODISHA (GK)	20	
SOME RIVERS IN ODISHA	21	
NATURAL SPRINGS AND HOT SPRINGS IN ODISHA	22	
KEY LAKES OF ODISHA	22	
SOME TEMPLES IN ODISHA	23	
SOME FREEDOM FIGHTERS OF ODISHA	23	
SOME FREEDOM FIGHTERS OF ODISHA WOMEN IN ODISHA'S FREEDOM STRUGGLE	23 24	
WOMEN IN ODISHA'S FREEDOM STRUGGLE	24	



# AS 2022

## **500+** Selections in OPSC OCS 2022

## **7 SELECTIONS IN TOP 10**



APTI PLUS



PRINKIL PRABIN PARIDA IGP

DEBABRATA GAUDA

SATYA S. PANIGRAHI

**RANK** 







RANK















































RANK 63 TSP & IGP



RANK 67



RACHITA MAHAPATRA RANK 68 RANK 70



RANK 71









RANK 54

TSP & IGP





RANK 82 RANK 83



SAURAV KUMAR RANJIT KALINGA ASISH SATPATHY RANK 86



RANK 90 RANK 92























RANK 125 RANK 137
CLASSROOM PROGRAM RANK 138 RANK 169 RANK 214 RANK 230 RANK 263
CLASSROOM PROGRAM CLASSROOM PROGRAM CLASSROOM PROGRAM CLASSROOM PROGRAM CLASSROOM PROGRAM **RANK 384 RANK 438** 











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### **SYLLABUS:**

CURRENT EVENTS OF NATIONAL AND INTERNATIONAL IMPORTANCE:
TO BE READ FROM THE IAS GAZETTE: COVERS - POLITY, GOVERNMENT SCHEMES, SCIENCE AND
TECHNOLOGY, ECONOMY, SECURITY, INTERNATIONAL RELATIONS, SECURITY, GEOGRAPHY, SOCIETY,
ENVIRONMENT AND ECOLOGY



## **APPOINTMENTS**

### Chief of DRDO

• Dr. Samir V Kamat, Chairman of DRDO, has been granted a second one-year extension till May 31, 2026, under Fundamental Rule 56(d), citing public interest. His leadership is considered crucial for advancing indigenous defence technologies. The Appointments Committee of the Cabinet (ACC) approved this extension, underlining the strategic importance of his ongoing contributions to national defence.

## Director of the Marine Products Export Development Authority (MPEDA)

- Ram Mohan M K has been appointed as the new Director of the Marine Products Export Development Authority (MPEDA).
- The Marine Products Export Development Authority (MPEDA), a statutory body under the Ministry of Commerce and Industry, was established on 24 August 1972 through the MPEDA Act, 1972, replacing the earlier Marine Products Export Promotion Council (1961). Headquartered in Kochi, MPEDA is tasked with promoting and regulating the export of marine products from India. It operates regional, subregional and trade offices in New Delhi, Tokyo and New York to strengthen global outreach.
- MPEDA offers services such as registration of export infrastructure, trade data dissemination, international marketing of Indian seafood and implementation of modernisation measures-including cold chain infrastructure, quality labs and aquaculture development. It also promotes brackish water aquaculture and deep-sea fishing through joint ventures and equity participation, India's ensuring seafood exports remain sustainable, high-quality and globally competitive.

### Chairman of UPSC

 Ajay Kumar, former Defence Secretary and a 1985-batch IAS officer of the Kerala cadre, has been appointed as the new Chairman of UPSC on

- May 14, 2025, following the end of Preeti Sudan's tenure. He played a pivotal role in defence reforms, including the CDS creation, Agniveer scheme and AtmaNirbhar Bharat in defence. As part of MeitY, he contributed to UPI, Aadhaar and GeM.
- The Union Public Service Commission (UPSC) is a constitutional body established under Part XIV of the Indian Constitution to recruit officers for the All India Services and Central Civil Services (Group A and B). Headquartered at Dholpur House, New Delhi, it operates independently and reports directly to the President of India. Though its advice is not binding, UPSC holds a high degree of autonomy, akin to the judiciary and the Election Commission.

### **Executive Chairman of NALSA**

Justice Surya Kant, a senior judge of the Supreme Court, has been appointed as the new Executive Chairman of NALSA effective May 14, 2025, succeeding Justice BR Gavai. Appointed by the President of India under the Legal Services Authorities Act, 1987, his elevation follows the convention of nominating the second senior-most SC judge. Known for promoting legal aid and access to justice, Justice Kant previously served as Chief Justice of the Himachal Pradesh High NALSA, established in 1995 headquartered in New Delhi, works to ensure free legal services to the underprivileged, in line with Article 39-A of the Constitution. His appointment is seen as a key step towards enhancing social justice and strengthening legal outreach.

### 52nd Chief Justice of India (CJI)

 Justice B.R. Gavai was appointed as the 52nd Chief Justice of India (CJI). The CJI is the highest-ranking judge of the Supreme Court and head of the Indian judiciary, appointed by the President based on the recommendation of the outgoing CJI and consultations with other judges, as per Article 124(2) of the Constitution. The Chief





Justice serves until the age of 65 or until removed through impeachment under Article 124(4), which requires a two-thirds majority in both Houses of Parliament for proven misbehavior or incapacity. Traditionally, the most senior judge is appointed as CJI, although this convention has been broken twice in history. The Chief Justice allocates cases, forms constitutional benches, oversees court administration and appoints court officials. Additionally, the CJI acts as the de facto Chancellor of the National Law School of India University and Visitor of the National Law University, Delhi.

## Chairman of the National Security Advisory Board (NSAB)

 Alok Joshi, former R&AW chief, has been appointed as the new Chairman of the National Security Advisory Board (NSAB) amid rising

- tensions with **Pakistan** following the **Pahalgam** terror attack.
- The National Security Advisory Board (NSAB), established in 1998, functions under the National Security Council Secretariat (NSCS) and works in coordination with the Strategic Policy Group (SPG) and Joint Intelligence Committee (JIC). It advises the National Security Council (NSC) on issues related to external threats, internal stability and emerging challenges, offering independent, long-term policy analysis. NSAB played a crucial role in shaping India's Nuclear Doctrine (2001) and the National Security Review (2007). Headed by a Chairperson, usually a senior former official, it includes members from diplomacy, defence, academia, economics and science. The board has no fixed size, allowing flexibility based on evolving needs, with members appointed for a two-year term.



### **AWARDS**

## National e-Governance Awards 2025

### **Context**

 Rohini Gram Panchayat, a fully tribal village in Dhule district, Maharashtra, has won the Gold Award at the National e-Governance Awards 2025, gaining national recognition for its digital governance initiatives.

### **Details**

The National e-Governance Awards Scheme, one of India's most prestigious digital governance recognitions, aims to promote excellence in e-Governance implementation. In 2025, 16 awards were conferred--10 Gold and 6 Silver--across six categories, including AI innovation, cyber security and grassroot service delivery. Winners receive a trophy, certificate and Rs 10 lakh (Gold) or Rs 5 lakh (Silver) to support public welfare initiatives. The scheme is administered by the Ministry of Personnel, Public Grievances & Pensions. Rohini Gram **Panchayat** in Maharashtra the Gold won Award for outstanding digital governance at the grassroots level.

### Miss World 2025

### Context

 Opal SuchataChuangsri of Thailand has been crowned Miss World 2025 in in Hyderabad, securing **Thailand's first-ever win** in the pageant's history. **Hasset Dereje Admassu** of **Ethiopia** was the **runner-up**.

### **Details**

• Miss World is the oldest surviving international beauty pageant, founded in 1951 in the United Kingdom by Eric Morley. After his death in 2000, his wife Julia Morley took over the leadership. Alongside Miss Universe, Miss Earth and Miss International, Miss World is part of the Big Four beauty pageants. In the 1980s, it introduced the "Beauty With a Purpose" theme, emphasizing intelligence and humanitarian work.

### National Florence Nightingale Awards 2025 Context

 President Droupadi Murmu presented the National Florence Nightingale Awards 2025 to 15 nursing professionals on May 30 at Rashtrapati Bhavan for their outstanding service to public health.

### **Details**

 Instituted in 1973 by the Ministry of Health and Family Welfare, the award recognizes excellence among Registered Auxiliary Nurses & Midwives, Registered Nurses and Midwives and Registered Lady Visitors, employed across Central, State/UTs and Voluntary Organizations. Each





recipient receives a Certificate of Merit, a cash award of ₹1,00,000 and a medal. In a significant move to strengthen nursing education and services, the Government of India has set up 157 nursing colleges and enacted the National Nursing and Midwifery Commission (NNMC) Act, 2023, establishing the National Nursing and Midwifery Commission to regulate and enhance the quality of nursing and midwifery education across the country.

### **International Booker Prize 2025**

### Context

 Banu Mushtaq made history by becoming the first Kannada author to win the International Booker Prize 2025 for her short story collection *Heart* Lamp, translated into English by Deepa Bhasthi.

### **Details**

- A former journalist and now a lawyer, Banu Mushtaq is also known for her association with the Bandaya Movement, advocating literature as a tool for social change. Heart Lamp reflects Banu's own experiences and observations from Karnataka, addressing themes like religious orthodoxy, patriarchy and women's agency.
- The International Booker Prize, formerly the Man Booker International Prize, is a prestigious literary award based in the United Kingdom, introduced in 2004 to complement the Booker Prize. Initially awarded biennially (2005–2015) to a living author for their entire body of work available in English, it celebrated sustained contributions to global fiction. However, since 2016, the format changed to an annual prize for a single work of fiction or short stories translated into English and published in the UK or Ireland. The £50,000 prize is equally shared between the author and translator, highlighting the vital role of translation in global literature.

## **Jnanpith Award**

### **Context**

 The 58th Jnanpith Award was conferred on Gulzar and Rambhadracharya by President Droupadi Murmu for their outstanding literary contributions.

### **Details**

 The Jnanpith Award, instituted in 1961, is India's highest literary honour, presented annually by the Bharatiya Jnanpith for an author's outstanding contribution to literature. It is conferred only on Indian writers writing in languages listed in the

- **Eighth Schedule** of the Constitution or in **English**. **Posthumous awards are not given.**
- Initially awarded for an author's most outstanding work from 1965 to 1981, the first recipient was G. Sankara Kurup in 1965 for Odakkuzhal (Malayalam). Since then, only works from the preceding 20 years are considered (excluding the award year). The cash prize, originally modest, was raised to ₹1.5 lakh in 1981 and as of 2015, stands at ₹11 lakh.
- The award includes a citation, a bronze Saraswati idol and a cash component. So far, 65 authors, including 8 women, have been honoured. Ashapoorna Devi was the first woman recipient in 1976 for her Bengali novel Prothom Protishruti.

### 2025 World Food Prize

#### Context

Mariangela Hungria, a renowned Brazilian microbiologist, has been awarded the 2025 World Food Prize for her pioneering work in biological nitrogen fixation--a sustainable method that enhances crop growth by naturally enriching soil nitrogen, thereby reducing dependency on chemical fertilizers. Her innovations have played a transformative role in Brazil's agricultural productivity and sustainability.

### **Details**

The World Food Prize, often referred to as the "Nobel Prize for Food and Agriculture", was conceived by Nobel laureate Norman Borlaug and established in 1986 with the support of General Foods. It recognizes individuals who improved the quality, quantity, have food worldwide, availability with contributions ranging from soil science to policy and hunger alleviation. Since 1987, it has been awarded annually by the World Food Prize Foundation, headquartered in Des Moines, Iowa, where laureates are honored at the Iowa State Capitol with a \$500,000 prize, a diploma and a commemorative sculpture by Saul Bass. The Foundation also conducts programs like the Borlaug Symposium, Iowa Hunger Summit and internships. After Borlaug, Swaminathan became the first laureate and later chaired the selection committee.

## **Pulitzer Prizes 2025**

### **Context**

 The Pulitzer Prizes 2025, among the most prestigious global awards in journalism and the





arts, were announced by the **Pulitzer Prize Board** to honour excellence in impactful reporting and storytelling.

### **Details**

- The New York Times led with four awards, including Breaking News Photography for Doug Mills' iconic image of the Trump assassination attempt. Other key winners include The Washington Post for Breaking News Reporting, Reuters for its investigation "Fentanyl Express" and The Wall Street Journal for its deep dive into Elon Musk. The New Yorker won three awards--in Commentary, Feature Photography and Audio Reporting. The Public Service prize went to
- Kavitha Surana and team for exposing maternal deaths linked to abortion laws.
- The Pulitzer Prizes, established in 1917 through the will of newspaper publisher Joseph Pulitzer, are prestigious annual awards presented by Columbia University, New York, to recognize excellence in journalism, literature, drama and music in the United States. There are 23 award categories, including Public Service, Investigative Reporting, Fiction, Poetry and Audio Reporting. Winners receive a certificate and \$15,000, except in the Public Service category, where a gold medal is awarded.



## **BOOKS & AUTHORS [CURRENT]**

Book	Author and Details	
India: 5000 Years of History	Audrey Truschke: Highlights key empires, cultural shifts and contested	
on the Subcontinent	narratives shaping the subcontinent's identity.	
Indira Gandhi and the Years	TCA Srinivasa Raghavan. Published on May 23, 2025, the book explores the	
that Transformed India	power struggle among the executive, legislature and judiciary during Indira	
	Gandhi's Emergency rule (1975-1977).	
PMO Through the Ages	Himanshu Roy	



## **BOOKS & AUTHORS [STATIC GK]**

BOOK	AUTHOR
The Wonder That Was India	A. L. Basham
Whole Numbers and Half Truths	Rukmini S.
The Struggle for India's Soul	Shashi Tharoor
The Problem of the Rupee: Its Origin and Its Solution	B. R. Ambedkar
Gita Rahasya	Bal Gangadhar Tilak
Young India: An Interpretation and a History	Lala Lajpat Rai
Prison Diary	Jayaprakash Narayan
The Golden Threshold	Sarojini Naidu
The Home and the World	Rabindranath Tagore
Nationality and Empire	Bipin Chandra Pal
Pilgrimage to Freedom	K. M. Munshi



## **SPORTS**

## Global Ambassador for the Esports World Cup 2025 (EWC)

### **Context**

 Cristiano Ronaldo, Portuguese footballer and fivetime Ballon d'Or winner, has been officially named the Global Ambassador for the Esports World Cup 2025 (EWC) by the Esports World Cup Foundation (EWCF)

**Details** 





Esports World Cup (EWC) is the world's largest annual esports event, held in Riyadh, Saudi Arabia (July-August), organized by the Esports World Cup Foundation. Launched in 2024 as a successor to Gamers8, it features 25+ games and a \$70 million+ prize pool (2025). Key features include the Club Championship (\$20 million) and introduction of chess (ambassador: Magnus Carlsen). Founded by Crown Prince Mohammed bin Salman in 2023, EWC faces criticism as a sportswashing tool amid Saudi Arabia's human rights concerns.

### Wimbledon

### **Context**

Wimbledon 2025 has announced a record prize pool of £53.5 million (~\$73 million), with £3 million (~\$4 million) each for men's and women's singles champions--an 11.1% increase from 2024.

### **Details**

Wimbledon is the oldest and most prestigious tennis tournament in the world, held annually since 1877 in Wimbledon, London, on outdoor grass courts. Organized by the All England Club with the Lawn Tennis Association, it is the third Grand Slam of the year, following the Australian Open and French Open. The 2025 edition (June 30 - July 13) will be the first to use only electronic line-calling, ending the use of human line judges in its 147-year history.

### **ICC Hall of Fame**

### Context

 MS Dhoni, former India captain and the only skipper to win all three ICC white-ball trophies, was inducted into the ICC Hall of Fame in 2025, becoming the 11th Indian cricketer to receive this honour.

### **Details**

- Dhoni led India to the 2007 T20 World Cup, 2011 ODI World Cup and 2013 Champions Trophy. Over his 16-year career, he played 350 ODIs, scoring 10,773 runs and 90 Tests, amassing 4,876 runs, while excelling as a wicketkeeper. The 2025 Hall of Fame class also included legends like Matthew Hayden, Daniel Vettori, Hashim Amla, Graeme Smith, Sana Mir and Sarah Taylor.
- The ICC Cricket Hall of Fame, launched in 2009, honours cricket legends from the sport's long history. It started with 55 FICA inductees, ranging from W.G. Grace to Graham Gooch. New members are added annually during the ICC

Awards. As of 2025, there are 122 inductees -- 85 from England, Australia and West Indies and 37 from other Test nations. Notably, in 2025, MS Dhoni, Graeme Smith and Daniel Vettori -- all 2011 World Cup captains -- were inducted. There are 15 women inductees, with Rachael Heyhoe Flint being the first (2010) and Sana Mir and Sarah Taylor inducted in 2025.

### Sonneborne-Berger tiebreak system

### Context

 Indian GM Aravindh Chithambaram clinched victory at the 6th Stepan Avagyan Memorial chess tournament held in Jermuk, Armenia, scoring 6.5 points in 9 rounds.

### **Details**

- He tied with R. Praggnanandhaa, but won on the Sonneborne-Berger tiebreak system, which evaluates the strength of opponents beaten. Aravindh remained unbeaten with 4 wins and 5 draws, defeating Aram Hakobyan in the final round. This adds to his stellar 2025, having also won the Prague Chess Festival Masters earlier. The tournament continues to grow as a significant fixture in the global chess calendar.
- The Sonneborn-Berger score, also known as the Neustadtl score, is a widely used chess tiebreak system, especially in Round Robin tournaments. It is calculated by adding the scores of defeated opponents and half the scores of drawn rewarding strong performances opponents, against higher-ranked players. Originally proposed by Hermann Neustadtl in 1882, it differs from earlier variants by Oscar Gelbfuhs and the non-Neustadtl version supported by Sonneborn and Berger.

### **Norway Chess**

#### Context

Magnus Carlsen clinched his seventh Norway
 Chess title in 2025 after a dramatic final round in
 Stavanger, drawing against Arjun Erigaisi to edge
 out Fabiano Caruana and D Gukesh.

### **Details**

 Norway Chess is a prestigious annual closed chess tournament held typically between May and June in Stavanger, Norway. It began in 2013 with ten top players, including seven of the world's highest-rated grandmasters and was won by Sergey Karjakin, with Magnus Carlsen and Hikaru Nakamura sharing second place. In 2015, Norway Chess joined the inaugural Grand Chess





**Tour** but later withdrew to maintain its independent status as a premier event.

## 2025 Asian Athletics Championships

### **Context**

India secured a strong second place at the 2025
 Asian Athletics Championships in Gumi, South
 Korea, with a total of 24 medals--8 gold, 10 silver and 6 bronze.

### **Details**

The World Athletics Championships--formerly the IAAF World Championships in Athletics until 2019--are the premier biennial global competition for outdoor track and field athletics, organized by World Athletics. Established officially in 1983 in Helsinki, the championships arose after the IOC removed the men's 50 km walk from the 1976 Olympics, prompting the IAAF to hold separate world events starting in 1976. Initially held every four years, the championships switched to a two-year cycle from 1991 onward. In 2024, World Athletics announced the World Athletics Ultimate Championship, a new elite biennial event starting 2026 featuring only the top 16 athletes per discipline.

## Indian Premier League (IPL) 2025

### Context

 Royal Challengers Bangalore (RCB) finally clinched their maiden IPL title in 2025.

#### Details

 They defeated Punjab Kings by 6 runs in a thrilling final at Ahmedabad's Narendra Modi Stadium.

### Princess of Asturias Award for Sports 2025 Context

 Serena Williams, the legendary tennis icon, has been conferred the Princess of Asturias Award for Sports 2025

### **Details**

- The award celebrates Serena's dual legacy--her dominance on the court with 23 Grand Slam singles titles and 73 overall and her voice for gender and racial equity off the court.
- The Princess of Asturias Awards are prestigious international honours awarded annually by the Princess of Asturias Foundation in Spain to individuals and institutions for outstanding achievements in sciences, humanities, public affairs and more. Held in October at Teatro Campoamor, Oviedo, the ceremony is presided

over by the **Princess of Asturias**. Winners receive a **Joan Miró sculpture**, a diploma, a foundation pin and a €50,000 prize. In 2004, UNESCO recognized the awards as an "exceptional contribution to the cultural heritage of Humanity".

## Nottwil World Para Athletics Grand Prix Context

 India's Mahendra Gurjar set a world record in the men's javelin F42 category at the Nottwil World Para Athletics Grand Prix in Switzerland with a throw of 61.17m, surpassing the previous 2022 record of 59.19m.

### **Details**

- He also clinched gold in long jump T42 with a 5.59m leap, marking his first event in that category and earning him the top Asia ranking.
- Nottwil World Para Athletics Grand Prix 2025
  was held in Nottwil, Switzerland, from May 23–
  25, with classifications from May 20–22. The
  event featured 254 para-athletes from 40 countries
  competing in various track and field events.

## First Indian to Win Formula 2 Race Context

 Kush Maini made Indian motorsport history by winning the Formula 2 Sprint Race at the Monaco Grand Prix, becoming the first Indian to achieve this feat.

### **Details**

 The Monaco Grand Prix, held annually on the Circuit de Monaco since 1929, is considered one of the most prestigious Formula One races in the world. Alongside the Indianapolis 500 and the 24 Hours of Le Mans, it forms the Triple Crown of Motorsport.

### Miao Lijie Named Ambassador for FIBA Women's Asia Cup 2025

### **Context**

 Chinese basketball legend Miao Lijie has been appointed as the ambassador for the upcoming FIBA Women's Asia Cup 2025, set to take place in Shenzhen, China, from July 13 to 20, 2025.

### **Details**

FIBA Women's Asia Cup is a biennial international basketball tournament for women's national teams from FIBA Asia and, since 2017, FIBA Oceania. Originally known as the Asian Basketball Confederation (ABC) Championship until 2001 and later the FIBA Asia Women's





Championship until 2015, the tournament showcases the top women's basketball talent from across Asia and Oceania, serving as a key qualifier

for global events like the FIBA Women's World Cup and the Olympics.



## **IMPORTANT DAYS**

Date	Day/Event			
May				
1 May	International Labour Day / May Day, Maharashtra Day, Gujarat Day			
2 May	World Tuna Day			
3 May	World Press Freedom Day			
4 May	World Portuguese Language Day			
6 May	International No Diet Day, World Asthma Day (First Tuesday)			
7 May	World Athletics Day			
8 May World Red Cross Day, World Thalassaemia Day				
9 May Rabindranath Tagore Jayanti, Maharana Pratap Jayanti				
10 May	World Lupus Day			
11 May	National Technology Day, Mother's Day (Second Sunday)			
12 May International Nurses Day, Buddha Purnima (Buddha Jayanti)				
15 May	International Day of Families			
16 May	National Dengue Day, International Day of Light, National Endangered Species Day (Third			
	Friday)			
17 May	World Telecommunication Day, World Hypertension Day, Armed Forces Day (Third Saturday)			
18 May	World AIDS Vaccine Day (HIV Vaccine Awareness Day), International Museum Day			
20 May	International HR Day			
21 May	National Anti-Terrorism Day, International Tea Day			
22 May	International Day for Biological Diversity			
23 May	World Turtle Day			
24 May	National Brother's Day			
25 May	Africa Day			
26 May	National Memorial Day (Last Monday of May)			
30 May	International Day of Potato, Goa Statehood Day, Hindi Journalism Day			
31 May	World No Tobacco Day (Anti-Tobacco Day)			
	June			
1 June	World Milk Day, Global Day of Parents			
2 June	International Sex Workers' Day, Telangana Formation Day			
3 June	World Bicycle Day			
4 June	International Day of Innocent Children Victims of Aggression			
5 June	World Environment Day			
7 June	World Food Safety Day			
8 June	World Oceans Day, World Brain Tumour Day			
12 June	World Day Against Child Labour			
14 June	World Blood Donor Day			
15 June	Father's Day, World Elder Abuse Awareness Day			







### Subarnarekha River

#### Context

- In July 2025, **Subarnarekha River** caused floods in **Balasore district**, Odisha.
- Though the water level receded below the danger mark (9.17m at Rajghat vs danger level 10.36m), over 15 panchayats and 30 villages in Bhograi block remained marooned.
- Crops destroyed, roads submerged and IMD warned of further rainfall, escalating vulnerability.

### Subarnarekha River

• Length: 395 km

• **Basin Area**: 18,951 sq. km

States Covered: Jharkhand, West Bengal, Odisha

• Mouth: Bay of Bengal at Kirtania, Odisha

• Source: Piska/Nagri near Ranchi, Chota Nagpur Plateau

### **Course of the River**

- Originates near Ranchi (Jharkhand)
- Flows through: Ranchi → Jamshedpur → Paschim Medinipur (WB) → Balasore (Odisha)
- Empties into Bay of Bengal near **Talsari**, Balasore

### **Major Tributaries**

- Left: Dulang River
- **Right**: Kharkai, Kanchi, Karkari, Raru, Garru Rivers.
- Confluence: Kharkai meets Subarnarekha at Sonari, Jamshedpur.

### Flood-Prone Areas in Odisha

- Coastal Odisha, especially:
  - o Jaleswar
  - o Bhograi
  - Baliapal
- Historic flood years: 1997, 2007, 2009, 2025
- Noted for flash floods due to heavy upstream rainfall.

### **Major Projects**

- Chandil Dam (Jharkhand): Multi-purpose reservoir, 1971
- Galudih Barrage (Jharkhand-Odisha border)
- Icha Dam (Kharkai river)
- Subarnarekha Multipurpose Project: Irrigation, power, water supply.
- Kirtania Port Project: Deep-sea port at Subarnarekha mouth, Odisha.

### **Hundru Falls**

- Located in Jharkhand.
- Falls from 98 metres.
- Formed on Subarnarekha river -- a major tourist spot.

#### **Environmental Concerns**

- Pollution due to mining of copper and uranium in Jharkhand.
- Industrial effluents (e.g., from Muri aluminium plant) threaten tribal livelihoods.

### Simplipal National Park

### Context

• Zeenat, a Royal Bengal Tigress translocated to Similipal Tiger Reserve, is expected to give birth by September 2025 after mating with a melanistic tiger. This marks a significant step in tiger conservation and genetic diversification in India.

### **Basic Details**

- Located in Mayurbhanj district, Odisha, Similipal spans 2,750 sq. km. It is part of the Mayurbhanj Elephant Reserve, which also includes Hadgarh and Kuldiha Wildlife Sanctuaries.
- It was declared as:
  - Tiger Reserve in 1973
  - Wildlife Sanctuary in 1979
  - o National Park in 1980
  - o Biosphere Reserve in 1994
  - o UNESCO Biosphere Reserve in 2009

### Geography

- Located in the Eastern Ghats, with an average elevation of 900 m.
- Important peaks: Khairiburu (1178 m) and Meghasani (1158 m)
- Major rivers: Budhabalanga, Kharkai, Palpala,
   Deo
- Waterfalls: Barehipani (217 m) and Joranda (181 m)

### **Climate and Vegetation**

- Tropical moist deciduous forest dominated by sal, along with orchids and medicinal plants.
- Temperature: Up to 40°C in summer and around 14°C in winter.
- Prone to **cerebral malaria** and **forest fires**.

### Wildlife

- Home to 42 species of mammals, 242 species of birds and 30 species of reptiles.
- Flagship species: **Bengal tiger**, **Asian elephant**, gaur, chausingha
- Other fauna: Peafowl, hornbills, junglefowl, Mugger crocodile (under a 1979 conservation scheme)

#### **Conservation and Relocation**

 Villages like Jamunagarh and Barhakamuda were relocated, resulting in increased tiger sightings.





 However, there are concerns about forced relocations and unresolved claims under the Forest Rights Act.

### **Recent Issues**

- The **2021 forest fires** caused major **ecological damage** and **wildlife displacement**.
- Similipal remains vulnerable to fires, disease outbreaks and climate-related threats.

### **Indravati River**

### Context

 Over 15 passengers were rescued after their boat tilted and drifted in the Indravati River near Dashamantpur, Koraput. The incident highlights the risks of monsoon travel in interior river zones.

### **Origin and Course**

- The Indravati River originates in the Dandakaranya range near Mardiguda, Thuamul Rampur, Kalahandi, Odisha, at an elevation of 914 m.
- It flows westward through Kalahandi, Nabarangpur and Koraput, before forming the Odisha-Chhattisgarh border, then enters Bastar in Chhattisgarh.
- It joins the Godavari River near Somnoor Sangam, Gadchiroli, Maharashtra.

Total length: 535 km

o **Basin area**: 40,625 sq. km

#### **States Covered**

• Flows through **Odisha**, **Chhattisgarh**, **Maharashtra** and **Telangana**.

### **Tributaries**

- Right-bank: Bhaskel, Narangi, Kotri, Bandia, Nimbra
- Left-bank: Nandiraj
- Other minor tributaries include Jaura, Muran, Telengi and Kora rivers.

### **Indravati Dam and Hydropower**

- Upper Indravati Hydropower Project: Near Mukhiguda, Kalahandi, Odisha.
- Generates **600 MW**, one of the largest hydro projects in **Eastern India**.
- Diverts water into the Mahanadi basin for irrigation and power.
- Other proposed projects like Kutru I & II, Nugur I & II and Bhopalpatnam were scrapped due to ecological concerns.

#### **Environmental Significance**

- Chitrakoot Falls (near Jagdalpur) lie on Indravati but are declining due to check dam construction.
- Indravati National Park and Tiger Reserve are located in Chhattisgarh.

The river is the lifeline for Kalahandi,
 Nabarangpur and Bastar districts.

### **Machkund Dam**

### **Context**

Due to incessant rainfall in Koraput, Machkund
Dam neared capacity, prompting the opening of
two sluice gates--marking the first floodwater
inflow of the 2025 monsoon.

### **Location and River System**

- Jalaput Dam is located on the Sileru River, also known as Machkund River.
- The Sileru is a tributary of the Sabari River, which in turn joins the Godavari River.
- It originates from the Mudugal hills in Andhra Pradesh and forms a natural boundary with Odisha.

### **Technical Overview**

- Built in 1955, Jalaput Dam supports the Machkund Hydro-Electric Scheme (MHES).
- The dam **impounds 34.27 TMC** of water for **120 MW power generation**.
- Power is supplied to towns in Odisha (Koraput, Jeypore) and Andhra Pradesh (Visakhapatnam, Vijayawada).
- It is a joint project between Odisha and Andhra Pradesh.

### **Geographical Features**

- The river runs 48 km north through the **Padwa Valley** before plunging at **Duduma Falls**.
- Jalaput, earlier known as Tentaput, is a border village between Odisha (Koraput) and Andhra Pradesh (Alluri Sitharama Raju district).
- A bridge links both states: LF (Andhra side) and RF (Odisha side).

## Odisha Real Estate Regulatory Authority (ORERA) Reforms

#### Context

 In a move to strengthen the implementation of the Real Estate (Regulation and Development) Act, 2016 (RERA) in Odisha, the state government has introduced key reforms to enhance transparency, inter-departmental coordination and enforcement in the real estate sector.

### **About ORERA**

- The Odisha Real Estate Regulatory Authority (ORERA) was established on 7th October 2017 under Section 30 of the RERA Act, 2016, which came into force on 1st May 2017.
- ORERA serves as a quasi-judicial regulatory body to promote and regulate the real estate sector.





 Its primary focus is on protecting consumer interests and ensuring transparency in real estate dealings.

### **Key Provisions of the Act**

- Mandatory registration of all real estate projects before any advertisement or sale.
  - The Government of Odisha has banned sale deed registration if the project is not registered with ORERA.
- Public disclosure of all project details: approved building plans, layout, land status and encumbrances.
- Regulation of financial transactions related to each project.
- Consumer redressal for non-delivery of promised amenities.
- **Compensation provisions** for loss suffered by allottees or promoters due to non-compliance.

#### **Recent State-Level Reforms**

- Real-time notification of project approvals to ORERA by all planning and development authorities under H&UD.
- Development of a digital protocol for seamless data exchange.
- Integration of ORERA 2.0 with Bhulekh and SUJOG portals for cross-verification and data transparency.

### **Enforcement Mechanism Strengthened**

- Coordination with Revenue & Disaster Management Department to enforce orders and recover penalties under the Orissa Public Demands Recovery Act, 1962.
- Support from BDA/BMC for field enforcement.
- Launch of a monthly enforcement calendar.

### **Monitoring and Oversight**

- Institutionalisation of monthly coordination meetings between ORERA, Housing and Urban Development Department, Odisha and Revenue Departments.
- Collectors and tehsildars now report illegal real estate activities to ORERA.
- RERA implementation included in district collector review meetings.

### **Institutional Capacity Building**

- Priority filling of key ORERA posts like Joint Secretary (Admin) and Deputy Secretary (Enforcement).
- ORERA empowered to recruit retired government officials via open advertisements.

### **Grievance Redressal**

 Regular review meetings between ORERA and H&UD to address complaints in a time-bound manner.

### Significance

 These reforms represent a paradigm shift in Odisha's real estate governance, ensuring greater accountability, consumer protection and a more transparent ecosystem for buyers and developers alike.

### **Propylene Gas**

### Context

 A propylene gas tanker leak near the Odisha-Jharkhand border disrupted traffic on NH-49, triggering the evacuation of the area within a 2-km radius.

### What is Propylene?

- Propylene, also known as propene, is a colorless, flammable gas with a faint petroleum-like odor. It is a hydrocarbon with the chemical formula CH<sub>3</sub>CH=CH<sub>2</sub>, containing a double bond, making it part of the alkene family.
- Naturally occurs in **forest fires**, **vehicle exhaust** and **cigarette smoke**.
- It is the **second most important raw material** in the **petrochemical industry** after ethylene.

### **Production Methods**

- **Steam Cracking**: Main method using **naphtha** or **propane**. Produces about **15**% **propylene**.
- Fluid Catalytic Cracking (FCC): Uses gas oils under high temperature and pressure. Produces 20–25% propylene.
- Propane Dehydrogenation: "On-purpose" method using catalysts like platinum, chromia, or vanadium.
- **Methanol-to-Olefins (MTO)**: Converts methanol from syngas into **ethylene** and **propylene**.
- Olefin Metathesis: Uses rhenium or molybdenum catalysts to interconvert olefins.

#### **Uses of Propylene**

- Over 60% used to produce polypropylene, found in:
  - Packaging films, fibers, containers and bottle caps.
- Precursor to:
  - o Propylene oxide, acrylonitrile, cumene, acrylic acid and isopropyl alcohol.
- Used in **oxy-fuel welding**, **brazing** and **metal cutting**.
- Key component in the cumene process, producing acetone and phenol.

**Industrial Importance** 





- Global processing volume (2013): approx. **85** million tonnes.
- Production has grown in East Asia, particularly China and Singapore.
- Research continues into low-temperature oxidative dehydrogenation for cleaner production.

## Odisha bans Refined Sugar, restricts Salt in School Meals

### Context

 The Odisha government has taken a landmark decision to ban refined sugar and limit salt intake in meals served under the PM POSHAN scheme and Sishu Vatika initiative across schools and Anganwadi centres.

### **Details**

- This step aligns with recommendations from the Indian Council of Medical Research (ICMR) and the Ministry of Women and Child Development, aiming to curb discretionary calorie intake and promote child nutrition.
- If sweeteners are required, only jaggery is allowed and must not exceed 5% of the total energy content.

### **Additional Guidelines**

- **Salt** use has been restricted.
- **HFSS foods** (high-fat, sugar, salt) are discouraged.
- Compliance with Food Safety and Standards Regulations (FSSR), 2011 & 2020 is mandatory.
- Artificial preservatives, colours and synthetic additives are banned in Sishu Vatika meals.
- Only FSSR 2020-approved emulsifiers are allowed.

### **Ban on Energy Drinks Near Schools**

- To address health risks from excess caffeine, the sale of energy drinks is banned:
  - o Within 100 meters of schools in rural areas
  - o Within 50 meters in urban areas
- Multiple studies have linked such drinks to cardiovascular, neurological and metabolic disorders in children.

### Significance

 This is a major policy intervention aimed at promoting lifelong healthy eating habits and preventing lifestyle diseases among Odisha's schoolchildren.

# NIT Rourkela's Mars Weather Research gains Global Recognition Context

- Researchers from NIT Rourkela, in collaboration with UAE University and Sun Yat-sen University (China), have made a significant breakthrough in understanding Martian weather.
- Their findings were published in the prestigious journal **New Astronomy Reviews**.

### **Details**

 The study, led by Prof. Jagabandhu Panda and research scholar Anirban Mandal, focuses on how dust devils, large dust storms and water-ice clouds shape Mars' atmospheric dynamics.

### **Key Findings**

- Dust Devils: Small, spinning columns of air more frequent in northern Mars, which lift fine dust into the atmosphere.
- Large Dust Storms: Triggered by heat-dust feedback loops, these storms can encircle the planet, changing wind and temperature patterns.
- Water-Ice Clouds: Appear seasonally over regions like Olympus Mons and the poles. Two types observed--aphelion cloud belts and polar hood clouds--vary by dust and ice content.

### Why It Matters

- This research improves weather prediction models for Mars--vital for robotic landings, human missions and studying habitability. It uses data from global missions, including ISRO's Mars Orbiter Mission (MoM).
- Mars weather research is crucial for sustaining future human exploration and urged greater involvement of Indian space agencies and universities.

### 97th Death Anniversary of Utkalmanigopabandhu Das observed

### Context

 A tribute ceremony was held on June 26, 2025, at the Odisha Legislative Assembly premises, commemorating the 97th death anniversary of UtkalmaniGopabandhu Das.

### Legacy of Gopabandhu Das

- Born in **1877**, passed away in **1928**.
- Honoured with the title "Utkalamani" (Jewel of Utkal).
- Founder of the **Samaja newspaper**—a pioneer in **journalism**, **education** and **social justice**.
- Championed press freedom, rural upliftment and nationalism during British rule.
- Inspired generations with his service-oriented philosophy rooted in truth, sacrifice and patriotism.





## Odisha-Adani Group Deal for Gopalpur Port Expansion

### Context

 The Odisha Government signed a Rs 16,554 crore Concession Agreement with the Adani Group for the expansion of Gopalpur Port, in a major boost to the state's maritime infrastructure.

### **About Gopalpur Port**

- Located near Brahmapur in Ganjam district, Odisha.
- Operated by Gopalpur Ports Ltd (GPL); owned by Adani Ports & SEZ (acquired 95% stake in March 2024).
- It is a natural deep-sea harbor with a maximum draft depth of 14.5 metres and can handle vessels of over 100,000 DWT.
- Officially opened for commercial operations on 23 May 2013.

### **Infrastructure & Connectivity**

- Connected to **NH-16** and **Kolkata-Chennai** railway line.
- 6 km NH-59 link road ensures swift cargo movement.
- Rail connectivity is supported by a siding near Chhatrapur, built by K&R Rail Engineering.

### **Strategic Importance & Expansion Goals**

- Expansion will boost capacity to 50 MMT per annum, promoting exports in steel, minerals and agro-based sectors.
- Will transform the port into a key logistics hub on India's eastern seaboard.
- Expected to generate 5,000 jobs (direct + indirect) and stimulate regional economic development.

## Odisha set to unveil EV Policy 2.0

### Context

In a major step toward clean and sustainable mobility, the Odisha Government is revising its Electric Vehicle (EV) Policy with a goal of achieving 50% Battery Electric Vehicle (BEV) registrations by 2036. As of June 20, 2025, EV registrations in the state stand at 8.71%, up from just 1.16% in 2021.

### Highlights of Odisha EV Policy 2.0 (Proposed)

- Extension of validity and enhancement of purchase incentives for EV buyers.
- Support for Charge Point Operators (CPOs) from the state budget on a first-come-first-served basis.
- Creation of a dedicated EV Fund by exploring levies on ICE vehicles.

- Accelerated rollout of charging infrastructure in urban and semi-urban areas to address range anxiety.
- Push for a balanced approach—boosting both supply (manufacturing) and demand (incentives).
- Alignment with the PM e-DRIVE Scheme for central support and financial assistance.

### Vision 2036 & Broader Goals

- Under Odisha Vision 2036, the state aims for 50% adoption of Electric and Alternate Fuel Vehicles.
- The revised policy will be data-driven, based on learnings from EV Policy 2021 and interdepartmental coordination.

## Odisha launches e-Registration App for Revenue Services

### Context

 In a major boost to digital governance, the Odisha Government has launched the 'e-Registration' mobile app, enabling citizens to access all revenue-related services from their smartphones without visiting government offices.

### **Key Features of the App**

- The app offers a **one-stop platform** for:
  - Booking slots for property registration
  - Tracking booking status
  - o **Applying for certified copies** of documents
  - o Downloading land-related documents
  - o Checking government-assessed land values
  - o Locating nearest sub-registrar offices
  - Applying for inspection-based registration
  - Providing feedback on services

### **Benefits and Impact**

- No physical visits to revenue offices
- Faster, transparent and corruption-free processing
- Especially helpful for the **elderly**, **working professionals** and people in **remote areas**
- Aligns with Odisha's **e-governance** and **transparency** goals

## Bhubaneswar among India's Least Affordable Cities for Housing

### Context

 As per a National Housing Board (NHB) analysis, Bhubaneswar ranks among India's least affordable capital cities, where even the top 5% of urban earners in Odisha need over 50 years of savings to afford a standard 1,184 sq ft house.

**Key Findings** 





- Based on a 30.2% savings-to-GDP ratio, even wealthy urban households find it unaffordable to buy homes in Bhubaneswar.
- The city joins metros like **Mumbai (109 years)** and **Gurgaon (63 years)** in unaffordability.
- In contrast, cities like Jaipur and Chandigarh offer home ownership in 15–20 years.

### Why So Unaffordable?

- Rising **real estate prices** in Bhubaneswar, often breaching the **₹1 crore** mark.
- Savings and income levels fail to keep pace with the property market boom.
- Urban development is concentrated, leading to limited land availability and infrastructure pressure.

### **Government Response**

- Odisha govt plans affordable housing units priced between ₹15 lakh-₹50 lakh for LIG and MIG families.
- Areas identified under the 'Greater Bhubaneswar' expansion strategy.
- Implementation through the Town Planning Scheme (TPS) and Bhubaneswar Development Authority (BDA).

### **Significance**

 This housing crisis marks a paradigm shift in Bhubaneswar's identity—from a once affordable and liveable city to an urban housing pressure point, demanding urgent intervention for inclusive development.

## Odisha to revise DPR for Tara Tarini Temple

### **Context**

 The Odisha government will prepare a revised Detailed Project Report (DPR) for developing the Tara Tarini Temple.

### Tara Tarini Temple

 The temple is a key Shakti Peetha on Kumari Hills, near the Rushikulya River in Ganjam district, about 28 km from Brahmapur.

### **Religious Significance**

- Believed to be where Maa Sati's breasts fell.
- One of the four Adi Shakti Peethas, alongside Kamakhya, Vimala and Kalighat.
- The sanctum houses stone idols, brass heads and a Buddha idol.

### **Major Festivals**

- Chaitra Jatra: Celebrated on Tuesdays in Chaitra with mundan rituals and KhechidiBhoga.
- **Sankranti Mela**: Held monthly; offerings made to **Bije Pratima** outside the sanctum.

## Odisha rolls out Apprenticeship-Embedded Degree Programs (AEDPS)

#### Context

 The Odisha Government has launched AEDPs for the 2025-26 session to boost student employability by integrating on-job training with academics.

#### **Details**

- Offered in **22 colleges** and **2 universities**, including **Rama Devi** and **Ravenshaw**.
- 6 industry-linked courses: B.Com (Logistics, BFSI, Retail, HR, E-commerce) and B.Sc/BA (Food & Hospitality).
- Backed by **UGC guidelines**, with **up to 50**% of the program as apprenticeships.
- Courses listed on the **SAMS portal**; classes start **July 10**.

## PM Modi launches 'Godabarish Mishra Adarsha Vidyalaya' Scheme in Odisha

### Context

 PM Modi, alongside CM Mohan Majhi, launched the Godabarish Mishra Adarsha Prathamika Vidyalaya initiative to set up model primary schools in all 6,794 Gram Panchayats of Odisha.

### **Details**

- Named after educationist Pandit Godabarish Mishra, the scheme aligns with NEP 2020 and RTE Act 2009, focusing on:
  - Foundational literacy & numeracy
  - o Smart classrooms, libraries, labs, playgrounds
  - o Revival of 45-51 century-old heritage schools
  - Equity in education for rural and marginalized communities
  - The initiative blends modern infrastructure with Odisha's cultural legacy, aiming to bridge the rural-urban divide and strengthen public education under the NIPUN mission.

## Odisha's 'Tarakasi' shines Globally as PN Modi gifts Silver Clutch at G7

#### Context

 At the 2025 G7 Summit in Canada, PM Narendra Modi gifted a Silver Filigree Clutch from Cuttack to Canadian Governor General Mary Simon, spotlighting Odisha's famed Tarakasi craft on the global stage.

### **Details**

• Known as the 'Silver City of India', Cuttack has preserved this 500-year-old art form, where artisans handcraft 99% pure silver wires into intricate, lace-like designs.





- Awarded the GI tag in 2012, Tarakasi blends influences from Mughal architecture and temple art, supporting over 1,500 livelihoods today.
- Each Tarakasi piece is handcrafted through an elaborate process involving melting, wire drawing, soldering and shaping-- often requiring a team of artisans.
- The gesture not only promoted India's cultural heritage but also served as a symbolic bridge in diplomacy amidst strained Indo-Canada ties.

### Pattachitra from Odisha gains Global Spotlight as PN Modi Gifts Artwork in Croatia

### Context

 Odisha's iconic Pattachitra art, earned global recognition once again when Prime Minister Narendra Modi gifted a Pattachitra painting to Croatian President Zoran Milanović during his 2025 state visit.

### **Pattachitra**

- Deeply Rooted in Jagannath Culture, Pattachitra (from *patta* meaning cloth and *chitra* meaning picture) is among India's oldest art traditions. Originating over a thousand years ago, it was historically used in Puri's Jagannath Temple during the *Anasara* period when painted forms of the deities substitute for idols. Common themes include the Ramayana, Mahabharata and Krishna Leela.
- Raghurajpur, a heritage village in Puri, remains
  the epicentre of this art, where families of
  chitrakars handcraft paintings using natural
  colours--hingula (red), haritala (yellow), lamp soot
  (black), conch shell (white) and indigo (blue) on
  treated cloth or palm leaves. Each piece is finished
  with a lacquer coating for durability and gloss.
- Pattachitra paintings from both Odisha and West Bengal have been granted Geographical Indication (GI) tags, signifying their unique cultural and artistic significance. The GI tag for Odisha's Pattachitra is registered as "Orissa Pattachitra", while West Bengal's is registered as "Bengal Patachitra".

## Raja Festival in Odisha: Cultural Joys & Child Development

### **Context**

 Raja Festival, celebrated across Odisha, honorswomanhood, fertility and Mother Earth, marking the start of the agricultural season. Spanning three days--Pahili Raja, Raja Sankranti and *Basi Raja--*it's especially cherished by children and adolescents.

### Raja Parba

Raja Parba, also known as Mithuna Sankranti, is a vibrant three-day festival of womanhood and fertility celebrated across Odisha in mid-June. Rooted in the belief that Mother Earth (Bhudevi) undergoes menstruation during this time, the festival honours her with rituals like swinging (doli), rest from work and adorning in new attire. Unmarried girls enjoy Poda Pitha, avoid barefoot walking and salt and partake in folk songs and swings, symbolising readiness for future motherhood. The fourth day, Basumati Snana, marks Bhumi's ceremonial bath. The festival blends agricultural reverence, feminine celebration and cultural joy, reflecting Odisha's deep-rooted traditions and the arrival of the monsoon season.

### **How Raja Boosts Child Development:**

- 1. **Swinging (Jhula):** Enhances **motor skills**, balance and emotional well-being. Fosters **peer bonding** and joy.
- Traditional Foods (Poda Pitha): Nourishes with nutritious ingredients like rice, jaggery and coconut. Encourages cultural learning through cooking.
- Play & Leisure: Outdoor and traditional games develop problem-solving and physical fitness, offering a break from routine stress.
- 4. **Folk Songs & Storytelling:** Boosts **language skills**, cultural pride and **community connection**.
- 5. **Dress & Grooming:** Wearing new clothes and using *alta* uplifts **self-esteem** and teaches grooming and aesthetics.

### **Broader Impacts:**

- Physical Health: Active play and movement
- Mental Well-being: Joyful break from routine
- Social Bonds: Family and peer interaction
- Cultural Identity: Connection with tradition
- **Emotional Growth:** Participation in shared celebrations

### Conclusion

 Raja is more than a festival--it's a natural, holistic development model. It offers today's children a joyful escape from screen time and academic pressures, nurturing their body, mind and soul through tradition.

Contaminated Water behind Diarrhoea, Cholera Outbreaks in Odisha

**Context** 





 A Central health team visiting Odisha confirmed that contaminated water is the primary cause of the diarrhoea and cholera outbreaks across the state.

### **Details**

- Lab tests confirmed E. coli contamination in 10 out of first-phase water samples and 16 of 37 faecal samples tested positive for Vibrio cholerae.
- The Central team also held meetings with officials from the Health, PR&DW and Housing & Urban Development (H&UD) departments to address the crisis and ensure safe drinking water supply.
- Meanwhile, in Bhubaneswar, stagnant water and garbage at Baramunda old bus depot raise further concerns about urban sanitation amid the outbreak.

### **KNOWLEDGE BOX**

- A recent report by the Central Groundwater Board has revealed dangerously high levels of fluoride contamination in several blocks of Odisha's Mayurbhanj district, posing a serious public health challenge. The worst affected is Kaptipada block, where fluoride levels have reached 20.3 mg per litre—far above the permissible limit of 1.5 mg/l. Thakurmunda, Raruan and Baripada blocks have also reported elevated levels ranging from 2.5 to 15 mg/l.
- Prolonged consumption of this contaminated water has led to severe health problems among residents, including bone degradation, dental fluorosis, fractures and joint issues, even among younger individuals. Estimates suggest that over 3,500 people across the district have been severely affected.

## **ODISHA RELATED GK**

## PROTECTED AREAS IN ODISHA

## National Parks in Odisha

### Simlipal National Park

- Location: Mayurbhanj district
- Area: 2,750 sq km
- Features: Sal trees, Joranda&Barehipani waterfalls, red silk cotton trees
- Fauna: Bengal tiger, elephant, chausingha, gaur
- Status: Tiger Reserve

### **Bhitarkanika National Park**

- Location:Kendrapara district
- Area: 145 sq km
- Features: Second largest mangrove forest in India
- Fauna: Saltwater crocodile, 215+ bird species, migratory birds from Central Asia & Europe
- Nickname: Amazon of India

## Marine & Wetland Ecosystems

## Chilika (Nalaban) Wildlife Sanctuary

- Districts: Puri, Khurda, Ganjam
- **Area:** ~1,100 sq km
- **Type:** Brackish water lagoon
- **Status:** Largest coastal lagoon in India & largest brackish lagoon globally

• **Fauna:** 160+ migratory bird species, fish, crabs, marine weeds

### **Gahirmatha Marine Wildlife Sanctuary**

- Location: Coastal Odisha
- Known for: World's largest nesting beach for Olive Ridley Turtles
- Special: Only marine sanctuary in Odisha

## Elephant Sanctuaries & Corridors

## Chandaka-Dampara Wildlife Sanctuary

- **Location:** South of Cuttack
- Area: 193.39 sq km
- Known as: Chandaka Elephant Reserve
- Vegetation: Coastal Sal, bamboo, semi-evergreen forests
- Fauna: Elephants, leopards, pangolin, civet, sloth bear, hyena

### Khalasuni Wildlife Sanctuary

- Area: 160 sq km
- Part of: Sambalpur Elephant Reserve
- Corridor:Khalsuni-Satkosia Elephant Corridor
- Flora: Sal-dominated forests
- **Features:** Waterfalls and panoramic greenery





## <u>Tiger Reserves and Proposed Tiger</u> Habitats

### Satkosia Tiger Reserve

• Location: Angul district

• **Area:** 988.3 sq km (Core: 523.61 sq km)

• River: Mahanadi Gorge (22 km canyon)

• **Fauna:** Tiger, elephant, leopard, sloth bear, dhole, crocodile, gharial

### Sunabeda Wildlife Sanctuary

• Location:Nuapada district

• **Area:** 600 sq km

• Status: Proposed tiger reserve

• Fauna: Tiger, gaur, leopard, sloth bear, barking deer, blue bull

## **Major Wildlife Sanctuaries**

### **Debrigarh Wildlife Sanctuary**

• Location: Bargarh district

• Area: 346.91 sq km

• Status: Eco-sensitive zone

• **Biodiversity:** 40 mammals, 200 birds, 85 butterflies, 42 fish species

### **Kotagarh Wildlife Sanctuary**

• Location: Kandhamal district

Area: 399.5 sq km

• Fauna: Elephant, gaur, peafowl, red jungle fowl

### Kuldiha Wildlife Sanctuary

Location: Balasore district

Area: 272.75 sq km

## • **Special:** Watchtower at Garsimulia for elephant sightings

• Fauna: Elephant, leopard, tiger, hornbill, hill myna

### Karlapat Wildlife Sanctuary

• Location: Kalahandi district

• **Area:** 175 sq km

 Fauna: Green munia, tiger, great-eared nightjar, sambar

### Hadgarh Wildlife Sanctuary

• Location:Keonjhar district

• **Area:** 191 sq km

Linked with:Similipal&Kuldiha

• Fauna: Leopard, jungle cat, hyena, langur

### **Balukhand Konark Wildlife Sanctuary**

• Location: Between Puri & Konark

• Features: Casuarina trees, sandy dunes

• Fauna: Blackbuck, deer, jackal, olive ridley turtles

### Badrama (Ushakothi) Wildlife Sanctuary

Location: Sambalpur district

• **Area:** 304.03 sq km

• Flora: Sal, sandalwood, neem, acacia

• Fauna: 15 tigers, 35 elephants, bison

### **Other Sanctuaries**

Baisipalli

• **Lakhari Valley:** 118 sq km, moist deciduous forest, elephant habitat

Rushikulya Rookery: Known for Olive Ridley nesting

## **SOME RIVERS IN ODISHA**

### **Tel River**

- The Tel River, the largest tributary of the Mahanadi, originates near the Amravati forest range in Nabarangpur district, close to the Odisha-Chhattisgarh border. It flows through the districts of Nabarangpur, Kalahandi, Balangir, Boudh and Sonepur, passing just 8 km from Titilagarh. It joins the Mahanadi at Sonepur (Subarnapur), creating a scenic confluence.
- The Baidyanath Temple, famous for the Kosaleshwar Shiva shrine, is located on the left bank of the Tel River, adding religious significance to the region.

### **Ib River**

- The Ib River is a tributary of the Mahanadi River, joining it at the Hirakud Dam in Odisha. Originating near Pandrapet hills at an elevation of 762 metres, it flows through Raigarh and Jashpur districts in Chhattisgarh and Jharsuguda and Sundargarh districts in Odisha. Covering a length of 252 km, it drains an area of 12,447 sq km, with a watershed area of about 25,000 sq km in Jashpur.
- The Ib Valley is rich in coal and hosts the Ib Valley Coalfield, making it a major industrial zone under the Mahanadi Coalfields Ltd. The river region also holds cultural and mythological





**significance**, with several **tribal settlements** and **folklore** associated with it.

### **Ong River**

 The Ong River is a tributary of the Mahanadi River, originating at an elevation of 457 metres and flowing entirely through Odisha. It covers a length of 204 km and joins the Mahanadi about

- **240** km upstream of Sonepur, where the Tel River also merges. The drainage area of the Ong River is approximately **5,128** sq km.
- Nearby rivers include the Tel Nadi (76 km), Gorkha Nadi (171 km), Subarnarekha (431 km), Godavari (485 km) and Manairu Vagu (508 km), indicating the Ong's position within a dense river network in eastern and central India.

## NATURAL SPRINGS AND HOT SPRINGS IN ODISHA

Odisha is home to several **mountain and hot springs**, many of which are linked to **major rivers and tributaries**. These springs are not only important hydrologically but also hold **cultural**, **ecological and tourism significance**.

### **Notable Natural Springs (linked to rivers):**

- Chandikhole (Jajpur) tributary of Mahanadi
- Barunei (Khurda) tributary of Daya
- Narayani (Puri) drains into Chilika Lake
- Nirmal Jhar (Ganjam) drains into Chilika Lake
- Pradhanpat (Deogarh) tributary of Brahmani
- Phurligharan (Bhawanipatna) tributary of Indravati
- Khandadhar (Bonei) tributary of Brahmani
- Nursinghanath (Bargarh) tributary of Tel
- Harishankar (Balangir) on Jira River, a tributary of Tel
- Gosinga Jhar (Kantilo) on Kuaria Nala, tributary of Mahanadi
- Koiliharan ([harsuguda) tributary of Mahanadi
- Jharbada (Dhenkanal) on Mankada River, a tributary of Brahmani

### **Notable Hot Springs:**

- Atri (Khurda)
- Taptapani (Ganjam)
- **Deulijhari** (Athamallik, Angul)

These springs are often associated with **religious shrines** and serve as **tourist attractions**, especially **Taptapani**, **Atri** and **Harishankar**.

## **KEY LAKES OF ODISHA**

Chilika Lake is India's largest brackish water lagoon, located across the districts of Ganjam, Khurda and Puri. Its area varies between 900 to 1165 sq km, expanding during monsoon. Connected to the Bay of Bengal, it is a Ramsar site, famous for hosting over 30 species of migratory birds and supporting rich aquatic biodiversity.

Anshupa Lake is a horseshoe-shaped freshwater oxbow lake located near Banki in Cuttack district, on the left bank of the Mahanadi. Spanning 231 hectares, it is nestled amid the Saranda Hills and surrounded by bamboo and mango groves. Designated as a Ramsar wetland in 2021, it serves as a haven for migratory birds in winter. The nearby 14th-century TrutiaDeva

**Temple**, built by the Eastern Ganga rulers, adds historical value.

Kanjia Lake, situated within the Nandankanan Zoological Park near Bhubaneswar, covers 75 hectares of lake area and 105 hectares of total wetland. It is ecologically significant, supporting over 30 bird species, along with diverse aquatic flora and fauna. However, urban expansion and waste dumping pose serious environmental threats.

Sara Lake, located near Puri, is a freshwater lake fed by four distributaries of the Mahanadi--Bhargavi, Kushabhadra, Mugei and Dhanua. It spans around 5





**km in length and 3 km in width** and is important for local agriculture and ecology.

Tampara Lake lies adjacent to Chatrapur town in Ganjam district. Around 4 km long and 0.5 km wide,

it is replenished by **Rushikulya river backwaters** during monsoons. It is emerging as a scenic spot with growing eco-tourism potential.

## **SOME TEMPLES IN ODISHA**

- **Sri Lokanath Mandir**: Situated near Jagannath Temple in Puri, it is a revered Shaiva shrine believed to be established by Lord Rama. The linga here, originally called Laukanatha, has deep mythological roots.
- Alarnath Temple: Located in Brahmagiri, this Vishnu temple is visited especially during Anavasara, when Lord Jagannath rests. It holds significance due to Chaitanya Mahaprabhu's association.
- Sakhigopal Temple: Known for the Krishna-Radha idols, this temple in Sakhigopal (near Puri) is famed for its festival, Anla Navami.
- **Ramachandi Temple**: On the banks of the Kushabhadra river near Konark, it is considered a Shakti Pitha of Puri and is older than the Sun Temple.
- **Konark Sun Temple**: Built by King Narasimhadeva I in 13th century, this UNESCO World Heritage site is an architectural marvel symbolizing the chariot of the Sun God.
- Wooden Sun Temple (Biranchi Narayan Temple): Located in Buguda, Ganjam, this west-facing wooden temple was built in 1790 and is a rare structure dedicated to the Sun God.

### **Lesser-Known Yet Culturally Rich Shrines:**

- Kapilash Temple (Dhenkanal): Built by Narasimhadeva I for Sri Chandrasekhara.
- Khirachora Gopinath Temple (Remuna): Famous Vaishnav shrine associated with Madhavendra Puri.
- Kichakeswari Temple (Mayurbhanj): Located at Khiching, dedicated to a tribal form of the goddess.
- Baladevjew Temple (Kendrapara): A shrine for Balarama, built during Maratha rule.
- Ladubaba Temple (Nayagarh): Combines Vishnu-Shiva iconography and is located amidst other temples.
- Raghunathjew Temple (Odagaon): Famous for its gold kalasha and literary significance linked to poet Upendra Bhanja.

## **SOME FREEDOM FIGHTERS OF ODISHA**

### Jayee Rajaguru

 The first martyr of Odisha, Jayee Rajaguru led the 1804 Khurda rebellion against the British on behalf of minor king Mukunda Deva II. He was executed in 1805 by the British for his resistance.

### BuxiJagabandhu

 Leader of the 1817 Paika Rebellion, BuxiJagabandhu rallied Kondhs and Paikas against British oppression. His guerrilla warfare continued till 1825, inspiring future revolts.

### ChakhiKhuntia (Chandan Hajuri)

 A priest of Puri and a revolutionary during the 1857 revolt, he supported Rani Laxmibai and instigated sepoy unrest. Later, he devoted himself to literature and spiritual pursuits in Puri.

### Sarala Devi

 A fierce nationalist, Sarala Devi joined the Non-Cooperation Movement in 1921. She became the first woman MLA and speaker of Odisha and a pioneer of women's empowerment and social reform.

### Samanta Madhaba Chandra Samantaray

 In 1827, he led the Tapangagarh revolt by refusing to pay British taxes. Though eventually subdued, his bravery earned respect and a pardon from the British.

### Veer Surendra Sai

A revolutionary from Sambalpur, he led a 37-year-long rebellion against British denial of his rightful kingship. He endured over 36 years in prison and remains a symbol of Odia resistance.





### **Baji Rout**

 At just 12, Baji Rout became India's youngest martyr by refusing to ferry British police across the Brahmani river in 1938. He was shot dead for his defiance.

### Laxmi Panda

 The youngest Odia member of Netaji's INA, she joined the army in Burma to fight colonial rule.
 She worked with key INA leaders and was renamed 'Indira' by Bose himself.

### Ramadevi Choudhury

 The first woman freedom fighter from Odisha, she led women in the Non-Cooperation and Salt Satyagraha Movements, faced multiple arrests and worked for Harijan welfare.

### Malati Choudhury

 Nicknamed 'Toofani' by Gandhi, she participated in the 1934 Padayatra, founded BajirautChhatravas and was part of the Constituent Assembly, later supporting the Bhoodan movement.

## **WOMEN IN ODISHA'S FREEDOM STRUGGLE**

The Indian freedom struggle saw remarkable participation of women and Odisha was no exception. Inspired by **Mahatma Gandhi**, many Odia women entered political life during the **Non-Cooperation Movement** and later played key roles in the **Civil Disobedience** and **Quit India Movements**.

### Parvati Giri - The Gandhi of Western Odisha

Known as the Mother Teresa of Western Odisha, Parvati Giri embodied Gandhian ideals. She not only took part in
the freedom movement but also dedicated her life to social service, focusing on the upliftment of the poor,
education and village reconstruction.

### Prabhavati Devi & Jambubati Devi

• These women leaders from **Western Odisha** made notable contributions through **sacrifice and service**. Their lives were driven by ideals that transformed personal action into a moral revolution against British rule.

### Sandi Sabara - The Forgotten Tribal Heroine

- Often left out of mainstream history, Sandi Sabara (renamed Santi Sabara by Rama Devi) was a tribal freedom
  fighter from Kujendri near Rayagada. During the Quit India Movement, she led the struggle in the absence of
  senior leaders like Biswanath Pattnaik.
- She worked tirelessly to promote khadi, prohibition, sanitation and cottage industries, thereby combining
  nationalism with grassroots reform. Her efforts drew the attention of leaders like Rama Devi, Gopabandhu
  Choudhury and Acharya Harihara.

## Women Freedom Fighters of Western Odisha

• Though history often overlooks them, the women of Western Odisha---from Bargarh to Kalahandi and Sundergarh--played a significant role in India's freedom movement. Inspired by Gandhiji, they organized Satyagrahas, mobilized other women and upheld the spirit of nationalism.

### Bargarh's Women Satyagrahis

Bargarh, once a subdivision of Sambalpur, produced fearless women leaders like Parbati Giri, Jambubati Devi, Gandharvi Devi, Ila Meher and Shreeyabati Devi. These women took active part in Gandhian movements, organized protests, collected funds for Swaraj and advocated for workers' rights, social reforms and indigenous industries.

### **Unsung Hero: Sandi Sabara**

• **Sandi Sabara**, a tribal woman renamed *Santi Sabara* by Rama Devi, was a powerful freedom fighter from **Kujendri near Rayagada**. During the **Quit India Movement**, she led the movement locally in the absence of senior leaders and worked on rural upliftment---spreading **khadi**, **sanitation**, **prohibition** and awareness. Despite her impact, she remains unrecognized in mainstream history.





### Prajamandala Movement in Odisha

 The Prajamandala Movement emerged in the 1920s to fight against feudal oppression in Odisha's 26 princely states. People revolted against taxations like Rasad, Magan, Bethi and Begari, demanding civil liberties and citizens' rights.

### Ranpur Uprising and Bazalgette Murder (1939)

• In Ranpur, the movement turned violent. Under the leadership of Raghunath Mohanty and Dibakar Parida, locals demanded forest rights, pond access and abolition of forced labour. On January 5, 1939, after the arrest of leaders, a massive protest broke out. The British Political Agent Major Bazalgette was attacked and killed by the agitated crowd. In retaliation, Raghunath Mohanty was hanged and Dibakar Parida deported to the Andamans.

## **MINERALS OF ODISHA**

### Bauxite in Odisha: Key Highlights

Odisha has the largest bauxite reserves in India, primarily associated with the Eastern Ghat Supergroup (Khondalites and Charnockites). These deposits are usually found as blanket cappings on plateau tops, making them suitable for open-cast mining.

### Major District-wise Bauxite Deposits

- Koraput District: Major deposits are located at Panchpatmali, Pottangi, Maliparbat, Kodingamali, Ballada, Hatimali, Chintamgundi, etc. These are the richest and most exploited bauxite belts.
- Rayagada District: Sites include Baphilimali, Sijimali, Tikrimali, Pasangmali and Majhigaonmali. These areas have significant untapped potential.
- Malkangiri District: Contains Korkanda, Siktapalli and Korpalli reserves.
- Kalahandi District: Major deposits include Karlapat, Niyamgiri, Lanjigarh and Pollingpadar.
- Kandhamal District: Known for deposits at Anamini Parbat, RukuniCuttack, Demoli and Ushabali.

### <u>Iron Ore in Odisha</u>

Odisha is one of India's leading producers of iron ore, with major reserves found in the Iron Ore Super Group--a geological formation comprising banded iron formations (BIF) and volcano-sedimentary rock piles.

### **Total Reserve**

 Odisha has approximately 5153 million tonnes of iron ore reserves, making it one of the richest states in iron content and supply in India.

- Kendujhar District: Dholkata Pahar contains bauxite over metatholeiitic basalt--distinct from Eastern Ghat-type.
- Sundargarh District: Deposits are found at Tantra, Kodalia, Jaldihi and Kusumdihi; associated with manganiferous shales of the Nuamundi Group.

### Geology & Reserve

- Geological Association: Mostly with Khondalite and Charnockite groups; in some areas, associated with shales and phyllites.
- Total Reserve: Odisha has over 1810 million tonnes of bauxite with >40% Al<sub>2</sub>O<sub>3</sub> and <0.5% SiO<sub>2</sub>--suitable for metallurgical use.

### **Uses of Bauxite**

- Aluminium Industry primary raw material
- Refractory Industry high-grade bauxite for fire bricks
- Chemical Industry alum and other compounds
- Petroleum Industry as catalyst support material

### **Major District-wise Deposits**

- Kendujhar (Keonjhar) District: Richest belt with deposits at Roida-Bhadrasahi, Joda East, Thakurani, Unchabali, Bolani, Guali, Malangtoli and others. This region forms part of the famous Joda-Barbil mining belt.
- Sundargarh District: Important sites include Barsuan, Kalta, Koira, Taldihi, Ganua,





- **Badamgarh Pahar** and **Kurmitarpahar**. These belts support large-scale mining and steel industries.
- Mayurbhanj District: Historic iron ore zones such as Gorumahisani, Badampahar and Suleipat, where mining began during the colonial period.
- Jajpur District: Contains deposits at Daitari-Tomka, contributing significantly to the state's mineral economy.

### **Uses of Iron Ore**

- Pig Iron and Sponge Iron production
- Steel manufacturing (both integrated and secondary units)
- Blast Furnace operations
- Production of ferro-alloys and other metallurgical products

### Chromite in Odisha

Odisha holds India's largest chromite reserves, mainly found in Jajpur, Kendujhar and Baleswar districts.

- Jajpur District: Chromite occurs in the Sukinda Ultramafic Complex, intruded into Precambrian metamorphic rocks. It's one of the world's richest chromite belts, with 173.80 million tonnes of reserves containing 40-45% Cr<sub>2</sub>O<sub>3</sub>.
- Kendujhar District: The Boula-Nuasahi Igneous Complex hosts significant chromite deposits.
- Baleswar District: Occurrence at Bhalukasuni.
- Uses: For chromium metal, ferroalloys (with iron, nickel, cobalt, etc.), chromium compounds and in the refractory industry.

## Manganese in Odisha

Odisha is a key contributor to India's manganese production, with major deposits in **Kendujhar**, **Sundargarh**, **Rayagada and Balangir**.

- Kendujhar District: Deposits at Joda, Roida, Gurda, Jaribahal, etc., occur in the shale formations of the Iron Ore Super Group in the Horse-shoe Synclinorium. Reserve: 119.81 million tonnes.
- Sundargarh District: Found in Gangpur Group of rocks, with sites like Orahari, Kolmong, Teheral, Kanthor-Koira.
- Rayagada District: Deposits like Nishikhal, Anajori, Ambadola and others are associated with Eastern Ghats Super Group--quartzites, khondalites, calcgneiss.
- Balangir District: Manganese occurs at Champasar, Rengali, Ucchabapali and other locations.
- Uses: Widely used in iron & steel, ferromanganese, dry cells and the chemical industry.

## Copper in Odisha

Odisha has limited but important copper reserves, located in **Gajapati** (**Debagada**) and **Mayurbhanj** districts.

- Debagada District: Adash deposit is associated with pyroxene granulite of the Eastern Ghats Super Group. Reserve: 3.09 million tonnes with 0.8% Cu cut-off grade.
- Mayurbhanj District: Found at Kesarpur, within sheared metabasics of the Proterozoic Eastern Singhbhum Belt.
- Uses: Used in electrical wiring, automobile parts, semiconductors and copper alloys.

## Lead and Zinc in Odisha

The Sargipalli mines in Sundargarh district are Odisha's major lead-zinc source, with minerals like galena, sphalerite, cerussite and malachite, hosted in garnetiferous biotite schist of the

Gangpur Group. The reserve is 1.89 million tonnes, with 6.73% Pb and 51 ppm silver, though the mine has been closed since 2001-02. Other minor occurrences are reported in Saintala (Balangir), Kermeli (Baragarh), Sisakhal (Kalahandi) and Gangajal (Gajapati).

## Mineral Sand along Odisha Coast

Odisha's coast, especially Ganjam and Puri districts, hosts vast mineral sand deposits formed by weathering of Eastern Ghats rocks and transported by rivers and tidal forces. Important sectors include Gopalpur, Chhatrapur, Prayagi, Paikirapur and Brahmagiri. Total reserve: 226.24 million tonnes.

These sands contain:

- Ilmenite & Rutile (source of titanium),
- **Zircon** (used in ceramics, refractories),
- Sillimanite (for high-temp refractories),





- Garnet (abrasive), and
- Monazite (contains rare earths, thorium, uranium).

### Nickel in Odisha

The Sukinda Valley in Jajpur district is one of India's richest nickel laterite belts, found as overburden in chromite mines (e.g., Saruabil, Kaliapani, Bhimtangar). With 174 million tonnes (≥0.5% Ni), this region supports stainless steel, electroplating, coil making and electronics. Minor deposits also occur in the Similipal Complex (Mayurbhanj).

### Platinum Group of Elements (PGE)

Found in the Baula-Nuasahi complex (Kendujhar) and parts of Jajpur, Baleswar and Dhenkanal districts. These are associated with ultramafic-mafic intrusions of the Singhbhum-Odisha Craton. Platinum is used in auto-catalysts, jewellery, electronics and dentistry.

## Tin (Cassiterite)

Tin ore is found in Malkangiri district (e.g., Bijapadar, Durmaguda, Kurumpalli), associated with pegmatites and quartz veins in metasediments of Bengpal Group. Tin is used in cans, solder, chemicals and alloys.

### **Asbestos**

Occurs in Malkangiri at sites like MV-76, Madatalguda, Billiguda, associated with granite-amphibolite contact zones. Though reserves are unestimated, asbestos is used in cement sheets, pipes, brake linings, insulation, fireproof clothing.

## China Clay (Kaolin)

Found in a wide belt from Mayurbhanj to Kendujhar, extending into Rayagada, Nawarangpur, Baragarh and Cuttack. Major sites include Joshipur, Chanchbani, Unchheibera, Devdhara, Kudingmali. Total reserve: 314 million tonnes. Widely used in ceramics, paper, paint, textiles, rubber industries.

### Coal in Odisha

Odisha is a coal-rich state:

- Talcher Coalfield (Angul-Dhenkanal) is the largest, with 65,226.86 million tonnes of noncoking coal in Lower Gondwana formations.
- Ib River Coalfield (Sambalpur-Jharsuguda) lies in the Raniganj Formation.
- Uneconomic coal also found in Athgarh, Gaisilat, Athmallick and Katrinjia basins.

Coal supports **thermal power generation** across the state and country.

## Fire Clay

Found in Cuttack (Talbasta, Ghantikhal), Khurda, Angul, Baragarh, Jharsuguda districts. Often associated with coalfields (e.g., Talcher, Ib River). Reserve: 175.53 million tonnes. Used in refractory bricks, sanitaryware and ceramics.



## **STATIC GK**

- The first five-year plan came into force in April 1951 and was active till March 1956.
- GST was implemented on 1st July 2017.
- The headquarters of SEBI is in Mumbai.
- Einstein received the Nobel Prize for the photoelectric effect in 1921.

- The most saline lake in India is Sambhar Lake in Rajasthan.
- The Chit Funds Act was enacted in 1982.
- Operation Twist refers to the RBI's simultaneous purchase and sale of government securities under Open Market Operations (OMO) to influence interest rates and manage market liquidity.
- NABARD was established in 1982 on the recommendation of the Sivaraman Committee.
- Inclusive development index was published by the World Economic Forum.
- Red Data Book contains the list of endangered species and is maintained by IUCN.





- Basel Convention deals with transboundary movement of hazardous waste.
- Montreal Protocol (1987) deals with substances that deplete the ozone layer.
- The first nuclear reactor in India was Apsara (1956).
- India's first satellite navigation project is GAGAN.
- CRISPR is a technology used for gene editing.
- **Boson particles** have an **integral spin** (0, 1, 2...).
- Project Loon was initiated by Google for balloon-powered internet.
- Manimekalai, is a Tamil Buddhist epic composed by KulavāṇikaṇSeethalaiSataṇar probably somewhere between the 2nd century to the 6th century.
- UNESCO is headquartered inParis, France.
- The Bretton Woods
   Conference led to the
   formation of IMF and World
   Bank.
- The Organization of the Petroleum Exporting Countries (OPEC)was founded on 14 September 1960 in Baghdad by the first five members: Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.
- The TAPI pipeline runs through Turkmenistan,

- Afghanistan, Pakistan and India.
- The International Court of Justice is located in The Hague, Netherlands.
- BRICS Bank is officially called New Development Bank.
- Rammohun Roy founded the Atmiya Sabha in 1814 in Kolkata.
- India's first digital village is Akodara in Gujarat.
- The Khetri mines in Rajasthan are famous for copper.
- The earliest evidence of agriculture in the Indian subcontinent is found at Mehrgarh.
- The Indo-Greeks were also the first to issue gold coins in India.
- Ashoka used the title "DevanampiyaPiyadassi" in his inscriptions.
- River Teesta originates as ChhomboChhu from a glacial lake KhangchungChho in Sikkim.
- India's first SEZ was established in Kandla, Gujarat.
- The basic unit of heredity is the gene, located on chromosomes.
- India joined the MTCR (Missile Technology Control Regime) in 2016.

- The Comprehensive Test Ban Treaty (CTBT) is not signed by India.
- The Kolkata Port is India's only riverine port.
- India's first female IAS officer was Anna Rajam Malhotra.
- India's first full-length feature film was Raja
   Harishchandra (1913), directed by Dadasaheb
   Phalke.
- The first Indian talkie movie was Alam Ara, released on March 14, 1931. It was directed by Ardeshir Irani and produced by Imperial Film Co.
- Habib Tanvir was known for blending Chhattisgarhi folk theatre with modern drama.
- The pancreas acts both as an endocrine and exocrine gland.
- The human body's largest organ is the skin.
- DNA was first isolated by Friedrich Miescher in 1869.
- The Louvre Museum is located in Paris and houses the Mona Lisa.
- The Nobel Peace Prize is awarded in Oslo, Norway.
- ASEAN was founded in 1967 in Bangkok, Thailand.
- The oldest Upanishad is the Brihadaranyaka Upanishad.





- The Pali Canon is the sacred text of Theravada Buddhism.
- NCERT was established in 1961 to assist and advise on educational matters.
- The National Anthem was adopted on 24 January 1950.
- The motto of the Supreme Court of India is Yato Dharma Tato Jaya.
- The first woman judge of the Supreme Court was Justice Fathima Beevi.
- The Great Trigonometrical Survey helped measure the height of the Himalayas.

- The first successful heart transplant in India was performed by Dr. P. Venugopal in 1994.
- Bose-Einstein Condensate is the fifth state of matter observed at near absolute zero.
- Kalamkari is a traditional hand-painting textile art from Andhra Pradesh.
- The Tropic of Cancer passes through eight Indian states. These states are: Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand,

West Bengal, Tripura and Mizoram

- Tropic of Cancer passes the districts in West Bengal are Purulia, Bankura, Bardhaman and Nadia.
- India's first bank was the Bank of Hindustan (1770), now defunct.
- Alessandro Volta invented the first chemical battery in 1800.



### **CURRENT ONE LINER**

- "Black Box" in aircraft is actually bright orange and includes the Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR), built to survive extreme crash conditions and aid in investigations.
- Statins inhibit HMG-CoA reductase to lower cholesterol and also exhibit anti-inflammatory, immunemodulatory, antioxidative and antithrombotic effects, making them useful beyond cardiovascular diseases.
- Merchant Discount Rate (MDR) is the percentage fee deducted by the bank from digital payments made to merchants, shared among the issuing bank, acquiring bank, payment system payment operator and gateway.

- CROPIC (Collection of Realtime Observations & Photo of Crops) uses AI and crowdsourcing to enhance efficiency and transparency in the agricultural sector.
- Cathepsin B (Cat B) is a protein-degrading enzyme identified as a key factor in ovarian reserve decline and inhibiting it helps preserve egg cells and prevent premature fertility loss.
- Volcán de Fuego is a stratovolcano located in Guatemala, near Antigua and is part of the Pacific Ring of Fire.
- Padmanabhaswamy Temple
   in Thiruvananthapuram,
   Kerala, is dedicated to Lord
   Vishnu as Ananta

- Padmanabha, with historical mentions dating back to the 8th or 9th century CE.
- Thitu Island, also known as Pag-asa Island, is the second largest natural island in the Spratly Islands, under Philippine control since 1971, with a civilian settlement, military presence and lies close to China's Subi Reef.
- Kalvarayan Hills, part of the Eastern Ghats in Tamil Nadu, span 1095 sq. km across districts like Salem, separating the Kaveri and Palar basins, with PeriyaKalrayans (avg. height 4000 ft) and Chinna Kalrayans (2700 ft), inhabited mainly by the Malayali tribe.
- Rare earth magnets, made from alloys of rare earth





elements like neodymium and samarium-cobalt, are known for their high magnetic strength and are used in advanced technologies despite being brittle and corrosion-prone.

- Agroterrorism is the deliberate use of plant or animal pathogens by nonstate actors to disrupt the agriculture sector or food supply, linking it to biological and chemical warfare.
- Kulsi River, a tributary of the Brahmaputra, originates in West Khasi Hills of Meghalaya, enters Assam at Ukiam and flows about 76 km to join the Brahmaputra at Nagarbera.
- Coringa Wildlife Sanctuary
  in Andhra Pradesh's
  Godavari delta is India's
  second largest mangrove
  forest, home to species like
  the fishing cat, Brahminy
  kite and a breeding ground
  for Olive Ridley Turtles.
- ECOWAS, founded in 1975 by the Treaty of Lagos, is a West African regional bloc aiming for economic integration, free movement and regional stability, now comprising 12 member states after Burkina Faso, Mali and Niger withdrew in 2024.
- Exposomics studies the total environmental exposures (like pollutants, diet, stress, chemicals) over a lifetime, integrating external factors with biological responses using tools like mass

- spectrometry, biomarkers and AI modeling.
- Thermophiles are heatloving microorganisms that thrive in high-temperature environments like hot springs and thermal vents, often producing potent antibiotics to outcompete other microbes.
- Nanozymes are nanomaterials with enzyme-like properties, functioning as catalysts for biochemical reactions similar to natural enzymes.
- Dickson Fjord, located in eastern Greenland, is part of the Arctic's glacial fjord system, characterized by deep inlets, steep cliffs, Ushaped valleys and long, narrow reaches inland.
- Raigad Fort, the capital of Chhatrapati Shivaji Maharaj's Maratha Empire, is a hill fort in Raigad district, Maharashtra, known as the 'Gibraltar of the East', with strategic elevation and surrounded by Kal and Gandhari river valleys.
- Lysosomal Storage **Disorders** (LSDs) are inherited metabolic disorders caused by defective lysosomal enzymes, leading to the accumulation of complex molecules like lipids, carbohydrates, or proteins inside cells.
- First-Person View (FPV)
   drones are small UAVs that
   provide real-time video
   feeds to operators via

- cameras, enabling precise manual control for tasks like surveillance, monitoring and search-and-rescue within a short operational range.
- The WHO's MPOWER
  framework outlines six key
  strategies to combat tobacco
  use: Monitor tobacco use,
  Protect from second-hand
  smoke, Offer cessation
  support, Warn about risks,
  Enforce ad bans and Raise
  tobacco taxes.
- Kalanamak rice, also known as Buddha rice, is an aromatic, non-basmati variety from eastern Uttar Pradesh and Nepal's Tarai region, known for its black husk, distinct fragrance and GI tag (2013), with cultivation dating back to 600 BC.
- Biostimulants are substances that enhance plant growth and stress tolerance by improving nutrient uptake and resilience, not by directly supplying nutrients and are regulated under the Fertiliser Control Order (FCO), 1985 by the Ministry of Agriculture.
- Kilauea Volcano, a shield-type volcano in Hawaii, stands at 4,190 feet, features the Halema'uma'u lava lake and is one of the world's most active volcanoes, erupting continuously since 1983 with typically nonexplosive eruptions.
- Moringa, or the "tree of life", is a nutrient-rich crop (Moringa oleifera) native to India, known for thriving in





- tropical climates, with leaves, seeds, bark and pods used in nutrition, medicine, cosmetics and even biofuel.
- Kiru Hydropower Project is a 624 MW run-of-river scheme on the Chenab River in Jammu & Kashmir, featuring a 135m-high concrete gravity dam.
- Liquid carbon is hard to study because it forms only under extreme conditions-high pressure (10 million times Earth's atmosphere) and temperatures around 4,500°C--and no container can survive such intense environments.
- Intercrystals are novel materials formed by stacking and twisting ultrathin layers of graphene and hexagonal boron nitride, creating unique moiré patterns with distinct physical properties.
- Chagos Islands, a UK overseas territory in the central Indian Ocean, are strategically important due to the U.S. military base on

- **Diego Garcia**, the **largest and southernmost island** of the archipelago.
- Clownfish, or anemonefish, are brightly colored marine fish known for their mutualistic symbiotic relationship with sea anemones, offering protection and receiving shelter in return.
- Salmonella is a group of bacteria that cause salmonellosis, a foodborne illness transmitted mainly through contaminated food or water, especially raw meat, eggs and unwashed produce.
- Index Card is a non-statutory statistical report prepared by the Election Commission of India post-election, providing constituency-level electoral data for academic, research and policy analysis.
- Loan-to-Value (LTV) Ratio is the percentage of a gold asset's value a lender offers as a loan. Regulated by the RBI, it ensures lenders maintain a

- safety margin against gold price fluctuations.
- Loan-to-Value (LTV) Ratio is the percentage of a gold asset's value a lender offers as a loan. Regulated by the RBI, it ensures lenders maintain a safety margin against gold price fluctuations.
- Greater Flamingo Sanctuary in Dhanushkodi is a vital stop on the Central Asian Flyway, rich in mangroves and home to 128 bird species.
- **DIGIPIN** is a geo-coded, open-source digital addressing system that assigns a unique 10-character alphanumeric code to every 4x4 meter location in India. Developed by Department of Posts, IIT Hvderabad ISRO's and NRSC, it enhances precision deliveries, emergency response and service access-even in rural or remote areas.

