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**9 August 2024**

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 **SAMYAK IAS, NEAR RIDDHI-SIDDHI, JAIPUR**

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## Geography

**Relevance:** Important Geophysical Phenomena

### 1. What's causing Antarctica's deep-winter heatwave, what could be its fallout? - Indian Express

#### Context

For the second time in two years, a record-breaking heatwave is sweeping through Antarctica at the height of its winter season. Ground temperatures have been 10 degrees Celsius higher than normal on average since mid-July, and up to 28 degrees higher on certain days.

#### Antarctica's deep-winter heatwave (Mains Analysis)

##### Possible reasons for heatwave

**Weakening of the polar vortex:** The vortex usually remains strong and stable during winter in the southern hemisphere, keeping cold air trapped over Antarctica and not letting hot air come in but it has been disturbed. Due to this, the vortex released trapped cold air, and opened the door for warmer air to enter the region.

**Weakened southern hemisphere vortex:** A rare event that is only expected to occur once every two decades on average.

**Reduction of the extent of the Antarctic sea ice:** In June, the extent of Antarctic sea ice was the second-lowest ever for that time of year. Sea ice plays a crucial role in keeping temperatures down in the polar regions due to its high albedo.

**Warmer Southern Ocean around Antarctica:** It loads the dice for warmer winter weather over Antarctica.

**Global warming:** According to a 2023 study, the continent is likely warming at a rate of 0.22 degrees Celsius to 0.32 degrees Celsius per decade – almost twice as fast as the rest of the world.

**Further losses of the Antarctic Ice Sheet:** Antarctica has already lost 280% more ice mass in the 2000s and 2010s than it lost in the 1980s and 1990s.

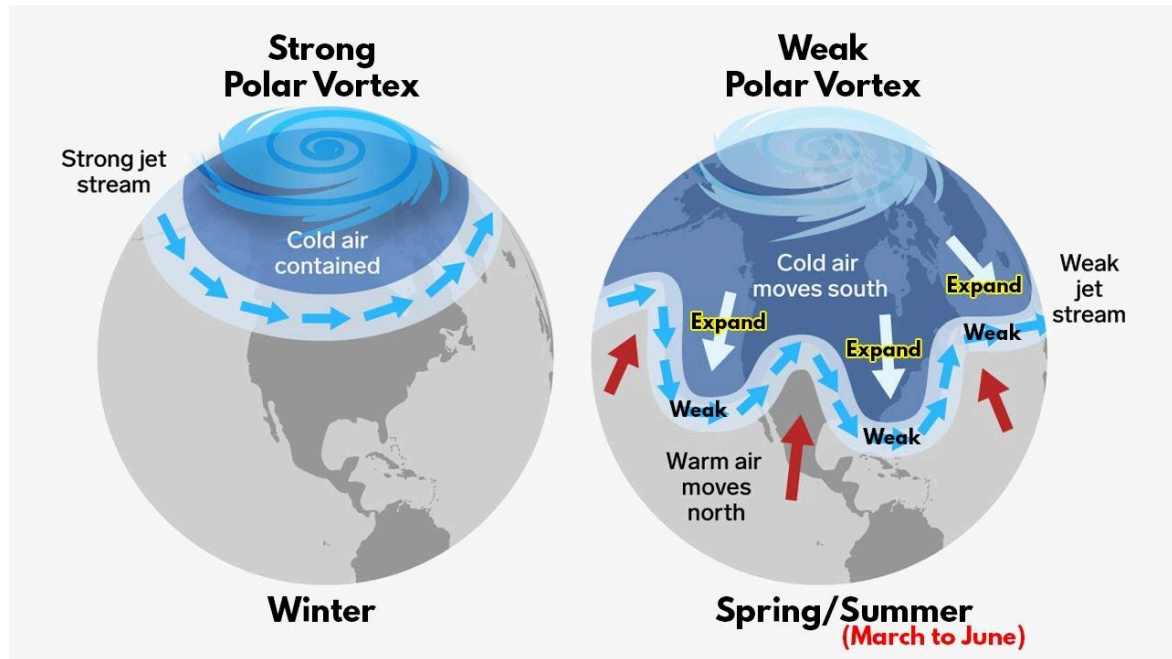
**Consequence of Antarctic Ice Sheet:** A glacier covering 98% of Antarctic continent holds more than 60% of the world's total freshwater. If entirely melted, it can submerge coastal cities and reshape the world's map.

##### The possible fallouts

**Impact on global ocean circulation system:** A 2023 study showed that the melting ice in Antarctica is slowing down this circulation. The freshwater from melting ice reduces the salinity and density of the surface water and diminishes the downward flow to the ocean's bottom.

**Carbon sequestration:** A slower global ocean circulation system will lead to oceans absorbing less heat and CO<sub>2</sub>, intensify global warming, and increase frequency & intensity of extreme events like floods & droughts.

**Polar Vortex:** It is the band of cold air and low pressure systems that spins around the poles of the Earth in the stratosphere.



**Q. What are the possible limitations of India in mitigating global warming at present and in the immediate future? (2010)**

1. Appropriate alternate technologies are not sufficiently available.
2. India cannot invest huge funds in research and development.
3. Many developed countries have already set up their polluting industries in India.

**Which of the statements given above is/are correct?**

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**Q. Bring out the causes for the formation of heat islands in the urban habitat of the world. (2013)**

## Polity

**Relevance:** Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these

### 2. Govt's proposed curbs on independent online content creators - Indian Express

#### **Context**

A draft Broadcasting Services (Regulation) Bill, 2024, circulated among a handful of stake-holders a few weeks ago seeks to expand the remit of the ministry from over-the-top (OTT) content and digital news to social media accounts and online video creators. The revised draft defines a "digital news broadcaster" in sweeping terms, requires them to have prior registration with the government, and prescribes standards for content evaluation.

#### **Curbs on news creators (Mains Analysis)**

- **Definition of news and current affairs programmes in the 2023 draft:**
  - newly-received or noteworthy audio, visual or audio-visual programmes or live programmes, including analysis, about recent events primarily of socio-political, economic or cultural nature, or
  - any programmes transmitted or retransmitted on broadcasting network, where the context, purpose, import and meaning of such programmes implies so.
- **New category in the 2024 draft:** "Digital news broadcaster or publisher of news & current affairs content"- any person who broadcasts news & current affairs programme through online paper, news portal, website, social media intermediary, or other similar medium as part of a systematic business, professional, or commercial activity but excluding replica e-papers.
- **"Systematic" activity:** Defined as any structured or organised activity that involves an element of planning, method, continuity or persistence terms with broad meanings that could give the executive sweeping powers of interpretation.
- **Individual creators included:** 2024 draft includes individual creators in the definition of digital news broadcasters; the definition in the Information Technology Rules, 2021 specifically excludes individual users.
- **Part III of the 2021 IT Rules:** It regulates digital news publishers and OTT platforms such as Netflix and Amazon Prime Video.

#### **Obligations of creators**

- **Provisions in revised draft:** A creator who is categorised as a digital news broadcaster must intimate the ministry of their work and existence; they must form one or more content evaluation committees at their own expense; and "strive to make" the committee diverse.

- **Penalty on violation:** News creators who do not intimate govt of the details of committee members are liable to be fined Rs 50 lakh for first contravention, & Rs 2.5 crore for subsequent violations in next three years.
- **Exemptions:** The government can exempt a distinct class of players or a group for avoiding genuine hardship.
- **Provision in the 2023 version:** The govt may prescribe a subscriber/viewer threshold that triggers intimation and content code obligations. The new draft Bill does not have this provision.

#### **Rationale for regulation**

- **Role played by independent content creators in 2024 Lok Sabha polls:** Creators earlier made videos on current affairs that made some sensational claims about the government and its senior leaders. So, it was decided that there has to be accountability for these creator.

#### **Obligations on social media**

- **Online intermediaries are exempt from liability for third-party content, if the intermediary:**
  - limits its function to providing access to a communication system over which information made available by third parties is transmitted or temporarily stored or hosted;
  - does not initiate the transmission; does not select or modify the information, except in compliance with government order,
  - observes due diligence while discharging duties under the Act and observes other prescribed guidelines.
- **Penal provisions:** Criminal liability provisions for social media companies if they do not provide information "pertaining to OTT Broadcasters and Digital News Broadcasters" on their platforms for compliance.

#### **Law in other countries**

- **Singapore:** Both traditional broadcasters and OTT content providers come under the country's broadcasting law.
- **US:** The Federal Communications Commission (FCC) and its Media Bureau regulate broadcast radio and television stations. OTT platforms are not directly regulated by US federal law or government authorities.

**Q. With regards to Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021, consider the following statements.**

1. The guidelines are for Over the Top (OTT) platforms only.
2. It has the Code of Ethics and Procedure and Safeguards for the intermediaries (as defined in the guidelines).
3. The Ministry of Information and Broadcasting, Govt. of India shall formulate an oversight mechanism.
4. The rules require intermediaries to set up a grievance redressal mechanism.

**Which of the statements given above is/are correct?**

- A. 1 and 2 only
- B. 2 only

- C. 2, 3 and 4 only
- D. 4 only

**Q. What are the implications of Unregulated OTT platforms in India? Suggest some recent policy measures introduced by the government. (250 words)**

**Relevance:** Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these

### 3. Proposed changes to Waqf law - Indian Express

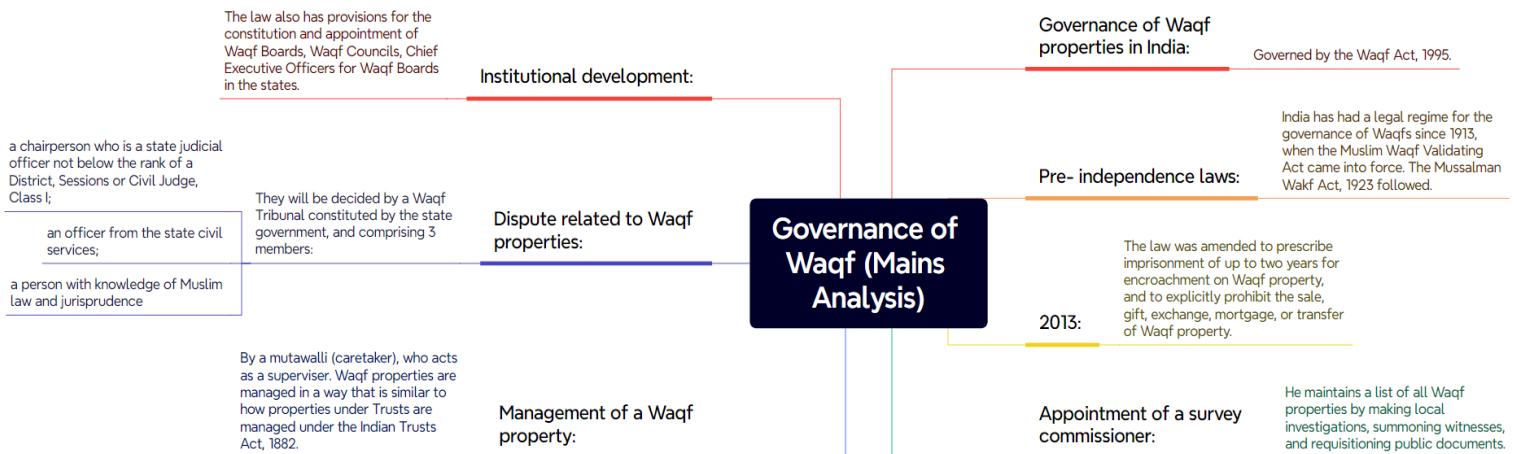
**Context**

The government recently referred the Waqf (Amendment) Bill, 2024, to a Joint Committee of Parliament. The Bill seeks to amend the 1995 Waqf Act, and proposes sweeping changes to how Waqfs are governed and regulated.

**Waqf property**

- **Waqf:** A personal property given by Muslims for a specific purpose - religious, charitable, or for private purposes. Beneficiaries of the property can be different, the ownership of the property is implied to be with God.
- **Formation:** Formed through a deed or instrument or orally, or a property can be deemed to be Waqf if it has been used for religious or charitable purposes for a long period of time.
- **Declaration:** Once a property is declared as Waqf, its character changes forever, and cannot be reversed.

**Governance of Waqf**

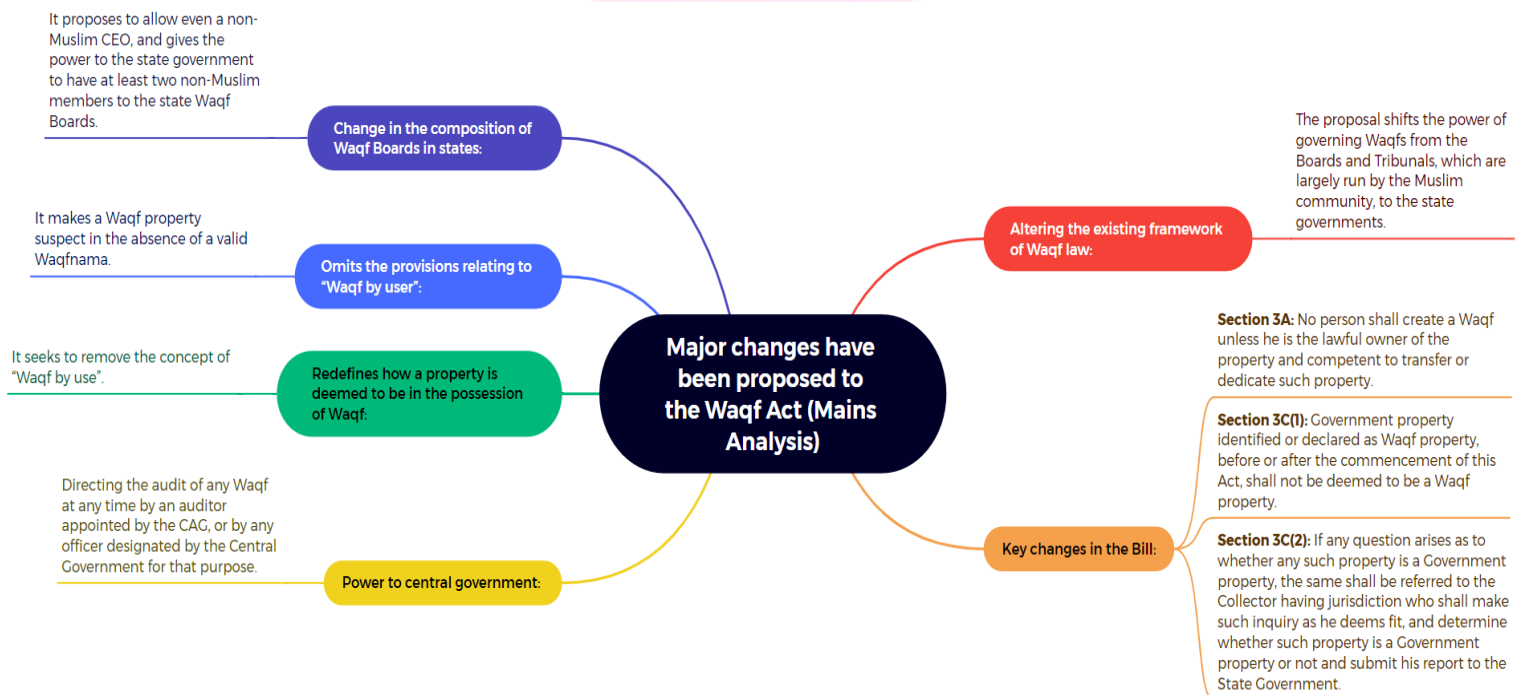


**Waqf Boards**

- **Waqf Board:** A body under the state government, which works as a custodian for Waqf properties across the state.
- **Properties:** Almost all prominent mosques in the country are Waqf properties and are under the Waqf Board of the state.

- **Composition:** Headed by a chairperson, and has one or two nominees from the state government, Muslim legislators and parliamentarians, Muslim members of the state Bar Council, recognised scholars of Islamic theology, and mutawallis of Waqfs with an annual income of Rs 1 lakh and above.
- **Powers:**
  - To administer the property and take measures for the recovery of lost properties of any Waqf
  - To sanction any transfer of immovable property of a Waqf by way of sale, gift, mortgage, exchange, or lease.

### Major changes have been proposed to the Waqf Act



**Relevance:** Parliament and State Legislatures

## 4. National Coastal Scheme - PIB

- **Launch:** 2014.
- **About:** Envisaged under the National Action Plan on Climate Change to address the impact of climate change on coastal and marine ecosystems, infrastructure and communities in coastal areas.
- **Components:**
  - Management Action Plan on Conservation of Mangroves and Coral Reefs
  - Research & Development in Marine and Coastal ecosystem
  - Sustainable Development of Beaches under Beach Environment & Aesthetic Management Service
  - Capacity Building / Outreach Programme of Coastal States/UTs on conservation of marine and coastal ecosystems including beach cleaning drive.



- **Implementing agencies:** State Governments of Coastal States and Union Territory (UT) Administrations.

## National Action Plan on Climate Change

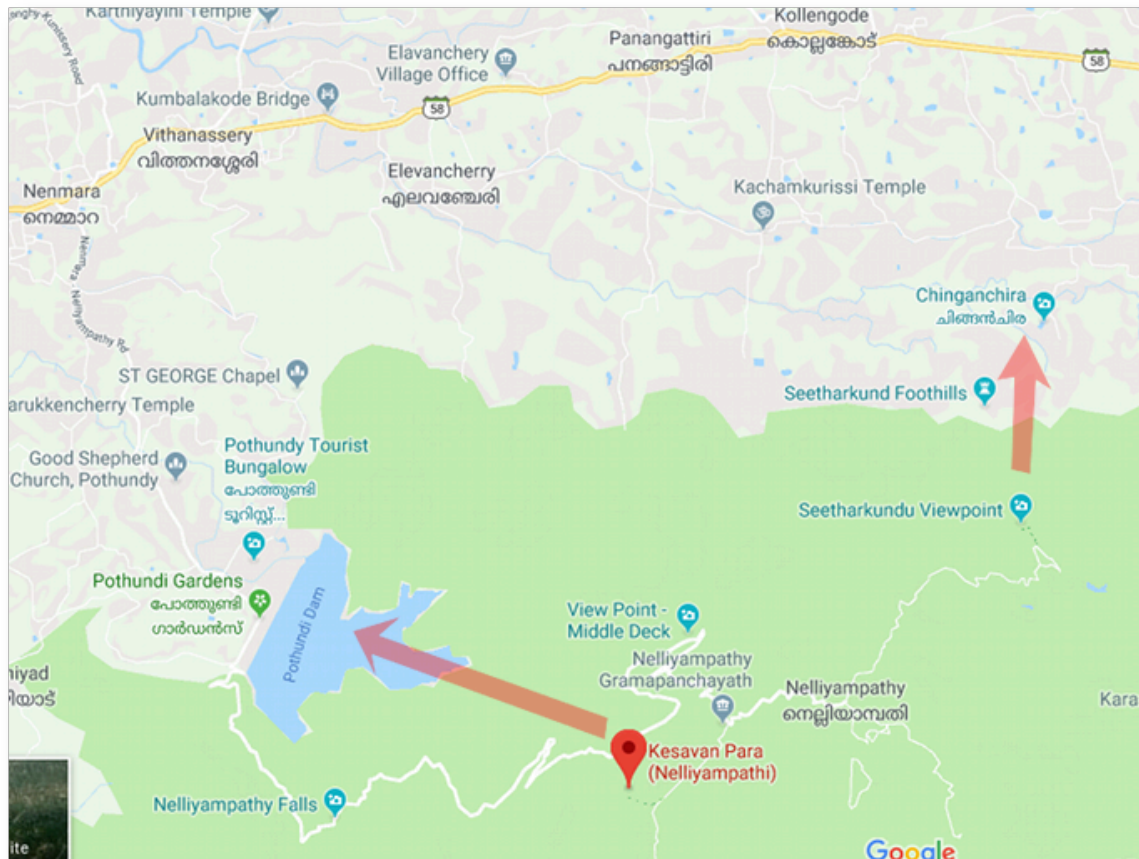
8 missions to address climate change concerns & promote sustainable development



## Economy

**Relevance:** Infrastructure: Energy, Ports, Roads, Airports, Railways etc

### 5. Pothundi dam - The Hindu

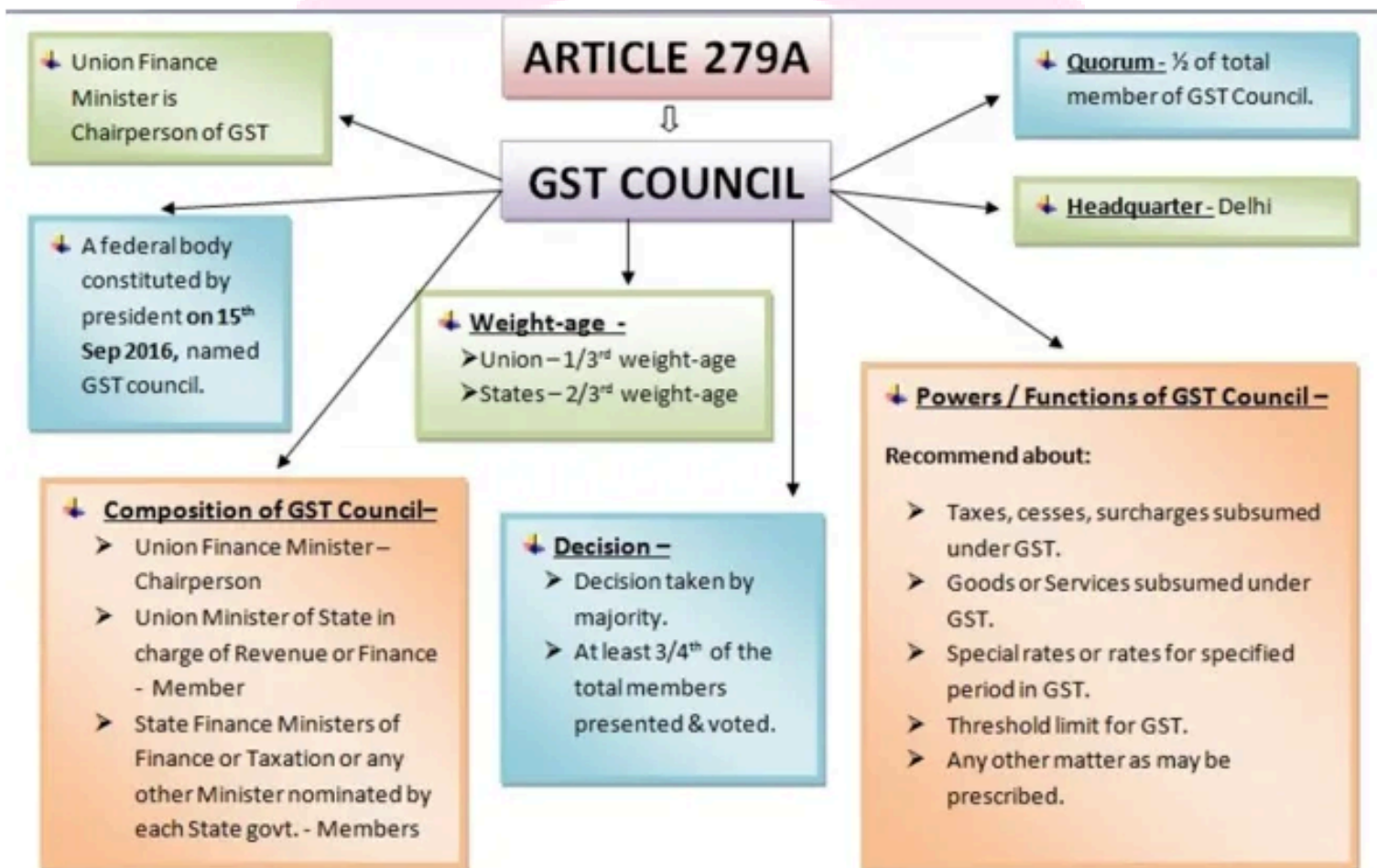


- **About:** An irrigation project located at a distance of 42 km from Palakkad at the foot of Nelliampathy hills.
- **Usage:** It provides irrigation to an area of 5,470 hectares in the Palakkad district and drinking water supply to the Nemmara, Aylur, and Melarcod Panchayat.
- **Construction:** Constructed in the 19th century, it is considered one of the oldest dams in India.
- **Significance:** Second dam in Asia which does not use cement mixture for construction. It is built using a mixture of jaggery and quick lime.
- **Inflow:** The dam is built across kaivayi of Ayilurpuzha (Bharathappuzha sub tributary). The Meenchadypuzha and Padipuzha flows into this reservoir.

**Relevance:** Indian Economy and issues

## 6. GST Council - The Hindu

- **About:** A joint forum of the Centre and the states set up by the President as per Article 279A (1) of the amended Constitution.
- **Members:** Union Finance Minister (chairperson), the Union Minister of State (Finance) from the Centre. Each state can nominate a minister in-charge of finance or taxation or any other minister as a member.
- **Functions:**
  - To make recommendations to the Union and the states on important issues related to GST, like the goods and services that may be subjected or exempted from GST, model GST Laws.
  - It also decides on various rate slabs of GST.



**Q. Consider the following items:**

1. Cereal grains hulled
2. Chicken eggs cooked
3. Fish processed and canned
4. Newspapers containing advertising material

**Which of the above items is/are exempted under GST (Goods and Services Tax)? (2018)**

- A. 1 only
- B. 2 and 3 only
- C. 1, 2 and 4 only
- D. 1, 2, 3 and 4

**Q. What is/are the most likely advantages of implementing 'Goods and Services Tax (GST)'?**

1. It will replace multiple taxes collected by multiple authorities and will thus create a single market in India.
2. It will drastically reduce the 'Current Account Deficit' of India and will enable it to increase its foreign exchange reserves.
3. It will enormously increase the growth and size of economy of India and will enable it to overtake China in the near future.

**Select the correct answer using the code given below: (2017)**

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

**Q. Enumerate the indirect taxes which have been subsumed in the goods and services tax (GST) in India. Also, comment on the revenue implications of the GST introduced in India since July 2017. (150 words, 10 Marks) (2019)**

**Relevance:** Indian Economy and issues

## 7. IBBI issues norms for committee of creditors to hasten IBC resolutions - The Hindu

### **Context**

Insolvency regulator IBBI has issued 'Guidelines for Committee of Creditors' to help conclude resolutions under the IBC in a time-bound manner and maximise the value of the corporate debtor's (CD) assets. Under the Insolvency and Bankruptcy Code (IBC), the Committee of Creditors (CoC) is a key decision-making body, especially in the context of rescuing the CD through a suitable resolution plan.

### **Insolvency and Bankruptcy Board of India (IBBI)**

Regulates professionals as well as processes.

Regulatory oversight over the insolvency professional agencies, insolvency professional entities, insolvency professionals and information utilities.

Enforces rules for processes of corporate insolvency resolution, individual insolvency resolution, corporate liquidation and individual bankruptcy under the IBC.

Specifies the minimum eligibility requirements for registration of insolvency professional agencies, insolvency professionals and information utilities and curriculum for the qualifying examination of the , insolvency professionals for their enrolment.

Collects and maintains records relating to insolvency and bankruptcy cases and disseminate information relating to such cases.

### Functions:

### Formation:

1st October 2016 under Insolvency & Bankruptcy Code (IBC), 2016.

### Aim:

It is responsible for the implementation of the IBC which amends and consolidates the laws relating to insolvency resolution of individuals, partnership firms and corporate persons in a time-bound manner.

### Constitution:

- A Chairperson.
- 3 members from Ministry of Finance, Ministry of Corporate Affairs and Ministry of Law, ex-officio.
- One member nominated by the RBI, ex-officio.
- Five other members nominated by the Central Government, out of which at least three should be whole-time members.

### Reappointment:

Eligible for re-appointment.

### Term of office:

5 years or until they attain sixty-five years, whichever is earlier

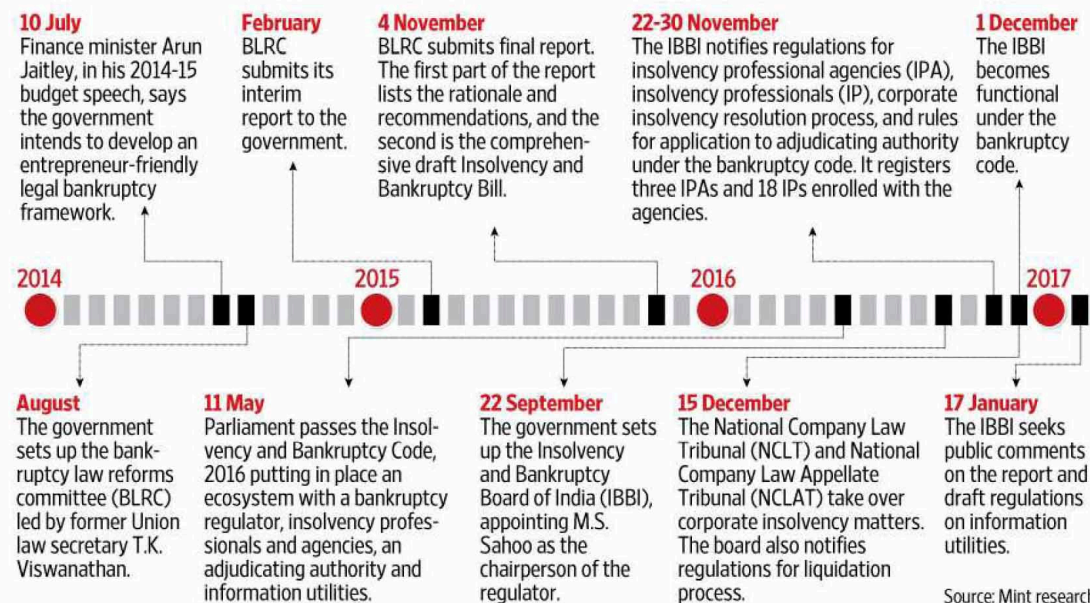
### Appointment:

Central Government

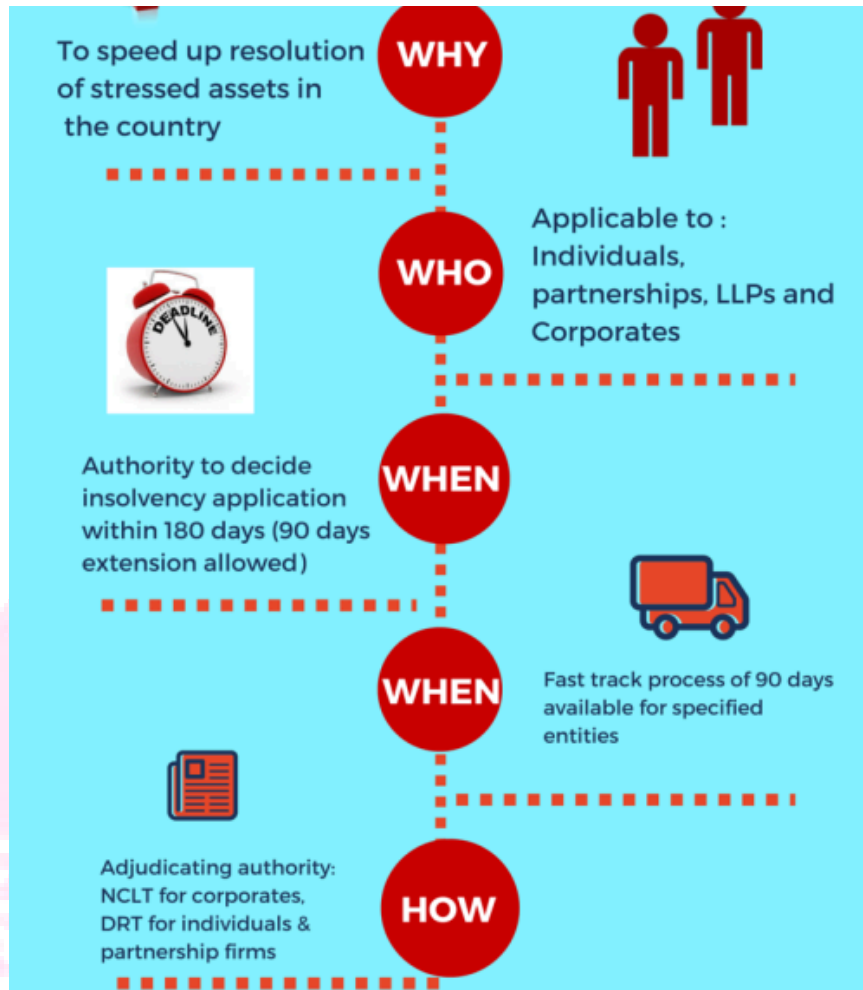
## Insolvency and Bankruptcy Board of India (IBBI) (Prelims Special)

### Insolvency and Bankruptcy Code (IBC), 2016 - A timeline (Mains Analysis)

## BANKRUPTCY CODE—IDEA TO IMPLEMENTATION



### Insolvency and Bankruptcy Code (IBC), 2016 (Prelims Special)



Salient Features						
<b>Clear &amp; Speedy Process for Early Identification &amp; Resolution of Financial Distress</b> for Corporates & LLPs (if underlying business found viable)	<b>Two Distinct Resolution Processes:</b> (a) Fresh Start; (b) Insolvency Resolution	<b>Adjudicating Authorities:</b> National Company Law Tribunal (NCLT) and Debt Recovery Tribunal	<b>Regulator:</b> Insolvency & Bankruptcy Board of India for IPs, IPAs & Information Utilities	<b>Insolvency Professionals (IPs):</b> To handle commercial aspects of Insolvency Resolution Process	<b>Insolvency Professional Agencies (IPAs):</b> To develop professional standards & code of ethics for insolvency professionals members	<b>Information Utilities:</b> To process financial information to be used in insolvency and bankruptcy proceedings.

**Relevance:** Infrastructure: Energy, Ports, Roads, Airports, Railways etc

## 8. RailTel gears up for Kavach tenders - The Hindu

### Context

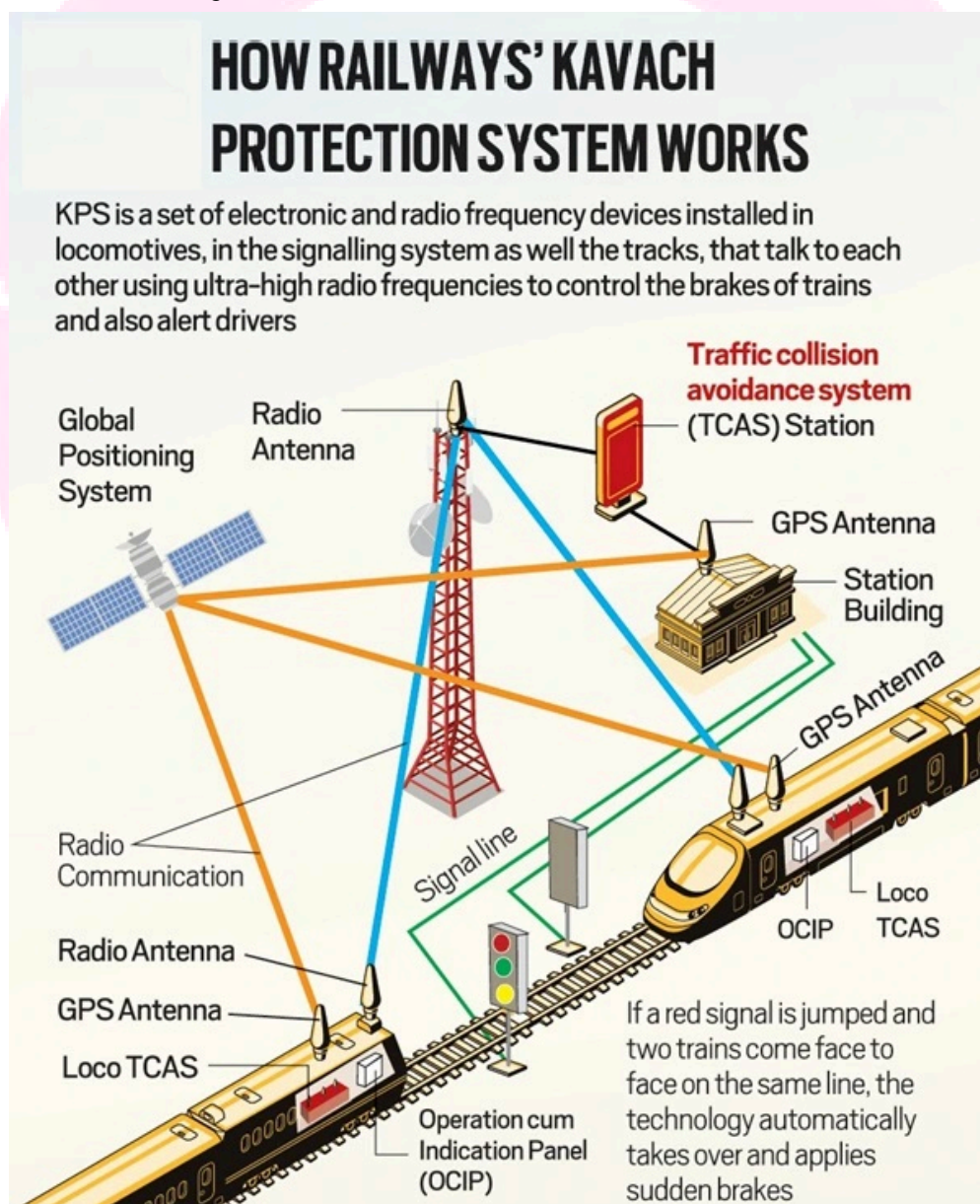
RailTel Corporation is eyeing new partners as it prepares to bid for tenders being rolled out by the Railways for the deployment of Kavach —the anti-collision

system. The Railway PSE, which provides broadband and VPN services, is already partnering Quadrant, a Kavach OEM. Quadrant's products are now in testing stage and awaiting approvals. Currently, Railways has three Kavach OEMs — Medha, HBL Power and Kernex. Two more, Quadrant and Digitronics are awaiting product approvals.

### RailTel (Prelims Special)

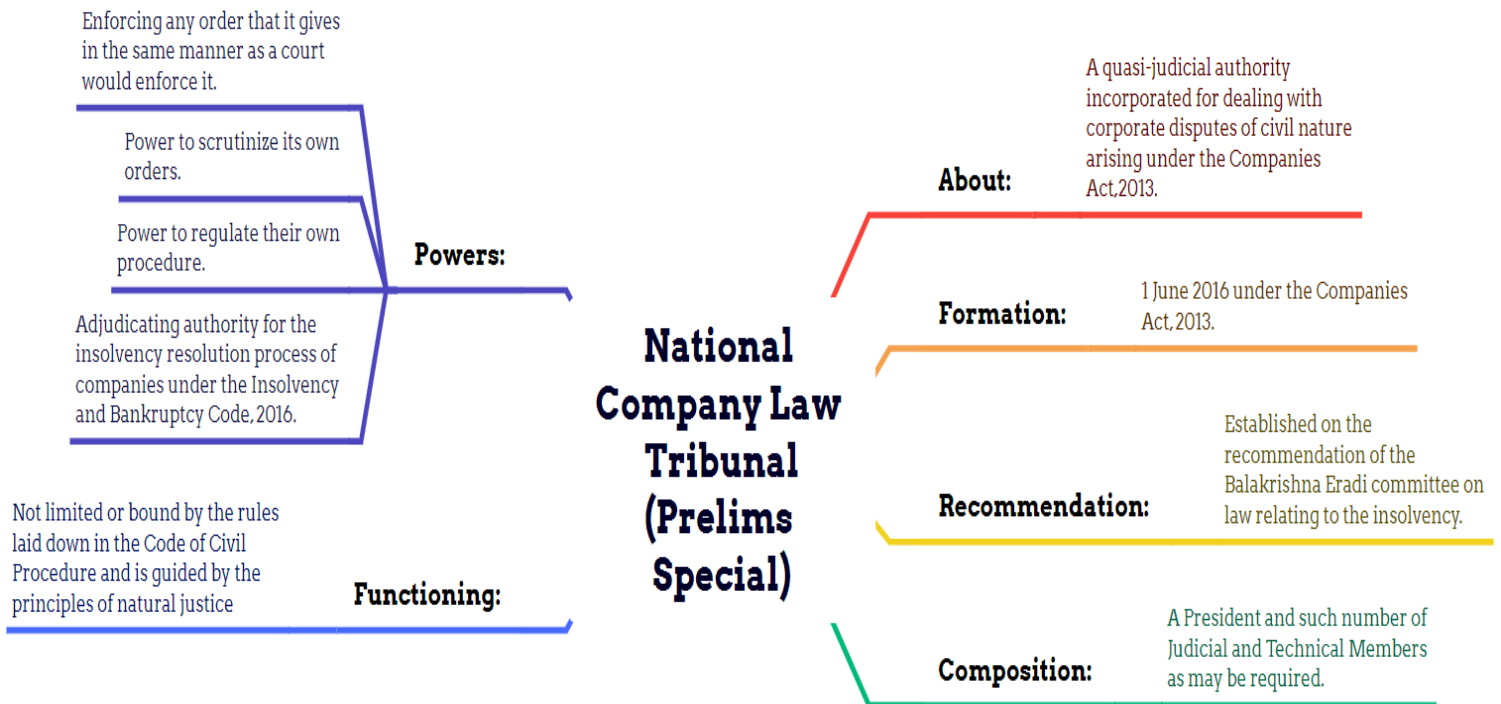
- **About:** An n ISO Certified Mini Ratna Central Public Sector Enterprise.
- **Mandate:** An ICT provider and one of the largest infrastructure provider in the country.
- **Formation:** Incorporated in September 2000 to modernize the existing Telecom system.
- **Function:** It is the Telecom system for train control, operation, and safety and to generate additional revenues by creating a nationwide Broadband and multimedia network.

### Kavach Protection System



**Relevance:** Indian Economy and issues

## 9. National Company Law Tribunal - Indian Express



**Q. Which of the following statements best describes the term 'Scheme for Sustainable Structuring of Stressed Assets (S4A)', recently seen in the news? (2017)**

- A. It is a procedure for considering ecological costs of developmental schemes formulated by the Government.
- B. It is a scheme of RBI for reworking the financial structure of big corporate entities facing genuine difficulties.
- C. It is a disinvestment plan of the Government regarding Central Public Sector Undertakings.
- D. It is an important provision in 'The Insolvency and Bankruptcy Code' recently implemented by the Government.



## Environment

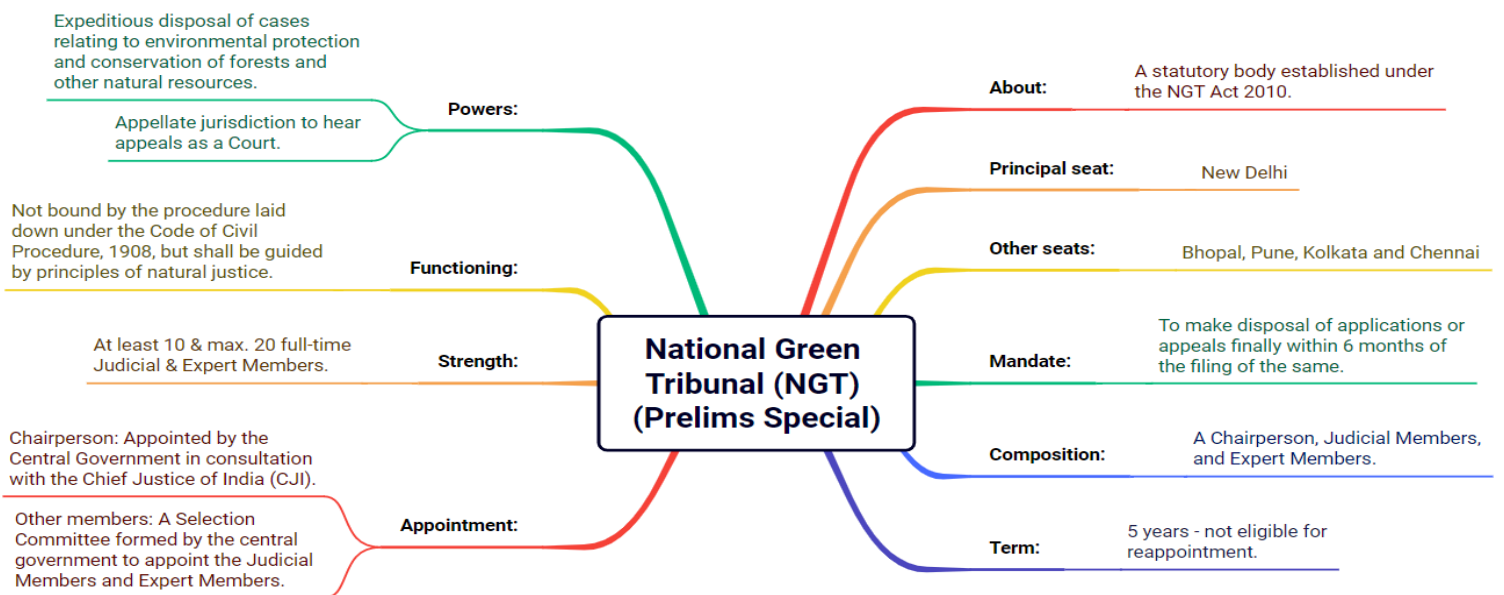
**Relevance:** Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

### 10. 'Assam didn't seek clearance for activities in sanctuary' - The Hindu

#### Context

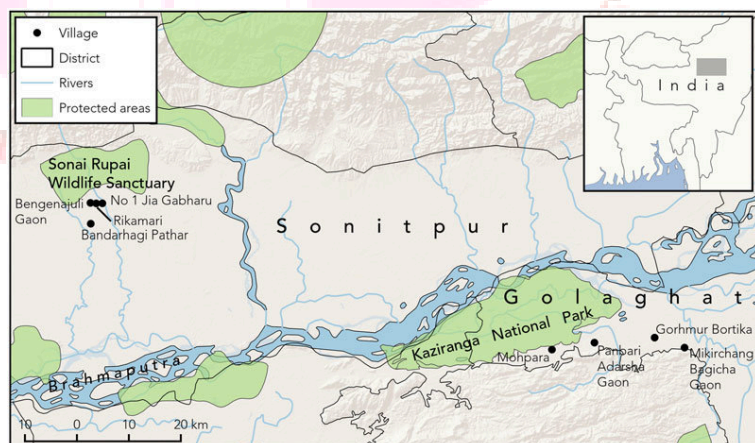
The Assam government did not seek forest clearance for non-forestry activities allowed in a wildlife sanctuary, MoEF&CC has told the National Green Tribunal. The Ministry also advised the NGT to pass orders as it deemed fit in a case related to the encroachment in the 220 sq. km Sonai-Rupai Wildlife Sanctuary in Assam's Sonitpur district.

#### National Green Tribunal (NGT) (Prelims Special)



#### Sonai-Rupai Wildlife Sanctuary/ Jewel of Assam (Prelims Special)

- **About:** A protected area located in the Indian state of Assam situated in the foothills of the Eastern Himalayas.
- **Boundaries:**
  - **West:** Pachnoi River



- **East:** Jia Gabharu
- **North:** Doimara Reserve Forest in Arunachal Pradesh
- **South:** Revenue village and Charduar Reserve Forest of Sonitpur
- **Designation:** A wildlife sanctuary in 1998.
- **Rivers:** Dolsiri, Gabharu, Gelgeli, and Belsiri.
- **Vegetation:** Tropical evergreen, semi-evergreen and moist deciduous forests.
- **Flora:** Hollang, Mekai, Dhuno, Udiyam, Nahar, Samkothal, Bheer, Hollock, Nahor.
- **Fauna:** Elephant, Indian bison, deer, one-horned rhinoceros, leopards, tigers, and some rare species of cats.
- **Bird Species:** White Winged Wood Duck, along with commonly seen birds like woodpeckers, hill mynas, Indian rollers, nightjars, horned owls, etc.

**Relevance:** Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

## 11. Why Himalayan towns need a different kind of development - The Hindu

### Context

The Indian Himalayan Range (IHR), comprising 11 States and two Union Territories, had a decadal urban growth rate of more than 40% from 2011 to 2021. Towns have expanded, and more urban settlements are developing. However, Himalayan towns require a different definition of urbanisation.

**Proper mapping of every town:** It will help in identifying vulnerabilities from geological and hydrological perspectives.

**Change in approach:** Planning process should involve locals and follow a bottom-up approach.

**Consultant-driven urban planning processes:** They should be shelved for Himalayan towns, with the urban design based on climate resilience.

**Separate chapter on urban financing for the IHR by Finance Commission:** The high costs of urban services and the lack of industrial corridors place these towns in a unique financial situation.

**Increase in GDP:** Current intergovernmental transfers from the centre to urban local bodies constitute a mere 0.5% of GDP; this should be increased to at least 1%.

**Sustainable development:** Himalayan towns must engage in wider conversations about sustainability, with the focus on urban futures being through robust, eco-centric planning processes.

Way forward

### IHR towns (Mains Analysis)

Current situation of IHR towns

**Struggle with managing civic issues:** Cities like Srinagar, Guwahati, Shillong, and Shimla face significant challenges in managing sanitation, solid and liquid waste, and water.

**Failure of planning institutions in these State:** It is so because they use models copied from the plains and have only limited capacities to implement these plans.

**Shortage of human resources:** City governments are short of human resources by almost 75%. Eg, in the Kashmir Valley, there are only 15 executive officers across over 40 urban local bodies.

**Expansion of cities into the peripheries:** It encroaches on the commons of villages. Srinagar, Guwahati are examples of such expansion, leading to the plundering of open spaces, forest land, and watersheds.

**Land use change:** In Srinagar, land use changes between 2000 and 2020 showed a 75.58% increase.

**Erosion of water bodies:** These areas have been taken over by built-up real estate. Nearly 90% of the liquid waste enters water bodies without treatment.

Increasing pressure from urbanisation and development

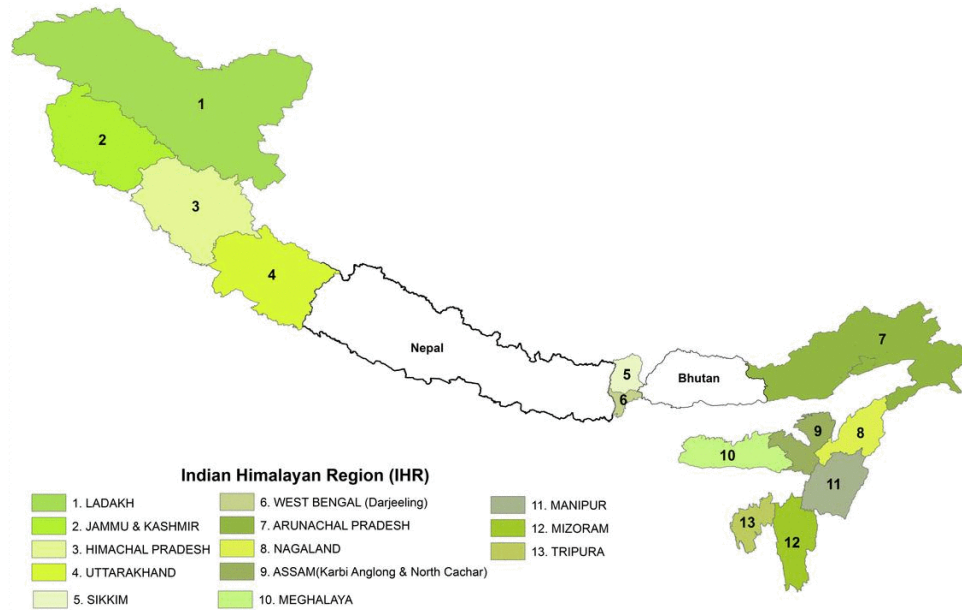
**High-intensity tourism:** Current tourism in the IHR often replaces eco-friendly infrastructure with inappropriate, unsightly, and dangerous constructions, poorly designed roads, and inadequate solid waste management.

Unsustainable infrastructure and resource use (land and water)

Climatic variations like changing precipitation patterns and rising temperatures.

Anthropological factors

**Indian Himalayan Region (IHR) (Prelims Special)**



- **About:** Mountainous area in India that encompasses the entire Himalayan range within the country.
- **Extent:** Stretches from the northwestern part of India in Jammu and Kashmir to the northeastern states along the border with countries like Bhutan, Nepal, and Tibet (China).
- **Covers 11 states:** Himachal Pradesh, Uttarakhand, Sikkim, all northeast states, and West Bengal and 2 UTs (Jammu & Kashmir and Ladakh).

**Relevance:** Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

12. Clouded leopard day - Indian Express

**Context**

Mizoram governor recently drew attention to the critical challenges in wildlife conservation during a function to observe International Clouded Leopard Day on Monday. He said the clouded leopard serves as a powerful symbol of the ongoing efforts to protect endangered species amid increasing threat to the ecology.

**Clouded Leopard (Prelims Special)**

- **About:** A wild cat inhabiting dense forests of the Himalayas through mainland Southeast Asia into South China.
- **2 species of clouded leopards:** Clouded leopard (*Neofelis nebulosa*) & Sunda clouded leopard (*Neofelis diardi*).

**Clouded leopard**



Clouded leopard at the Nashville Zoo

**Conservation status**

Extinct      Threatened      Least Concern

(EX) (EW) (CR) (EN) (VU) (NT) (LC)

Vulnerable (IUCN 3.1)<sup>[2]</sup>

CITES Appendix I (CITES)

- **Distribution:** Southern China, Bhutan, Nepal, northeast India, Burma, Thailand, Vietnam, Malaysia, Cambodia, Laos, and Bangladesh.
- **Vegetation:** Tropical evergreen rainforests, dry tropical forests and mangrove swamps.
- **Distribution in India:** Sikkim, northern West Bengal, Meghalaya, Tripura, Mizoram, Manipur, Assam, Nagaland and Arunachal Pradesh.
- **Appearance:** It has distinctive 'clouds' on its coat - ellipses partially edged in black, with the insides a darker colour than the background colour of the pelt.
- **Nature:** Asolitary animal.
- **IUCN Red List conservation status:** Vulnerable

**Relevance:** Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

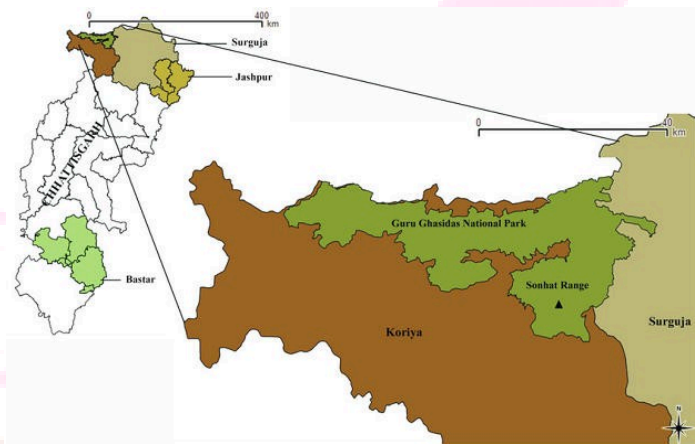
### 13. Chhattisgarh govt. to develop fourth tiger reserve in State - The Hindu

#### Context

The Chhattisgarh government recently announced that it would establish a new tiger reserve, making it the fourth such reserve in the forest-rich State. It will be named Guru Ghasidas-Tamor Pingla Tiger Reserve.

#### Guru Ghasidas-Tamor Pingla Tiger Reserve (Prelims Special)

- **Location:** Northern part of the state of Chhattisgarh, bordering Madhya Pradesh and Jharkhand.
- **Significance:** Fourth Tiger Reserve in Chhattisgarh, after the Udanti-Sitanadi, Achanakmar and Indravati Reserves.
- **Establishment:** Formed after integrating the regions of Guru Ghasidas National Park and Tamor Pingla Sanctuary.
- **Fauna:** Tigers, leopards, hyenas, jackals, wolves, sloth bears, barking deer, chinkara, and chital.
- **Rivers:** Origin point of Hasdeo Gopad and Baranga and a catchment area for Neur, Bijadhur, Banas, Rehand, etc.



**Relevance:** Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

## 14. Govt denies any threat to Bhoj Wetland delisting from Ramsar Convention list - Indian Express

### Context

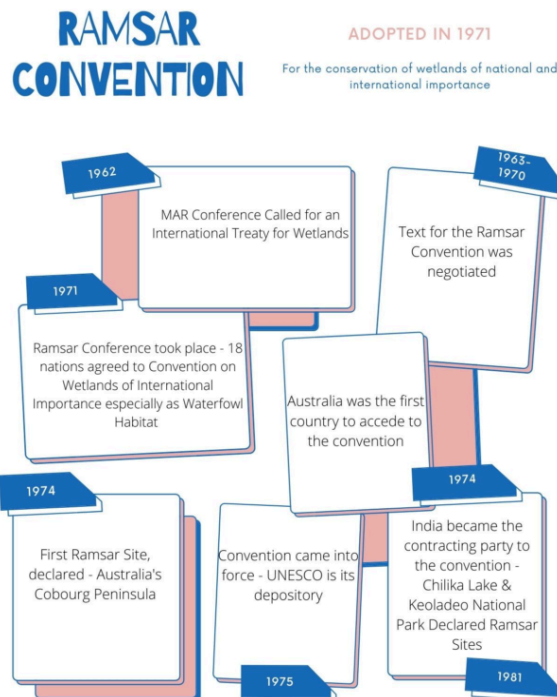
The Union Government has recently denied that the international Ramsar site, Bhoj Wetland in Bhopal faces no threat of delisting from Ramsar Convention list of wetlands of International importance.

### Bhoj Wetland (Prelims Special)

- **Location:** Bhopal, Madhya Pradesh.
- **2 contiguous human-made reservoirs:**
  - **Upper Lake:** Bhojtal (Bada Talaab)
  - **Lower Lake:** Chhota Talaab
- **Significance of Upper Lake:** A major source of potable water for Bhopal.
- **Biodiversity:** Rich in biodiversity, particularly for macrophytes, phytoplankton and zooplankton.
- **Fauna:** Over 15 kinds of fish and several vulnerable species, including turtles, amphibians and aquatic invertebrates.
- **Designation:** Declared as a Ramsar site in 2002.



### Ramsar Convention (Prelims Special)



**Q. Consider the following statements:**

1. Under Ramsar Convention, it is mandatory on the part of the Government of India to protect and conserve all the wetlands in the territory of India.
2. The Wetlands (Conservation and Management) Rules, 2010 were framed by the Government of India based in the recommendation of Ramsar Convention.
3. The Wetlands (Conservation and Management) Rules, 2010 also encompass the drainage area or catchment regions of the wetlands as determined by the authority.

**Which of the statements given above is/are correct? (2019)**

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 only
- D. 1, 2 and 3



## Sci and Tech

**Relevance:** Science and Technology- Developments and their Applications and Effects in Everyday Life.

### 15. WHO lists over 30 pathogens that could start the next pandemic - The Hindu

#### Context

More than 40 athletes at the 2024 Olympics in Paris have tested positive, signalling a new global rise in cases. The subgenus Sarbecovirus, of which SARS-CoV-2 is a member, now finds a place on the list of “priority pathogens” in the WHO’s recently-released ‘Pathogens Prioritisation’ report.

#### ‘Pathogens Prioritisation’ report

- **About:** A framework for epidemic and pandemic research preparedness, involving over 200 scientists from 54 countries who evaluated evidence related to 28 viral families & 1 core group of bacteria, encompassing 1,652 pathogens.
- **Final list:** Over 30 ‘priority pathogens’.
- **Major priority pathogens:** Nipah, Ebola, Zika viruses, dengue virus and the influenza A viruses etc.

#### World Health Organization (WHO) (Prelims Special)

- **About:** The United Nations’ specialized agency for Health founded in 1948.
- **Headquarters:** Geneva, Switzerland.
- **Member states:** 194 Member States, 150 country offices, six regional offices.
- **Mandate:** Providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.



**Relevance:** Science and Technology- Developments and their Applications and Effects in Everyday Life.

## 16. Candida Auris (C. auris) - The Hindu

- **About:** A fungal pathogen that is often multi-drug-resistant capable of causing invasive infections in the human body.
- **Threat:** Can cause infections from superficial (skin) infections to more severe, life-threatening infections, such as bloodstream infections.
- **Discovery:** First identified in Japan in 2009.
- **Transmission:** Thought to spread through contact with contaminated surfaces or by person-to-person transmission.
- **Symptoms:** Fever and chills that don't go away after treatment with antibiotics.
- **Mortality Rate:** 30-60%
- **Treatment:** Antifungal drugs called echinocandins. But some C. auris infections are resistant to the main types of antifungal medications.

### WHY IT'S SUCH A BIG WORRY...

**What is Candida auris**

- A type of fungus that can cause serious illness in hospitalised patients; infections can be difficult to treat
- First identified in 2009 in a patient in Japan. In recent years, it has emerged around the world. The US has reported over 600 such cases

**CANDIDA AURIS AND INDIA**

Till about a decade ago, fungal infections were less common among the critically ill. Drugs could effectively treat them...  
...But Candida auris changed that

- A study published in Emerging Infectious Diseases, a medical journal, in 2013 documented how isolates of Candida auris taken from 12 patients in 2 hospitals in India were resistant to fluconazole, one of the most commonly used anti-fungal medications

**Mortality rate in patients suffering from the infection was as high as 33%**

- Another study published in Intensive Care Medicine in 2014 was conducted at 27 Indian ICUs; 6.5% of admitted patients suffered from fungal infection
- More recently, in 2018, AIIMS Trauma Centre released a study involving all patients admitted in the hospital between 2012 and 2017 who suffered fungal infection. Candida auris was the second most important species causing the infection followed by Candida tropicalis

**Infection caused by Candida auris, it was found, had low rate of susceptibility to FLU (55%) and VRC (35%), two of the most commonly used anti-fungals**



**WHY IT'S SO DANGEROUS**

<ul style="list-style-type: none"> <li>➤ Candida auris is resistant to most anti-fungal medications</li> <li>➤ Affects immune-compromised patients and causes high mortality</li> <li>➤ Found in patient's environment and hands of healthcare workers, which indicates it's hospital-acquired</li> <li>➤ The fungus forms non-dispersible cell</li> </ul>	<ul style="list-style-type: none"> <li>aggregates and persists for longer time in environment, in addition to its thermos-tolerant and salt-tolerant properties</li> <li>➤ Mortality rate in patients infected by Candida auris can range from 33% to 72%</li> <li>➤ The fungus is sensitive mostly to echinocandins, a new class of antifungal drug, which is very expensive</li> </ul>
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## Miscellaneous

### 17. Buddhadeb Bhattacharjee - The Hindu

- Former West Bengal Chief Minister and veteran communist leader Buddhadeb Bhattacharjee (80) passed away in Kolkata recently. Mr. Bhattacharjee became Chief Minister of the State in 2000 and led the CPI(M)-led Left Front to power for two terms in 2001 and 2006. He is survived by his wife Meera and daughter Suchetana.



### 18. China confirms large shallow gas field in SCS, 1st in world - Indian Express

China has announced the discovery of a major gas field, estimated to exceed 100 billion cubic meters, in the South China Sea, a region already fraught with military and diplomatic tensions.

#### Lingshui 36-1 gas field

- **About:** Labelled as the world's first large, ultra-shallow gas field in ultra-deep waters.
- **Location:** Southeast of Hainan, China's southernmost island province.

#### South China Sea (SCS)

- **About:** An arm of western Pacific Ocean in Southeast Asia.
- **Location:** South of China, east & south of Vietnam, west of the Philippines and north of the island of Borneo.



- **Bordering states & territories:** People's Republic of China, Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.
- **Straits and water channels:** Connected by Taiwan Strait with East China Sea and by Luzon Strait with the Philippine Sea. It is a connecting link between Indian Ocean and Pacific Ocean, through Strait of Malacca.
- **Major islands:** The Paracel Islands, the Spratly Islands and the Scarborough Shoal.
- **Significance:**
  - **Trade:**  $\frac{1}{3}$  rd of the global shipping passes through it, carrying trillions of trade.
  - **Biodiversity:** It has one-third of the entire world's marine biodiversity and contains lucrative fisheries providing food security to the Southeast Asian nations.
  - **Energy:** It is believed to have huge oil and gas reserves beneath its seabed.

