

# DAILY NEWS

## ANALYSIS



**19<sup>th</sup> April**

### Explained

- |    |  |   |
|----|--|---|
| 1. | ISRO-NASA Collaborations- NISAR Mission        | 2 |
| 2. | Bhagavad Gita, Natyashastra in UNESCO Register | 4 |
| 3. | NGT and Simlipal                               | 4 |
| 4. | Mapping: Sudan crisis, DRC conflict            | 6 |

### Decoded

- |    |   |   |
|----|---|---|
| 5. | India sure contender for seat in expanded UNSC: IGN Chair | 8 |
|----|---|---|

### DNA Quiz

Playlist Link:

What to Read: <https://bit.ly/3FYdutC>

Daily News Analysis: <https://bit.ly/4ge9BgF>

## EXPLAINED

### 1. ISRO-NASA COLLABORATIONS- NISAR MISSION

**Relevance:** GS 3/Science and Technology

**Backdrop:** The NISAR mission is set to be launched in June 2025.

#### In the news

#### NISAR Mission:

NISAR (NASA-ISRO Synthetic Aperture Radar) is an Earth-observation satellite.

**Development:** It is jointly developed by NASA (USA) and ISRO(India).

- NASA has provided the L-band radar, GPS, a high-capacity solid-state recorder to store data, and a payload data subsystem.
- ISRO has provided the S-band radar, the GSLV launch system, and the spacecraft.

**Function:** It will scan the globe every 12 days throughout its mission of imaging the Earth's land, ice sheets, and sea ice to give an unprecedented view of the planet.

#### Features:

- The 2,800-kilogram satellite is a dual-frequency imaging radar satellite.
- Stationary antenna reflector:** It will be used to focus the radar signals emitted and received by the upward-facing feed on the instrument structure.

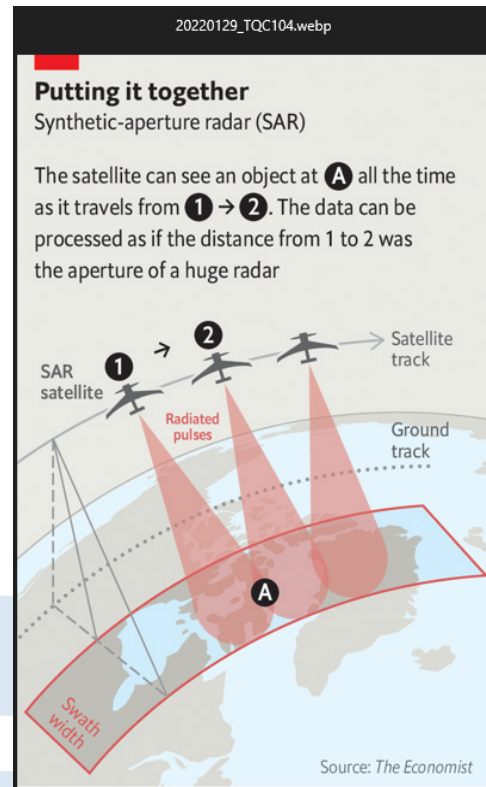
#### Objectives of the Mission:

- To make extremely granular observations of the Earth at regular intervals. It can capture changes as small as 1 cm in size during its repeated observations over the same terrain.
- To study the dynamic processes happening on Earth's surface, like the retreat of glaciers, changes in vegetation and forest cover, movements during earthquakes and volcanoes, etc.
- To provide new insights into our understanding of processes like climate change or natural hazards.
- ISRO will use NISAR for agricultural mapping, monitoring of glaciers in the Himalayas, landslide-prone areas, changes in the coastline, etc.

**Synthetic Aperture Radar (SAR):** SAR is a remote sensing technique that uses microwave radar to create detailed images of the Earth's surface.

#### How does it work?

SAR systems emit microwave pulses and record the echoes reflected from the Earth's surface. By processing these echoes while the radar is moving, a longer "synthetic aperture" is created, which improves the image resolution.



#### Traditional Radar vs Synthetic Aperture Radar:

Aspect	Traditional Radar	Synthetic Aperture Radar (SAR)
<b>Antenna</b>	Uses a fixed, physical antenna.	Uses a smaller antenna on a moving platform to simulate a larger, "synthetic" aperture.
<b>Resolution</b>	Limited by the physical size of the antenna.	Higher resolution due to the synthetic aperture created by the motion of the antenna.
<b>Imaging</b>	Detects objects and measures distance, speed, and direction; image detail is limited.	Produces high-resolution images of terrain, regardless of weather or lighting conditions.

<b>Applications</b>	Used for object detection, navigation, and weather monitoring.	Used in earth observation, mapping, environmental monitoring, and military reconnaissance.
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**Advantages:**

- **All-weather operation:** SAR can penetrate clouds, fog, and even darkness.
- **Day/night operation:** Unlike optical systems, SAR can operate at any time of day, making it useful for surveillance and monitoring.
- **Higher resolution:** SAR can produce detailed images with high spatial resolution.

**NISAR Payloads:****L-band Synthetic Aperture Radar (L-SAR):**

Developed by NASA, it operates at a wavelength of approximately 24 cm.

It is designed to penetrate through vegetation and surface materials.

Provides high-resolution imagery for studying solid Earth processes, ice sheet dynamics, and biomass changes.

**S-band Synthetic Aperture Radar (S-SAR):**

Developed by ISRO, it operates at a wavelength of approximately 10 cm

For studying surface deformation and changes in biomass

Provides high-resolution imagery for monitoring natural hazards, such as earthquakes, volcanic activity, and landslides.

**Other India-US Space Cooperation:**

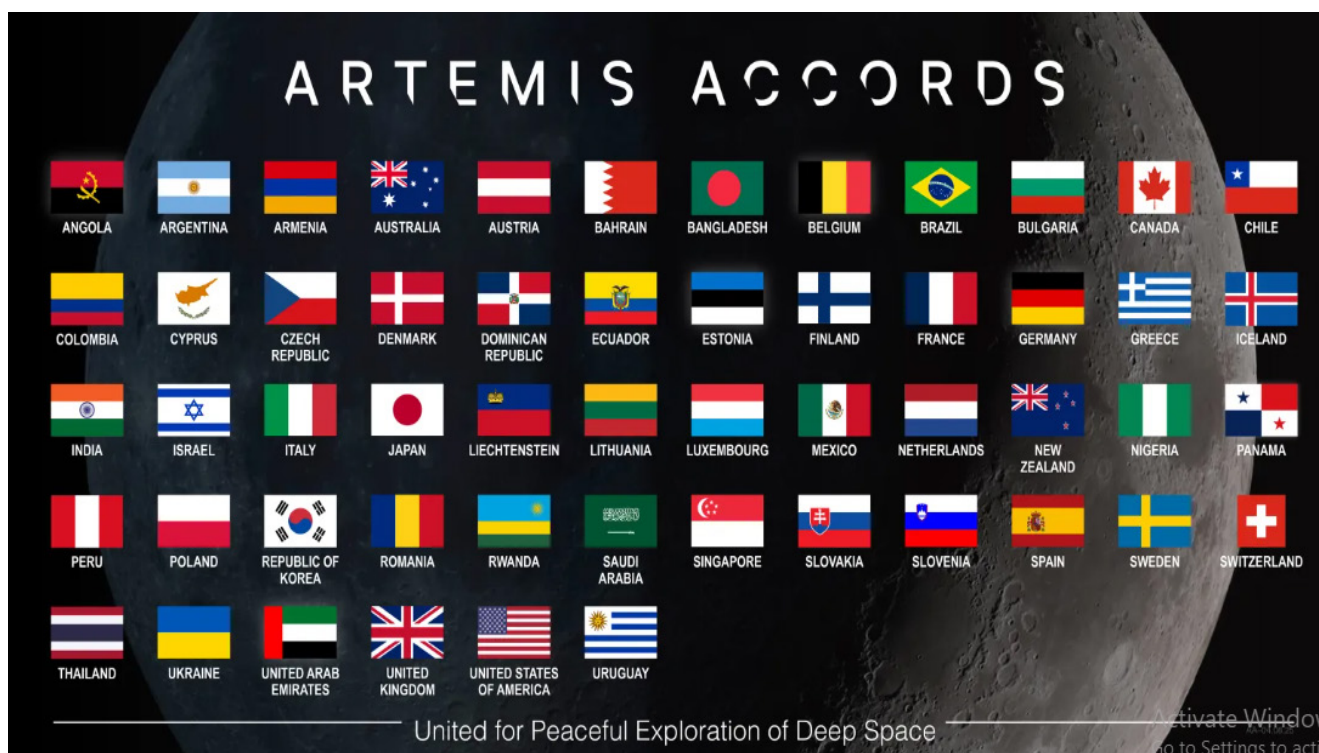
**Astronaut Training:** Two Indian astronauts are being trained at NASA facilities for an upcoming flight to the International Space Station.

**Artemis Accords:**

- It aims to establish shared principles for responsible space exploration and use, building upon existing international space agreements.
- Artemis Accords are non-binding guidelines underpinning the Artemis program.
- The Artemis programme is an ambitious U.S.-led project to return humans to the Moon, this time permanently.
- The project plan includes a base on the lunar surface, multiple spacecraft to ferry humans and cargo, a small orbiting space station called the 'Lunar Gateway', and a constellation of satellites to help with navigation and communication.

**Artemis Accords signatories:**

A total of 54 countries have signed the Artemis Accords. Bangladesh became the 54th nation to join on April 8, 2025. India joined in June 2023.



## 2. BHAGAVAD GITA, NATYASHASTRA IN UNESCO REGISTER

**Relevance:** GS1/ Art and Culture

**Backdrop:** Recently, the manuscripts of the Bhagavad Gita and Bharata's Natyashastra were added to UNESCO's Memory of the World Register.

### In the news:

#### Memory of the World (MoW) Programme:

Launched by UNESCO in 1992 to preserve the valuable archive holdings and library collections all over the world, and ensure their wide dissemination.

**MoW Register:** The central project of the MoW Programme was to create a compendium of documents such as manuscripts, oral traditions, audio-visual materials, and library and archive holdings which are of world significance and outstanding universal value.

In any year, at most two submissions from a country are added.

**Entries:** With the latest additions, the Register now contains 570 entries.

#### These include:

- Books or collections of works (eg. Mahavamsa, the meticulously kept historical chronicle of Sri Lanka).
- Drawings (eg. Meiji-era collection of Sakubei Yamamoto of Japan).
- Manuscripts (eg. collection of more than 11,000 Shaiva Siddhanta manuscripts).
- Audio recordings (eg. 430 hours of recordings of the Frankfurt Auschwitz trials, 1963-65) and
- Video recordings (eg. Bangabandhu Sheikh Mujibur Rahman's historic March 7, 1971 speech).

**Indian submissions:** Register contains 14 submissions by India, including Rig Veda, collective works of Shaivite philosopher Abhinavagupta, archives of the first summit meeting of Non-Aligned Movement in Belgrade in 1961, and the archives of Dutch East India Company.

#### Natyashastra:

Traditionally attributed to the sage Bharata, Natyashastra is an ancient Sanskrit treatise on performing arts. Comprising 36,000 verses, the Natyashastra embodies a comprehensive set of rules that define natya (drama), abhinaya (performance), rasa (aesthetic experience), bhava (emotion), sangita (music), etc.

#### Bhagavad Gita:

- Traditionally attributed to the sage Vyasa, Bhagavad Gita is a Sanskrit scripture comprising 700 verses that are organised in 18 chapters, embedded in the sixth book (Bhishma Parva) of the epic poem Mahabharata.
- The text is generally dated to the first or second century BCE.
- The Gita is essentially a dialogue between Arjuna and Krishna, which takes place just before the beginning of the great war of the Mahabharata.

#### United Nations Educational, Scientific, and Cultural Organization (UNESCO):

- It is a specialized agency of the UN, based in Paris. It was formed in 1945.
- It works for achieving peace and security by promoting international collaboration through educational, scientific, and cultural reforms in order to increase universal respect for justice, the rule of law, and human rights, along with fundamental freedom proclaimed in the UN Charter.
- It has 195 member states and ten associate members. India is a founding member of the Organisation.

#### UNESCO World Heritage Sites

- A World Heritage site is a landmark or area with legal protection by an international convention administered by UNESCO.
- Designated by UNESCO for having cultural, historical, scientific, or other forms of significance.

**World Heritage Sites in India:** India has 43 UNESCO World Heritage Sites. These include 35 Cultural sites, 7 Natural sites and 1 mixed sites recognised for their outstanding universal value to humanity.

The most recent World Heritage Sites in India are the Moidams of Assam and Santiniketan, which were added in 2023 and 2024, respectively.

## 3. NGT AND SIMLIPAL

**Relevance:** GS 3/Environment and Ecology

**Backdrop:** Citizens' outfit approaches NGT against move to 'allot' 100 acres for hotel near Simlipal

#### About NGT

- It is a specialized judicial body in India established for the effective and expeditious disposal of cases relating to environmental protection
- **Established On:** 18 October 2010

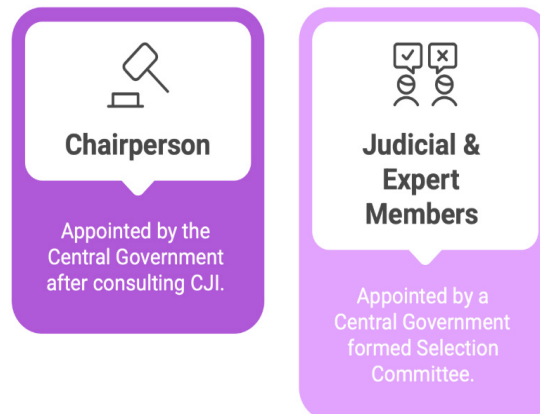
- **Established Under: National Green Tribunal Act, 2010**
- Headquarters: New Delhi
- Other Benches: Bhopal, Pune, Kolkata, Chennai
- **India is only the third country in the world after Australia and New Zealand** to set up a dedicated body (NGT) for the redressal of environmental issues and disputes.

### National Green Tribunal (NGT): Structure & Appointment

#### • Qualifications:



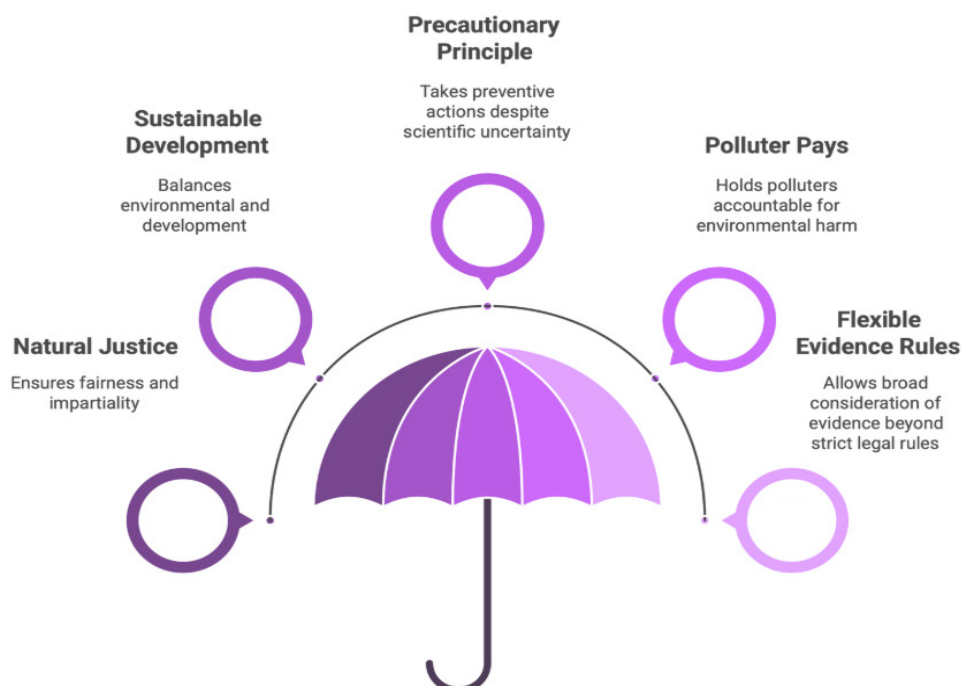
### Appointment Process



### Jurisdiction and Powers

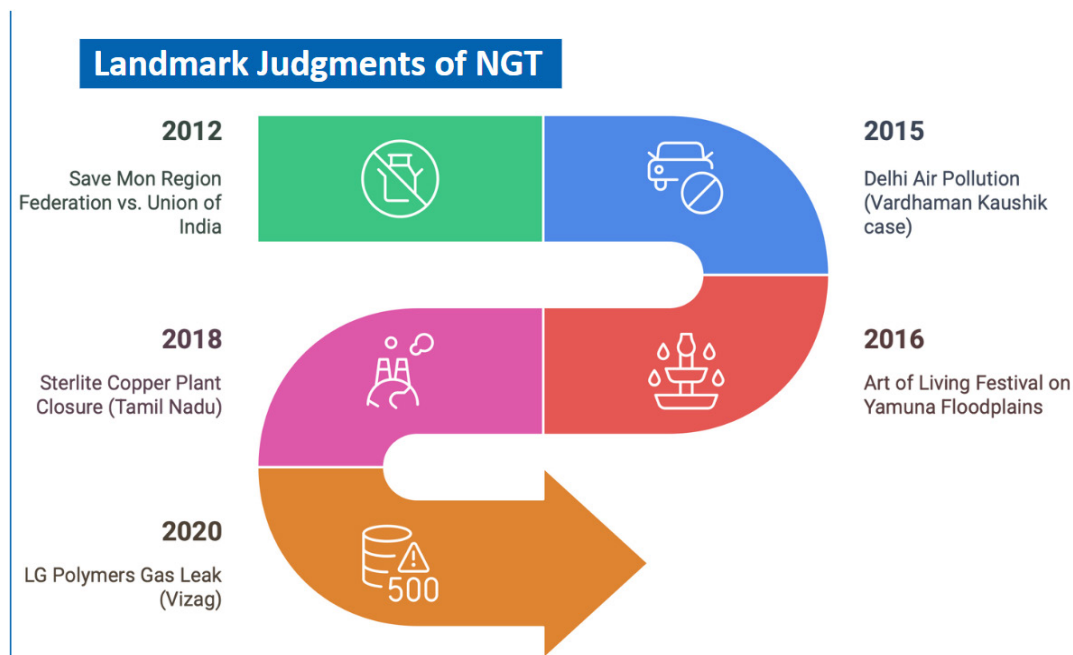
- **Original jurisdiction on matters of “substantial question relating to the environment.”**
- **It can hear civil cases related to environmental laws such as:**
  - ♦ The Water (Prevention and Control of Pollution) Act, 1974
  - ♦ The Air (Prevention and Control of Pollution) Act, 1981
  - ♦ The Environment (Protection) Act, 1986
  - ♦ The Forest (Conservation) Act, 1980
  - ♦ The Biological Diversity Act, 2002

### NGT Guiding Principles





**Subhash Kumar v. State of Bihar (1991)**, established the 'Right to a Clean Environment' as a fundamental right under Article 21 of the Indian Constitution.



#### About Simlipal Tiger Reserve:

- Located in the northern part of **Mayurbhanj District**, Odisha, derives its name from the **Simul (Silk Cotton)** tree.
- Simlipal was initially a **hunting ground** and became a **tiger reserve** under **Project Tiger** in May 1973.
- It was declared a **wildlife sanctuary** in 1979, a **National Park** in 1980, and a **biosphere reserve** in 1994.
- UNESCO recognized it as a **Biosphere Reserve** in 2009. It is also part of the **Mayurbhanj Elephant Reserve**.
- **Rivers:** **Budhabalanga**, **Khairi**, **Salandi**, and **Deo**, flow through the region, draining into the **Bay of Bengal**.
- **Waterfalls:** Famous for **Barehipani** (399 m) and **Joranda** (150 m) falls.
- **Home to Melanistic (Black) Tigers** It is the only known place in the world where wild melanistic tigers are naturally found.
- Only Tiger Reserve in India with a **Tiger-Mugger Crocodile-Elephant Habitat Combo**

#### Flora and Fauna: Falls under Eastern Highlands Moist Deciduous Forests

##### Dominated by:

- Sal (*Shorea robusta*)
- Bamboo, Mahua, and a variety of medicinal plant
- Important species: Bengal Tiger, **Leopard**,

**Elephant, Gaur (Indian bison), Wild dog (Dhole), Malabar giant squirrel, Pangolin, Mugger crocodile** (in nearby rivers)

- Acts as a **critical ecological corridor** between the **Eastern Ghats** and **Central Indian landscape**

##### Tribal Communities:

- Home to **indigenous tribes** like **Santhal, Mankidia, Kolha, Khadia** and **Ho**.
- Presence of **PVTGs (Particularly Vulnerable Tribal Groups)**, including **Lodha**.

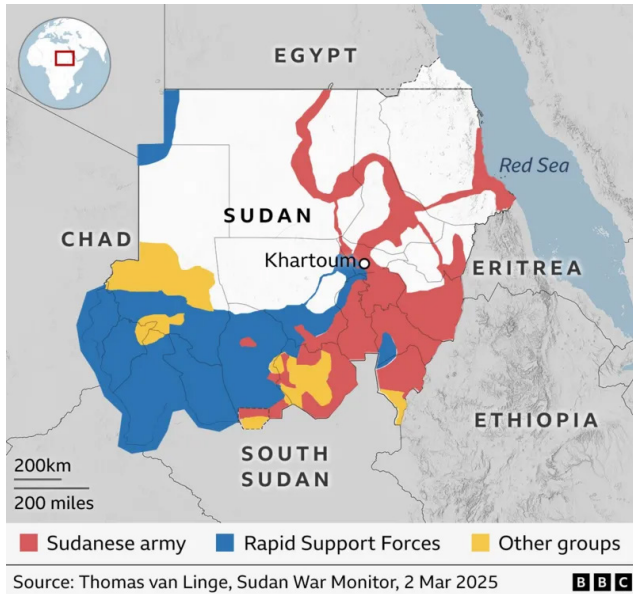
## 4. MAPPING: SUDAN CRISIS, DRC CONFLICT

Relevance: GS 2/ International relation

Backdrop : Sudan camp assault survivors in 'disastrous conditions': MSF

#### About Sudan Crisis

- The Ongoing conflict in Sudan began in April 2023 between two rival military factions:
- Sudanese Armed Forces (SAF) led by Gen. Abdel Fattah al-Burhan
- Rapid Support Forces (RSF) led by Gen. Mohamed Hamdan Dagalo (Hemedti)
- The power struggle erupted over a proposed transition to civilian rule following the 2019 ousting of President Omar al-Bashir and a 2021 military coup.



### About Sudan's Geography

- Sudan **shares borders with seven countries**: Egypt to the north, Libya to the northwest, Chad to the west, the Central African Republic to the southwest, South Sudan to the south, Ethiopia to the southeast, and Eritrea to the east.
- It also has a coastline along the Red Sea to the northeast.
- The **White Nile and Blue Nile meet at Khartoum (Capital city)** to form the Nile River, the country's most important water source.
- The **Atbara River**, another major tributary, also flows into the Nile from Ethiopia.
- Sudan's **northern and western regions are dominated by the Sahara Desert**, while the Nubian Desert lies in the northeast.
- Mountainous areas include the **Red Sea Hills** in the east, **Jebel Marra** in the west (the highest point at around 3,042 meters), and the **Nuba Mountains** in the central-southern part.



### About DRC Conflict

- M23 fighters have captured several strategic towns and cities in eastern DRC.

Their first major success was the capture of **Goma (North Kivu)**

- Goma's significance**: Lies on the border with Rwanda and Lake Kivu; it's a major trade and transport hub near mineral-rich mining towns.
- The rebels also seized **Bukavu, the capital of South Kivu province**. Other captured areas include Masisi, Rutshuru, and Katale.
- Over the past year, the M23 has made rapid advances across the mineral-rich east of DR Congo, taking areas where **coltan – the ore from which tantalum is extracted** – is mined.

**Coltan**: Blue-grey, lustrous metal – including being able to hold a high charge compared to its size, while operating in a range of temperatures - make it an ideal material for tiny capacitors, which temporarily store energy.



**M23-** Mouvement Du 23 Mars (M23) is a Congolese rebel group based in the eastern regions of the Democratic Republic of the Congo (DRC) led by ethnic Tutsis primarily operating in North Kivu province, which borders Uganda and Rwanda.

### Democratic Republic of the Congo (DRC)

#### Location

- The Democratic Republic of the Congo (DRC) is located in **Central Africa**.
- It is the **largest country in sub-Saharan Africa**.
- DRC is surrounded by plateaus merging into savannas in the south and southwest, by mountainous terraces in the west, and by dense grasslands extending beyond the Congo River in the north



### Congo Rainforest



#### Congo Rainforest

Home to the Congo Rainforest, the second-largest rainforest in the world after the Amazon.

#### Location

Covers a large part of central and western DRC.

#### Congo River Basin

Most of central and western DRC lie within the Congo River Basin.

#### Congo River

The Congo River is 4,398 km long, making it the second-largest river system in Africa.

## DECODED

### 5. INDIA SURE CONTENDER FOR SEAT IN EXPANDED UNSC: IGN CHAIR

**Backdrop:** Current debate on UNSC reform

**Relevance:** GS II/ Important International institutions, agencies and fora - their structure, mandate.

#### About the news:

**Intergovernmental Negotiations (IGN):** A group of nation-states working (informally) within the UN to further reform the UNSC.

**Composition:** IGN is composed of African Union, G4 nations, Uniting for Consensus Group (UfC), L.69 Group of Developing Countries, Arab League, Caribbean Community, etc. (CARICOM).

#### United Nations Security Council (UNSC) Reform

**UNSC** is one of the UN's six main organs and is aimed at maintaining international peace and security.

**Composition:** It currently consists of five permanent members (P5-China, France, Russia, the UK, and USA) and ten non-permanent members elected for two-year terms.

#### Need For Reform?



##### Legitimacy

Failed to take substantive measures to address issues such as COVID, Russia-Ukraine Conflict, etc.



##### Representation

of regions, such as Africa, Asia-Pacific, and Latin America and the Caribbean.



##### Structure

The realities of 1945, when the Council was established, no longer align with today's geopolitical landscape.



##### Bureaucracy

UN's bureaucratic structures and complex decision-making processes have slowed down responses to global challenges.



##### Financial Burden

Need to reassess the formula for assessing financial contributions to the UN budget. Currently, it is largely based on a country's gross national income, with a cap on contributions.



**Challenges in UNSC Reform:**

- **Procedural Hurdles:** Amending the UN Charter requires consensus among member states, which can be challenging given divergent positions.
- **Size and Terms:** No agreement on the acceptable size and terms for an enlarged Council.
- **Veto Provisions:** Extending veto power to new permanent members is a point of disagreement.
- **Effectiveness Uncertainty:** Even if the Council were enlarged to be more representative, doubts persist about whether it would improve its functioning.
- **Geopolitical Tensions:** E.g., Disputes between Russia and Western countries, such as those related to Ukraine or Syria, can hinder cooperation on broader reform issues.

**Why should India be granted permanent membership?**

- **Emerging Global Power:** Represents one-sixth of the global population, fifth largest economy, etc.
- **Leader of Developing Countries.** E.g., Global South.
- **Active International participation:** Active participant in international events and treaties like UN peacekeeping mission, development goals, sustainable development, climate change, and anti-terrorism. E.g., India has provided more than 200,000 officers to UN peacekeeping missions.
- **Long Historical ties with the UN**

**Hurdles in India's case:**

- **China factor:** All permanent members of the UNSC have supported India's candidature except China.
- **Opposition** from various groups, such as Uniting for Consensus/Coffee Club.
- **Self-interest** of the Council's current permanent members.
- **India's firmness** to protect its interests: India has not signed the Nuclear Non-Proliferation Treaty (NPT) and the Comprehensive Nuclear-Test-Ban Treaty.

**India's Preparedness:**

- India engages actively in the ongoing Inter-Governmental Negotiations (IGN) on UNSC reforms.
- India is working alongside other reform-oriented countries through its membership in the G-4 Group (India, Japan, Brazil, and Germany) and

the L.69 Group (group of developing countries from Asia, Africa, and Latin America) to build support among the UN Member States for expansion of the UNSC.

- India has also been constantly engaging with countries of the Global South.

**Way forward:**

- **Membership Expansion:**

- ♦ Increase both permanent and non-permanent seats for a more diverse range of perspectives in the Council's decision-making processes.
- ♦ Stronger voices for Africa, Asia-Pacific, Latin America, and the Caribbean for its legitimacy and effectiveness.

- **Reform of the Veto Power:** Limit or abolish the Veto, as the current veto power of P5 hinders the Council's ability to effectively address global crises.

- **Enhance Legitimacy and Effectiveness:** Simplify bureaucratic procedures and increase transparency and accountability in the Council's decision-making processes.

- **Text-Based Negotiations:** To move the process forward and ensure that specific proposals are developed and debated.

- **Intermediate Reforms:** G-4 (Japan, Germany, Brazil, and India) proposed the creation of a new temporary category of seats with longer terms than the current two-year term.

- **Resolution 377 A of the UNGA** can be taken into consideration for deciding the issue of UNSC reforms. It states that the UNGA can consider the matter and issue recommendations, if in any case the UNSC due to lack of unanimity amongst its P-5 members, fails to act as required to maintain international peace and security.

**For India:**

- **Playing a more active role** in important issues in international security, such as nuclear proliferation in Iran and North Korea, human rights violations in Syria, etc.
- **Aligning its foreign policy** on a more coherent note, to better impact its presence in the Geopolitics of the world.

## MAINS PYQ

- Q.** Discuss the impediments India is facing in its pursuit of a permanent seat in the UN Security Council. (2015)

## == PRACTICE QUESTION ==

- Q.** The United Nations and the Security Council will remain just a “talk shop” if they do not reflect the realities of the present world. Elaborate. Also, suggest measures to make the UN relevant today. (15 marks).

## == DNA QUIZ ==

- 1.** With reference to the NISAR mission, which of the following statements is/are correct?
1. It is the joint collaboration of NASA and ISRO.
  2. Both payloads, L-band Synthetic Aperture Radar (L-SAR) and S-band Synthetic Aperture Radar (S-SAR), are developed by ISRO.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

- 2.** Consider the following properties included in the World Heritage List released by UNESCO:
1. Shantiniketan
  2. Rani-ki-Vav
  3. Sacred Ensembles of the Hoysalas
  4. Mahabodhi Temple Complex at Bodhgaya

How many of the above properties were included in 2023?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

- 3.** How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB)?

1. The NGT has been established by an Act whereas the CPCB has been created by the executive order of the Government.
2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

- 4.** In the recent years Chad, Guinea, Mali and Sudan caught international attention for which one of the following reasons is common to all of them?

- (a) Discovery of rich deposits of rare earth elements
- (b) Establishment of Chinese military bases
- (c) Southward expansion of Sahara Desert
- (d) Successful coups

### Answer

1 (A)

2 (B)

3 (B)

4 (D)