



## **DAILY CURRENT AFFAIRS 23-04-2025**

### **GS-1**

1. Gita and Natyashastra added to UNESCO's Memory of the World Register
2. Strait of Gibraltar

### **GS-2**

3. Article 355 of the Indian Constitution

### **GS-3**

4. Nitrogen

## Gita and Natyashastra added to UNESCO's Memory of the World Register

Syllabus: GS-1; Art & Culture

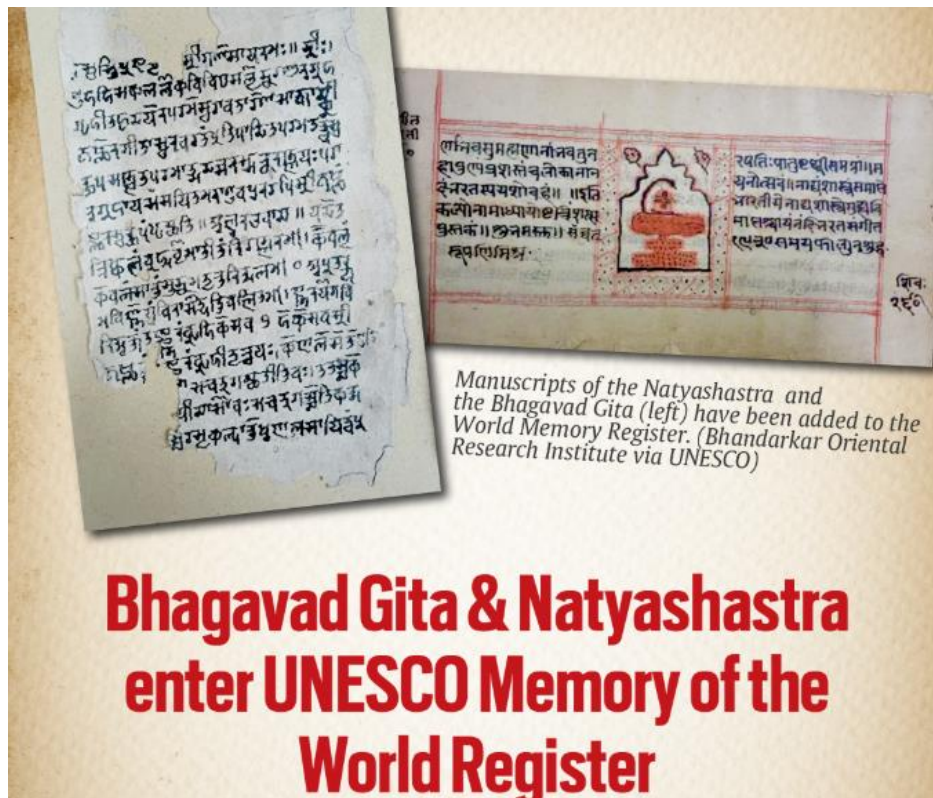
### Context

- Bhagavad Gita, Natyashastra enter UNESCO's 'Memory of the World Register'

### UNESCO's Memory of the World Register – Indian Entries

Some notable Indian entries include:

1. **Rigveda Manuscripts** (2007) – Preserved at the Bhandarkar Oriental Research Institute, Pune.
2. **Ramcharitmanas, Panchatantra, and Sahrdayāloka-Locana** (2023) – Manuscripts of these classical texts were added.
3. **Tibetan Buddhist Canon** (shared with China & Mongolia).
4. **Mughal-era Administrative Documents** (like the Shivaji Maharaj's official correspondence).



## About the Bhagavad Gita and Natyashastra

### 1. Bhagavad Gita

- **Meaning:** "The Song of God"
- **Origin:** Part of the **Mahabharata** (Bhishma Parva, chapters 23–40)
- **Language:** Sanskrit
- **Author:** Traditionally attributed to **Vyasa**, narrated by **Lord Krishna** to **Arjuna**
- **Date:** Estimated between **5th century BCE to 2nd century CE**
- **Chapters & Verses:** 18 chapters, 700 verses (*shlokas*)
- **Key Themes:**
  - Dharma (duty/righteousness)
  - Karma Yoga (path of action)
  - Bhakti Yoga (path of devotion)
  - Jnana Yoga (path of knowledge)
  - Concept of **Nishkama Karma** (selfless action)
- **Influence:** Core text in **Hindu philosophy**, widely studied in **yoga, spirituality, and leadership**
- **Translations:** Translated into **75+ languages**, including by **Swami Vivekananda, Gandhi, and Western scholars**

### 2. Natyashastra

- **Meaning:** "The Science of Drama"
- **Author:** Attributed to **Bharata Muni**
- **Language:** Sanskrit
- **Date:** Estimated between **200 BCE – 200 CE**
- **Chapters & Verses:** 36 chapters, ~6000 verses
- **Key Aspects:**
  - **Comprehensive guide to performing arts** (theatre, dance, music)
  - Introduces **Rasa theory** (aesthetic emotions like love, anger, humor)
  - Defines **Bhavas** (emotional expressions)
  - Describes **classical dance forms, stagecraft, costumes, and music (Gandharva)**
  - Covers **four types of acting** (*Angika* – body, *Vachika* – speech, *Aharya* – costumes, *Sattvika* – emotions)
- **Influence:**
  - Foundation for **Indian classical dance** (Bharatanatyam, Kathak, Odissi, etc.)
  - Basis for **Sanskrit drama and traditional theatre** (Kutiyattam, Yakshagana)
  - Referenced in **modern acting theories**

## Strait of Gibraltar

### Syllabus: GS-1; Geography Mapping

#### Context

- Sayoni Das, a swimmer from Bengal, became the **first Asian woman** to successfully **swim across the Strait of Gibraltar**.
- Highlights Indian achievements in global endurance sports.



#### Geographical Location

- Connects the **Mediterranean Sea** to the **Atlantic Ocean**.
- Separates **Europe (Spain and Gibraltar)** from **Africa (Morocco and Ceuta)**.

- Lies between:
  - **North:** Spain and British Overseas Territory of Gibraltar.
  - **South:** Morocco and the Spanish enclave of Ceuta.

### Physical Dimensions

- **Length:** Approximately **58 km**.
- **Narrowest width:** ~**13 km** (between **Point Cires** in Morocco and **Point Marroquí** in Spain).
- **Western end:** ~**43 km wide** (between **Cape Trafalgar** and **Cape Spartel**).
- **Eastern end:** ~**23 km wide** (between **Rock of Gibraltar** and **Mount Hacho / Jebel Moussa**).
- **Depth:** Ranges from **300 to 900 meters**.

### Key Landmarks

- **Pillars of Heracles:**
  - **Rock of Gibraltar** (Europe).
  - **Jebel Moussa** or **Mount Hacho** (Africa).

### Geological Formation

- Formed due to the **northward movement of the African Plate** towards the **Eurasian Plate**.
- Lies between **Spain's high plateau** and **Atlas Mountains** in northern Africa.

### Hydrological Features

- Unique **double water flow** system:
  - **Atlantic water** (less saline) flows **inward** at the surface.
  - **Mediterranean water** (more saline) flows **outward** at deeper levels.

### Strategic and Economic Importance

- One of the **busiest waterways in the world**.
- Critical for **global trade**, especially **oil, gas, and cargo** transport.
- **Over 100,000 ships** pass through annually.
- Major port: **Tanger-Med Port** (Morocco) – key **transshipment hub** near Tangier.

### Geopolitical Sensitivity

- **Gibraltar:** British Overseas Territory, disputed by **Spain**.

- **Ceuta**: Spanish enclave in Africa, contested by **Morocco**.
- Area is closely monitored for **security**, **migration**, and **smuggling risks**.

## **Article 355 of the Indian Constitution**

### **Syllabus: GS-2; Indian Constitution**

#### **Context**

- A petition in the **Supreme Court** sought invocation of Article 355 in West Bengal, citing violence in Murshidabad during protests over the **Waqf Amendment Act**.
- The Court expressed surprise and did not immediately support such invocation, reflecting the careful judicial scrutiny over the Centre's use of this provision.

#### **Constitutional Text:**

- "It shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the government of every State is carried on in accordance with the provisions of this Constitution."

#### **Context and Significance**

- Part of: **Emergency Provisions – Part XVIII, Articles 352 to 360**
- Purpose: Imposes a constitutional duty on the Union government to:
  - Protect states from external aggression
  - Address internal disturbances
  - Ensure constitutional governance in all states

It empowers the Centre to intervene in a state without dismissing its government, making it a step below **Article 356 (President's Rule)**.

#### **Key Features**

<b>Aspect</b>	<b>Explanation</b>
Preventive in nature	Enables Centre to act before a complete constitutional breakdown occurs
Non-self-executing	Requires executive or legislative action to be implemented
Limited intervention	Permits use of central forces, advisories, or support to manage crises
Supports federal balance	Acts as a tool to maintain national integrity without undermining state autonomy



## Judicial Interpretation

### S. R. Bommai Case (1994):

- The Supreme Court held that Article 355 cannot be used arbitrarily.
- It does not justify unwarranted imposition of President's Rule.
- Its invocation is subject to judicial review.

### Comparison: Article 355 vs Article 356

Article 355	Article 356 (President's Rule)
Duty to protect and assist	Power to take over state machinery
No dismissal of state government	State legislature may be suspended or dissolved
Limited, preventive intervention	Full control under President
Often precedes Article 356	Invoked when constitutional machinery fails

## Nitrogen

### Syllabus: GS-3; Greenhouse gas

#### Context

- **India**, the world's **second-largest emitter of nitrous oxide (N<sub>2</sub>O)** after China, faces **heightened climate risks** due to N<sub>2</sub>O's **300 times greater global warming potential than CO<sub>2</sub>**.
- **Excess nitrogen use in agriculture** (via synthetic fertilizers) is a major contributor, with **80% lost to the environment**, worsening climate change and pollution.

#### Key Facts About Nitrogen

- Nitrogen (N) is a **colorless, odorless, inert gas** that makes up **~78% of Earth's atmosphere** (as N<sub>2</sub>). While essential for life, human activities (especially synthetic fertilizers) have disrupted its natural cycle, leading to **pollution, climate change, and ecosystem damage**.

## 1. Nitrogen Basics

### Chemical Properties

- **Symbol:** N
- **Atomic Number:** 7
- **Forms:**
  - **Diatomic Nitrogen ( $N_2$ )** – Stable, makes up most of the atmosphere.
  - **Reactive Nitrogen (Nr)** – Includes ammonia ( $NH_3$ ), nitrates ( $NO_3^-$ ), nitrous oxide ( $N_2O$ ), and nitrogen oxides ( $NO_x$ ).

### Biological Importance

- **DNA & Proteins:** Essential for amino acids (building blocks of life).
- **Chlorophyll:** Needed for photosynthesis in plants.
- **ATP:** Key to cellular energy transfer.
- **Nitric Oxide (NO):** Acts as a signaling molecule in humans (regulates blood flow).

## 2. The Nitrogen Cycle

A natural process that recycles nitrogen between the atmosphere, soil, and living organisms.

Key Steps:

### 1. Nitrogen Fixation

- **Natural:** Bacteria (e.g., *Rhizobium* in legumes) convert  $N_2 \rightarrow$  **ammonia ( $NH_3$ )**.
- **Industrial: Haber-Bosch process** (energy-intensive, uses fossil fuels).

### 2. Nitrification

- Bacteria convert  $NH_3 \rightarrow$  **nitrites ( $NO_2^-$ )**  $\rightarrow$  **nitrates ( $NO_3^-$ )** (plant-absorbable form).

### 3. Assimilation

- Plants absorb  $NO_3^-$  to grow; animals get nitrogen by eating plants.

### 4. Ammonification

- Decomposers break down organic waste  $\rightarrow NH_3$ .

### 5. Denitrification

- Bacteria convert  $NO_3^-$  back into  $N_2$ , releasing  **$N_2O$  (a potent greenhouse gas)**.

## 3. Human Impact: The Nitrogen Crisis

- Since the **Haber-Bosch process (1913)**, humans have **doubled** the natural nitrogen cycle's rate, causing:



## A. Environmental Damage

- **Eutrophication:** Excess nitrates runoff into water, causing **algal blooms** → **dead zones** (e.g., Gulf of Mexico).
- **Soil Acidification:** Overuse of fertilizers degrades soil health.
- **Air Pollution:** NO<sub>x</sub> contributes to **smog, acid rain, and respiratory diseases**.

## B. Climate Change

- **Nitrous Oxide (N<sub>2</sub>O):**
  - **300x more potent than CO<sub>2</sub>** as a greenhouse gas.
  - Accounts for **~6% of global warming** (mainly from agriculture).
  - India & China are the **top N<sub>2</sub>O emitters** due to heavy fertilizer use.

## C. Health Risks

- **Nitrate-contaminated water** → "Blue Baby Syndrome" (methemoglobinemia).
- **NO<sub>x</sub> emissions** → Asthma, lung damage.

## 4. Solutions & Sustainable Management

### A. Agricultural Improvements

- **Precision Farming:** Use sensors & AI to apply fertilizers efficiently.
- **Organic Alternatives:** Biofertilizers (e.g., compost, manure, nitrogen-fixing crops like legumes).
- **Slow-Release Fertilizers:** Reduce nitrogen runoff.

### B. Policy & Technology

- **Emission Regulations:** Stricter controls on industrial NO<sub>x</sub>.
- **Wastewater Treatment:** Remove nitrates before discharge.
- **Carbon-Neutral Ammonia:** Green hydrogen-based fertilizer production.

### C. Individual Actions

- Reduce food waste (less demand = less fertilizer use).
- Support regenerative farming practices.

## 5. Future Outlook

- **UNEP warns** that nitrogen pollution is a "**sleeping giant**" of environmental crises.
- **Sustainable nitrogen management** could reduce emissions while ensuring food security.