

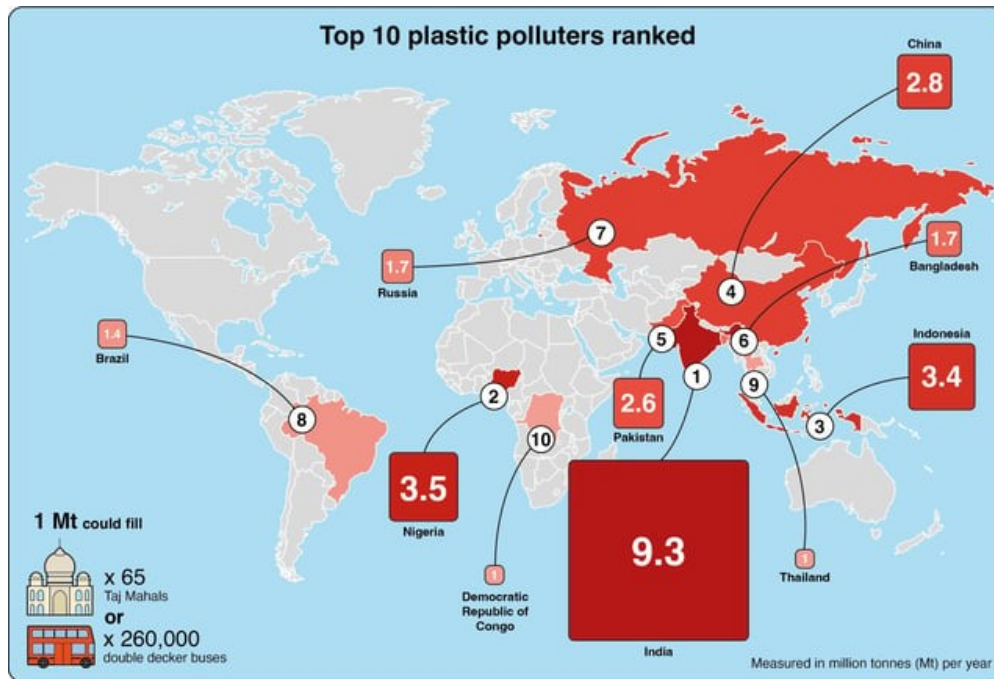
## UPSC Daily Current Affairs | Prelim Bits 10-09-2024

### A study on Plastic Pollution

*A recent study says that India has secured the top spot as biggest plastic polluter in the world, releasing 9.3 million tonnes (Mt) annually, amounts to roughly one-fifth of global plastic emissions.*

### Findings of the study

- The study defined plastic emissions as materials that have moved from the managed or mismanaged system (controlled or contained state) to the unmanaged system (uncontrolled or uncontained state, the environment).
- Of the unmanaged waste, roughly 43% or 22.2 mt is the form of unburned debris and the rest, some 29.9 mt, is burnt either in dumpsites or locally.
- **Global findings** - Globally, roughly 69% or 35.7 Mt per year of the world's plastic waste emissions come from 20 countries, of which
  - 4 are low-income countries,
  - 9 are lower-middle-income countries and
  - 7 are upper-middle-income.
- Furthermore, high-income countries have higher plastic waste generation rates, but ***none are ranked*** in the top 90 polluters, as most have 100% collection coverage and controlled disposal.
- Littering was the largest emission source in the Global North, uncollected waste was the dominant source across the Global South.
- **In India** - India has secured the top spot as biggest plastic polluter in the world, releasing 9.3 million tonnes (Mt) annually, amounts to roughly one-fifth of global plastic emissions.
- India's official waste generation rate, approximately 0.12 kilograms per capita per day.



- Taking the 2<sup>nd</sup> and 3<sup>rd</sup> spots were Nigeria, with 3.5 Mt of emissions and Indonesia, with 3.4 Mt.

## Global Plastics Treaty

- In 2022, World Countries agreed to develop a Treaty on plastic pollution by 2024 to reduce greenhouse gas emissions from plastic production, use and disposal.
- The Global Plastics Treaty is a ***legally binding agreement*** between over ***175 United Nations*** member countries to reduce the use of plastics.
- **Goals - Reducing plastic production** - Setting deadlines for countries to reduce plastic production.
- **Eliminating unnecessary uses** - Banning certain uses of plastics that create waste.
- **Prohibiting certain chemicals** - Banning specific chemicals used in the production of plastics.
- **Setting recycling goals** - Setting targets for recycling plastics.
- **Addressing the entire lifecycle of plastics** - The treaty addresses the entire life cycle of plastics, from design to production to disposal.
- **Considering vulnerable workers** - The treaty may consider the impact on vulnerable workers.
- **Chemical testing mandates** - The treaty may include mandates for testing certain chemicals in plastics to ensure safety and environmental protection.
- **Regular evaluations** - The treaty may include regular evaluations to assess progress.

## Reference

[Down to Earth | Plastic pollution rankings](#)

## Newly added species in the Ginger family

The scientists from the Indian Institute of Science Education and Research (IISER), discovered 6 new species of Ginger.

- **Classification-** The newly discovered species belongs to the ***Genus Globba***.
  - Species within the Globba genus are popular as ornamental plants, often known as dancing girls, weeping goldsmith, snowball, Singapore gold, white dragon, and ruby queen.
  - The common name for this genus is ***dancing girl or dancing lady ginger***.
- **Family-** Zingiberaceae
  - Zingiberaceae is the largest family within the order Zingiberales.
  - Members of Zingiberaceae are ***perennial, rhizomatous herbs*** that usually grow in moist shady places of the tropical regions.

*Species within the Globba genus are known for their ornamental value and are often called dancing girls due to their delicate and attractive flowers.*

- **Genus - Habitat-** It is commonly found in tropical regions such as Southeast Asia, India, and the Eastern Himalayas.

<b>Globba corniculata</b>	Named for horn-shaped structure at the base of the labellum. Found in West Bengal's Darjeeling district.
<b>Globba paschimbengalensis</b>	Named after West Bengal.
<b>Globba polymorpha</b>	Named for the variation in bracteole colour within the species population, found in West Bengal.
<b>Globba tyrnaensis</b>	Named after Tyrna, a village in Meghalaya's East Khasi Hills district.
<b>Globba janakiae</b>	Named in honour of botanist E.K. Janaki Ammal, found in Meghalaya.
<b>Globba yadaviana</b>	Found in Mizoram's Mamit district, named after the late Rajesh Yadav, father of lead author Ritu Yadav.



- **Taxonomic collection challenges** - In the northeastern States it is a significant challenge in identifying species from these sacred groves since voucher collections from these locations are prohibited.

## Reference

[The Hindu | Newly added species in the Ginger family](#)

## Planetary Protection

*Planetary protection ensures that Earth and other celestial bodies are shielded from cross-contamination by microbial life during space missions.*

- **Planetary protection-** It is the principle of ***preserving the biospheres*** of both Earth and other planetary bodies from ***contamination by microbial life*** during space missions.
- It's an important principle of interplanetary missions, such as from the earth to the moon or Mars.
- The Committee on Space Research (COSPAR), Committee of the International Science Council (ISC) has formulated a planetary protection policy to guide compliance with the United Nations Outer Space Treaty.
- The principle is grounded in ***Article IX*** of the Outer Space Treaty (1967).
- **Compliance-** The spacecraft are sterilized by assembling them fully and baking them in a dry room ***at 120°C for 3 days*** to prevent contamination.
- **Application-** The principle of planetary protection is applied in missions like ***NASA's Viking 1*** (the first spacecraft to land on Mars in 1976) and China's upcoming ***Tianwen-3 Mars*** sample-return mission (planned for 2028).

Outer Space Treaty

- The Outer Space Treaty, formally the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.
- It is a **multilateral treaty** that forms the basis of international space law in 1967.
- It was adopted by the **United Nations General Assembly** on December 19, 1966 and entered into force on October 10, 1967.
- It establishes rules for the peaceful use of space and prohibits the stationing of weapons of mass destruction in space.
- The treaty also defines the rights of nations to the moon and other celestial bodies.
- **Principles**
  - **Peaceful use** - The treaty establishes legally binding rules for the peaceful exploration and use of space.
  - **No weapons of mass destruction** - The treaty prohibits the stationing of weapons of mass destruction in space.
  - **No military activities** - The treaty prohibits military activities on celestial bodies.
  - **Free exploration** - The treaty declares that space is an area for free use and exploration by all.
  - **Sharing of knowledge** - The treaty enshrines the principle of sharing scientific findings and knowledge.
- **Members** - As of June 2024, **115 countries** are parties to the Outer Space Treaty (OST), and 23 more countries have signed but not yet ratified it.
- India **signed the treaty** in March 1967 and ratified it in 1982.

## Reference

1. [The Hindu | Planetary Protection](#)
2. [NASA | Planetary Protection](#)

## Sahariya Tribes

*At least 172 cases of malnourished children have been identified among Sahariya tribals in Baran district within 2 weeks.*

- **Location** - The Sahariya are an ethnic group in India, primarily found in Madhya Pradesh, Rajasthan and Chhattisgarh.
- Their main residential area is the Shahabad forest, which stretches from Rajasthan to Guna in Madhya Pradesh.
- **Other names** - They are also known as Seher, Sair, Sawar, Saor, Sahara, etc.
- The members of Sahariya tribes believe in animism.
- **History** - They traditionally trace their origins back to the Ramayana and beyond.
- **Language** - They speak a Munda language that belongs to the Austro-Asiatic language family.
- **Religion** - They practice Hinduism and worship local deities like Bhavani, Gond Devta, Bundela Devta, Soorin, and Bijasur.
- **Social structure** - The Sahariya consider all adults in their community to be part of a governing council, which is **led by a patel**.
- **The Pardhan** is the leader at the society level, and attends social functions like marriages.

- **Economy** - They are skilled in gathering forest products and making ***catechu from Khair trees***.
- **Occupation** - The Saharia farmers use the "slash and burn" method of cultivation along the hill slopes.
- The most specialized occupation is the shaman. Shamans are religious leaders who cure the sick by magic, communicate with the spirits, and control events.
- Saharia villages generally contain several quarters called ***longlongs***. Each longlong is inhabited by one patrilineage called a ***birinda***.
- **Living arrangements** - They often live in separate areas of villages called "Seharana".
- The Sahariya tribe is a ***Particularly Vulnerable Tribal Group (PVTG)***.

## References

1. [Times of India | Malnourishment in Sahariya tribes](#)
2. [Deccan Herald | Malnourishment in Sahariya children](#)

## Swachh Vayu Survekshan Award 2024

Recently Union Environment Ministry presented Swachh Vayu Survekshan Awards for the year 2024.

- **Swachh Vayu Diwas** - It is the International Day of Clean Air for Blue Skies is celebrated on 7 Sept, 2024.
- **Current year host** - Rajasthan State Pollution Control Board.
- **Swachh Vayu Survekshan Awards** - They were presented to the best performing 9 [National Clean Air Program \(NCAP\)](#) cities.

Award Category	Winners
<b>Category-1</b> (Population over 10 Lakhs)	Surat, Jabalpur, and Agra
<b>Category-2</b> (Population between 3 and 10 Lakhs)	Firozabad, Amravati, and Jhansi
<b>Category-3</b> (Population under 3 Lakhs)	Raebareli, Nalgonda, and Nalagarh

- The Municipal Commissioners of winner cities were awarded with cash prizes, trophy, and certificate.
- **Evaluation Criteria** - The Criteria for Ranking of cities for ambient air quality will be on population basis.
- 131 NCAP cities are divided into 3 categories mentioned below:

<b>Category</b>	<b>No. of Cities</b>	<b>Population</b>	<b>List of cities</b>
<b>Category 1</b>	47 cities	above 10 Lakh plus population <i>(5 nos. of NCAP funded cities are also Million plus cities (MPCs) apart from 42 MPCs under XV-FC)</i>	List of 47 cities are attached at <b>Annexure-I.</b>
<b>Category 2</b>	44 cities	above 3 to 10Lakh population	List of 44 cities are attached at <b>Annexure-II.</b>
<b>Category 3</b>	40 cities	under 3 Lakh population	List of 40 cities are attached at <b>Annexure-III.</b>

\*Population 2011 census

## National Clean Air Program



- **Year-** 2019
- **Ministry-** Ministry of Environment, Forest and Climate Change.
- **About-** The program is a pollution control initiative, the government committed funds as well as set targets for 131 (non-attainment cities) of India's most polluted cities.
- **Non-attainment cities-** They are called as non-attainment cities as they did not meet the national ambient air quality standards (NAAQS) for the period of 2011-15 under the National Air Quality Monitoring Program (NAMP).
- **Goal-** To meet prescribed annual average ambient air quality standards at all locations in the country in a stipulated timeframe (long-term).
- **Objectives-**
  - Stringent implementation of mitigation measures for prevention, control and abatement of air pollution.
  - Augment public awareness and capacity building measures.
  - Augment and strengthen air quality monitoring network across the country
- **Tenure-**
  - **Mid-term-** *5 years action plan* to begin with keeping 2019 as base year.
  - **Long term-** The program is further extendable to *20-25 years* after mid-term review of the outcomes
- **Phase-I** - It proposes a tentative national target of 20%-30% reduction in PM2.5 and PM10 concentrations by 2024, with 2017 as the base year for comparison.
- **Phase-II-** The government set a new target of a 40% reduction in particulate matter concentration, by 2026.
- **Fund-** The program is backed by *15<sup>th</sup> Finance Commission*.
- **Cities responsibilities-** Cities are required to take measures to improve air quality inter-alia include solid waste management, control of pollution from biomass burning and air pollution from construction & demolition activities.
- **Non-binding-** The program is considered as a scheme rather than legal binding document hence there are no specified penal actions against cities that fail to meet the targets outlined in the program.
- **PRANA-** Portal for Regulation of Air-pollution in non-attainment cities, is a portal for monitoring of implementation of National Clean Air Programme (NCAP).
- **Status of air quality-** Out of 131 identified cities, decrease in PM10 Concentration has been observed in 88 cities during 2022-23 as compared to levels during FY 2017-18.

## References

[PIB | Swachh Vayu Survekshan Award, 2024](#)