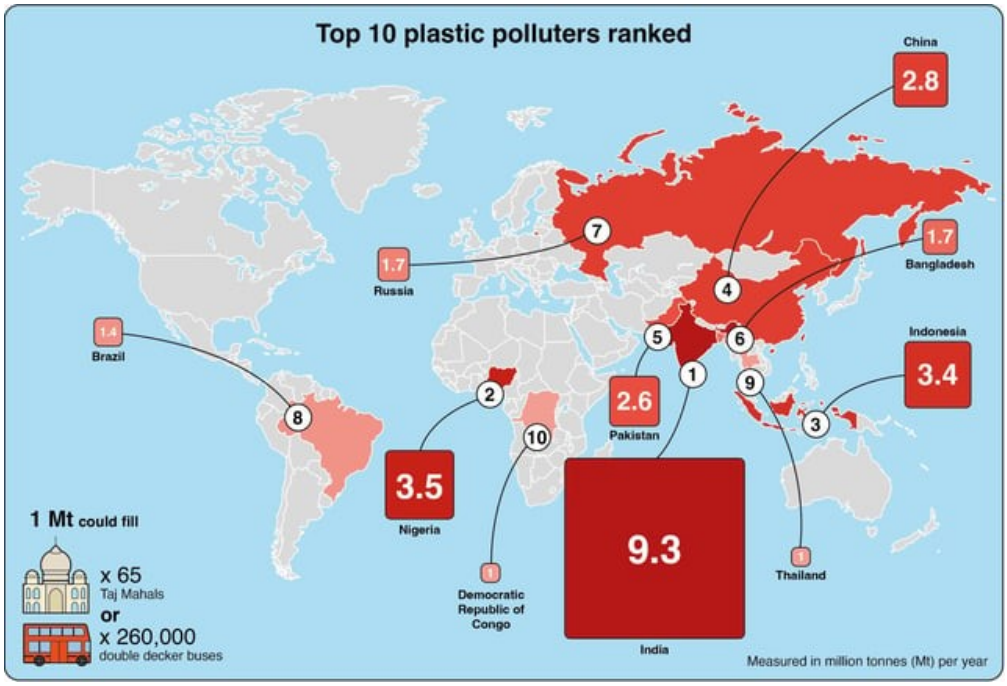
UPSC Daily Current Affairs | Prelim Bits 10-09-2024

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 2nd and 3rd 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.

Globba corniculata	Named for horn-shaped structure at the base of the labellum. Found in West Bengal's Darjeeling district.
Globba paschimbengalensis	Named after West Bengal.
Globba polymorpha	Named for the variation in bracteole colour within the species population, found in West Bengal.
Globba tyrnaensis	Named after Tyrna, a village in Meghalaya's East Khasi Hills district.
Globba janakiae	Named in honour of botanist E.K. Janaki Ammal, found in Meghalaya.
Globba yadaviana	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 chattisgarh.
- Their main residential area is the Shahabad forest, which stretches from Rajasthan to Guna in Madhya Pradesh.
- **Other names** - They are aslo 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
Category-1 (Population over 10 Lakhs)	Surat, Jabalpur, and Agra
Category-2 (Population between 3 and 10 Lakhs)	Firozabad, Amravati, and Jhansi
Category-3 (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:

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

*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 *15th 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

SHANKAR IAS PARLIAMENT
Information is Empowering