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## Prelim Bits 20-02-2024 | UPSC Daily Current Affairs

### Global Resources Outlook Report

The 2024 edition of the Global Resources Outlook Report will be tabled at the 6<sup>th</sup> UN Environment Assembly which is to be held in Nairobi, Kenya.

- **Launched in** - 2019
- **Published by** - International Resource Panel of UN.
- **Aim** - To provide regular reporting on the state and impact of, and outlook for, resource use globally.

*The International Resource Panel (IRP) was launched by the United Nations Environment Programme (UNEP) in 2007 to build and share the knowledge needed to improve our use of resources worldwide.*

### Highlights of the Report

- **Consumption** - Consumption of natural resources globally is set to rise **by 60% by 2060**, already 4 times higher than the 1970 levels.
- **Technosphere** - It is the totality of human-made products, from airports to Zimmer frames and it is *heavier than the biosphere* and have exceeded that of all life on Earth since 2020.
- **Equity over GDP** - The report prioritises equity and human wellbeing measurements over GDP growth alone.
- **Against Green Production** - It proposes actions to reduce overall demand rather than simply increasing "*green*" production.
- Greener Energy transition technologies requires 'strategic and critical minerals', whose extraction demands more energy.
- For example, Electric vehicles use almost 10 times more critical raw materials than conventional cars.
- Reaching net zero transport emissions by 2050 would require 6-fold increase of critical mineral extraction within 15 years.
- **Extraction** - The extractive activities like mining are disrupting the balance of the planet's ecosystems.
- **Decline in Urban mining** - The current economic system makes *extractive mining cheaper* and easier than urban mining.
- Urban mining is a practice that literally pull waste out of landfill and reclaim non-

renewable materials to be recycled and reused.

- It is often labour-intensive and requires a complex and state-enforced regulation of waste streams.
- Extractive mining, a process to extract raw materials from the earth, becomes cheaper due to the cheap availability of land in developing countries

*A UN study of 60 metals found the recycling rate for most of them was below 1%.*

- **Recommendation** - Degrowth, to radically reduce the unsustainable global use of materials and energy in an egalitarian manner.

## UNEP

• **UNEP** is the leading global environmental authority that sets the global environmental agenda.

UNEP		
<b>Founded in</b>	1972	
<b>Headquarters</b>	Nairobi, Kenya	
<b>India's membership</b>	<b>India is a member</b>	

• It works on **7 thematic areas** - Climate change, Disasters and conflicts, Ecosystem management, Environmental governance, Chemicals and waste, Resource efficiency, and Environment under review.

- **Reports** - Global Environment Outlook, Emission Gap Report, Adaptation Gap Report, Actions on Air Quality & Rise of Environmental Crime Report (along with INTERPOL)
- **UNEA** - The UN Environment Assembly is the world's highest-level decision-making body on the environment which brings together representatives to address the world's most pressing environmental challenges.

## References

1. [Down To Earth| Global Resources Outlook Report](#)
2. [The Guardian | Extraction of raw material to rise by 60%](#)

## Northern Green Anaconda

*Recently, scientists discovered a new species of Green Anaconda in South America and named it 'Norther Green Anaconda'.*

- The green anaconda, formerly believed to be a single species, is actually 2 genetically distinct species.

## Green Anaconda

- **Size** - They are the *world's heaviest snakes*, among the longest and is also known as *giant anacondas*
- The largest females can grow to more than 7m long and weigh more than 250 kilograms.
- **Habitat** - Mainly in rivers and wetlands in *South America*.
- **Significance** - They *balance their ecosystems* by influencing the behaviour of many other species, like where and how they forage, breed and migrate.

- **Genetic Diversity** - It diverged into 2 species by almost 10 million years ago whose level of **genetic divergence 5.5%**.
- But there is *no obvious geographical barrier* exists to separate them and both *look almost identical*.

*The genetic difference between humans and apes is about 2%.*

Green Anaconda	Northern green anaconda	Southern green anaconda
<b>Scientific Name</b>	Eunectes akayima	Eunectes murinus
<b>Native Habitat</b>	Ecuador, Colombia, Venezuela, Trinidad, Guyana, Suriname and French Guiana.	Perú, Bolivia, French Guiana and Brazil.
	Newly identified species.	Existing species/ discovered earlier.
<b>Vulnerability</b>	Smaller range so highly vulnerable	IUCN status is Least Concern

- **Significance**- *Tailored conservation strategies* can be devised to safeguard both species.

## Anacondas

- **Habitat** - In *swamps, marshes, and slow-moving streams*, mainly in the tropical rain forests of the Amazon and Orinoco basins.
- **4 anaconda species** - Green, yellow, dark-spotted, and Bolivian anacondas.
- Green Anaconda is larger than all others.
- **Features** - They are *nonvenomous constrictors*, coiling their muscular bodies around captured prey and squeezing until the animal asphyxiates.
- **Indicator species** - *Highly sensitive to environmental change*.
  - Healthy populations indicate healthy, vibrant ecosystems, with ample food resources and clean water.
  - Declining numbers indicate environmental distress.

## References

1. [Down To Earth| Discovery of Northern Green Anaconda](#)
2. [National Geography| Green Anacondas](#)

## Definition of Forest

Recently, Supreme Court (SC) ordered the government to revert to the 'dictionary meaning' of forest as upheld in a 1996 SC decision in Godavarman case.

- **Issue** - Constitutionality of Forest (Conservation) Amendment Act, 2023.
- **Section 1A** - A land has to be either notified as a forest or specifically recorded as a forest in a government record to qualify as a "forest".
- **Section 5** - Zoos and safaris referred to in the WPA, 1972, under the ownership of government or any authority within forest areas, excluding protected areas, are exempted from the definition of forests.
- **SC's Interim Order** - It ordered government to revert back to dictionary meaning of forest thereby, it will include 1.97 lakh square km of undeclared forest lands.

*In 1996 T.N. Godavarman Thirumulkpad vs Union Of India & Ors., Supreme Court directed that, the term forest' has to be understood in terms of its dictionary meaning irrespective of the nature of ownership and classification thereof.*

- **Consolidated record** - It ordered the Environment Ministry to issue a circular to the States and UTs to prepare a consolidated record of all the lands recorded as 'forest' in government records
  - It includes forest-like areas, unclassed & community forest lands.
- It is in regard with Rule 16 of Environmental Ministry notification issued in 2023, and it would take 1 year.
- Until preparation of such records, the definition of forest as pronounced in Godavarman case shall continue.
- **Comprehensive records** - It directed the Union government to require States and UTs, within 2 weeks, to forward the comprehensive records of forest lands that are identified as per the guidelines laid by the Godavarman judgement.
- The Environment Ministry shall publish the submitted report by mid-April 2024.
- **Establishing Zoos** - It directed that the establishment of "zoos or safaris" by any government or authority should not be consented to without the final approval of the apex court.
- The court listed the case again in July 2024.

## References

1. [The Hindu| SC's Interim Order on 'Definition of Forest'](#)
2. [Down To Earth| Issues with Forest Conservation Amendment Act](#)

## IBSA Fund

Recently, India has contributed 1 million USD to IBSA Fund.

- **IBSA Fund** - India, Brazil and South Africa Facility for Poverty and Hunger Alleviation Fund.
- **Created in** - **2004**, but became operation in 2006.
- **Established by** - *India, Brazil and South Africa*, commonly called as IBSA countries.
- **Aim** - To identify replicable and scalable projects that can be disseminated to interested developing countries as examples of good practices in the *fight against poverty and hunger*.
- To support for Southern-led, demand-driven, transformational projects in developing countries.
- **Fund Manager and Secretariat** - UNOSSC.
- **Fund** - Each of the IBSA countries contribute 1 million USD annually.
  - India's contributed more than 18 million USD in total.
- **Supports projects** - Through partnerships with local governments, national institutions and implementing partners.
- Projects may range from promoting food security, and addressing HIV/AIDS, to extending access to safe drinking water all to contribute to the achievement of SDG by 2030.
- **Fund allocation** - **50.6 million USD** to date, supporting 45 projects across 37 countries of the global South.
- It has already approved 3 projects in 2024
  - Rural Electrification using Micro-grids' in Southern Belize
  - Empowering Women and Youth to Drive Sustainable Agriculture' in South Sudan
  - Investment in Agri-business development in Mubadrti' in Palestine.

### Quick Facts

- **UNOSSC** - The United Nations Office for South-South Cooperation was established by UN General Assembly in 1974 and hosted by UN Development Programme (UNDP).
- It aims to promote, coordinate and support South-South and triangular cooperation globally and within the UN system.
- **IBSA** - A unique forum which brings together India, Brazil and South Africa.
- They are the 3 large democracies, 3 major economies, 3 multicultural, multi-ethnic, multilingual and multi-faith countries on 3 different continents.

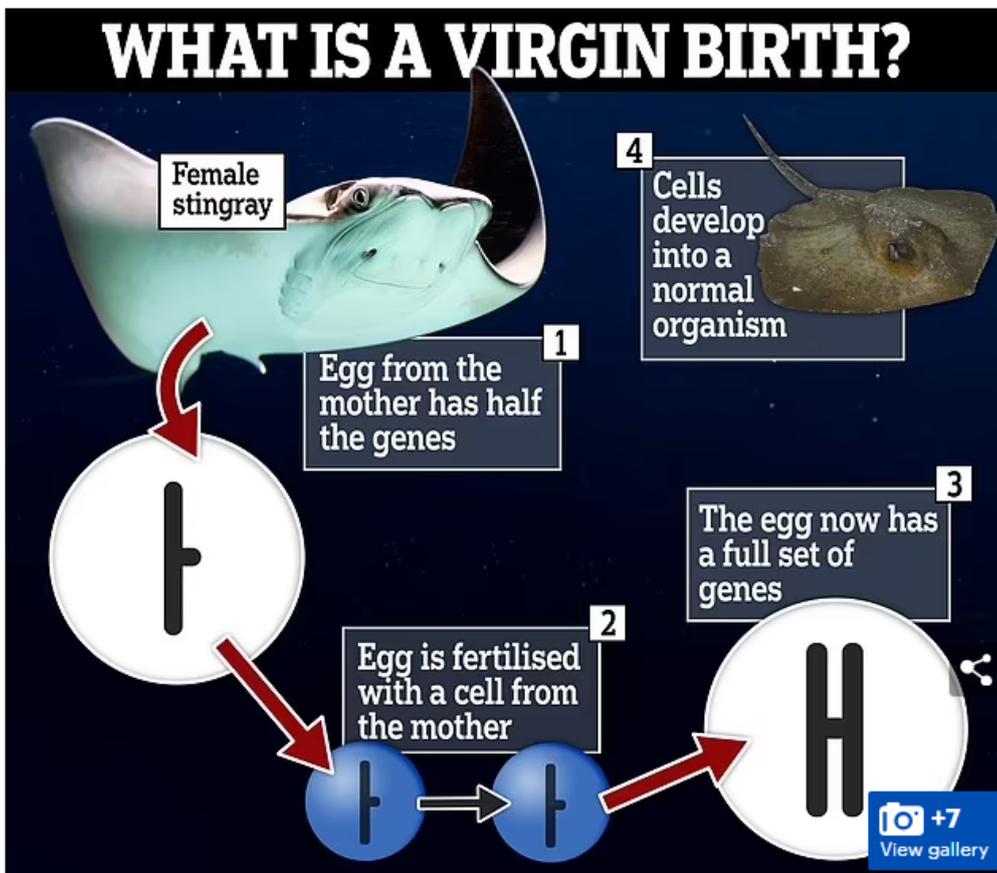
### References

1. [Business Standard| India contributes 1 million USD to IBSA Fund](#)
2. [IBSA| IBSA Fund](#)
3. [UN| UN Office for South-South Cooperation \(UNOSSC\)](#)

### Parthenogenesis

*Charlotte, a female round stingray has become the topic of international attention after getting pregnant despite not having a male ray companion for at least 8 years.*

- **Parthenogenesis** - In Greek, it means '*virgin creation*'.
- It is a *rare form of asexual reproduction* in which a female produces an embryo without fertilization by a male's sperm.
- It can operate on either a haploid (n) or a diploid (2n) cell.
- It has been observed in *more than 80 vertebrate species*, including California condors and a crocodile.
- Many species of *sharks and rays* are also capable of this.
- Parthenogenic species may be
  - **Obligate** - They are incapable of sexual reproduction.
  - **Facultative** - They are capable of *switching between parthenogenesis and sexual reproduction* depending upon environmental conditions.
- **Apomixis** - A process where the egg is fertilised with cells from the mother rather than by a male.
- A smaller cell known as a "**polar body**," which forms at the same time as the egg and contains DNA similar to the mother's, merges with the fertile egg.
- The offspring's are *similar to the mother but not exact clones*.
- It is more *common in low-density populations*, such as those on the verge of extinction.



**Automixis** is the process by which a *mammal can undergo virgin birth*. Here, egg would need to double its genetic content, divide, and then re-combine. The egg would end up with the normal number of chromosomes without the need for any additional genetic material.

- **Significance** - *Round stingray, has never been reported to give birth this way and*

thus it will be the 1<sup>st</sup> such incidence if confirmed.

## References

1. [Deccan Herald| Parthenogenesis in Round Stingray](#)
2. [Daily Mail| Virgin Birth](#)



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