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 6th 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. • 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
Scientific Name	Eunectes akayima	Eunectes murinus
Native Habitat	Ecuador, Colombia, Venezuela, Trinidad, Guyana, Suriname and French Guiana.	Perú, Bolivia, French Guiana and Brazil.
	Newly identified species.	Existing species/ discovered earlier.
Vulnerability	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 f*orest-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 1st such incidence if confirmed.

References

1. Deccan Herald| Parthenogenesis in Round Stingray
2. Daily Mail| Virgin Birth

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