

1. Africa's Splitting Plates

Topic: Geography



In News: Scientists have predicted that a new ocean would be created as Africa gradually splits into two separate parts.

More on the Topic:

- The division of the continent is connected to the East African Rift, a crack that stretches 56 kilometres and appeared in the desert of Ethiopia in 2005, triggering the formation of a new sea.
- This geological process will **inevitably divide the continent, resulting in currently landlocked countries, such as Uganda and Zambia, obtaining their own coastlines** in due time, which would take five to 10 million years.



- As the Somali and Nubian tectonic plates continue to pull apart from each other, a **smaller continent will be created from the rift**, which will include present-day Somalia and parts of Kenya, Ethiopia, and Tanzania.
- **The Gulf of Aden and the Red Sea will eventually flood** into the Afar region in Ethiopia and the East African Rift Valley, leading to the formation of a new ocean.
- This new ocean will result in **East Africa becoming a separate small continent** with its own unique geographic and ecological characteristics.
- The three plates — the Nubian African Plate, Somalian African Plate and Arabian Plate — **are separating at different speeds.**
- The Arabian Plate is moving away from Africa at a rate of about an inch per year, while the two African plates are separating even slower, between half an inch to 0.2 inches per year, according to Macdonald.
- The necessary evacuation of people and the potential loss of lives will be an unfortunate cost of this natural phenomenon.

What is rifting?

- The Earth's lithosphere, comprised of the crust and upper part of the mantle, is divided into several tectonic plates that are not stationary but rather move in relation to each other at varying speeds.
- **Tectonic forces not only move the plates but also have the potential to cause them to rupture**, resulting in the formation of a rift and potentially leading to the creation of new plate boundaries.
- **Rifting refers to the geological process in which a single tectonic plate is split into two or more plates** separated by divergent plate boundaries.
- This process leads to the **emergence of a lowland region known as a rift valley**, which can occur either on land or at the bottom of the ocean. These rift valleys occur due to the movement of Earth's tectonic plates.

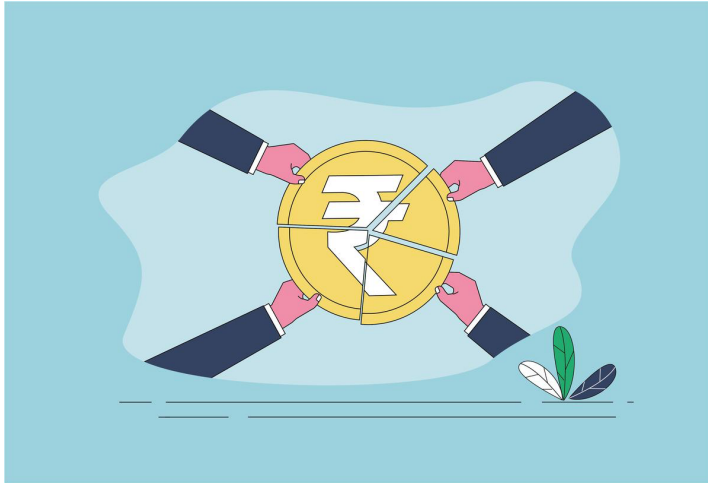
Challenges & consequences:

- Africa is the **most impacted region when it comes to displacement, with a larger number of countries affected than any other continent or region.**
- As the plates continue to split in the future, this phenomenon will result in the **displacement of communities, settlements and various flora and fauna.**
- These changes will impact **their habitats due to climate change**, resulting in environmental degradation. Rapid urbanisation and **increased settlements will put pressure on natural resources, leading to a scarcity of water, energy and food.**
- Uncontrolled waste disposal will also be a significant concern. Furthermore, some species will disappear, while others will become endangered due to habitat changes.
- While the process of rifting may often go unnoticed, the separation of the Nubian and Somali plates can result in the formation of new faults, fissures and cracks or the reactivation of pre-existing faults, **leading to seismic activity.**

Source: Indian Express

2. Friction over revenue sharing formula of Centre and the States

Topic: Polity and Governance



In News: The Fifteenth Finance Commission's (XVFC) formula is skewed in favour of some States, resulting in wide inter-State variations.

More on the Topic:

- As population is given a higher weightage, it tilts the balance in favour of some northern States. This has been a bone of contention between the Centre and the affected States.
- It has been criticised that the notion to allocate funds based on the population, it rewards those who have not been able to achieve population control.
- The government defended the Finance Commission formula stating that the basic rationale of sharing is horizontal equity. And
- The objective of the transfer of funds is to enable a State to provide comparable levels of services.

The Fifteenth Finance Commission's (XVFC) formula:

- The XVFC had arrived at the States' share in the divisible pool of taxes based on each State's needs (population, area and forest and ecology), equity (per capita income difference) and performance (own tax revenue and lower fertility rate).
- **The weight assigned to needs was 40%, equity 45%, and 15% for performance.**
- This formula meant that Uttar Pradesh and Bihar got 17.9% and 10%, respectively in the XVFC.
- Karnataka, Kerala and Tamil Nadu got 3.65%, 1.93% and 4.08%, respectively.
- Notably, the XVFC **introduced the fertility rate in the formula to reward States which had reduced the fertility levels.**



- While this does favour the developed States which have pushed their TFR below replacement rate, the weightage given to the component is relatively lower than equity and need.

What are the Arguments of the Southern States:

- The southern have grown faster and contributed larger revenue to the central revenue share. It should be considered while the distribution.
- Equity should not adversely impact efficiency.
- The money that goes to poorer States is not leading to their development. The reasons should be stated.
- State-wise HDI and per capita NSDP depict a trend where States which get more money from the Centre show sedate growth, and the progress of those who get less is relatively much superior. This should be considered with seriousness.

Way Ahead:

- Horizontal and vertical imbalances of the fiscal federalism should be brought back to balance amicably.
- Creating the new fiscal federal architecture based on the effective decentralization, transparent GST regime, independent Finance commission and effective NITI Aayog can strengthen India’s unique cooperative federalism.

Source: AIR

3. Women and Men in India 2022

Topic: Reports and Indices

URBAN AREAS WERE MUCH WORSE THAN RURAL

States/UTs with less than 1,000
females per males



National Family Health Survey (2019–21)

In News: Women and Men in India 2022 report was published recently.

More on the Topic:

- It was published by **Ministry of Statistics and Programme Implementation (MoSPI)**.
- **The sex ratio at birth:** went up by three points to 907 in 2018-20 from 904 in 2017-19.
- But women are still largely **left out of the labour force**, restricting their scope of financial independence.
- **India's Labour Force Participation Rate:** defined as the percentage of persons in the labour force in the population — for those above 15 years of age has been on the rise since 2017-2018. However, women are severely lagging behind men.
- **The average wage earned per day by casual labourers in work:** men in rural areas earn more than women in urban areas.
- **The mean age for marriage has improved marginally** up from 22.1 years in 2017 to 22.7 years in 2020.
- Other indicators like **infant mortality rate and under-five mortality rate have also been on the downward trend.**

Population Trends:

- The population growth, already on a downward trend from 2.2 per cent in 1971 to 1.1 per cent in 2021, is projected to fall further to 0.58 per cent in 2036.
- **India's age and sex structure:** as per which the population under 15 years of age is expected to decline and the population above 60 years is expected to increase by 2036.
- **The age-specific fertility rate:** defined in the report as the number of live births in a specific age group of women per thousand female individuals of that age group — for the 20-24 years and 25-29 years age group between 2016 and 2020 reduced from 135.4 and 166.0 to 113.6 and 139.6 respectively.

Source: Hindu

4. REACHOUT Scheme

Topic: Government Schemes





In News: An umbrella scheme Research, Education and Training Outreach (REACHOUT) is being implemented by the Ministry of Earth Sciences for capacity building.

More on the Topic:

It consists of the following sub-schemes:

- R&D in Earth System Science (RDESS)
- International Training Centre for Operational Oceanography (ITCOcean)
- Program for Development of Skilled manpower in Earth System Sciences (DESK)

The main objectives of the above sub-schemes are:

- **Supporting various R &D activities** in the thrust areas of different components of Earth System Sciences that are theme and need based and that would help in attaining the National goals set up for MoES.
- **Develop useful collaborations with international organizations** for mutual transfer of advanced knowledge in science and technology in Earth Sciences and to provide services to developing countries.
- **Develop skilled and trained manpower in Earth Sciences** with the support of academic institutions in the country and abroad.

Source: Indian Express

5. Barda Wildlife Sanctuary

Topic: Environment and Ecology



In News: The Gujarat government has planned to translocate 40 adult and sub-adult lions to the Barda Wildlife Sanctuary in the state.

More on the Topic:

- As per the last count in 2020, there are 674 lions in the state and Gir has long been overflowing with the Lions..



- Experts have demanded translocation of lions in India for the past two decades as the big cats have been geographically isolated in Gir.
- A second home would **protect the lion population from extinction in case of diseases like the Canine Distemper Virus leads to their deaths.**
- **The Supreme Court of India in 2013 had also ordered relocating some lions to Madhya Pradesh;** however, 10 years later, the transfer has not yet happened.
- Carnivore populations restricted to single sites face various **extinction threats from genetic and stochastic environmental factors.**
- Catastrophes such as **an epidemic, an unexpected decline in prey, natural calamities or retaliatory killings** could result in their extinction when they are restricted to single populations.

Source: Business Standard

6. Colombo Security Conclave (CSC)

Topic: International Relations

COLOMBO SECURITY CONCLAVE (CSC)

Regional security grouping initially formed in 2011 as a trilateral Indian Ocean Rim Association maritime security grouping of India, Sri Lanka and the Maldives

MEMBERS

India
Sri Lanka
Maldives
Mauritius

OBSERVERS

Bangladesh
Seychelles



In News: The Fifth National Security Advisor meeting of the Colombo Security Conclave (CSC) welcomed Mauritius as its fourth member while encouraging Bangladesh and Seychelles to join as member states.

More on the Topic:

- CSC was founded as a trilateral security framework between **India, Sri Lanka and the Maldives with four pillars of security cooperation, covering marine safety and security, human trafficking, counter-terrorism, and cyber security.**
- **Later Mauritius joined as fourth member and Bangladesh & Seychelles participate as observer countries.**
- ‘CSC Focused Operation’ was aimed at keeping the vital part of the Indian Ocean safe and secure for commercial shipping, international trade and conduct of legitimate maritime activities.

Source: Business Standard

7. Plastic Rocks

Topic: Environment and Ecology



In News: Brazilian researchers find ‘terrifying’ plastic rocks on remote island in the state of Espirito Santo, Brazil.

More on the Topic:

- Melted plastic has become intertwined with rocks on the island, which researchers say is evidence of humans’ growing influence over the earth’s geological cycles.
- Plastic was found in the rocks called plastiglomerates - a mixture of sedimentary granules and other debris held together by plastic.

Source: Business Standard
