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Maternal Mortality Ratio

India has improved its maternal mortality ratio (MMR) to 97 deaths per lakh in 2018-2020 from 130 deaths per lakh in 2014-2016.

- The Maternal Mortality Ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births.
- The Registrar General of India released a Special Bulletin on MMR.
- India has accomplished the National Health Policy (NHP) target for MMR of less than 100/lakh live births.





- India is on the right track to achieve the SDG target of MMR less than 70/ lakh live births by 2030.
- 8 States have achieved Sustainable Development Goal (SDG) target for MMR.

Highest MMR (SDG 3.1 achieved states)	Lowest MMR
Kerala (19)	Assam (195)
Maharashtra (33)	Madhya Pradesh (173)
Telangana (43)	Uttar Pradesh (167)
Andhra Pradesh (45)	Chhattisgarh (137)
Tamil Nadu (54)	Odisha (119)
Jharkhand (56)	Bihar (118)
Gujarat (57)	Rajasthan (113)
Karnataka (69)	Haryana (110)

Other key Findings

- Institutional births across the country have increased to 88.6% in 2019-2021 from 78.9% in 2014-2016.
- Anaemia levels among women between the ages of 19 and 49 have increased to 57% in 2019-2021 from 53.1% in 2015-2016.

References

1. PIB - Decline in the National Maternal Mortality Ratio

2. Down To Earth - India improves maternal mortality ratio

Tiangong Space Station

China launched three astronauts to its Tiangong space station which is China's first in-orbit crew rotation.

- The 3 astronauts were carried by the Shenzhou-15 spacecraft will live and work on the Tiangong space station for 6 months.
- Shenzhou-15 (Divine Vessel) mission was the last of 11 missions needed to assemble the 'Celestial Palace'.
- Tiangong is China's permanent space station that will operate in low-Earth orbit at an altitude from 340 km to 450 km.
- Tiangong Space Station is named after the Chinese word for 'heavenly palace' or 'celestial palace'.
- The station has a designed lifespan of at least 10 years.
- The Chinese space station has 3 modules
    1. Tianhe core module (heavenly river)
    2. Crew module and the laboratory cabin modules Wentian (quest for heavens) and
    3. Mengtian (dreaming of heaven).
- Tiangong weighs about 66 tons with all 3 modules.
- China has planned a Xuntian space telescope which will co-orbit with Tiangong, with a slightly different orbital phase.

China will have the only spaces station in orbit after ISS expires in 2024.

International Space Station

- The International Space Station (ISS) is a joint program of 5 Space agency the United States (NASA), Russia (Roscosmos), Japan (JAXA), Canada and 10 member states of the European Space Agency.
- It has been in operation since 1998 and due to be retired in 2024.
- ISS is equipped with 16 modules and weighs around 450 tons.

References

1. Indian Express - China's new 'Heavenly Palace' space station

Andromeda galaxy and Galactic Cannibalism

Scientists discovered by studying a star cluster in Andromeda galaxy that Andromeda may be a cosmic cannibal.

- The Dulais Structure is a dark stream of stars (globular clusters) in Andromeda. (Dulai means Black stream in Welsh)
- The Dulais Structure is dark stream illuminated by star clusters that orbit unlike any other clusters in Andromeda.

- This means the star clusters are from the leftovers of a massive feeding event called galactic cannibalism.

Galactic Cannibalism is a feeding event of galaxy in which larger galaxies consume smaller galaxies or globulars to grow.



Andromeda Galaxy

- The Andromeda Galaxy also known as Messier 31, is the nearest major galaxy to the Milky.
- Andromeda is a spiral galaxy approximately 2.5 million light-years from Earth.
- It is the largest galaxy of the Local Group, which also contains the Milky Way, the Triangulum Galaxy, and other smaller galaxies.

References

1. Indian Express - Andromeda galaxy's 'cannibalistic' nature
2. Space - Galactic cannibal Andromeda feasts on smaller galaxies
3. Science Alert - Andromeda engaged in 'Cannibalism' again

Rainbow of fruit and vegetables

Coloured fruit and vegetables, and also herbs, spices, legumes and nuts provides a plethora of phytonutrients.

- Each colour of coloured fruit and vegetable signifies different nutrients
- The nutrients found in plant foods are broadly referred to as phytonutrients.
- There are at least 5,000 known phytonutrients.



References

1. The Hindu - Nutrients in coloured fruit and vegetables

State of Global Water Resources 2021

The World Meteorological Organization (WMO) released its first State of Global Water Resources 2021.

- State of Global Water Resources is an annual report released by the World Meteorological Organization headquartered at Geneva.
- The report was released in order to assess the effects of climate, environmental and societal change on the Earth's water resources.
- The report aims to support monitoring and management of global freshwater resources in an era of growing demand and limited supplies.
- The report focusses on three major areas:

1. Streamflow - the volume of water flowing through a river channel at any given time.
2. Terrestrial water storage (TWS) - all water on the land surface and in the sub-surface.
3. The cryosphere (frozen water).

UN-Water reported that 74% of all natural disasters between 2001 and 2018 were water-related.

- Major Indian river basins (the Brahmaputra, Ganges and Indus) exhibit a gradual decline in TWS over the period 2002-2021.
- The total water storage of the Ganga-Brahmaputra and Indus basins declined in 2021.
- But they witnessed more water flowing in the river channels due to glacial melt.

The Indo-Gangetic Plain (IGP) is a crucial hotspot as about half a billion people live in the plain across Pakistan, Nepal, India and Bangladesh.

References

1. Down To Earth - Water storage declined says WMO
2. WMO - State of Global Water Resources 2021
3. The Times Of India - WMO reports on freshwater availability

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