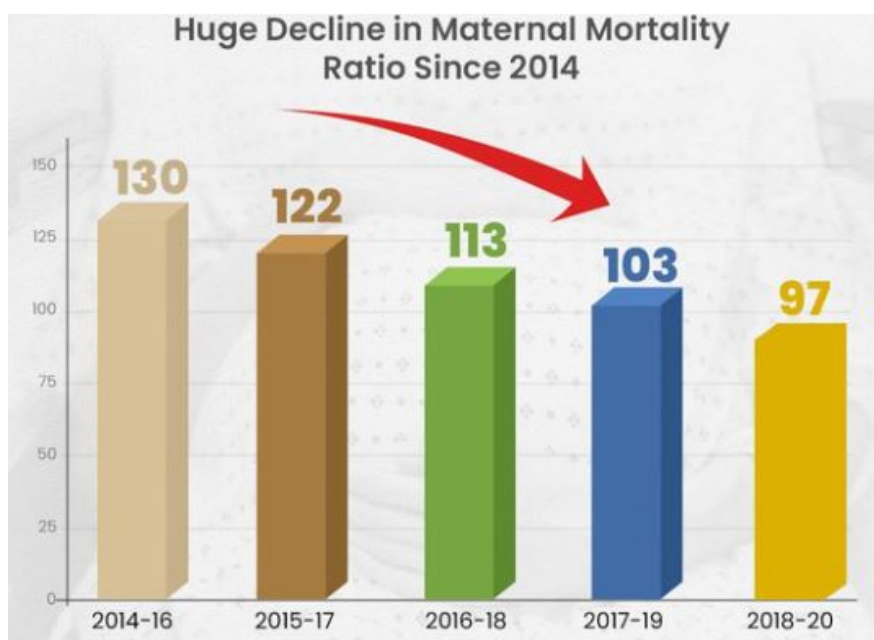


Prelim Bits 01-12-2022 | UPSC Daily Current Affairs

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.



TARGET 3.1

REDUCE MATERNAL MORTALITY

By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 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

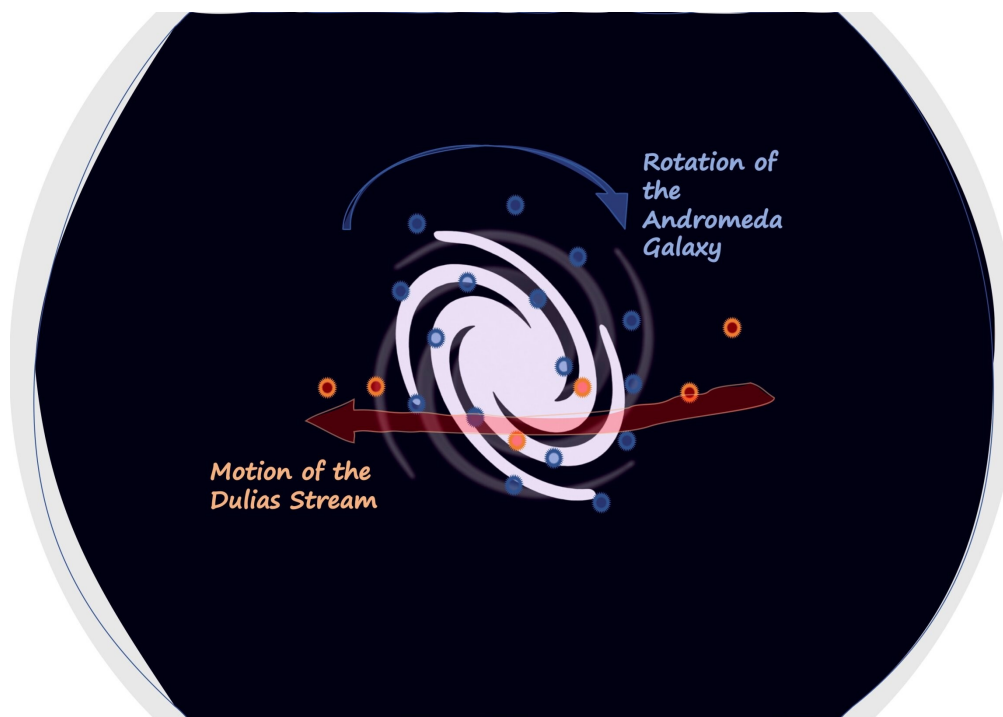
1. [Indian Express - China's new 'Heavenly Palace' space station](#)

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.

| | |
|---|--|
|  | <p>Tomatoes, apples, cherries, watermelon, red grapes, strawberries</p> <ul style="list-style-type: none"> • Carotenoids - lycopene, flavones and quercetin • Antioxidants • Carotenoids - lycopene, flavones and quercetin |
|  | <p>Carrots, pumpkins, mandarins, oranges and turmeric</p> <ul style="list-style-type: none"> • Carotenoids - alpha and beta-carotene, curcuminoids • Converted into Vitamin A which is also an antioxidant • Reduces the risk of cancers and heart disease. Important for eyes and eyesight. |
|  | <p>Apples, pears, bananas, lemons and pineapple</p> <ul style="list-style-type: none"> • Lutein, meso-zeaxanthin, viola-xanthin and zeaxanthin • Absorbs UV light in eyes and protecting them from sun damage. |
|  | <p>Avocados, Brussels sprouts, apples, pears and leafy vegetables.</p> <ul style="list-style-type: none"> • Chlorophyll, catechins, nitrates and folate (or vitamin B9) • Antioxidants and has Vasodilating properties. • Improves blood circulation and reduces blood pressure, reducing our risk of heart and other vessel complications and disease. |
|  | <p>Blackberries, blueberries, figs, prunes and purple grapes.</p> <ul style="list-style-type: none"> • Anthocyanins, resveratrol and tannins. • Reduces risk of cancer, heart disease, stroke and improving signalling between brain cells. |
|  | <p>Garlic, potatoes and bananas</p> <ul style="list-style-type: none"> • Flavones -apigenin, luteolin, isoetin and allicin • Allicin has anti-bacterial and anti-viral properties also normalise high blood pressure. |

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](#)

