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### BrahMos Supersonic Missiles

#### Why in News?

- India delivered the first batch of BrahMos supersonic cruise missiles to the Philippines on Friday, over two years after signing a \$375 million deal to supply the weapon systems with the Southeast Asian country.

#### More About the News

- The Indian Air Force used its C-17 Globemaster transport aircraft to transport the BrahMos supersonic cruise missiles to the Philippines to deliver the weapon system.



- In January 2022, Philippines concluded a \$375-million deal with India for three batteries of shore-based, anti-ship variant of the BrahMos becoming the first export customer for the joint venture missile between India and Russia.
- Philippines is acquiring the systems under the Horizon 2 of the Revised Armed Forces of the Philippines Modernization Programme.
- The delivery comes amid the showdown between Philippines and China in the South China Sea which has been ongoing for the last few months and will significantly augment the defensive posture of the

Philippines armed forces once the systems are operationalised.

- As the world's fastest supersonic cruise missiles, the BrahMos missiles will provide deterrence against any attempt to undermine Philippines' sovereignty and sovereign rights, especially in the West Philippine Sea.
- As per the deal, Philippines will get three missile batteries for the BrahMos supersonic cruise missile system. The deal also encompassed training for operators and the necessary integrated logistics support package.
- BrahMos supersonic cruise missiles are produced by BrahMos Aerospace Pvt Ltd—a joint venture between the Defence Research and Development Organisation (DRDO) and the Russian Federation's NPO Mashinostroyeniya.
- BrahMos supersonic cruise missiles are said to be one of the most successful missile programs in the world.
- The BrahMos supersonic cruise missiles fly at a speed of 2.8 Mach or almost three times the speed of sound.
- They can hit a target up to a range of 290 kilometres and can be launched from submarines, ships, aircraft, or land platforms.



### Fossils of Massive Prehistoric Snake

#### Why in the News?

- Researchers at the Indian Institute of Technology (IIT) Roorkee have reported the discovery of fossils of one of the largest snakes that ever existed and likely lived 47 million years ago during a period called the Middle Eocene.

#### More About the News

- The fossils were found in Kutch, Gujarat, and the reptile, named Vasuki Indicus, could have been anywhere between 10 metres and 15 metres long, or as big as a modern-day school bus.
- It belonged to the now-extinct Madtsoiidae snake family but represents a unique lineage from India.
- The discovery could improve understanding of how the madtsoiid species evolved in different kinds of climate, as well as the factors that contributed to large body-sizes. One of the causative factors is held to be high temperatures in the tropical climate of that time.
- The reptile existed at a time when the earth looked quite different from today, and Africa, India and South America were one, conjoined landmass.
- Vasuki Indicus likely had a broad and cylindrical body, hinting at a robust and powerful build and was as big as Titanoboa, a massive snake that once roamed the earth and is reportedly the longest ever known. Vasuki refers to the mythical snake often depicted around the neck of the Hindu god



Shiva.

- Much like present-day pythons and anaconda, Vasuki Indicus killed its prey by suffocation.
- This discovery is significant not only for understanding the ancient ecosystems of India but also for unravelling the evolutionary history of snakes on the Indian subcontinent.
- It underscores the importance of preserving our natural history and highlights the role of research in unveiling the mysteries of our past.

### National Curriculum for Early Childhood Care and Education 2024

#### Why in the News?

- The Ministry of Women and Child Development (MWCD) has released the National Curriculum for Early Childhood Care and Education 2024 titled 'Aadharshila,' on the lines of the National Education Policy 2020 and the National Curriculum Framework.

#### More About the News

- For the first time ever, the Central government has released curriculum advisable to be taught to children aged three to six-years-old, thus giving an impetus to pre-school learning in 14 lakh anganwadis across the country.
- 'Aadharshila' (translated as foundation stone) is a detailed 48-week curriculum meant for learning in the age-group of three to six-year-olds in anganwadis.
- There are 14 lakh anganwadis in India which serve as nodal points in villages for health and nutrition needs of pregnant mothers and children.
- The MWCD, along with the Ministry of Education, has envisioned that these anganwadis should double up as pre-schools which impart basic learning to children, thus strengthening their foundational literacy and numeracy concepts.
- The curriculum includes a weekly based play calendar with four weeks of initiation that

include academic activities which help children transition from home to anganwadi centre by engaging them in fun and free play.

- Activities and time table are segregated age-wise, with detailed requirement of materials needed, age-appropriate specifications, variation, notes for teacher, targeted curricular goals and competency that children achieve and observing children's interest.
- The curriculum helps in developing listening skill, vocabulary building, boosting imagination, narration, following instructions, creativity, social development, developing self-expression and self-esteem, which will help a child to easily transition into Grade 1.
- The national framework for three to six years will serve as a base for States to develop their own culturally appropriate curriculums seen as a solution to tackle later school challenges of children.

### Forests as a National Asset and Financial Wealth

#### Why in the News?

- The Supreme Court has asserted in a judgment that forests in India are a national asset and a major contributor to the nation's financial wealth.

#### More About the News

- The judgment has come at a pivotal time when the controversial Forest Conservation (Amendment) Act of 2023 or the FCAA has attracted widespread criticism.
- The FCAA is accused of giving a free hand to States to regularize encroachments in protected forests and determine diversions of forestlands. The Act has been criticized for paving the way for the commercial exploitation of forests, besides exempting infrastructural projects from environmental clearance.
- A country with excess forest cover would be in a position to sell its excess carbon credit to the one in deficit. This in turn underlines



the significance of forests in contributing to the financial wealth of a country.

- The judgment said India's forests serve as a major sink of carbon dioxide (CO<sub>2</sub>). The value of mitigation has put a conservative value of \$5 per tonne of CO<sub>2</sub> locked in our forests, this huge sink of about 24,000 mountain of CO<sub>2</sub> is worth \$120 billion.
- The court quoted from a 2009 report of the Ministry of Environment and Forests titled 'India's Forest and Tree Cover: Contribution as a Carbon Sink', which said that from "1995 to 2005, the carbon stocks stored in our forests and trees have increased from 6,245 million tonnes (mountain) to 6,662 mountain, registering an annual increment of 38 mountain of carbon or 138 mountain of CO<sub>2</sub> equivalent".
- Justice Sundresh highlighted the protective role of forests against climate change. It referred to a 2022-2023 report of the Reserve Bank of India on the macroeconomic impact of climate change and changing patterns of rainfall.
- These factors, the judgment quoted the report, could cost the economy 2.8% of its GDP and depress the living standards of nearly half of its population by 2050.
- India could lose anywhere around 3% to 10% of its GDP annually by year 2100 due to climate change," the judgment noted from the RBI document.
- Man, being an enlightened species, is expected to act as a trustee of the earth. It is not his right to destroy the habitat of other species but his duty to protect them from further peril.

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