DAILY CURRENT AFFAIRS 01-06-2026

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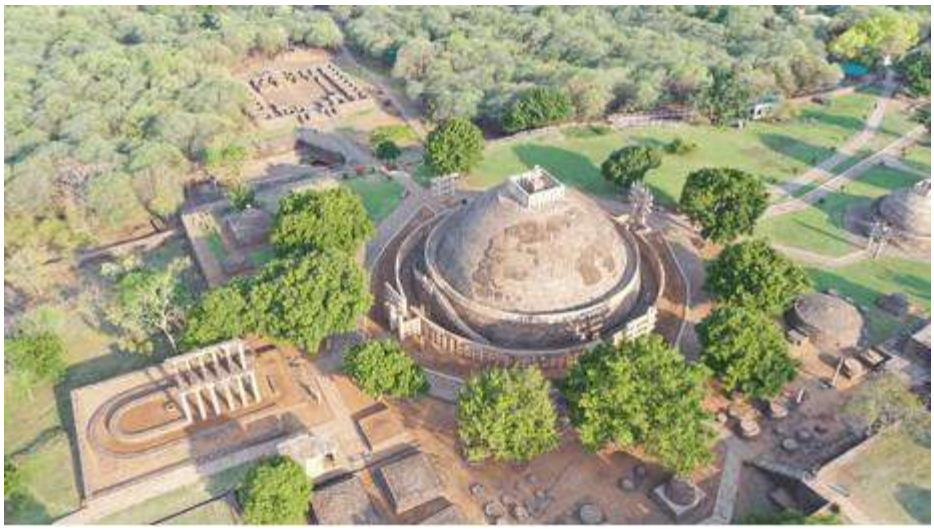
Sanchi Stupa

Syllabus: GS-1; Indian History, Art & Culture (Buddhist Architecture and Heritage)

Context:

Recently, sacred relics of Sariputra and Maudgalyayana, two of Lord Buddha's foremost disciples, preserved at Sanchi Stupa, are being sent to Mongolia.



About Sanchi Stupa

- Sanchi Stupa was constructed by the **Mauryan Emperor Ashoka** in the 3rd century BCE.
- It houses sacred relics associated with the Buddha and his revered disciples.
- The construction of the monument was supervised by Ashoka's wife, Devi.
- The growth and development of the Sanchi complex received significant support from the merchant community of **Vidisha.**
- The site was found in a dilapidated condition when **British officer Henry Taylor rediscovered it in 1818.**
- The first systematic survey and excavation of Sanchi were later conducted by **Alexander Cunningham in 1851.**

Structure of Sanchi Stupa

- The stupa is surrounded by a large stone railing featuring four intricately carved gateways, collectively known as Sanchi sculptures.

- At its core is a hemispherical dome **(Anda)** resting on a base, symbolizing the celestial dome encompassing the earth.
- Above the dome is a square railing structure called the **Harmika**, representing the sacred world mountain.
- Rising from the Harmika is a central mast **(Yashti),** symbolizing the cosmic axis.
- The mast is crowned with a series of umbrellas **(Chatras),** which signify the different heavenly realms **(Devaloka).**

Sakura Science Programme

Syllabus: GS-2; International Relations, GS-3; Science & Technology

Context

Recently, the Department of School Education and Literacy (DoSEL), Ministry of Education, flagged off a delegation of Indian students selected to participate in the **Sakura Science Programme 2026** in Japan.

About Sakura Science Programme

- The **Sakura Science Programme (SSP)** is a prestigious **Japan-Asia Youth Exchange Program in Science**.
- It was launched in **2014** by Japan to promote scientific cooperation and cultural exchange among Asian countries.
- **India joined the programme in 2016.**
- The programme provides students and young researchers with opportunities to experience **Japan's advanced science, technology, innovation ecosystem, and cultural heritage**.
- Selected participants undertake **short-term visits to Japan**, where they interact with leading universities, research institutions, and industries.

Implementing Agency

- The programme is implemented by the **Japan Science and Technology Agency (JST)**, a national research and innovation agency of Japan.

Objectives of the Programme

- To nurture talented young individuals with the potential to contribute to scientific and technological innovation.
- To encourage international collaboration in science and technology.
- To promote the global circulation of knowledge, skills, and researchers.
- To strengthen partnerships between Japanese educational and research institutions and their counterparts abroad.
- To enhance diplomatic relations through science and technology cooperation.

Significance for India

- Provides Indian students with exposure to cutting-edge scientific research and technological advancements.
- Strengthens **India–Japan cooperation** in education, innovation, and research.
- Encourages scientific temperament, innovation, and global outlook among young learners.
- Helps build future networks of researchers, scientists, and innovators between the two countries.

Mission Queen Pineapple

Syllabus: GS-3; Agriculture, Food Processing & Allied Activities

Context:

- Recently, the Union Minister for Development of North Eastern Region (MDoNER) launched the "Mission Queen Pineapple".

About Mission Queen Pineapple

- Mission Queen Pineapple has been launched to promote **Tripura's GI-tagged Queen Pineapple,** a key agricultural identity of the state.
- Its primary objective is to create an integrated pineapple **value-chain ecosystem** in Tripura.
- The initiative seeks to bridge structural gaps in the sector, unlock premium market opportunities, and generate value from pineapple leaves that are otherwise discarded.
- The mission has been planned as a three-year roadmap extending from Q2 FY 2026 to Q4 FY 2028.
- The **Ministry of Development of North Eastern Region (MDoNER)** serves as the nodal ministry for its implementation.

Key Facts about Queen Pineapple

- Queen Pineapple is a spiny, golden-yellow variety known for its sweetness, rich aroma, juicy texture, and high nutritional value.
- It is rich in **Vitamins A, B, and C**, along with minerals such as **calcium, magnesium, potassium, and iron.**
- The fruit records **Total Soluble Solids (TSS)** or sweetness levels between 13 and 17.2° Brix, with acidity ranging from 0.6% to 0.8%, resulting in a balanced sweet-tart taste.
- It is recognized as the **State Fruit of Tripura**.
- Queen Pineapple received the Geographical Indication (GI) tag in 2015.

National Family Health Survey-6 (NFHS-6)

Syllabus: GS-2; Health, Welfare and Social Sector Initiatives

Context

The Ministry of Health and Family Welfare has released the findings of the **National Family Health Survey-6 (2023–24)**, which indicate substantial improvements in maternal and child health outcomes while also highlighting a growing burden of obesity and diabetes among adults.

About NFHS

The National Family Health Survey (NFHS) is a nationwide household survey that provides comprehensive data on population, health, nutrition, and family welfare indicators.

Institutional Framework

- Nodal Ministry: Ministry of Health and Family Welfare (MoHFW)
- Implementing Agency: International Institute for Population Sciences (IIPS), Mumbai
- First Survey: 1992–93
- Latest Round: NFHS-6 (2023–24)

Coverage

NFHS-6 surveyed approximately **6.79 lakh households** across **715 districts** in all States and Union Territories, except Manipur.

Key Areas Covered

- Fertility and family planning
- Maternal and child health
- Nutrition
- Immunisation
- Non-communicable diseases
- Women's empowerment
- Domestic violence
- Water, sanitation and hygiene

Major Findings

Maternal Health

Institutional Deliveries

- Increased from 88.6% to 90.6%.

Caesarean Section Deliveries

- Increased from 21.5% to 27.2%.
- Private facilities: 54.1%.
- Public facilities: 16.9%.
- Urban areas: 40%, significantly above the WHO-recommended range of 10–15%.

Antenatal Care

- 95.9% of women received antenatal care.
- First-trimester registration increased to 76.2%.
- Four or more antenatal visits increased to 65.2%.

Maternal Nutrition

- Consumption of Iron-Folic Acid (IFA) tablets for 100+ days increased to 54.9%.
- Consumption for 180+ days increased to 37.8%.

Child Health and Nutrition

Nutritional Indicators

- Stunting reduced from 35.5% to 29.3%.
- Severe wasting declined from 7.7% to 5.2%.
- Underweight children declined marginally from 32.1% to 31.8%.

Child Health

- Acute respiratory infections reduced from 2.8% to 1.9%.
- Severe diarrhoea prevalence fell to 0.5%.

Breastfeeding

- 95.6% of infants below six months were breastfed.

Immunisation

Full Vaccination Coverage

- Increased from 83.8% to 87.1%.

Other Improvements

- Rotavirus vaccine coverage increased from 36.4% to 85.4%.
- Second dose of measles vaccine increased from 58.6% to 71.8%.
- 95.6% of vaccinations were administered through public health facilities.

Fertility and Family Planning

Total Fertility Rate (TFR)

- Remained stable at 2.0, below the replacement level of 2.1.

Contraceptive Prevalence Rate (CPR)

- Increased from 66.7% to 69.1%.

Menstrual Hygiene

Use of hygienic menstrual protection among women aged 15–24 years increased from 77.6% to 79.2%.

Rising Burden of Non-Communicable Diseases

Obesity

Women

- Increased from 24% to 30.7%.
- Urban: 42.8%
- Rural: 25.5%

Men

- Increased from 22.9% to 27.3%.
- Urban: 36.3%
- Rural: 23%

Diabetes

Men

- Increased from 15.6% to 20.9%.
- Urban: 23.9%
- Rural: 19.7%

Women

- Increased from 13.5% to 17.8%.
- Urban: 21.9%
- Rural: 16.2%

Significance

Positive Developments

- Improved maternal and child healthcare outcomes.
- Enhanced immunisation coverage.
- Better antenatal care services.
- Reduction in stunting and wasting, reflecting the impact of nutrition programmes.

Key Concerns

- Rapid increase in Caesarean-section deliveries, especially in private hospitals.
- Rising prevalence of obesity and diabetes.
- Growing urban-rural disparities in lifestyle diseases.
- Persistence of India's dual burden of malnutrition: undernutrition among children and overnutrition among adults.

Conclusion

NFHS-6 highlights India's achievements in maternal and child health, nutrition, and immunisation while simultaneously drawing attention to the emerging challenge of non-communicable diseases. The findings underline the need for a balanced public health strategy that addresses both traditional and lifestyle-related health concerns.

Coal Gasification

Syllabus: GS-3; Energy, Infrastructure, Science & Technology

Context

Recently, the Union Minister for Coal and Mines highlighted the importance of surface coal gasification, stating that it could help replace imports worth nearly ₹3 lakh crore. To promote this technology, the Union Cabinet has approved a ₹37,500-crore incentive package aimed at enhancing the utilisation of India's abundant coal resources and reducing dependence on imported industrial chemicals.

What is Coal Gasification?

Coal gasification is a process that converts coal into **synthetic gas (syngas)**, primarily consisting of hydrogen and carbon monoxide. This syngas serves as a feedstock for producing a variety of industrial and energy products.

Products Derived from Syngas

- Urea
- Ammonia
- Methanol
- Synthetic Natural Gas (SNG)
- Hydrogen
- Ammonium Nitrate
- Dimethyl Ether and other industrial chemicals

Why is Coal Gasification Important for India?

India relies heavily on imports for several chemicals that can be produced through coal gasification:

- Around 20% of urea demand is met through imports.
- Nearly the entire ammonia requirement is imported.
- About 80–90% of methanol demand is met through imports.

At the same time, India possesses vast domestic coal resources:

- Coal reserves: ~401 billion tonnes
- Lignite reserves: ~47 billion tonnes

Coal gasification can help improve energy security, reduce foreign exchange outflow, lower the current account deficit, and strengthen domestic manufacturing capabilities.

Government Targets and Incentives

Coal Gasification Target

- Gasification of **100 million tonnes of coal by 2030**.

Financial Support

- **₹8,500 crore scheme (2024):** ₹6,233 crore allocated to eight projects.
- **₹37,500 crore incentive package:** Provides support equal to about 20% of plant and machinery costs, addressing the high capital requirements of gasification projects.

Major Projects

Talcher Coal-Based Ammonia-Urea Complex

- Expected commissioning: FY 2027-28

Coal-to-Chemical Projects

Projects involving production of:

- Syngas
- Ammonium nitrate
- Direct reduced iron
- Ethanol
- Hydrogen

Expected commissioning: FY 2029-30

Key Stakeholders

Public Sector

- Coal India Ltd.
- Coal India–BHEL Joint Venture
- Coal India–GAIL Joint Venture
- Western Coalfields projects

Private Sector

- Jindal Steel and Power
- Greta Energy and Metal

Major Challenge: High-Ash Indian Coal

A unique challenge for India is the high ash content of its coal, along with variable calorific value and complex mineral composition.

Conventional gasification technologies used in countries such as China, the United States, and Australia are not fully suited to Indian coal characteristics.

Suitable Technology for Indian Conditions

Fluidised-Bed Gasification

- Particularly effective for high-ash coal.
- Uses a stream of gas to suspend coal particles and facilitate efficient gasification.
- Better equipped to handle variability in coal quality.

Indigenous Innovation

BHEL has developed a **Pressurised Fluidised-Bed Gasifier** specifically designed for Indian coal, representing a major step toward technological self-reliance.

Indigenisation and Economic Challenges

Coal gasification projects are highly capital-intensive and involve long gestation periods.

- Capital costs account for nearly 30% of syngas production costs.
- Financial viability remains a key concern.

Progress in Indigenisation

- BHEL can manufacture most critical gasification components through its domestic facilities.
- Jindal Steel and Greta Energy have indigenised nearly 80–90% of their requirements.

However, some advanced technologies may still need to be sourced from China, which remains the global leader in coal gasification technology.

Conclusion

Coal gasification supports multiple national objectives, including:

- Energy security
- Import substitution
- Fertiliser self-sufficiency
- Industrial growth
- Aatmanirbhar Bharat
- Efficient utilisation of coal resources

Despite its potential, the sector must overcome challenges related to technology adaptation, financing, project timelines, and dependence on foreign technology for large-scale deployment.