

GOVERNANCE- WELFARE SCHEMES, E-GOVERNANCE, SERVICES ETC.

BEE-Star Rating Programme

To commemorate its 19th foundation day, Bureau of Energy Efficiency (BEE), Ministry of Power organized a Stakeholder Consultation to develop a vision towards building an energy efficient India.

Key Points

- On this occasion, BEE **expanded the coverage of its star labelling programme** by including energy efficient **Deep freezer and Light Commercial Air Conditioners (LCAC)**.
 - With this inclusion BEE will cover 26 appliances.
 - **Deep freezer and Light Commercial Air Conditioners (LCAC) are major energy guzzlers** in commercial space.
 - The program will be initially launched in voluntary mode from 2nd March, 2020 to 31st December, 2021. Thereafter, it will be made mandatory after reviewing the degree of market transformation in this particular segment of appliances.
 - Through this initiative, it is expected to save around 2.8 Billion Units by FY2030, which is equivalent to GreenHouse Gas (GHG) reduction of 2.4-million-ton Carbon Dioxide.
- The Star Labeling Programme has been formulated by the **Bureau of Energy Efficiency**, under the **Energy Conservation Act, 2001**.
- During the event, a **database on energy efficiency** named **Urja Dakshata Information Tool (UDIT)** was also launched. This initiative has been taken by the BEE with the **World Resources Institute (WRI)**.
 - It is a user-friendly platform that explains the energy efficiency landscape of India across industry, appliances, building, transport, municipal and agriculture sectors.
 - It will also showcase the capacity building and new initiatives taken up by the Government across the sectors in the increase energy efficiency domain.

Energy Efficiency in India

- **Transition:** India's energy sector is set for a transition with recent developmental ambitions of the Government e.g. 175 GW of installed capacity of renewable energy by 2022, 24X7 Power for all, Housing for all by 2022, 100 smart cities mission, promotion of e- mobility, electrification of railway sector, 100% electrification of households, Solarization of agricultural pump sets, and promotion of clean cooking.
- **Potential of Energy Efficiency:** Energy Efficiency has the maximum **GreenHouse Gas (GHG) abatement potential** of around **51% followed by renewables (32%), biofuels (1%), nuclear (8%), carbon capture and storage (8%) as per the World Energy Outlook (WEO 2010)**. World Energy Outlook (WEO) is the flagship publication of the International Energy Agency.
 - India can avoid building 300 GW of new power generation up to 2040 with implementation of ambitious energy efficiency policies.
- **Positives:** Successful implementation of Energy Efficiency Measures contributed to electricity savings of 7.14% of total electricity consumption of the country and emission reduction of 108.28 million tonnes of CO₂ during 2017-18.

INDIAN ECONOMY

Defence Expenditure as a Part of GDP

The Minister of State for Defence gave information about the defence expenditure as a part of GDP in Rajya Sabha.

Key Points

- The Defence Expenditure is **increasing every year in absolute terms**, implying higher spending. However, Defence Budget as a **percentage of GDP** may appear to be **decreasing** due to the **increasing trend in the growth of GDP**.
- In Budget Expenditure(BE) 2019-20, total Defence Budget (including Miscellaneous and Pensions) is 15.47% of total Central Government Expenditure.
- In BE 2019-20, the Capital Budget of the Ministry of Defence is approximately 31.97% of the total capital expenditure of the Central Government Expenditure.
- The expenditure on operations/ maintenance and Defence Infrastructure has been maintained optimally.

SCIENCE AND TECHNOLOGY- EVERYDAY SCIENCE, SPACE, NUCLEAR, DEFENCE ETC

Flow diverters stents

The research team of Sree Chitra Thirunal Institute of Medical Science and Technology (SCTIMST), Thiruvananthapuram has developed an **intracranial flow diverter stent** for the treatment of **aneurysms** of the blood vessels of the brain.

- Currently, the flow diverter stents are imported and are not manufactured in India.

- The availability of indigenous technology will help to manufacture these stents at a **much lower price within the country.**

SCTIMST is an **Institute of National Importance** under the **Department of Science and Technology.**

Key Points

- Flow diverters stents are deployed in the artery in the brain bearing the aneurysms to **divert blood flow away from the aneurysm**, thus reducing the chances of its rupture from the pressure of blood flow.
- The **weave shape of the designed stent** makes it **resistant to kinking or twisting** when it is placed in complex-shaped arteries.
- It is made up of **Nitinol, a superelastic alloy with shape memory** acquired from National AeroSpace Laboratories, Bengaluru (CSIR-NAL).
- A shape-memory alloy is an alloy that can be deformed when cold but returns to its pre-deformed ("remembered") shape when heated.

Nitinol

- Nitinol is a **nickel-titanium alloy** distinguished from other materials by its **shape memory and superelastic characteristics.**

Brain Aneurysm

- Brain aneurysm is also known as **Intracranial aneurysm.**
- Intracranial aneurysm is a **localised ballooning, bulging or dilation of arteries** in the brain, caused by progressive weakening of the inner muscles of the wall of the blood vessels.
- Spontaneous rupture of the aneurysm can result in bleeding into the space around the brain **leading to paralysis, coma or death.**

BIO-DIVERSITY CONSERVATION

Concentration of Black Carbon on Gangotri Glacier

According to a research done by the **Wadia Institute of Himalayan Geology**, the **concentration of black carbon on Gangotri glacier has almost doubled in the past few years** primarily because of agricultural burning and forest fires.

- Scientists have been monitoring black carbon through two weather stations on way to **Gangotri glaciers** - namely Chirbasa station at a height of 3,600 m, and **Bhojbasa** station at a height of 3,800 m - for the last few years.
- Wadia Institute of Himalayan Geology (WIHG) is an **autonomous institution under the Department of Science & Technology.** It is headquartered in Dehradun (Uttarakhand).

Key Findings

- **Seasonal Variation**
 - The concentration of the black carbon increases in summer months due to varied factors. Scientists have found a range of black carbon up to 4.62 micrograms per cubic metre.
 - In the non-summer months, the concentration comes down to about 2 micrograms per cubic metre.
- **Reasons for Increase in Black Carbon Concentration in Summer Season**
 - Period from April to June shows remarkable increase in black carbon concentration primarily due to direct and indirect activities related to **tourism.**
 - Also, forest fires contribute to increasing black carbon concentration. According to the Forest Survey of India, the forest fire activity is generally reported in Uttarakhand from February to June, with a peak in fire incidences in May and June.
 - Besides man made, other reasons for forest fires in the state include lightning, friction of falling rocks and monkeys accidentally throwing stones that create sparks leading to forest fires.
 - Over 44,554 hectares of forest area has been damaged in forest fires in Uttarakhand since its formation in 2000.
 - The lowest black carbon concentration has been recorded during August followed by December, likely due to the absence of tourist activities and forest fire incidences during these months.
- **Local Sources of Black Carbon**
 - Forest fires, domestic and commercial fuel wood burning, seasonal burning of crop residue and developmental activities.
 - Pollution from local, regional and global sources that accumulate over the Himalayan region and increase the concentration of black carbon.
- **Possible Impact**
 - Black materials absorb more light and emit infra-red radiation which increases the temperature. So, when there is an increase in black carbon in the higher Himalayas, it will contribute to faster melting of the Himalayan glaciers.

- In the longer run, the changes in the atmospheric composition of the high Himalayan will affect the weather pattern (such as rain and snow precipitation patterns), and accordingly natural resources and socio-economic activities of Himalayan communities.

Way Forward

- The Black Carbon (BC) aerosols contribute significantly towards global warming due to its light-absorbing nature. Their presence in the eco-sensitive zone, such as the Himalayan glacier valleys, is a matter of serious concern and needs to be meticulously monitored.

About: Black Carbon

- Black carbon is a kind of an **aerosol**. An aerosol is a suspension of fine solid particles or liquid droplets in the air.
- Among aerosols (such as brown carbon, sulphates), Black Carbon (BC) has been recognized as the second most important anthropogenic agent for climate change and the primary marker to understand the adverse effects caused by air pollution.
- It gets emitted from gas and diesel engines, coal-fired power plants, and other sources that burn fossil fuel. It comprises a significant portion of **particulate matter or PM**, which is an air pollutant.

IMPORTANT FACTS ABOUT PRELIM

Greek Island of Lesbos

- **Lésbos**, also called **Mitilíni**, is a **greek island**.
- It is the largest island after Crete and Euboea in the **Aegean Sea**.
- The island is largely volcanic in the west, and numerous thermal springs indicate the unstable subterranean structure that has caused severe earthquakes throughout history.
- The irregular coast of Lésbos is penetrated by **two narrow-mouthed bays**, Geras (southeast) and the Gulf of Kallonís (southwest).
- The principal peak is **Mount Lepethymnus** (Áyios Ilías) which reaches 3,176 feet.

Whale Shark

- **Scientific Name:** Rhincodon typus
- **Features:** Whale sharks are the largest shark and they feed on plankton and travel large distances to find enough food to sustain their huge size, and to reproduce.
- **Habitat:** Whale sharks are found in all the tropical oceans of the world.
- **Threats:** Oil & gas drilling, shipping lanes etc.
- **Protection Status:**
 - **IUCN Red List:** Endangered
 - **CITES:** Appendix II
 - **Indian Wildlife Protection Act, 1972:** Schedule I

Renaming of the Jammu Airport and University

Resolutions have been passed to rename the Jammu Airport and the Jammu University after Hindu Dogra monarchs Maharaja Hari Singh and Maharaja Gulab Singh, respectively.

- **Maharaja Gulab Singh** founded the **Dogra dynasty** and **became the first monarch of J&K in 1846**.
- **Maharaja Hari Singh**
 - Maharaja Hari Singh was the **last Dogra monarch**, who **acceded to India in 1947**.
 - Soon after the accession, **an interim state government** was instituted by a **proclamation made by the Maharaja on March 5, 1948**.

DAILY ANSWER WRITING PRACTICE

Qns. Is it a good idea to privatise even the profit-making public sector enterprises? Give reason in support of your answers.

Ans.

Recently there has been a change in disinvestment policy for CPSEs, allowing for strategic disinvestment in profit-making CPSEs like BPCL, Shipping Corporation of India, Container Corporation of India, some of which have Navratna status.

Good Idea

- **LPG reforms:** Over the years, keeping in line of LPG reforms, disinvestment targets have been raised so as to allow private players more space for investment e.g. FY 2010-11 target was 40000 crore while in FY 2019-20 it is 90000 crore.
- **To plug fiscal deficit:** Necessity to fulfil targets of FRBM Act, which itself have been comprehensively reviewed in 2016 due to regular slippages.
 - New Targets: Fiscal Deficit by FY2020-21 2.8% and 2.5% by 2023
 - Though there have been declining fiscal deficit from over 5% in 2012-13 to 3.4% in 2018-19, challenges remain in face of welfare role of state e.g. PM-KISAN scheme.

- **To ensure the attractiveness of PSEs for the private sector:** To achieve objectives of bringing down shareholding by the government to less than 51% along with the attractiveness of such profit-making CPSEs will help overcome challenges faced in loss-making CPSE's privatization, such as Air India.

Not a Good Idea

- **Against values and objectives of LPG reforms:** a profit-making PSU is able to show professionalism, higher productivity, able to compete in the domestic and global market along with meeting welfare objective doesn't need further privatization (a private entity will have only one aim of profit-making).
- **Need for short-term liquidity** (meeting FRBM target etc.) should not compromise stable long term macro-economic structural adjustment. E.g. there is a need to enhance revenue from tax collections and rationalise subsidies. This route also disincentivises the government in ensuring targets of the fiscal deficit are met.
- Global level corporations like China's PetroChina have state support and are profit-making. CPSEs in India can be developed on such a line in strategic areas like energy, shipping etc.

Way Forward

Thus, such privatization should not compromise long-term socio-economic considerations. Even if it is done, at the most, some stakes should be diluted rather than going for full-scale privatization that too on level playing and rule-based regime.

DAILY QUIZ

- Consider the following statements regarding 'State of India's Birds 2020' report.
 - It is the first comprehensive assessment of range, abundance and conservation status of birds in India, that was released during the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP13).
 - The report is prepared by *BirdLife International*.
 - Much of the data is based on citizen science, that is information provided by birdwatchers through various platforms.

Which of the above statements is/are correct?

a) 1, 2 b) 1, 3 c) 2, 3 d) 1, 2, 3
- Seymour Island, recently seen in news is located in

a) Greenland b) Sumatra c) Madagascar d) Antarctica
- With a view to providing a greater measure of protection to depositors in banks the Deposit Insurance and Credit Guarantee Corporation, has raised the limit of insurance cover for depositors in insured banks to Rs. 5 lakh per depositor. In this regard, consider the following statements.
 - Deposit Insurance and Credit Guarantee Corporation is a wholly owned subsidiary of the Reserve Bank of India.
 - Depositors holding more than Rs 5 lakh in their account have no legal remedy in case of the collapse of the bank.
 - It will not have any impact on the operating expenses of banks.

Which of the above statements is/are correct?

a) 1, 2 b) 2, 3 c) 1 only d) 1, 3
- Consider the following statements regarding Finance Commission.
 - The 15th Finance Commission has reduced the share of tax revenues that the Centre shares with the states from 42% to 40%.
 - The 15th Finance Commission has considered the 2011 population along with forest cover, tax effort, area of the state, and demographic performance to arrive at the states' share in the divisible pool of taxes.
 - Finance Commission can suggest measures to maintain a stable fiscal environment consistent with equitable growth.

Which of the above statements is/are correct?

a) 1, 2 b) 2, 3 c) 1, 3 d) 1, 2, 3
- Consider the following statements regarding Non-lapsable Central Pool of Resources scheme.
 - Non-lapsable Central Pool of Resources scheme aims to ensure speedy development of infrastructure in the Left-Wing Extremism (LWE) affected districts.
 - Both physical and social infrastructure sectors are considered for providing support under the Central Pool.

Which of the above statements is/are correct?

a) 1 only b) 2 only c) Both d) None