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News Analysis (16 Oct, 2018)

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Air Pollution in Delhi

Every year during the onset of winter Delhi's air quality begins to fall.

- Air pollution in India is estimated to kill 1.5 million people every year. It is the fifth largest killer in India.
- According to air quality data compiled by the World Health Organisation (WHO), Delhi is the world's most polluted city.
- According to the WHO, India has the world's highest death rate from chronic respiratory diseases and asthma. Air pollution also impacts the environment through reduced visibility, acid rain, and formation of ozone at tropospheric level.

Reasons for Deteriorating Air Quality of Delhi

- **Stubble Burning:** National capital shares its border with the states of Haryana and Uttar Pradesh. One of the main reasons for increasing air pollution during the month of October-November is crop burning by the farmers in these states.
Farmers burn rice stubbles in Punjab, Haryana and Uttar Pradesh. It is estimated that approximately 35 million tonnes of crop are set afire by these states. The wind carries all the pollutants and dust particles, which have got locked in the air.
- **Vehicular Emission:** Delhi has more than 9 million registered vehicles. The Central Pollution Control Board (CPCB) and the National Environmental Engineering Research Institute (NEERI) have declared vehicular emission as a major contributor to Delhi's increasing air pollution.
- **Weather:** During the winter season, dust particles and pollutants in the air become unable to move. Due to stagnant winds, these pollutants get locked in the air, resulting in smog.

- **High Density:** With more than 11000 people per square kilometer, Delhi is among the most densely populated cities in the world. Over-population adds up to the various types of pollution.
- **Lack of Infrastructure:** In India, investment in public transport and infrastructure is low which leads to congested roads, and hence air pollution.
- **Construction Activities and Open waste burning:** Large-scale construction in Delhi-NCR is another culprit that is increasing dust and pollution in the air. Delhi also has landfill sites for dumping of waste, burning of waste in these sites also contributes to air pollution.
- **Thermal Power Plant and Industries:** Industrial pollution and garbage dumps are also increasing air pollution and building-up smog in the air.
- **Firecrackers:** Despite the ban on cracker sales in 2017, firecrackers were a common sight in Diwali. It is the major reason for smog in Delhi after Diwali.
- **Diesel generators:** A large number of housing societies and businesses resort to using diesel generators as alternate for power supply during cuts. Diesel generators contribute approximately 15 percent to the city's air pollution.
- **Dust Storm from Gulf countries:** During the smog in the year 2017, the dust storm from Gulf countries was also the reason which enhanced already worse condition.

Steps were taken by the government to tackle pollution

- To tackle Stubble burning
 - The government is giving subsidy to farmers for buying Turbo Happy Seeder (THS) which is a machine mounted on a tractor that cuts and uproots the stubble and also drill wheat seeds.
 - Punjab and Haryana procure stubble and straw for biofuel plants and in the waste-to-energy power generation plants.
- Graded Response Action Plan (GRAP):
The government has implemented GRAP to tackle with the rising pollution in Capital. It includes the measures like shutting down Badarpur Thermal Power Plant and a ban on construction activities.
- Recently, the government has also launched a pollution forecast system for New Delhi.
- The central government released the National Air Quality Index (AQI) for public information under the aegis of the Central Pollution Control Board.
AQI has been developed for eight pollutants— PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulfur dioxide, ozone, and carbon monoxide.
- The April 2020 deadline for the country to implement BS-VI (Bharat Stage-VI is the Indian equivalent to Euro VI) grade fuels was advanced for Delhi to April 1, 2018, because of the extremely high levels of air pollution in the city.
- Construction of Eastern and Western Expressways for by-passing non-destined traffic to Delhi.
- A ban on burning of leaves/ biomass in Delhi.

- Prohibition on the entry of overloaded and non-destined trucks in Delhi and imposition of 'Green Tax'.
 - Out of 2800 major industries, 920 industries have installed on-line continuous (24x7) air pollution monitoring devices; others are in process of installation.
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RBI to Buy G-Secs

The Reserve Bank India has announced that it will purchase government securities worth \$120 billion under Open Market Operations to cater for durable liquidity needs.

- The purchase of government securities by the RBI under OMOs will infuse liquidity into the system. In India, liquidity conditions usually tighten during the second half of the financial year (mid-October onwards). This happens because the pace of government expenditure usually slows down, even as the onset of the festival season leads to a seasonal spike in currency demand. Moreover, activities of foreign institutional investors, advance tax payments, etc. also cause an ebb and flow of liquidity.

This could arm banks with more funds for lending, and lead to softer interest rates in the economy. This is good news for both businesses as well as individuals.

- The liquidity requirements, are of two types — temporary and durable.
 - **Short-term or temporary liquidity** arises out of temporary mismatches between assets and liabilities. To meet such a situation, banks approach the money market (In India, the **call money market**).
 - The call money market can, however, be the answer only in situations where some banks have excess liquidity and some others are in deficit. But there can be situations where the temporary need may be felt by the entire banking system. In that situation, the only recourse is to go to the central bank. The various types of repo facilities are meant to meet this requirement.
 - **Long-term or durable liquidity** is met by modulating the net foreign assets and net domestic assets growth over the course of the year.
- The offers will be submitted in electronic format on the Reserve Bank of India Core Banking Solution (E-Kuber) system.

E-Kuber

- e-Kuber is the Core Banking Solution of Reserve Bank of India which was introduced in 2012.
- Core Banking Solutions (CBS) can be defined as a solution that enables banks to offer a multitude of customer-centric services on a 24x7 basis from a single location, supporting retail as well as corporate banking activities.

- The centralisation thus makes a “one-stop” shop for financial services a reality. Using CBS, customers can access their accounts from any branch, anywhere, irrespective of where they have physically opened their accounts.
- Almost all branches of commercial banks, including the Regional Rural Banks (RRBs), are brought into the core-banking fold.
- The e-kuber system can be accessed either through INFINET or Internet. The INFINET is a Closed User Group Network for the exclusive use of member banks and financial institutions and is the communication backbone for the National Payments System.

G-Secs

- A Government Security (G-Sec) is a tradable instrument issued by the Central Government or the State Governments.
- It acknowledges the Government’s debt obligation. Such securities are short term (usually called treasury bills, with original maturities of less than one year- presently issued in three tenors, namely, 91 day, 182 day and 364 day) or long term (usually called Government bonds or dated securities with original maturity of one year or more).
- In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).
- G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments. Gilt-edged securities are high-grade investment bonds offered by governments and large corporations as a means of borrowing funds.

[Read more about Instruments of Monetary Policy...](#)

GEAC Seeks Information from Bangladesh on Bt Brinjal

Recently, India’s biotech regulator, the Genetic Engineering Appraisal Committee (GEAC), has sought information about Bt brinjal (a genetically modified crop) from Bangladesh, where farmers have been growing the crop since 2013.

Background

- *Bacillus Thuringiensis* Brinjal, popularly known as Bt brinjal, has been at the centre of controversy in India.
- Bt brinjal, a genetically modified strain created by India’s seeds company Mahyco in collaboration with American multinational Monsanto, claims to improve yields and help the agriculture sector.

- The transgenic variety is said to resist an attack from a deadly fruit and shoot borer, one of the major insect-pests of brinjal.
- However, the safety of Bt brinjal has been debated by the scientists working for the government, farmers and environment activists.
- Environment activists say the effect of GM (genetically modified) crops on rats have shown to be fatal for lungs and kidneys. It is dangerous to introduce these experimental foods into the market without proper research.
- Further, Indian farmers would have to depend on Multinational Corporations for seeds which would be a threat to India's agriculture as the supply of seeds will be regulated and thus will be costlier.
- While Bt. Brinjal was cleared for commercialization by GEAC in 2009, the Ministry of Environment and Forest put a moratorium on its release in 2010 till scientific studies establish the safety of the product from the point of view of its long-term impact on human health and environment.
- India is yet to approve any GM technology in food crops, including GM mustard developed by the Delhi University. In 2002, India had approved Bt cotton, the only non-food GM crop which is grown in the country.

Recent developments

- GEAC noted that Bangladesh had approved the same Mahyco's Bt Brinjal technology in 2013 and 50,000 farmers in the country are currently growing the vegetable.
- The committee asked the Indian Council of Agricultural Research (ICAR) to obtain relevant information and data on the post commercial release effects of Bt brinjal from Bangladesh Agricultural Research Institute.
- The GEAC decided this on hearing a request made by Mahyco (developer of transgenic brinjal) seeking permission for large-scale environmental release and demonstration of Bt brinjal.

Genetic Engineering Appraisal Committee

- The Genetic Engineering Appraisal Committee (GEAC) functions under the Ministry of Environment, Forest and Climate Change (MoEF&CC).
 - It is responsible for the appraisal of activities involving large-scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
 - The committee is also responsible for the appraisal of proposals relating to the release of genetically engineered (GE) organisms and products into the environment including experimental field trials.
 - GEAC is chaired by the Special Secretary/Additional Secretary of MoEF&CC and co-chaired by a representative from the Department of Biotechnology (DBT).
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Important Facts for Prelims (16th October 2018)

QS ranking for Indian universities

- Recently Quacquarelli Symonds (QS) has launched its first India-specific rankings- India University Rankings. This is the first edition of the rankings exclusively for Indian institutions.
- It is the second country-specific rankings conducted by QS. The first was released for China.
- QS is a UK based global higher education company which brings out the QS World University Rankings, the world's most widely-consulted list of its kind.
- The Indian Institute of Technology (IIT), Bombay, has secured the top spot followed by the Indian Institute of Science (IISc), Bengaluru.
- The rankings reflect the top 75 Indian universities. Of these, at least seven IIT's are ranked in top ten.
- The indicators for ranking are – academic reputation (30 percent), employer reputation (20 percent), faculty-student ratio (20 percent), research citations per faculty member (20 percent), proportion of international students (2.5 percent) and proportion of international faculty (2.5 percent).

Pandavani Artist Teejan Bai Honoured by Japan

- Recently folk artist Teejan Bai from Chhattisgarh received Japan's one of the greatest honours, the Fukuoka Arts and Culture Prize for her art Pandavani.
- Earlier, the Fukuoka Art Prize had been awarded to Indian musician, A.R. Rahman.
- The Award to Teejan Bai can reflect India's strengthened soft power in East Asia.
- Pandavani (literally meaning 'songs of the Pandavas'), a folk theatre form involves enacting and singing with instrumental accompaniment ektara or tambura in one hand and sometimes a kartal in another.
- It is rustic entertainment, popular in the tribal areas of Chhattisgarh and neighbouring States.
- Sangeet Natak Akademi (National level academy of performing arts under Ministry of Culture) has initiated the documentation and promotion of this theatre form.

Mithun or Gayal (Bos Frontalis)

- The killing of at least 10 Mithuns has sparked tension between villagers on inter-State border of Assam and Arunachal Pradesh. Mithun is the State animal of Arunachal Pradesh.

- The mithun or gayal (*Bos frontalis*), considered a descendant of the Indian Gaur or bison, plays an important role in the socio-economic and cultural life of tribes such as the Nyishi, Apatani, Galo, Mishmi, Adi, Sherdukpen and other communities of Arunachal Pradesh.
 - They are considered sacred because mithun sacrifice is compulsory in all ceremonial rituals.
 - The Mithun is often referred to as 'the cattle of the mountains' and 'ship of the highland'.
 - Mithun prefers cold and mild climates, and feeds on forest leaves, shrubs and grass. It has a high fertility rate, producing one calf every year.
 - It has been classified as Vulnerable by the IUCN.
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