



News Analysis (06 Jul, 2019)

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Highlights of Budget 2019

The **Union Minister for Finance** presented the Union Budget 2019-20 before the Parliament.

Constitutional Provisions

- The **term 'budget' has nowhere** been used in the Constitution. It is the popular name for the **'Annual Financial Statement'** that has been dealt with in **Article 112 of the Constitution**.
- The budget is a statement of the **estimated receipts and expenditure of the Government of India** in a financial year (FY), which begins on April 1 and ends on March 31 of the following year.
- In addition to the estimates of receipts and expenditure, the budget contains certain other elements. Overall, the budget contains the following:
 - Estimates of revenue and capital receipts;
 - Ways and means to raise revenue;
 - Estimates of expenditure;
 - Details of the actual receipts and expenditure of the closing financial year and the reasons for any deficit or surplus in that year; and
 - Economic and financial policy of the coming year, that is, taxation proposals, prospects of revenue, spending programme and introduction of new schemes/projects.
- The **Railway Budget** was separated from the **General Budget in 1921** on the recommendations of **the Acworth Committee**. In August 2016, the Central Government decided to **merge the railway budget into the general budget**.

Economy

- Fiscal deficit in FY 19 has been set at 3.3% of the GDP.
- Indian economy will become a 3 trillion dollar economy in 2019. Government aspires to make India a 5 trillion dollar economy by 2024-25. To achieve this, there is a need for

investment in:

- **Infrastructure**
- **Digital economy**
- **Job creation in small and medium firms**
- PAN and Aadhaar will become interchangeable. One can use Aadhaar number to file I-T Returns.
- Rs. 5 lakh minimum limit announced for taxpayers.
- In view of rising income levels, those in the ₹2-5 crore and ₹5 crore-and-above brackets will see an increase in effective tax rate by 3% (39%) and 7% (42.74%), respectively.
- No change in personal income tax rates.
- Increase in cess on fuel by 1 rupee, petrol & diesel to get costlier; while customs duty on gold and precious items increased.
- Corporate tax with a turnover of up to Rs 400 crore slashed to 25% from a current rate of 30%.
- **GST Council** advised to reduce tax rate on Electric Vehicles from 12% to 5%.
- No charge on digital payments: **Merchant Discount Rate** charges waived on cashless payment.
- **Measures related to MSMEs:**
 - Proposed **easing angel tax** for startups.
 - E-verification mechanism for establishing investor identity and source of funds for startups.
 - 2% interest subvention for GST-registered MSME on fresh or incremental loans.
 - **'Stand Up India' Scheme** to continue till 2025.
 - New television channel for start-ups.
 - Pension benefit extended to retail traders with annual turnover less than Rs 1.5 crore.
 - New payment platform for MSMEs to be created.
- Proposal to provide Rs 70,000 crore capital for PSU Banks.
- Regulation of HFCs (Housing Finance Cos) to move to RBI from National Housing Bank.
- Govt to **modify** the present policy of **retaining 51% stake in PSUs**.
- Govt to continue with **strategic divestment of select CPSEs**.
- **Divestment target of Rs 1.05 lakh crore for FY 20**.
- **Strategic disinvestment of Air India** proposed to be re-initiated.
- **Global Investors Meet** to be held in India.

Rural India and Agriculture

- **Gaon, Garib and Kisan** are the focus of the government.
- **New Jal Shakti ministry** will work with states to ensure Har Ghar Jal for all rural houses by 2024.
- **Pradhan Mantri Gram Sadak Yojana phase 3** is envisaged to upgrade 1,25,000 km of road length over the next 5 years.
- Govt will set up 100 new clusters for 50,000 artisans in FY 20.
- Every single rural family, to have electricity by 2022.

- Govt to promote **Zero Budget Farming**.
- 10,000 new farm produce organisations.
- 80 Livelihood business incubators and 20 technology business incubators to be set up in 2019-20 under **Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE)** to develop 75,000 skilled entrepreneurs in agro-rural industries.
- **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**
 - A robust fisheries management framework through PMMSY to be established by the **Department of Fisheries**.
 - To address critical gaps in the value chain including infrastructure, modernization, traceability, production, productivity, post-harvest management, and quality control.

Youth

- To popularise sports at all levels, **National Sports Education Board** for development of sportspersons to be set up under '**Khelo India**.'
- Govt to launch 'Study in India' programme to attract foreign students in higher education.
- Rs 400 crore allocated for **world-class higher education institutions in FY 20**.
- **National research foundation** to fund, coordinate and to promote research in the country.
- **New Higher Education Commission** with focus on higher autonomy.
- **New national education policy** to propose changes in school, higher education.
- To make the Indian youth ready to take up jobs in foreign countries, more emphasis on new-age skills like **Artificial Intelligence, Internet of Things, Big Data, etc.**
- **Study in India** proposed to bring foreign students to study in Indian higher educational institutions.

Social

- **Nari tu Narayani:** Women SHG Interest Subvention Programme to be expanded to all districts in India.
- **Rs 1 lakh loan** to be provided for **SHG women** members under **Mudra Scheme**.
- **Rs 3,000 pension per month** for workers from **the informal sector**.
- **Gandhipedia** being developed by the **National Council for Science Museums** to sensitize youth and society about positive Gandhian values.

Infrastructure

- State road networks to be developed in the second phase of **Bharatmala project**.
- **Rs. 50 lakh crore investment** needed in **Railway Infrastructure** during 2018-2030.
- Public-Private-Partnership proposed for development and completion of tracks, rolling stock manufacturing and delivery of passenger freight services.
- Policy interventions to be made for the development of **Maintenance, Repair and Overhaul (MRO)**, to achieve self-reliance in the **aviation segment**.

- Outlay of Rs. 10,000 crore for 3 years approved for **Phase-II of FAME Scheme.**
- National Highway Programme to be restructured to ensure a **National Highway Grid, using a financeable model.**
- Power at affordable rates to states ensured under **“One Nation, One Grid”.**
Blueprints to be made available for **gas grids, water grids, i-ways, and regional airports.**

Space

- India has emerged as a major space power. It is time to harness our ability commercially.
- A public sector enterprise, **New Space India Limited (NSIL)** has been incorporated to tap benefits of ISRO.

Roadmap for Future

- **Simplification of procedures.**
 - **Incentivizing performance.**
 - **Red-tape reduction.**
 - **Making the best use of technology.**
 - **Accelerating mega programmes and services initiated and delivered so far.**
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Project Manav

A human atlas initiative named **Manav** has been launched by the **Department of Biotechnology (DBT)** and Persistent Systems, a biotechnology company.

- The aim is to create **a unified database of molecular network** of all the tissues in the human body and to derive a holistic picture of working of the human body.
- In this **public-private venture**, DBT and Persistent Systems will invest Rs 13 crore and Rs 7 crore respectively.
- There is already a similar **Human Cell Atlas project** (launched in the year 2016), which is a collaborative effort between the **world-leading scientists**, to generate data pertaining to cellular and molecular activities of various cell types in the body in both its normal and disease state using techniques such as single cell genomics.
- The **Indian project**, on the other hand, depends on the knowledge already available in scientific literature to derive information on cellular network.

About the Project

- This mega project will collate and integrate molecular information on human tissues and organs that currently remain in research articles in an unstructured and disorganised form.
- The project would **utilise large biological community**, both students and scientists, for extracting and adding the information from scientific literature at the level of cells and organs.
- The database, that would get created, would eventually help researchers **identify gaps in current knowledge** and help in future projects in diagnostics and disease biology.
- Also, the information gathered in the project will help scientists to understand the differential molecular factors which vary between diseased states vis-a-vis a healthy state of an organ.
- The project will be executed by the **Indian Institute of Science Education and Research (IISER)** and the **National Center for Cell Sciences (NCCS)** based in Pune.
 - While the institutes will train students, the technology platform and data management will be provided by the private partner.
 - **IISER** is an autonomous institution established by the **Ministry of Human Resource Development**.
 - **NCCS** is an autonomous organisation aided by the Department of Biotechnology, **Ministry of Science and Technology**.
- This initiative will also help in creating a **trained population of biologists**. With the data curation and analysis skills imparted during this project, students will have better opportunities for jobs in the life science sector.
- The data methodology and technical platform developed during this project can also be extrapolated to do other science projects on biodiversity, ecology, environment etc. which may be relevant nationally or globally.

Cosmic Rays Impacting Earth's Climate

According to a study published in the **Scientific Reports** journal, the cosmic rays are impacting earth climate by adding low-cloud cover.

- Besides atmospheric temperature and the amount of water vapour in the air, cosmic rays beaming down through space also contribute towards cloud formation.
- According to scientists: Cosmic rays can affect the earth's climate by increasing cloud cover and cause an "umbrella effect".

Cosmic Rays

- Cosmic rays are atom fragments that rain down on the Earth from outside of the solar system. Most cosmic rays are atomic nuclei: most are hydrogen nuclei, some are helium nuclei, and the rest are heavier elements.
- Though cosmic rays were discovered in 1912 but still the origins of the highest energy cosmic rays remains unknown and a topic of much research, most scientists suspect their origins are related to supernovas (star explosions)
- Cosmic rays travels at the speed of light and have been blamed for electronics problems in satellites and other machinery.

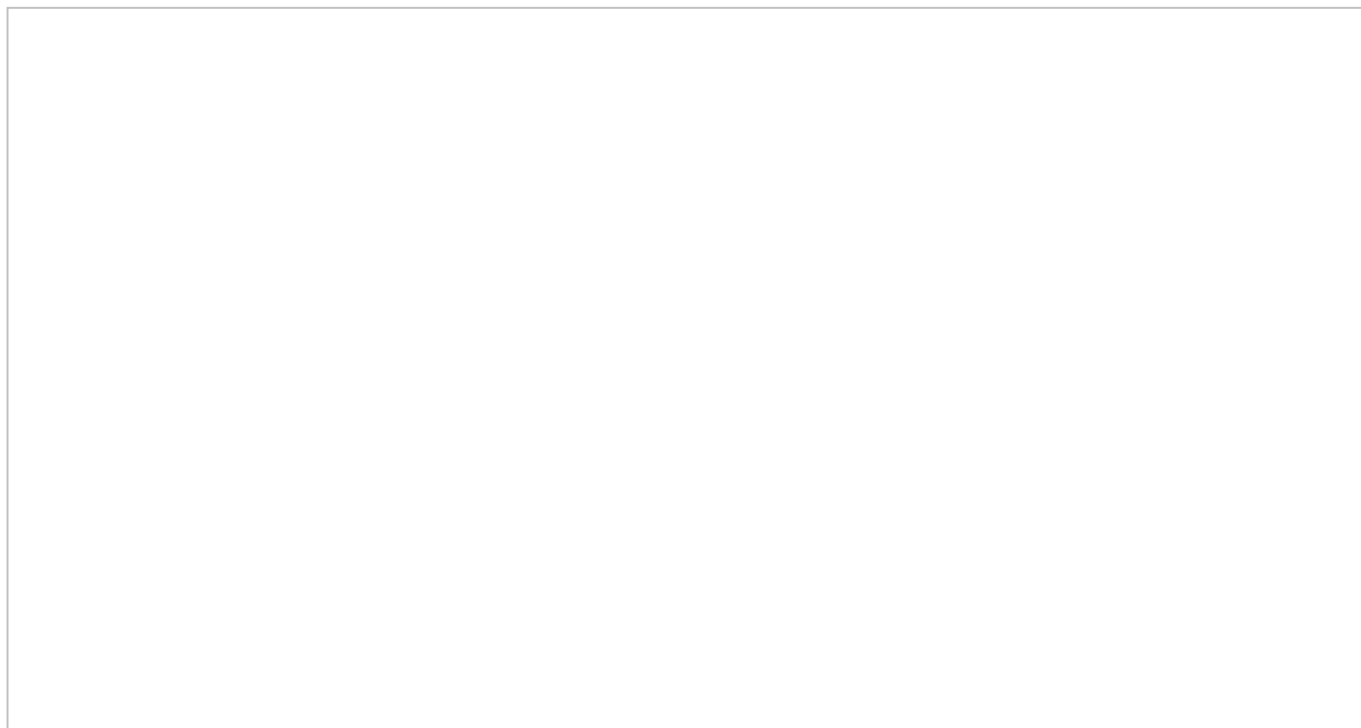
Umbrella Effect

In this case Umbrella effect refers to the cooling of earth, as cosmic rays increases low level clouds which blocks the sunlight thereby acting as an Umbrella.

- Previous studies using data from the meteorological observation showed that there are only minute changes in the amounts of cosmic rays and cloud cover.
- However, the researchers from the Kobe University in Japan, analysed Earth's last geomagnetic reversal (a phenomenon where the planet's overall magnetic field flips) transition 780,000 years ago and figured out that :
 - During the period, the Earth's magnetic strength fell to less than one-fourth and cosmic rays increased by over 50 per cent.
 - This spiked the global cloud cover and enabled detection of the impact of cosmic rays on climate.
 - The Cosmic rays can enhance the formation of low-lying clouds or increase the global cloud cover ultimately leading to the cooling of Earth's atmosphere.
 - Combined effect of rays and cloud cover, led to a high atmospheric pressure in Siberia. The effect caused the East Asian winter monsoon to become stronger.
 - Focusing on the phenomenon, the researchers also investigated changes in particle size and accumulation speed of loess layer dust (sediment created by the accumulation of wind-blown silt) in two locations of China's Loess Plateau.

The particles became coarser and silt was accumulated up to three times faster in both locations. due to this during the last geomagnetic reversal, the researchers found evidence of stronger winter monsoons.
- So this study provides an opportunity to rethink the impact of clouds on climate. When galactic cosmic rays increase, so do low clouds, and when cosmic rays decrease clouds do as well, so climate warming may be caused by an opposite-umbrella effect
- Earlier the **Intergovernmental Panel on Climate Change** has discussed the impact of cloud cover on climate but this phenomenon has never been considered in climate predictions due to the insufficient physical understanding of it.
- Thus with the increase in climate change events, understanding the cosmic rays' role in global warming may be important.

The Economic Survey 2018-19 has recommended setting up of a **central welfare database of citizens** by **merging different data** maintained by separate ministries and departments.



- The principle behind the recommendation is that the most data generated by the people, of the people, should be used for the people.
- The government already held a rich repository of administrative, survey, institutional and transactions data about citizens, but these data are scattered across numerous government bodies.
- The government would be able to utilise the information embedded in the database **for enhancing ease of living for citizens**, enable truly evidence-based policy, improve targeting in welfare schemes, uncover unmet needs, integrate fragmented markets, bring greater accountability in public services and generate greater citizen participation in governance, etc.
- The **datasets that can be merged** include birth and death records, pensions, tax records, marriage records; survey data such as census data, national sample survey data; transactions data such as e-national agriculture market data, UPI data, institutional data and public hospital data on patients.
- It has been suggested that **database be created as a public good** within the legal framework of **data privacy**. Even, a part of the generated data can be monetised to ease the pressure on government finances. **Access to a selected database can be provided to the private sector for a fee.**

Indian government is working on finalising the personal data protection policy.

Changing Demographic Profile: Faster Than Expectation

According to the **Economic Survey 2018-19**, India's population growth rate will decline faster than assumed as the fertility rate in many states has reached the replacement rate.

- The survey predicts that India will have a total fertility rate below the replacement rate in the next two years.
 - Projected values for 2021-41 suggest that TFR at the national level will continue to decline rapidly and will lie below replacement level fertility at 1.8 as early as 2021.
 - It noted that India's population in the 0-19 age bracket has "already peaked due to sharp declines in total fertility rates (TFR) across the country.
- Also the threat of managing an ageing population is very real now as some states will start transitioning to an ageing society by the 2030s.
- Nine states — Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Telangana, Maharashtra, West Bengal, Punjab and Himachal Pradesh — have fertility rates well below the replacement rate.
- States known for high population growth rates (Bihar, Uttar Pradesh, Rajasthan and Haryana) also witnessed population decline and population is now growing below 1 per cent in the southern states as well as West Bengal, Punjab, Maharashtra, Odisha, Assam and Himachal Pradesh.

While India is already struggling with high unemployment, the changing demography will add to the challenge of fulfilling aspirations of New India.

Replacement level fertility

- It is the total fertility rate(the average number of children born per woman) at which a population exactly replaces itself from one generation to the next, without migration.
- This rate is roughly 2.1 children per woman for most countries, although it may modestly vary with mortality rates

Gangetic Dolphins Found in Mahananda River

For the first time, a population of Gangetic River Dolphins has been found in the Mahananda river, in Bihar's Kishanganj district.

Dolphins were spotted during a survey conducted by a team of scientists from Vikramshila Biodiversity Research and Education Centre (VBREC) of Tilka Manjhi Bhagalpur University.

Mahananda River

- Mahananda river is a tributary of the Ganga.
- It originates from the Himalayas in Darjeeling, West Bengal.
- The river flows through Bihar, West Bengal, and then continues southeastward to join the Ganga at Godagari in Bangladesh.
- According to scientists, the number of dolphins in the Mahananda and its tributaries can

be much more than this, as the survey was not conducted in a suitable season.

Post monsoon is a suitable season when there is adequate water level.

- The presence of dolphins is the sign of a healthy river ecosystem.

Gangetic Dolphins

- **The Ganges river dolphin** is found in parts of the Ganges, Meghna, and Brahmaputra river systems in India, Nepal, and Bangladesh.
 - They are locally known as Susu, which refers to the noise the dolphin is said to make when it breathes.
- The Gangetic river dolphin is India's national aquatic animal.
- **Behaviour and Habitat:**
 - The Gangetic Dolphins are generally blind and can detect only the direction of light.
 - They emit an ultrasonic sound which reaches the prey. The dolphin then registers this image in its mind and subsequently catches hold of its prey.
- In fact, these dolphins live by echolocation. They navigate, feed, escape danger, find mates, breed, and nurse babies by echolocation.
 - Dolphins prefer water that is at least five to eight feet deep.
 - Gangetic dolphins live in a zone where there is little or no current, helping them save energy. If they sense danger, they can dive into deep waters.
 - The dolphins swim from the no-current zone to the edges (Turbulent waters) to hunt for fish and return.
- **Threats:**
 - **Water Level:** Declining water in the river, putting more pressure on the dolphins to manage their life cycle.
 - **Climate change**
 - The **increasing pollution** due to large scale discharge of industrial and municipal waste, siltation, and mechanised boats pose one of the biggest threats to these freshwater dolphins.
 - **Poaching:** They frequently fall prey to poachers. Their carcasses are found regularly on river banks.
 - **Protection Status:**
 - IUCN Status: Endangered
 - It is listed on CITES Appendix I.
 - It is classified under Schedule 1, Wildlife (Protection) Act, 1972 providing absolute protection as offences under these are prescribed the highest penalties.

NOTE: CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement which aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

The Gangetic river dolphin is one of the four freshwater dolphin species in the world. The other three are found in the Yangtze river in China, the Indus river in Pakistan and the

Amazon river in South America.

- **The Amazon river dolphin** is also known as the boto or 'pink river dolphin. It is characterized by its long snout and pale pink color.
- **The Indus river dolphins** locally as the Bhulan. They are found in the lower parts of the Indus River in Pakistan. Another small, isolated population **can be found in the Beas River in India.**

Vikramshila Gangetic Dolphin Sanctuary

- It is located in Bhagalpur District of Bihar, India.
 - The sanctuary is a 50 km stretch of the Ganges River from Sultanganj to Kahalgaon.
 - It was designated as a protected area for the endangered Gangetic dolphins in 1991.
-