Economic Survey – Volume 2

Chapter wise summary document

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Volume 2 of Economic Survey (2018-19)

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Chapter 1- State of the economy in 2018-19 : A Macro View

Global economic Scenario:

- India’s contribution to GDP of Emerging Markets and Developing Economies and world economy has increased over the years.
- World Economic Outlook report of IMF states that growth of world economy will be boosted mainly by the growth in India and China and their increasing weights in world’s income.
- World output declined to 3.6% in 2018

Indian Economic Scenario:

- India is still the **fastest growing major economy and 7th largest economy in terms of GDP in 2018-19.**
- India’s GDP at current international dollar with **PPP adjustments ranks 3rd in the world.**
- Growth of India’s GDP moderated to 6.8% in 2018-19 from 7.2% in 2017-18.

**Various reasons behind moderation are mainly due to:**

- “Agriculture and allied” - Decline in rabbi crop production and contraction in food prices.
- Lower growth in trade, hotel, transport, communication and service related to broadcasting.
- Moderation in public administration and defence sectors.
- Election related uncertainty may have contributed too.
- Deceleration in manufacturing sector has hindered growth of industry sector. IIP of manufacturing sector grew at 0.3% compared to 7.5% in the same quarter of previous year.
- Slowdown in auto sector.
- Stress in NBFC’s also contributed to slowdown.

- **Trade deficit** increased from US$ 162.1 billion in 2017-18 to US$ 184 billion in 2018-19.
- **FDI inflows grew by 14.2% in 2018-19.** Among the top sectors attracting FDI equity inflows, services, automobiles and chemicals were the major categories.
- **Direct taxes grew** by 13.4% owing to improved performance of corporate tax. However, **indirect taxes fell short of budget estimates** by about 16% following a shortfall in GST revenues.
Drivers of the growth: Consumption has always been a strong and major driver of growth in the economy for India.

- Especially private final consumption has always been a strong and major driver of growth in the economy (approx 60%). Although the share of private consumption in GDP remains high, the pattern of consumption has undergone some change over time.

Changing pattern of consumption in India

- The pattern of consumption has undergone some change over time – from essentials to luxuries and from goods to services. This shows an increase in discretionary spending by the households as compared to the necessities.
- This shift is also visible in the change in pattern of spending from consumption of goods to services. There has been a decline in share of goods in total final consumption.
- The share of non-food expenditure has increased with the expenditure share increasing for education, medical, conveyance and durable goods.

- Second component of consumption is the government final consumption expenditure (GFCE). Growth of GFCE decelerated from 15.0 per cent in 2017-18 to 9.2 per cent in 2018-19.
- The third major component of demand is investment. Investment (Gross Capital Formation) accounts for nearly 32 per cent of GDP, within which fixed investment (Gross fixed capital formation) accounts for about 29 per cent of GDP.
- Green shoots (fresh investments) in the investment activity appear to be taking hold as also seen in the pickup in credit growth to industry. Credit to, large and micro, small & medium enterprises has also witnessed pickup in growth.
- Investment rates have been declining since 2011-12, though the investment rate in services is displaying signs of bottoming out. In 2017-18, investment rate in services sector became the highest.

<table>
<thead>
<tr>
<th>Table A: Level and growth of per capita income and consumption</th>
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<tbody>
<tr>
<td><strong>Level in Rupees</strong></td>
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<tr>
<td>Per-capita GDP</td>
</tr>
<tr>
<td>Per-capita NNI</td>
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<td>Per-capita PPCE</td>
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Source: Central Statistics Office

GFCE comprises government’s (revenue) expenditure on compensation of employees, net purchase of goods and services and consumption of fixed capital.
Investment rate in agriculture still continues to lag behind and now is half the investment rate in the industry sector.

- There has been a decline in savings rate as well, with the household sector entirely contributing to the decline.

### Table 3: Gross Savings as percentage of GDP

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<tbody>
<tr>
<td>Gross Savings</td>
<td>34.6</td>
<td>32.2</td>
<td>31.1</td>
<td>30.3</td>
<td>30.5</td>
</tr>
<tr>
<td>Public</td>
<td>1.5</td>
<td>1.0</td>
<td>1.2</td>
<td>1.7</td>
<td>1.7</td>
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<tr>
<td>Private corporates</td>
<td>9.5</td>
<td>11.7</td>
<td>11.9</td>
<td>11.5</td>
<td>11.6</td>
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<tr>
<td>Household sector</td>
<td>23.6</td>
<td>19.6</td>
<td>18.0</td>
<td>17.1</td>
<td>17.2</td>
</tr>
<tr>
<td>Net financial savings</td>
<td>7.4</td>
<td>7.1</td>
<td>8.1</td>
<td>6.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Physical savings</td>
<td>16.3</td>
<td>12.5</td>
<td>9.9</td>
<td>10.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Source: Central Statistics Office
Chapter 2: Fiscal developments

Targets:

- Fiscal deficit of 3 per cent of GDP by FY 2020-21
- Central Government debt to 40 per cent of GDP by 2024-25

Central Government Finances:

Background:

- Fiscal consolidation started from FRBM act, 2003 and was successful.
- During Global financial crisis, it was paused, which was manifested in tax concession and higher expenditure. However, after 2011-12, there have been gradual, but consistent, efforts towards fiscal consolidation.

Trends in Receipts for 2018-19:

Tax revenue

- 51 per cent of Gross Tax Revenue was estimated to accrue from direct taxes and the remaining 49 per cent from indirect taxes.
- The GST collections are yet to stabilise and several changes have been carried out following decisions of the GST Council during the course of the year. These changes, inter alia, relate to rate rationalisation for goods and services, changes in the threshold limits and exemptions granted.

Better tax administration, widening of TDS carried over the years, anti-tax evasion measures and increase in effective tax payers base have contributed to direct tax buoyancy. Widening of tax base due to increase in the number of indirect tax filers in the GST regime has also led to improved tax buoyancy.

Non-Tax Revenue

- Non-tax revenue constitutes about 1.3 per cent of GDP in 2018-19

Disinvestment – New initiatives undertaken by DIPAM: - Budget 2018-19 kept target of Rs 0.80 Lakh crore. Against this Rs 0.85 lakh crore was collected through various instruments:

- IPOs
- OFS (Offer for sale)
- Buybacks of shares
- ETFs (Exchange traded funds) - consisting CPSE ETF + Bharat-22 ETF
• **Strategic Disinvestment** was successfully done for Dredging corporation of India Ltd (DCIL) + Hospital service Consultancy corporation Ltd (HSCC Ltd)

• **Listing of Unlisted CPSEs** – for RailTel corporation Ltd. + National seed corporation of India Ltd., etc

• **Focus on Asset monetisation**
  - Identified non-core assets of CPSEs under strategic disinvestment.
  - Immovable enemy property under the custody of CEPI, MHA.
  - Assets of other CPSE- sick/ loss making

• **Processes**
  - Alternative mechanism, Inter-ministerial group and Consultative groups have been notified.
  - Hiring of intermediaries for Asset Monetisation cell started.
  - Identification of Potential assets to be monetized has been started.

**Trends in Expenditure:** Composition of government expenditure reveals that expenditure on defence, salaries, pensions, interest payments and subsidies account for more than 60% of total expenditure.

Several steps have been taken to rationalise central government expenditure, such as:

• Improved targeting of subsidies
• Restructuring and reclassification of central sector and centrally sponsored schemes.
• Increase indigenisation and involvement of private sector in defence industry through Make II procedure.
• An innovation ecosystem for Defence, titled “Innovation for Defence Excellence” (iDEX) was launched to create an ecosystem to foster innovation and technology development in Defence and Aerospace.
• A Defence Investor Cell has been made functional in the Department of Defence Production (DDP) to act as one-stop solution for all types of defence production related queries.
• Various other factors such as decrease in global crude prices, decontrol of petroleum prices etc. have contributed to a decrease in revenue expenditure

**Central Government Debt:**

• Total liabilities of the Central Government include debt contracted against the Consolidated Fund of India, technically defined as Public Debt, as well as liabilities in the Public Account.
90 per cent of total liabilities of the Central Government was public debt

Total liabilities of the Central Government as a ratio of GDP, has been consistently declining, particularly after the enactment of the FRBM Act, 2003.

General Government (Centre plus States) Finances: has been on the path of fiscal consolidation and fiscal discipline. The combined liabilities of Centre and States have declined to 67 per cent of GDP as on end-March 2018. The fiscal deficit of General Government is further expected to decline from 6.4 per cent of GDP in 2017-18 RE to 5.8 per cent of GDP in 2018-19 BE.

Outlook for 2019-20: The coming year will pose several challenges on the fiscal front such as-

- There are apprehensions of slowing of growth, which will have implications for revenue collections.
- The financial year 2018-19 has ended with shortfall in GST collections. Therefore, revenue buoyancy of GST will be key to improved resource position of both Central and State Governments.
- The resources for now expanded Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) and Ayushmaan Bharat, as well as new initiatives of the new Government, will have to be found without compromising the fiscal deficit target as per the revised glide path.
- US sanctions on oil import from Iran is likely to have impact on oil prices and thereby on the petroleum subsidy, apart from implications for current account balances.
- Fifteenth Finance Commission will submit its report for next five years beginning April 2020. Its recommendation especially on tax devolution will have implications for Central Government finances.
Chapter 3: Monetary Management and Financial Intermediation

Basics - Monetary Policy Committee (MPC) since 2015 has adopted targeted approach to keep inflation under control. RBI uses tools like Repo rate, Reverse repo, CRR, SLR, etc to control the money supply.

Liquidity Conditions and Management- Liquidity conditions have been tight lately. This tightening happened due to growth in bank credit, growth in currency in circulation and drawing down of foreign exchange reserves by RBI to smoothen exchange rate volatility. Consequently, liquidity in excess of Rs 2 lakhs crore was sucked out of the system.

Steps taken by RBI:-

- Infusing liquidity through Open Market Operations,
- Increasing the Facility to Avail Liquidity for Liquidity Coverage Ratio (FALLCR) which supplemented the ability of individual banks to avail liquidity from the repo market against high quality collateral.
- Reducing the statutory liquidity ratio (SLR)
- Injected rupee liquidity for through long-term foreign exchange buy/sell swaps.

Banking Sector

- The performance of the banking sector (domestic operations), Public Sector Banks (PSBs) in particular, improved in 2018-19.
- The Gross Non-Performing Advances (GNPA) ratio of SCBs decreased from 11.5 per cent to 10.1 per cent between March 2018 and December 2018.

Figure 17: Non performing assets as a percentage of Gross Advances

Data source: Reserve Bank of India
Non-Banking Financial Companies (NBFC) = NBFCs have played increasingly important role in resource mobilization and credit intermediation, thereby helping commercial sector to make up for low bank credit growth

- The NBFCs experienced difficult times in 2018-19 in the aftermath of the ratings downgrades and default of IL&FS Group.
- NBFCs depend largely on public funds which account for 70 per cent of total liabilities of the sector.
- Bank borrowings, debentures and commercial paper are the major sources of funding for NBFCs.
- Immediately after the IL&FS crisis, NBFCs faced severe liquidity crunch as mutual funds (MFs) stopped refinancing the loans of NBFCs.

Development in Capital market = There was net inflow in Mutual fund industry and net outflow of foreign portfolio investors (FPIs).

Insurance sector - The insurance sector encourages savings and provides long-term funds to individuals. It also provides funds for infrastructure development and other long gestation projects of the nation.

Insurance penetration and Insurance density are two main parameters to assess the Insurance sector.

Status:-

- **Insurance penetration** which was 2.71 per cent in 2001 has steadily increased to 3.69 per cent in 2017 while in China during the same year it was 4.57 per cent.
- **Insurance density** in India which was US$11.5 in 2001, reached to US$73 in 2017. While in China it was US$384.
- **Globally insurance penetration and density** were 3.33 per cent and US$353.

Insolvency and Bankruptcy Code (IBC) 2016: Resolving Corporate Stress in a Changed Paradigm

- IBC seeks to achieve resolution of corporate debtors (CDs) in distress and failing that, its liquidation in a time-bound manner under oversight of the National Company Law Tribunal (NCLT).
- Financial Creditors (FC) have been provided with greater role and powers through the committee of creditors.
- The management and control of assets of the debtor are handed over to an Insolvency Professional (IP).

Implementation of IBC:
The National Company Law Appellate Tribunal (NCLAT), the Principal Bench of NCLT at New Delhi, and 11 benches of NCLT

The Insolvency and Bankruptcy Board of India (IBBI) – the regulator was established on October 1, 2016.

What has been done?

- The Banking Regulations Act, 1949 was amended to enable the RBI to direct banks to take defaulting borrowers into insolvency.
- RBI constituted an Internal Advisory Committee which recommended the filing of cases under the IBC in all accounts with fund and non-fund based outstanding amounts greater than 5,000 crore, with 60 per cent or more classified as non-performing by banks as of March 31, 2016.
- The IBC provides for the establishment of Information Utilities (IU) to collect financial information from creditors, get it authenticated by debtors, store and provide access to the resolution professional, creditors, liquidator and other stakeholders so that they can make informed decisions.
- The National e-Governance Services Limited (NeSL) was registered as the first IU by the IBBI. The details of information filed with NeSL show a growing trend of use of IU by creditors. Increased use of IUs is expected to eliminate information asymmetry and improve implementation timelines under the IBC.

Impact of IBC - Behavioural Changes: The IBC has paved the way for Operational Creditors, mostly SMEs and small vendors to use the IBC as a recovery tool. The threat of promoters losing control of the company or protracted legal proceedings is forcing many corporate defaulters to pay off their debt even before the insolvency can be started.


Research and Training:

- The IBBI has announced the launch of Graduate Insolvency Programme (GIP), the first of its kind, for those aspiring to take up the discipline of IPs as a career or other roles in the value chain.
- The Insolvency Research Foundation (IRF) has been established by the Indian Institute of Corporate Affairs (IICA), an autonomous body under the Ministry of Corporate Affairs, in partnership with SIPIINDIA industry think-tank as an independent research centre.
• The Centre for Insolvency and Bankruptcy (CIB) has been set up at IICA to serve as an apex institute of learning, training, and development in the area of insolvency and its spheres of influence.

Reforms in Pipeline

• The UNCITRAL Model Law on Cross-Border Insolvency (Model Law) is the most widely accepted blueprint to effectively deal with cross-border insolvency issues while ensuring the least intrusion into each country’s internal insolvency and bankruptcy laws. India has initiated steps to inact a model law.

• The IBBI has recently set up a working group under former SEBI Chairman Mr. U. K. Sinha to recommend a complete regulatory framework to facilitate insolvency resolution and liquidation of debtors in a corporate group.

• A Working Group under the chairmanship of Mr. P. K. Malhotra, former law secretary, has been set up by the IBBI to recommend the strategy and approach for implementation of the provisions of IBC dealing with insolvency and bankruptcy of individuals.

• The technology can be used to an extent by the NCLT and the IBBI to enhance case management for strict timekeeping of insolvency cases.

• Technology can also be used for data mining and analysis for constant review of the IBC impact on the ground. IPs should be encouraged to use technology to speed up data collection and access for the purpose of efficient Corporate insolvency resolution process (CIRP).
Chapter 4: Prices and Inflation

The economy witnessed a gradual transition from a period of high and variable inflation to more stable and low level of inflation in the last five years.

Trends in Inflation:

- **Headline inflation**, based on the Consumer Price Index – Combined (CPI-C) has been declining continuously for the last five years. Headline CPI-C inflation has remained below 4.0 per cent for two consecutive years. The decline in the inflation in the FY 2018-19 was mainly due to low food inflation which ranged between (-)2.6 to 3.1 per cent.
- **Food inflation**, based on Consumer Food Price Index (CFPI) declined to a low of 0.1% during 2018-19. Food inflation based on Wholesale Price Index too declined over the last two financial years.
- **Core Inflation**, was on rising trend in 2018-19 in comparison to 2017-18.
- **Rural –urban Inflation**, both rural and urban inflation witnessed reduction, but decline in rural inflation is steeper than that of urban inflation since July 2018. The importance of food in determining rural inflation has been declining over the years. In contrast, the role of miscellaneous category i.e. services in determining rural inflation has increased

Trends in Global commodity prices:

- As per the commodity prices published by the World Bank, energy commodity prices have continued their increasing trend in the fiscal 2018-19.
- Food prices also recorded deflation as per both the World Bank and the Food & Agriculture Organisation (FAO)

Efforts to contain inflation

General measure:-

- **Advisories are being issued**, as and when required, to State Governments to take strict action against hoarding & black marketing, especially for commodities in short supply.
- **Regular review meetings** on prices and availability of key commodities are held along with Price Stabilization Fund Management Committee (PSFMC)

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Core inflation = inflation that is likely to continue for a long period, therefore, more stable.

Unlike the non-core component of inflation, core inflation is not affected by temporary shocks.

In India, core inflation is generally measured by excluding highly volatile components from the headline inflation.

By their very nature, food and fuel have been highly volatile.
Higher Minimum Support Price (MSP) for pulses and other crops has been announced so as to incentivize production and enhance availability.

Price Stabilization Fund (PSF) has been set up for procurement of agri-horticultural commodities including potatoes, onions and pulses, during lean period to improve availability and moderate their prices.

Specific measures:-

- Pulses from the buffer are utilized for strategic market intervention for price management, meeting institutional requirements like - for MidDay Meal Scheme (MDM), ICDS and needs of forces.
- Prohibition on export has been withdrawn in April 2018 on all varieties of edible oils, except mustard oil.
Chapter 5: Sustainable Development and Climate Change

Achieving SDG:

1. **Finances** = USD 5 to USD 7 trillion per year is required for financing these goals worldwide and USD 3.9 trillion per year in developing countries. However, the current investment in developing countries is around USD 1.4 trillion leading to a shortfall of USD 2.5 trillion per year (UNCTAD, 2014).

2. **India’s progress towards SDGs**

   - **NITI Aayog** has come up with a *single measurable SDG index* to track the progress of all the States and UTs across 13 out of 17 SDGs (excluding Goal 12, 13, 14 and 17 on account of unavailability of comparable data across States/UTs) = helps in informed policy formulations.
   
   - **NITI Aayog** has also developed a *composite index for each State/UT* which aggregates progress towards each SDG. Kerala and Himachal Pradesh are the front runners amongst all the states.
   
   - **Success** - India’s growth trajectory for achieving SDG 10 (Reduced Inequality) and SDG 15 (Life on Land) is impressive as compared to the other SDGs as several states have achieved 100 in these SDGs. This may be due to performance in worthy initiatives such as PMJDY, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the National Environment Policy, National Agro-forestry Policy and Green Highways Policy.
   
   - **Struggling** - India is struggling to achieve its targets of SDG 5 (Gender Equality) and SDG 11 (Sustainable Cities and Communities) as large number of states are in the ‘Aspirants’ category’. Goa, a front runner among all the States and UTs in SDG 11, has been doing exceptionally well in waste management.
   
   - **Flagship schemes are contributing towards SDGs like** SBM, BBBP, PMUY, PMJDY, etc.

Further we will analyse steps helping and needed toward SDG.

**Ganga – Life line of India** :- Towards achieving the SDG 6 (Ensure availability and sustainable management of water and sanitation for all) government
has prioritised the cleanliness of mighty River Ganga through ‘Namami Gange Mission’.

**Major components of Namami Gange mission:-**

- **Sewerage project management** = PPP with Hybrid annuity model along with ‘one city one operator’ approach to ensure competitive and positive market participation.

- **Urban Sanitation** = construction and rehabilitation of Sewage Treatment plant (STP), inception and diversion of drains, solid waste management through cleanliness drives on ghats and deployment of skimmers for river surface cleaning.

- **Urban river management** = Urban river management plan is being prepared with National Institute of Urban Affairs + comprehensive survey for generating high resolution LIDAR (Light Detection and Ranging) maps for entire Ganga stretch to understand its spatial status.

- **Industrial pollution** = Online Continuous Effluent Monitoring Systems (OCEMS) for all polluting industries have been connected with Central Pollution Control Board (CPCB) & State Pollution Control Board (SPCB) servers and a system of SMS alerts have been initiated to non-complying.

- **Water use efficiency** = A market for reuse of treated wastewater is being developed. For example - the re-use of 20 MLD of treated wastewater in Mathura Refinery is a milestone in propagating this waste-to-wealth approach as well as saving the water-stressed Yamuna river.

- **Water quality** = 6 Real Time Water Quality Monitoring Stations (RTWQMS) are operational under Namami Gange Programme + Manual water quality monitoring – Biological Oxygen Demand (BOD) decreased at 42 locations and coliform bacteria count decreased at 47 locations.

- **River as public space** = Development of 143 ghats has been taken up, out of which 100 completed + 54 crematories have also been taken up for ensuring safe crematory rituals + Sanitation initiative was supported by Kumbh 2019 - urinals, dustbins and lining bags. Innovative campaign like ‘Paint my city’ were organised to connect people with city and river.

- **Rural sanitation** = Under Namami Gange, 4,465 villages on the Ganga stem have been declared ODF with completion of construction of about 11 lakh independent toilets.

- **Ecosystem Conservation** = massive afforestation drive going on.
• **Clean Ganga Fund** = has been set up for encouraging and facilitating corporates and individuals to join the efforts of rejuvenation. A total of `371 crore has been received in the Clean Ganga Fund as of April 2019.

Why we need Resource Efficiency?

**Introduction** = Resource efficiency means a transition of the management of natural resources with a progressive minimization of waste in both consumption and production processes through various policies and measures.

Resource Efficiency (RE) has emerged as one of the key strategies towards the 2030 Agenda of achieving the SDGs. **SDG 12 aims to ‘Ensure Sustainable Consumption and Production Patterns’** along with the eight other SDG goals (2, 6, 7, 8, 9, 11, 14 and 15) have a bearing on resource efficiency.

**Estimates** - The **International Resource Panel** estimated that efficient resource policies in G7 countries could reduce the global use of natural resource **by 28 per cent**, diminish greenhouse gas (GHG) emissions by an additional **15 to 20 per cent** and deliver annual economic benefits of **USD 2 trillion globally** by 2050 relative to existing trends (UNEP, 2018).

**Current and future Projection for India:**

- In **2010**, India accounted for **7.2 per cent consumption** of globally extracted raw materials. (TERI)
- **Rate of recycling** is **very low** as compared to other developed economies which signifies an urgent need for improving productivity and efficiency.
- As per the **NITI Aayog’s Strategy Paper on Resource Efficiency 2017**, India consumed 5 billion tonnes of biomass, fossil fuels, minerals and metals in 2010 and was the third largest consumer after China (21.5 billion tonnes) and USA (6.1 billion tonnes)
- It is projected that **India’s demand for total material will more than double by 2030** under the assumption of continued economic growth of 8 per cent till 2030 and possible slowing down to 5 per cent thereafter till 2050 and medium growth in population.
- India would be requiring around **6.5 billion tonnes of minerals** in order to sustain the demand of growing population.
Priority sector for enhancing resource efficiency:

- **E- waste**
  - Estimates suggest that USD1 billion worth of gold can be extracted with mining of urban e-waste.
  - Global E-waste Monitor, 2017 estimated that India was the fifth largest producer of e-waste by generating nearly 2 million metric tons of e-waste in 2016 and can earn the value of raw materials to the tune of 55 billion Euros if e-waste was properly mined.

- **Waste management**
  - Effective waste management policies can generate 14 lakhs jobs and nearly USD2.7 billion opportunities can be created from the extraction of eight million tonnes of steel from the end of life vehicles.

- **Plastic waste**
  - India consumed nearly 14.5 million tonnes of plastic in 2016. Collection and recycling of plastics is majorly being performed by unorganized sector (nearly 4,000 recycling units) and organized sector (around 3,500 recycling units).

- **NITI’s Focus Areas**
  - NITI Aayog’s Status Paper “Circular Economy (CE) and Resource Efficiency (RE)- Current Status and Way Forward” (January, 2019) has reviewed the status, concerns and opportunities of four focus sectors/areas steel, aluminium, e-waste and construction & demolition (C&D) waste in fulfilling the goals of RE.

**International example for resource efficiency:**

- **Extraction and Designing**
  - Iceland and United Kingdom have focused on reducing the use of primary raw materials and impact of material extraction respectively in the stage of ‘Extraction of Raw Materials’.
  - France has introduced the strategy of integrating the environmental aspects into designing of the products whereas Ireland has tried to extend the lifespan of the products.

- **Waste prevention and recycling**
  - Croatia has stressed on collection of metal and bio-waste to improve recycling rates.
  - Poland has initiated the Transform waste into resources.

**NITI’s recommendation for mainstreaming RE approach:** 6 pillars for RE framework in India
1. Policies

- **National policy on RE** for all abiotic + biotic resources keeping in mind various lifecycle states and stakeholders.
- **National Policy on Sustainable Public procurement (SPP)** to minimize consumption, reduce waste generation and GHG emission.
- **National policy for End- of – Life Vehicles (ELVs)**

2. Programs and mainstreaming

- **Make use of CSR, Corporate environmental responsibility (CER), Extended Producer responsibility (EPR)** for RE initiatives.
- **Leverage existing flagship programs and schemes** like SBM, Make in India, Start-up India, Zero Effect-Zero Defect Scheme, Smart Cities, and Ganga Rejuvenation Mission, etc to mainstream RE.
- **Leverage the national clean energy and environment fund** to finance infrastructure, clean technologies and related initiatives.

3. Regulations

- **Establish a national coordinating body – Bureau of Resource Efficiency (BRE)** between various ministries to identify, implement and achieve national RE goals.
- **Rationalise tax regime** on critical virgin raw materials to make secondary raw materials price competitive.

4. Setting up Dynamic Recycling Industry

- **Promote the establishment of material recovery facilities (MRFs)** with allocation of land in urban and industrial areas.
- **ULBs should be facilitated** to undertake urban mining and create secure landfills.
- **Producer Responsibility Organizations (PRO)** for waste recycling and for engagement with the informal sector should be established.

5. R&D and Technology Development

- **Leverage technologies** like Artificial Intelligence (AI), robotics, blockchain etc. for the recycling industry.
- **Support R&D** to develop scalable technologies for RE.

6. Capacity Development, Outreach & Monitoring

- **Creation of accredited laboratories** that could conduct testing (especially for recycled products) as well as provide advisory services.
- **Develop and promote programmes and certifications** for informal sector skill development in RE.
- Develop monitoring and outcome indicators for tracking progress on RE.

Climate change

Facts:

- In line with the global trends, during the year 2018, annual mean surface air temperature of India was +0.41°C, significantly above normal. The year 2018 was the sixth warmest year on record since the nation-wide records commenced in 1901.

- India’s Second Biennial Update Report (BUR) submitted to UNFCCC in December 2018 as per the reporting obligations under the Convention. The report shows that emission intensity of India’s GDP came down by 21 per cent between 2005 & 2014 and its achievement of climate goal for pre-2020 period is on track. A total of 2.607 billion tons of CO2 equivalent of GHGs were emitted from all activities (excluding Land use, Land-Use Change, and Forestry (LULUCF)) in India. About 12 per cent of emissions were offset by the carbon sink action of forestland, cropland and settlements.

- Preliminary estimates indicate that India would need around US$206 billion (at 2014-15 prices) between 2015 and 2030 for implementing adaptation actions in key areas like agriculture, forestry, water resources ecosystem, etc. Apart from this there will be additional investments needed for strengthening resilience and disaster management.

Three Essential ‘S’s of Climate Finance: - Scope; Scale; Speed

1. Scope

- Should support both the adaptation and mitigation activities of the developing countries in accordance with the country needs and priorities.

- Accounting of climate finance should include parameters like – Public grants, how to treat private climate finance flows that are ‘mobilized’ or ‘leveraged’, the clarity on “new and additional” also need to be understood in this context.

2. Scale

- Developmental challenges and climate change puts additional burden on the already scarce resources of developing countries.

- A recent report by Oxfam, 2018 indicated,
“People in poorer countries are on average five times more likely than people in rich countries to be displaced by extreme weather events.

By mid-century, the costs of climate change to developing countries are estimated to exceed US$1 trillion per year, even if global average temperature remains below 2°C.”

3. Speed

- **Oxfam Report, 2018** - Against the US$100 billion goal, the aggregated climate finance, estimated as net climate-specific assistance is far lower than the reported climate finance with new climate-specific assistance may be just **US$16-21 billion**. As of February 2019, the pledge and approval of multilateral climate change funds shows lagged performance.

![Figure: Status of the Funds (in US$ million)](image)

**Development in Sustainable finance Arena:**

- At present **private sectors financing is mostly done by banks**, so need is to diversify sources of financing to increase the scale of sustainable investment.

- **Green bond Market** (tapping capital market) is the potential source to scale up. Globally, the green bond market has seen remarkable growth over the past 5 years. In the first quarter (Q1) of 2019, green bond issuance reached US$47.9 billion. Maximum issuers were from developed countries - USA, France and Canada topped list, accounting for 48 per cent of Q1 2019 global issuance.

- In India, **SEBI has provided** a regulatory environment for issuance of green bonds in May 2017. The fruits of which are - **India stands at 11th position in global country ranking and accounts for 33 per cent of the Certified Climate bonds** by number in emerging markets.
Possible capital market structures for sustainable finance may include Real Estate Investment Trusts (REITs) and Infrastructure Investment Trusts (InvITs) which can be leveraged for transfer of green and sustainable assets such as energy efficient buildings, renewable power projects, mass transportation systems, etc. to the institutional investors.

**International solar Alliance (ISA)** - ISA’s motto is, “let us together make the sun brighter”

- ISA is the **first treaty-based** International Intergovernmental Organization launched by **India and France on 30 November, 2015** in Paris and entered into force on 6 December, 2017. As on June 2019, 75 countries have signed.

- ISA has **launched five programmes** so far:
  - Scaling Solar Applications for Agriculture Use;
  - Affordable Finance at Scale;
  - Scaling Solar Mini Grids;
  - Scaling Solar Rooftop, and
  - Scaling Solar in E-mobility and Storage.

- ISA’s engagement through **financing by the EXIM Bank of India**, among others, resulted in **development of a portfolio of 27 solar projects in 15 countries**. These projects are being supported with **India’s concessional financing of US$ 1.4 billion**.

- In addition, “**Action to Transaction**” meets an innovative platform where **project developers and bankers were brought together**, facilitated 238 projects in ISA countries.

- ISA Solar Award has been instituted **for Solar Scientists** doing extraordinary work across ISA countries with a onetime corpus contribution of US$1.5 million from the Government of Haryana.
Chapter 6 - India’s External sector

Global economic environment- Increasing Trade Protectionism and Slowing down of Global Output (along with temporary shocks of federal government shutdown in the United States and production problems in the automotive sector in Germany)

Its impact:-

- US- China Trade war,
- World growth slowdown at 3.6 % in 2018 (while in 2017 it was 4.6%)
- India’s export got affected negatively,
- Portfolio investors looking for market so investing in emerging market economies (like India) making their currencies stronger and imports cheaper.
- Crude oil prices have begun to harden (in 2019) following production cuts by oil exporting countries with the US also cutting out oil supplies from Iran, while prices of other commodities have also risen due to supply distortions.
- Spatial shift in nature of CAD- advanced economies shifting from Current account deficit to Current account surplus, while Emerging and developing economies on the other hand slipped from their current account surplus position of US$379.0 billion in 2011 to US$0.1 billion in 2017. This reflects the shifting of the consumption hub of the world from the advanced to the less advanced countries.

India’s BOP developments in 2018-19:-

Current account Developments:

- **Widening of Current Account Deficit** (from 1.8 % in 2017-18 to projection of 2.4 % of GDP in 208-19)- driven by a **deterioration of trade deficit** from 6.0 per cent of GDP to 6.7 per cent across the two years + Rise in crude prices + decline in growth of merchandise export.
- **Exports** - growth in merchandise exports mainly resulted from high growth in Petroleum, Oil & Lubricants (POL) exports. Petroleum products continue to have the largest share in India’s export basket at 14.1 per cent in 2018-19.
- India’s largest export destination country continues to be the United States of America (USA), which accounted for 16 per cent of India’s exports (in value terms) in 2018-19, followed by United Arab Emirates (UAE), China and Hong Kong.
• **Imports** - Imports also increased and Crude petroleum continues to be the largest imported commodity in 2018-19 with a share of 22.2 per cent.

• China continues to be the largest source of imports of India accounting for 13.7 per cent of the total imported value in 2018-19

• Trade deficit increased to US$145.3 billion during the same period from US$118.4 billion in the corresponding period of previous year.

• **Trade in invisibles Services trade** = Software services, accounting for about 40 per cent of total services receipts, along with financial services, have been the main drivers in the service exports

• **Remittances** = According to the World Bank (April 2019), India remained a top remittance recipient country in 2018, followed by China, with remittance inflows peaking at all-time high at US$78.6 billion.

![Figure 10: Top Remittance Receivers in 2018](image)

*Source: Latest available figures from World Bank.*

### Capital account Development

• During 2018-19, net foreign investment declined to US$31.3 billion as compared to US$52.4 billion in the corresponding period of 2017-18. Robust foreign direct investment (FDI) inflows were more than outweighed by withdrawals under portfolio investment reflecting an escalation of global risk aversion.

• The reduced dependency on FPIs to fund CAD in recent times is also reflected in the fact that growth of forex reserves in the country bears no correlation with movements in net FPI. India’s foreign exchange reserves stood at US$422.2 billion as of June 14, 2019.

• Among the major economies running current account deficit, India is the largest foreign exchange reserve holder and eighth largest among all countries of the world.
External Debt

- India’s External Debt was US$521.1 billion at end-December 2018, 1.6 per cent lower than its level at end-March 2018.
- As per the World Bank data, though India is the third largest debtor country (in absolute amounts) among developing countries (after China and Brazil), its average-age of debt is much higher given that its ratio of short-term debt to total debt is only about 19.0 while that of China is 69 per cent. Higher age of debt reduces the roll-over risk.

Exchange Rate: The Indian rupee was one of the least volatile Emerging Market (EM) currencies during 2017-18 and traded in the range of 63.63 to 65.08 per US$.

Trade related Logistics:

- The Indian logistics sector is on a big growth tide.
- According to the domestic rating agency ICRA, Indian logistics sector is expected to grow at a rate of 8-10 per cent over the medium term.
- The logistics industry of India is currently estimated to be around US$215 billion.
- According to the Global Ranking of the World Bank’s 2016 Logistics Performance Index, India jumped to 35th rank in 2016 from 54th rank in 2014 in terms of overall logistics performance. In 2018, India stood at 44th rank. Experts predict that the logistics sector can be the largest job creator by 2022.
- Government of India has announced a draft National Logistics policy for which a national logistics action plan is being developed.

Various logistics schemes have been introduced, which are as under:

- The Government has launched many flagship programmes like the Bharatmala Yojana, the Sagarmala Yojana and the Dedicated Freight Corridors. The objective of these programmes is to develop infrastructure to meet the growing demand of logistics in the country and to make a modal shift on more cost-effective modes of transport.
- 111 waterways have been identified for development.
- Infrastructure status has been given to select logistics activities like warehousing, cold chains, Multi modal logistics parks and slurry pipelines.
- Subsidy is provided to develop cold chains and pack houses.
- Indian logistics industry is a sunshine sector and there are multiple factors on both demand and supply side that are driving this sector. On the demand side, the reduction in truck
turnaround time following GST is a major stimulus to logistics growth as also pick up in industrial production.

- On the supply side, the outsourcing of non-core activities like warehousing is allowing main players to focus on improving efficiency of transportation. Automation of large warehouses is also adding to the efficiency of the logistics sector.
- Driving logistics cost down from estimated current levels of 13-14 per cent of GDP to 10 per cent in line with best-in-class global standards is essential for India to become globally competitive.
Chapter 7 - Agriculture and Food Management

Need is to shift from the philosophy of ‘green revolution’ led productivity to ‘green methods’ led sustainability in agriculture, keeping mind the rising problems – environmental degradation, climate change, declining landholding size in India, hunger and poverty issues.

Status:-

- Average annual growth rate in real terms in agricultural & allied sectors has remained at around 2.88 per cent during 2014-15 to 2018-19.
- As per Phase-I results of the Agriculture Census, 2015-16, the number of operational holdings, i.e. land put to agricultural use, has increased to 14.6 crore in 2015-16 from 13.8 crore in 2010-11, thereby registering an increase of 5.3 per cent.
- Pre-dominance (85 per cent) of small and marginal farmers in agriculture sector.
- The share of operational holdings cultivated by women has increased from 11.7 per cent in 2005-06 to 13.9 per cent in 2015-16. The marginal and small holdings operated by women farmers together constitute 27.9 per cent of total operational holdings cultivate.

Bringing RE in small holder Agriculture:-

1. Increasing irrigation water productivity (IWP) in Agriculture

- 89% of ground water is used for irrigation. By 2050, India will be in the global hot spot for ‘water insecurity’.
- The water guzzlers, paddy and sugarcane, consume more than 60 per cent of irrigation water available in the country, thereby reducing water availability for other crops.
- Micro irrigation (MI) facilities are potential solution, but the initial high cost acts as deterrent, especially for small and marginal farmers. States with improved penetration of MI systems have saved almost 40-50 % in energy and fertiliser consumptions.
- Focus in agriculture should shift from ‘land productivity’ to ‘irrigation water productivity’.
2. Economizing the use of fertilisers and pesticides

- Since 2002, the fertilizer consumption in India has continually increased till 2011. However, the fertiliser consumption has been declining since then.

- **Fertilizer response ratio** is on declining trend. According to Department of Fertilisers, the declining fertilizer response ratio in Indian agriculture is due to:
  - Inadequacy and imbalance in fertiliser use,
  - Increasing multinutrient deficiency,
  - Lack of farmers awareness about balanced plant nutrition and poor crop

**Suggested Measures** = Awareness to farmers’ regarding the right product, dosage, time and method of application ; use of optimal dose based on soil health status; promotion of neem-coated urea; promotion of micronutrients, promotion of organic fertilizers, and promotion of water soluble fertilizers.

3. Turning to organic and natural farming for sustainability

- Government has been promoting organic farming in the country through the schemes such as Paramparagat Krishi Vikas Yojana (PKVY) and Rashtriya Krishi Vikas Yojana (RKVY).

- In the revised guidelines of PKVY scheme during the year 2018, various organic farming models like Natural Farming, Vedic Farming, Cow Farming, Homa Farming, Zero Budget Natural Farming (ZBNF) etc. have been included wherein flexibility lies with the States to adopt any model of Organic Farming depending on the farmer’s choice.

- Organic farming is also being promoted through the scheme Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) under National Mission for Sustainable Agriculture (NMSA).

4. Adopting Appropriate Technologies for Smallholder Farms

- Need to promote use of environment friendly automated farm machinery tools suited to small scale operations.

- **Custom Hiring Centres (CHCs)** can be set up to promote use of high-tech machinery for the mechanization of small and marginal farm holdings, especially in difficult terrains. From 2014-15 to 2017-18, a
total of 8162 CHCs were established under the Sub Mission on Agricultural Mechanization (SMAM) scheme.

- **ICT application**: To facilitate communication and reduce transaction costs, the ICT (Information and Communication Technology) applications are crucial in smallholder farming. Technology can play a critical role in bridging the information gaps that (The use of block chain technology in the coffee market represents one such example)

**Case Study** - Coffee board has launched block chain based coffee e-marketplace.

Block chain based market place app for trading of Indian coffees is intended to bring in transparency in the trade of Indian coffee, maintain the traceability of Indian coffee from bean to cup so as consumer tastes real Indian coffee, the grower is paid fairly for his coffee produced (who are mostly small growers, tribal farmers).

The initiative will also help coffee producers find exporters within the stipulated time to meet the growing demands and in building greater trust through increased transparency.

5. Improving Infrastructure and Access to markets: Removing bottlenecks- A combination of enhancing rural infrastructure to improve connectivity, Information, Communication Technology (ICT) to provide timely information about prices, aggregation and storage facilities.

**Allied Sectors: Animal husbandry, Dairying and Fisheries**

Livestock farming in India is part of a composite farming system characterized by crop-livestock interactions.

**Status:-**

- As per the 70th round of NSSO, livestock rearing was the principal source of income to about 3.7 per cent of the agricultural households.
- According to the 19th Livestock Census, India has vast resource of livestock comprising about 300 million bovines, 65.1 million sheep, 135.2 million goats and 10.3 million pigs.

1. Animal husbandry and Dairying

**Status:-**

- India ranks 1st in milk production, accounting for 20 per cent of world production.
Milk production in India has been increasing steadily over the years from 55.6 million tonnes in 1991-92 to 176.3 million tonnes in 2017-18.

All India per capita availability of milk is 375 grams per day, it varies between 71 grams per day in Assam to 1120 grams per day in Punjab. So, inter-state variability exits.

There are three key drivers of increasing milk demand viz; - Population growth; Urbanization and Income growth which lead to an increase in the price of milk.

2. Small Ruminant Sector

Sheep and goat are collectively known as small ruminants.

**Status:**

- India supports 16.1 per cent of the world’s goat population and 6.4 per cent of its sheep.

**Key benefits:**

- **Higher reproductive rates and smaller reproductive cycle** and high incidence of multiple births, there is potential for a higher annual off take of goats than seen with cattle & buffaloes. This allows farmers/producers a quick interval of selling part of their flock and generating cash income.

- **Higher Survival rates in harsh environment** - on available shrubs and trees in adverse harsh environment in low fertility lands where no other crop or animals can survive except some rare exceptions like camel.

**Steps taken to improve productivity of Livestock and dairy Sector:**

- **Rashtriya Gokul Mission (RGM):** breed improvement programme for indigenous breeds so as to improve the genetic makeup and increase the stock, as they are known for their suitability in extreme climatic conditions.

- **E Pashu Haat Portal:** For connecting breeders and farmers regarding availability of quality bovine germplasm.

- **National Livestock Mission:** For intensive development of livestock, especially small livestock along with adequate availability of quality feed and fodder.

- **Livestock Health & Disease Control Scheme:** Assistance provided for prevention and control of animal diseases like Foot and Mouth Disease (FMD), classical Swine fever, etc.
• Dairy Development: strengthening infrastructure for production of quality milk, procurement, processing and marketing of milk and milk products through the following dairy development schemes.

3. Fisheries Sector

Status:-

• India is the second largest fish producer in the world with a total production of 13.7 million metric tonnes in 2018-19 of which 65 per cent was from inland sector.
• Almost 50 per cent of inland fish production is from culture fisheries, which constitutes 6.5 per cent of global fish production.
• Government has merged all the schemes of fisheries Sector into an umbrella scheme of ‘Blue Revolution: Integrated Development and Management of Fisheries’ focusing on increasing fish production and productivity from aquaculture and fisheries resources, both inland and marine.

Draft National Inland fisheries and Aquaculture Policy, 2019 (major recommendations)

Inland Fisheries:-

• Conserving indigenous resources, and restoring natural ecosystem of rivers and other natural wetlands.
• Transferring management of fisheries in manmade reservoirs to the state fisheries departments for scientific enhancement and efficient governance,
• Bringing policies, law, and conservation programmes for development of fisheries in the Himalayan and north-eastern states

Aquaculture:-

• Developing state and area-specific action plans and separate program for small farmers.
• Redefining land use categories to include fisheries and aquaculture as components of agriculture.
• Simplifying requirements for registration and leasing of farms,
• Encouraging private sector in production of seed, feed and other aquaculture inputs, and

Food Security and Food management in India

Definition = Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their
dietary needs and food preferences to ensure an active and healthy life (FAO, 2018).

Global Food Security Index (GFSI), 2018 considered four core issues of food security across 113 countries: (i) affordability, (ii) availability, (iii) quality & safety and (iv) natural resources and resilience.

Status:-

- GFSI ranks India 76 out of 113 countries.

Steps by government:-

(i) Announcing Minimum Support Prices and Central Issue Price
(ii) Undertake procurement of food grains through FCI and decentralised procurement by State Agencies
(iii) Maintain buffer stocks; and
(iv) Open market sale of wheat and rice to check inflation

MSP and Food grains Procurement

Status:-

- MSP is announced for 22 crops before the sowing season.
- In 2018-19, the government raised the MSP of both kharif and rabi crops to ensure a return of at least 50 per cent above the cost of production to enhance farmers’ income.
- An increase in MSP leads to increase in production, but only about one-third of the total production of food grains are procured. The rest of the food grains are sold in the open market.

Issues with MSP and food procurement:-

- **Storage of Food grains** = In States like Punjab, Haryana, Chhattisgarh, Uttar Pradesh, Madhya Pradesh etc. where MSP procurement is well established, there arise problems in storage.
- **Liquidity of excess grains** = The government tries to liquidate excess stocks through open market sale to bulk buyers above the reserve price, which equals the MSP plus the procurement cost, but bulk buyers prefer wheat over rice = skewed preference.
- **Exports of food grains** = Exports of food grains by FCI at prices lower than the reserve price would effectively imply an export subsidy. Moreover, this would expose India to disputes in the multilateral trade framework.
- **Unawareness of farmers** = An Evaluation Study on Minimum Support Price conducted by NITI Aayog, found farmers are unaware of the MSP announcement before the sowing season.
• **Logistics issue** = In certain cases, even though farmers are aware of the MSP, the absence of procurement centres in the villages, transportation costs, reluctance of mill owners to buy small quantities from the farmers remain stumbling blocks.

**Food Subsidy**

Food subsidy comprises of two main components:

- **The first component** includes subsidy provided to the Food Corporation of India (FCI) for procurement and distribution of wheat and rice under the National Food Security Act (NFSA), 2013 and other welfare schemes and for maintaining the buffer stock of food grains as a measure of food security.
- **The second component** comprises subsidy provided to States undertaking decentralized procurement.

Due to above subsidies, economic burden is increasing, for sustainability of food security operations, the issue of burgeoning food subsidy bill needs to be addressed.

**Computerisation of Targeted Public Distribution system (TPDS):**

*Background* = TPDS is operated under the joint responsibility of the Central and State/UT Governments.

- The **Central Government** is responsible for procurement, allocation and transportation of food grains up to the designated depots of the FCI.
- The **State Governments** are responsible for allocation and distribution of food grains involving identification of eligible beneficiaries/families, issuance of ration cards to them and supervision and monitoring of functioning of Fair Price Shops (FPSs).

**To modernize and bring about transparency in the TPDS operations**, the Central Government is implementing the Scheme ‘End-to-end Computerisation of TPDS Operations’ on cost sharing basis with the States/UTs. The [Justice Wadhwa Committee Report for PDS (2011)](https://www.insightsonindia.com) divided computerization into two parts:

- a first one to prevent diversion
- A second one to enable secure identification at ration shops.
The Committee has recognized Chhattisgarh as a model state for the first component, and Gujarat as a model for the second.

**Status**

- There are 5.33 lakhs Fair Price Shops (FPSs) and over 23 crore ration card holders in the country as on March 2019.
- Approx 74% FPSs have been automated by installing the electronic point of sale device.
- Level of computerization of FPSs across States is not uniform.

**Action plan for Doubling Farmers income (DFI) by 2022**: Government had constituted an Inter-Ministerial Committee to examine issues relating to Doubling of Farmers’ Income (DFI) and recommend strategies.

The Committee (*Ashok Dalwai Committee*) has identified seven sources of income growth viz,

1. Improvement in crop productivity;
2. Improvement in livestock productivity;
3. Resource use efficiency or savings in the cost of production;
4. Increase in the cropping intensity;
5. Diversification towards high value crops;
6. Improvement in real prices received by farmers; and
7. Shift from farm to non-farm occupations.

Several initiatives have already been rolled out, which include:-

- Advocating **progressive market reforms** through the State Governments,
- Encouraging **contract farming** through the State Governments by promulgating of Model Contract Farming Act,
- **Up-gradation of Gramin Haats** to work as centers of aggregation and for direct purchase of agricultural commodities from the farmers,
- **e-NAM** to provide farmers an electronic online trading platform,
- Distribution of **Soil health Cards** to farmers so that the use of fertilizers can be rationalized,
- Increase water efficiency through **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**-“Per drop more crop”,
- Better insurance coverage to crops for risk mitigation under **Pradhan Mantri Fasal Bima Yojana (PMFBY)**,
- Extended the facility of **Kisan Credit Card (KCC)** for animal husbandry and fisheries related activities as well as Interest Subvention facilities to such categories of farmers.
• **Increase in the Minimum Support Price (MSPs)** for all Kharif & Rabi crops for 2018-19 season at a level of at least one and half times of the cost of production

Further, to provide social security net for small and marginal farmers as they have minimal or no savings for old age and to support them in the event of consequent loss of livelihood, Government has decided to implement a new Scheme for providing old age pension of R3000/- to the eligible small and marginal farmers, subject to certain exclusion clauses, on attaining the age of 60 years. The scheme aims to cover around 5 crore beneficiaries in the first three years. It would be a voluntary and contributory pension scheme, with entry age of 18 to 40 years.
Chapter 8 – Industry and Infrastructure

INDUSTRY

Status:-

- IIP (Index of Industrial Production), assigns a weight of 77.63 per cent to manufacturing sector, 14.37 per cent to mining sector and 7.99 per cent to electricity sector. The industrial growth rate in terms of IIP was 3.6 per cent in 2018-19 as compared to 4.4 per cent in 2017-18.

- According to Department of Public Enterprises, there are 339 CPSEs as on 31 March, 2018. Out of these 339 CPSEs, 257 are in operation and 82 are non-operational during 2017-18. Out of the operating 257 CPSEs, 184 CPSEs were profit making, 71 loss making and 2 CPSEs at no profit no loss.

- As per the World Bank Doing Business (DB) Report released on 31 October 2018, India has considerably improved its ranking to 77th position among the 190 countries and has leapt 23 ranks over its previous rank of 100.

Key Initiatives taken to boost Industrial sector in India :-

- **Start-up India** = Start-ups drive economic growth, create employment and foster a culture of innovation.

  As on March 1, 2019, 16,578 new start-ups were recognized across 499 districts, 47 per cent Start-ups from Tier II and III cities and 46 per cent of Recognized Start-ups have at least one woman director-which reflects inclusive growth along with balanced regional growth.

  **Steps taken to boost start-ups**- easing regulations such as exemption from Income tax on investments raised by Start-ups, 22 regulatory reforms implemented to improve Ease of Doing Business for Start-ups, Self-certification regime for six labour laws and three environmental laws, Start-up India Hub as ‘One Stop Shop’ for the start-up ecosystem to provide free Start-up India Learning Program to build business plans.

- **Foreign direct Investment (FDI)** = The Government is playing a proactive role in investment promotion through a liberal FDI policy.
During 2018-19, total FDI equity inflows were US$44.36 billion as compared to US$44.85 billion during 2017-18.

**Sector wise issues and performance of the Industry:**

1. **Steel**

   **Status:**
   
   - Steel industry directly contributes to about 1.4 to 2 per cent of India’s GDP.
   - Globally, India is the second largest producer of crude steel in the world surpassing Japan with a global share of 6 per cent.
   - India is the third largest consumer of the finished steel after China and USA, however, its per capita consumption is only 69 kg as against the global average of 214 kg.

   **Key Challenges:**
   
   - Capacity expansion as the demand for steel is bound to rise with economic growth.
   - High grade and value-added steel are used in power, defence and automobile which is currently imported.
   - Difficulties in acquiring mining lease and high dependency on import of coking coal add to cost of steel production.
   - High logistics costs also act as a major constraint.
   - Due to imposition of trade restrictive measures by USA, European Union and Canada, India’s exports have declined.

   **Way forward** = National Steel Policy, 2017 gives broad policy directives for encouraging long-term growth for Indian steel on both supply and demand fronts. It envisages focus on domestic production especially of value added steel in order to meet the growing demand.

2. **Leather and footwear**

   **Status:**
   
   - India is the second largest producer of footwear, second largest exporter of leather garments and fifth largest exporter of leather goods.

   **Key challenges:**
   
   - Global demand for footwear is moving towards non leather footwear, while Indian tax policies favour leather footwear production.
   - India faces high tariffs in partner country markets for leather goods and non-leather footwear.
Way forward = A special package of Rs 2600 crore under the scheme Indian Footwear and Accessories Development Programme is being implemented (2017-20). The special package for the leather industry has the potential to generate 3.24 lakh new jobs in three years and assist in formalization of 2 lakh jobs.

3. Gems and Jewellery

Status- The gem and jewellery sector contributes to exports and employment generation of around 5 million.

Steps taken to boost-

- Special Notified Zone has been established
- Common Facility Centres has been set up,
- Separate ITC HS Code for lab grown diamond has been created
- Reduction of GST rates for cut and polished diamonds and precious stones.
- Providing financial assistance for participation of international fairs.
- A Domestic Council for Gems & Jewellery has been envisaged and launched in January 2019 to strengthen the domestic manufacturing and to help organise the small scale based domestic jewellery industry.

4. MSME

Helps in industrialization of rural areas, large employment opportunities, reducing regional imbalances

Status:- (find your note)

Steps taken to support MSME sector:-

- ‘In-principle approval’ for loans up to `1 crore within 59 minutes through online portal.
- Interest subvention of 2 per cent for all GST registered MSMEs on incremental credit up to `1 crore is also being provided and will be in operation.
- Prime Minister’s Employment Generation Programme,
- Credit Linked Capital Subsidy Scheme for Technology Up-gradation,
- Scheme of Fund for Regeneration of Traditional Industries, and Micro and Small Enterprises Cluster Development Programme for the establishment of new enterprises and development of existing ones.

5. Textile

Status:-
India is second largest manufacturer and exporter in the world.

Sector contributes 12.65 per cent to manufacturing and 2.3 per cent to GDP.

During 2018-19, the share of textile and clothing in India’s total exports stands at a significant 12 per cent.

The sector is the biggest employer after agriculture employing 4.5 core people directly and another 6 crore people in allied sectors.

**Steps taken to support the sector:**

- Additional incentives under Amended Technology Up-gradation Fund Scheme.
- Relaxation of Section 80JJAA of Income Tax Act.
- Assistance is also provided to exporters under Market Access Initiative Scheme.

**INFRASTRUCTURE**

**SDG goal number 9** aims to “Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all”

**Status:**

- India needs to spend 7-8 per cent of its GDP on infrastructure annually, which translates into annual infrastructure investment of US$200 billion currently.
- However, India has been able to spend only about US$100-110 billion annually on infrastructure, leaving a deficit of around US$90 Billion per annum.
- India is ranked 2\textsuperscript{nd} among developing countries both by the number of PPP Projects as well as the associated investments

**Steps taken to boost investment in Infrastructure:**

- **National Investment and Infrastructure Fund** has been created with a capital of approximately Rs 40,000 Cr.
- **Credit Enhancement Fund** for infrastructure projects for increasing the credit rating of bonds boated by infrastructure companies is going to be launched in the country.
- **New Credit Rating System** for infrastructure projects, based on Expected Loss approach, has also been launched which seeks to provide additional risk assessment mechanism for informed decision making by long-term investors.
• **Infrastructure investment trusts and Real Estate Investment Trusts** have been formulated to pool investment in infrastructure.

**Other steps taken:-**

• **HAM Model** - the Hybrid Annuity Mode of PPP to encourage private participation in infrastructure projects. Government contributes 40 per cent of the total project cost in the construction period, remaining 60 per cent is paid as biannual annuity after the completion of the project construction.

**Way forward** = An institutional mechanism to deal with time bound resolution of disputes in infrastructure sectors is needed.

**Sector wise status and performance of Infrastructure:-**

1. **Road Sector**

   **Status:-**

   • It is the dominant mode of transportation in comparison with rail, air traffic and inland water-ways and accounts for 69 per cent and 90 per cent of the country wide freight and passenger traffic respectively
   • India’s rural roads constituting 70.65 per cent and National highways constituting 1.94 per cent of total road network of about 58.98 lakh kms.

   **Key challenges:-**

   • Availability of funds for financing large projects,
   • Lengthy processes in acquisition of land and payment of compensation to the beneficiaries,
   • Environmental concerns,
   • Time and cost overruns due to delays in project implementation, procedural delays,
   • Lesser traffic growth than expected increasing the riskiness of the projects resulting in stalled or languishing projects.
   • Shortfall in funds for maintenance.

   Major outcomes in Road sector during the period 2014-15 to 2018-19 were construction of Eastern Peripheral Expressway (To decongest National Capital), Delhi-Meerut expressway(1st NH in India with 14 lanes) and Dhola-Sadiya Bridge.(Assam to Arunachal Pradesh - 24X7 connectivity)

2. **Railways**

   **Status:-**
• Rail safety = Improving, incidents of collision declining (in 2018-19 it was ZERO). More effort needed at the front of derailment and fire in trains.

• Mission Electrification = IR has initiated a major electrification program for electrifying 100 per cent of its Broad Gauge network. This would reduce the nation’s dependence on imported diesel oil. Till now approx. 52 % of the total network has been electrified.

• Mission Cleanliness = ‘Swachh Rail, Swachh Bharat’, mission focuses on cleanliness. ‘Green Rating’ is also being done for energy and water conservation and there is an increasing competition among stations.

Activity for cleanliness = Bio toilet + mechanised cleaning + plastic bottle crushing machines + Rag Picking contracts + Dustbins

3. Civil Aviation

Status:-

• The demand and supply trends in civil aviation show that passenger demand is higher than the seat supply. So many Brownfield and Greenfield airports are being developed.

• UDAN: Under “Ude Desh ka Aam Naagrik-UDAN”, a total of 719 routes have been awarded in three rounds of bidding for regional connectivity, 182 of which are operational. Once all routes are operationalized, more than 1 crore RCS-UDAN seats will be provided annually, and 21 States would have more than 3 operational airports each. Prior to UDAN, only 7 States had more than 3 operational airports each.

• Air Cargo: The first National Air Cargo Policy’s outline was released at the Global Aviation Summit in January 2019. It aims to achieve fundamental re-engineering of the whole-of-the-value-chains for domestic and export-import air freight for reaching the target of handling 10 million tonnes by 2026-27

Key challenges:

• High airport tariffs, royalty and other charges.
• Shortages of certain skilled manpower in civil aviation sector and recourse to overseas suppliers of Maintenance Repair & Overhaul (MRO) facilities, particularly for periodic engine, landing gears, propellers and airframes.
• High and unpredictable change in **global crude oil prices during 2018-19** have been compounded by a high domestic tax regime on aviation turbine fuel.

4. **Shipping**

**Status:-**

• As per the Indian Shipping Statistics 2018, “India had a fleet strength of 1400 vessels with gross registered tonnage (GRT) of 12.68 million”

• Ports handle around 90 per cent of EXIM Cargo by volume and 70 per cent by value.

• India’s first inland waterway multimodal terminal (MMT) at Varanasi was inaugurated in 2018.

• For facilitating **Ease of Doing Business**, Ministry of Shipping had identified various parameters for **reducing dwell time and transaction costs** in the major ports. These include **elimination of manual forms, Direct Port Delivery** etc.

5. **Telecom Sector**

**Status:-**

• The overall tele-density in India stands at 90.10 per cent, the rural tele-density being 57.50 per cent and urban tele-density being 159.66 per cent at the end of March 2019.

• The private sector dominated overall connections with a share of 88.72 per cent at the end of March’19 while the share of public sector was 11.28 per cent.

• As per a GSMA report, the mobile industry supports about 6.5 per cent of India’s GDP.

**Key policy initiatives:-**

• **Making India 5G ready by 2020**: The Government has constituted High Level 5G India 2020 Forum to articulate the Vision for 5G in India and submitted its report on “Making India 5G Ready” in August, 2018. Based on the recommendations of the forum, seven committees have been constituted for action on Spectrum Policy, Regulatory Policy, Participation in International Standards for 5G, etc.

• **Digital Communications Commission**: ‘Telecom Commission’ has been re-designated as the ‘Digital Communications Commission’ to ensure effective implementation and monitoring of the newly announced ‘National Digital Communications Policy- 2018’

5. **Petroleum and Natural Gas**
Government aims to “Reform, Perform and Transform” the energy sector of the country by achieving self-sufficiency.

**Status:-**

- There are total 23 refineries in the country, 18 in the public sector, 2 in the joint venture sector and 3 in the private sector.

**Steps taken:-**

- Hydrocarbon Exploration Licensing Policy (HELP)/ Open Acreage Licensing Policy (OALP), Discovered Small Field (DSF) Policy.
- Policy framework for exploration of Unconventional Hydrocarbons under existing Production Sharing Contracts.
- Coal Bed Methane contracts.
- Setting up of National Data Repository for re-assessment of Hydrocarbon Resources
- Pradhan Mantri Ujjwala Yojana (PMUY) was launched with the objective of providing LPG connections to eight crore women belonging to the Below Poverty Line (BPL) families.

6. **Power sector**

**Status:-**

- India improved its ranking in the Energy Transition Index published by World Economic Forum (76th position from 78th in 2018)
- The installed capacity has increased from 344 GW in 2018 to 356 GW in 2019. The capacity of thermal power is 64 per cent
- The peak deficit i.e. the percentage shortfall in peak power supply vis-à-vis peak hour demand has declined from around 9 per cent in 2012-13 to 0.8 per cent during 2018-19

7. **Urbanization and Housing**

**Status:-**

- According to Census 2011, 377.1 million Indians comprising 31.14 per cent of the country’s population lived in urban areas, which are projected to grow more than 600 million by 2031.

**Steps taken:-**

- **Real Estate (Regulation and Development) Act, 2016 (RERA):** to ensure regulation and promote real estate sector in an efficient and transparent manner and to protect the interest of home buyers.
- **Pradhan Mantri Awas Yojana (Urban):** has four components: “Insitu” Slum Redevelopment, Credit Linked Subsidy Scheme, Affordable
Housing in Partnership with public or private sector and Beneficiary-led individual house construction/enhancements.

- **Smart Cities Mission**: The strategic components of Smart Cities initiative are area-based development involving city improvement (retrofitting), city renewal (redevelopment) and city extension (Greenfield development) and a Pan-city development in which Smart Solutions are applied covering larger parts of the city.

Under the SCM, all 100 cities have incorporated Special Purpose Vehicles (SPVs), City Level Advisory Forums (CLAFs) and appointed Project Management Consultants (PMCs).

Some other initiative under Smart city mission:-

- **‘Ease of Living’ Index** for cities was launched to enable a shift to data driven approach in urban planning & management and to promote healthy competition among cities. Index is based on across three pillars such as quality of life, economic ability and sustainability.

- **Municipal Performance Index (MPI), 2019** seeks to examine the sectoral performance of municipalities across a set of 5 verticals namely Service, Finance, Planning, Technology and Governance.

- **National Urban Innovation Hub** will be the apex national level institution that will drive the MoHUA’s whole-of -system innovation through a Hub and-Spoke network across states and UTs and for delivering the capacity building for urban transformation and governance reforms.

**Conclusion**- To meet our aspirations of growth and development, India has to develop its industry and infrastructure, for which the potential of the perfect blend of Industry 4.0 and next generation infrastructure is necessary. Industry 4.0 encompasses automation in industrial sectors whereas next generation infrastructure brings physical infrastructure and technology like internet of things, automation together to maximize.
Chapter 9 – Services Sector

Status:-

- Services sector accounts for 54 per cent of India’s Gross Value Added (GVA). However, with a 34% share in employment, it does not generate jobs in proportion to its share in GVA.
- Services sector growth continues to outperform agriculture and manufacturing sector growth, contributing more than 60 per cent to total GVA growth.
- Computer & ICT services, business services and travel services account for about 75 per cent of the total services exports.
- According to the WTO, India is among the world’s top 10 exporters and importers of commercial services, ranking eighth in exports and tenth in imports in 2017.
- FDI equity inflows into the services sector accounted for more than 60 per cent of the total FDI equity inflows into India.
- As per the UN National Accounts Statistics data, India has the 2nd fastest growing services sector after China. India also ranks 2nd after the UK in terms of services share in exports.

Steps taken by government to boost Services export:-

- **Service Exports from India Scheme (SEIS)**- which covers export of business services, education services, health services, tourism and travel related services, etc.
- **Champion Services Sector Scheme** - Government has created a dedicated fund of Rs 5,000 crore for financing sectoral initiatives under this scheme.
- **Schemes and policies** - Government has taken many initiatives such as Start-up India, Insolvency and Bankruptcy Code, Digital India, National Intellectual Property Rights (IPR) policy, etc.

Major sub-sectors with Service Sector- performance an policies:-

1. Tourism:

- In India, the Tourism sector had been performing well with Foreign Tourist Arrivals (FTAs) growing at 14 per cent to 10.4 million and Foreign Exchange Earnings (FEEs) at 20.6 per cent to US$28.7 billion in 2017-18. However, the sector witnessed a slowdown in 2018-19.
- Outbound tourism increased in recent years, with the number of departures of Indian nationals from India that stood at 23.94 million in

Steps taken by government-

- ‘National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive’ (PRASHAD) = pilgrimage infrastructure at selected important pilgrimage destinations. The total number of sites identified for development under the scheme at present is 41 in 25 states.
- Swadesh Darshan Scheme = the Ministry of Tourism has identified 15 thematic circuits for development namely: Himalayan Circuit, North East Circuit, Krishna Circuit, Buddhist Circuit, Coastal Circuit, Desert Circuit, Tribal Circuit, Eco Circuit, Sufi circuit, etc.

Suggestion to boost Tourism sector:-

- Land should be made available for hotels and reserve land for hotels in all new townships under planning.
- Fast-track clearances for hotel projects.
- Increase skill development efforts to train more persons.
- Make the Taxation regime on Hospitality Industry globally competitive
- The co-ordination mechanism of various like-minded Ministries and Stakeholders to resolve issues for promotion of tourism in the country needs to be strengthened.
- State/UT Government need sensitization about tourism as a major driver of employment and poverty alleviation.
- Budgetary allocation for development of tourism infrastructure should be increased.

Health and medical Tourism:-

Status

- The market size of medical tourism in India is estimated at USD 3 billion in 2017. The value of medical tourism is forecasted to reach USD 9 billion by 2020.
- India currently has around 18 per cent of the global medical tourism market.
- Share of Medical Tourists to India is 4.9 per cent out of total FTAs in 2017.

Steps taken to boost:-

- Financial support - Government offers financial support as Marketing Development Assistance, for Publicity and for organising Wellness and Medical Tourism Promotion shows.
• **Promotion** - Medical Tourism is regularly highlighted for promotion as part of the Incredible India Campaign in the print, electronic, online and outdoor media in India and abroad as well as at the various travel trade exhibitions overseas.

• **Visa support** - ‘Medical Visa’ has been introduced, which can be given for specific purpose to foreign travellers coming to India for medical treatment. ‘E- Medical Visa’ has also been introduced for 166 countries.

• **Niche product** - Ayurveda as a Niche product has been introduced as part of ‘Medical and wellness tourism’ in order to overcome the aspect of ‘seasonality’ and to promote India as a 365 days’ destination and attract tourists with specific interests.

2. **IT–BPM Services**

Status: - (As per NASSCOM)

- The IT services constitute the largest segment with a share of around 52 per cent, followed by BPM with share of around 20 per cent.
- Software products and engineering services together accounted for around 19 per cent share whereas hardware accounts for 10 per cent.
- USA, UK and EU account for ~ 90 per cent of the total IT-IrTeS exports.
- E-commerce market is estimated at US$43 billion for FY 2018-19.

**Favourable conditions for the digital industry:**-

- **Government initiatives** - such as Digital India covering e-Government services, common service centres, BPO promotion schemes, digital payments, electronic manufacturing, Digital Saksharta Abhiyaan, e-commerce, GST network, Make in India, Start-up India, e-health, Smart Cities, and e-agriculture market place/ digital mandis.

- **New and emerging technologies** - enhancing the digital economy of the country and are creating new opportunities for revenue and job creation in both traditional as well as new sectors of the economy such as transport, health, power, agriculture, and tourism.

- **National Policy on Electronics 2019 (NPE 2019)** – notified in February 2019 by MeitY for creating eco-system for globally competitive ESDM sector; special package of incentives for mega projects; promoting start-up eco-system in all sub-sectors of electronics, including emerging technology areas such as 5G, IoT/ Sensors, artificial intelligence (AI), machine learning, augmented reality (AR) and virtual reality (VR), drones, robotics, additive manufacturing, gaming and entertainment, cyber security; promoting research, innovation and support to industry for green processes and sustainable e-waste management, emphasis on cyber security and promoting trusted
electronics value chain initiatives to improve India’s national cyber security profile etc.

Way forward = Need to diversify market, demand from APAC, Latin America and Middle East Asia is growing and new opportunities are emerging for expanding in continental Europe, Japan, China and Africa.

3. Media & Entertainment Services

Status:

- **Private Television Sector** - India is the second largest pay-TV market in the world after China. As per Broadcasting Audience Research Council of India (BARC)/EY estimates, out of the estimated 29.8 core households in India, TV penetration reached 66 per cent in the country.

  India has at present a large broadcasting and distribution sector in the world comprising 906 satellite TV channels, 1469 Multi System Operators (MSO), 60,000 Local Cable Operators (LCO), 6 DTH operators and several IBTV service providers.

- **Radio Sector** – All India Radio (AIR) broadcasts cover nearly 92 per cent of the geographical area and 99.2 per cent of the population of the country.

  Community Radio Stations are set up with the involvement of various educational institutions and civil society organizations. At present, 250 Community Radio stations have been operational. It is proposed to establish at least one CRS in each district with priority to coastal districts and aspirational districts.

- **Print media** - accounted for the second largest share of the Indian M&E industry. Print Industry is declining all over the world and also in India, primarily due to huge in roads of internet and TV channels in media industry.

- **Films** - As per FICCI-EY Media & Entertainment Report (2019), India is the world’s biggest producer of films with 1,776 domestic film releases in 2018. The highest number of films were released in Kannada (243) followed by Hindi (238) and Telugu (237).
Despite producing the most number of movies in the world, India has less than 25 per cent of the number of screens as compared to China or USA. India’s screens per million of population is also the very low, primarily due to lack of cinema penetration in tier-II, tier-III and tier-IV markets in India. This presents a large untapped potential for the Indian film segment.

- **Digital media** - As per FICCI-EY Media & Entertainment, Report (2019), total number of mobile subscribers stood at 1.17 billion in 2018. Smartphone users increased by 39 per cent to reach 340 million in 2018. Average data consumption doubled from 4 GB to 8 GB per month between 2017 and 2018. Given that there are around 4 billion internet users in the world, one in eight is Indian.

![Figure 10: Category wise consumption of mobile content (Jan - Sept 2018)](source)

*Mobile content* - The above graph tells us that, use of digital media is untapped wrt Economics and education, while on the other side for entertainment it is huge. So, just imagine its potential to boost economic growth and development and also bridge the education divide.

*Social Media* penetration reached 17 per cent in 2018, up from 11 per cent in 2015. The most active social media platforms were YouTube, Facebook, WhatsApp and Instagram.

*Emerging Media* - comprising of digital media including OTT, animation & VFX, live events, online gaming, etc. that has been witnessing double digit growth in the media & entertainment sector in recent years.
The Animation, VFX, gaming and comics sector in India is also a thriving business with even Hollywood movies being outsourced to India for work related to post-production which includes video editing, visual effects, animation, 2D-3D conversion, etc. It is one of the sunrise sectors for India and given the rapid expansion of the sector the requirement of skilled professionals is also immense.

Following initiatives have been taken in the recent years to facilitate Media and Entertainment industry:-

- **Check on Piracy** = a Bill has been introduced in the Rajya Sabha in February 2019 to amend the Indian Cinematograph Act 1952 to check increasing piracy of films by unauthorized recording of films in cinema halls.

- **Champion Service Sector** = Audio–visual service has been identified by the Government as one among the 12 Champion Service sectors identified for focused development so as to reap its full potential.

- **National Centre of Excellence (NCOE) for Animation, Visual Effects, Gaming and Comics** – Government of India is in the process of setting it up with the objective of imparting world class education in animation, gaming, visual effects and employment generation in the sector at Mumbai.

- **Film and Television Institute** in Arunachal Pradesh is being established to encourage talent among youngsters of the North East in the sector of film and television.

4. **Space Services**

Status:-

- India became the sixth nation to develop this highly coveted complex cryogenic rocket propulsion technology.

- In the case of Satellite Launching, as on March 2019, PSLV had cumulatively launched 324 satellites. PSLV also holds the distinction of launching the highest number of satellites, 104, in a single launch. GSLV Mk-III has successfully completed a suborbital experimental flight followed by two developmental flights.

- Bhuvan Services - ISRO’s Bhuvan Geo-portal provides multi sensor, multi-platform and multi temporal Satellite Imagery, thematic maps and satellite data-derived information related to Earth Observation & Disaster Management Support. Presently, more than 6500 map services offered by Bhuvan are being used under various applications.

- **Mapping and Geospatial Services** - Satellite data, synchronous with ground data, are used to estimate crop acreage in-season forecasting of production for 8 major crops in the country viz. wheat, rice (kharif
& rabi), mustard, rabi sorghum, jute, winter potato, sugarcane, cotton in the country. Some of the major satellite data based mapping/Geospatial services developed include Horticulture Crop Inventory, Hydro-informatics products under National Hydrology Project (NHP), Village level Ground Water Prospects, Monitoring of progress of road construction under PMGSY, GIS implementation of MGNREGA (Geo MGNREGA), Etc.
Chapter 10 Social Infrastructure, Employment and Human Development

It has also been estimated that demographic advantage in India is available for five decades from 2005-06 to 2055-56, longer than any other country in the world (UNFPA, 2018). This demographic advantage can be reaped only if education, skilling and employment opportunities are provided to the young population.

Human development Index

- India’s HDI (Human Development Index) has improved significantly over the years between 1990 and 2017. The country’s HDI value increased from 0.427 to 0.640, but its position is still lowest among its peer countries.
- As per the UNDP Human Development Index (HDI), India is ranked 130 among 189 countries- along with interstate disparity in regional and human development.
- The Subnational Human Development Index (SHDI) for different States for the period 1990 and 2017 released by UNDP show that all States have shown significant improvement in levels of human development.
- The region-wise trend of HDI scores suggests that most Southern and Northern States have performed much better as compared to their Eastern counterparts who have registered poor performance in SHDIs.

Gender Issues (SDG 5 Gender equality)

Government of India has initiated several programmes like Beti Bachao, Beti Padhao (BBBP), Ujjwala Scheme, Poshan Abhiyaan, Pradhan Mantri Matra Vandana Yojana etc., to mainstream women and make women active agents of change in the society.

Gender issues analysed on basis of Financial Inclusion and level of household autonomy of women, highlights:-

- **Bank or saving account** = At all India level, the proportion of women having a bank or saving account that they themselves use have increased from 15.5 per cent in 2005-06 to 53 per cent in 2015-16.
- **Participation in household decision making** = As per NFHS-4, participation of currently married women in household decision making has increased from 76.5 per cent in 2005-06 to 84 per cent in 2015-16 at all India level.
Gender budgeting

- Gender budgeting was referred for the first time by the then Finance Minister of India in his budget speech in 2001. Subsequently, it was recommended to have a separate chapter in annual reports of Ministries/Departments. Department of Expenditure has been issuing a note on Gender Budgeting as a part of budget circular since 2005-06.
- Further, Chief Secretaries of all States/UTs were instructed to set up gender budget cells on the lines of the Charter for Gender Budget cells issued by the Ministry of Finance in 2012.
- Gender Budgeting is concerned with gender-sensitive formulation of legislation, policies, plans, programmes and schemes; allocation and collection of resources; implementation and execution; monitoring, review, audit and impact assessment of programmes and schemes; and follow-up corrective action to address gender disparities. It is undertaken through several institutional mechanisms such as Gender Budget Statement, Gender Budget Cells, as well as various schemes/programmes for women and girls.
- In the Gender Budget Statement of 2019-20, 30 Ministries/Departments reported having schemes with women’s component, amounting to approximately 5 per cent of the total Union Budget.
- The Ministry of Women and Child Development (MoWCD) as the Nodal agency has adopted the mission strategy of 'Budgeting for Gender Equity' to ensure that government budgets are planned according to the differential needs of women and men and accordingly prioritized.
- In order to implement Gender Budgeting at State level, MoWCD has been conducting number of trainings, workshops, one to one interactions and development of resource material.

Trends in Social sector expenditure:

The expenditure on social services by the Centre and States as a proportion of GDP has registered an increase of more than 1 percentage points during the period 2014-15 to 2018-19 (BE), from 6.2 % in 2014-15 to 7.3 % in 2018-19 (BE).

Education for All (SDG 4)

The drop-out rates are very high for boys at the secondary school level. According to NSSO 71st round2 (2014), the reasons for male students dropping out are economic activities, lack of interest in education and financial constraints.
Gender parity index (GPI) based on GER = Although, enrolment of girls is higher than that of boys in government schools, the pattern gets reversed in private schools. The gender gap in enrolment in private schools has consistently increased across age groups.

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<tr>
<th>Table 2: SDGs target and achievements in Education - Goal 4: Quality Education</th>
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<tbody>
<tr>
<td><strong>Global Targets</strong></td>
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<tr>
<td>1. By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.</td>
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<tr>
<td>2. By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including higher education.</td>
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<tr>
<td>3. By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.</td>
</tr>
<tr>
<td>4. By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.</td>
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Source: Reports of Gov

Learning outcome: Improving quality of education

- As per Annual Status of Education Report (ASER, 2018), from 2014 to 2018, there is a gradual improvement in both basic literacy and numeracy for Class III students but still only a quarter of them are at grade level (ability to read and do basic operations like subtraction of Class II level).
- The Rules of the RTE Act were amended in February, 2017 to include, for the first time, the class wise, subject wise Learning Outcomes till Class VIII, thereby emphasising the importance of quality education.
- In this regard, Learning Outcomes for each class in Languages (Hindi, English and Urdu), Mathematics, Environmental Studies, Science and Social Science up to the elementary stage have been developed.
- National Achievement Survey (NAS) which was earlier based on textbook content, has been made a competency-based evaluation from 2017. The NAS, 2017 was therefore one of the world’s largest sample surveys of student learning achievement – District wise report cards were generated.
Short fall of teachers

- The shortage of teachers is a perennial problem with 9.08 lakh vacancies of teachers at elementary level in government schools as on 31st March 2016. This is despite the high number of pass-outs in D.Ed./B.Ed. programme.
- The shortage of teachers and principals and administrative staff, lack of regular supervision and inspection, inadequate training of the teachers, timely availability of finances are some of the factors plaguing the education system in the country as captured by PGI (Performance Grading Index, 2017-18) in the Governance and Management Domain for the first time

Skill development - According to NSSO Report 2011-12, only 2.3 per cent of the total workforce in India had formal sector skill training

Some recommendations towards improving the skill development programmes are stated below:

- **Skill Voucher** can be introduced as a financing instrument given to a beneficiary that enables them to sign up for vocational education course at any accredited training institute. After training, institution can redeem the voucher from the government.
- **Industry should be incentivized** to set up training institutions in PPP mode. Local Industry must be involved for curriculum development, training modules, provision of equipment, training of trainers etc.
- **The personnel of Railways and other Para-military forces** could be used for skill training or lending institutional support in imparting training in hilly, inaccessible and difficult terrains.
- **Skill mapping** - Local bodies can be used for skill mapping and creating a data base of youth at local level to assess demand supply gaps.

Employment Scenario - Findings of Periodic Labour Force Survey

- The Periodic Labour Force Survey (PLFS) has been designed to yield annual estimates of the labour force on employment and unemployment along with quarterly estimates for the urban areas.
- As per PLFS estimates, Labour Force Participation Rate (LFPR) in India has declined to 36.9 per cent in 2017-18 from 39.5 per cent in 2011-12 (NSSO) as per usual status.
- The unemployment rate (UR) in India stood at 6.1 per cent with 5.3 per cent in rural areas and 7.8 per cent in urban areas as per usual status.
- PLFS found on average, a male employee earned nearly 1.2-1.3 times the earnings of female regular salaried worker in 2018.
Health for all

Status:

- Maternal Mortality Ratio (MMR) of India has declined by 37 points from 167 per lakh live births in 2011-13 to 130 per lakh live births in 2014-16, in a span of three years.
- As per the latest Sample Registration System, 2016 report, the Under Five Mortality Rate in India is 39 per 1000 live births, Infant Mortality Rate is 34 per 1000 live births and Neonatal Mortality Rate is 24 per 1000 live births.

<table>
<thead>
<tr>
<th>Global Targets</th>
<th>India’s Achievements</th>
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<tr>
<td>1</td>
<td>By 2030, reduce the global MMR to less than 70 per 100,000 live births.</td>
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<tr>
<td>2</td>
<td>To reduce neonatal mortality to at least as low as 12 per 1,000 live births by 2030.</td>
</tr>
<tr>
<td>3</td>
<td>To reduce under-5 mortality to at least as low as 25 per 1,000 live births by 2030.</td>
</tr>
</tbody>
</table>

- **OOPE** is mainly wart medicines. Government has taken steps – AYUSHMAN BHARAT, Jan Ausyadhi centres, National AYUSH mission – an affordable Health care option for all.

- **Human Resource in health sector** = The rural public health facilities across the country have difficulty in attracting, retaining, and ensuring regular presence of highly trained medical professionals. There exists...
shortfall across all cadres in the posts of doctors and specialists. There are large number of PHCs which are functioning with ‘one doctor or without doctor’. The States where large number of PHCs are functioning with ‘one doctor and without doctor’ indicate relatively higher level of rural IMR and MMR compared to other States.

Public health services delivery in rural areas warrants better governance mechanisms through adoption of technologies, community and Local Self Government (LSG) participation and social audit.

- **National Quality Assurance Programme - Kayakalp**: Clean Hospital Initiative was launched in 2015. This initiative rewards public health facilities to maintain cleanliness, hygiene and infection control in the facilities.

  Kayakalp aims to promote sanitation and hygiene in public healthcare institutions. Facilities are assessed using objective checklist covering seven domains (a) Hospital Upkeep, (b) Sanitation & Hygiene, (c) Waste Management, (d) Infection control, (e) Support Services (f) Hygiene Promotion, and (g) Beyond the hospital boundary.

  The major achievement with the advent of Kayakalp is the improvement of many of the components of basic amenities related to availability of water, sanitation, hand hygiene, biomedical waste management and basic environmental cleaning in public health facilities.

**AYUSH – an affordable health care option for all**

As per NSSO, 71st round, only 5 to 7 per cent usage of ‘other’ including AYUSH (Ayurveda, Yoga or Naturopathy Unani, Siddha and homoeopathy) has been reported both in rural and urban areas. In terms of costs, the average out of pocket expenditure on AYUSH medicines per treated person is lower compared to non-AYUSH medicine.

**CASE STUDY - JANANI** scheme of Government of Kerala is an exemplar which has popularised the system of homeopathy treatment for infertility in public health facilities. In July to December 2012, the launch year of the pilot project JANANI, the number of cases at Kannur district was less than 100. However, over time there has been exponential growth in the number of infertility cases being registered and treated at Kannur District Homeopathy Hospital.
Rural development (PMGSDY + PMAY-G + MGNREGA)

- **Pradhan Mantri Gram Sadak Yojana** launched in 2000, aims to provide funds to States to construct rural roads to connect villages by all-weather roads = length and rate is increasing year by year.

- PMGSY is aggressively encouraging use of “Green Technologies” and nonconventional materials like waste plastic, cold mix, geo-textiles, fly-ash, iron and copper slag etc. in rural roads. This is to reduce the “Carbon Footprint” of rural roads. Reduce environmental pollution, increase the working season and bring cost effectiveness.

- **Rural housing (PMAY-G): Shelter for the Poorest of the Poor** launched in 2016 with a target to complete 1 Crore pucca houses with basic amenities by March 31, 2019. During 2014-2019, 1.54 crore houses were completed including those carried over from Indira Awas Yojana.

- The average number of days taken for completion of a house under IAY was 314 days (more than 10 months) in 2015-16 against 221 days (seven months) under first year of PMAY in 2016-17 and around 114 days (three months) during the second year of PMAY in 2017-18.