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Strategy for New India at 75

Introduction

NITI Aayog has released '**Strategy for New India @ 75**' document by replacing five year plans with an aim to **accelerate economic growth to 9-10%**, make the country a **\$4-trillion economy by 2022-23** and to **achieve UN Sustainable Development Goals**.

The document defines the strategy for 2022-23 across **forty-one areas**. Each chapter includes:

- **Objectives for 2022,**
- **Progress already made,**
- **Binding constraints,**
- **Way forward for achieving stated objectives.**

The document was prepared after **extensive consultation** at – central, state and district levels stakeholders.

The document has been disaggregated under **four sections: Drivers, Infrastructure, Inclusion and Governance**.

CHAPTER 1: DRIVERS

Growth

Objectives

- Accelerate gross domestic product (GDP) growth rate in a inclusive and sustainable manner to about 8 per cent during 2018-23.
- Investment rate should be raised from 29 per cent to 36 per cent of GDP by 2022-23.
- Increasing total exports from USD 478 billion in 2017-18 to USD 800 billion by 2022-23.

Current Situation

- The share of manufacturing in India's GDP is low relative to the average in low and middle-income countries.
- Capital intensive sectors have witness higher growth in manufacturing such as automobiles and pharmaceuticals.
- India hasn't been able to capitalize fully on its inherent labor and skill cost advantages to develop large-scale labor intensive manufacturing.
- India is also grappled with complex land and labour laws.
- There is a need of generating good quality jobs to cater to the growing workforce and to absorb out-migration of labour from agriculture.
- India has had strong macroeconomic fundamentals including low and stable rates of inflation and a falling fiscal deficit. However there is a need for structural reforms that address the binding constraints for a more robust supply-side response.

Way Forward

Raising investment rates to 36 per cent by 2022-23

- India's tax to GDP ratio (17%) is very low and it should aim to increase its tax-GDP ratio to at least 22 per cent of GDP by 2022- 23.
- There's a need to rationalize direct taxes for both corporate tax and personal income tax, ease tax compliance burden which along with demonetization and GST will boost India's tax to GDP ratio.
- Higher public investment in housing and infrastructure will create large multiplier effects in the economy.
- Government should exit central public sector enterprises (CPSEs) that are not strategic in nature, which will attract private investment and contribute to the exchequer, enabling higher public investment.

Macroeconomic stability should be achieved through prudent fiscal and monetary policies

Lowering government's debt-to-GDP ratio will reduce the relatively high interest cost burden on the government budget and will also improve the availability of credit for the private sector in the financial markets.

Efficient financial intermediation

- Efficient functioning of the financial markets is crucial to maintain high growth in the economy.
- An improved risk-assessment framework for lending should be created to facilitate easier availability of capital and avoid a situation of large-scale nonperforming assets in the banking sector.
- Enable alternative (to banks) sources of credit such as bond market for India's long-term investment needs.

Focus on exports and manufacturing

- Logistics sector needs to be made more efficient, rationalization of power tariffs structure to ensure global connectivity and competitiveness of Indian industries.
- States should ease labor and land regulations particularly speedily implementing **Fixed Term Employment (FTE)**.
- Strengthen the governance and technical capabilities of Export Promotion Councils (EPCs) by subjecting them to a well-defined, performance-based evaluation.
- Closer ties with emerging economies of South East Asia particularly Cambodia, Laos, Myanmar and Vietnam should be forged using BIMSTEC frameworks.
- Physical infrastructure and measures to facilitate seamless cross-border movement of goods in the North-East region would help accelerate integration and promote exports.

Employment generation

Employability of labor can be increased by improving health, education and skilling outcomes and a massive expansion of the apprenticeship scheme.

Employment and Labour Reforms

Objectives

- Complete codification of central labor laws into four codes by 2019.
- Increase female labor force participation to at least 30 per cent by 2022-23.
- Encourage formalization of the labor force by reforming labor laws, easing of industrial relations and ensuring of fair working conditions and social security.

Current Situation

- 49% of total Indian workforce engages in agriculture with a miniscule contribution of 15% to **Gross Value Added**.
- Indian economy needs to generate nearly 70 lakh jobs annually to absorb the net

addition to the workforce.

- MSMEs and informal sector firms dominate the employment landscape in India. As per the National Sample Survey (NSS) 73rd round, 6.34 crore MSMEs in the country engaged in different economic activities provides employment to 11.10 crore workers.
- India also exhibits a low and declining female labor force participation rate which stood at 23.7% in 2011-12 compared to China's 61% and US's 56%.
- Cost of compliance and the complexity generated by various labor laws is high in the country.
- Government has brought in few reforms such as moving licensing and compliance processes online, simplifying procedures and permitting self-certification etc.
- Government has several schemes to help generate employment such as **MGNREGS, MUDRA Yojana, and Pradhan Mantri Rojgar Protsahan Yojana** etc.

Constraints

- Large share of India's workforce is employed in low productivity activities with low levels of remuneration.
- Workers in unorganized sector are not covered by labor regulations and social security.
- According to the **India Skill Report 2018**, only 47 per cent of those coming out of higher educational institutions are employable.

Way Forward

Enhance skills and apprenticeships

Labour Market Information System (LMIS) which identifies skill shortages, training needs and employment created should be made functional.

Labour law reforms

- Simplify and modify labor laws in formal sector.
- There is a need of National Policy for Domestic Workers to recognize worker's rights and promote better working conditions.

Enhance female labor force participation

- **Maternity Benefit (Amendment) Act, 2017**, and the **Sexual Harassment of Women at Work Place (Prevention, Prohibition and Redressal) Act** need to be implemented effectively across all sectors.
- Ensuring that skills training programs and apprenticeships include women.

Ease industrial relations to encourage formalization

Overhaul the labor dispute resolution system to resolve disputes quickly, efficiently, fairly and at low cost.

Wages

- **Minimum Wages Act, 1948**, needs to cover all jobs.
- Enforcing the payment of wages through cheque or Aadhaar-enabled payments for all.

Working conditions and social security

- Enact a comprehensive occupational health and safety legislation based on risk assessment.
- Workers housing on site will enhance competitiveness and workers' welfare.
- Increasing capacity building in informal sector.
- Compulsory registration of all establishments to ensure better monitoring of occupational safety as well as recreation and sanitation facilities.

Technology and Innovation

Objectives

- Reach in top 50 countries in the Global Innovation Index by 2022-23.
- Five scientific research institutions should be amongst the top 100 in the world.
- India should spend at least 2 per cent of gross domestic product (GDP) on Research & Development.

Current Situation

- India has launched various schemes to nurture and retain young researchers and women scientists in the field of scientific research.
- India has become a major destination for outsourced funding in R&D covering areas from Information and Communication Technology, biotechnology, aerospace, and materials technology etc.
- India is amongst handful nations that have credible capabilities in the field of space technology, strategic and defense technologies.
- India ranks third in largest number of startups in the world. Government through the **Atal Innovation Mission (AIM)** aims to transform radically the innovation, entrepreneurship and start-up ecosystem of the country.

Constraints

- India's expenditure in R&D is a paltry 0.7% of its GDP which stands 1.2% and 2% for

Brazil and China respectively. Private sector's contribution in R&D is also miniscule.

- The link between research, higher education and industry is weak and nascent.
- Lack of scientific temperament at both early and later stage of career leads to the diversion of potential researchers to other rewarding sectors.
- **"Lab to Land"** time is too long i.e. rate of transfer of technologies from lab to industry and for societal benefits is low.
- The public procurement system is heavily biased in favor of experienced and established products and technologies discouraging new and innovative technologies offered by start-ups.

Way Forward

- Empowered body is required to steer holistically the management of science in the country which will help in pursuing inter-disciplinary research among various scientific agencies.
- Public funded R&D institutions are affected by their poor marketing skills and information dissemination which can be improved by-
 - Setting up value addition centers for (i) up-scaling technologies, (ii) improving technologies from Technology Readiness Level 4 to 6. (iii) Demonstrating industrial scale pilot production, (IV) coordinating with investors to incubate entrepreneurs etc.
 - DST should create a National Technology Data Bank to provide central database for technologies that are ready for deployment or under development.
- **Measures related to government procurement include the following:**
 - Government should invite international bidding for both products and services only when Indian manufacturers are unable to supply products/services of comparable international quality.
 - Awareness drives can be organized among the procurement managers of various ministries/ departments/state governments/CPSUs, about the DIPP's **Public Procurement Order 2017**.
- **District Innovation Fund** (2 crore) in each district may be created for promoting grass root innovation.
- Atal Innovation Mission is aimed at setting at least 5,000 labs by 2019 and 10,000 by 2020 **Atal Tinkering Labs (ATLs)** around the country.
- Foreign collaborators, consultants, visiting faculty, adjunct scientists needs to be involved in pursuing R&D in the emerging areas such as nano-technology, stem cell research, astronomy, genetics, next generation genomics, drug discovery, etc.

Industry

Objectives

- Double the current growth rate of the manufacturing sector by 2022.
- Gradual adoption of the latest technology advancements, referred to as 'Industry 4.0'.

Current Situation

- India is the fifth largest manufacturer in the world with a gross value added (GVA) of INR 21,531.47 billion in 2017-18 with a Cumulative Annual Growth Rate of 7.7 per cent between 2012-13 and 2017-18.
- Government has taken multiple initiatives to boost manufacturing such as **Make in India, Startup India, and MUDRA**. It has also undertaken massive recapitalization of Public Sector Banks to ease availability of credit to MSMEs.
- World Bank ranked India 100th among 190 countries in the Ease of Doing Business (EODB) in 2018 a jump of 34 positions from last year.
- FDI regime has substantially liberalized, improving India's rank in terms of annual FDI inflows from 14 in 2010 to 9 in 2017. FDI inflow in manufacturing is about 35% of total FDI India receives.

Constraints

- Regulatory risks and policy uncertainty in the past have dented investor confidence.
- There has been a **cyclical slowdown in fresh investment** since 2011-12.
- The adoption of new technologies such as artificial intelligence, data analytics, M2M (Machine
- Getting construction permits, enforcing contracts, paying taxes, starting a business and trading across borders continue to constrain doing business.

Way Forward

Demand generation, augmentation of industrial infrastructure and promotion of MSMEs

- Government should push domestic manufacturing capabilities by optimally using public projects such as Sagarmala, Bharatmala, industrial corridors, and the Pradhan Mantri Awas Yojana (PMAY).
- Export strategies should be based on sector competitiveness and resource strength.
- Foreign Direct Investment should be encouraged in manufacturing in order to realize Indian dream of becoming world's workshop.
- Streamline discretionary powers vested at different levels of governance by adopting digitized processes and making all approvals electronic in a transparent, time bound manner.
- A greater connect between government-industry-academia is required to identify the changing requirements in manufacturing and prepare an employable workforce.

- E-commerce will be the driver of overall economic growth in the near future, creating vibrant environment for it to thrive, is the need of the hour which involves increasing internet access, digitizing payment, improving transportation, logistics etc.
- There is a need to harmonize Indian quality standards with global standards, lack of which has affected Indian exports and prevented the leveraging of trade agreements adequately.

Industry 4.0

- Major push should be given to industry to adopt Industry 4.0, which will significantly impact sectors like automobile, pharmaceuticals, chemicals and financial services resulting in operational efficiencies, cost control and revenue growth.
- Specialized training programs should be created on '**Smart manufacturing**' to address the shortage of high-tech human resources.
- The development of industries that produce the key building blocks forming the basis of Industry 4.0 could be incentivized.
- Incentives could be focused on MSMEs that manufacture products including sensors, actuators, drives, synchronous motors, communication systems, computer displays, and auxiliary electromechanical systems.

Ease of doing business

- Introduce a “single window” system that provides a single point of contact between investor and government and facilitates all required licenses and approvals.
- Geographic Information System (GIS) should be adopted for geographical planning and ease of environmental clearances.
- Ensure the seamless integration of the **Shram Suvidha portal** and state agencies' portals.

Shram Suvidha Portal

- The portal was launched by government of India in Oct' 2014 and comes under Ministry Of Labor And Employment.
- The main features of the Portal are as follow:
 - Allots Labour Identification Number (LIN) for effective, efficient and real-time governance in Labour Administration.
 - To bring transparency and accountability in enforcement of labour laws through Online Inspection System and Filing of Online Inspection Report
 - Common Online Registration and Filing of Self-Certified and Simplified Single Online Annual Return for multiple labour laws to ease the complexity of compliance.

Doubling Farmers' Income (I): Modernizing Agriculture

Objectives

- Modernize agricultural technology, increase productivity, efficiency and crop diversification.
- Generate income and employment while ensuring food security and maximizing value addition in agriculture.

Current Situation

- Yield of majority of crops in India is lower than the world average **due to low irrigation, use of low quality seeds, low adoption of improved technology, and knowledge deficit** about improved agricultural practices.
- There is a **huge gap in extension delivery system** in India which results in poor yields amongst as well as within states.
- Closing these gaps provides an opportunity to enhance productivity and incomes significantly implying that state with low productivity have significant potential for catch-up growth in their productivity levels.
- Demand side factors favor the expansion of area under fruits and vegetables, and livestock products, diversification to the fruits and vegetables segment is likely to benefit small and medium farmers.
- Number of initiatives aimed at modernizing agriculture has been launched such as **PMKSY (Pradhan Mantri Krishi Sinchai Yojana), Soil Health Card etc.**

Constraints

- Use of outdated and inappropriate technology.
- Affordability of Technology remains a challenge due to dominance of small and marginal farmers.
- Agricultural research in the country is constrained by resource inadequacy, regulations and intellectual property rights (IPR).
- A huge gap exists between the demand for and supply of skills in agriculture, hindering diversification, adoption of precision agriculture and on farm post-harvest value addition.
- Low scale is a serious constraint on the adoption of improved practices and in the input and output market.

Way Forward

Productivity and efficiency

- Irrigation coverage needs to be increased to 53 per cent of **Gross Cropped Area**

(GCA) by 2022-23.

- Increase adoption of hybrid and improved seeds.
- States should aim to increase the **Seed Replacement Rate (SRR)** to 33 per cent for self-pollinated crops and 50 per cent for cross-pollinated crops in alternative years.
- **Increase Variety Replacement Ratio** - replacing old variety of seeds with hybrid and enhanced seeds to increase productivity along with developing climate resilient varieties of crops suitable for the 128 agro-climatic zones of the country.
- Seed testing facilities needs up gradation in terms of both personnel and technical expertise.
- There is a need for Uniform National Procedure for seed licensing to tackle the problem of heterogeneity in seed licensing procedures across states.
- Efficient fertilizer usage by strengthening the Soil Health Card scheme.
- The current lopsided fertilizer subsidy policy needs to bring secondary and micronutrients on the same nutrient based subsidy (NBS) platform as phosphorus (P) and potash (K).
- Align the pesticide regulatory framework with food safety laws to make adoption broad based.
- Subsidy should be provided on liquid fertilizers to encourage fertigation with micro-irrigation.

Strengthening extension systems

- The **Agriculture Technology Management Agency (ATMA)** programme needs to include bottom up planning at the district and block levels to develop **Strategic Research Extension Plans (SREP)** and subject matter specialists at Krishi Vigyan Kendras (KVKs) should orient their research to the block action plans developed by ATMA.
- Priority should be given to extension services that disseminate information to farmers regarding (i) crop selection (ii) demand for and supply of crop produce, and (iii) availability of infrastructure facilities for storage, transport and marketing of produce.
- Prioritizing value added extension services to raw agricultural produce would result in increased price realization and farmers' income.

Diversification: promotion of High Value Crops (HVCs) and livestock

- Design an incentive mechanism to wean farmers away from cereal crops to HVCs.
- Shift to using hybrid varieties for vegetables which has the potential to increase yields by 1.5 to 3 times and provide a significant increase in income.
- Using **Rootstock technology** which has shown the capacity to double production and is resilient to climate stress.
- Targeted efforts to create a market for niche products are recommended.
- Recycling and utilizing agricultural waste would give a further fillip to farmers' income.

Livestock and fisheries

- Breeding of indigenous cattle with exotic breeds needs to be encouraged which will enable greater gene coverage, reduced diseases and greater resilience to climate change.
- Installing of bulk milk chillers and facilities for high value conversion of milk are needed to promote dairy in states.
- Integrate the Blue Revolution scheme with MGNREGA.

Doubling Farmers' Income (II): Policy & Governance

Objectives

- Create a policy environment that enables income security for farmers, while maintaining India's food security.
- Transforming agriculture to robust agri-business systems by encouraging participation of private sector.
- Promoting agripreneurs so that even small and marginal farmers can capture a higher share of value addition from '**farmgate to fork**'.

Current Situation

- Mismatch between the contribution of agriculture to national income and share in employment.
- Income of farmer is only one-third of the income of a non-agriculture worker since the 1980s.
- Country took 22 years to double farmers' income at an annual growth rate of 3.31% during 1993-1994 to 2015-16; doubling farmers' income between 2015-16 and 2022-23 will require an annual growth rate of 10.4%
- Government initiatives:
 - 100 per cent foreign direct investment in agriculture in 2016-17,
 - e SAMPADA scheme for creation of food processing infrastructure,
 - Introducing **Model Agricultural Produce and Livestock Marketing Act (2017)**, **Model Contract Farming Act** etc.

Constraints

- Fragmented land holdings create difficulties for marginal farmers to access credit or new technology, severely affecting farm productivity and their incomes.
- There exists a large gap between **Farm Harvest Prices (FHP)** and retail prices leading to agrarian distress.
- Lack of non-farm employment opportunities has resulted in excessive dependence on

agriculture.

- Access to institutional credit remains a constraint, especially in the case of tenant farmers.

Way Forward

Marketing reforms

Marketing can be improved by adopting **Model APLM Act**, which provides for progressive agricultural marketing reforms such as setting up of markets in the private sector, farmer-consumer markets, e-trading, single point levy of market fee, a unified single trading license in a state etc.

Amend Essential Commodities Act

The Essential Commodity Act should be replaced with a modern statute that balances the interests of farmers and consumers as it has disincentivized large investment in agricultural technology and infrastructure.

Stable export policy

Government of India should come up with a coherent and stable agricultural export policy, ideally with a five to ten-year time horizon.

Price realization

- **Commission on Agricultural Costs & Prices (CACP)** should be replaced by an agriculture tribunal in line with the provisions of **Article 323 B** of the Constitution.
- Replacing MSP with Minimum Reserve Price (MRP) which could be the starting point for auctions at mandis or separating the criteria for MSPs for which produce is procured.
- Raising MSP or prices is not a long term solution. Fair prices can be realized by the creation of a competitive, stable and unified national market to enable better price discovery, and a long-term trade regime favorable to exports.
- Creation of an effective and technology driven Agriculture Advisory Service to ensure that farmers adopt an optimal cropping pattern that maximizes their income.
- Encourage states to adopt the **Model Contract Farming Act, 2018**.

Land aggregation

- Encourage states to adopt the **Model Agriculture Land Leasing Act, 2016**.
- Digitization of land records is a must for effective implementation of land leasing which will help in generating updated land records.

Research & development

- Focus needs to shift on precision agriculture such as micro irrigation, climate smart technologies, internet of things (IoT), and use of technology in animal husbandry to monitor animal behaviour, health and production to prepare for future challenges.
- Raising research spending from 0.3 per cent to at least 1%.
- Integrating Farming value chain, covering production, postproduction, processing and other value addition activities will turn cost effective for agriculture sector.

Innovation

Several breakthroughs have the clear potential for quickly doubling farmers' income such as ZBNF (Zero Budget Natural Farming), herbal inputs that improve soil quality and make plants more pest resistant etc.

Non-farm income

- Farmers can be shifted to agro-business and farm related skills which are currently in short supply.
- India needs to accelerate growth in the manufacturing, services and exports sectors to wean labour away from agriculture resulting in higher productivity and income for farmer.

Doubling Farmers' Income (III): Value Chain & Rural Infrastructure

Objectives

- Transform the rural economy through the creation of modern rural infrastructure and an integrated value chain system.
- Leveraging the value chain to boost India's exports of food products.

Current Situation

- Despite achieving full village electrification and accelerating the pace of connecting habitations through the **Pradhan Mantri Gram Sadak Yojana (PMGSY)**, Agriculture infrastructure, such as rural markets, warehouses, cold chain, farm machinery hubs India suffers from an infrastructure deficit.
- There is a need for additional markets to be setup as recommended by **Dalwai committee**. A proposal for **developing 22,000 Rural Periodic Markets (RPMs) into Grameen Agriculture Markets (GrAMs)** has also been made in 2018-19 Budget.
- Lack of adequate and efficient cold chain infrastructure leads to massive post-harvest

losses.

- Number of step has been taken to modernize the agri-value chain such as **SAMPADA, Operation Greens etc.**

Constraints

- Inability to acquire land for setting up of market yards due to restrictions on land leasing and land acquisition.
- Existing marketing infrastructure suffers because of a lack of finances, manpower and proper facilities.
- Poor maintenance of rural roads with a sub optimal connectivity also acts as a hindrance.

Way Forward

Markets and value chain

- Infrastructure status should be accorded to agriculture value chains- Warehousing, pack-houses, ripening chambers those even at village levels in order for them to avail fiscal benefits.
- Government collection centers and warehousing facilities should be set up at the village/block level to benefit small and marginal farmers.
- Pledge financing at warehouses, through **Negotiable Warehouse Receipts (NWR)**, needs to be adopted and popularized as an alternative means of financing.
- Coordination among different ministries will facilitate synergies between different initiatives such as the **Rashtriya Krishi Vikas Yojana (RKVY)** of the agriculture ministry, **Viability Gap Funding** of the Ministry of Commerce for cold chains and **Pradhan Mantri Kisan Sampada Yojana** of Ministry of Food Processing Industry.

Rural roads, electricity and mechanization

- Maintenance of rural roads through women Self Help Groups.
- Private entrepreneurs should be incentivized to establish small farm implement mechanization hubs and big machinery hubs.

Export enablers

- Developing export oriented clusters with common infrastructure facilities. These clusters should contain a functional, end-to-end cold chain system along with processing facilities.
- There exists a shortage of testing laboratories, essential for health certificates for exports. Private laboratories should be extended financial support to achieve international accreditation.

- Efforts must be made to setup **Green Channel** for perishable produce at identified airports handling cargo.
- Regulatory frameworks regarding use of pesticides, growth hormones, and antibiotics for marine produce need to be developed and implemented effectively to curb the rejection rate in the export market.

Financial Inclusion

Objectives

- Ensuring universal access to bank accounts, which are a gateway to all financial services.
- Providing access to digital payment services and increasing its penetration.
- Ensuring universal coverage of insurance for life, accidents, etc., and of pensions and other retirement planning services.
- Better access to credit at a reasonable cost for those presently excluded.

Current Situation

- Schemes such as **Jan Dhan Yojana, MUDRA Yojana, Stand-Up India Scheme, Jeevan Jyoti Bima Yojana, Suraksha Bima Yojana** promote financial inclusion.
- At present 80% of Indian adults have bank accounts which stood at 53% in 2014.
- Awareness and use of mobile payments in India which was low before 2016 and stood at 1% has seen a significant improvement after demonetization and launch of BHIM platform.
- India has a considerable ground to make in terms of credit access to its people. Similarly, bank credit to GDP ratio in India is 51 per cent, as compared to 98 per cent in China in 2016.

Constraints

- Lack of financial literacy amongst low income households.
- High cost of operations of the traditional banking model.
- Excessive regulatory requirements on products, and market entry, and conservative regulatory approach to new technologies.

Way Forward

- A comprehensive financial literacy program (**Arthik Shiksha Abhiyan**) will help improve financial literacy and may be integrated in the regular school curriculum.
- Growth of online and paperless banking can be facilitated which will turn out to be cost and time effective.

- Technology can be used to assess the credit worthiness for households and informal businesses.
- New data-sharing framework can be build on the success of Jan Dhan and Aadhaar platform to enable easier access to credit, with adequate safeguards for maintaining data privacy.
- Payment banks and other platforms can be used to scale up payments systems in underserved areas.
- Payment banks can be proactively regularized in order to make the commercially viable and scalable.
- Regulatory framework governing formal financial products should be simplified and made more consumer-friendly in order to attract households.
- KYC restrictions in the capital markets can be eased and linked to other KYC information to enable ease of doing business and increase the participation of retail investors.

Housing for All

Objectives

Providing every family with a pucca house, with a water connection, toilet facilities, and 24x7 electricity supply and access.

Current Situation

- Homeless families are provided housing assistance in rural and hilly areas through Pradhan Mantri Awas Yojana (Gramin) launched in 2016.
- The scheme aims at building one crore rural houses in three years between 2016-17 and 2018-19 and has built 32.14 lakh houses in 2016-17.
- Pradhan Mantri Awas Yojana (Urban) looks to achieve target of constructing 1.2 housing units in urban areas.

Constraints

- Lack of access to finance from formal financial institutions.
- Long-drawn out, multi-level approval system in urban areas.
- Predominance of conventional construction practices that result in delayed progress in urban areas and the limited use of prefabricated and pre-engineered materials
- Capacity constraints in urban local bodies (ULBs) to formulate and design mass housing projects.

Way Forward

Access to finance

- Department of Financial Services should consider creating a subcategory under priority sector lending (PSL) for affordable houses.
- The government should raise funds commensurate with the 'Housing for All' targets which will help in achieving greater synergies among agencies, implementing government housing schemes.

Technology for construction

- A Global Housing Technology Challenge has been launched which will bring internationally proven construction technologies for adoption in India.
- There is a need for major push in the form of slum development programs in urban areas. Therefore, a National Mission for Slum Rehabilitation will bring a greater focus on making the country slum free.

Reducing costs

- Government projects should focus on the life cycle cost (LCC) approach to the construction of houses rather than the cost per square foot approach to ensure quality of construction.
- Fiscal support should be provided to companies that use recycled products made from waste.
- Regulatory complexities should be rationalized and a single window approval system should be adopted to reduce the time taken to construct houses in urban areas.

Efficient use of land

- The land lying idle with loss making PSUs of the central/ state governments can be used for projects under 'Housing for All'.
- Indian cities should focus on vertical growth instead of horizontal growth.
- Urban governance reforms, such as removing the need to obtain permission for non-agricultural use, amending rental laws and others, can potentially help achieving the goal of 'Housing for All' by 2022-23.

Travel, Tourism and Hospitality

Objectives

Increase India's share in global international tourist arrivals from 1.18 per cent to 3 per cent.

Current Situation

-
- India sits at 40th position in the World Economic Forum's Travel and Tourism Competitiveness Index in 2017.
 - India with its 35 world heritage sites, 10 bio-geographical zones and 26 biotic provinces proves itself as a hot destination among tourists with varied interests.
 - India's travel and tourism sector contributed of USD 22.92 billion in 2017-18.
 - Tourism is a labour intensive sector which has a potential to generate large scale, good quality employment.
 - To realize the sector's potential Indian government has launched multiple initiatives such as tourist visa on arrival, enabled with electronic travel authorization (ETA)

Constraints

- Awareness about the e-visa facility remains low, medical e-visa holders face difficulties because of the limited number of repeat visits and cumbersome registration processes.
- Deficiencies in infrastructure and inadequate connectivity hamper tourist visits to some heritage sites.
- Tourist information centers are poorly managed, making it difficult for domestic and foreign tourists to access information with ease.
- Lack of adequately trained individuals in the tourism and hospitality sector is a key challenge in giving visitors a world-class experience.

Way Forward

- Launch an e-visa regime to attract clientele from the meetings, incentives, conferences and exhibitions (MICE) market.
- Hotels, resorts, equipment, parks etc., having a project cost more than INR 1 crore should be notified as 'infrastructure' to enable promoters to avail loans on a priority basis.
- Improve flight connectivity to tourist destinations through the timely implementation of the Ministry of Civil Aviation's Regional Connectivity Scheme – UDAN (RCS-UDAN).
- Promote river cruise tourism by making the entire stretch of National Waterway No. 1, the River Ganga, from Allahabad to the Farakkah Barrage, fully navigable.
- Building **deep-water marinas** in the coastal areas of India including in the Andaman and Nicobar Islands and in Mumbai.
- Connect local communities to tourism by encouraging them to set up small enterprises to supply the tourism industry.
- Upgrade the skills of existing workers such as taxi drivers, boat operators, guides, and restaurant and dhaba workers making the more people friendly and receptive.
- Create Centers of Excellence for leadership in the tourism sector as a fulcrum of professional education, research and advocacy to create managers and entrepreneurs

in tourism.

- Enable access to markets for traditional handicrafts producers by linking them with global markets. The government should also encourage the export of tribal handicrafts.
- Launch targeted promotional campaigns in Asian countries.
- Reconsidering differential pricing for heritage sites as the higher ticket price for non-Indians leads to losing out on a large segment of youth travelers.
- Create common passes to visit multiple heritage sites.
- Tourist information centers should be operated by trained personnel and must have resources like maps, travel guides, etc.

Minerals

Objectives

- Double the area explored from 10 per cent of obvious geological potential (OGP) area to 20 per cent.
- Accelerate the growth of the mining sector from 3 per cent in 2017-18 to 14 per cent, with an average growth of 8.5 per cent during 2018-23.

Current Situation

- India has explored only 10% of its Obvious Geological Potential (OGP) area of 5.71 lakh sq. km. resulting in India's huge mineral import corresponding to 3,73,662 crore seven times more than its domestic production.
- Minor minerals have a small share in value terms but their production is more labour intensive. Thus, they can be a source of large-scale employment generation.

Constraints

- Shortcomings in the licensing regime such as the separation of auction of prospecting licenses and provision of mining licenses.
- High incidence of taxes, royalties and levies in comparison to global standards.
- Disconnect between training institutions and industry.

Way Forward

- To facilitate participation by private sector players in exploration, launch a mission **"Explore in India"**, by revamping the minerals exploration and licensing policy.
- Public sector units (PSUs) and private sector companies should have a level-playing field with respect to mining.
- Single window and time-bound environment and forest clearances with authorities

explicitly declaring whether an area is inviolable or not.

- All statutory approvals should mandatorily be granted within 180 days of application for exploration and mining of minerals.
- Landowners/farmers/tribals need to be given mining rights for minor minerals on their land, to enable them to mine either on their own or by outsourcing it.
- A National Mineral Regulatory Authority may be created to regulate the minerals sector to operate transparently with internationally recognized technical standards.
- A National Data Repository (NDR) of Mineral Resources should be created and uploaded online.
- Rationalize taxation/royalty and other levies on mining, capping it at a maximum of 40 per cent of the sale value to make mining competitive globally.
- India should create an organization for strategic acquisitions of mines in other countries and to sign diplomatic and trade agreements.
- Promote zero waste mining by incentivizing leaseholders to utilize and sell sub-grade minerals/rejects.

Chapter 2: INFRASTRUCTURE

Energy

Objectives

- 175 GW of renewable energy generation capacity by 2022
- Reduce imports of oil and gas by 10 per cent by 2022-23
- Continue to reduce emission intensity of GDP in a manner that will help India achieve the intended nationally determined contribution (INDC) target of 2030.

Current Situation

- India's energy mix is dominated by coal with a 49.6% share, followed by oil- 28%, biomass- 11.6%, gas - 7.3%, renewable and clean energy 2.2% and nuclear energy 1.2%.
- India is the third largest energy consumer of the world but its per capita energy consumption is significantly low in comparison to US and China.
- Total Installed power capacity of India is about 334 GW including 64 GW of renewable energy.
- India is heavily dependent on petroleum imports, importing approximately 82% of crude oil and 45% of natural gas requirements during 2017.
- India has a 16,000 km network of gas pipeline with another 10,000 km out for bidding.

Constraints

Subsidies and taxes

- A variety of subsidies and taxes distort the energy market and promote the use of inefficient over efficient fuels.
- Indian exports and domestic production turns out uncompetitive as energy taxes do not come under GST and hence, no input credit is given.

Power

- Unmetered power supply to agriculture provides no incentive to farmers to use electricity efficiently.
- Regulatory Commissions are unable to fully regulate discoms and fix rational tariffs.
- State power utilities are not able to invest in system improvements due to their poor financial health.

Oil & gas

- Lack of market-driven gas prices for old fields disincentivizes further production.
- The gas pipeline infrastructure is inadequate.

Coal

- Land for coal mining is becoming a major issue.
- Tendency to expand opencast mining and giving up underground operation even for better quality coal reserves aggravates the land availability problem.

Renewable energy

- High energy cost makes investment in the sector unattractive.
- Flexibility in generation and balance requirements for the integration of renewable energy are emerging as major issues.

Energy efficiency

- Limited technical capabilities, high initial capital expenditure, limited market and policy issues have adversely affected efforts to achieve energy efficiency.
- Non-availability of sufficient credit facilities.

Way Forward

Subsidies and Taxes

- Oil, natural gas, electricity and coal may be brought under GST to enable input tax

credit.

- All form of subsidies should be provided as functional subsidies to end-consumers to empower them to choose the energy form most suitable and economical to them

Power

- Privatizing state distribution utilities and/or the use of a franchisee model will reduce Aggregate Technical and Commercial losses.
- Promote the use of solar pumps for agriculture. Local discoms should buy surplus power from the farmer.

Oil & gas

- Provide for a common carrier and open access to gas pipelines.
- Separate the developmental and regulatory functions of the Petroleum and Natural Gas Regulation Board.
- Consider market pricing for blocks that are not viable because of low gas pricing.
- Provide "priority sector" status for 2G bioethanol projects. The concept of 'solar parks' can be applied to bio-fuels.

Coal

- Put the onus on concerned state governments to make the land required for mining available.
- Expeditiously operationalize commercial coal mining.

Renewable Energy

- Renewable purchase obligations (RPO) should be strictly enforced and inter-state sale of renewable energy should be facilitated.
- Hybrid renewable energy systems such as solar PV + biomass should be explored.

Energy efficiency

- The Bureau of Energy Efficiency (BEE) should come out with a white paper on its 5-year strategy on energy efficiency in various sectors and specify energy consumption norms.
- Promote the mandatory use of LED and the replacement of old appliances in government buildings with five-star appliances.
- Widen and deepen The Perform, Achieve and Trade (PAT) program; make Energy Saving Certificate (ESCert) trading under the PAT scheme effective by ensuring strict penalties against defaulters.
- For the MSME sector, BEE should develop cluster-specific programs for energy intensive industries to introduce energy efficient technologies.

- Promote the use of the public transport system and vehicles can be turned electric gradually.

Surface Transport

Objectives

- Increasing the coverage and quality of roads and highways for internal and external trade.
- Achieve the Bharatmala Phase-I target by completing 24,800 km by 2021-22.
- Improve the regulatory framework for roads to achieve better compliance, seamless connectivity.
- As a signatory to the Brasilia Declaration, reduce the number of road accidents and fatalities by 50 per cent by 2020.

Current Situation

- The road sector in India accounts for the largest share in the movement of both passengers and freight.
- The demand for mobility on roads has risen continuously, leading to a sharp rise in the number of road transport vehicles.

Constraints

- Stretched capacities of the existing national and state highways.
- The annual outlay marked for maintenance and repair of national highway is only 40 per cent of the funds required resulting in the inability to take up timely maintenance interventions.
- Delays in acquiring land affects project costs as the average cost of land escalates with time.

Way Forward

- Increase connectivity by expanding the road network through:-
 - Bharatmala Pariyojana Phase-I
 - Special Accelerated Road Development Program for the North-Eastern region (SARDP-NE)
 - 'North-East Road Network Connectivity Project Phase I'
 - Chardham Mahamarg Vikas Pariyojna
- Improve road maintenance and safety by adopting a Maintenance Management System (MMS).
- Earmarking 10 per cent of its annual budget for road and highways for maintenance.

- Imposing heavy penalties on contractors for poor quality of operations and maintenance (O&M) into contracts across all contract modes.
- Ensuring that Ministry of Road Transport and Highway's **Bhoomi Rashi** web portal becomes fully functional by March 2019.
- Introducing vocational training courses on road construction in Industrial Training Institutes (ITIs).
- Ensure stringent testing of driving skills before granting driving licenses by adopting technologically advanced methods such as the automated driving testing system.
- Increase emphasis on research and development such as Establish a transport data centre at the national level for applied research on roads, Enhance R&D on IT-enabled traffic management systems, etc.
- Transform state road transport undertakings (SRTUs) and promote public transport, rural transport and last mile connectivity.
- Urban mobility must move towards multimodal solutions by ensuring seamless movement between different modes.

Railways

Objectives

- India should have a rail network that is not only efficient, reliable and safe, but is also cost-effective and accessible by 2022-23.
- Augment the capacity of existing railway infrastructure and increasing the speed infrastructure creation from the present 7 km/day to 19 km/day by 2022-23.
- "100 per cent" 2 electrification of broad gauge track by 2022-23 from the 40 per cent level in 2016-17.
- Improve the safety of the railways, achieving zero fatalities from the 2016-17 level of 238 fatalities.
- Increase the share of non-fare revenues in total revenue to 20 per cent and increasing the freight load capacity of railways.

Current Situation

- Indian Railways (IR) is the fourth largest network in the world in terms of route km (67,368 km in FY17).
- It is also the largest passenger and fourth largest freight transporting railway system globally.
- Indian railways suffer from high saturation and over-utilized capacity on popular routes such as golden quadrilateral make up only 15% of the total route of the railways but it transports 52% of passenger traffic and 58% of total freight load.
- Under-investment in the sector has crippled operations and hampered capacity

augmentation.

- There is a need for additional investment in rail infrastructure and scaling up investment.

Constraints

- Routes are congested with 60% routes running at more than 100% utility leading to leading to reduction in the average speed of passenger and freight trains.
- Delays in decision making, inadequate market orientation and long project approval durations lead to slow turnover times and delays in the implementation of railways projects.
- Poor cleanliness of trains and stations, delays in train departures/arrivals, quality of food and difficulties in booking tickets are key issues.
- Poor terminal facilities lengthen loading and unloading times.

Way Forward

- Prioritize ongoing projects to improve capacity utilization. Timely completion of these projects will generate more revenue.
- Consider transferring coach and locomotive manufacturing and repairs to private players with Indian railways keeping the right to regulate, monitor and ensure safety of users.
- Separate suburban passenger transport from the rest of the network and put a light rail network in place in all major urban areas under local governments.
- Rationalize fare structures and subsidies, and monetize assets to generate revenues.
- Enhance safety of trains to reduce accidents and modernize stations by **Eliminating level crossings**, using advanced technologies such as automatic train protection, fog safety devices and ensuring the smooth functioning of by-pass crossings.
- Improve terminal efficiency by promoting the concept of '**engine-on-load**' system, developing proper terminal layouts etc.
- Setting up an independent regulator for the Indian Railways which will take decisions such as:
 - Take decisions regarding price regulation.
 - Protect consumer interests, promote competition, efficiency and economy
 - Help attract investment, promote efficient resource allocation etc.

Civil Aviation

Objectives

- Doubling air cargo handled from about 3.3 million tonnes in 2017-18 to about 6.5 million tonnes.

- Ensuring the increase of domestic flight ticket by making domestic air travel affordable by 2023.
- Ensure that airport tariffs, taxes on fuel, landing charges, passenger services, cargo and other charges are determined in an efficient, fair and transparent manner.

Current Situation

- The World Economic Forum's Global Competitiveness Report, 2018 ranks India as 53rd out of 140 countries worldwide in air transport infrastructure.
- UDAN promote balanced regional growth and make flying affordable for the population.
- India's civil aviation sector has seen a steady growth with its domestic passenger almost doubling between 2007-08 and 2016-2017.

Constraints

- With continued expansion of its aviation sector India is likely to face airspace, parking bays.
- Shortage and gaps in availability of industry-recognised skills – from airline pilots to crew for maintenance could constrain the growth of different segments of the sector.
- Due to high taxes and lack of competition among providers, ATF is relatively expensive in India. Since it remains outside the GST network, prices are plagued with regional disparities.

Way Forward

- Enhancing aviation infrastructure by completing the planned airports under the UDAN initiative in a time-bound manner.
- Increase investment in the sector through financial and infrastructure support by creating additional parking hubs at suitable locations accessible through short haul flights.
- Promote collaboration between original equipment manufacturers (OEMs), industry and educational institutes to teach latest concepts of aviation industry.
- Promoting air cargo growth through "Fly-from-India" that is the creation of transshipment hubs.
- Develop an integrated digital supply chain or e-cargo gateway based on the **National Air Cargo Community System (NACCS)** platform.
- Ensuring the independence of the Directorate General of Civil Aviation and Prioritizing aviation safety.

Ports, Shipping and Inland Waterways

Objectives

- Double the share of freight transported by coastal shipping and inland waterways from 6% in 2016-17 to 12% by 2025.
- Increase the port handling capacity to 2,500 Million Metric Tonnes (MMT) by 2022-23.
- Reduce the turnaround time at major ports from about 3.44 days to 1-2 days (global average) by 2022-23.

Current Situation

- India has a coastline spanning about 7,500 km, forming one of the biggest peninsulas in the world and majority of Indian external trade by volume and by value are handled by ports. Yet, roads and railways continue to be the dominant mode for cargo movement.
- The total capacity utilization of Indian ports stands at 52.44 %.
- The Ministry of Shipping's Sagarmala program focuses on modernizing and developing ports, enhancing port connectivity, etc.
- Inland Water Transport (IWT) carries less than 2 per cent of India's organized freight traffic and negligible passenger traffic.

Constraints

- Lack of capability to handle large container vessels due to inadequate depth.
- Weak hinterland connectivity between production centers and gateway ports often leads to higher costs and delays.
- The cost of capital is very high and makes IWT freight uncompetitive.
- States' Ferries Acts from various years govern cross ferry movement and this may present a barrier to inland navigation.

Way Forward

- The government needs to open up the dredging market to attract international players in dredging activities to increase and maintain draft depth at ports to attract large vessels and enable them to become hub ports.
- Expedite the completion of various projects under Sagarmala, setting up coastal economic zones (CEZs) and establishing new ports.
- Drawing lessons from successful global ports such as Rotterdam, Felixstowe and Singapore to improve efficiency.
- The new **Merchant Shipping Bill** needs to be enacted at the earliest to promote the ease of doing business, transparency and effective delivery of services
- Enhance last mile connectivity to inland waterways by integrating multimodal and intermodal connectivity.

- Financing for inland vessels could be made part of priority sector lending by banks.
- Categorizing inland vessels as infrastructure equipment will ease access to capital for a sector where capital investments and operational costs are high.

Logistics

Objectives

- Reducing the logistics cost from 14% of its GDP to less than 10%.
- Expand the logistics market to USD215 billion by 2020 from the current level of USD160 billion.
- Improving logistics skills and increase jobs in the sector to 40 million by 2022-23 from about 22 million in 2016.
- Reducing border compliance time to 24 hours for exports and to 48 hours for imports by 2020 as approved by National Trade Facilitation Action Plan.

Current Situation

- Existing logistics costs in India are high relative to other countries.
- Recognizing importance for exports and growth, the government has included logistics in the harmonized master list of the infrastructure subsector.
- India is placed at 66th out of 137 countries in infrastructure in World Economic Forum's Global Competitiveness Index (GCI) 2017-18 and at 146 out of 190 in World Bank's Ease of Doing Business.

Constraints

- Cost of logistics is high due to challenges in accessing finance, underdeveloped infrastructure, and poor connectivity.
- Logistic sector is burdened by too many regulators which often lead to duplication of processes.
- Movement of goods across modes suffers from the absence of last mile connectivity and infrastructure.

Way Forward

- Rationalize tariffs and determine prices in an efficient manner across different modes.
- Creating an overarching body that maintains a repository of all transport data.
- Setting up multimodal logistics parks will help in addressing issues related to underdeveloped infrastructure, an unfavorable modal mix and connectivity.
- Allowing private players to operate in **Container Corporation of India's (CONCOR)** port terminals which will help utilize the infrastructure better.

- Gradual implementation of the international standards especially in operations, and adopting global benchmarks on unit load devices such as containers and pallets.

Digital Connectivity

Objective

Digital connectivity is vital to Indian economic growth and there is a need to eliminate digital divide by 2022-23, whereby India looks to achieve:

- Physical digital connectivity across all states, districts and gram panchayats (GPs).
- Delivery of government services digitally by 2022-23.
- Hundred per cent basic digital literacy across the country to be able to leverage the benefits of digitization.

Current Situation

- According to the Internet Trends 2017 report - 27% of Indian population uses internet.
- Indian government has multiple schemes running to help realize its vision of Digital India such as Digital India Scheme (2015), BharatNet and National Information Infrastructure etc.
- The government has also launched the Public Internet Access Program to make common service centers (CSCs) operational at the gram panchayat level to deliver government services online.
- The government has identified 55,619 villages with no mobile coverage. Most of which are in the North-Eastern states.

Constraints

- Internet access is plagued by issues related to quality and reliability, outages, call drops and weak signals.
- Scarcity of content in Indian languages as most of the content on internet is in English.
- A large number of e-services are not available on digital platform requiring citizens to physically visit government offices.
- The regulatory framework for cyber security is inadequate; hacking and denial-of-service attacks have often led to disruption of services.

Way Forward

- TRAI should put in place a credible system to track call drops, weak signals and outages to ensure the quality and reliability of telecom services.
- Adequate spectrum availability is critical to ensure service quality. Efficient spectrum

allocation in large contiguous blocks should be explored.

- The National Digital Literacy Mission should focus on introducing digital literacy at all levels in all government schools.
- State governments should pay special attention to creating content, particularly those relating to government e-services, in Indian regional languages.
- Ministry of electronics and information technology needs to evolve a comprehensive cyber security framework for data security, safe digital transactions and complaint redressal.

Smart Cities for Urban Transformation

Objective

- Drive job creation and economic growth.
- Significantly improve efficiencies in service delivery.
- Leverage technology for inclusive, sustainable and participatory development by 2022-23.

Current Situation

Smart Cities is an approach to urban development characterized by area-based development, efficient delivery of basic infrastructure and services in an equitable manner and citizens' participation.

The Government of India has selected 100 cities with an outlay of INR 2.04 lakh crore to develop and transform into smart cities.

Constraints

- Unavailability of digital master plan or a digital strategy and roadmap.
- Data-driven decision making for service delivery and resource sustainability.
- Non-availability of skilled human resources to handle various functional domains.
- Financing smart cities and financial sustainability of ULBs would pose a serious challenge.

Way Forward

- India should mainstream the resilient cities approach which should also be in line with the 11th Sustainable Development Goal (SDG)
- Environment sustainability should be recognized as a distinct goal and be measured as part of service levels.
- Data observatories should be developed in urban centers which should serve as a

decision support mechanism for policy makers and to engage citizens.

- Single-window facility should be created for the urban poor to access basic services such as water supply, drainage and sewerage, and affordable housing in the form of dormitory and rental housing.

Swachh Bharat Mission

Objectives

- Making India Open Defecation Free (ODF) by October 2, 2019.
- Carrying out extensive information, education and communication (IEC) and behavior change campaigns to change the attitude of people regarding healthy sanitation practices.
- Ensuring scientific solid and liquid waste management.
- Creating an enabling environment for private sector participation.
- Eradicating manual scavenging.

Current Situation

- Water and Sanitation related diseases continue to remain among the major causes of death among children under five years.
- In India, the under-five mortality rate is 50 per thousand live births as compared to the global average of 41.
- Lack of sanitation facilities leads to groundwater contamination and pathogen contamination leads to diarrhoeal diseases, resulting in malnutrition, stunting and death.
- The Swachh Bharat mission has resulted in achieving 81% sanitation coverage which was only 39% in 2011 census.

Constraints

- Sustaining the change in behavior patterns among people
- Continued unwillingness of urban local bodies (ULBs) to levy user charges.
- Inadequate infrastructure for collection, transportation and processing of segregated waste.
- Lack of credit from financial institutions for solid and liquid waste management projects.
- Discharge of untreated effluent into rivers.

Way Forward

- The concept of Swachhata needs to be integrated into hospitals, government offices

and other public establishments.

- Plan intensive behavior change communication (BCC) and inter-personal communication (IPC) campaigns beyond the SBM target year of 2019.
- BCC should lay greater emphasis on encouraging people to segregate waste into wet, dry and hazardous waste right at the point of waste generation
- Children should be made aware of sustainable waste management practices through suitable changes in the school syllabus; engaging in college campuses etc.
- Adopt the wider use of twin-pit toilets. It is a low-cost technology that decomposes waste into bio-fertilizer.
- Expenditure on bio-toilets/bio-digesters may be considered for concession from the goods and services tax (GST) to encourage large-scale adoption.
- ULBs should be nudged to charge adequate user charges for collection and disposal of waste and maintenance of toilets.

Water Resources

Objective

By 2022-23, India's water resources management strategy should facilitate water security to ensure adequate availability of water for life, agriculture, economic development, ecology and environment.

- Provide adequate and safe drinking water (piped) and water for sanitation for citizens and livestock.
- Provide irrigation to all farms (Har Khet Ko Pani) with improved on-farm water-use efficiency (more crop per drop).
- Ensure Aviral and Nirmal Dhara in the Ganga and other rivers along with their tributaries.
- Create additional water storage capacity to ensure full utilization of the utilizable surface water resources potential of 690 billion cubic meters (bcm).

Current Situation

- Main source of water in India is precipitation which brings about 4000 BCM of water of which 53.4% is lost due to evapo-transpiration.
- The available utilizable water resource potential is 1137 bcm, comprising 690 bcm of surface water and 447 bcm of ground water.
- According to Central Water Commission water availability in the country has decreased from 1816 cubic meters (cu m) in 2001 to 1544 cu m in 2011.

Constraints

- There is a huge gap between the irrigation potential created (112.5 million ha in 2012) and the irrigation potential utilized (89.3 million ha in 2012).
- The Easement Act, 1882, which grants groundwater ownership rights to the landowner, is one of the reasons for water over-use and depletion of groundwater levels.
- The subsidized pricing of water in various states has resulted in non-revenue water and a sharp decline in groundwater levels in all states.
- The sustainability of the source and growing contamination of ground water in newer areas are constraints in ensuring safe drinking water supply in rural and urban areas.

Way Forward

- The National Mission for Clean Ganga should coordinate with the Ministry of Drinking Water, Supply and Sanitation for solid and liquid waste management.
- Incentivize the wider adoption of sprinkler and drip irrigation by diverting resources otherwise used to subsidize power and surface irrigation.
- Special emphasis should be laid on desilting of water bodies, including river, lakes, ponds and reservoirs.
- With the country generating 140 bcm of wastewater annually, a pilot scheme to irrigate 10 lakh ha with treated waste water by 2020 may initially be taken up.
- Participatory aquifer management initiated in the 12th Plan National Aquifer Management (NAQUIM) under PMKSY should be strengthened through a network of partnerships to control unbridled, competitive extraction of groundwater.
- Promote the use of solar pumps to improve the utilization of groundwater in Eastern India where utilization is hampered by the lack of power.
- The MoWR should develop specific strategies to tap water through watershed development (check dams) in rain-fed areas.
- States should ensure effective implementation of the rain water harvesting structures for buildings.
- A water regulatory framework should be established for water resources in all states.
- An action plan should be drawn up to improve water use efficiency (with 2017 as the base year) by 20 per cent in all sectors by 2022.

Sustainable Environment

Objective

- Bringing down PM2.5 levels in Indian cities to less than 50.
- Creating 175 GW of renewable energy generation capacity.
- Effectively implementing the Solid Waste Management Rules, 2016.
- Increasing the forest cover to 33.3 per cent of the geographical area, as envisaged in

the National Forest Policy, 1988.

Current Situation

- Indian cities face a high risk of air pollution due to rapid industrialization high urbanization, increased use of vehicles, uncontrolled burning of crop residue and emissions from coal power plants and brick kilns, etc.
- At present, forest and tree cover occupies about one-fourth of the total geographical area in our country.
- Country produces 62 million tonnes of waste approximately annually of which only 22-28% is processed and treated.

Constraint

- A major contributor to air pollution is the practice of burning crop residue, particularly in North India. Convincing farmers to discontinue the practice would be a big challenge.
- Lack of awareness of the ill effects of pollution impedes efforts to control pollution.
- 'Polluters should pay for the pollution' principle is not effectively implemented.
- Agro-forestry is hampered by regulatory restrictions.

Way Forward

Crop residue burning

- Extend financial support to farmers in the short term for in-situ treatment of paddy-straw/non burning of crop residue.
- Create a "Clean Air Impact Fund" to provide viability gap funding (VGF) for projects with long gestation periods and low returns on investment such as bio-power or bio-ethanol projects.

Solid waste management and air, water and soil pollution

- A task force should be set up to study and implement measures to control pollution from brick kilns.
- Sewage treatment plants of adequate capacity should be installed at suitable locations to make rivers pollution free.
- The use of bio-digester toilets, a technology licensed by the Defense Research and Development Organization (DRDO), may be expeditiously considered for nationwide implementation.
- Introduce an eco-labeling scheme to promote the sale of products made out of waste.

Forest management

- Afforestation should be promoted aggressively through joint forest management (peoples' participation) and the involvement of the private sector.
- Public land available along railway tracks, highways, canals, etc., should be used for greening India.

Climate change

- Access to low cost finance especially through the Green Climate Fund should be encouraged
- New national missions on wind energy, waste-to-energy and coastal areas should be developed.
- Use the **National Adaptation Fund for Climate Change** and other global funds for strengthening resilience against climate change in sectors like agriculture, forestry, infrastructure and others.

Chapter 3: INCLUSION

School Education

Objective

- Hundred per cent enrolment and retention at elementary education and secondary education levels.
- Equitable participation by all society segments, in terms of attendance, retention and years of schooling to ensure maximum social inclusion.
- Creating a robust framework for tracking individual students across their schooling years that incorporates data on their learning outcomes.

Current Situation

- The ASER surveys estimate that national attendance in primary and upper primary schools is 71.4 per cent and 73.2 per cent respectively.
- Despite increasing access, enrolment in government primary schools declined by 2.31 crores in absolute numbers from 2007-08 to 2015-16.

Constraints

- Disproportionate focus on school infrastructure as opposed to learning outcomes.
- Challenges in governance and monitoring mechanisms for learning outcomes.
- Accountability systems in government schools.
- Inadequate teacher training, large number of teaching vacancies and rampant

absenteeism.

- Limited options for vocational education in the school system.

Way Forward

- Government spending on education as a whole should increase to at least 6 per cent of GDP by 2022 which stands at 3 % and according to World Bank world's average is 4.7%.
- Robust mechanisms should be formulated to enforce regulations on teacher qualifications, teacher absenteeism and learning outcomes.
- An electronic national educational registry may be conceptualized for tracking each child's learning outcomes based on CCE and final exams through a unique ID.
- Improving the quality of teaching is an integral aspect of improvement in school education.
- Life skills, including coping with failure/crises and stress management, should be included as part of the school curriculum.

Higher Education

Objective

- Increasing gross enrolment ratio (GER) in higher education from 25 per cent in 2016-17 to 35 per cent by 2022-23.
- Make higher education more inclusive for the most vulnerable groups.
- Create an enabling ecosystem to enhance the spirit of research and innovation.
- Improve employability of students completing their higher education.

Current Situation

- The number of university-level institutions has grown by about 25 per cent and the number of colleges by about 13 per cent in the last five years.
- India's higher education GER (calculated for the age group, 18-23 years) increased from 11.5% in 2005-06 to 25.2% in 2016-17 but it is significantly less than the global average of 33%.
- Very few Indian institutions due to quality, feature in the top 200 in world rankings.

Constraints

- Outdated curriculum results in a mismatch between education and job market requirements.
- Quality assurance or accreditation mechanisms are inadequate.
- There is no policy framework for participation of foreign universities in higher

education.

- There is no overarching funding body to promote and encourage research and innovation.

Way Forward

- Ensuring effective coordination of different higher education regulators, such as UGC, All India Council for Technical Education (AICTE) and National Council for Teacher Education (NCTE).
- Create a framework to allow foreign universities of global repute to operate in India and collaborate with Indian universities and offer joint degrees.
- Domain experts in their field should develop basic minimum standard in curriculum that will serve as a benchmark for institutions at the undergraduate and post-graduate levels.
- Post-secondary career options should be provided through skills/vocational training that should be integrated seamlessly with higher education and the skilling mission.
- Reforming accreditation framework as accreditation coverage in nation is inadequate.
- Quality teaching skills are in short supply across disciplines. A central scheme may be launched to attract teachers of Indian origin.
- The scope of Massive Open Online Course (MOOCs) and Open and Distance Learning (ODL) can be broadened, to tap their potential to provide access to quality education beyond geographical boundaries.

Teacher Education and Training

Objective

- Enforcing minimum teacher standards through rigorous teacher eligibility tests and criteria for the induction of teachers.
- Improving in-service teacher training system.
- Increasing teacher accountability for learning outcomes of students.
- Addressing the problem of teacher vacancies and teacher absenteeism.

Current Situation

- The National Council for Teacher Education (NCTE) is the regulator for teacher education in the country.
- Inadequate accreditation and grading process followed by NCTE has resulted in bad quality of teachers at primary and higher educational level.
- There is a vacancy of 9 lakh teachers in schools, of which 4.2 lakh teacher vacancies are in SSA schools.
- Thirty-three per cent of schools do not meet the pupil-teacher ratio. Ironically, despite

the overall shortage of teachers, there is a surplus of 2.91 lakh teachers across the country because of an imbalance in regional demand-supply.

Constraints

- There is insufficient regulatory monitoring of teacher education institutions.
- Test eligibility test in some states are not adequately robust.
- There are inadequate in-service training programs as well as lack of public funding support.

Way Forward

- A committee should be set up to develop transparent/objective and rigorous criteria to recognize institutions.
- Fraudulent or dysfunctional teacher education institutions should be closed as soon as possible.
- In-service teacher professional development programs should be redesigned with continuous progressive development such as peer-learning, demonstration classes, sabbaticals for research/advanced studies etc.
- **The Pt. Madan Mohan Malviya National Mission for Teachers & Teaching**, which seeks to “build a strong professional cadre of teachers”, should be taken up in mission mode.
- A national electronic teacher registry should be setup to bring together employers and job aspirants in this sector.
- States should test teachers tri-annually on the same test designed for the children they are teaching which will ensure competency of the teacher.
- The Teacher Eligibility Test (TET) across states should be strengthened as per central TET through standardization of results, quality benchmarking of testing-items and extending the TET for teachers at pre-school and classes at 9-12 levels.
- Each state must develop a teacher-demand forecast model for all levels, starting from elementary to higher education based on which new training institutions can be instituted.

Skill Development

Objective

- India needs to build the capacity and infrastructure for skilling/reskilling/up-skilling existing and new entrants to the labor force.
- Increase the proportion of formally skilled labor from the current 5.4 per cent¹ of India’s workforce to at least 15 per cent.

- Developing internationally compliant National Occupation Standards (NOS) and the Qualification Packs (QP) that define a job role.
- Making all training compliant with the **National Skills Qualification Framework (NSQF)**.

Current Situation

- More than 54 per cent of India's population is below 25 years of age and 62 per cent of India's population is aged between 15 and 59 years, this demographic dividend for India is expected to last for the next 25 years.
- India has the opportunity to supply skilled labor globally and become the world's skill capital.
- To realize the potential of its huge youth population government has launched many schemes and programs such as National Skill Development Mission, Skill India scheme.
- Sector skill councils (SSCs) have been involved in curriculum up-gradation/preparation, and in the assessment and certification process, with courses aligned to NSDF.
- **Recognition of prior learning (RPL)** has been introduced to ensure certification of and bridge training for the existing work force.

Constraints

- The India Skill Report 2018 states that only 47 per cent of those coming out of higher educational institutions are employable.
- Vocational training is not an aspirational choice.
- Involving industry for improved quality and relevance – scaling up the apprenticeship program.
- Integrating the informal sector into the skill development ecosystem.

Way Forward

- Skill development plans and strategies should be developed by geography and sector by mapping the availability of infrastructure and on the basis of assessing skill requirements at the national and state levels.
- Industry stakeholders must be incentivized to provide data on their skill requirements which could be used as input for the skill requirement assessment made at different levels.
- Capacities of teacher training institutes need to be upgraded to ensure the availability of qualified trainers along with cross learning by teachers and industry experts.
- There is a need to create awareness about recent amendments in the Apprenticeship Act, 1961, and about the National Apprenticeship Promotion Scheme (NAPS) among different stakeholders.

- Facilitate the integration of the micro, small & medium enterprises (MSME) sector into the apprenticeship system by linking it to MUDRA scheme.
- Alternative financial sources such as Corporate Social Responsibility (CSR) funds, Compensatory Afforestation Fund Management and Planning Authority (CAMPA) funds should be tapped to expand the skill program and contribute to national skill development fund.
- NSDC may get into partnerships with private jobs counseling agencies for helping newly skilled persons with soft skills and adapting to local conditions.

Public Health Management and Action

Objective

- Mobilize public health action through an integrated, inter-sectoral and pan-stakeholder approach.
- Operationalize vital enablers - a) public health and management cadre, b) public health agency with capacitated supporting institutions (c) municipalities and panchayati raj institutions.

Current Situation

- India accounted for only 18% of the global population in 2016, but it accounts for 34% of the global tuberculosis burden and 26 per cent of the premature mortality due to diarrhoea, lower respiratory and other infectious diseases.
- A poor health system results in increased burden of non-communicable disease which can easily be prevented and stopped at early stage.
- The government has taken several steps to strengthen public health such as Mission Indradhanush and Intensified Mission Indradhanush as well as the National AYUSH Mission.

Constraints

- The large burden of NCDs requires lifestyle and community-level interventions necessitating concerted interventions at various levels of the system.
- The following preventable risk factors are causes for a major proportion of diseases in the country: maternal and child malnutrition, air pollution, unhealthy diets, high blood pressure, high blood glucose etc.
- There is no single authority responsible for public health that is legally empowered to enforce compliance from other public authorities and citizens.

Way Forward

- Public funding on health should be increased to at least 2.5 per cent of GDP as envisaged in the National Health Policy, 2017
- Make the practice of yoga a regular activity in all schools through certified instructors.
- Strengthen the Village Health Sanitation and Nutrition Day platform to cover a broader set of health issues across various population groups instead of only focusing on child health.
- Incentivize state governments to invest in creating a dedicated cadre for public health at the state, district and block levels.
- Create a designated and autonomous focal agency to perform the functions of disease surveillance, maintenance of national health statistics, enforcement of public health regulations etc.
- Redefine the role of the technical directorate (Directorate General of Health Services) and create a Directorate of Public Health.

Comprehensive Primary Health Care

Objective

- Provide quality ambulatory services for an inclusive package of diagnostic, curative, rehabilitative and palliative care, close to the people.
- Deliver preventive and promotion services, and action on the ground to tackle determinants of ill health locally.

Current Situation

- India, primary care infrastructure largely prioritized around reproductive, maternal and child healthcare, and some communicable diseases.
- The National Health Policy (NHP), 2017, envisages comprehensive primary health care delivered through Health and Wellness Centers (HWCs).

Constraints

- The existing primary health care model in the country is limited in scope representing only 15 per cent of all morbidities for which people seek care.
- Supply side deficiencies, poor management skills and lack of appropriate training prevent delivery of the desired quality of health services.
- Funding for health is inadequate on primary care.
- Citizens have to incur high out-of-pocket expenditure on primary health care, of which the largest expenditure is on drugs.
- There is a shortage of adequately trained and motivated personnel.

Way Forward

- Accelerate the establishment of a network of 150,000 HWCs to ensure sufficient coverage of affordable primary care and lower the burden on secondary and tertiary care.
- Mobilize Corporate Social Responsibility (CSR) and Non-Resident Indians for funding HWCs.
- Coordinate action for disease prevention and public health promotion and to address social determinants of health.
- Undertake a well-funded research program to find the best pathways for effective and context-specific scaling up of primary health care.
- Develop urban adaptations of comprehensive primary care.

Human Resources for Health

Objective

- Achieve a doctor-population ratio of at least 1:1400 (WHO norm 1:1000) and nurse population ratio of at least 1:500 (WHO norm 1:400) by 2022-23.
- Ensure availability of paramedics and doctors as per Indian Public Health Standard (IPHS) norms in high priority districts by 2020.
- Generate at least 1.5 million jobs in the public health sector by 2022-23, a large number of which will employ women.

Current Situation

- India's Doctor-population ratio stands at 1:1613 and current Nurse-population ratio at 1:588.
- The distribution of doctors and nurses across the country is uneven. Urban areas have four times as many doctors and three times as many nurses as compared to rural areas.
- There are also severe shortages in the category of allied health professionals (AHPs) including medical lab technicians, optometrists and radiologists.
- Passage of the National Medical Commission (NMC) Bill, 2017 by the Union Cabinet, addition of 15,364 undergraduate and 9,855 postgraduate seats in medical colleges increasing the superannuation age of doctors to 65 are some steps taken by govt. to address the issue of shortage of HR in healthcare sector.

Constraints

- The regulatory system (Medical Council of India, Nursing Council of India) has failed to ensure adequate availability and quality of health professionals.

- Many state and private medical/nursing/dental colleges have poor infrastructure.
- Health professionals in the public sector are inadequately compensated and motivation levels are extremely poor.

Way Forward

- Enacting the NMC Bill, 2017 and revamping the AYUSH, nursing, dentistry and pharmacy councils along the lines of the NMC Bill, 2017.
- Establish a nursing school in every large district or cluster of districts with a population of 20-30 lakhs as per the National Health Policy, 2017.
- Create pathways for training of doctors in specialties and super-specialties at private hospitals (certification, short courses, exchange programs, etc.)
- An enabling framework for deployment of doctors and specialists from the private sector to government hospitals on a visiting/honorary basis may be developed and piloted.
- Create a cadre of primary healthcare practitioners by introducing a three-year competency-based dynamic course for primary, community and family medicine.
- Partner with private hospitals to skill technicians, nursing and para-nursing under the National Skill Development Corporation's Healthcare Sector Skill Council.

Universal Health Coverage

Objective

- Attain coverage of at least 75 per cent of the population with publicly financed health insurance by 2022-23.
- Reduce by 50 per cent the proportion of households facing catastrophic health expenditure from the current levels.

Current Situation

- The mixed health system is largely dominated by the private sector, which provides services at widely varying costs and quality levels.
- Public funding of health has been consistently low in India (approximately 1.3 per cent of GDP) resulting in huge Out of pocket expenditure.
- Despite India being one of the largest suppliers of generic drugs to the world, a significant proportion of the country's population lacks access to essential medicines.
- The Pradhan Mantri Bhartiya Janaushadhi Pariyojana provides cheaper drugs.

Constraints

- There has been inadequate focus on comprehensive preventive care and primary care

in the past.

- The multiplicity of government-sponsored insurance schemes has resulted in the fragmentation of the risk pool.
- Since outpatient care, drugs and diagnostics are not covered under several government insurance schemes, people often delay seeking care until they are severely ill.
- The prices of diagnostic tests can vary widely across the country. For example, a lipid profile test can cost Rs. 90 in some cities, going up to Rs. 7,110 in others.

Way Forward

- Establish the Ayushman Bharat-National Health Agency at the central level and counterpart institutions at the state and district levels for management of the PM-JAY.
- Develop a robust, modular, scalable and interoperable IT platform to enable paperless and cashless transactions under the scheme.
- Provide greater autonomy to public hospitals to use claims money generated under PM-JAY to improve facilities, purchase the necessary drugs/tests and provide performance-based incentives to staff.
- Institute a new Drug Price Control Order (DPCO), which ensures rational drug prices by reducing trade margins.
- Finalize the national pharmaceutical policy to enable access to affordable medicines, promote the use of generic drugs, and clamp down on unfair marketing practices.
- Formulate and implement the e-pharmacy policy to facilitate online access to quality medicines in a cost-effective and timely manner.
- Introduce a separate Act for medical devices as per global best practices, so that medical devices are regulated separately from pharmaceuticals.
- Identify at least 20 academic or research institutions at the regional level to act as hubs capable of training a minimum of 500 doctors every year.
- Cover the entire country with a network of viral research and diagnostic laboratories with a testing capacity of more than 15 lakh samples per year.

Nutrition

Objective

Under POSHAN Abhiyaan, achieve the following outcomes by 2022-23:

- Reduce the prevalence of stunting among children to 25 per cent or less.
- Reduce the prevalence of underweight in children (0-6 years) to 25 per cent or less.
- Reduce the prevalence of anaemia among young children (6-59 months) to 43 per cent or less.
- Reduce the prevalence of anaemia among adolescent girls and women (15-49 years)

to 38 per cent or less.

Current Situations

- A World Bank estimate indicates that reducing stunting can raise India's GDP by 4-11 per cent.
- According to National Family Health Survey-4 (NFHS-4), 2015-16, over one-third of all under-five children are stunted, every fifth child is wasted, and more than 50 per cent of the children are anaemic.
- India is fighting the rising menace of 'over-nutrition' as one fifth of India's adults are either obese or overweight as per NFHS-4 data, leading to an increased risk of diabetes and cardiovascular disorders.

Constraints

- The underlying causes of malnutrition are multifaceted and rooted in economic and social factors like low levels of female literacy, lack of access to clean drinking water and sanitation.
- The design of the ICDS program has an important limitation – its focus on the first 1000 days of the child's life is inadequate.
- The ICDS program is beset with persistent challenges such as shortage of staff and field workers, poor monitoring, instances of food pilferage and poor quality of services.

Way Forward

Address policy and governance issues

- Provide greater flexibility to states to adapt programs for context-specific implementation and to experiment with innovative approaches to attain high coverage, quality, equity and better outcomes.
- Establish an institutional mechanism, outside the government, to conduct independent annual audits of the program to achieve implementation improvements.

Ensure convergent action at all levels

- Develop and implement Annual Integrated Health, Nutrition and Swachh Bharat Mission (SBM) action plans for all districts under the POSHAN Abhiyaan.
- Implement mission mode action in districts with a high burden of malnutrition under POSHAN Abhiyaan

Refine program interventions

- Replace the food-centric approach with more broad-based action that includes healthcare measures birth spacing, delaying age of marriage, exclusive breastfeeding for 6 months, and adequate access to complementary food interventions.
- Focus on immunization including Rota Virus and Pneumococcal Vaccines; target the vaccines preferentially to high focus districts.

Fortification

- Consider mandatory fortification of staples produced in the organized sector and provide incentives to the industry.
- Incorporate fortified food grains within government programs such as ICDS, mid-day meal scheme, and PDS.

Scale-up nutrition MIS and strengthen monitoring mechanisms

Undertake joint health and nutrition reviews in the field as a standard practice.

Make 'POSHAN Abhiyaan' a Jan Andolan

- Make POSHAN Abhiyaan a community-led movement with adequate political backing.
- Develop behavioral change communication modules and ensure its use by all frontline workers.

Galvanize the National Anaemia Control Program

Implement the revised strategy for the anaemia control program based on evidence; incorporate home, community, school and facility level action.

Gender

Objective

- To create an enabling environment without institutional and structural barriers.
- To enhance the female labor force participation rate to at least 30 per cent by 2022-23.

Current Situation

- There has been a decline in female labor force participation rate (LFPR) despite increasing levels of education and declining fertility rates.
- The current female LFPR is 23.7 per cent (26.7 per cent in rural areas and 16.2 per cent in urban areas).
- On average, 66 per cent of women's work in India is unpaid, compared to 12 per cent

of men's.

- The government has launched some initiatives to promote gender equality and welfare such as **Beti Bachao, Beti Padhao** campaign, **the Maternity Benefit (Amendment) Act, 2017, Pradhan Mantri Matru Vandana Yojana, POSHAN Abhiyaan and the Pradhan Mantri Ujjwala Yojana.**

Constraints

- Constraints of workplace distance, inflexibility in working hours, lack of availability of crèches, safety etc., deter women from participating in economic activities.
- The absence of opportunities for part-time work and challenges surrounding re-entry into the workforce further worsen the situation.
- Women's work comprises mostly of invisible/unpaid work.

Way Forward

- Craft legislations for women engaged in the unorganized sector to ensure at least a minimum set of gender-sensitive provisions such as access to privacy, minimum wages, maternity benefits, leave and grievance redressal.
- Reward villages/districts with an equal child sex ratio through information, education, and communication (IEC) campaigns.
- Generate gender-disaggregated data and rank states on key indicators.
- Create policies and guidelines, on priority, to enhance access to credit by women entrepreneurs; provide facilitated credit access pathways for single women, women's self-help groups.
- Prioritize groups of women farmers seeking to lease land, water bodies, etc., at the village panchayat level.
- Specially focus on skill development among women, particularly for activities such as soil conservation, social forestry, dairy development etc.
- Extending the Post Graduate Indira Gandhi Scholarship for Single Girl Child scheme to families with two girl children.
- Promote skill development among women in non-traditional work such as electronic technicians, electricians, plumbers, taxi drivers etc.
- Ensure mobility, security and safety for all women.

Senior Citizens, Persons with Disability and Transgender Persons

Objective

To ensure a life of dignity, social security and safety for senior citizens, enabling them

to actively participate in economic development and the nation building process.

Current Situation

- India has 10.38 crore senior citizens (60 years and above), with 3.8 crore being above the age of 80 years.
- Senior citizens are expected to rise to 20% of the population by 2050.
- Access to institutional support and specialized medical care is skewed, with most of these concentrated in urban areas.
- The government has taken various steps to ensure benefits to elderly people such as providing them tax benefits, pension scheme- Pradhan Mantri Vaya Vandana Yojana etc.

Constraints

- Poverty and lack of income security makes it difficult to meet even basic needs like food, housing, healthcare, etc., for a large number of senior citizens.
- There is a shortage of well-trained personnel for delivering care giving and other services for senior citizens.

Way Forward

- National policy for older people should be revised; it should cover housing, income security, pension, and access to healthcare.
- Necessary amendments to the Maintenance and Welfare of Parents and Older Persons Act, 2007 should be made.
- Old age home in every district should be made in every district in adherence to some minimum quality standards by 2020.
- Prioritize supply of aids and assistive devices for senior citizens below the poverty line.
- Ensure a barrier-free environment in all public buildings, parks, etc., for the elderly.

Persons with disabilities

Objective

To create opportunities for and empower persons with disabilities (PwDs) to realize their potential and live a productive and dignified life.

Current Situation

- India has a Persons with Disabilities' population of 2.68 crore corresponding to 2.21% of population.

- PwDs today face several challenges, according to the Census 2011, 27 per cent of disabled children between the ages of 5-19 had never attended an educational institution.
- They also tend to be stigmatized and discriminated against and lag behind others with respect to access to basic infrastructure and opportunities for economic participation.

Constraints

- Identification of the disabled population in India has been a major problem.
- There is a lack of appropriately disaggregated data for PwDs generated at regular intervals.
- Disability related issues require multi-sectoral action, which has been difficult to achieve in practice.

Way Forward

- Generate data on PwDs to identify reliable and regular trends for informed policymaking.
- Earmark at least 5 per cent of the total budget of social sector ministries for schemes for PwDs.
- Provide special education training in teacher training courses, give scholarship to disable students making physical environment of school PwDs friendly etc.
- Provide aids and assistive devices to at least 3 lakh beneficiaries every year.
- Integrate the skill development scheme with schemes of the National Trust (e.g., Disha), to address the needs of the intellectually disabled.
- Integrate initiatives of various ministries to provide skill training, soft loans and entrepreneurship opportunities to PwDs.
- Make the Accessible India Campaign a mass movement with the involvement of citizens and civil society.
- Incorporate universal design and accessibility standards in engineering, architecture and computer science studies.

Transgender Persons

Objective

To ensure a life of dignity, social security and safety for transgender persons, enabling them to actively participate in economic development and the nation building process.

Current Situation

- The transgender community is among one of the most marginalized communities in the country.
- As per Census 2011, India has 4.87 lakh transgender persons.

Constraints

- Parliament is yet to pass the Rights of Transgender Persons Bill, 2016.
- Accurate identification of transgender persons is a major challenge.
- The implementation of the “Scheme for Transgender Persons” is suboptimal.

Way Forward

- Provide for identification of transgender persons in all government and non-government records by introducing a separate column to include the third gender.
- Sensitize communities towards the challenges and needs of transgender persons.
- Mandate the provision of housing and community services to accommodate at least 50 per cent of transgender persons.
- Design a scheme for providing skill and employability training to transgender persons to integrate them with mainstream society.

Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Classes (OBCs), Other Tribal Groups and Minorities

Objective

To accelerate the socio-economic development of SCs, STs, OBCs, safai karamcharis as well as De-notified Tribes, Notified Tribes and Semi Nomadic Tribes through focused affirmative action.

Current Situation

- High incidence of poverty and low educational attainment are the two major challenges faced by weaker sections in India.
- Research on SCs and STs suggests that historical inequities among the different segments of India’s workforce have diminished over the last three decades.
- However, there is still a long way to go before the inequities are bridged completely.

Constraints

Problems of isolation, exclusion and occupational subjugation are major obstacles to mainstreaming these social groups in the socio-economic development of the country.

- Resources are distributed thinly among a large number of schemes, especially under the scheduled caste sub-plan (SCSP) and tribal subplan (TSP), instead of among a few targeted schemes.
- There is limited awareness about the schemes resulting in leakages and denial of benefits.

Way Forward

- Establish the National Institute for Tribal Research.
- Earmark funds under all developmental programs for DNTs, SNTs and NTs.
- Put in place mechanisms to regularly monitor the implementation of legislations like the Panchayat (Extension to Scheduled Areas) Act and Forest Rights Act (FRA), 2006.
- Set up a permanent commission for NTs, DNTs and SNTs along the lines of the National Commission for SCs and STs.
- Establish residential schools in uncovered blocks/districts with facilities for vocational training.
- Expand the Stand-Up India scheme to include uncovered social groups like OBCs, DNTs, NTs and SNTs.
- Encourage indigenous tribal medicine alongside other systems to create additional livelihood opportunities.
- Extend habitat rights to Particularly Vulnerable Tribal Groups within the FRA framework.
- Empower marginalized communities by promoting community-owned radio stations.

Minorities

Objective

To bridge the gap between minority communities and the rest of the population with respect to various socio-economic and human development indicators through affirmative action.

Current Situation

- As per Census 2011, of the total population of 121 crore, Hindus constitute 79.8%, Muslims 14.25%, Christians 2.3%, Sikhs 1.7%, Buddhists 0.7% and Jains 0.4%.
- While improvements have been made in various fields religious minorities lag behind on certain indicators pertaining to educational attainment, gender equality and workforce participation.

Constraints

- Data on development indicators for minorities is not generated at regular intervals.
- Some minority communities are also included under SCs, STs and OBCs, which could result in the duplication of schemes for the same set of beneficiaries.

Way Forward

- Enhance pre-matric scholarships, post-matric scholarships, merit-cum-means scholarships, Maulana Azad National Fellowships and National Overseas Scholarships with a 15 per cent increase annually from 2019-20.
- Increase the number of scholarships for girls from minority communities by 10 per cent every year.
- Provide access to public transport in the form of buses and cycles to raise enrolment rates among girls from vulnerable communities.
- Train at least 100,000 minority women under the **Nai Roshni** and **Seekho Aur Kamao** scheme every year.
- Identify the poorest among the minority communities through the Socio-Economic Caste Census data for proper targeting of various schemes.

Chapter 4: GOVERNANCE

Balanced Regional Development: Transforming Aspirational Districts

Objective

Achieve balanced development in India by uplifting 115 districts, currently below the national average in the areas of health and nutrition, education, agriculture and water resources, financial inclusion and skill development, and basic infrastructure.

Current Situation

- The Aspirational Districts Program (ADP) was launched on January 5, 2018, to select backward districts and uplift them.
- These places suffer from poor endowment of physical resources, lack of infrastructure, poor social capital, low standards of health, nutrition, education and skill, poor governance etc.

Constraints

- Governance inadequacy hampers the effective implementation of government schemes

- There is no accountability on the part of either the government or district administrations.
- There is lack of social awareness and community participation in development programs.
- There is lack of competitiveness among districts to improve developmental performance.

Way Forward

- Create a positive narrative of development by making development a mass movement as people are the most valuable resource to improve a district's performance.
- Use data to inform decision-making and spur competition among districts.
- Promote federalism and put in place institutional mechanisms to ensure teamwork between the central, state and district administration.
- Partner with expert organizations with demonstrated technical competence.

The North-East Region

Objective

- Create adequate infrastructure such as road, rail and air connectivity, waterways, internet connectivity and financial inclusion.
- By 2022-23, the region should also be developed for enhanced trade, particularly for the export of products made in the NER, to the Association of Southeast Asian Nations (ASEAN) region and other neighboring countries (Bangladesh, Bhutan and Nepal).

Current Situation

- The NER consists of eight states, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.
- The region accounts for 3.78% of India's population and covers 7.98% of its total geographical area and contributing 2.5% to India's GDP.
- This area is strategically important for India both for its geographical location and the resources found there.
- NER shares about 5,437 km of international boundaries with Bangladesh, Bhutan, China, Myanmar and Nepal.
- The region is rich in coal, limestone, petroleum, natural gas, Uranium etc. some of the states in north east have highest forest cover in the country.

Constraints

- Despite abundant rainfall, the irrigation coverage in this region is less than the

national average of 46.35 per cent.

- The NER offers great attractions for mountaineering, trekking and other tourist activities. However, the tourism industry remains underdeveloped.
- The region remains under developed because of inadequate infrastructure in terms of limited air, rail and road connectivity; Under-utilization of available natural resources; Safety and security related issues.

Way Forward

- Each state should be encouraged to draw up their development blueprint in consultation with the NITI Aayog and the North-East Council (NEC).
- Transit treaties for the NER and its neighboring countries need to be put in place. India should initiate a regional multi-modal transit agreement between the NER and the four neighboring countries.
- UDAN III may be launched. Its international component could connect Guwahati to ASEAN capitals.
- The Government of India and the NER should work together to create an environment to attract more private investment into the region.
- Tourism, particularly eco-tourism and adventure tourism should be promoted by identifying suitable sites and creating supporting infrastructure at these sites through the PPP mode.
- Water management is a major issue in the NER. Early completion of ongoing irrigation projects under the **Accelerated Irrigation Benefits Program** should be accorded high priority.

Legal, Judicial and Police Reforms

Objectives

To ensure the safety and security of citizens and ensure access to effective legal systems and speedy delivery of justice.

Current Situation

- There is massive pendency and capacity issues in Indian courts, which impede access to justice.
- Police reforms are intrinsically linked to judicial reforms which would result in efficient criminal justice dispensation.

Constraints

- The major challenge facing the judiciary is the huge backlog of over 2.7 crore pending

cases.

- Ease of doing business in India is severely constrained by the inability to enforce contracts or laws, lengthy and costly litigation and arbitration processes, and archaic legislations. y. The World Bank “Doing Business Report” 2018 ranks India at 164 in ‘Enforcing Contracts’.
- Police/law and order is a state subject, falling under List II of the Seventh Schedule of the Constitution of India. Our federal structure makes policy reform a rather sticky issue.
- The police to people ratio is significantly lower (137 police personnel per 1, 00,000) against the UN recommended 222 police personnel per 100,000 citizens.

Way Forward

Legal reforms

- Create a repository of all existing central and state laws, rules and regulations
- Repeal redundant laws and introduce a new initiative to remove restrictive clauses in existing laws.
- It is necessary to inculcate respect for the rule of law among citizens. The process should start at the school level by mandatorily introducing innovative programs with well thought out content and activities.
- Continuing legal education in selected areas should be made mandatory for lawyers and judges and rules of professional conduct and ethics need to be drawn up and implemented.
- New laws should be drafted in simple, plain language.

Judicial reforms

- There is a huge backlog of pending cases which is a critical logistical and efficiency issue. A study conducted by finance ministry shows that it takes, on an average, almost 20 years for a property related dispute to be resolved.
- Tribunals should be merged and rationalize to enhance efficiency. Appointments to tribunals must be streamlined through a specialized agency or under the Department of Personnel and Training (DoPT).
- An all-India judicial services examination on a ranking basis can be considered to maintain high standards in the judiciary.
- Multi-faceted training faculty for judicial academies including reputed lawyers, successful NGOs and others, for holistic exposure may be considered.
- Performance index for judges and a separate state wise index for ease of getting justice should be created.
- Videoconferencing facilities can be used to assist in speedy access to justice and to minimize logistical issues.

Police reforms

- **The Model Police Act of 2015** can serve as the basis for legislative reform as it modernizes the mandate of the police, insulates police from political interference and provides for the measurement and tracking of police performance.
- A task force may be created under the Ministry of Home Affairs (MHA) to skill personnel and identify non-core functions that can be outsourced.
- Women participation should be encouraged by MHA to achieve the target of 30% women among the new recruits.
- Integrate the Lokpal and Prevention of Corruption Acts into police reforms to enhance accountability.
- Introduction of remodeled training modules, refresher courses and continuing education for police personnel should be undertaken.
- A separate cadre for exclusively looking into cyber-crimes, cyber threats and fraud needs to be developed.

Civil Services Reforms

Objective

To reform system of recruitment, training and performance evaluation of the civil service to ensure more effective and efficient delivery of public services.

Current Situation

Reforms in civil services are a continuous process and several initiatives have been taken in recent years such as introduction of a multi-stakeholder feedback (MSF) performance evaluation, dispensing with interviews for lower level positions, introduction of online mechanisms for appraisals and filing of various returns by employees, implementation of e-office etc.

Constraints

- There is a mismatch between positions and skill sets. Recruitment is not competency specific and often, the right person is not placed in the right job.
- As the complexity of the economy increases, policymaking becomes a specialized activity. Opposition to lateral entry therefore hinders the development process.
- Attracting talent and nurturing excellence, ensuring transparency and accountability along with participatory and representative decision-making are also few of the challenges.

Way Forward

Recruitment

- Objectivity in the recruitment should be increased and elements of arbitrariness should be eliminated.
- Lateral entry should be encouraged in higher levels of government which requires higher expertise.
- Young officers should be assigned mentors having similar functional specialization or with high-quality NGOs for values and soft skill mentorship.
- The upper age limit for the civil services should be brought down to 27 years for the general category in a phased manner by 2022-23.
- Efforts need to be made to outsource service delivery to reduce dependence on the administrative machinery.

Training

- Training system needs to be reoriented to focus more on managing urban areas as economic gravities are shifting towards cities.
- Mid-career exams/skill assessment might be undertaken to evaluate and decide on future postings.

Evaluation

- Annual Confidential Reports can be replaced by Multi Stake Holder Feedback. It is important for MSF to be online to retain transparency and accountability.
- New schemes of incentives for extraordinary performance should be introduced.
- Develop benchmarks to assess the performance of officers and compulsorily retire those deemed unable to meet the benchmarks.

Governance

- A citizen centric framework needs to be devised by improving people's access to information through the use of Information and communication technology and RTI.
- The capabilities and knowledge base of central public information officers (CPIOs), appellate authorities (AAs) and information commissions need to be upgraded in order to save them from any external influences.
- Effective system of checks and balances needs to be created to ensure that officers are given their due process and are not vulnerable to vested interests and political pressures.

E-initiatives and Probity

- Strengthen institutional mechanisms for prevention and detection of corruption by Improving transparency in recruitment, placement and training; Reviewing

performance of officers based on probity etc.

- E-Office should be created in all ministries/ departments; all states/UTs may also be encouraged to adopt it.
- Every department should simplify their processes to cut administrative delays and ensure participatory feedback mechanisms for efficient service delivery.

Modernizing City Governance for Urban Transformation

Objective

To transform our cities into economically vibrant and environmentally sustainable habitats that provides equitable access to basic infrastructure, public services and opportunities to all citizens.

Current Situation

- India's growing urbanizing needs requires sustainable infrastructure and services for a better quality of life, which can be ensured through modern urban governance which is a key enabler for urban transformation.
- The government has undertaken various initiatives-
 - Tourism (HRIDAY - Heritage City Development and Augmentation Yojana),
 - Infrastructure (Housing for All, Smart Cities Mission, AMRUT - Atal Mission for Rejuvenation and Urban Transformation)
 - Sanitation (Swachh Bharat Mission)

Constraints

- The absence of a modern spatial planning framework, public utility design standards takes a huge toll on economic growth, environmental sustainability and living conditions in the cities.
- There is lack of human resource capacities in the urban sphere at all levels. The municipalities are heavily under-staffed along with required skill gap.
- ULBs (urban local bodies) always struggle with financial crunch mainly due to the narrow, inflexible and non-buoyant tax base; broken financial accounting and audit systems and the inability of municipalities to levy and recover taxes and user charges.
- The distribution of power between elected officials at the city level (mayors and councillors) and central administrative service cadres at the city/ district levels is often a bone of contention with no clear demarcation.

Way Forward

- A city dashboard can be created- capturing city-level investments, GDP and

employment growth, financial position and financial performance encouraging competition among cities.

- There is urgent need for a synchronous and modern national framework for the spatial planning of cities factoring in plan preparation, implementation and enforcement at metropolitan, municipal and ward levels.
- Finances of civic agencies and Urban Local Bodies needs to be strengthened to support high-quality infrastructure and the delivery of services.
- This can be done through fiscal decentralization, innovative models to improve revenue collection, optimizing return on assets especially land and buildings, value capture methods etc.
- The National Skill Development Corporation (NSDC) should be leveraged to improve understanding of municipal jobs including job definitions, technical competencies and key result areas.
- A separate sector skill council for municipal services may be considered.
- Ward committees should activate a technology enabled 'Open Cities Framework' and the use of digital tools for feedback and reporting enhancing trust between citizens and governments.
- ULBs should encourage the participation of all community associations, including settlements of the underprivileged and civil society organizations.

Optimizing the Use of Land Resources

Objectives

- Ensuring that land markets function smoothly, through efficient allocation of land across uses, provision of secure property rights and titles.
- Legalize and ease land leasing.
- Consolidate fragmented plots of farmers to enhance efficiency and equity.
- Create a digitized and integrated land records system that is easily accessible in all states.
- Increase efficiency in the management of forest land.
- Convert waste and fallow land to productive uses.

Current Situation

- India is one of the most land scarce countries in the world. Agriculture accounts for the bulk of land use although the sector contributed only 17.45% to the nation's GDP.
- The total recorded forestland in India is 76.4 million hectares, which is about 23.3 per cent of the total geographical area.
- There is a need to make land available to meet the needs of a fast expanding economy and rising population with a greater thrust on vertical development.

Constraints

- Agricultural tenancy laws passed by various state governments between 1950s and 1970s are highly restrictive discouraging landowners from leasing out land.
- Landholdings in India are small and highly fragmented which not only results in diseconomies of scale, but also makes the task of irrigation management and land improvement difficult.
- Deficient land records and lack of conclusive land title result in costly litigation and adversely affects investment and economic growth.

Way Forward

- Smaller plots of land can be consolidated through pooling to enhance productivity and increase farm incomes.
- Effectively implement the Forest Rights Act (FRA) in all states to strengthen the property rights of forest dwellers, tribal populations and local communities.
- Bring more area under agro forestry using wasteland, non-cultivable fallow lands, etc.
- Encourage trees as a resource for farmers especially by easing restriction on certain species of trees.
- Efforts must be made to update and digitize land records in a user-friendly manner. This will improve real-time information on land, optimize use of land resources, benefit landowners and assist in policy and planning.
- Cultural wastelands, estimated at about 12 million ha, need to be improved and productively utilized as a potential resource.
- Strengthen property rights, plan urbanization and prevent land degradation.
- Prevent land degradation and soil erosion through policies that promote fertilization and organic farming.
- Tools such as land value capture, town planning schemes, and land based taxes like vacant land tax, land value increment tax, etc., can be used to finance rapid and efficient urbanization.

Data Led Governance and Policy Making

Objective

Evidence based policy making should be made integral to the overall governance structure in New India, 2022-23. This would require:

- Improving efficiencies in processes related to existing data collection by government departments and agencies.
- Expanding warehousing facilities for storing and integrating data from different sources.

- Making data available for industry practitioners, academicians, researchers, etc., wherever feasible.
- Integrating data analysis and interactive data visualization into all policy formulation.

Current Situation

- For any large-scale developmental to take place its delivery mechanisms needs to be robust and efficient and requires data for selection, implementation and evaluation of these policies.
- Rapid advancements in technology have led to an explosive growth in the volume of data produced.
- The proprietary access to high value data sources, public services and governance systems in India can better harness the value of this data.
- There is a need for evidence-based policymaking and robust data collection processes in various contexts ranging from health to natural calamities to agriculture.
- The Report of the Dr. Rangarajan Commission in 2001 also acknowledges the increased need for data in the decision-making process.

Constraints

- There is over-reliance on data collection through surveys which are released at a considerable lag diminishing their usefulness in policymaking.
- Large volumes of data collected by different government agencies and departments are not shared. The shared data too is not in machine readable format or cannot be integrated with data from other sources to help develop multi-dimensional insights.
- There is considerable lack of awareness regarding currently available data sources.

Way Forward

- Collecting administrative and survey data in digital format will address the issues related to time lags, data cleansing, etc., associated with surveys to a large extent. This requires adoption of latest technologies that require recording in digital format, geo-tagging etc.
- Ensure availability of data at a more granular level – village/block/district.
- Enable data sharing in real time through Application Programming Interfaces (API) across ministries in a central location for easy access by the public.
- Data integration and quality assurance should be undertaken by states. States should also create Data Repositories.
- A strong data protection regime needs to be formulated for which **Justice Sri Krishna Committee's recommendation** (July 2018) are being considered.
- Tertiary big data should be collected by private third parties for better governance and evidence-based policymaking.

- Government statistical organizations responsible for data collection and reporting need to be updated on new technologies.
- Re-skilling in areas of statistics, analytics, computer science and programming needs to be promoted across government agencies, both at the state level and at the centre.