Power for All – A Dream Coming True

- Access to reliable and affordable energy increases the ease of living and generates employment. It is a prerequisite to digital connectivity in rural India, thereby opening new vistas for the people hitherto unconnected to the outer world.

Power Scenario:

- The past four and a half years, have seen unprecedented pace of infrastructure creation in every segment – be it power generation, transmission or distribution.
- **Availability** - One lakh megawatts of new generation capacity have been added. **Energy deficit** has been brought down from **4.2 per cent to almost zero**. India has become an **exporter of electricity** – exporting electricity to Nepal and Bangladesh.
- **Transmissio**n - In the past four years almost one lakh circuit kilometers have been added to the inter-state transmission capacity.
- Now, for the first time we have **One Nation – One Grid** – the entire network operating on one frequency connect every village.
- **Access to electricity** - A major landmark to universal access to electricity was crossed when India achieved **100 per cent village electrification** in April 2018.
- Most of these villages were located in *remote inaccessible areas with difficult terrain in hilly areas, forest areas, areas severely affected with LWE activities etc. and transportation of material/equipment and mobilization of manpowe*r for execution of works required determination and perseverance.
- In 2762 villages, extending grid network was not feasible due to remote and inaccessible locations **solar based standalone system were provided**.

Schemes:

- To achieve this feat, extensive infrastructure was created **under DDUGJY**. Special focus was on **feeder separation** (rural households and agricultural) and **strengthening of sub-transmission and distribution infrastructure** including metering at all levels in rural areas.
- The next step was to light up every household. The Prime Minister launched the **'Pradhan Mantri Sahaj Bijli Har Ghar Yojana' – Saubhagya** in Sept. 2017 with the aim to achieve universal household electrification.
- The International Energy Agency called India's electrification journey as *one of the greatest success stories of the Year-2018*.
- Government launched **Integrated Power Development Scheme (IPDS)** with an aim to strengthen power infrastructure in urban areas. The focus areas of IPDS are:
    - o Strengthening of sub-transmission and distribution network in the urban areas.
    - o Metering of distribution transformers/feeders/consumers in the urban areas.
    - o IT enablement and automation of distribution sector.
- The huge addition in the consumer base at the rate of one lakh households per day, coupled with growth in the economy has meant that our *electricity demand has been growing at the rate of more than 10 per cent in the past months*.

Addressing Renewable Energy

- India is in the process of **changing its energy mix**. To make our electricity clean and green, it has developed a roadmap to achieve **175 GW capacity in the renewable energy sector by 2022**, which includes 100 GW of solar power and 60 GW of wind power.
- Today, India stands at **5**[th] **position** in the world in installed solar capacity, at **4**[th] **position** in installed wind capacity and at **5**[th] **position in overall renewable energy** (installed capacity).

Steps for Energy Efficiency

- Household LED bulb distribution program **UJALA and SLNP** (**Streetlight National Project**) for replacing conventional streetlights with smart and energy efficient LED street lights have saved billions of unit electricity per year.
- **Star Labeling program**, **Energy Conservation Building Code** and energy efficiency measures through **Perform. Achieve and Trade (PAT)** are also important initiatives in the field of energy efficiency.
- The first cycle of the PAT for industry achieved savings of more than 8.6 million tones of oil equivalent which is almost 1.23 percent of primary energy supply of India.
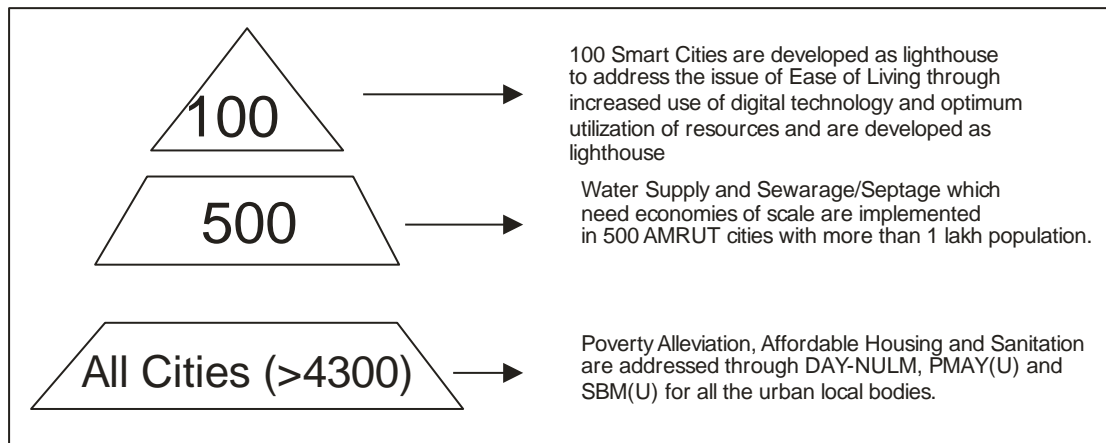
Way Forward:

- A new Tariff Policy is being finalized. This policy makes it mandatory to provide reliable and 24×7 power supply for all from 1st April 2019.
- If a power outage occurs without a valid reason (e.g., for scheduled maintenance or disruption due to natural calamity), the concerned power distribution company (DISCOM) will face penalties.
- Another futuristic area we are working on is – **Smart Electricity Meters**.
- This will revolutionise the power sector by way of **reduced AT & C losses**, **better health of DISCOMs**, **incentivisation of energy conservation and ease of bill payments** etc. Further, it will generate skilled employment for the youth.
- The Government has launched the **National E-Mobility programme** to promote electric vehicles in a big way. Creation of extensive charging infrastructure is a prerequisite for large scale adoption of EVs.
- Our country jumped to **24th rank in 2018 on World Bank's Ease of Getting Electricity in the world** as against 111st rank in 2014.
- This is a quantum leap and shows the result oriented approach.

Multi-Pronged Approach to Urban Transformation

- India's urban population was over 31 per cent in 2011 census. This is expected to rise to 40 per cent by 2030 and 50 per cent by 2050, i.e., it will cross 800 million.
- As per 2011 census, urban India contributed 63 per cent to the GDP; it is projected to grow over 75 per cent by 2030.

Challenges to Urban India

- Poverty alleviation, basic infrastructure like water supply and issue of ease of living are the major challenges
- Therefore, a three-level strategy, as highlighted in following diagram has been envisaged:

100	100 Smart Cities are developed as lighthouse to address the issue of Ease of Living through increased use of digital technology and optimum utilization of resources and are developed as lighthouse
500	Water Supply and Sewarage/Septage which need economies of scale are implemented in 500 AMRUT cities with more than 1 lakh population.
All Cities (>4300)	Poverty Alleviation, Affordable Housing and Sanitation are addressed through DAY-NULM, PMAY(U) and SBM(U) for all the urban local bodies.

What do we mean by Smart Cities?

- Smart Cities Mission was launched on June 25, 2015. Hoever, there is no fixed definition of a smart city. Our Smart Cities are woven around the following principles :
    1. **Citizen at the Core**
    2. **More from Less**
    3. **Cooperative Competitive Federalism:** Cities are selected through competition in to stage challenges at state and Central levels.
    4. **Integration, Innovation, Sustainability**
    5. **Technology is the Means, and Not the Goal**
    6. **Inclusiveness is a Guiding Philosophy:**
- Broadly, Smart Cities address three core issues: *Live-ability, Economic-ability and Sustain-ability.*
- Creating a better investment climate, enabling creation of jobs as per needs of available talent, attracting more investment and talent, breeding innovation, reducing levels of unemployment are some of the important aspirations of smart cities.

Smart Cities Mission Strategy

- The Mission tries to meet its major goals through a two-fold strategy: 1. **Area Based Development** - which focuses on development of world class localities within cities to act as replicable models through *redevelopment, retrofitting or green development*. 2. **Pan City development** - Wherein cities identify few key areas of intervention with use of digital technologies to create impacts on basic infrastructure and services with an intent to improve quality of life for their citizens.
- **Technology as a Means, and not the End -**
    o Every Smart City under the Mission will have a Smart City Centre (also referred to as Integrated Command and Control Centre). Few examples in this regard are –
    o Rajkot recorded an increases in on-line issuance of birth/death certificates; and through surveillance, crime rate has gone down.
    o There is an improvement in traffic challans in Ahmedabad.
    o Pune has installed the city which feed data to the Smart city centre thereby enabling timely warning and response mechanism.
    o In Vishakhapatnam, CCTV and GPS enabled buses are being tracked online through the Smart City Center.
    o Bhopal has seen a rise in its property tax collections and is able to track its transport services online.
- **Quality of Life and Economy-**
    o The Mission promotes **mixed land-use in area-based developments** as proximity and density reduce the per capita costs of providing and maintaining infrastructure and services, while creating knowledge spill-overs and specialization that hugely enhance the urban productivity.
- **Innovation as Key Driver -**

- o Recognising the role of Start-ups, the Smart Cities Mission will work to create an innovation eco-system in Smart Cities through **SPIRIT-Smart Cities Promoting Innovation Research and Incubation in Technology**.
  - o It is an initiative in collaboration with Atal Innovation Mission (AIM) and Start-up India program harnessing the strengths of the three initiatives.
  - o Another important area of transformation is the digital payments space.
- **Impact on Sustainability -**
  - o Smart Cities have proposed investments to ensure assured electricity supply with at least 10 per cent of the Smart City's energy requirement coming from Solar Energy. Diu has become the first city to completely switch over to solar power during the day-time.

Key Enablers

Smart Governance, improved urban finance, capacity building and technology driven innovation are key enablers in the performance of the smart cities.

A. Smart Governance -
- Smart Cities Mission aims to **address barriers in data driven governance** through **'Data Smart Cities'**, an evolving policy framework on data for smart cities, which aims to be a catalyst for the entire eco-system comprising of people, processes and technology.
- Smart Cities Mission intends to unlock civic data for all 100 cities.
- Making ULBs financially self-sufficient is very important for sustainable development. The Ministry started **credit rating of cities**, which has been completed in 465 cities.
- The Ministry has **incentivized ULBs through cash incentive** of <u>Rs. 13 crore for every Rs. 100 crore of municipal bonds issued</u>, equivalent to 2 per cent interest subvention.
- Cities are implementing projects in PPP mode for Housing, Waste-to-Energy, Solar Rooftop, Public Bike Sharing, Parking Management, Smart Cards and Transport Hubs.

B. Capacity Building and Knowledge Management -
- The Ministry has launched the **Cities Investment To Innovate, Integrate and Sustain (CITIIS)** Challenge in collaboration with the French Development Bank (AFD).
- AFD will provide investment support to selected cities in key sectors of Sustainable Mobility, Public Open Spaces, Urban Governance & ICT and Social & Organization Innovation in Low-Income Settlements.
- **India Smart Cities Fellowship & Programs** has been launched to engage brilliant youth with the Mission.
- **SmartNet** is an initiative to support the development of cities across India and to **create a resource-rich ecosystem** of learning, sharing and disseminating for city managers and primary stakeholders in the urban transformation of India.

C. National Urban Innovation Hub
- A new entity titled the **'National Urban Innovation Hub' (NUIH)** - is being proposed at the national level to consolidate existing resources and to expand the footprint of innovation development and capacity building for the urban sector.
- NUIH will anchor the **National Smart Cities Capacity Building Program** to produce empowered functionaries and stronger institutions.
- NUIH will be powered by the **National Urban Innovation Stack (NUIS).**
- NUIS is a nationally-shared digital infrastructure usable by the Governments, both at Centre and States and across public and private sectors.

Way Forward:

- At the start of the mission, one of the biggest challenges was to create an institutional framework at city level. It is for the **first time that city level SPVs** have been created for comprehensive urban development in India. Now, these cities have to build capacity at city level to take up innovative technology solutions.

- A major challenge is to build **urban finance capacities** in order for cities to be able to leverage grants being provided by the governments.
- **Innovative financing models** like *issuance of municipal bonds, developing PPP projects and formulating land value capture finance* (VCF) policies are required.
- The importance of **standardization in the context of development** of Smart Cities cannot be ignored.
- The Mission is closely working with Bureau of Indian Standards (BIS) in an effort to come up with smart ICT infrastructure standards and they are hopeful that they should be able to release the first version of these standards around mid-2019.

National Water Ways: Integrated Transport Network

The Government of India is aggressively pushing for the development of inland waterway routes as part of an integrated transport network strategy.

Steps taken:

- In November 2018, India's **first riverine multimodal terminal on river Ganga** (National Waterway-1) at Varanasi was dedicated to the nation.
- On the same day, country's first container cargo that travelled on river Ganga (National Waterway-1) from Kolkata to Varanasi was also received.
- **106 new national waterways** were announced under the **National Waterways Act, 2016**. With the five existing National Waterways (NW), the addition of the new ones takes the **total number to 111 in the country**.
- **Inland Waterways Authority of India (IWAI)**, the nodal agency under the Ministry of Shipping is mandated to make National Waterways commercially navigable.
- IWAI aims to increase the cargo transportation through IWT on National Waterways in the country from 55 million tones currently to 150 million tones by 2023.
- **Jal Marg Vikas Project (JMVP)** was announced on National Waterway-1 (NW-1) to enable commercial navigation on Varanasi-Haldia stretch of river Ganga.
- Of the **three multimodal terminals** being built on river Ganga under JMVP, the **one at Varanasi** is already operational and **second in Sahibganj** (Jharkhand) will be ready by mid-2019.
- **According to a World Bank economic analysis**, approximately **1.5 lakh direct and indirect employment opportunities** will be created due to interventions under the Jal Marg Vikas Project.
- JMVP is a wholly inclusive, economic and environment friendly game changer intervention on river Ganga.
- The project not only creates an alternative, cost effective mode of transport but **will create 'Room for River'** which has *proved to be an effective flood mitigating and river conservancy measure internationally, especially in low lying Netherlands*.
- NW-1, along with the proposed Eastern Dedicated Freight Corridor and NH-2, constitute the **Eastern Transport Corridor of India** *connecting the National Capital Region (NCR) with the eastern and North-eastern states and Myanmar, Thailand, Nepal and other east and Southeast Asian countries through the Kolkata Port and Indo-Bangladesh Protocol Route*.
- IWAI launched a **dedicated portal 'FOCAL'** connect **cargo owners and shippers** with real time data on availability of vessels.
- A developed IWT will not only augment the overall transport capacity of the country, but will also help **correct the transport modal mix** that impose huge logistics costs on the Indian economy.
- The **costs of logistics in India, at 15 per cent of GDP**, is about twice those in the United States.
- The **logistic share of waterways** in the USA is 8.3 per cent, in Europe (7 per cent), in China (8.7 per cent), while in India it is **only about 1.5 per cent**. *India has 14,500 kilometers of navigable inland waterways*.

- **Vessel design** - In August, 2018, IWAI made **public 13 standardised state-of –the-art ship designs** suitable for large barge haulage on river Ganga.
- It will serve as an enabler for the domestic shipbuilding industry working on inland vessels and open huge possibilities for cargo and passengers movement on National Waterway-1.

IWAI at Social Congregations

- Inland Waterways Authority of India (IWAI) has been working hard towards facilitating safe passenger movements at Kumbh-Mela 2019.
- In the past, IWAI has provided similar facilities of ferrying pilgrims and channel marking at Ganga Sagar Mela in West Bengal and Prakash Parv at Patna.

Benefits of Inland Water Transport

IWT provides supplementary mode of transport which is cost effective, fuel efficient and environment friendly.

missions – CO_2 equivalent greenhouse gas emission per tone-km of cargo transportation is 15g by IWT, Rail and 64 g by Road transport.

nergy consumption – 1 HP can carry 400 kg load in waer, 500 kg by Rail and 10 kg on Road.

eld cost – 1 litre fuel can move 105 tonne-km by IWT, 85 tonne-km by Rail and 24 tonne-km of freight by

- IWT can provide optimal modal mix by integrating river transport with other modes thereby reducing total logistics costs.
- It eases congestion on Road and Rail networks.
- IWT requires very little land acquisition as compared to Road and Rail modes.
- Caters to the needs of the relatively under developed hinterland.

Business Opportunities

The development works being undertaken by IWAI provide business opportunities to players involved in waterways in the fields of:

- Cargo movements
- Dredging works
- Construction, Operation and Maintenance of Terminals
- Barge Construction and Operations
- Navigation Aids
- Hydrographic Surveys
- Manpower Supply for Vessels and Terminals. Training of Vessel Crews
- Stevedoring and Forwarding
- Cruise Operations
- Consultancy Services for Techno-Economic Feasibility, Environmental and Social Impact and Market Analysis Studies, Preparation of DPRs.
- Project Management Consultancy
- Construction Supervision
- Proof Checking of Design
- Model Studies.

Promoting River Tourism

- International publication **'CondeNast Traveller'** listed Ganga cruise as **one of the 'six river cruises to take in 2017'**.
- In addition to becoming one of the principal cargo movement routes in India, this stretch on NW-1 has good potential for river cruise tourism.

Other National Waterways:

I.   National Waterway-2

River Brahmaputra from Bangladesh Border to Sadiya (891 km) was declared as National Waterway -2 in 1988.

II.   Indo-Bangladesh Protocol Route

Day to day protocol permissions are issued by IWAI to barges to sail in the designated port of cells in India and Bangladesh. The Protocol was first signed in 1972 and is presently valide up to 05th June 2020.

III.   NW-3 has been fully developed for commercial navigation, while NW-4 and NW-5 are being developed with infrastructure of Inland Waterways.

Development of 8 new National Waterways taken up during 2017-18 as:

- **Gandak River** has been declared as **National Waterway – 37**. It is located from *Bhaisaslotal Barrage near Triveni Ghat to Hajipur in Bihar and Uttar Pradesh*.
- **Rupnarayan River** has been declared as **National Waterway – 86**. It is located from Pratappur to Geonkhali in West Bengal.
- **Alappuzha – Kottayam – Athirampuzha** canal has been declared as **National Waterway – 9**. It is located from Boat jetty, Alappuzha to Athirampuzha market in Kerala.
- **Sundarbans Waterways** has been declared as **National Waterway -97** in West Bengal.
- **Barak River** as NW 16.
- **Cumberjua Canal** (**NW27**) –Confluence of Cumberjua and Zuari rivers near Cortalim ferry terminal to confluence of Cumberjua and Mandovi rivers near Sao Martias Vidhan Parishad.
- **Mandovi River (NW68)**: Bridge at Usgaon to confluence of Mandovi River with Arabian Sea at Reis Magos.
- **Zuari River (NW111**) Sanvordem Bridge to Mormogao Port.

Achievements of Major Ports

Some of the major policy and procedural steps and achievements in the recent past are:
- A new Special Purpose Vehicle, namely **Indian Port Rail Corporation Ltd**. has been set up as a public limited company to undertake last mile rail connectivity projects in major ports.
- Average Turn-Round Time, Which was 82.28 hrs during 2016-17, came down to 64.43 hrs.
- Average Output per Ship Berthday improved to 15333 tonnes during 2017-18.

Shyama Prasad Mukherjee Rurban Mission (SPMRM)

"Shyama Prasad Mukherjee Rurban Mission (SPMRM)" was launched on February 22, 2016. The aim of the Mission was to **develop rural growth clusters** in all States and Union Territories (UTs) so that overall development in the region can be triggered. These clusters are to provide economic activities, developing skill and local entrepreneurship and providing infrastructure amenities.

National Heritage City Development and Augmentation Yojana (HRIDAY)

The Ministry of **Housing and Urban Affairs**, Government of India, launched **the National Heritage City Development and Augmentation Yojana (HRIDAY)** scheme on January 21, 2015, with a focus on holistic development of heritage cities. The main objective of HRIDAY is to **preserve character city and facilitate inclusive heritage linked urban development** by exploring various avenues including involving private sector.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

The Government of India launched the **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)** with the aim of *providing basic civic amenities like water supply, sewerage, urban transport, parks as to improve the quality of life for all especially the poor and the disadvantaged*. The focus of the Mission is **on infrastructure creation** that has a direct link to provision of better services to the citizen.

The purpose of "AMRUT" mission is to:

(i)   ensure that every household has access to a tap with assured supply of water and sewerage connection
(ii)   (ii) increase the amenity value of cities by developing greenery and well maintained open spaces e.g. parks and
(iii)   (iii) reduce pollution by switching to public transport or constructing facilities for non-motorized transport e.g., walking and cycling.

UDAN – Giving New Meaning to Air Connectivity

- The Union Government's flagship regional connectivity scheme, UDAN has become an important means for making low cost flying available to people in smaller Indian cities.
- The scheme has brought **first time air connectivity to people of 35 tier-II and tier-iii cities** (as on December 2018).
- Since the last 10 years, air traffic has grown three folds in India and it has the potential to be among the global top three nations in terms of domestic and international passenger traffic.
- In 2016 Government of India launched **National Civil Aviation Policy (NCAP)** to provide an ecosystem for the harmonized growth of various aviation subsectors like airlines, airports, cargo, etc.
- The policy envisions **creating an eco-system to make flying affordable for the masses** and to enable 30 crore domestic ticketing by 2022 and 50 crore by 2027, and international ticketing to increase to 20 crores by 2027.

Making Air Travel Convenient

- **UDAN (Ude Desh Ka Aam Naagrik)** is a fulcrum under NCAP to make air travel convenient and affordable for the common man in small cities, and through this, push regional growth. Currently, 70 per cent of air traffic in the country caters only to the metros.
- UDAN addresses the **challenges relating to the issue of lack of infrastructure and affordability** by upgrading the airports and **cutting down on the cost** of operations by extending **various incentives to airlines** and thus making air tickets affordable.
- The scheme provides for revival and upgradation of existing airstrips in small cities where UDAN operations would happen. To reduce the costs of operations for airlines, concessions from Centre, States and airport operators are extended.

Salient Features of RCS-UDAN

- The Regional Connectivity Scheme-UDAN intends to enable **air operations on unserved routes** connecting regional areas, **promote balanced regional growth** and make flying affordable for the masses.
- RCS-UDAN is a **demand driven scheme** where the interested airlines and helicopter operators are selected through competitive bidding process.
- The selected airline operator of RCS-UDAN would have to provide **a minimum of 9 and a maximum of 40 RCS seats** on the RCS flight for operations through fixed wing aircraft. **All seats upto 13 passengers** for helicopters will be considered as RCS seats.

- The fare for one hour journey of approximately 500 km on a fixed wing aircraft or for a 30 minute journey on a helicopter would be approximately Rs. 2,500, with proportionate pricing for routes of different stage length/flight duration.
- On RCS route, the minimum frequency would be three and maximum of seven departures per week in other than priority areas.

UDAN – A Win – Win for All Stakeholders	
Citizens - Connectivity - Affordability - Jobs	**Airlines** - Incumbents: creation of new feeder routes; bringing new passengers to aviation. - Startups: new opportunities to create scalable business models as regional airlines.
National Government - Jumpstarting the regional aviation market. - Metcalfe law: power of a network increases as new nodes are added.	**Airport Operator** - Expansion opportunities - More passengers for existing air-ports
Regions - More trade and commerce. - Tourism circuits - Development of remote areas	**Original equipment manufactures (OEMs)** - India is expected to move from 450 to 1,200 aircrafts in a decade - Growth of domestic manufactures, India as an export hub.

Challenges:

- Preparedness of airports, readiness of airlines and involvement of State Government are very important.
- Civil aviation sector is highly regulated due to its sensitive nature. **Licensing of airports is a tedious process**.
- Implementation challenges not only involve monitoring and assisting for revival of airports but also facilitation for obtaining Air operator permits for selected airlines and helicopter operators under the scheme.
- Few small operators who have bid under UDAN are facing teething problems due to their limited capacities.
- It is imperative for UDAN to work with small airlines which have potential to take the regional scheme to remote areas.
- Availability of qualified crew is also a major challenges for airlines and significant efforts are needed to create a pool of skilled professionals.
- Safety and security are paramount and the operations have to comply with required regulations. To address these challenges, the implementation mechanism needs to be strengthened. Airport Authority of India (AAI) is providing necessary support to State Governments in developing the airports, documentation for licensing, etc.

Conclusion:

- Today, airports like **Nanded in Maharashtra and vidyanagar in Karnataka** have become shining example under UDAN.
- Plans are already affot to take the Regional Connectivity Scheme (RCS) for tourist destinations and expanding the scheme for international routes based on the requests from the State Governments.

Transforming Connectivity: Indian Railways on the Go

- Indian Railways, the **third largest railway network** in the world, has, in the past few years, undergone transformational changes to expand is reach.
- The railways maintain a *gigantic network of 63,000 kms* and run 22,000 trains to transport 1.50 million passengers daily.
- The Railways are now connecting India at a faster pace with a 59 per cent increase in the average speed of commissioning new lines from 4.1 km (2009-14) per day to 6.53 kms per day (2014-18).

Connecting the Seven Sisters

- In the North East, **rail connectivity has come to all the Seven Sister States** of Assam, Meghalaya, Nagaland, Tripura, Mizoram, Manipur and Arunachal Pradesh.
- The **Bogibeel Bridge**, the longest Rail-cum-Road Bridge of the country running 4.94 km in length across river Brahmaputra near Dibrugarth in Assam has been commissioned, connecting Assam and Arunachal Pradesh.
- India's **tallest bridge** with pier height of 141 m is being constructed on **Irang River at Noney in Tamenglong district**, Manipur as part of the Jiribam-Tupul-Imphal new line, a marvel of railway engineering. Its height will be *almost equal to two Qutub Minars combined.*

Capacity Augmentation

- The railways launched **two Dedicated Freight Corridor** (DFCs) projects, Eastern and Western Dedicated Freight Corridors for the purpose.
- It would lead to a fundamental change in reduction in unit cost of transportation, smaller organization and management cost, with higher efficiency and lower energy consumption.
- To overcome the problem of congestion and over-saturation of routes, doubling of tracks and laying of additional lines has been going on.

Speeding up Electrification

- To reduce dependence on imported diesel fuel and carbon emission, Indian Railways have embarked upon a major programme to **speed up electrification of railway lines**.
- **Electric traction accounts for just 37 per cent** of the total energy expenses of Indian Railways.
- Through electrification, Indian Railways is likely to save Rs. 13,510 crore per annum in fuel bills and the same will improve its finances.
- Electrification will reduce the use of imported fossil fuels thereby improving energy security to the nation.
- 100 per cent electrification will provide **seamless train operation** by eliminating detention of trains due to change in traction from diesel to electric and vice versa.
- It will help Railways in enhancing line capacity due to higher speed and higher haulage capacity of electric locomotives. There will be improved signaling systems, which will lead to enhanced safety in train operations.

Ensuring Safety

- To ensure connectivity with safety, the railways created the **Rashtriya Rail Sanraksh Kosh (RRSK)** a dedicated fund for safety projects during 2017-18, for clearing the backlog of critical safety related works.
- Safety has been accorded priority and consequential train accidents **reduced to 62 per cent** from 118 in 2013-14 to 73 in 2017-18.
- It had been decided to **completely stop the manufacture of ICF Coaches** from 1st April 2018 and shift to **safer Linke Hofmann Busch (LHB) design** coaches having anti-climbing features.
- The railways signaling system is being completely modernized.

- Responding to the problem of accidents at unmanned level crossings, the Governments has planned to remove or man all unmanned level crossings on Broad Gauge.

Offering Better Services

- To make the railways smart, for punctuality, instead of the stationmaster recording the time, **data loggers have been put at interchange points** which would be computer generated. The Step has already improved punctuality to 73-74 per cent.
- Indian Railways is working **on putting a GPS device on every locomotive** so that every train can be tracked on mobile phones knowing exactly where they are. Railways is reviewing to engage itself with artificial intelligence.
- Railways has also planned to make 6,000 railway stations Wi-Fi enabled.
- Railways is improving passenger services including a complete makeover of stations while **instilling local art and culture in the design**. Government has improved trains and coaches including launching the Tejas, Antyodaya and Humsafar trains.
- "Make in India" has been given a boost by indigenous manufacturing of Semi High Speed (160 Kmph) **self propelled Train 18**. Work has started on **Mumbai-Ahmedabad Bullet train project on Japanese mode**l.
- Decision has been taken to **transport empty containers and empty flat wagons** for private container rakes **at a discount of 25 per cent**.
- The move is likely to give a thrust to movement of empty containers by rail towards ports to return as loaded, thus profiting Indian Railway with higher container share.

Connected North East: Building Pan India Ties

- The North East is connected to the rest of the country through **Siliguri Corridor**, popularly known as the chicken neck area in North West Bengals. It is flanked by Nepal and Bangladesh.
- The region accounts for **3.78 per cent of India's population** and **covers 7.98 per cent** of its total geographical area. Its contribution to national **GDP is 2.5 per cent.**
- The region is strategically important for India both for its **geographical location and its resources** and shares about **5,437 km of international boundaries with Bangladesh, Bhutan, China, Myanmar and Nepal**.
- Recognising the need to augment infrastructure in the region, the government of India has sanctioned projects for construction of road projects for over 12,000 kms.
- The projects are being executed by **National Highways & Infrastructure Development Corporation (NHIDCL)**.
- NHIDCL was incorporated on July 18, 2014 as a public sector undertaking under the Ministry of Road Transport and Highways.
- Special Accelerated Road Development Programme for the North-Eastern region (SARDP-NE) – is another initiative of the government to fast-track infrastructure projects in the region.
- The government think tank NITI Aayog, advocating to develop the region by 2022-23 for enhanced trade, particularly for the export of products made in the NER, to the Association of Southeast Asian Nationa (ASEAN) region and other neighbouring countries (Bangladesh, Bhutan and Nepal), has stressed the need to fast-track highway projects.
- It said the projects like **Kaladan Multi-Modal Transit-Transport Project**, **the India-Myanmar-Thailand Trilateral Highway**, the 5 km road stretch between the border city of Zokhawthar in Mizoram and Rih in Myanmar need to be expedited besides improving "about 4,099 km in the North-East".

Indo Myanmar Connectivity

- The upgradation of the Kalewa-Yagri stretch of the India-Myanmar-Thailand (IMT) Trilateral Highway is being executed by National Highways Authority of India.
- India and Myanmar are keen on bus service after operationalising the Land Border Crossing Agreement, which allows nationals from the two countries holding valid passport and visa to cross over without requiring special permission.
- In addition to other programmes, the Center has approved a scheme named **North East Special Infrastructure Development Scheme (NESIDS)**, a 100 per cent Central Sector Scheme to be implemented till March 202

Affordable Housing: Taking Centre Stage

- The quality of a nation's infrastructure is a critical index of its economic vitality. Reliable transportation, clean water, and safe deposit of wastes are basic elements of a civilized society and a productive economy.
- The importance of infrastructure for sustained economic development is well recognized.
- **Physical infrastructure** covering transportation, power and communication through its *backward and forward linkages facilitates growth*, while **social infrastructure** including water supply, sanitation, sewage disposal, education and health, which are in the nature of primary services **have a direct impact on the quality of life**.
- With the Government permitting 100 per cent FDI in the road sector, several foreign companies have formed partnership with Indian player to capitalize on the sector, s growth.

Population Growth &Housing

- Urban population in Indian may reach 600 million by 2031(over 50 per cent of the total population), from 377 million in 2011 and the total number of cities is expected to rise to 87 (from 50 in 2011).
- Further, the urban share of the GDP is projected to increase to 75 per cent in 2031 from an estimated 62-63 per cent in 2009-2010 .
- Consequently, there is a dire need to.
- Address the current and anticipated future shortage of housing along with other infrastructure deficit prevalent in our urban centers.

Pradhan Mantri Awaas yojana (PMAY)- Housing for All 2022

- While efforts to provide low-cost housing have been made for many years, the PMAY launched in 2015 provides urban housing a fresh impetus.
- The PMAY-Urban (PMAY-U) **subsumes all the previous urban housing schemes** and aims at 'Housing for All' to be achieved by the year 2022. Housing shortage of 20 million is envisaged to be addressed through the PMAY-U.
- The mission has four components:

  A. In situ slum redevelopment (ISSR):
  This uses land as resource. The scheme aims to provide houses to eligible slum dwellers by redeveloping the existing slums on public / private land. A grant of INR 1 Lac per house is provided by the Central Government.

  B. Affordable housing in partnership (AHP):
  This aims to provide financial assistance to private developers to boost private participation in affordable housing projects; Central assistance is provided at the rate of INR 1.5 Lac pre EWS house in private projects where at least 35 per cent of the houses are constructed for the EWS category.

  C. Credit-linked subsidy scheme (CLSS):
  This scheme facilitates easy institutional credit to EWS, LIG and MIG household for the purchase of homes with interest subsidy credited upfront to the borrower's account routed through primary lending institutions (PLIs).

  D. Beneficiary-led construction or enhancement (BLC):
  This scheme involves central assistance of INR 1.5 lakh per family for new construction or extension of existing houses for the EWS/LIG.

Urban Housing Initiatives

- PMAY **scheme is converged with other schemes** to ensure houses have a toilet, Saubhagya Yojana electricity connection, Ujjwala Yojana LPG gas connection, access to drinking water and Jan Dhan Banking facilities, etc.
- The **union Budget 2017-18 announced** a number of measures to boost affordable housing:
  - ➢ Affordable Housing has been given **Infrastructure status**.
  - ➢ One crore rural houses will be created by 2019.
  - ➢ Real estate developers to **get tax relief on unsold stock** as liability to pay capital gains will arise only in the year a project is completed.
  - ➢ Instead of Built up area of 30 and 60 sq meter, the carpet area of 30 and 60 sq meters will be applicable for affordable housing.
  - ➢ Holding period for capital gains tax for immovable property reduced from 3 years to 2 years.
  - ➢ Tax break of 1 year post receipt of the completion certificate, for the unsold stock.
- There is another **push to low cost housing** through Pradhan Mantri Awas Yojana (PMAY).
- Under the scheme, government has announced that an **interest rate of only 4 per cent would be charged on loans above Rs 12 lakh.** The government has also extended the time of completion of such projects from 3 years to 5 years. Thus, more projects will now be eligible for profit-linked income tax exemptions.
- Affordable housing finance is estimated to be a Rs. 6 lakh crore business opportunity by 2022, by when the Government seeks to achieve housing for all citizens.
- Due to the big push from PMAY to create housing for all, a new group of **Affordable Housing Finance Companies** has emerged, which is now serving low-income, urban informal customers using an innovation pioneered in India-field-based credit assessment.

National Youth Parliament Festival 2019 Launched

The National Youth Parliament Festival 2019 was launched on 12th January 2019 by the Minister of State IC) for Youth Affairs and Sports thereby beginning the celebration of the National Youth Day 2019.

It is to provide a chance to the youth to brainstorm about new India and to find ways and chalk out plans to realize our resolves before 2022.

National Youth Parliament Festival 2019 is organized on the theme of "Be The Voice of New India" and "Find solutions and contribute to policy". Youth in the age bracket of 18-25 years are invited to participate in the District Youth Parliament.

First Central University in India, Focusing Solely on Sports Education

National Sports University, Manipur was set up in 2018. The University is presently functional from its temporary campus at the Khuman Lampark Sports Complex of Imphal.

University – with four schools

- o School of Sports Science and Sports Medicine
- o School of Sports Management and Technology
- o School of Sports Education
- o School of Interdisciplinary Studies

Creating Adequate Infrastructure in Health Care

Health infrastructure is an important indicator for understanding the health care policy and welfare mechanism in a country.

Health Indicators for India:

- India has systematically improved health conditions. **Life expectancy** has doubled from 32 years in 1947 to **66.8 years** at present.
- **Infant Mortality Rate (IMR)** has fallen to 50 per thousand live births.
- Further, it is estimated that public funding accounts for only 22 per cent of the expenses on healthcare in India. Most of the remaining 78 per cent of private expenditure is out of pocket expense.

Healthcare Structure in India:

- Indian healthcare delivery system is categorized into **two major components** – public and private.
- The Government i.e. public healthcare system comprises limited secondary and tertiary care institutions in key cities and focuses on providing basic healthcare facilities in the form of Primary Healthcare centres (PHCs) in rural areas.
- The private sector provides majority of secondary, tertiary and quaternary care institutions with a major concentration in metros, tier I and tier II cities.
- Medical education infrastructure in India has shown rapid growth during the last 20 years. The country has 476 medical colleges, 313 colleges for BDS courses and 249 colleges which conduct MDS courses.

Towards Universal Access to Health Care

- India's **National Health Policy, 2017** envisions the goal of attaining highest possible level of health and well-being for all at all ages through a preventive and promotive health care orientation in all development policies.
- It also talks about universal access to good quality health care services without financial hardship to the citizens, Under health related Sustainable Development Goal (SDG) no. 3 (Good Health and Well-Being), a commitment towards global effort to eradicate disease, strengthen treatment and healthcare, and address new and emerging health issues has been pronounced.

Major Government Initiatives

- Government of India launched **Pradhan Mantri Jan Arogya Yojana** (PMJAY), to provide health insurance worth Rs. 500,000 to over 100 million families every year.
- In August 2018, the Government of India has approved **Ayushman Bharat**-National Health Protection Mission as a centrally Sponsored Scheme.
A. Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)
- It has the objectives of correcting regional imbalances in the availability of affordable/reliable tertiary healthcare services and also to augment facilities for quality medical education in the country.
- PMSSY has two components:
    (i)   Setting up of AIIMS like institutions
    (ii)   Upgradation of Government Medical College Institutions.
- **Six AIIMS-like institutions**, one each in the States of Bihar (Patna), Chhattisgarh (Raipur), Madhya Pradesh (Bhopal), Orissa (Bhuvneswar), Rajasthan (Jodhpur) and Uttranchal (Rishikesh) have been set-up under the PMSSY scheme.

B. Kayakalp

- The Ministry of Health & Family Welfare, Government of India has launched a National Initiative to give Awards to those public health facilities that demonstrate high levels of cleanliness, hygiene and infection control.
- **"Kayakalp**" is an initiative to promote sanitation and hygiene in public healthcare institutions. Facilities which outshine and exceed the set measures are awarded and incentivized under Kayakalp.

C. Mission Indradhanush

- The Government of India has launched Mission Indradhanush with the aim of improving coverage of immunization in the country.
- It aims to achieve at least 90 per cent immunization coverage by December 2018 which will cover unvaccinated and partially vaccinated children in rural and urban areas of India.

Private sector in Health Care

- The Supreme Court in a recent judgment directed government hospitals in Delhi to refer poor patients to private hospitals.
- This decision has been described as a pro-poor decision which aims at bringing the poor rural patients at par with the urban rich patients.

Market size

- The healthcare market can increase three fold to Rs. 8.6 trillion by 2022.
- India is experiencing 22-25 per cent growth in medical tourism and the industry is expected to double its size from present (April 2017) US$3 billion to US$6 billion by 2018.

Achievements

- In 2017, the Government of India **approved National Nutrition Mission (NNM**), a joint effort of Ministry of Health and Family Welfare (MoHFW) and the Ministry of Women and Child Development (WCD) towards a lifecycle approach for interrupting the intergenerational cycle of under nutrition.
- Many patients have benefitted from **Affordable Medicines and Reasonable Implants for Treatment (AMRIT)** Pharmacies.
- The Government of India approved the **National Medical Commission Bill 2017**. It aims to promote medical education reform.

Conclusion:

- Public healthcare service should ensure three **"Es-Expand-Equipty-Excellance".**
- India is well poised to a better public healthcare infrastructure, facilities and services and hopefully with all the well intentioned initiatives we shall see health taking a top priority agenda in the coming years and delivering on the promises that the new and bold initiatives in the health sector.