DATE - 7 August 2021

Smart City

GS PAPER- 3, INFRASTRUCTURE

SOURCE- Pib

Context:- Smart City Mission was started six years ago. Now during the pandemic, we have seen that smart cities remain in the dark. The devastation caused by the pandemic further exacerbated the issues related to urbanization.

Background:-

- According to Census 2011, Indian Cities accommodate nearly 31% of India's current population and contribute 63% of GDP. According to some reports Urban areas are expected to house 40% of India's population and contribute 75% of India's GDP by 2030. This Development of physical, institutional, social, and economic infrastructure requires a comprehensive allocation of resources.
- Cities are truly the engines of growth today and in the past, that needs a holistic approach. To meet the long-lasting aspirations of growing urban populations and sustain a virtuous cycle of sustainable

growth and development, the development of Smart Cities has become crucial.

Problems in the Indian Urbanization:-

- Well known infrastructure deficits.
- Inadequate water supply.
- Inadequate waste management.
- Inadequate sewerage.
- Inadequate transport arrangement.
- A high level of pollution, with climate change.
- Frequent extremes of floods and drought.
- Increasing crime in Indian cities.
- Degrading the life such as an increase in the slums and other informal living infrastructure.
- A deficit in the physical infrastructure.

What is smart city:-

- The Smart Cities Mission was launched on June 25, 2015 along with the key objective of promoting cities, to provide sustainable core infrastructure, clean and sustainable environment and give a decent quality of life to their citizens through the application of ‘smart solutions’.

Why we need Smart Cities and Their positives:-

- More effective, data-driven decision-making:-

- Advancements in “big data” and connected devices have allowed cities access to information. A well-designed data analytics strategy gives city officials the ability to access and analyze a massive amount of information thereby easy glean meaningful, actionable insights.
- Enhanced citizen and government engagement:-
- Smart Cities will deliver robust, user-friendly digital services. Collaboration tools, modern and intuitive websites, mobile applications, self-service portals, and convenient online accounts have become the standard in many facets of life which are the cornerstone of smart urbanization.
- Safer communities:-
- A smart city is a safer city. Leveraging technology advances and pursuing private/public partnerships help reduce criminal activity, Cyber fraud and other crimes as well. Technologies such as license plate recognition, gunshot detectors, connected crime centers, next-generation 911, and body cameras all give law enforcement an edge with constant surveillance of public spaces..
- Reduced environmental footprint:-
- Smart cities are fighting back to reduce negative effects on the environment that have been caused due to the rise of greenhouse gases, debris in our oceans, and trash in our streets. Energy-efficient buildings, air quality sensors, and renewable energy sources are providing cities with new tools to shrink their ecological footprint.
- Improved transportation:-
- According to Smart City Press, Smart city transportation investments are expected to rise over 25 percent annually. Connected transportation systems have some of the greatest potential to drastically enhance efficiencies throughout a city on one hand and reduce congestion on the other. From enhanced traffic management to public transit riders’ ability to track bus or train locations, smart technologies allow cities to better serve citizens’ demands and expectations despite often rapidly growing populations.
- Increased digital equity:-
- Smart city technology has the ability to create a more equitable environment for societies that can live cohesively among others. To ensure digital equity, individuals must have access to high-speed

internet services and to affordable devices. The adoption of public Wi-Fi hotspots strategically placed throughout a city can offer reliable internet services to all residents and thereby ensuring the fulfillment of fundamental rights.

- For example, the City of Seattle has developed a plan to deliver skills training, ensure the availability of affordable devices, and provide accessible and low-cost internet connections.
- New economic development opportunities:-
- The public investment in smart city technology has a large potential multiplier effect that may go up to 10 times, according to recent reports
    - That means massive expansion in gross domestic product growth when cities innovate. According to one of the reports, every 10% increase in internet users, GSP increases 3%.
- Smart city investments are playing an increasingly important role in enhancing cities' regional and global competitiveness to attract new residents and businesses.
- Efficient public utilities:-
- With a limited supply of natural resources available to meet current societal demand, smart technologies are giving cities the tools needed to effectively conserve, reuse, efficiently use, and reduce the inadvertent waste of water and electricity.
- Smart sensors now allow cities to quickly identify leaks in pipes and fix damaged in a shortened time frame
- Improved infrastructure:-
- Aging roads, bridges, and buildings often require massive investments to maintain and repair. Smart technology can provide cities with predictive analytics to identify areas that need to be fixed before there is an infrastructure failure thereby saving human lives and potential financial loss.
- Increased workforce engagement:-
- A highly effective workforce is an essential criterion for realizing an efficient smart city dream. Deploying smart technologies helps to alleviate the burden of manual tasks that many city employees face every day.

- The advancement in autonomous agent capabilities, mobile devices, bots, and sensors allows city employees to steer their efforts towards more strategic initiatives, reducing time spent on the day-to-day manual operations.

Challenges in the Smart Cities:-

- Smart cities function as special purpose vehicles diverged from regular urban governance structures, so the issue of accountability prevails.
- It can create islands of development rather than an inclusive development of the city which takes care of the needs of everyone.
- State and local governments lack data or the capability to analyze this data in order to understand the evolving needs of their communities.
- India's Smart Cities Mission has identified more than 20 priority areas but the interventions by the respective agencies are weak.
- There is an inadequate emphasis on the functioning of urban local bodies, their parastatal agencies as well.
- The Area Based Development approach is missing, for example, the development of a sewage system somewhere or a web of roads in another city.
- Urban local bodies lack both technical and human capacity and professionalism along with starving finances.

The solution in Post Pandemic:-

- The Integrated Command and Control Centres (ICCCs) will act as a point of data integration and surveillance which should act as:-
    - They must provide a good public dashboard of information.
    - Access to health alerts, vaccinations, hospital beds, and topical advice, rounded off with data on pollution, rainfall, congestion, etc,

    - City planning has to ensure every section of society has a voice in the process.
- Pedestrianization, biking, and harmonious opportunities for street vending must be created by allocating more land for commons.
- Smart city planning should not ignore the informality that marks India's urban spaces.
- State governments take resolute action on the pretext of Finance, rule of law, and among other things.
- There must be a clear road space for bicycles, which exemplifies safe travel and can complement expanded public transport.
- Government must increase on all diversion of wetlands and commons for any other development.
- Governments must create new urban gardens and water bodies, and do a climate change audit for every piece of infrastructure planned.
- Recovery of valuable materials from waste will act as an opportunity even in the biggest cities.
- Deployment of multiple sensors to gauge air, noise and water pollution, provision of electronic delivery of citizen services along with all the sectors which may be private and the government will be the way forward.

Swarn Singh

Creating Sustainable Livelihoods for Rural Women

(GS PAPER-1, WOMEN

SOURCE- Pib)

Context:

The guidelines of the various beneficiary-oriented schemes of the Department of Agriculture and Farmers Welfare (DA &FW), Ministry of Agriculture & Farmers Welfare provide that States and other Implementing Agencies incur at least 30% expenditure on women farmers. These schemes include Support to State Extension Programmes for Extension Reforms, National Food Security Mission, National Mission on Oilseed & Oil Palm, National Mission on Sustainable Agriculture, Sub-Mission for Seed and Planting Material, Sub-Mission on Agricultural Mechanization and Mission for Integrated Development of Horticulture.

Schemes:

- The Department of Rural Development, Ministry of Rural Development launched a scheme namely ‘Mahila Kisan Sashaktikaran Pariyojana (MKSP)’, as a sub-component of

DAY-NRLM (Deendayal Antyodaya Yojana — National Rural Livelihoods Mission).

- This scheme has been implemented since 2011 with the objective to empower women by making systematic investments to enhance their participation and productivity, as well as create sustainable livelihoods for rural women. The program is implemented in project mode through State Rural Livelihoods Mission (SRLM) as Project Implementing Agencies.
- In order to familiarize women with the latest techniques in agriculture and allied sectors, training is being imparted to women farmers under schemes of DAC&FW and DAY-NRLM.
- These include Support to State Extension Programmes for Extension Reforms (ATMA) under Sub-Mission on Agriculture Extension (SMAE). Skill training courses in agriculture and allied areas (of minimum 200 hours duration) are also being conducted for farmers including women farmers through National Training Institutes, State Agricultural Management & Extension Training (SAMETIs), Krishi Vigyan Kendras (KVKs), and State Agricultural Universities (SAUs), across the country. Under DAY-NRLM, training on agroecological practices is being provided through community resource persons. KVKs established by Indian Council Agricultural Research (ICAR) impart training to farmers including women farmers on various aspects of agriculture and allied sectors.

Female Participation:

- The government is taking various measures to increase the participation of women farmers in the agriculture sector.
- This includes providing additional support and assistance to women farmers, over and above the male farmers under few schemes; provision of 30% of funds for women under various beneficiary oriented schemes/programs; taking pro-women initiatives such as supporting farm women's food security groups, undertaking macro/micro-level studies in critical thrust area related to women in

agriculture, delivery of Gender Sensitization Module on Gender Learning through training programs at National/Region/State Level, compilation and documentation of gender-friendly tools/technologies; Farm Women Friendly Handbook and compilation of best practices/success stories of the women farmers, etc.

Khyati Khare