

Home &gt; People

## Smart and sustainable cities

Dr Harish Sharma, ED, Rudrabhishek Enterprises, makes a point



15 Jul 2021

The United Nations laid its ambitious target of Sustainable Development Goals (SDG) in 2015 to promote sustained and inclusive economic growth with global partnership. The basic idea behind these goals is to uplift the life of people, improve health and well-being, and conserve & replenish the environment. Majority of the world population currently lives in cities and this number is bound to increase; therefore cities have an important role to play. Stakeholder consultation is also an important part in smart city that allows two-way communication and further achieving sustainability goals together. In this article we will discuss how cities can achieve their Economic, Social and Environmental Goals.

### *Maximizing resource utilization*

Smart cities use Internet of Things (IoT) to evaluate, align, share and optimize their resources. By doing so, these cities minimize their resource consumption, maximize the availability of resources to their citizens and the reduce wastage. These cities use geospatial technologies to estimate the quantity, location and demand which helps them optimize their resource utilization. With help of IoT, they continuously collect and analyze data to generate patterns and prepare models to provide better things and services for the citizens.

### *Minimizing waste*

Since the demand for a particular commodity is already estimated, the administration provides resources as per the demand of area. Authorities encourage their citizens to segregate waste at the source into reusable/recyclable and non-recyclable waste. By doing so, the cities reduce their waste to the minimum possible quantity. Most importantly, they convert their wet waste in compost/manure and responsibly dispose the environmentally harmful waste. Many cities have now started collecting data about their municipal solid waste to analyze its composition and derive patterns to tackle it better. Waste to energy plants is a common feature of most modern cities.

### *Energy, water and soil conservation*

Large cities are striving to rectify the wasteful usage of energy and water. Most of them have installed better transmission lines in order to reduce losses during transmission and distribution of power. They are encouraging their residents to use energy efficient equipment to lower down their electricity consumption. Smart public area lightings, which optimize their electricity usage as per the need, have also been installed in many places. Most cities are incentivizing their citizens to install rooftop solar power plants to generate their own electricity and supply the surplus to the grid. India is committed to achieve 40 GW of solar power through its Rooftop Solar Power projects by 2022. Govt is also developing strategy and roadmap to harness the potential of offshore wind energy along India's coastline.

Cities across the world are building blue infrastructure to minimize the run-off of the rainwater and help it in seep underground. This not only helps replenish the underground water, it also reduces soil erosion. Strategic blue infrastructure will also help in preventing floods. Jal Shakti Abhiyan (JSA) is promoting water conservation and motivating citizens for rainwater harvesting, recycle/reuse of treated water and rejuvenation of water bodies.

### *Empowering communities*

No city can call itself truly sustainable unless all its citizens are benefited by its sustainability efforts. One of the important aspects of SDGs is the empowerment of communities and vulnerable groups. ULBs are working tirelessly to provide education, healthcare, hygiene and employment to every citizen. This not only helps bring the vulnerable groups in mainstream but also maintains health, safety and sanitation. Skill development and vocational training with employment opportunities are other ways of moving towards sustainability.

### *Real world examples*

Several cities across the globe are leading the way towards the sustainability with its own set of limitations and challenges. Let's examine how some major world cities are doing in terms of sustainable goals.

1. London: London is one of the most crowded cities in the world. Due to its population and extent of modernization, it is facing several environmental challenges. However, by efficient waste handling, air quality monitoring and pollution mitigating measures and noise reduction provisions, it is showing the world how to move towards sustainability despite several challenges.

2. Seoul: The capital city of Korea is rapidly replacing the traditional buses by electric buses for public transport. It is also focusing on increasing green spaces within the city. Electric bikes can be rented in the city at very affordable prices.

3. Dubai: Situated in the desert, Dubai is generating a large part of its electricity from solar power. It is also focusing strongly on water recycling. Dubai has provision for separate drainages for grey water and black water, which helps in better waste water management. The city is also investing heavily on creating infrastructure for electric cars.

Cities are the epicenter of the mankind's major activities. Cities not only act as hub for economic and financial activities, they also act as the boiling pot for different cultures. Today more than 50% of world population is living in urban areas. This number will grow to 68% by the year 2050, according to UN. This sheer number indicates how important cities are when it comes to sustainability and environmental conservation. Most cities across the world have realized their importance and role in achieving the SDGs. Cities, which are yet to start their journey towards sustainability, should take lessons and learn from experiences of other cities similar to them.