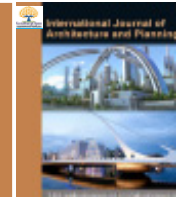




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Poor Sanitation Hurts Urban Planning

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Abstract

This paper examines sanitation problems in cities and understanding the importance of urban planning and construction. The application of economics to sanitation is expanding in underdeveloped countries. The reaction of businesses to a worldwide crisis that was created by the breakdown of markets and societies. Both environmental protection and economic progress are intricately related and intertwined. The ecological problem is brought on by economic expansion. Ecological imbalance: a growth that is unhealthy. Take, for example, normative economics. Utilitarianism should guide environmental economics. An economic analysis of environmental problems, causes, and effects employs concepts, techniques, and methodologies from the field of economics. The economics of sanitation need to be addressed on both a global and local scale. A city is considered to be liveable when it offers residents equal access to housing, mobility, food, services, education, and meaningful employment. It gives inhabitants the opportunity to take part in the civic, economic, and cultural life of the city. Cities that are liveable have access to clean water and sanitation systems that remove wastewater. This indicates that the communities in which we live care about our health and well-being. We have options when it comes to water, power, communications, transportation, healthcare, and education. Health, both physical and emotional, is an essential component of liveability for all members of a city, region, or community. Participation from the public sector and the business sector is required here. The paper ultimately stresses Raise people's consciousness about the local, global, current, and future settings, as well as the relationships between them.

Keywords: *City, Liveable, Sanitation, Urban planning*

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1. Introduction

It is common practice to represent urban places as more desirable than rural areas. The examples of hygiene and cleanliness are as follows. We have a campaign called "Clean India" with mounds of waste, but we do not have sufficient restrooms, sanitation facilities, or health and hygiene services. By reducing the amount of wasted land and resources, mayors and other municipal officials may stimulate economic growth and contribute to the creation of new jobs.

In urban India, about 37% of human waste is disposed of in an incorrect manner. This has a negative impact on both public health and the environment in metropolitan regions, which are responsible for producing more than 60% of the nation's GDP. According to Sulabh, the reduction of dangers and various other risk factors is how urban sanitation protects people's health. The enormous amounts of human waste produced by cities are a factor.

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The New Urban Agenda employs the terms “resilience” and “efficiency” approximately 30 times each, and the 11th Sustainable Development Goal (SDG) asks for resilient and sustainable cities and human settlements. The report analyses the problems with urban sanitation in India and suggests potential remedies.

The Problems and Goals of the Research

- Sanitation in cities continues to be a challenge, despite the progress made in research and technology.
- Sanitation’s importance
- Understanding the importance of urban planning and construction
- Problems with Sanitation
- Explore numerous choices.
- Cleanliness

Issues relating to waste management, health, and hygiene have been the primary focus of most sanitation-related discussions in sociology. Recent research conducted in India by Dr. V.B. Hans examines the issue of sanitation from an economic vantage point. *Economics of Sanitation Approaches and Avenues* was published as a result of this Conference. The World Bank discovered that poor sanitation caused a 7% decrease in GDP. The lack of access to sanitation has a significant impact on the economy.

The application of economics to sanitation is expanding in underdeveloped countries. The reaction of businesses to a worldwide crisis that created by the breakdown of markets and societies. According to Professor Keshav, an economist at Bangalore University, Sanitation Economy, often known as investing in resources connected to toilets, boosts health as well as education and economic progress.

In their 2016 report titled “The true cost of sanitation,” which was co-authored by LIXIL Group Corporation, Water Aid, and Oxford Economics, the authors calculated the cost of inadequate sanitation in relation to mortality, productivity, healthcare access, and access in general. The cost to the world economy due to a lack of cleanliness was US\$222.9 bn in 2015, which is a 22% increase from US\$182.5 bn in 2010.

According to the report, Asia-Pacific is responsible for paying 77% of the economic cost associated with inadequate sanitation. Each region of Latin America, the Caribbean, and Africa is responsible for 10% of the total cost worldwide.

The concept of “house” (Greek: “*oikos*”) is fundamental to both ecology and economics. Both humans and various kinds of animals can be found on this planet. Man leads a life that is at odds with the natural world. In an ideal world, all living things, including people, would be able to call a healthy environment home. How much does the expense of development amount to? “Unity in diversity” has long served as the guiding principle of our nation’s concept. The loss of biodiversity is another worrying trend. Working across disciplines is necessary in order to address environmental concerns. This demonstrates the connection between the economy, the environment, and sanitation.

Both environmental protection and economic progress are intricately related and intertwined. The ecological problem is brought on by economic expansion. Ecological imbalance. a growth that is unhealthy. Take, for example, normative economics. Utilitarianism should guide environmental economics. An economic analysis of environmental problems, causes, and effects employs concepts, techniques, and methodologies from the field of economics. The economics of sanitation needs to be addressed on both a global and local scale.

Sanitation lowers the expenditures of the health system, decreases the number of sick days taken, and frees up more time for convenience (time that would have been spent waiting in queue at shared sanitation facilities or walking to defecate in the open).

People have the potential to produce more when access to water is simplified and made more expedient. This can also increase personal safety by removing the need for lengthy and potentially hazardous water hauls. People who have access to better water sources tend to have better health and experience higher levels of productivity.

It has been shown that providing children with access to clean water can enhance their health, as well as their school attendance and overall life outcomes.

The water problem is a financial crisis. The gathering of water and ensuring its safety costs billions of dollars in lost economic potential. Women are responsible for collecting water for 785 million people who lack access to clean water.

In 2016, the Toilet Board Coalition carried out a study to determine the viability of the circular economy. The primary concerns were the following:

- Is there any benefit in repurposing the resources used in toilets?
- Can these things be supplied in a sustainable manner through scalable business models?
- Are there a lot of huge industrial buyers interested in the system?

Participants in the study included both low-income sanitation Small and Medium-sized Enterprises (SMEs) and specialists from multinational firms, academic institutions, and the “waste” (resource) management value chain.

If the price at which anything sells on the market is what determines its economic value, then only marketed commodities have value. Therefore, economic value cannot be attributed to natural resources or public goods. Economic worth does not equal resource price. Things that don’t have prices on the market can yet have great economic value.

Is there a return on investment for water and sanitation projects? The benefits of enhancing water and sanitation are difficult to measure, but best estimates indicate that they will considerably outweigh any associated expenses. According to the United Nations, every dollar spent on water and sanitation systems saves \$8 in healthcare costs, disease, and lost productivity. According to research conducted by the WHO in 2004, an investment of one dollar in water, sanitation, and hygiene education would produce health benefits ranging from three to thirty-four times that amount, depending on the technology.

According to the UN Human Development Report from 2006, the cost of the water and sanitation gap is \$170 bn, which is equivalent to 2.6% of the GDP of poor nations.

The price of contemporary water and sanitation services for homes can be broken down into seven primary components:

- There is a cost associated with redirecting raw water from its intended usage to domestic purposes.
- Bringing water into the city that has not been treated.
- Treatment of rain water so that it can be consumed.
- Water that has been treated and distributed to urban households.
- Collection of domestic wastewater (also known as sewage collection).
- Treatment of wastewater (also known as sewage treatment).
- It is considered to have negative externalities when treated wastewater is discharged into the environment.

The economy benefits from improvements made to water and sanitation, including an increase in labour productivity and returns. A cost-benefit analysis applied to the economics of water and sanitation. Problems relating to institutions, government, and the economy pertaining to water and sanitation. e-governance). The Economic Impact of Sanitation Report (pdf) that Indonesia compiled lends credence to that assertion. According to the report, Indonesia lost US\$6.3 bn due to poor hygiene and sanitation in 2006, which is equivalent to 2.3% of the country’s GDP.

According to the report, inadequate sanitation and hygiene are responsible for 120 million cases of disease and 50,000 early deaths per year.

2. Initiative for Sanitation and the Economy

According to a study conducted by WSP in East Asia in 2007, it was discovered that inadequate sanitation and hygiene costs Cambodia, Indonesia, Lao People’s Democratic Republic, the Philippines, and Vietnam around \$9.2 bn each year in 2005 dollars. The Economics of Sanitation Initiative was established as a result of this study.

- Sanitation Economy—companies—waste entrepreneurs, etc.
- The Sanitation Economy is giving rise to several types of sanitation-related business concepts.
- Sanitation Economy entrepreneurs gain multiple revenue streams.

2.1. New Financial Models

The expense of not improving sanitation. Getting sick from poor sanitation and losing time at work can have a financial toll. Inadequate sanitation facilities can also result in wasted time and effort, decreased product quality because of poor water quality, lost tourism income owing to high contamination and disease risk, and increased costs associated with cleanup.

3. Sanitation Expenses

3.1. Initiatives taken by Sulabh

The improved sanitation had multiple financial benefits, including: (1) the direct economic benefits of avoiding illnesses (which saved money on healthcare expenses); (2) the indirect economic benefits, which included fewer work days lost to illness and a longer lifespan because these benefits enabled people to work more; and (3) the non-health benefits, which included time.

3.2. Sanitation, Healthcare, and the Business Community

The water and sanitation firms that serve urban Africa's informal settlements are dealing with a significant sanitation backlog. Because of this backlog, further investments are required. When deciding on a method of sanitation, it is important to take lifecycle costs into account. Sewerage that relies on gravity and is combined with treatment is more affordable than UDDT and VIP latrines.

All populations with densities greater than 158 and 172 people per hectare. The yearly cost of simplified sewerage and treatment was US\$142 per household, whereas the annual cost of UDDT was US\$156 and the annual cost of VIP latrines was US\$144. A monthly cross-subsidy and surcharge of \$5.30 (US) per family might cover the expense of sewage system simplification.

3.3. Sanitation

Sanitation is a problem that affects the entire world since population increase and increasing urbanization are surpassing the capacity of existing sanitation facilities. According to figures from the United Nations, more than 2 billion people lack access to basic sanitation. In 2015, many people in India did not have access to sanitation. 2019 will see the introduction of new sanitation practices by both public and private institutions. India is currently in the driver's seat because to its "Swachh Bharat Mission" and its "Jal Shakti Ministry." The "Swachh Bharat Mission" in India has altered the behaviors of consumers, industry leaders, and business owners, which has paved the way for the development of new economic sectors and supply chains related to sanitation. This exhibits advocacy for sanitation and sets a benchmark for the entire world.

Inadequate sanitation costs India ₹2.4 tn (US\$53.8 bn). In 2006, this accounted for 6.4% of India's total GDP. The annual impact per person is ₹2,180 (about US\$48).

3.4. Facts

- In the year 2020, 54% of the world's population, or 4.2 billion people, had access to safe sanitation.
- There are 1.7 billion people who do not have access to their own private toilets or latrines.
- 494 million people do their business in the open, such as in the water, bushes, or roadway gutters.
- In the year 2020, just 45% of the world's domestic wastewater was treated.
- At least ten percent of the world's population consumes food that was irrigated with wastewater.

Inadequate sanitation contributes to mental health issues, sexual assaults, and missed educational and employment opportunities, all of which have a negative impact on well-being, social development, and economic growth.

Poor sanitation contributes to the spread of polio, cholera, dysentery, and typhoid fever, as well as intestinal worms. Those affected by stunting and antibiotic resistance see their numbers rise.

Poor water, sanitation, and hygiene contribute to the deaths of 829,000 people in low- and middle-income countries, where 60% of all diarrheal fatalities occur. Inadequate sanitation is the root cause of gastrointestinal worms,

schistosomiasis, and trachoma, which collectively account for 432,000 of these fatalities. Poor sanitation causes malnutrition.

In the year 2020, 54% of the world's population, or 4.2 billion people, used a sanitation service that was safely managed, 34% of the population, or 2.6 billion people, used private sanitation facilities connected to sewers that treated wastewater, 20% of the population, or 1.6 billion people, used toilets or latrines where excreta were safely disposed of in situ, and 78% of the population, or 6.1 billion people, used at least a basic sanitation service.

However, it is possible to avoid getting diarrhoea and save lives. 297,000 children younger than 5 years old may be spared if water, sanitation, and hygiene were improved.

The practice of defecating in public can lead to both sickness and poverty. Open defecation is most widespread in nations that have the highest rates of child mortality under the age of 5, the highest rates of child malnutrition, the highest rates of poverty, and the highest rates of wealth disparity.

Sanitation, March 21, 2022, World Health Organization.

3.5. The Advantages of Sanitation

Sanitation encompasses more than just the prevention of diarrhoea. Examples:

- Preventing the spread of tropical diseases that are largely ignored, such as intestinal worms, schistosomiasis, and trachoma, which affect millions of people;
- Minimizing malnutrition;
- Fostering respect and a secure environment for women and girls;
- Girls' enrollment in schools increases when they are provided with their own restrooms.
- Decreasing antibacterial resistance;
- Water, alternative sources of energy, and nutrients derived from waste;
- Irrigation of treated wastewater has the potential to alleviate water scarcity, particularly in regions where the climate has altered.

According to a research conducted by the WHO in 2012, investing \$1 in sanitation resulted in \$5.50 in reduced healthcare expenses, increased productivity, and fewer deaths caused by early causes.

3.6. Challenges

In 2013, the Deputy Secretary-General of the United Nations issued a call for an end to public urination and defecation by the year 2025. The world is on track to abolish open defecation by the year 2030, if not 2025; nevertheless, the current rate of progress would need to double in order to achieve universal sanitation coverage by the year 2030. Prices for universally managed services need to be increased by a factor of four.

The plight of the urban poor provides an increasingly difficult task since more and more of them are relocating to cities with deteriorating or non-existent sewage systems, cramped restrooms, and limited capacity for trash collection and disposal. Polluting poorer neighborhoods with sewage that is dumped by wealthier families into storm drains, streams, or landfills worsens access inequality and contributes to environmental degradation. The majority of the wastewater that is produced around the world is discharged into aquatic bodies such as rivers, lakes, and the ocean.

The water and nutrients needed for urban food cultivation can be found in wastewater. There is a requirement for both regulatory bodies and public education. A total of 36 million hectares of peri-urban croplands are irrigated with wastewater that has not been adequately treated. This area is roughly the same size as Germany.

2019 is the year when UN-Water launched the SDG6 Global Acceleration Framework. (GAF). The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) published a report titled "The State of the World's Sanitation" on World Toilet Day in the year 2020. The research outlined the health effect, sanitation coverage, progress, policy, and investment, in addition to a GAF sanitation acceleration plan.

Daily, the sanitation workers of Dharmapuri are forced to pick up human excreta, which is an inhumane profession that also has administrative corruption and caste bias built into it; there are dehumanizing ordeals, layers of precarity, and problems in the toilet infrastructure. Moreover, there are flaws in the infrastructure of the toilets itself. Why is it that stating one's rights is considered to be insubordinate? (Srividya, 2023).

3.7. The Reaction of the WHO

In 2010, the United Nations General Assembly recognised that people have a right to drinking water and sanitation that is free from contamination, easily accessible, and inexpensive. They also called for international support. Sustainable Development Goal 6.2 needs universal sanitation.

The World Health Organization (WHO) provides advice to national governments on health legislation and the provision of health services with the goal of reducing the global spread of disease. The World Health Organization (WHO) monitors the prevalence of diseases and access to sanitation facilities, and it examines what helps and what inhibits progress. Monitoring provides the Member States and donors with worldwide statistics that can assist them in making investments in toilets as well as in the proper management of excreta and wastewater.

Through the World Health Organization's (WHO) Guidelines on sanitation and health, safe wastewater use, recreational water quality, sanitation safety planning, and sanitary inspections, WHO collaborates with partners to promote effective risk assessment and management practises for sanitation in communities and health facilities. WHO backs collaborative efforts between the WASH sector and the health sector to combat neglected tropical diseases, cholera, polio, and antibiotic resistance. All WHO sanitation guidelines include climate resiliency.

Sanitation that is safe encourages the correct use of toilets, the avoidance of open defecation, and the management of solid and liquid waste. Inadequate sanitation is the root cause of a wide variety of fatal diseases, the premature mortality of children under the age of five, the polluting of ground water, a reduction in family income as a result of rising medical bills, and a degradation of human dignity. Knowing the impacts of poor sanitation, the role of all stakeholders, including immunizations, and the implementation of safe sanitation systems is required at all levels, including family, community, and government. This includes knowing the effects of bad sanitation.

3.8. Health

Diarrhoea, cholera, trachoma, intestinal worms, malaria, and ascariasis are only few of the diseases that can be contracted through drinking water and food that have been tainted with pathogens that have been polluted by human waste.

In just one gram of poo, the World Health Organization discovered 10,000,000 viruses, 1,000,000 bacteria, 1,000 parasite cysts, and 100 parasite eggs. Through the use of proper sanitation and hygiene practises, it is possible to cut off the feces-to-mouth route that connects human waste to food, water, and crops.

3.9. The Females and the Young

Because their immune systems are still developing, children under the age of five are particularly susceptible to infections that are associated with inadequate sanitation. In developing nations, acute diarrhoea claims the lives of 1.5 million children each year. Children who are malnourished due to the presence of parasites do not develop normally in either their physical or mental capacities.

Sanitation on its own is capable of mitigating some of these unfavourable consequences on youngsters.

Children who are frequently ill miss school, which leads to low academic achievement. youngsters that are infected can spread the disease to other youngsters. When girls enter puberty, a lack of separate toilet facilities that are also clean creates discomfort, which inhibits attendance during menstruation and ultimately leads to girls dropping out of school. When there is a lack of adequate sanitation, young girls and women are more likely to experience anxiety, shame, and harassment while defecating in public environments.

Sanitation and waste management both have an impact on the surrounding environment. Sewage that has not been treated and is allowed to run directly into water bodies is harmful to coastal and marine ecosystems. It also pollutes the soil and the air and infects millions of people.

3.10. Economy

According to the World Bank, India's inability to provide adequate sanitation and toilets has resulted in economic losses.

India loses USD38.5 bn annually due to poor sanitation in the areas of health, education, access time, and tourism.

3.11. The History of Sanitation in India

In 1954, India's First Five Year Plan began implementing sanitation programmes in rural areas. The 1981 Census reported that only 1% of rural areas have access to sanitation. Sanitation in rural areas was the primary focus of the International Decade for Drinking Water and Sanitation (1981-1990). The Central Rural Sanitation Program (CRSP) was initiated in India in 1986 with the goal of enhancing the quality of life in rural areas and providing women with more privacy and dignity. To increase rural people's awareness of, and desire for, sanitary facilities, a "demand driven" method was implemented beginning in 1999 as part of the "Total Sanitation Campaign" (TSC). This approach centered on Information and Education Campaigns, Human Resource Development, and Capacity Development. People are now better able to select appropriate delivery mechanisms based on their respective financial situations as a result of this improvement. BPL households that constructed and used Individual Household Latrines (IHHL) were awarded monetary incentives as a form of positive reinforcement. The first Nirmal Gramme Puraskars (NGP) were awarded to General Practices (GPs) who achieved 100% sanitation coverage and other indicators of open defecation-free general practices in order to encourage better sanitation. The award helped to increase community awareness in Nirmal Status; nonetheless, several awardee general practices have experienced difficulties maintaining their status. As of January 4, 2012, the NBA took the place of the TSC. The rural community has been completely covered by improved sanitation at an accelerated rate as a result of fresh techniques and a saturation strategy. Saturating the society was one of the goals of the Nirmal Bharat Abhiyan (NBA), which aimed to establish Nirmal Gramme Panchayats. The NBA raised the stakes for the IHHL and strengthened its support for MGNREGS. The NBA-MGNREGS convergence was pushed back because of problems with funding.

4. Swachh Bharat Mission

The Indian Prime Minister initiated the Swachh Bharat Mission on October 2, 2014, with the goal of hastening the process of achieving universal sanitation coverage and concentrating on clean sanitation. To achieve Swachh Bharat by 2019, as a fitting tribute to Mahatma Gandhi's 150th birthday, the Mission Coordinator is the Secretary of the Ministry of Drinking Water and Sanitation (MDWS), with two Sub-Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission (Urban), which aims to achieve Swachh Bharat by improving rural cleanliness through Solid and Liquid Waste Management activities and making Gramme Panchayats clean. This will be accomplished by the Mission through the elimination of bottlenecks, such as the MGNREGS's partial support for Individual Household Latrines, and a focus on essential issues that are affecting outcomes. The SBM (G) Guidelines and Provisions came into effect on October 2, 2014.

5. Strategy

The plan is to transform "Swachh Bharat" become a widespread movement that encourages people to clean their homes, places of employment, villages, towns, and surrounding areas. Since sanitation is a problem that affects the states, the governments of those states ought to have the authority to decide on their own implementation policy, funding, and means to satisfy state requirements. This assists state governments in developing an implementation framework that makes the most of mission provisions and interventions. Recognising the utmost significance of the targeted program to the country as a whole, the Government of India would lend its assistance to the respective State governments by naming it a Mission. The following are some highlights of the strategy:

- Empowering local institutions to facilitate extensive behavior modification at the grass-roots level.
- Providing the implementing agencies with the tools necessary to carry out the program on schedule and evaluate the overall results.
- Providing incentives for governmental entities to bring about behavioral changes in the community. The Implementation Framework for each State should comprise a road map of activities for the three critical phases of the

Program: planning, implementation, and sustainability. At each phase, there will be activities that call for detailed planning and particular Plans of Action to be developed.

6. Planning

6.1. Planning at the State Level

The District will put up a project proposal that includes the specifics of the Gram Panchayat, and the State Government will analyse and compile this information into a State Plan.

IEC, BCC, triggering exercise, capacity building, implementation, financial assistance, and monitoring activities will be aggregated across all Gram Panchayats in the state plans that will contain IEC, BCC, and other initiatives. The State Plan (Swachh Bharat Mission Gramin – Ministry of Drinking Water and Sanitation) will be given to the Indian government. This plan consists of a separate Project Implementation Plan (PIP) for each of the next five years, as well as five separate Annual Implementation Plans (AIP). The states will amend their prospective state project implementation plans (G) using the baseline data and SBM norms. Each year, the Ministry gives its approval to the AIP plans. An annual communication plan should be included in each and every state's AIP.

Sanitation and waste management both have an impact on the surrounding environment. Sewage that has not been treated and is allowed to run directly into water bodies is harmful to coastal and marine ecosystems. It also pollutes the soil and the air and infects millions of people.

The majority of city dwellers are crammed into housing that is substandard.

Over 50% of urban Indian households have at least one room that is shared, and these houses have an average occupancy of 4.4 individuals.

6.2. Unplanned Development

The construction of a developed metropolis requires unplanned development, which contributes to the widening gap between the wealthy and the poor in metropolitan areas.

The Covid-19 outbreak has made life more difficult for people who live in slums.

The acceleration of welfare and relief programs, the provision of free vaccines, food security, and proper shelter in the slums are all part of the plan to improve health facilities and welfare programs.

Sanitation, transport and health facilities in a slum.

Providing assistance to local support organizations and non-profit organizations so that they can communicate with underserved communities. Because of urbanization, new approaches to urban planning and governance are required.

Create an infrastructure that is not only robust but also sustainable and inclusive.

A bottom-up strategy will be employed, with the goal of better understanding the difficulties faced by urban poor.

7. Architecture

Urbanization has the potential to establish a model that is more sustainable by putting people closer to their places of employment, boosting productivity, and fostering creativity and new ideas through the development of smart cities and improved infrastructure.

The need for cities, urbanization, and urban infrastructure is increasing as a result of population growth and the availability of urban amenities. Cities' efficiencies, productivity, economies, and security are all improved by better infrastructure.

The elimination of informal communities depends heavily on careful urban design. The primary objective is to develop human settlements that are integrated and sustainable, so that they can better withstand environmental, social, and economic challenges and improve the quality of life in rural communities.

Integrated land connection, landfills, urban drainage networks, land requirements, and other urban complexity need to be taken into consideration while designing spatial layouts.

Without spatial designs, it is difficult to find solutions to the infrastructure challenges that plague Indian cities.

In 2015, the National Smart Cities Mission was established.

It is a program for the urban renovation and retrofitting of cities that is being implemented by the Indian government with the goal of creating smart cities that are citizen-friendly and sustainable.

The Smart Cities Mission is an initiative that encourages the expansion of local communities as well as the implementation of technologies that improve the quality of life in urban areas.

The first “smart city” in India was located in Indore. According to the findings of Juniper Research’s analysis of transport, infrastructure, energy, lighting, city administration, as well as technology and urban connection, Shanghai will be the smartest city in the world in the year 2022.

The government is looking for more effective ways to manage complexity, increase efficiency, and improve quality of life as a result of a rapidly expanding urban population and increasing urbanization. In order for cities to make the most of their resources and services, the infrastructure must be monitored and integrated.

The following are components of a smart city’s infrastructure:

- Sufficient water
- Assurance of supply of power
- Sanitation and the elimination of waste
- Transportation in cities and urban mobility
- Housing at an affordable price for those in need
- Connectivity and digitization both go hand in hand
- E-governance, citizen participation

8. Sustainable Environment

Protection of citizens, particularly of vulnerable groups including infants, the elderly, and pregnant women.

The goal is to develop compact regions in a way that is both sustainable and inclusive so as to serve as an example to other cities.

9. Coverage

The operation will focus on 100 cities that are evenly dispersed across the states and territories. The method gives equal weight to the number of statutory towns and the urban population. Statutory towns are defined as towns that have a municipality, corporation, cantonment board, or notified town area committee. According to this method, there will be at least one Smart City in each state and territory.

In India, there are about 4,000 urban local bodies and towns that offer opportunities in the areas of housing, sanitation and cleanliness, livelihood, information technology, health and education, transportation, and the environment. The government places a high priority on investments in financial and information technology services, and the Smart City Mission is of importance to leading economies.

Through careful planning, execution, and monitoring, the mission can be made both intelligent and ever-evolving.

In the early 1980s, the United Nations Decadal Program for Water Supply and Sanitation had as its primary objective the provision of sanitation services to eighty percent (80%) of all urban dwellers. In 1980-1981, as part of a scheme that was government supported, dry latrines were changed such that they no longer required manual scavenging. Included in this count were slum and squatter colonies as well as residences with dry latrines. 41 Urban Development Programs in India Under this scheme, HUDCO was responsible for channelling both loans and central subsidies.

The acronym SSPD stands for “Shelter and Sanitation for Pavement Dwellers.”

This plan was initiated in significant urban regions, such as metropolitan cities, which have huge populations that do not have access to shelter. The Tenth Plan emphasized that the provision of subsidies under the program needs to be sufficient in order to make it possible for non-governmental organizations to participate in the construction of shelters. Bed funding need to be changed so that there are adequate shelter nights available for women and children who are homeless. This program's Pay and Use component is going to be combined with VAMBAY's Nirmal Bharat Abhiyan in the near future. Accelerated Urban Water Supply Program (AUWSP): This is another centrally sponsored scheme launched during the Eighth Plan for providing water to the towns having less than 20,000 population as per the Census of 1991, operationally under the State PHED to be funded by the Central Government, State Government, and concerned ULBs on a 50:45:5 ratio. This scheme was designed to provide water to the towns having less than 20,000 population as per the Census of 1991. The Center was responsible for covering all of the Union Territories' costs.

NSDP stands for the National Slum Development Program.

The NSDP, which was first implemented in 1996 as a program of Special Central help for the renovation of slums, has been giving additional help from the central government to state governments in order for the slums to receive, among other facilities, water supply and sanitation.

(JNNURM) is an acronym for the JAWHARLAL NEHRU NATIONAL URBAN RENEWAL MISSION.

Urban Renewal is one of the thrust areas in the National Common Minimum Program of the Government, and as such, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched on December 3, 2005, with an investment of ₹50,000.00 cr in the Mission period for seven years beginning in 2005-06. The Mission period will begin in 2005-06. Urban Renewal focuses on the inclusive development of urban centers. The Mission is charged with advancing reforms and accelerating the development of infrastructure, with a particular emphasis on the effectiveness of urban infrastructure and services, community engagement, and ULB accountability to people.

The term "urban planning" refers to the process of arranging and developing a city on various levels, including architectural, infrastructural, economic, ecological, and even political.

Urban planning is a technical and political process that develops and designs land use and the built environment, including air, water, and infrastructure entering and leaving urban areas, such as transportation, communications, and distribution networks and their accessibility. It is also known as town, city, regional, or rural planning.

The goal of urban planning is to provide answers to concerns regarding how people will live, work, and play in order to manage the orderly development of urban, suburban, and rural areas.

The disciplines of civil engineering, architecture, human geography, politics, social science, and design sciences are all essential components of urban planning.

Research, analysis, strategic thinking, engineering architecture, urban design, public consultation, policy proposal, execution, and management are some of the tasks urban planners are responsible for.

In addition, urban planning include both large-scale master planning of undeveloped land, sometimes known as Greenfield projects, and more localized interventions and renovations of already-existing structures, buildings, and public areas.

10. Urban Planning Basics

The following are ten principles of urban planning that every humanitarian should be aware of:

1. Inquire of the community what their requirements are.

Asking members of the community what they require is an important part of community outreach. Participation in the community helps them provide a solution. Participation from the community can help develop tactics for humanitarian work and urban planning, as well as address knowledge gaps.

Collaborating with communities to uncover weaknesses and threats and giving them the power to help shape potential solutions. The answers to the city questions are typically unexpected.

2. Data are helpful.

Quantitative data validates anecdotal community feedback. Data helps quantify needs. This evidence contributes to the community's education and illuminates potential next steps.

3. Opportunities arise whenever there is overlap.

Cities are intricate webs of systems, industries, actors, and neighborhoods, each of which has a primary objective that influences the way the city functions. The success of a city is not determined by a single component but rather by the power and vitality of the overlaps.

Collaboration is an absolutely necessary component in the process of discovering unique ideas. The development of urban solutions is driven by collaboration between private industry, Non-Governmental Organizations (NGOs), and the state sector.

4. Humanitarians center their work on individuals, whereas urban planners study how people's surroundings influence them. The geographic positions of cities are frequently indicative of the degree of risk, susceptibility, social tension or cohesion, as well as economic potential.

Understanding the context in which individuals live enables us to better comprehend the difficulties, possibilities, requirements, and overall quality of life that they face. The Livelihoods Center in Beirut, which is operated by the International Rescue Committee (IRC), is a multi-story facility located close to a central roundabout and at the crossroads of different districts. The IRC makes use of its location in order to make livelihood programming more accessible.

5. Design is important because location is important.

Smart urban design solves challenges and capitalises on opportunities. Humanitarians are not designers, yet design considerations (such as location, size, and scale) can stimulate innovative approaches to meeting the requirements of people.

The most disadvantaged residents of Medellin were able to cut down on their travel time because to the now-famous urban escalators located in Comuna 13.

6. Cities are frequently centers of political activity, whether for positive or negative reasons. Humanitarian organizations have a responsibility to recognize the power of politics and collaborate with political partners in order to develop long-term solutions to urban challenges.

Maintaining a commitment to humanitarian principles. Having the courtesy to acknowledge other people.

7. The importance of civil society cannot be overstated.

Because of the multiplicity of cities, civil society is able to exert pressure on political power through activities such as church group meetings, community board fundraisers, or protests in central Beirut.

Because of their greater population density and cultural diversity, cities have a greater influence on the functioning of civil society than do rural places. It's possible that building humanitarian alliances with the right civil actors is just as vital as engaging the official sector.

8. Humanitarians assist those who are most in need, whereas urban planners seek to improve conditions for all residents. Finding those in a city who are the most helpless can rip the social fabric apart. Urban planners and humanitarian workers collaborate in order to provide better services for those who are most in need.

9. There is an advantageous answer to every problem. Humanitarian organizations are better able to implement long-term solutions in urban areas. Because of their interconnection and complexity, we need creative, long-term solutions that are both successful and an improvement on the situation we were in before the crisis.

Even in the face of a disaster, urban planners and humanitarian workers need to have a vision for how to enhance infrastructure. This may be in the form of a floodwall that doubles as a park or a program that improves water, sanitation, and hygiene.

10. Prepare yourself.

The clue is in the name. The best urban planning addresses pressing concerns while also looking to the illustrious future of a city. Uncoordinated projects almost never succeed in meeting their long-term objectives.

By developing a strategy and a long-term vision, urban planners can increase the likelihood that their work will have a positive, intended, and enduring influence.

A strategy for the infrastructure is required for a Master strategy. The infrastructure plans need to incorporate the sanitation sub plans as well.

The following are the primary stages of urban planning:

- Exploration/preparation.
- Planning/feasibility.
- Formal planning/zoning.
- The planning and the carrying out.
- Operation.

There are five ways that cities can become greener:

- Urban farming
- Healthy diets
- Preventing the loss and wastage of food
- Greening in order to promote healthier lifestyles and environments.
- Creating links between urban and rural settings

The following are important topics that will be discussed:

Poor governance at the local level

10.1. Insufficient Resources

- Inadequate planning has led to housing and office space prices in several Indian cities reaching levels that are unprecedented anywhere else in the world.
- A lack of potable water and electrical power, insufficient means of mobility, and crucial infrastructure gaps.

10.2. Environmental Deterioration

- Urbanization is the source of poor nutrition, health problems due to pollution, communicable diseases, inadequate sanitation and housing, and other health problems related to urbanization.

11. How do we Stop Slums?

11.1. Solutions

Slums must be upgraded as a result of urbanization; eviction is not an option. This entails making responsible efforts to improve living circumstances in informal settlements and providing short-term and long-term suitable housing options.

Our global advocacy campaign is called Solid Ground, and its goal is to protect the land rights of people living in slums and advance policies that improve sanitation in order to stop evictions by force.

Access to land, tenure security, financing, and basic services are all necessary components of urban development.

Upgrading a slum needs having tenure stability in order to have access to land, capital, and essential services.

Countries and non-governmental organizations are coming together to form global teams in order to fight slums, advocate for residents' rights, and rehabilitate urban settlements.

11.2. SWM Laws

2016 Municipal Solid Waste Manual

The urban component of the Swachh Bharat Mission was initiated by the Indian government on October 2, 2014.

Cleanup of the Survekshan

11.3. Survey of Swachh

Volunteers from various stakeholder groups work to clean up the nation on Sewa Diwas.

Samagra Swachhata is the collective effort of the people, municipalities, SBM ambassadors, and businesses to clean up their environment.

Sarvatra Swachhata is an initiative that involves extensive cleaning of well-known locations.

Banao, Apnao Campaign

Volunteers from various stakeholder groups work to clean up the nation on *Sewa Diwas*.

12. After the Covid-19

Special public cleaning

Disposal of quarantined trash from private residences.

Disposal of masks and transfer of those masks without combining them with other types of household garbage from residences that were confined.

Providing safety for those who collect and transport Covid-19 waste

Apps for smartphones, online health exams, Geographic Information Systems (GIS), and electronic passes are some of the other tools that governments and ULBs are using to monitor and control the virus.

13. Urban Sanitation

In spite of the fact that only 27.78% of India's population resides in urban agglomerations or towns, the country is in the midst of a severe urban growth crisis. India is one of the least urbanized countries in the world. Along with economic, social, and political advancements, urbanization has also brought with it a host of socioeconomic challenges. Sanitation is of the utmost importance.

13.1. Water

Pandemic Covid-19 brought attention to inadequate slum sanitation. Slums made washing one's hands and maintaining a physical distance impossible.

Only 21.8% of the homes in Delhi's slums make use of public faucets.

14. Sewerage/Sanitation

The sewage treatment facilities in India's cities are deplorable. The cities in India do not have sewer systems. The lack of available municipal resources and unchecked population increase are to blame for this unfortunate state of affairs.

According to some estimates, only 35-40% of metropolitan residents have access to sewage facilities. The sewer lines in the majority of cities have been neglected. It's not uncommon for sewers to back up or break.

The waste from most cities' sewage systems is thrown into rivers or the ocean, which pollutes such bodies of water.

The majority of urban areas in India have sewer lines located close to water pipes. The water becomes tainted and can then become a vector for the transmission of diseases.

Keeping cities clean is an important part of urban sanitation. Sanitation in the city encompasses more than only the collection, processing, and disposal of human waste. Slums are areas of the city that are overpopulated and have inadequate sanitation, both of which can lead to the spread of disease to other residents of the city.

There are about 60 million urban dwellers who do not have access to adequate sanitation, and more than two-thirds of wastewater is discharged into the environment without being treated, which pollutes the land and the water.

Poor sanitation contributes to the spread of polio, cholera, dysentery, and typhoid fever, as well as intestinal worms. Those affected by stunting and antibiotic resistance see their numbers rise.

15. Objectives

Sanitation in cities lowers the risk of disease by better controlling urban variables. Waste from cities is a significant contributor. Sanitation in cities is accomplished mostly through the use of sewers, which funnel waste towards centralized treatment plants. People are less likely to use the streets as bathrooms when there are public toilets as well as portable toilets available for large events.

The administration of water supplies is an additional component of urban sanitation. A reliable sanitation service guarantees clean water for consumption. Isolating wells to prevent pollution, securing outside water supplies, and constructing a safe pipe network to supply water to households are some examples of things that may be done to improve water safety.

Sanitation is also responsible for trash collection and disposal. Garbage collectors pick up trash on a predetermined day of the week in most cities and transport it to a facility where it is processed. Recycling and composting could become part of municipal rubbish collection in order to lessen the negative impact on the environment, increase revenue, and bring down consumer costs.

16. Sanitation Issues

- Defecation
- Undrinkable water
- Dense living
- Uneducated
- Less desirable health
- Diseases rise
- Education decline
- Deflation

As a result, there is an inadequate supply of water, inadequate trash collection and disposal, unprotected food, substandard housing, contamination of the air, land, and water, and inadequate environmental housekeeping.

Benefits: Improved urban sanitation lowers the amount of pollutants in the ground, surface, and subsurface water. It lessens the amount of flooding caused by climate change.

17. Remedies

The conditions in India must be more conducive to sanitation.

The National Policy on Faecal Sludge and Septage Management (FSSM) was finally approved in India in February 2017, making it one of the first countries in the world to do so. The policy demonstrates the government's commitment to ensuring that everyone has access to sanitation that is both safe and sustainable.

17.1. Survey

To keep the topic of cleanliness in the public eye, the government of India conducts an annual ranking poll called Swachh Survekshan. Indicators of the FSM are currently weighted.

This application is assisting city governments in assessing their performance in the area of sanitation and drawing the attention of citizens. With the use of the new FSM indicators, local and state governments are already putting into action actions that have been approved by their peers.

It is imperative that we implement long-term solutions. To begin, reputable construction firms, consultants, and industry professionals are required to supply the necessary solutions and services. Second, cities need to increase their capacity to provide services centered on infrastructure so that they can compete.

Sustainable sanitation investment requires good faecal sludge management. The efficient management of faecal sludge is a public health concern that needs to be given priority in order to maintain the country's investment in sanitation, particularly during the course of the past four years. It is becoming increasingly critical for the government to create and scale up solutions, despite the existence of a robust policy framework (Hans, 2023).

18. Conclusion

Cities are home to 3.5 billion of the world's 7.5 billion people and are responsible for producing 75% of global GDP. Experts in demographics predict that there will be an additional three billion people living in cities by the year 2050, bringing the total urban population share to two-thirds. We need cities that are both intelligent and livable.

Yet cities and urban areas all over the world are confronted with significant social and ecological challenges, including pollution, poverty, unemployment, substandard housing, food insecurity, and a lack of basic services for more than one billion people who live in slums; limitations on productivity brought on by a lack of basic infrastructure; and concentration risk brought on by natural disasters and climate change.

It is possible for mayors and other local leaders to generate economic growth and employment opportunities without placing an undue pressure on the land or its resources.

The eleventh Sustainable Development Goal calls for cities and human settlements that are resilient and sustainable, while the 'New Urban Agenda' emphasises resilience and efficiency approximately 30 times each.

The resilience of urban growth can be explained and shaped by resource efficiency and effectiveness. Both urban resiliency and resource efficiency can be negatively impacted by each other.

At the preliminary meetings held by UN Environment and the Rockefeller Foundation, which were responsible for shaping the New Urban Agenda, resilience and resource efficiency in urban spaces were explored.

Despite only covering 2-3% of the area, cities are responsible for 70-75% of the world's total consumption of natural resources. Because cities must obtain their food, water, electricity, and other resources from great distances, they require an intricate transport infrastructure. As a result, urbanization has profound implications for both society and the environment.

Urbanization at a breakneck pace in developing countries poses a challenge to sustainable development. The UNDP is acting in response. This plan outlines the multifaceted and ever-changing urban challenges as well as the interconnected development options that cities must consider in order to realise the Sustainable Development Goals (SDGs).

The needs of people are met, the environment is protected, and the needs of future generations are not sacrificed in the name of sustainable development. Definition taken from the Brundtland Commission's report *Our Common Future* and the New Urban Agenda that was subsequently implemented.

Economy drives urbanization. People move to cities in search of better career opportunities and increased investment. As a consequence, urbanization is frequently indicative of economic success. This indicates the increasing proportion of both the GDP and the labour force that is contributed by industry and services. Graphs illustrate the connection between the two. Examine the degree to which urbanization is correlated with employment in industry and services as well as GDP.

It is dangerous to concentrate people, production, and garbage in an area if there is not a good city governance. The warming of the planet is currently being caused by cities. It is commonly believed that cities are responsible for between 75 and 80% of all greenhouse gases.

19. Suggestions

The demographics, infrastructure, and economic activity in cities all contribute to their precarious positions. The rate

of urban population increase is highest in areas like deltas and beaches, which are prone to natural disasters like flooding, rising sea levels, and storm surges. These dangers are made significantly worse by climate change.

Green space helps to reduce runoff as well as the influence of the urban heat island, which together make a city more resilient. This lowers the expenditures associated with risk reduction and air conditioning.

Change is driven by cities. As communities of individuals and businesses, they foster creative thinking and the exchange of information. Costs for infrastructure and services are reduced in areas with dense populations. An urban identity that is shared by its residents can invigorate the environmental agenda of a city. The example of New York City demonstrates that efforts to make cities more resistant to shocks and stressors can result in the waste of resources. These potential conflicts can be helped to be resolved by integrating and adjusting the urban planning and governance systems.

For development to be sustainable, living circumstances must be improved, and the resources and systems that sustain life must be used in an environmentally responsible manner. The loveliest, healthiest, and most desirable cities in Europe are also the ones with the lowest emissions of greenhouse gases per inhabitant. They use a fraction of the number of vehicles that most cities in the United States do since walking, biking, and riding public transit are such delightful activities. The most attractive and expensive housing in the city centers of Europe and the United States is also the most space- and energy-efficient dwelling.

Nevertheless, goals related to sustainability can be supported by city-scale resilience and resource efficiency. Researchers in Johannesburg showed that different approaches can complement one another.

Although it may be challenging to align these goals, cities cannot afford to pass up this chance.

We require cities that can be lived in. Many cities are plagued by problems such as environmental deterioration, traffic congestion, insufficient urban infrastructure, and a lack of basic services such as water, sanitation, and waste management. The environmental footprints left by cities are disturbing and put at risk the natural resources that are necessary for economic expansion and the alleviation of poverty. Finding a balance between economic growth and the maintenance of sustainable, livable communities is the most significant urban challenge facing Asia and the Pacific.

A sustainable city takes into account social, environmental, and economic implications through careful planning and management of its metropolitan areas. Walkways and bike lanes, for instance, contribute to the sustainability of urban areas.

According to the *Oxford Dictionary* (n.d.), “liveable” implies “suitable for living.”

The 2022 Monocle Survey found that Copenhagen is the city that offers the highest quality of life, followed by Zurich, Lisbon, and Helsinki. The phrase “world’s most liveable” refers to any list of cities ranked on an annual survey measuring the quality of living circumstances. A city is only considered “liveable” if it offers its residents access to clean water, air, food, and housing, as well as a sense of community and welcoming surroundings in which individuals, particularly young people, can cultivate their social skills, sense of autonomy, and sense of identity.

A city is considered to be livable when it offers residents equal access to housing, mobility, food, services, education, and meaningful employment. It gives inhabitants the opportunity to take part in the civic, economic, and cultural life of the city. Cities that are livable have access to clean water and sanitation systems that remove wastewater. This indicates that the communities in which we live care about our health and well-being. We have options when it comes to water, power, communications, transportation, healthcare, and education. Health, both physical and emotional, is an essential component of livability for all members of a city, region, or community. Participation from the public sector and the business sector is required here.

These kinds of conferences provide a lot of value.

Everyone gets along, including the administrators, the professionals, and the citizens.

Talk to each and every person.

Raise people’s consciousness about the local, global, current, and future settings, as well as the relationships between them. Caren proposes providing an explanation as to why these adjustments are required in order to make the city stronger.

Instead than sitting about and waiting, she encourages us to “look and see what you/we can do that is within the realms of our possibilities by talking to the appropriate people.”

Find someone who can maintain the forward momentum that has been established by early participation. Get others involved.

Another option is to “Bring the people into it and start with small activities and interventions which don’t require a lot of effort or costs.”

Nobody enjoys being kept in the dark. Everyone needs to pitch in and get their hands dirty for sustainable urban planning to work.

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