Habitat I to Habitat III: From Issues to Urban Transformation

A.K. Jain
President- Association for Settlements and Housing Activities
ak.jain6@gmail.com

Habitat I and II Conferences (Vancouver, 1976 and Istanbul, 1996) were the turning points for the habitat sector. These provoked a renewed interest and mobilised the federal and local governments, NGOs, private sector and individuals around the globe to work towards better habitat. The implicit message had been to 'think global, act local'. Habitat assumed a broader and holistic meaning and environment emerged as a central issue. In spite of remarkable efforts, the gap between the issues and implementation continues. As such, it is suggested that the focus of the Habitat III may be on the bridging gap between issues and the implementation, which has to be country/ states/region specific. This is particularly relevant for large, developing countries like India. The scenario given below brings out such gaps between the habitat issues and implementation in India.

Urban Issues and Challenges

India is on the path of massive urbanization. The total number of towns and cities increased from 5161 in 2001 to 7936 in 2011. There are 468 Class I cities among 7935 towns and cities and the number of million plus cities has increased from 35 in 2001 to 53 in 2011. The 53 million plus cities together constitute 42.63 per cent of the total urban population, while the Class I cities (468, each having the population of more than 100,000) together constitute 70.20 per cent of the total urban population. As per Census 2011, there are 3 mega-cities, viz. Greater Mumbai, Delhi and Kolkata which have crossed the 10 million population mark, while five cities, viz. Chennai, Bengaluru, Hyderabad, Ahmedabad and Pune have each attained more than 5 million population. From 377 million urban population, it is projected that by the year 2031, 600 million people will live in urban areas and 78 cities in India will become metropolitan (million plus). Although the Indian cities generate 60% of GDP and 70% of jobs, the state of housing and basic infrastructure services remain awfully poor, impeding sustainability and economy.

Table 1: India's Urban Trajectory

Year	2011	2031
Population	1210 million	1440 million
Urban Population	377 million	600 million
Cities and Towns	7936	-
Million + Cities	53	78
Housing Shortage	18.76 Million Units	30.40 million Units
Slum Population	93 million	150 to 200 million

Source: Census of India, 2011 & McKinsey Report, 2010.

Indian cities manifest a duality of both, triumph and tragedy. The majority of population suffers a growing sense of loss and frustration as their lives and hopes for the future disintegrate. Millions of people every year flock from villages to cities in hope of finding jobs and basic sustenance. However, many of them find the living conditions in urban areas bordering almost to inhuman levels. One out of every three persons in Indian cities lives below the poverty line and about one-fourth of India's urban poor are living in unplanned settlements and slums, lacking rudimentary services.

Urban Exclusion

Symptoms of urban exclusion in Indian cities are visible in continuing poverty and unemployment, slums and squatter settlements, environmental pollution, shortages of housing and the basic services as water, sanitation and electricity. Problems vary in kind and severity but no city is without its share. Despite a century of industrialization and development, more people today are ill-housed than ever before and the goal of higher living standards is receding.

Urban Dangers and Insecurity

People in urban areas are exposed to various kinds of natural and man-made dangers and risks. The natural dangers arise mainly from geological, hydrological and air disturbances, which impact the human life and property. The man-made dangers mainly cover crimes, unsafe buildings, roads, traffic, energy, amenities, services and unhealthy and polluted environment. The children, elderly, women, disabled and the poor, including homeless and squatters constitute the most vulnerable group of people. The factors that make

a city unsafe include a poor urban environment – dark or badly lighted streets, derelict parks and empty lots, badly maintained public spaces, inadequate signage, lack of public toilets especially for ladies on roads and in public buildings, markets, schools, etc. Empty streets and service lanes/backyards become crime prone due to isolation and darkness. Gender discrimination, lack of respect and sensitivity towards the women, children, disabled and elderly are the common issues of urban security. Traffic and transport hazards are mainly due to poor roads, rash driving, lack of safe pedestrian crossings and sidewalks, lanes for NMVs /cycles, etc. Delayed response or non-intervention of authorities in disaster, crimes and violence is a major reason of urban danger (Jain, 2007 a).

Disasters

India with more than 1210 million people, 3.3 million sq. km of area, 30 States, 7 Union Territories and 671 districts, 7936 cities and towns, and 600,000 odd villages is vulnerable to droughts, floods, cyclones and earthquakes. Landslides, avalanche and forest fires also occur frequently. Among the 37 States/Union Territories in the country, 22 are multi-disaster prone. As much as 40 million hectare of land in the country has been identified as flood prone, and on an average 18.6 million hectare of land is flooded annually. About 57% of area of the country is vulnerable to seismic activity. 18% of country's total area and about 68% of total sown area is drought prone, affecting approximately 50 million people. India has a long coastline of 8040 km, which is exposed to tropical cyclones and tsunami. As such, almost the entire country is prone to disasters.(Jain 2007a)

The United Nations global assessment report on disaster risks (2015) estimates that India's average annual economic loss due to disasters is likely to be $9.8 billion, which includes more than $7 billion loss on account of floods.
The report warns that without adequate State investments in disaster risk reduction (DRR) development would be hindered. India has projected a $1 trillion investment in infrastructure in the next five years and unless adequate steps are taken to make them resilient to floods and other natural calamities, the investment runs the risk of going waste.

Climate Change

India with its diverse agro-climatic and morphological zones is particularly affected by climate change. Climate change can bring considerable changes in the hazard profile of the region by its type intensity, magnitude and frequency. Many of these impacts may not be uniform across spatial and temporal scales. Devastating floods, typhoons and a series of hurricanes are being associated with climate change. According to the initial report of the United Nations Framework on the Convention on Climate Change, the predicted impacts of climate change in India include a surface air temperature rise up to 4° Celsius by 2100, up to 30% decline in yield in rain-fed areas for some crops and an increase in incidences of extreme events, such as droughts, floods and cyclones. Urban livelihoods, property, quality of life and future prosperity are threatened by the risks of flooding, landslides, heat waves and droughts and adverse events due to climate change. While large population densities in urban areas create increased vulnerability, they also create the potential for changes that can mitigate human impacts on climate. Since these impacts will strongly vary in its extent and form throughout the country, they require customised interventions in different states   threatened population.

Cultural Heritage

The deterioration of urban culture, heritage and environment is a major problem faced by rapidly changing traditional cities, especially in the inner city areas. They are threatened by carbon emissions of use of fossil fuels, increasing traffic, insanitation, poor drainage, open defecation and by inadequate solid and liquid of waste disposal.

Poverty is manifested in various ways- hunger, ill-health, denied dignity, lack of power, choice and security. Poor people are often unable to improve their living conditions and have no control on the decisions that impinge on their culture, life and environment. The efforts against poverty usually fail since they do not integrate with the cultural dimension and the social values that influence how individuals, societies and institutions react to develop. Revitalisation of old cities would benefit not only the natural environment and the city economy, but also the residents of those cities (Jain, 2015 b).

Housing and Slums

As per Ministry of Housing and Poverty Alleviation (MoHUPA, 2012), total housing shortage in urban India is 18.78 million units. 2011 Census shows that in India there are nearly 78.86 million households, of which 0.39 million are homeless(Jain, 2010). About one-half of the population of India's major metropolitan centres, like Delhi, Kolkata, Mumbai and Chennai are living in various types of illegal, squatter and slum settlements. The proportion is even higher in many other cities. On an average about one-fourth of the population mainly the poor are living in the slums, bastis and Jhuggi-jhompri clusters. Census estimate puts slum and squatter population in 2011 at 93 million, i.e. about 23% of India's urban population.

Urban Land

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 has replaced the Land Acquisition Act of 1894. It obliges the government and others to give rehabilitation package to displaced people, if they buy over 50 acres of land in urban areas and 100 acres in rural areas. Under the new Act land can be acquired by the government for its own use, or for the public purposes. Farmers will get four times the market price in the rural areas, while in the urban areas it will be double the market price.

The acquisition of land under new Land Acquisition Act is not only difficult, but also very expensive. There is no options but to adopt new ways of planning and development. The option should facilitate optimum use of land with rationalized FAR/FSI and densities. The brownfield development has to be taken up in a big way, rather than green development. It is necessary to mobilise financial resources by recovery of FAR/ FSI charges, development charges, conversion charges, betterment levy, etc. for public services, urban transport, greens and social housing. Land Pooling and Adjustment, Town Planning Schemes, Transferable Development Rights and Accommodation Reservation can be the alternative methods of land obtaining and its assembly for planned development (Jain, 2014a).

Basic Infrastructure Services

Transport and Mobility: According to Wilbur Smith Associates (MOUD, 2008) the urban transport scenario in Indian cities is quite depressing. Vehicle population in India increased 80 folds in the last 40 years, but road area increased by only 5 per cent. Only 17 of the largest cities have organized bus services, and only six cities – Mumbai, Kolkata, Delhi, Hyderabad, Bangalore and Chennai – have an intra-urban rail system. In metropolitan cities, 40 to 50 percent people walk and use non-motorised transport, while 30% people use public transport Private vehicles are growing three to four times the population growth in urban areas. It is estimated that 2.5 billion square meter of roads, 7,400 km of metro rail network and subways are needed to be built by 2031. India with more than 140,000 road deaths and more than 500,000 major road accidents per year is one of the most unsafe countries to travel in the world. 81 % of the accidents happen because of the poor, rash driving, of which mostly the pedestrians are victims. In Indian cities about one-third to two-thirds of trips are solely by walk. Still 90% of city roads do not have footpaths. Except few highways and major roads there are no signage, signboards, road marking and basic information for drivers and travelers. About half of urban roads have potholes and are in poor repair. By and large there is no accountable system of road maintenance. The intensive use of fossil fuels for urban transport (private vehicles, cars, 2 stroke engines, two wheelers, etc.) has made city air very unhealthy (Jain, 2013).

Sanitation: In India 626 million people that is 53.1 percent of total population defecate in open, which is highest in the world. According to National Sample Survey Office (NSSO) data 69.3% of rural and 18.6% urban households do not have toilets. According to the 2011 census, only 46.9% of the 246.6 million households have lavatories while 49.8% defecate in the open. The remaining 3.3% use public toilets. CRY survey report (2012) reveals that 37 percent schools in Delhi do not have functional toilets. Schools and public toilets often suffer from major flaws such as blocked sewerage, broken doors and no water. The Annual Status of Education Report for 2010 (ASER) confirms the link between providing separate toilets in schools and girls' dropout rates. 2.6 million latrines involve manual scavenging and bulk of the human excrement enters into the river, water bodies and drain. The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 has prohibited manual scavenging and mandates the provision of household latrines. Large number of

the public institutions, schools and work-places are also without the facility of toilets (Jain, 2014b).

Solid Waste: The problem of solid waste management in Indian cities is assuming serious proportions due to increasing population, urbanisation, changing lifestyles and consumption patterns. The garbage from unauthorised developments, slums, Jhuggi-Jhompri (JJ) settlements, etc. is hardly collected which further add to the environmental degradation.

It is estimated that urban India generates 68.8 million tons of municipal solid waste per year, which is projected to grow to 160.5 million tons per year by the year 2041. Presently, only half of the municipal solid waste is collected processed, treated or recycled. This is a major cause of insanitation and poor hygiene, which degrades and pollutes the environment (Jain, 2015d).

Sewage: It is estimated that out of 38,000 mld of the municipal sewerage generated in India, only 12,000 mld is treated. Wastewater and effluents from the industries, dairies, refineries, quarrying, power generation, etc. are major sources of air pollution, ground water quality deterioration and soil contamination.

Rivers and Water Pollution: India is criss-crossed by 14 major, 44 medium and 55 minor rivers. Average rainfall in India is 80 cm per year. India is fortunate to have the availability of water @ 2464 cu.m per capita. However, the availability of water (both surface and ground) varies extremely in the various regions of the country. Rajasthan with 8% of the country's population has only 1% of the total water resources of the country whereas Bihar with 10% of the country's population is endowed with 5% of water resources. Quantitatively it amounts to 562 cu.m per capita per annum in Rajasthan, i.e., nearly the absolute water scarcity level of 500 cu.m per capita per year as per World Bank indicator.

Almost every Indian city is situated along a river or water body, which is not only the source of water, but also has social, cultural and religious value. However, with indiscriminate urbanization these have become polluted and dirty. River Ganga was ranked among the top five most polluted rivers of the world in 2007. The faecal coliform level in the river Ganga near Varanasi is

more than 100 times the norms. One billion liters of raw, untreated sewage is estimated to flow daily into the river. In Uttar Pradesh out of 742 towns and cities, only 17 have sewage treatment plants (STP). As a result most of the sewage, estimated at 2900 million liters, flows into river. 10,000 dead bodies are thrown into the river each year, besides cremation of 40,000-50,000 bodies on its banks and disposal of ashes of lakhs of the dead every year. The river stretch from Kanpur to Kannauj is most polluted, mainly due to industries and tanneries. The sewage accounts for 95 per cent of river pollution in big cities such as Varanasi, Kanpur and Allahabad. According to the scientific studies of water samples from the upper Ganga, the levels of resistance genes, which lead to spread of life threatening bacteria and superbugs are 60 times higher than the permissible norms as millions of visitors and pilgrims travel to Varanasi, Allahabad, Rishikesh and Haridwar during the summer. Encroachments and construction in river bed, illegal mining of sand and water are other major issues, which have become rampant (Jain, 2015c).

Clean India Mission (2014)

The following key initiatives under Swachh Bharat Campaign (Clean India Mission, 2014) aim to make cities and villages clean and hygienic:

- Every house with a toilet
- Public toilets and total sanitation
- Sewerage and decentralised STP
- Solid Waste Management, Reduce, Recycle, Reuse, Circular Metabolism
- Waste collection, segregation and recycling, bio-methanisation, vermi-composting, incineration, etc.
- Drainage, waste water recycling
- Integrated Sewerage-Sanitation- Water-Wastewater- Drainage
- Pollution control
- Public health and hygiene focus

River Cleaning and Rejuvenation Mission (2015)

- Integrated and participatory approach, synergy among socio-cultural, environmental, technical, financial and legal aspects.
- Continuous flow of water, closing polluting industries, interceptor drains, CEPTs, wastewater cleaning, recycling, zero run-off drainage, integrated green and blue networks

These initiatives involve integration of public, private and community resources, Central Government grants and funding and adoption of smart systems. Capacity building and implementation focus are necessary to achieve the results. Planning is a pre-requisite which should be based on a comprehensive Information System, Digitized Mapping and Geo-portal. Mobile based maintenance and monitoring of public services, especially public toilets, solid waste management, waste water recycling, pollution control, etc. are necessary for effective implementation of the plans and programmes.

Urban and Spatial Planning

Christopher Benninger, *in his foreword to book Transforming Delhi by A.K. Jain (2015) says 'Transforming Delhi is visualizing the city from the "other way around!". Put the last person first, the hutment dwellers, the informal sector hawker, the small scale repairman, the physically challenged, domestic servants, street vendors, rickshaw wallah and, casual workers. Put yourself in the position of elders, women, children and a diverse array of city dwellers whose lives are affected intimately and almost moment by moment by distant professional decisions that shape the city. Seek paths and channel to facilitate and empower them into becoming stakeholders, harnessing their huge energies and amplifying their contributions'* (Jain.2015d)

The age of centralized, classical and conventional planning is over. The efforts have to made to indigenise urban planning and make it part of larger eco-system of sociology. This implies thinking afresh in order to reorient planning to address our own demographies, culture, humanity and local geography. Gautam Bhatia puts it succinctly:

'Today India is at the crossroads of some serious choices: to either enter the world market as a shameless imitator of China and the West, competing with them on expanding highways, ports, and racing restlessly to compare GDP figures. Or we choose a different destiny, a path of serious discovery and inventiveness, directing our energies to more imaginative forms of architecture, planning and urban living, that produce altogether different — but relevant — models — ideas that may even do away with inessential and expensive Western-type infrastructure. Whatever their final form, new cities could accommodate a wide swathe of diverse citizens and lifestyles, and give everyone that much-needed uplift that comes with living in a place they love. Surely the choice should not be difficult'. (Times of India, 25th May 2014).

From Reactive to Transformative Action

The urban issues are more or less well known. What is lacking is transforming them into action. This needs mobilizing the community resources matched with public resources to increase the speed and efficiency of delivery process. This requires a radical change in the planning process that involves people seriously in the delivery system and decision making process.
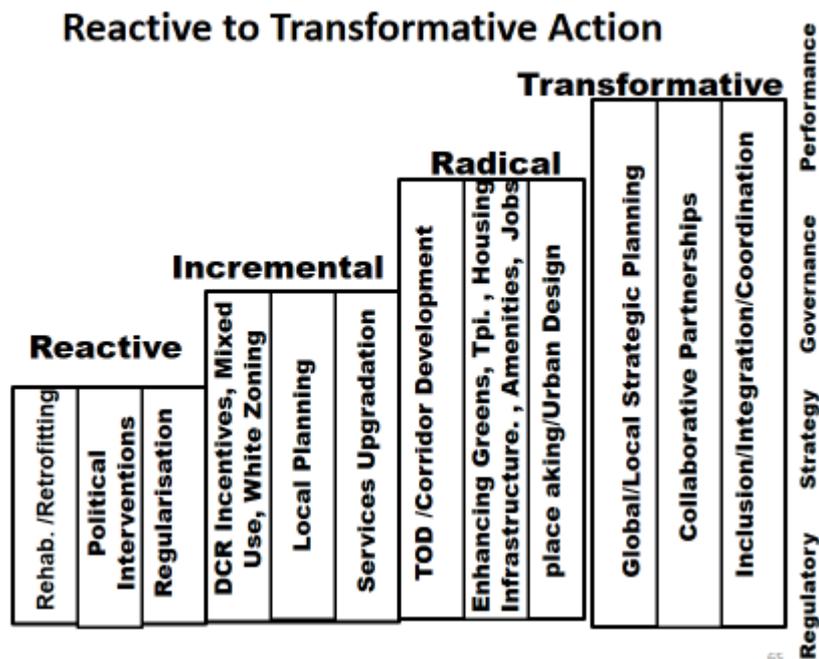
The current planning is by and large reactive, which should gradually move towards transformative action. This involves the steps of incremental actions (land management, planning, engineering, services, etc.) to radical action (Alternative ways of land management, planning and infrastructure development, pollution prevention and urban renewal) for inclusion, integration and coordination). The transformative action involves strategic planning, collaborative partnership, reforms and combination of regulatory, governance and performance.

There is a great scope for planning programmes to incorporate the socio-spatial elements of in a comprehensive planning strategy, and integration of poor in the formal settlements into the wider urban system. For augmenting the physical infrastructure, it is vital to work out a phased and evolutionary programme, which allows improvement at a later date. The introduction of decentralised system of sewerage, water treatment, power generation, waste recycling and spatial characteristics of infrastructure should be the determinants in planning and the mode of aggregation of development.

Urban Transformation

To make the cities more livable and inclusive, the Government of India in 2015 has embarked on Smart Cities programme for 100 cities and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) for 500 cities. The focus is on core infrastructure services like adequate and clean water supply, sanitation and solid waste management, efficient urban mobility and public transportation, affordable housing for the poor, power supply, IT connectivity, e-governance and citizen participation along with municipal reforms and providing aid to the state governments and the ULBs.

With the commitment that by the time the Nation completes 75 years of Independence, every family will have a pucca house with water connection, toilet facilities, 24x7 electricity supply and access. The Central Government has launched (2015) "Prime Minister's Housing for All by 2022" mission. The mission seeks to provide 20 million housing and take up the Slum rehabilitation project. The program provides interest subsidy of 6.5 per cent on housing loans with tenure of up to 15 years for EWS and LIG, which works to nearly Rs 100,000 to Rs 230,000 per unit. It promotes slum free cities and mandates house in the name of women, or joint ownership.

For conservation of urban heritage and cultural resources, the Government of India (2015) has launched the Historic City Development Augmentation Yojana (HRIDAY), which will initially cover 12 cities viz. Ajmer, Amrawati, Amritsar, Badami, Dwarka, Gaya, Kanchipuram, Mathura, Puri, Varanasi, Velankanni and Warangal.

Swachh Bharat Mission (SBM) is another major initiative of the Government of India, covering 4,041 statutory towns, to clean the streets, roads and infrastructure of the country. SBM includes focus on provisioning of household toilets, community toilets, public toilets, solid waste management and bringing in behavioural change in people regarding healthy sanitation practices.

The restoration of rivers is a high priority on the agenda of Government of India. National Gange Plan aims to integrate the efforts to clean the river Ganga, with an outlay of Rs 200,000 million for the next five years. It focuses on pollution abatement, interception, diversion and treatment of waste water flowing in the open drain through bio-remediation in-situ treatment, use of innovative technologies, sewage treatment plants (STPs), effluent treatment plants (ETPs) rehabilitation and augmentation of existing STPs. Short term measures include-arresting the pollution at exit points on riverfront to prevent inflow of sewage, effluents and solid waste into the river.

All these missions focus on urban transformation of India. However, their success is largely contingent upon rigourous, sustained efforts of the urban local bodies and meticulous planning, together with legal, institutional and financial reforms, which facilitate and mobilise public, private and peoples' resources.

Urban Governance

The prevailing governance framework has not been able to serve these vast populations. During the recent years, there had been a growing concern on the issues of urban governance and its interactions with civil society, infrastructure services, poverty, ecological sustainability, employment and social equality.

The Indian federal has a three-tier institutional system with the Central government at the top, state governments at the second level and local governments at the grassroots level. The responsibility for providing basic services and implementing development programs is mainly of the local government. India has the distinction of having the largest number of democratically elected local governments in the world-more than 250,000 rural and urban local bodies with almost 3 million elected representatives.

The form of governance prevalent in the country at all levels is generally bureaucratic and involves conservative controls. With the 74th Constitutional Amendment Act (1992), the urban local bodies have been assigned greater role in urban planning and governance. However, effectively this has not happened in most of the States, as the governments are reluctant to part with their powers. Poor municipal capacity and finances are acting as barriers in the area of decentralization.

The process of urban governance, linked with the participatory democratic decentralization has direct bearing on the issues of livelihoods, poverty, infrastructure/basic services, equity and capacity building. The local bodies have a catalyst role to act as a bridge between the people, NGOs, CBOs, political apparatus and the government.

With the decentralized, local and participatory planning, the role of the local government is undergoing a radical change. In the changing environment, skills are necessary to strike a balance between the economic and inclusive growth and between political process and service delivery. It is urgent that in the spirit of decentralization and democratic governance, the role of civil society and community organizations is incorporated in urban management. This would make it possible to channel and meet demands of local development.

Capacity building has to play an important input in this agenda if it has to be successfully implemented. At present there is a woeful lack of urban management and "urban managers", who could comprehensively foresee and manage the overall urban development that aims at the sustainability, transparency, efficiency, delivery and partnership.

Four critical areas, viz. community empowerment, community action, governance reforms and communications are vital for equity and inclusive governance. This needs legal and institutional reforms, local planning, economic and social inclusion, transparency, accounting reforms and mobilizing investments.

Information and communication technology (ICT) and e-governance are emerging as the tool of community empowerment, efficient service delivery and reduced corruption. The local municipal governments, police, service agencies, banks, etc. are gradually adopting web sites, e-banking and e-governance, replacing time consuming and corruption generating paper work. This is the fundamental building block of urban governance. The key result areas to achieve better governance are enhanced efficiency, employment generation, social inclusion, education, healthcare, gender equity, and protecting the human rights.

Lessons from Global Practices

The cities are the crucibles of innovation and ideas which are the drivers of economic growth and social transformation. Lessons can be learnt and new ideas can be harvested from all over the globe which could be adapted in local context. Given below are some of the global experiences which provide important lessons at the local levels:

Table: Habitat Vision and Global Examples

	Vision	Examples
1.	Inclusive Cities for citizens, Migrants and refugees	Johannesburg Metro Government, besides several human/citizen rights, ensures right to shelter, water, electricity and livelihood. It has mandated street vending policy guidelines livelihood to the apartheid, besides 6 Kl of water per household per month and other basic facilities.

2.	Safer City and Disaster Resilience & Urban Safety	• New York after Sandy Hurricane introduced Disaster Resilience Zoning in its plans, DCR and Building Byelaws. In spite of much pressure from the developers, they do not compromise with safety requirements. • In Istanbul unauthorised buildings in Gecekondu demolished and built by ULB, engineering supervision and earthquake insurance are compulsory.
3.	Conservation of Urban Culture and Heritage.	• Conservation and revitalisation of traditional cities, (Italy, UK, USA, etc.). • Kyoto as Japan's Heritage City, Landscape centric plan, lowering of FAR/ heights and architectural restrictions for revitalising historic townscape • Conservation of Humayun Tomb – Nizamudin-Sunder Nursery, New Delhi (AKTC). • Conservation of Mehrauli Archaeological Park, New Delhi(INTACH-DDA) • Barcelona – Conservation of traditional urbanism, neighbourhoods, Industrial Heritage, Protection Programme & Special Plan for Historic Areas. • New York – City Museum highlighting the history and heritage of New York City. • Aga Khan Islamic Cultural Centre, Toronto.
4.	Legal Framework for coordinated, integrated planning and sustainable development, yet decentralized, local autonomy for planning and governance.	Local Government and Municipal 'Structures Act'1998 (amended in 2010) of South Africa provides for constitution of Metropolitan Local Govt. and autonomous municipalities at local level, all telescopically connected. It enables delegated powers to the local bodies/ public departments to undertake preparation of plans and projects. Legislation helps in a better coordination, reduction of creation of several

		independent, standalone structures and organisation. In South Africa powers for approval/ clearance under various other legislations also stand delegated to metropolitan municipal/ bodies. New York's City Planning Commission, likewise is the centre point for planning and multifarious regulatory systems. Gujarat and Maharashtra Town Planning Acts also provide for decentralised planning and delegation of special planning powers to Municipal Bodies, Corporations and Public Undertakings such as CIDCO, MIDC, etc
5.	Urban Governance, Regulatory efficiency, transparency and effectiveness.	In many city governments, a balance is maintained between professional freedom and strict enforcement for compliance of code of conduct such as Johannesburg, New York, Washington, and also cities in Asia, Australia and Europe Policy of post facto regularisation of unplanned, illegal developments has been abandoned in many cities. On-line Building Plan Approval systems have made it redundant the need o personal contacts between the officials and public. Mobile based or on- line payments have become common. In PPP projects, the private partner is bound by public Disclosure Laws.
6.	Municipal Finance & Capacity Development.	• Global – Local Financial Strategy of Johannesburg. • Informal Sector economy and poverty alleviation in Johannesburg. • Integrating MDGs with City Plan (Johannesburg). • Fiscal Plan along with Physical Plan (Washington). • Infrastructure Debt Fund. • Differential monetary, fiscal and tariff policy (Johannesburg).

		- Development Impact Fee,
		- 'User Pays' principle, Land as a Resource (Various Cities).
		- Financial Districts in Toronto, New York and other cities.
		- Credit rating & issue of Municipal Bonds (Ahmedabad).
		- City competition (USA, UK, China).
		- Ease of Doing Business (UK, USA, Japan, Korea, Singapore, China and India).
		- Green Municipal Bonds (South East Asia).
7.	Urban Design and Spatial Planning	A new form of Planning Controls for redevelopment replacing conventional land use, FAR/FSI height, density, etc. have been adopted in Shanghai. In 1990, it had an average road area per capita of 2.28sqm and public green area per capita of 1.02sqm. The new planning controls in place of conventional building centric control (FAR, FSI, Height, etc.) mandated the provision of areas under circulation/roads, green spaces and social infrastructure at 10 sqm. per capita each. By 2003, average road area per capita increased by more than five folds to (12.3sqm.) and public green area per capita more than nine folds to 9.16sqm , which gave a radical turnaround of the dilapidated, congested city.
		- City as a dynamic system of networks (Barcelona, Johannesburg, Toronto, etc.)
		- Participatory, local, flexible and evolving continuous planning process (Santa Fe Brazil; Cape Town, South Africa, Master Plan for Delhi-2021, Curitiba, Brazil, Medellin, Colombia, etc.
		- Inclusive and equitable planning and housing (Bahir Dar, Ethiopia, Burkina Foso, Singapore, etc.)

		• Integrating spatial, institutional and financial plans (Singapore, Chengdu , China, Bogota ,Colombia, etc.) • Urban design, eco-initiatives, liveable, sustainable city (Melbourene, Singapore, Fukuoka City (Japan)
8.	Urban Land, Alternatives to compulsory land acquisition	• Town Planning Scheme (Gujarat, Maharashtra) • Land Readjustment & Pooling (Japan, Korea, Thailand, India) • Guided Urban Development (India, Australia, etc.) • Slum Improvement Programme (Gujarat, Mumbai, Hyderabad) • Joint Development Model (UP, Haryana, etc.) • TDR (Mumbai, Ahmedabad) • Flexible/ White Zoning (Singapore). • Infrastructure – Land Bundling (UP, India). • Incentivised Infill Development (UK, New York, etc.) • Land Titling & Adm. Projects in Thailand, Laos, Philippines, Indonesia, Cambodia, Vietnam, etc. (World Bank) • Creating Land Bank by Town Planning Schemes (Ahmedabad Municipal Corporation).
9.	Urban Rural Linkages	• Johannesburg GDS 2040 Paradigm and Regional Framework links urban and rural, liveability and businesses, social development and economic growth with the environment. • Gramin Bank, Bangladesh.
10.	Public Spaces, Place making, landscape and green growth	• Barcelona has done remarkable work in place making by creating large open spaces, city squares, pedestrian boulevards, sea/ water front development and conservation of Antonio Gaudi's iconic architecture. Its new

		suburban developments, such as smart city have been criticised for inhuman scale and spaces without an identity.
		• Creation of PATH, 30 km long shopping and cultural corridor in Toronto, which is a major shopping and economic corridor in the downtown.
		• Biophilic landscape development (Singapore)
		• Urban Farming in multi-storied structures (Singapore, Sweden).
		• In New York derelict Chelsea Railway line converted into a linear park cutting through the Downtown.
		• Israel: Floriculture and micro-irrigation by recycled waste water.
11.	Local Economic Development.	• Various cities such as Johannesburg, New York, Washington, Ahmedabad, etc. provide for Local Economic Development Planning, which seeks to address the issues at grass root levels.
		• SEWA Bank – (micro financing) Ahmedabad
		• Micro-banking programmes in Indonesia, Mexico, Venezuela, South Africa & Morocco.
12.	Jobs and Livelihoods, Convergence between Urban Planning, and Local Economic Development	• Convergence of Urban Planning, Economic Development & Social issues where human concerns dominate the development policy and planning decisions which was inspired by Nelson Mandela.
13.	Urban Ecosystems and Resource Management	• Redevelopment of derelict industrial areas and Special Infrastructure Plans for old areas, Barcelona.
		• Johannesburg – Water and Energy Policy.
		• Washington – Green and Healthy Communities & Urban Renewal Programme.
		• New Delhi – Yamuna & Aravali Bio-diversity

		Parks and City Forests (DDA).
14.	Cities and Climate Change, Low Carbon Development	• Johannesburg Global–Local Strategy, Mitigating Climate Change Strategy. • Climate Street.
15.	Urban Infrastructure & Basic Services	• Infrastructure services, Public toilets, Eco-sanitation, Smart Grids, waste-water recycling, satellite irrigation, energy efficiency, solar energy, Common Utility Duct for Municipal Services (Toronto, South Korea, Japan, Gujarat, Johannesburg, etc.) • Pneumatic Waste Management (Chicago, Mecca)
16.	Urban Transport & Mobility, Multi-modal Public Transit, integrated with Cycles/ Pedestrians, Wheel Chair users.	• Transect & Cross-Transects programme of Barcelona. • Transit oriented development (TOD) in Barcelona. As compared to Los Angeles, Barcelona's urban transit is 10 times more cost effective and carries 10 times passengers per km, with only one-tenth of carbon emissions as compared to Los Angeles. • Multi modal single ticket Rapid Transit in Toronto subsidised by the Government. • Declogging Johannesburg, Singapore, Curitiba, etc. by car ownership control and better public transit, including high quality BRT. • Melbourne – largest tram system in the world. • TOD(New Delhi) and Delhi Mumbai Industrial Corridor (DMIC).
17.	Housing & Slum Rehabilitation.	• Toronto – Affordable Rental Housing Policy, 2009

		• Melbourne - Village concept of neighbourhoods • Affordable Housing Brazil, Minha Casa, Minha Veda, Malaysia, Shanghai, Hiring Reform Plan(1994), • Baan Nankong Housing Programme in Thailand. • Large scale affordable housing, Sri Lanka, Vietnam, Hong Kong. • Grameen Bank Housing Programme, Bangladesh, Johannesburg, Amsterdam, etc
18.	Smart City, Innovation and Technology centres, Digital Land Management, Geo-portal and public services	• GIFT Smart City, Gandhinagar (Gujrat India), DMIC Industrial/smart cities, Common Utility Duct/ Tunnel, Wi-fi. • Madsar City (UAE). • Songdo, South Korea. • Smart grid, solar energy, intelligent water and sewerage networks, non-invasive repairs, maintenance and analytics, simulation modelling, smart cards, ICT enabled traffic controls, GIS & SDI (Various cities).
19.	Informal Settlements	• Ahmedabad – Slum Networking (Parivartan) • Mumbai – Slum Rehabilitation Programme subsidised by market sale component and incentive FSI. Reverse Mortgage, loan subsidy/subvention, viability gap funding for Slum Rehabilitation. • Regularisation and Upgradation of slums and Unauthorised colonies with 3 to 4 million population(New Delhi)

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