

## **EMERGING PLANNING PERSPECTIVES AND NEW APPROACHES**

**Richa Rathi Thakkar<sup>1</sup>**

Consultant Planner & Visiting Faculty,  
Ahmedabad

**Anand J Thakkar<sup>2</sup>**

Associate Professor, School of Design  
SSIU, Ahmedabad

### **Abstract**

New ideas, developments and approaches are taking shape with the emerging importance of social responsibilities to reach harmony and due to turning events in the global economy. Contemporary situations demand the discipline of planning to be more interactive and induced into the civil society's decisions; by creating perspectives and facilitating sustainable developments. In order to meet the upcoming demands from the planning profession, practitioners shall (1) actively participate in sessions on contemporary agendas; (2) encourage new solutions and technical alternatives; and (3) actively adopt the changing nature of parameters to be considered for analysis. Therefore, to comprehend and delegate on the above points and to conclusively include in the Plans, it is needed to evaluate and understand our surroundings and situations through a newer approach. The paper broadly covers need for a newer perspective, its reflection in the Government initiatives and enlists some of the new data sets for consideration.

### **1. INTRODUCTION**

The pressing need in planning is to make development free from shortcomings and discrepancies. This effort necessitates appraisal of approaches in planning, new schemes, their execution and success.

Amidst aims of excellence and fundamental aspirations lies pertinent role of focussed planning, analytic perspective and revised data-sets. More often than not, excellences like emerging as global-power or supreme-economy and aspirations like thorough equality or

---

<sup>1</sup> *Richa Rathi Thakkar* has more than eight years of experience in Urban and Infrastructure development projects and in providing advisory services to Government of India and State Government(s). She is Geographer and Environmental Planner. One of her key projects includes Project Management of "Urban and Regional Development Plans Formulation & Implementation (URDPFI) Guidelines, 2015", Ministry of Urban Development, New Delhi

<sup>2</sup> *Anand J Thakkar* is an Architect, Urban Planner. He is currently an Associate Professor, School of Design at Swarnim Startup & Innovation University, Ahmedabad. He has more than nine years of experience in Architecture and Planning consultancy and worked with iconic institutions like Kyoto University Global Centre for Education and Research Program, Japan & CEPT University

freedom, coincide with contrarities and gaps in achievement. And because aims of excellence and fundamental aspirations both are duly affected by implementation of planning, the appraisal of either brings back ‘planning’ also in question. This on-going research necessitates rethinking approaches towards planning and development.

Further, in system-run social-economies, the structural band of planning, schemes, and analytic data-sets is precisely for success of aims and aspirations while minimizing failures. Especially, grids of data-sets are the central concern for improvement and revision in achieving goals; at least, to combat contrarities in plan-execution and aimed-results. An interdisciplinary approach can bring out results, where planning is not limited to land-development concerns but also addresses social issues. Some of the new approaches shall embrace this perspective for sustainable human developments.

**2. CONVENTIONAL APPROCHES - REVISTED**

The statutory planning system(s), program driven plans and special purpose plans have considered the following key elements for analysis, which may vary from scale to scale. These are:

<i>Plan Type</i>	<i>Data Groups &amp; Analysis</i>
Master Plan/ Development Plan	Demographic profile, Economic profile, Land uses, Transportation, Infrastructure, Housing, Environmental analysis
Zonal Development Plan	Site background & analysis, Proposals & Development strategy, Compliance to Government policies, Zoning regulation, Development regulations, Implementation framework
Comprehensive Development Plan	City profile, Demographic profile, Land management & urban growth, Economic profile, Infrastructure , Environmental analysis, Housing analysis

The Plans and references are oriented towards land uses and its regulation, while there are only few attempts to expand into Policy intervention, Vision or Perspective Development and, in incorporating Social aspirations. These planning approaches have limited the interlinking of spatial systems with infrastructure and facilities, which is actually the basic provision of human settlement. Our plans have conventionally ignored the social elements like cultural interactions and social security.

The need for critical evaluation predetermines demand for new data sets to evaluate parameters with increasing exactitude.

**3. NEED FOR NEW PERSPECTIVE**

A paradigm shift in the economic indicators, planning approaches and development mechanism is a reflection of the emerging New India. This shift is society-oriented and politically-instrumented approach and is the root of the new perspective.

Following is list of focal points which are significant for appraisal and further holistic planning.

**3.1 Unsuccessful planning cases:** Often cases of failures are sources of new learning. For India to emerge as one of the Global powers, it needs to gauge its failures in order to assess direction of its growth in coming future.

- **Need to emerge as Global Power:** Such efforts are reflected in new Government programmes and policies. Government Schemes, namely Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Heritage City Development & Augmentation Yojana (HRIDAY) by Ministry of Urban Development, *PradhanMantri Kaushal Vikas Yojana* (Skill Development Programme) and *BetiBachao BetiPadhao* Scheme (BBBP), Female Child Protect are all new approaches in respective fields. The Twelfth Five Year Plan (2012-17) had initially pressed urgency of economic recovery and was titled 'Faster, More Inclusive and Sustainable Growth'. It is clear from the above that, Development has taken priority not only for immediate efforts, but for faster results also.
- **Inclusive Planning:** An added factor to development is 'Inclusive planning', which has become a necessity for planners to consider and reflects in the current Government's approach to development through its slogan '*SabkaSaath, SabkaVikas*'.
- **Citizen's Engagement:** The paradigm shift to prioritise, vision development through citizen's engagement and feedback at later stages of planning is paving way to interactive and stronger planning methods as well as preparing newer e-platforms.

**3.2 Changing Lifestyle and Urbanisation:** Denser developments, faster lifestyle and the pressure on micro-economic set-ups have altered the recent Indian lifestyle and so has its implications. Women Safety has been questioned in recent times and has undoubtedly become a serious concern. With increase in Urban Female Work Participation Rate from 15% to 18% over the decade (Census of India, 2001 & 2011) and expected to increase further, need for safer cities is a pressing issue. Similarly, increasing crime rates and road safety issues have got attention. To achieve a balance in community development including matters of health concerns and environmental safeguards, there is a demand to evaluate and plan for these parameters.

**3.3 Modification in Rural-Urban Characteristics:** The rapid changes taking place in the country (rural) areas have an influence on the economic and social profile of India. Socio-cultural changes mainly, due to exposure of the youth through internet and shift in employment pattern from primary economic activities to service sector activities has created parallel situations. Hence a changed viewpoint is emerging to modernise rural settlements or villages and smaller towns as per its need. Government's initiatives have been through '*Swachh Bharat Abhiyan*' and '*Adarsh Gram*', lately. But since population densities in rural and peri-urban areas are sparse, alternative solutions are to be sought, for which, newer parameters need to be considered while planning.

**3.4 Digitalisation:** The revolutionary change to digitalisation has its impact on all aspects of development, i.e. economic, social and environmental and it is emerging as a promising tool. Both public and private sector are transforming to this platform to seek solutions and to integrate and deliver value-added services. New data sets are much needed in this field and are significant for integration as 'layers' and for interfacing through applications. However, it

has its own inherited challenges, some of which are cybercrime, loss of privacy and mass-control-loss.

**3.5 National Disturbances/Terrorism:** Contrary to development, terrorism is an international turmoil which is unpredictable in time and space. This situation, unless resolved at global level, will still hold high pressure on city design where key elements of transportation network and urban design are crucial.

**3.6 Climate Change:** This aspect cannot be ignored in any planning exercise. Due to the location and geography of India, it is witnessing direct impact of this complex phenomenon. The rising sea levels, temperatures and erratic monsoon are warnings of approaching turbulence.

**3.7 New Sectors of Development in Focus:** Pro-Development Sectors, as listed below, demand specific attention in terms of status quo for areas of investment:

- *Infrastructure:* 'In 2016, India jumped 19 places in World Bank's Logistics Performance Index (LPI) 2016, to rank 35th amongst 160 countries. In FY 2016-17, infrastructure sector in India witnessed investment of US\$ 3.49 billion<sup>3</sup>. Major investment expected in renewable power, green-field expressways and urban transport.
- *Energy:* 'Around 293 global and domestic companies have committed to generate 266 GW of solar, wind, mini-hydel and biomass-based power in India over the next 5–10 years. The initiative would entail an investment of about US\$ 310–350 billion<sup>4</sup>. Cleaner source of energy and waste to energy are the two prime focuses which need attention by planners, hence it is crucial to understand both, international practises and local situations.
- *Tourism:* Tourism and Hospitality sector is picking-up across India as International aid is being directed towards this sector and is among the top 10 sectors to attract Foreign Direct Investment (FDI).

**3.8 Mode of Development:** To implement the project, especially large infrastructure projects, the shift is towards a co-ordinated Public-Private-Partnership (PPP). Due to this added factor, it is essential that decision making is to be rightly stated for earmarking the project cost and benefits at an initial stage or for its success at the later implementation stage. Hence the role of planners becomes more crucial to provide an unbiased, well researched and a feasible plan.

Since new approaches are coming up (such as best practices in road construction, waste management) and there are only handful implemented cases, it is desirable that the new indicators need to be thoroughly verified by different data groups & analysis which have not been commonly used before.

<sup>3</sup> <https://www.ibef.org/industry/infrastructure-sector-india.aspx> (as on 01.09.2017)

<sup>4</sup> <http://www.ibef.org/industry/power-sector-india.aspx> (as on 01.09.2017)

#### **4. REFLECTION OF NEW APPROACHES FOR ANALYSIS**

Government of India and International institutes have taken initiatives to promote holistic development. However, lately, the approach for the same has gone a step ahead to refurbish its foundation in its implications. The attempt is to set preference-oriented and quantitative targets, which shall be revisited to monitor success. The principle approach is to re-erect the development parameters to be result-oriented and paving way for a continuous planning process. For such analysis, emphasis has shifted to 'processed data sets' to be used which shall be statistically quick to study and in the form of hard matrix for further usage and for monitoring. Therefore, these data sets are to be converted as indicators to pass or fail in the targeted attempt. The change is being reflected in Government programmes and planning approaches as pointed below:

##### **4.1 Smart City Challenge, (MoUD):**

- The challenge evaluated city's baseline founded on hard matrix to understand the preparedness of a city to advance as a SMART CITY.
- New and clear Key Parameter Indicators (KPI) were laid out (such as liveability, administrative efficiency) and stiff percentages defined by MoUD for minimum baseline improvement (such as in renewable energy, energy efficiency etc.).
- Achievable targets (as hard matrix and percentages) were to be set by the cities for future references and monitoring.
- Specific sector preference to be laid by cities, especially taking into consideration the public opinion (with the use of portals: <http://www.smartcitieschallenge.in/>, <https://www.mygov.in/>).
- Innovative citizen engagement approaches adopted by participant cities.
- The result of the challenge is in a ranking order of the cities by MoUD.

##### **4.2 Atal Mission for Rejuvenation and Urban Transformation, (AMRUT), (MoUD):**

- Outlay for AMRUT is INR 50,000 crore for the five years from FY 2015-16 to FY 2019-20.
- Existing City Baseline infrastructure levels to be evaluated versus the Service level benchmarks as hard matrix, including household level coverage, per capita consumption as well as efficiency.
- Again, achievable targets as hard matrix and percentages (financial and physical) vis-à-vis the given time frame- to be set by the cities to evaluate variance in future.
- Specific targets in terms of percentages for particular milestones (such as Municipal tax and fee improvement, User charges) were set by MoUD.
- Checklist considered new areas for appraisal including citizen consultations for prioritizing projects, assessment of low cost or no cost improvements, consideration of management improvements and PPP, inclusion of National level priorities and inclusive development.

Apart from this, Government of India launched a City Livability Index on June 23, 2017, which would measure the quality of life in 116 major cities on a set of 79 parameters.

##### **4.3 Swachh Bharat Abhiyaan (GoI):**

**An International Multidisciplinary Research e-Journal**

- This mission has completely different approach; i.e. Proactive approach including focus on behavioural change strategy, universal target of 100% coverage, enabling environment for private sector participation and the mission covers both rural and urban areas.
- Planned Waste to Energy Production (Mega Watts) - 493.7 and Total Waste to Compost Production for the year 2016 (Metric Tons) - 65,047 as per *Swachh Bharat* Urban.
- *Swachh Bharat* Urban recognises best case studies in different areas and Municipal Solid Waste Management, challenging conventional waste collection and management systems and inviting techno-economic innovations.
- City Sanitation Plan is comprehensively integrated with the mission, again bringing out achievable targets and transparency.
- Campaign promotion through social media and electronic media, for universal coverage among many other activities included under the broad umbrella of ‘*Swachh Bharat*’.
- Under this mission, Government of India released "Cleanliness Ranking" for 73 cities based on cleanliness and sanitation.

**4.4 Heritage City Development and Augmentation Yojana (HRIDAY), (MoUD):**

- HRIDAY guides recording and documentation of tangible and intangible heritage assets such as areas of social importance, livelihood dependence on assets.
- Concept development of interlink between Disaster management and Heritage.
- The Plan is proposed to consider improvement of ‘Imagibility of the area’ as a factor of opportunity and quantifying the development.
- Pallet creation for specific components has been considered as a part of the Plan.

**4.5 Urban Green Growth Strategies for Indian Cities (I.C.L.E.I, NIUA, Global Green Growth Institute):**

- Urban Green Growth Strategies for Indian Cities considers “favouring examples which included aspects of economic viability, environmental sustainability, social sustainability and improved governance” for good practices.
- The Report (volume 1) takes into account parameters which reflect relationship with the planning indicators like Residential use of traditional energy sources, RE-regulation in bi-laws or D.C. Rules/Green building schemes and even presence of energy/solar cells within ULBs for evaluating Urban Energy Sector and Green Growth.
- It considers simple yet effective parameters like availability of skilled labour, proximity to trade corridors, availability of power/ clean fuel for business to evaluate Urban Economy and Business and Green Growth.
- Co-ordination among agencies and adequate cost recovery to evaluate Urban Transport Sector and Green Growth and GIS based property mapping among others.

**4.6 United Nation Women Flagship Programme:**

- Safe Cities and Safe Public Spaces is one of UN Women’s Flagship Programming Initiatives designed to ensure that UN Women can deliver on the Sustainable Development Goals (SDGs).
- Some of the successful cases achieved by innovative approaches are: ‘(1) Egypt’s Ministry of Housing, Utilities and Urban Development adopted women’s safety audits to ensure a gender approach to urban planning. (2) Port Moresby (Papua New Guinea) established vendors associations in their safe market programme, with 50% representation of women in executive positions’<sup>5</sup>.

New approaches highlighted above are in the direction of innovative social accountability tools, inclusiveness, based on public aspirations, where else new data sets are systematically converting to objective parameters than subjective outputs. These datasets used are simple indicators and effective co-relations between various factors of planning, analysis of which can bring out better understanding of the subject and critical aspects of interdependency.

**5. PARAMETERS**

Hence, the new approach has already emerged. This paper further highlight use of other similar important data groups in the same direction of growth and analysis. These are not limited for the Government organisations to consider, but all researchers and scholars to explore with the aim of an interdisciplinary and integrated development.

Of course the collection of wide and varied data groups is matter of the State, however its creative utilisation to bring out co-relation between different parameter, to study interdependency and accuracy of targets can be considered by researchers and consultants to evoke decision makers.

Some sections of data sets are elaborated and brought to light for reference. One more important aspect, i.e. public opinion and inclusion of citizen’s aspirations has been considered to understand citizen’s opinion on specific inputs.

**5.1 Health and Safety:** One of the most critical issues for concern for social balance is the health and overall safety, which needs a dedicated section while planning. These aspects may capture the changing civil society’s aspiration and may touch some of the unturned stones.

<b>Health and Safety</b>	<b>Parameters</b>	<b>Consideration of Citizen’s Opinion</b>
Fire safety	Fire accidents typology; Analysis of origin of fires, Fire regime analysis & regime wise power supply analysis; Hydrant capacity; Rescue missions; Robust fire detection system(s); Burned area restoration & rehabilitation	Citizen’s opinion to understand public awareness of fire alarming systems in Public, Semi-public & Commercial areas; Willingness to participate in fire safety drills; Emergency responses & awareness among public

<sup>5</sup>United Nation Women, Flagship Programme, ‘Safe cities & Safe public Spaces’, June, 2016. (This Global programme was launched in November, 2010 which included New Delhi among its champion cities).

Disaster planning	Proximity to hazardous elements; Exposure of service lines; Escape routes; Transport and communication facilities; Regional level data sets	Preparedness for disaster; Disaster shelter planning; Adaptability to mitigation options; City resilience
Women safety	Dark space mapping; Pedestrian facilities, Recorded criminal activities & incident mapping; Nearest emergency aids; Clear sightlines around major landmarks, Analysis of existing surveillance system	Identifying vulnerable areas in the neighbourhood and city; Safety issues concerning transportation, (e.g. preference to one-way roads, Separate provision in Mass public transportation system etc.)
Crime rates	Analysis of crime by typology; Surveillance system; Unemployment rate pattern & Immigration pattern; Recreational activity analysis	Access to defensible spaces; Discussion on Crime Prevention Through Environmental Design (CPTED); Need for IT solutions
Health infrastructure	Health infrastructure mapping, Capacity analysis, Analysis of rapid response system ; Analysis of public green spaces , centres related to health & overall well being	Accessibility to & quality of health facilities; Preference to public verses private services; Development of a rating system; Use of IT sector like apps
Resilience towards terrorism	Observation of global terrorism Index; Analysis of transport entry & exit points; Surveillance system; Identification of critical city centres & monuments; Analysis of (portable)external barriers and street furniture (cluttered/ uncluttered)	Public opinion on surveillance options <sup>6</sup> ; Aspects of multidimensional security & planning; Balance between security & aesthetics

**5.2 Urbanisation in Peri-urban areas:** The changing characteristics of Indian population and its lifestyle are immensely affected by the interplay of socio-economic factors in rural and urban areas and henceforth its developmental needs. Within the urban-influenced areas, i.e. Peri-urban, the spare population density makes decentralised infrastructure as a feasible option. These are also the areas which house large institutional spaces and provide essential life support services for urban residents. Further, it has unique cultural, social as well as environmental parameters, which need to be considered to understand its planning desires. Points noted for consideration are listed below-

- Larger perspective of urban & rural correlation, transition & interdependency.

<sup>6</sup>Public opinion on Surveillance options is needed to discuss the prospects and consequences of the various types of surveillances. Selected options shall be considered in planning proposals and thrust for investment by Government.

An International Multidisciplinary Research e-Journal

- Population density and build-up density to comprehend the settlement composition.
- Percentage and ratio of male and female workers in various sectors, Literacy rate, Male-female ratio to analyse the level of development in peri-urban area.
- Availability of public transportation, solid waste generation per capita, and property ownership sizes as socio-economic indicators.
- Sources of water and dependence of household and economic uses on it, disposal and handling of solid and liquid waste, influence of industrial land uses and *mandi* towns to maintain the balance between environmental and economic systems.
- Here, public opinion is critical and largely useful for planners as it can be considered at the initial stages of Greenfield site Plan formulation and for development control regulation.

**5.3 Inclusive Planning:** Inclusive planning is the solution to overcome clashes between classes, castes, genders, age groups. Development planned with consideration to vulnerable sectors of society can reduce gaps, improve economic productivity and help India to emerge as a Global power.

Inclusive planning	Parameters	Consideration of Citizen's Opinion
Education	Permanent & mobile schools; Rate of school drop-outs <sup>7</sup> ; Low school attendance, Student -Teacher ratio ; Private higher education institutes & tuition centres; Transition from one education level to higher level	Need for Institutional improvements; Related infrastructure for curriculum activities
Facilities for dependents	(1) Elderly – old age centres, health infrastructure, recreational activities; (2) Infants & Toddlers – crèche, day-care centres, health infrastructure, dedicated open spaces; (3) Institutes for differently-abled; (4) Barrier free environment for elderly & differently-abled	Specific community infrastructure; Willingness for common infrastructure & institutional households; Design needs for dedicated spaces
Gender oriented infrastructure	Woman hospitals, Institutes & hostels; Dedicated public transportation or feeder services; Toilets for women	Social security& safeguards; Gender oriented economic opportunities; Specific community infrastructure
Economically Weaker Section	Employment ratio; Employment duration; Comparison of wages as per economic indicators; Coverage of infrastructure in slums	Economic opportunities sector wise; Mapping the major centres for work & live to understand mobility; Infrastructure needs

<sup>7</sup>Qualitative indicators in education sector to be analysed to understand the outreach of students, proximity and distribution of institutes, infrastructural issues and the need to consider socio-economic factors in planning.

**5.4 Infrastructure:** Since the focus of development is infrastructure, its analysis should not be limited merely to infrastructure ‘coverage’ but consider the following aspects too:

- Comparison of city infrastructure baseline with Service level benchmarks.
- Sustainability indicators: waste to energy, green energy in the city.
- Checklist for areas of improvement: unscheduled failures, leakages, irregularities in supply.
- Mass transportation (from urban planning point of view): besides population density, built-up density can also be analysed to understand vertical growth to co-relate with the shifting Transit oriented Development (ToD) module.
- Elements like real-time data, two-way data shall form the basis of the smart IT applications.
- Public opinion is vital to identify gaps in infrastructure, to understand adaptability of public at large and to induce public awareness but public education is equally significant, specifically while handling waste management aspects, fuel management aspects and to encourage use of public transportation.

**5.5 Road Safety:** To decrease road accidents and incidents, road safety has become a commitment in Regional/Urban/Transport planning. Detail guidelines are available for Road safety checklist(s), out of which few indicators are enlisted below:

Road Safety	Parameters	Consideration of Citizen’s Opinion
Road Accidents	Accident typology (minor accidents - major accidents); Accident mapping; Accessibility for public transport and emergency vehicles	Common areas of incidents and accidents; Need for public transport users been considered; Assess the impacts of various tools used in road design for vehicle & pedestrians (such as use of colours, lights, signages etc.)
Pedestrian Safety	Pedestrian accidents; Pedestrian facilities –overhead bridges & subways, signals, lighting poles; provision of climbing lanes in hilly areas	
Road design	Road levels; Design of cross-section, junctions, interchanges; Horizontal and vertical alignment and visibility	

**5.6 Cultural Indicators:** It is difficult to measure cultural changes; however indicators such as digitalisation, education, literacy rate, male-female ratio, power consumption and waste generation can be used to measure modernisation. While from infrastructure point of view, quantity and quality of malls, stadiums, auditorium, museums and other cultural public spaces shall be analysed. Analysis of Household industries (such as food related, handicraft, handloom etc) can bring out culture influenced economic activities.

**5.7 Urban Environment Indicators:** From health point of view, the following indicators can be used to analyse environment.

- Indicators as per CBCP/ SBCP for Natural Resource Analysis.
- Green fuel use.
- Eco-system compatible urban design (Eco-urban design analysis).
- Non-confirming uses- Mapping of city land utilisation and analysis of incompatibility.
- Micro-Climate impacts by Thermal Mapping. Thermal modelling shall be increasingly used in analysis of city morphology and its climatic impacts to help reduce greenhouse gas emission.
- Mapping Radiations - Radiations, such as from telecommunication instruments and equipments, laboratories using radioactive materials, large electromagnetic devices must be critically charted to invigilate justified usage of technology.

**5.8 Improved Governance and Accountability:** Apart from the Scheme mandates, statutory city’s planning shall cover administrative efficiency and good governance aspects.

<b>Improved Governance and Accountability</b>	<b>Parameters</b>	<b>Consideration of Citizen’s Opinion</b>
Governance	Administrative efficiency, E- Governance, Citizen charters & Grievance system,	Feedback on grievances; Rating the functional ability of the administration
Public Accountability	Transparency in Budget, Adoption of double entry accrual accounting, Web enabled public information system	Use of existing IT applications, Need for other IT solutions

## 6. CONCLUSIONS

There is a pressing need for ‘*out of box*’ solution in all aspects of planning. Specifically in project consultancy, such approaches may be a value addition and analysis may provide creative solutions.

A holistic approach is now a pre-requisite for urbanisation and especially for smart city development (of brown field site) to ensure involvement of various departments (Departments of Police, Electricity board, Fire safety department, Education departments, Health service providers) and disciplines (like Demography, Sociology, Architecture, Engineering, Economics, Public Administration) for appraisal and implementation. Hence an integrated perspective is imperative for sustainable development, execution and success.

The new perspectives & data sets, suggested above among others, may come as a challenge for planning discipline. But indulgence in the new data sets may overcome the conventional and shall be revisited occasionally and treated as an opportunity to manifest for a better future of planning.

## **BIBLIOGRAPHY**

### **Report:**

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Mission Statement & Guidelines, Ministry of Urban Development (MoUD), Government of India, 2015, Pp. 8, 28-30, 50- 59.
- Guidelines for Swachh Bharat Mission (SBM), Ministry of Urban Development (MoUD), December 2014.
- Guidelines for Heritage City Development and Augmentation Yojana (HRIDAY), Ministry of Urban Development (MoUD), Government of India, 2015, Pp. 3-6, 17.
- Heritage City Development and Augmentation Yojana (HRIDAY), Template for Preparation of City HRIDAY Plan including Civil Infrastructure Development Plan, 2015, Ministry of Urban Development (MoUD), National Institute of Urban Affairs (NIUA), Pp. 13 -19.
- ‘Urban Green Growth Strategies for Indian Cities’, Vol. 1, I.C.L.E.I Local Governments for Sustainability, South Asia (Publisher), National Institute of Urban Affairs (NIUA), Global Green Growth Institute), 2015, Pp. 31 - 111.
- Crime Prevention Through Environmental Design Guidebook, National Crime Prevention Council, Singapore, 2003. Source: <http://www.popcenter.org/tools/cpted/PDFs/NCPC.pdf>
- Bhandari. Laveesh, Chapter 11, Social infrastructure: Urban health and education, Infrastructure Report, 2006, Urban Infrastructure, (Indicus Analytics, New Delhi) Source: [http://www.iitk.ac.in/3inetwork/html/reports/IIR2006/Social\\_Infra.pdf](http://www.iitk.ac.in/3inetwork/html/reports/IIR2006/Social_Infra.pdf)
- Urban & Regional Plan Formulation & Implementation Guidelines (URDPFI), Vol. I & II, 2015, Ministry of Urban Development (MoUD).

### **Article:**

- Tpl. .edidiong Elijah Usip, MNITP, RTP, Arc. Timothy Effiong Edem, Mr.Uyobong Etuk. “Urban planning, architecture, and global terrorism: The Nigerian perspective“. European Scientific Journal, August 2015, Vol. 11. No.23, P. 4, 12& 13.

### **Brochure:**

- United Nation Women, Flagship Programme, ‘Safe cities & Safe public Spaces’, June 2016. Source : <http://www.unwomen.org/en/what-we-do/ending-violence-against-women/creating-safe-public-spaces>

### **Web-page:**

- <http://www.ibef.org/industry.aspx> (as on 01.09.2016)
- <http://www.swachhbharaturban.in/> (as on 01.09.2016)
- <http://swachhbharaturban.gov.in> (as on 01.09.2016)