Chapter 5

Government’s Initiatives for Determining the Open Space Availability

5.1 Introduction

5.1.1 City planning in India is not new. The planning of towns and villages was done in a scientific manner even in Vedic times. Some of the principles on which this was based, are valid even today. The science of ancient town planning is expounded in the Shilpa Shastras, Niti Shastras and Smriti Shastras and also in the treatises on astrology and astronomy. Descriptions of towns and villages occur very frequently in the Vedas. Vedic civilization recorded remarkable progress in village and town planning. The problems of town planning and architecture were resolved scientifically. It reflects scientific knowledge, methodical treatment and implementation of Shastras in planning towns. The scope of ancient Indian town planning included all relevant requirements for a healthy civic life. It includes descriptions of temples, market, streets and lanes, royal palaces, housing of citizens, arched gateways, sheds for drinking water, pleasure-garden, tanks and reservoirs, wells, citywall, forts, etc. (http://tcpomud.gov.in/ Divisions/MUTP/Land/Landuse_Classification_Report.pdf). The conscious provision of open space is an integral part of the modern town planning. By and large it was towards the end of the nineteenth century that green open space became important. Although most town and cities have occupied the same location for centuries, the buildings and other physical infrastructure which comprise the built environment are not fixed but are affected continuously by the dynamic forces of change. This modification of the urban environment occurs at a variety of scales ranging from residential relocation to large scale projects. The net effect of these socio spatial processes is revealed most clearly in land use structure of the city. (Pacione, M.2009). The need of the hour is sustainable development. Sustainable development refers to:-

- Utilising the present resources keeping in mind the future needs of the society, so as not to exhaust the resources.
- It should not disturb the ecological cycle and hence preserve the environment.
5.1.2 The preservation of open space and to ensure effective planning for open space for recreation, it is essential that the needs of the local people are known. Assessment should be done at the regional or sub-regional level and it should cover the differing and distinctive needs of the population for open space and recreational facilities. National standards cannot cater to the local circumstances, such as differing demographic profile and the extent of built development in the area. Local standards should include: quantitative element (how much new provision may be needed); a qualitative component (against which to measure the need for enhancement of existing facilities) and accessibility (including distance thresholds and consideration of the cost of using a facility). Active preservation of open space is essential for the provision of recreational opportunities along the protection of natural features. With increasing population and growing pollution, we can’t ignore the ill effects of planning on the environment.

5.1.3 According to Roddis (1962), open space has to fulfill the following objectives:

- To provide a setting for public buildings and monuments;
- To provide open green areas vital to residents of apartments and other congested housing;
- To provide areas for recreation, both active and passive for residents of all ages;
- To preserve and enhance natural scenic beauty in the community;
- To develop low lying areas in stream valleys or other land that is generally not suitable for building.

5.1.4 Parks and other types of green space can play a valuable role in sustainable development. It is therefore useful to consider how planners have traditionally planned for parks and open space. Typically, a certain amount of open space is required in any development, based on assumptions about park use. Often this required amount of green or open space is calculated according to formulas that are a ‘standard’ in planning legislation and/or policies. Open space has a public purpose; it is for the use of community. What constitutes a proper use will depend largely on the social needs of the times and may change from generation to generation.
5.1.6 The distribution of public open space appears to be influenced by the city development. The change in land use and the lifestyle of the community perhaps leads to modifications in open space form and use. The aim of this chapter is not just to think over the open space planning but to question the generalized interpretation of the open space type and its distribution that is presently conceived by the planners.

5.2 A Comparative Analysis of Open Space Standards

5.2.1 Open space exists at many different scales, in many different forms, and under the jurisdiction of many different organizations. Several planning challenges have emerged in recent years regarding future parks and open space needs. Among these challenges is the need to ensure that an adequate supply of parkland and open space is available to meet the needs of an increasing population. Connecting parks and open space; providing public access to the park system; and protecting existing open space from overuse, conversion to other uses, encroachment by inappropriate new development, or reduction by inappropriate development on adjacent lands are additional challenges that planners are confronting.

5.2.2 Delhi remains one of the oldest surviving cities in the world today. In fact, it is an amalgam of eight cities, each built in a different era on a different site – each era leaving its mark, and adding character to it – and each ruler leaving a personal layer of architectural identity. It has evolved into a culturally secular city – absorbing different religions, diverse cultures, both foreign and indigenous, and yet functioning as one organic entity.

5.2.3 The first city of Delhi was Indraprastha founded by the Pandavas at the time of Mahabharata. Much later, the Tomar Rajputs, who ruled over Delhi, founded Dhillika; Alauddin Khilji built Siri; Tughlaqs added Tughlaqabad, Jahanpanah and Firozabad. Humayun constructed his capital city Din Panah. His grandson Shahjahan built Shahjahanabad and almost a century and a half later Lutyen designed New Delhi – the Imperial capital of the British Raj.
5.2.4 Delhi assumed its modern form when in 1912 the imperial capital of British India was shifted from Calcutta to Delhi. Since then it has undergone three distinct phases of City Planning.

- The building of New Delhi by a team of British town-planners and architects led by Lutyens (1912-1935)
- The setting up of the Delhi Improvement Trust and the efforts at renovation of Old Delhi (1936-1950) and then in the post-independence period.
- The setting up of the Delhi Development Authority and its combined task of developing new areas and improving old ones 1950 onwards.

5.2.5 Phase 1: In 1912 the government decided to build a new capital city at Delhi separate from the existing city of Delhi. The Delhi Town Planning Committee consisted of the architect Edwin Lutyens, captain G S Swinton (chairman of the London County Council, an eloquent champion of city improvement) and John A Brodie (city engineer of Liverpool who had recently gained notice for the scheme for a parkway around that city). The new city was planned as a garden city (as was fashionable in European town planning then) with conscious symbolisation of British imperial power in India. Vast stretches of land were to separate the New city from the old city. Lutyens also planned the residential area for the government officials and the ‘rajas’ etc assisting the British Raj. But in this whole process almost no attention was paid to the problems of Old Delhi which suffered a lot in the times to come. Due to the creation of New Delhi, Old Delhi experienced a 28 percent surge in population from 1916-1926 resulting in the spilling over of the population from inside the walled city to the Paharganj area, whose restructuring was later abandoned by Lutyens due to resource constraints. Also, no provision of housing was premeditated for the large number of skilled and unskilled workers which immigrated in for the construction work of New Delhi. This negligence of the planners towards Old Delhi resulted in its transformation to a large slum area through deterioration and dilapidation.

5.2.6 Phase 2: In 1936, the declining public health of the Old Delhi led to the appointment of AP Hume, an officer on special duty, to suggest measures for relieving congestion in Delhi. In his Report on Relief of Congestion in Delhi (1936)
Hume wrote "the city contains numerous well defined slum areas of the meanest type and abounds in insanitary lanes and dwelling. The report suggested the setting up of an Improvement Trust, a social body equipped with statutory authority for planning and executing a programme for decongestion of the city along with administration of public lands. This led to the setting up of the Delhi Improvement Trust in March 1937. The stated purpose, however, was primarily administrative and only secondarily to deal with public health.

5.2.7 Phase 3: Post-independence Delhi was immediately overwhelmed by a deluge of refugee immigrants from West Pakistan as a result of partition. In the 1950s, it was realised that if the development of Delhi was to be a controlled and channelized process, then it was necessary to provide a Planning Body which could have a broad perspective and take decisions after conducting proper surveys of the area. There was political will behind it to develop the modern capital city of independent India. In December 1957 the Delhi Development Authority was constituted through an act of parliament. It evolved a draft plan in June 1960 and submitted it to the public for objections and suggestions. With due changes the final master plan was ready in November 1961 and in 1962 it was made law. The plan was basically a land-management plan. It took into consideration the increase in Delhi's employment potential in government, trade and industry. On that basis it projected an increase in population up to 50 lakhs by 1981 (which has proved to be very low) and set 'urbanisable limits” which were to be enclosed by a 1 km wide 'green belt' to restrict further urbanisation and prevent surrounding urban areas from merging with Delhi. The plan basically marked out commercial areas, residential areas, industrial and educational areas, etc. (Zonal Approach).

5.2.8 The DDA is responsible for guiding planned development in Delhi, through successive Master Plans. The DDA and other municipal bodies are responsible for guiding planned development in Delhi. They are responsible for developing and disposing of land in the city. It is also the sole agency mandated to develop and dispose of land in the city. The growth of the city over the years has been on a ring and radial pattern, with reliance on road based transport. A Master Plan is essentially a blue print for development, which seeks to guide development for a particular year. In addition to
the general layout, it addresses issues related to development on land, heritage conservation, environment, improvement of an old city, etc. In fact, Master Plan is not a static plan. It has provision for review based on monitoring and feedback. It is possible to amend it from time to time, to keep pace with new developments. The implementation of Master Plan is carried out by the Development Authorities, which ensures the development, and growth of various parts of the town is in harmony.

5.2.9 The enactment of the 74th Constitutional Amendment Act, 1992 has marked a radical shift from Top Down Approach to a Bottom Up Approach whereby decision-making is to take place at the grass root level. The urban local bodies have been empowered to function as plan making and implementing agencies i.e. Nagar Panchayat (for transition area from rural to urban), Municipal Council (for a smaller urban area) and Municipal Corporation (for a large urban areas). In addition, it has a provision for the constitution of District Planning Committees (DPC) and Metropolitan Planning Committees (MPC). DPC is responsible to consolidate the plans prepared by the Panchayats and Municipalities in the District and to prepare a Draft Development Plan for district as a whole. MPC is responsible to prepare a Draft Development Plan for Metropolitan area as a whole. The development foreseen by previous Master Plans was poly-nodal with a hierarchy of commercial centres located on either ring or radial roads. The First Master Plan (FMP) for Delhi, 1961-81, was published by DDA in 1962. The Second Master Plan (SMP) for Delhi 1981-2001, was published by DDA in 1990. As per FMP, 11.7% of the total area of Delhi (17287.45 hectares) was urbanized in 1958-59, with a population of 20 lakhs. FMP envisaged development of urbanisable area of 44,777 hectares by 1981, catering to a population of 46 lakhs. This was subsequently increased to 48,777 hectares-40000 hectares were added for development of Patparganj, Satita Vihar and Vasant Kunj. The Second Master Plan envisaged acquisition of 20,000 hectares, for planned development by 2001.

The Master Plan of Delhi - 1962 (MPD-1962) indicates the Ridge as a regional park covering an area of 8220 acres and it recommended that upper Ridge to be reserved for a regional park and undergrowth must be cleared for hiking, the area near Qutub Minar to be converted into a botanical garden and the Malcha Rifle Range on the
southern portion of the Rides is not to be touched. Whereas Master Plan of Delhi 2001 (MPD-2001) mentions that the Ridge area which is about 7777 ha should be preserved in its natural state and afforested with indigenous flora with minimum of artificial landscapes.

5.2.10 The Northern Ridge (Old Delhi Ridge) is situated between Civil lines and the Delhi University, with an area of 150.46 ha notified as a protected forest while 20.87 ha has been classified under non-forest use. The area added to this part of the Ridge in 1962, was 3.18 ha. At present, this area (as per National Capital Territory (NCT) and MPD 2001) is 81 ha of which 73 ha is with the Delhi Administration and 11 ha with the Municipal Corporation of Delhi (MCD). The latest draft of Master Plan 2021 (MPD-2021) was published in March, 2005, which offers this vision: “to make Delhi a global metropolis and a world class city, where all the people are engaged in productive work with a decent standard of living and quality of life in a sustainable environment. Among the reasons for this lack of convergence between plan and reality is the population growth that Delhi has experienced. From a community of 700,000 in 1947 to 1,700,00 in 1951, Delhi’s population grew to 13,780,000 in 2001. The current (2011) population is estimated to be 16,730,000. The National Capital Territory of Delhi is the area within the boundaries established by the Government of India as the seat of the national government. The NCTD includes an area 1483 sq. km. It is surrounded by the states of Haryana, Rajasthan and Uttar Pradesh. In order to plan for this astounding population increase, the MPD-2021 proposes a three level approach:

• To find ways by which the population growth in Delhi can be checked;

• To increase the population holding capacity of the area within the existing urban limits through redevelopment, and also deflect part of the population into the nearby regions (the National Capital Region, NCR);

• Extension of the current urban limits to the extent necessary.

5.2.11 The National Capital Region (NCR) includes an area of 30,242 sq. km that
incorporates the area of the NCTD and also districts in the surrounding states that are contiguous to the NCTD. The NCR Planning Board was created in 1984 to institute planned development for the region.

5.2.12 The 2021 Master Plan includes an analysis of the “population holding capacity” of Delhi. It assumes an average density of 250 persons per hectare (100 persons per acre), redevelopment of already developed areas to enable higher density, especially along Metro corridors, as well as augmentation of infrastructure and increasing the transportation network capacity. These calculations show that the holding capacity is 15,300,000, significantly less than the forecast population of 23,000,000 by 2021. So, it is clear that additional land must be acquired to accommodate this population. Looking to the future, Delhi will continue to face significant challenges as the population grows. Having set its sights on being ‘a global metropolis and a world class city’, it is imperative for the City to provide shelter and livelihood for all its residents.

5.3 Implementation of the Standards

5.3.1 At the UN conference on Human Settlements held in 1976, it was emphasized that, “public parks should be created from the slum improvement scheme and attempts should be made to maintain historically valuable architectural landmarks and surrounding areas as recreational places. Public parks along existing canals, open space and small recreational places should be provided in crowded areas such as the CBD of the city. The urban authorities should show the capacity to control the urban services, environmental pollution, aesthetic development, environmental sanitation and improve basic condition of health. Efforts are needed to protect and identify areas of historical, cultural, scientific and recreational value”.

5.3.2 Urban Planning in India has gone through considerable changes. India as an emerging economic power has been pursuing planning policies with an objective to uplift standard of living of all strata of the society. Focus of planning shifted from ‘the principle of controlled development of land’ to ‘the principle of demand and supply’ of open economy. Due to this paradigm shift, traditional planning needs to readjust its
planning tools like master plan and zonal plans, in such a way that it recognizes
ground realities and it is also acceptable to the people. The concept of master plan and
structure plan are both being questioned in terms of their nature and effectiveness.
Never the less, stakes related to controlling the urban development are crucial for the
future of humanity. City dwellers are expected to account for roughly half the world’s
population in the 21st century. The increase in urbanisation of the world population is
inescapable and irreversible. Thus, urban planning becomes essential and fundamental
for any future development policies. Over the years, Master Plan remains to be the
only planning instrument which stood test of time despite criticism, severe limitations
and slow pace of implementation. Master plan becomes a document which may bring
reforms, flexibility and set implementable goals for urban planning process, with
some innovative ideas and shift from ‘standard based planning’ to ‘procedure based
planning’.

5.3.3 Procedure based planning integrates local issues like land ownership, socio-
economic status and contribute to bottom-up approach to land use planning at zonal
and master plan level, which is entirely top down approach. But it does not mean that
current land use planning practice can be done away with. Judicious introduction of
procedure based planning for integration of local issues in the zonal and master plan
framework is need of the hour. Bottom-up procedures are successful for improving
the quality of land use planning and resource management. The issue of open space
in and around cities depends on ownership of urban and urbanisable land. The
provision of open space reflects inadequacy of urban planning policies. The available
open space has been constantly decreasing. The planning started due to growth of
cities that was putting negative impact like increased density, dearth of infrastructure
and facilities, decay of inner city etc. as a result of which plans were formed at
various levels i.e. for a city as a whole, for a part of a city, for some zone etc. A
master plan is a long term plan prepared for the planned development of cities. The
land use-planning must be viewed as an integral part of the national development
process that cannot be viewed in isolation from social and economic planning.
5.4 Ward wise Analysis

5.4.1 On doing a ward wise analysis of open space, we again make three zones i.e. core, intermediary and periphery as shown in figures 33 and 34. Then we tabulate the open space in the wards of three zones in Appendix I, II and III. Table 5.1 shows the total open area in core, intermediary and peripheral zones.

5.4.2 The National Capital Territory (NCT) includes areas administered in tandem by the Government of Delhi and three Municipal Corporations. The largest of these is the Metropolitan Corporation of Delhi (MCD); the other two are the New Delhi Municipal Corporation (NDMC) and the Cantonment Board. The MCD administers the largest area, including all rural areas within the NCT. Planning standards for open space in cities vary according to the measure of local conditions. According to Rame Gowda (1974), there is a standard of 1.5 hectares of total open space per 1000 population as a minimum requirement. We shall also use the same standard for this study.

Table 5.1: Open Area in the Zones of Delhi, 2011

<table>
<thead>
<tr>
<th>Zones of Delhi</th>
<th>Area in Hectares</th>
<th>Open Area in Hectares</th>
<th>Population</th>
<th>Open Area per 1000 Population</th>
<th>Density of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core zone</td>
<td>20207</td>
<td>2620</td>
<td>3981841</td>
<td>0.65</td>
<td>197.05</td>
</tr>
<tr>
<td>Intermediary zone</td>
<td>34502</td>
<td>6126</td>
<td>5537706</td>
<td>1.11</td>
<td>160.50</td>
</tr>
<tr>
<td>Peripheral zone</td>
<td>91553</td>
<td>10198</td>
<td>4330960</td>
<td>2.35</td>
<td>47.30</td>
</tr>
</tbody>
</table>

Source: calculated by research scholar
Figure 32 Open Area in the Zones of Delhi, 2011

Source: Calculated by research scholar
Figure 33 Percentage Open Area in Delhi, 2011

Source: DDA land use map of Delhi
Figure 34: Open Area per thousand Population in Delhi, 2011

Source: DDA land use map of Delhi
5.4.3 In the core zone, the open area per 1000 population comes to 0.65 hectares, in intermediary zone the value is 1.1 hectare, and in the peripheral zone the value is 2.35 hectare (Table 5.1). These values will reduce further if the forest area is deducted from the parks and playground area. As we move from the core to the periphery, the open space value is increasing but still the population in the core and the intermediary zones do not have open space availability as per the standard mark of 1.5 hectare. Figure 32 shows the data of open area and total area, in the three zones respectively by bar diagram. Figures 33 and 34 show the percentage open space in the wards of Delhi and the open area per thousand population with the core, intermediary and peripheral zones marked on them. It clearly shows that the peripheral zone wards have higher open space in comparison to core and intermediary zone wards.

5.4.4 The analysis of percent open space to total area brings out the uneven distribution. The planned areas of the city seem to have relatively larger proportion of open space available as compared to the unplanned areas. The percent open area map shows that mostly wards with highest open area are located in south Delhi, e.g. GK I and II, Malviya Nagar, Hauz Khas, Gulmohar Park, R k Puram, Bijwasan, Mahipalpur, Mehrauli, Chhatarpur. The open area per 1000 population map shows that the wards having high open area are very few e.g. Rajendra nagar, Delhi Cantt, Bijwasan, Mahipalpur, Chhatarpur, GK I, Gulmohar Park.

5.5 Summing Up

The cities can be made better only through its open space system. The quality of open space creates an imageability of the city. A sustainable city provides adequate access to open space, which included parks, playgrounds and recreation facilities to its residents. Numerous studies have also shown that parks and street trees lead to increase in the property values. The nature of urban open space is much diversified. The city level open space is very important as that is the lifeline of the city. Lots of effort has gone into the making of Developmental plans. The provision of open space reflects inadequacy of urban planning policies. The ward wise analysis shows the true status of open space that needs to be improved with proper planning.