Chapter - 5

Provisioning for Drinking Water in Hyderabad

Chapter four discussed the involvement of private sector and the civil society organisations in water provisioning to the people. While the neo-liberal context made the delivery of drinking water more market centric making it a commercial resource, on the other hand the involvement of civil society organisations appeared to have made a positive change towards people’s access to water. In addition civic movements at times have prevented commercial exploitation of water. The present chapter deals with the people’s access to drinking water in Hyderabad. The chapter is divided into three sections. The first section gives an overview of Hyderabad and the provisioning of drinking water before the creation of Hyderabad Metropolitan Water Supply & Sewerage Board (HMWS&SB). It also briefly discusses why and how the HMWS&SB was created. The second section deals at length about the HMWS&SB and water supply in Hyderabad. In addition it deals with the composition, and organisational set up of HMWS&SB, service area, sources of water supply, service indicators, water service connections, demand and deficit and water tariffs in Hyderabad. The last section deals with the HMWS&SB’s efforts to engage private parties in different aspects of water supply, the role stake holders such as the elected representatives, market agency and civil society involvement in people’s access to water.

The pace of urbanisation in Hyderabad in the past few decades is quite rapid. As the city is the largest contributor to the state’s GDP, business establishments and also common people have found it as a suitable destination for all the economic activities. With an increase in service sector base, in the city, there is a consequent increase in the population. Providing basic civic services to the ever increasing number of people is a challenge to the city administration. Drinking water being the most basic necessity, the city administration appeared to have made all efforts in providing basic requirements to the people.
5.1 Hyderabad: A Profile

The city of Hyderabad has a history that goes back to 400 years. It was founded on the banks of the river Musi in 1591-92 by Muhammad Quli Qutb Shah and remained a capital of the Quli Shahi rulers. It was an independent province under the Nizams during the British period. When India got independence in 1947, the State of Hyderabad was merged with the Union of India and later became the capital of the present state of Andhra Pradesh.

Hyderabad emerged as one of the prominent cities of the post-independent India and it is one of the largest metropolises in India. With an area of about 778 square kilometres, the Hyderabad Urban Agglomeration (HUA) consists of Municipal Corporation of Hyderabad (MCH), Secunderabad cantonment, the ten surrounding municipal towns, Osmania University, some out growths (OGs), and a few smaller settlements. There are people from different walks of life and from different regions in India. The growth of IT sector has propelled the city’s growth phenomenally.

From April 2007 onwards it became Greater Hyderabad Municipal Corporation (GHMC) based on a notification released on 16th April 2007 by the Government of Andhra Pradesh. The city is divided into (5) Zones (including North, South, Central, East and West) and 17 circles to provide better services. The 12 surrounding municipalities were merged into the earlier MCH area leading to the creating of the Greater Hyderabad Municipal Corporation (GHMC). For a comprehensive planning of this, the state government created an exclusive agency. It is christened as HUDA (The Hyderabad Urban Development Authority).

5.2 Hyderabad Urban Development Authority (HUDA)

The Hyderabad Urban Development Authority (HUDA), authority extends over an area of 1865 sq. kms covering the entire district of Hyderabad and parts of Ranga Reddy and Medak districts of Andhra Pradesh. It includes the 175 sq. kms under the Hyderabad Municipal Corporation area, 416 sq. kms under the 10 municipalities and 1237 sq. kms under the 106 gram panchayats. The Government of Andhra Pradesh has expanded the jurisdiction of HUDA towards the constitution of
Hyderabad Metropolitan Development Authority (HMDA) keeping in view the rapid
growth trend in Hyderabad.\textsuperscript{4} The enlarged jurisdiction of HUDA now extends to 54
Mandals located in five districts with a total area of nearly 6300 sqkm. Earlier the area
under HUDA constituted nearly 300 villages. With the proposed creation of the
HMDA, 600 villages are now added.\textsuperscript{5} The villages that formed part of the larger
HMDA are coming under Medak, Ranga Reddy, Nalagonda and Mahaboobnagar
districts in Andhra Pradesh.

5.3 Demographic trends in Hyderabad

Hyderabad recorded rapid population growth in the last few decades. From a
population of 12.5 lakhs in 1961, its population reached 25.5 lakhs and almost trebled
to 43 lakhs by 1991. According to 2001 census, city’s population (erstwhile MCH) is
36.3 lakhs. It is ranked as sixth largest city among the major metropolitan cities in
India. It is estimated that by 2021 the HUA will have a population of one crore. The
decadal growth rate of Hyderabad Urban Agglomeration (HUA) was 43 per cent and
67 per cent during seventies and eighties respectively. But it came down to 31 per
cent during 1991-01. However, much of the spatial expansion in the last two decades
in the HUA has occurred in the erstwhile ten surrounding municipal towns. These
towns recorded a high growth rate of 71 per cent in nineties as compared to only 18.7
per cent by the core city (erstwhile MCH area). Several of these surrounding
municipal towns have been growing at high rates from eighties onwards. Their share
of population in the HUA has increased from about 23 to 30 per cent while there is a
Corresponding decline of population in the erstwhile MCH area.\textsuperscript{6}
Table 5.1: Demographic profile of Hyderabad

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City Population</td>
<td>36.3 lakhs</td>
</tr>
<tr>
<td>HUA Population</td>
<td>57.5 lakhs</td>
</tr>
<tr>
<td>Decadal Growth Rate</td>
<td></td>
</tr>
<tr>
<td>(City)</td>
<td>66.6 per cent</td>
</tr>
<tr>
<td>City Area</td>
<td>260 sq. km.</td>
</tr>
<tr>
<td>Metropolitan Area</td>
<td>688 sq. km.</td>
</tr>
<tr>
<td>Number of Slums</td>
<td>811</td>
</tr>
<tr>
<td>Slum Population</td>
<td>14.1 lakhs</td>
</tr>
</tbody>
</table>

Source: Census 2001 and Municipal Corporation of Hyderabad (MCH)

*a Decadal Growth Rate is in the 1980s

*b This refers only the notified slums. There are several hundred more non-notified slums in the HUA.

5.4 Drinking water in Hyderabad: access and quality

The city of Hyderabad without any perennial river is primarily dependent on the lakes and tanks for drinking water purposes. As the city grew physically and demographically over the years, the sources of drinking water got either dried up and shrink and in some areas are polluted. Consequently there is always search for new water sources sometimes in the distant rivers to meet the growing water needs.

Three sources from where drinking water needs of Hyderabad are met. These are: (1) HMWS&SB (Individual house service connections, group connections, water tankers and public stand posts (PSPs), (2) Private sources (Packaged drinking water, bottled mineral water, private water tankers and water from neighbours), and (3) Ground water (Individual bore wells, group bore wells and hand pumps).

While water supplied by the water board is the primary source for majority of the residents in the city, there are also people who depend on the private supply and ground water for their daily needs. However, in the past few years, the dynamics of drinking water provisioning to the people in Hyderabad have undergone phenomenal changes. One can notice an increasing trend of depending on private and ground water source. Inadequate amount of water and the low quality supplied by the water board is
often cited as the main reason. However if one looks into the history of water supply one comes across interesting aspects.

5.5 History of water supply in Hyderabad

The city used to have an organised water supply system. It is documented;

“Sir Salar Jung the Great did so much for Hyderabad that it seems fitting that a memorial to him should take the shape of such a useful institution as water supply, which must be a blessing to every resident of the city, be he prince or pauper, high or low, rich or poor. The supply of water principally comes from Mir Alam lake ... There are twenty seven miles of piping, ranging from three to twenty four inches in diameter, which can supply on average of fifteen gallons of water per day to every inhabitant of Hyderabad, so that the city is not behind the cities of British India in this respect.”

Initially people in Hyderabad obtained water from rivers and open dug wells. For example, people of Lalapet, located in south of Hyderabad numbering about 5000 used to get their drinking water from a big well situated within a garden belonging to The Nizam, the Raja Pramukh of Hyderabad. This is so since times immemorial. Later the Secunderabad Municipal Corporation (SMC) obtained permission from The Nizam, to install a pump at the well and take water supply through pipes to the people of Lalapet at the cost of Secunderabad Municipal Corporation. Gradually with the increase in the population of the city, there was dependence on outside sources. The Umada sagar (an irrigation tank) near Chandrayangutta was first used as the source of drinking water for Hyderabad. Later the Mir Alam tank had been the main sources of drinking water to Hyderabad. The Hussain sagar (which is now in the heart of the city of Hyderabad) built in 16th century provided water to some localities, and towards the end of 19th century water from Hussain Sagar was exclusively used for drinking purpose. On the other hand, Secunderabad received its supply from Faukl sagar at Jeedimetla. Once, Osman sagar and Himayat sagar water supply was commissioned in the 1920s’, all other sources became insignificant and later abandoned.

Hyderabad was inundated by an unprecedented flood caused by the river Musi on September 28, 1908. Most parts of the city were submerged and there was great loss both in terms of property and human lives. In order to prevent the recurrence of such disasters, two dams were constructed across the river Musi and its tributary river
Esi on the advice of Sir M. Visweswaraya, the celebrated engineer from Hyderabad between the years 1922-1927. This followed the Osmansagar and Himayatsagar reservoirs respectively on both the rivers. Since then these water bodies continued to be principal sources of drinking water to the city.

A separate agency Hyderabad Water Works was commissioned in 1922. With this, long conduit was built from Osman sagar to Asifnagar (Near Sarojini Devi Hospital), and service reservoirs were built at Red Hills, Bogulkunta and Chilkalguda to supply water to the city. In addition, a sump was constructed on Banjara main road to pump water to reservoirs built at Banjara Hills. The Osman sagar conduit was tapped near Shaikpet and water was treated and supplied to the military areas and also the civil population in and around Golconda fort. A separate reservoir for Secunderabad was constructed at Marredpally.\(^{10}\)

5.5.1 Water supply to Hyderabad after independence

After Hyderabad was named as the capital of Andhra Pradesh, consequent to the re-organisation of states, there was sudden influx of population. As the city grew, the urban sprawl encroached into vacant lands and water bodies due to the increasing pressure on land for housing and other activities. Many water channels that used to carry floodwaters from one lake to the other in a catchment area are encroached by private agencies. Discharge of untreated industrial effluents has led to the total degradation of the water quality in many water bodies. No implementation of building regulations and pollution control laws has encouraged encroachment and pollution of water bodies.

Consequently meeting drinking water demand for the city population became more challenging. The two reservoirs Osmansagar and Himayatsagar utilised to their maximum level and in addition there was search for additional source of water. In the year 1958, a scheme was undertaken to draw water from the Manjira river which is near Sangareddy in adjacent Medak district, about forty miles from Hyderabad. The scheme was commissioned in 1965. Water was pumped from the river to service reservoirs at Lingampally from where it comes by gravity to the city.\(^{11}\) Later in the year 1972, due to persistent demand for drinking water, the Manjira phase II was taken up to draw additional water from the Manjira river.\(^{12}\) As the demand for water

148
increased, Manjira phase III and IV was taken up and there was search for additional sources which included Krishna river and Godavari river.

The additional demand for water coincided with the rise in population including slum population. Especially in the slum areas which are ill served at times inadequate physical infrastructure and other technical issues such as land tenure meant that access to water in the slums become a cumbersome process. As the situation deteriorated and the pressure mounting, government took initiatives in development of the poorer areas which also included piped water supply.

5.6 Provisioning of drinking water in the slums and other poorer areas

There is considerable increase in the number of slums and population in the slums in Hyderabad. The Government of Andhra Pradesh has adopted a policy of tenure regularisation during 1995. Accordingly all slum dwellers residing on government lands for more than five years are eligible for tenure regularisation. In the case of private lands, government acquires them and regularises the tenure. Once regularisation is complete, government agencies take up several projects regarding housing improvement and other municipal infrastructure development such as drinking water supply.

There are two categories of slums, i.e., notified slums and non-notified. Slums are notified under the Andhra Pradesh Slum Improvement Act, 1956 for redevelopment and improvement. However, lack of clear policy guidelines, cumbersome procedures, political influence etc, have remained major problems in notification of slums. The developmental programmes are implemented only in notified slums, thereby depriving the poor in non-notified slums of even the barest services. Lack of clear and transparent guidelines has not only affected the process of notification of slums but also influenced the investment trends. Generally, there is a strong tendency to distribute the available funds equally amongst the wards irrespective of the slum population, which leads to skewed development and limited impact.\(^\text{13}\) The consequent result of such government policy has led to limited access to basic services like drinking water.
5.7 Institutional arrangements

Before the present Water Board was created the Hyderabad Water Works Department was entrusted with the responsibility of supplying drinking water to the city of Hyderabad. The Hyderabad Water Works Department is part of Government of Andhra Pradesh. It is headed by a Chief Engineer, attached to the Municipal Administration Department of the state government usually dominated by technical experts. The Organisation was predominantly an Engineering Department for making arrangements for the supply of water. This agency gets its grants from the government, to meet both capital expenditure and deficits in the Operations & Maintenance costs. The erstwhile Hyderabad Water Works to run like any government agency with no focus on financial management and orientation for providing quality services to the people. With a view to ensure autonomy which enables to plan effectively the government created an exclusive agency the Water Board in 1982.

5.8 The Water Board of 1982

The Government of Andhra Pradesh through an act (Act 6 of 1982) created the water board. According to the provision in the Act, the Board was supposed to be headed by a person with administrative experience or an engineer with water works or a technical person with experience. Further, the most important feature of the water Board was the provision for representations from the community. According to the provisions, three non-officials shall be appointed representing different interests of the people from among the members of public. The primary reason for having such a provision in the Board was to elicit public views on different water supply issues. Though there are other sources of public views such as news papers or representations from public but these non-official members were important source of public opinion to the Board during discussion on important issues of water supply in Hyderabad.¹⁴

However, the Board was abolished a year after it was created. The water board was created as a pre-condition for granting of loans by the World Bank for water supply in Hyderabad. Since the government did not receive any loans from the World Bank, the water board was abolished.¹⁵ It was then running as a department with no
public representative. The government redrafted to create the board again in 1989, they deliberately removed the provision for public representations. The reasons cited were: (1) public representatives would create problem during discussions, and (2) they would be a hindrance to the board’s functioning by raising different questions. The government also wanted to make the Board a political sort of thing and headed by the Chief Minister of the state.\textsuperscript{16} The new Board was created in 1989 (Act 15 of 1989). It must be noted here that the Government of Andhra Pradesh secured a loan (of ten million dollar) in May 1990 from the World Bank for Hyderabad water supply and sanitation.\textsuperscript{17}

5.9 Hyderabad Metropolitan Water Supply and Sewerage Board (HMWS&SB)

The Hyderabad Metropolitan water Supply and Sewerage Board (HMWS&SB) was constituted by an Act of Andhra Pradesh Legislative Assembly with effect from November 01, 1989. HMWS&SB was created to give administrative and financial independence and increased responsibility while supplying drinking water to the people. The HMWS&SB has a mandate to plan, design, construct, organise, execute and manage water supply systems in the city.

5.9.1 Constitution and composition of the HMWS&SB

Chapter III of the Hyderabad Metropolitan Water Supply and Sewerage Act 1989 deals with the constitution and composition of the water board. According to the Act, the HMWS&SB consists of the following members (see table 5.2);
Table 5.2: Composition of the HMWS&SB

<table>
<thead>
<tr>
<th></th>
<th>Chief Minister</th>
<th>Ex-Officio Chairman</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Minister for Municipal Administration</td>
<td>Ex-Officio Vice-Chairman</td>
</tr>
<tr>
<td>3</td>
<td>Secretary to Government, Municipal Administration and Urban Development Department</td>
<td>Ex-Officio Director</td>
</tr>
<tr>
<td>4</td>
<td>Secretary to Government, Finance Department</td>
<td>Ex-Officio Director</td>
</tr>
<tr>
<td>5</td>
<td>Secretary to Government, Irrigation Department</td>
<td>Ex-Officio Director</td>
</tr>
<tr>
<td>6</td>
<td>Commissioner, Municipal Corporation of Hyderabad</td>
<td>Ex-Officio Director</td>
</tr>
<tr>
<td>7</td>
<td>Chairman, A.P. Pollution Control Board</td>
<td>Ex-Officio Director</td>
</tr>
<tr>
<td>8</td>
<td>Director, Health</td>
<td>Ex-Officio Director</td>
</tr>
<tr>
<td>9</td>
<td>A Chief Engineer of the Board, to be appointed by the Government</td>
<td>Director</td>
</tr>
<tr>
<td>10</td>
<td>One person nominated by the Government of the rank of Accountant General</td>
<td>Director</td>
</tr>
<tr>
<td>11</td>
<td>One person of the I.A.S. cadre to be nominated by the Government</td>
<td>Managing Director</td>
</tr>
</tbody>
</table>


According to the Act, the chief minister of Andhra Pradesh is the chairman of the board with ten other members. Sometimes there are criticisms, that the head of the government in the state is heading a water board. This gives the chief minister unlimited power to formulate policies according to his likes and it appears the rationale of administrative independence of the board stands compromised.

Below the rank of Managing Director, there is a line of officials who actually deliver water to the people. Figure 5.1 below gives an outline of the organisation of the HMWS&SB and the channel of information before water is actually delivered to the people. While the managing director is a generalist officer, below his rank there is line of specialist officers most of them are engineers.
Personnel at the top of the organizational chart are deputed by the Government unlike staff in charge of operations and maintenance. Theoretically, these persons cannot be deputed to HMWS&SB for more than three years while operational staff members are permanent employees. Staff members working under Section Managers are supposed to visit the houses of consumers for meter reading, bill distribution and
detection of illegal connections and to carry out feasibility studies. HMWSSB has adopted a structure consisting of four operational and geographical levels as seen in the organizational chart. The area under its authority is divided into four branches or circles, each of which is further split into 10 divisions. Each division consists of sections and sub-sections. At the centre, there are four Directors, each in charge of a service: technical, projects, finance and personnel.

Nevertheless, all policies are decided by a central administrative body. Within the framework of delegated powers in an organization, managers enjoy a certain amount of freedom in dealing with matters related to operations and maintenance. But decisions regarding investments can be taken only with prior permission from senior officials. However, policies related to connections and complaints were centralized after the setting up of Metro Customer Care (MCC) and Single Window Cell (SWC).

5.9.2 Service area

The service area of HMWSSB is 688.2 Sq.Kms, which includes MCH area comprising of 150 wards, ten adjoining Municipalities, Osmania University Campus and Secunderabad Cantonment, ten (10) enroute villages along national highway no 9 up to Sangareddy. The board is already providing water supply services to the two new municipalities, Patancheru and Ramchandrapuram. The board supplies in bulk to the municipalities and the municipalities in turn take up distribution and maintenance of water supply systems in their respective municipality.18

5.10 Sources of water supply

There are three important aspects of water supply to Hyderabad. (1) The time gap between successive projects after Manjira phase I in 1965 declines steeply. This reveals the rapid pace of urbanisation and the consequent growing demand for water. (2) The distance of the water source from the city is increasing with each new project, consequently increasing the cost as well as the distribution and transmission losses. (3) The recent water supply projects have relied on direct diversion of water from rivers through barrages and dams located far away from the city.19

The details of sources of water supply to Hyderabad after commissioning Krishna Phase-II Project are presented in Table 5.3 and Figure 5.2.
### Table 5.3: Details of present sources of water supply to Hyderabad

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Source Name</th>
<th>River</th>
<th>Year</th>
<th>Impoundment Name</th>
<th>Distance from city (km)</th>
<th>Drawls (Mgd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Osmansagar</td>
<td>Musi</td>
<td>1920</td>
<td>Osmansagar</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Himayatsagar</td>
<td>Esi</td>
<td>1927</td>
<td>Himayatsagar</td>
<td>9.6</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Manjira Phase I</td>
<td>Manjira</td>
<td>1965</td>
<td>Manjira barrage</td>
<td>58</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Manjira Phase II</td>
<td>Manjira</td>
<td>1981</td>
<td>Manjira barrage</td>
<td>59</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>Manjira Phase III</td>
<td>Manjira</td>
<td>1991</td>
<td>Singur Dam</td>
<td>80</td>
<td>38</td>
</tr>
<tr>
<td>6</td>
<td>Manjira Phase IV</td>
<td>Manjira</td>
<td>1993</td>
<td>Singur Dam</td>
<td>80</td>
<td>39</td>
</tr>
<tr>
<td>7</td>
<td>Krishna Phase I</td>
<td>Krishna</td>
<td>2004/05</td>
<td>Nagarjun Sagar Dam</td>
<td>116</td>
<td>58</td>
</tr>
<tr>
<td>8</td>
<td>Krishna Phase II</td>
<td>Krishna</td>
<td>2008</td>
<td>Nagarjun Sagar Dam</td>
<td>116</td>
<td></td>
</tr>
</tbody>
</table>


As can be seen from the above table there are in between 1920 and 2008, successive governments tried eight sources to augment water supply to the city of Hyderabad. The distance from the source to the city increased from 9 km to 116 km. Four plans are through Manjira 1965-1993. The above table gives other details. In all about 206 mgd of water is drawn for augmenting water needs of the city.
5.10.1 Existing transmission, distribution and storage capacities

The transmission mains carry water from the source to the water treatment plants and subsequently to the Master balancing reservoirs at Hydernagar, Lingampally and Singur. The trunk distribution mains transmit water from the balancing reservoirs to the reservoirs within the city. The total length of the transmission mains is about 286 Km, trunk mains is about 265 Km and length of the distribution system is 1727 Km.

The water distribution system for the MCH area is divided into 20 water distribution zones. The zones are further divided into 20-30 sub zones based on common ability and operational convenience. The total storage capacity available within MCH is about 390 ML comprising of 118 underground reservoirs and elevated
reservoirs. The present storage capacity is inadequate for the quantity of water supply available for the city.

5.11 Service coverage

The Goal of HMWS&SB is to provide safe and adequate drinking water to 100% of the projected population of Hyderabad metropolitan area. However, according to the HMWS&SB, 90% of population is covered with potable water supply in MCH area and 65% in surrounding municipalities. The city has over 3,87,532 water connections in MCH area and 1,94,600 connections in surrounding municipalities (see Table 5.4). Around 70% of the population has access to piped water supply in MCH area and is around 43% in surrounding municipalities. In addition to that, the city has 8353 public stand posts (PSP) for water supply to the weaker sections of society, who cannot have individual house connections.

Table 5.4: Connection details

<table>
<thead>
<tr>
<th>Category</th>
<th>No Connections</th>
<th>Percentage of the total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>387,532</td>
<td>77.38</td>
</tr>
<tr>
<td>Slums</td>
<td>98,696</td>
<td>19.71</td>
</tr>
<tr>
<td>Commercial</td>
<td>13,451</td>
<td>2.69</td>
</tr>
<tr>
<td>Industrial</td>
<td>936</td>
<td>0.19</td>
</tr>
<tr>
<td>Others</td>
<td>194</td>
<td>0.04</td>
</tr>
<tr>
<td>Total</td>
<td>500,809</td>
<td>100.00</td>
</tr>
</tbody>
</table>


Table 5.5: Major parameters of water demand and supply in MCH area

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of households having individual tap connections</td>
<td>70%</td>
</tr>
<tr>
<td>Number of public working power driven bore wells</td>
<td>58</td>
</tr>
<tr>
<td>Number of public working hand pump bore wells</td>
<td>4859</td>
</tr>
<tr>
<td>Number of mobile tankers</td>
<td>250</td>
</tr>
<tr>
<td>% households dependant on stand posts</td>
<td>7%</td>
</tr>
</tbody>
</table>

5.12 Service indicators

The average per capita consumption of water is estimated at 162 lpcd, but in slum areas it is estimated to be much lower. The residents in Hyderabad are supplied water for about 2 hours on every alternate day. However from November 14, 2008, some parts of the core city area is claimed to be supplied with daily water supply. The surrounding municipalities are supplied for one hour every third day. However, the actual hours of water supply are not uniform throughout the city. For instance, according to Saleth and Dinar “areas of economic and political importance manage to get water for more hours than areas with less organized or dispersed pressure groups.”

It is visible in Hyderabad that areas in the main city are supplied water regularly and the duration of supply is more than in the periphery and the poorer areas. As a result, water deficit is distributed unequally across regions and uses within the city limits.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>MCH</th>
<th>Surrounding Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Network Coverage</td>
<td>90%</td>
<td>65%</td>
</tr>
<tr>
<td>2 % Access to Piped Water Supply</td>
<td>70%</td>
<td>43%</td>
</tr>
<tr>
<td>3 Average Per Capita Supply</td>
<td>162 lpcd</td>
<td>91 lpcd</td>
</tr>
<tr>
<td>4 Unaccounted for water</td>
<td>40% (est.)</td>
<td>60% (est.)</td>
</tr>
<tr>
<td>5 Duration of Supply</td>
<td>2 hrs alternate day / some parts daily</td>
<td>1 hr third day</td>
</tr>
<tr>
<td>6 Connections/1000 pop</td>
<td>102</td>
<td>39</td>
</tr>
<tr>
<td>7 Average volume of water produced</td>
<td>162 Mgd</td>
<td>44 Mgd</td>
</tr>
<tr>
<td>8 Unit Production Cost</td>
<td>Rs. 14 /kl (Avg.) and Krishna Water – Rs. 18 /kl</td>
<td></td>
</tr>
<tr>
<td>9 No. of PSPs</td>
<td>5092</td>
<td>3261</td>
</tr>
<tr>
<td>10 Water Tariffs Residential &amp; Commercial Industrial</td>
<td>Rs. 6/ – Rs. 35/ kl</td>
<td>Rs. 100</td>
</tr>
<tr>
<td>11 Private sector involvement</td>
<td>Billing, collection, leak repair, maintenance etc</td>
<td>Partly</td>
</tr>
</tbody>
</table>

The water board claims that it is supplying daily water to the residents in Hyderabad. Although there is a fairly good level of access to water in the centre of the city, there are still differences in the level of supply and in the means used to get it in case of people living outside the core city areas. However, there are several instances published in the local dailies in Hyderabad, which states all is not well with water supply. People in the twin cities are forced to buy tanker water. There are cases where people get water once or twice in a week, the duration of water supply is very less and the water pressure very low. Moreover the water supply timings are very erratic. This results in insufficient amount of water to meet the daily requirements.

5.13 Water tariffs

One of the most important issues with water supply in Hyderabad is the water tariff. The people in Hyderabad who have meter fixed to their water connection in working condition are charged according to slab rate. With increase in water consumption one has to pay more (see Table 5.7). Those whose meters are not working have to get it repaired at the earliest or have to pay fine to the water board. The introduction of meters is supposed to inculcate a change in attitudes of people who started looking at supply as a paid public service. It is supposed to facilitate management at the higher level and make the public aware of the economic value of water.

<table>
<thead>
<tr>
<th>Category</th>
<th>Consumption of Water in Kilo Litre per month</th>
<th>Rate in Rs. per KL</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) where the monthly consumption is 500 kl or less</td>
<td>0-15 15-30 31-50 51-100 101-200</td>
<td>6.00 8.00 15.00 20.00 25.00</td>
</tr>
<tr>
<td>(b) where the monthly consumption exceeds 200 kl</td>
<td>Entire consumption</td>
<td>35.00</td>
</tr>
</tbody>
</table>

Source: The Andhra Pradesh Gazette, Hyderabad, Friday, December 29, 2006
During the annual meeting, chief minister, Y.S. Rajasekhara Reddy, refused to hike the water tariffs. The chief minister, who is also chairman of the board, agreed to provide a subsidy of Rs.50 crores to finance its operations. This gesture was apparently made possible by sharing a part of the development charges levied by the Hyderabad Urban Development Authority (HUDA), the Cyberabad Development Authority (CDA) and the Hyderabad Airport Development Authority (HADA).

### 5.14 Connection charges

The charge for getting a new water connection in Hyderabad is about 8,000-12,000. Such a high amount for getting piped water supply denies water access to those who cannot pay for it. On the other hand, the government in order to make water affordable to the poor had directed the water board to sanction new water connections to the poor households with a payment of Rs 1200 in equal instalments of Rs 100 for 12 months. The scheme was primarily to encourage people of lower income groups to apply for individual connections. This is against the normal charges of Rs 2400 for new connection. The differential amount is borne by the government. This policy was implemented in August 2004. It appeared to be a success because 26,000 households have received water connections under the new scheme.

However, the poverty line is set by MCH at Rs.24000 per annum or Rs.2000 per month. In this situation, Rs.1200 can be a substantial investment in addition to the payment of monthly charges for water consumption. Water tariffs are not based on concessional rates and are given on the basis of level of consumption. Therefore, the rate adjustments do not necessarily favour those who belong to poor group. There is another dimension to providing access to water. In fact, connections can be given only to households in areas where this is physically possible and the area must be recognized by competent authority as being entitled to be provided with civic services. Since a number of slums are identified as illegal, they are not entitled to such schemes. Therefore, underprivileged localities are often subjected to differential treatment by the commercially-oriented services by HMWS&SB.
5.15 Water demand and deficit

The extent of water deficit in a given city is usually defined by the gap between demand and supply. This indicates the degree of water crisis prevailing in the city. Hyderabad’s current estimated demand stands at 290 Million Gallons per Day (MGD). But total installed capacity of water from the surface sources is about 245 Mgd. The estimated ground water extraction that supplements water supply is 25 mgd, which accounts to only around 270 Mgd supply. The water allocation to Municipal Corporation area is about 162 Mgd and for the ten surrounding municipalities is about 44 Mgd. This is made worse during the drought conditions, which constrict supply even further. As shown in table 5.8 a huge gap is indicated between current supply and demand, and this is likely to widen by 2021, when the estimated demand will grow to 400 Mgd.

Table 5.8: Projections of water demand and deficit in Hyderabad (in MGD)

<table>
<thead>
<tr>
<th>Years</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>153</td>
<td>162</td>
<td>162</td>
<td>162</td>
<td>162</td>
</tr>
<tr>
<td>Demand</td>
<td>230</td>
<td>290</td>
<td>328</td>
<td>360</td>
<td>400</td>
</tr>
<tr>
<td>Deficit</td>
<td>77</td>
<td>128</td>
<td>166</td>
<td>198</td>
<td>238</td>
</tr>
</tbody>
</table>

Source: Hyderabad Metropolitan Water Supply & Sewerage Board

Currently the water board manages the water deficit through a mix of supply hours manipulation and an informal and unequal rationing of the total water deficit across regions and use categories. On the other hand, people deal with water scarcity at their end by relying on a variety of water augmentation options depending upon their economic capability. These options range from investment in in-house storage system to the installation of their own bore wells and on purchased water from private tanker supply. However, since the poor people have limited options, their reliance on the water supplied by the water board is higher as compared to economically sound users.29

On November 14, 2008 it announced that with availability of water from Krishns river it can supply 32 crore 80 lakh gallons water to meet the growing drinking water needs. It was estimated that an amount of Rs 830 crore was required to tap nine crore gallons of water from Krishna river to cater to the needs of municipalities around Hyderabad (since merged in GHMC-Greater Hyderabad
Municipal Corporation). Even before its completion the Government of Andhra Pradesh announced a scheme for diversion of Godavari water to the city to augment drinking water availability to the city at a cost of Rs. 4000 crores. While plans are on across the state, there are disturbing reports of lack of access to drinking water not only in urban areas but large number of habitations. The following table reflects the deep crisis afflicting the policy on drinking water.

**Table 5.9: Access to drinking water in Andhra Pradesh**

<table>
<thead>
<tr>
<th>Total Habitations</th>
<th>Access to water</th>
<th>Partial access</th>
<th>Nil access</th>
<th>Low quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>72095</td>
<td>33310</td>
<td>37394</td>
<td>479</td>
<td>912</td>
</tr>
</tbody>
</table>

Source: Culled from newspaper published in Hyderabad, May 6, 2009.

The above information is made available to the media. It needs to be mentioned that while in 2007 the number of habitations that received full fledged water supply is mentioned as 39512. It makes one wonder why the number got reduced to 33310 while the budgetary support shows that Rs 600 crores is allocated to new schemes for augmenting water supply across the state. This was in addition to the new initiatives taken by the board in order to provide better service delivery to the people. Few new initiatives by the board can be discussed here.

**5.16 New initiatives by the HMWS&SB for better service**

Various reforms were undertaken in the late 1990s with regard to the water board’s functioning in order to enable the board to serve efficiently. Broadly these initiatives were intended to better serve the people, however sometimes they ended up becoming more complex in functioning.

**5.16.1 Metro Customer Care (MCC)**

MCC was launched in February 1999 as a new department (open round the clock) in the HMWS&SB head office. An important innovation was the setting up of a computerized complaint centre. Complaints are transmitted to the different divisions and sections through the computer network. The office can receive up to 500 complaints per day. It should be pointed out that the number of complaints is now much higher in the central parts of the city than in the outlying areas.
5.16.2 Single Window Cell (SWC)

SWC was set up in April 1999 as a new department based in the HMWS&SB head office to receive, process and coordinate all applications for new water and sewage connections. As for the SWC, although it has become easier to submit an application for a new connection, it has been observed that it is not always easy for people living in outlying areas to make the trip to the Board’s head office. The procedure is all the more problematic since it is often necessary to make several trips before an application is accepted.

5.16.3 Citizens’ charter

The third reform intended for users, undertaken by the HMWS&SB in the late 1990s, was the introduction of a Citizens’ Charter in January 2000 for laying down computable norms for implementing a wide spectrum of services.

5.16.4 Lok adalat

The Lok Adalat was set up in 2000. The objective was to hold regular meetings during which unresolved disputes, particularly those awaiting a decision of the court for a long time, are likely to be amicably settled. This practice was still in use in 2006 as announcements were published in daily newspapers inviting people to the Lok Adalat for getting their grievances redressed. For example, the Permanat Lok Adalat for Public Utility Services conducted a special water adalat for people having grievances regarding improper billing, non-supply of adequate water and other related complaints.

5.17 Effort towards private participation

The HMWS&SB is actively considering to privatise the operation and maintenance and distribution of water supply in the erstwhile municipalities. The HMWS&SB has already privatised few of its functions such as bill collection, meter reading and maintenance. There was a bigger plan to privatise water supply in Hyderabad but owing to pressure from different groups such as the Communist Party, the plan is abandoned now. The initiative to involve the private sector is in
accordance with the loan agreement with the World Bank. One of the objectives for
the water supply project in Hyderabad says, “developing the HMWS&SB into an
effective commercially oriented water utility capable of sustaining the delivery of
such services.”34 Under the agreement, the HMWS&SB is free to increase water
tariffs in order to attain full cost recovery.35 Therefore, the HMWS&SB it appears is
more interested in the management for financial stability rather than basic service
delivery.

In addition to the involvement of private parties in fixing water meters,
HMWS&SB has started outsourcing its operations while keeping major decision-
making powers in its own hands. Particularly as part of its efforts to recover unpaid
bills, downstream operations at the consumers’ end have been outsourced to private
agencies. Starting from August 2006, about 50% of the job of distributing bills has
been outsourced.36 Four agencies AP Online Services, Excel Computers, Sri Rami
Reddy & Co and Bhavani, have been selected after calling for tenders and their
remuneration varies from zone to zone (from Rs.2.79p to Rs.4.00p per bill). The main
clause in the contract is the monthly distribution of bills.

It is quite clear that treating water as an economic good (payment for water by
volume being accepted as a norm) has coincided with the outsourcing of some
operations and maintenance functions. These policies are expected to improve the
Board’s financial condition by increasing its income and optimizing its expenditure.
The strong influence exerted by international institutions such as the World Bank is
also evident. The introduction of benchmarking and the practice of taking the
assistance of the private sector are recurrent themes in the reforms proposed by these
institutions and the subsequent introduction by the HMWS&SB.37 This process got
slowed down with the change in regime in Andhra Pradesh. During the earlier Telugu
Desam Party (TDP) government under Chandra Babu Naidu, the state governments’
actions were tuned to the voices of the World Bank. However, the Congress
government under Rajashekhar Reddy has resorted to more populist policies making
the process slow.

On the other hand, the HMWS&SB has launched its own packed water called
Metro Water on April 14, 2009 from the newly established water plant in Asif Nagar
filter premises. The plant is established on a pilot basis and the water cans would be
initially given to Government Departments and institutions. Subsequently plans are on to supply water to the people.

5.18 Role of different stake holders and access to drinking water

There are numerous institutions involved in the process of water decision making. Though the water board is mandated through an Act of state legislature to provide drinking water to the citizens, however the local government i.e. the municipal corporation is constitutionally empowered to perform the water supply functions. In case of Hyderabad, the municipal corporation has very limited functions with regard to water supply to the citizens. Even the mayor and the councillors are not members in the HMWS&SB.
Figure 5.3: Decision making, the role of citizens and access to drinking water

Corporators, elected for a five-year term, are in charge of the development of their electoral constituencies. Together with MLAs (Members of Legislative Assembly) and MPs (Members of Parliament), they constitute a General Body which meet once in six weeks. These representatives are involved in water access issues. The role of municipal corporators in the area of water supply seems to serve essentially as buffers.\textsuperscript{38} Distribution of duties is not dictated by official rules but rather takes the form of informal arrangements. For example, interaction between
individual corporators and HMWS&SB depends on various factors such as personal relationships, party affiliations, political tensions surrounding the issue of water, expectations of the population, etc. Therefore, the representation of his or her role differs from one stakeholder to another.

Together with the proposals forwarded by municipal corporators, which are studied and most of which are included in the plans drawn up by the water board, the latter also plan additional projects to fulfil what are in their view complementary requirements. Even though the corporators are not part of the formal decision-making bodies, as people’s representatives they are involved in urban governance and are in contact with the administration at the municipal level for the resolution of day-to-day problems.

5.19 Role of market agencies in access to water

The water demand in Hyderabad has assumed alarming level. It appears that the water board is unable to meet the ever increasing demand for water. As a result there is several private water service provider providing water by way of packaged water, canned water or tanker water. The water market has proliferated in the city at an alarming level and their rise in the past few years is phenomenal. One can find in the city, there are several water service providers providing potable water in 20 litres cans for a monthly charge. For such a service one has to take a monthly coupon and pay at the end of every month. Such instances has increased at an alarming level taking cue from the water boards inability at times to supply adequate water of sufficient quality to the people.

When the Dial a tanker scheme was launched in September 2004, the board used to make about 300 trips per day. However, it has increased to 5000 trips a day (which includes 2000 free trips to slums and 3000 paid trips) by April 2005. The demand for drinking water in the city has reached an alarming level when the private water tankers are also finding it difficult to meet the demands. Armed with the huge demands from the public, the private tanker owners are flouting all norms and legal procedures to meet the demands and make quick money. For example a new item published in local news paper found that domestic bore wells on the back side of
Kapra lake are being used incessantly to draw groundwater for domestic and commercial use. This is in contrast and blatant violation to the provisions of the Andhra Pradesh Water, Land and Trees Act 2002. The Act gives high priority to protecting drinking water sources and bans sinking of bore wells within 250 meter from existing drinking water sources without permission.

There are areas in the city of Hyderabad such as Nampally, Trimulgherry and Amberpet which are safe havens for the private tanker owners to draw unlimited groundwater and sell it for a higher price. As it is discussed earlier, people who have capacity to pay are buying water from the private sources to meet their needs.

5.20 Role of CSOs / VOs in access to water

Different civil society organisations and voluntary organisations are also playing an important role for people’s access to drinking water. The organisations through petitions, public hearings, campaigns and press meets has in the past put enormous pressure on the HMWS&SB as well as the government in matters of better water supply. In addition, they put pressure on the government not to hike the water tariffs which in turn will deprive the poor people of their access to water.

**Forum for a Better Hyderabad** is a coalition of civil society organizations and individuals in Hyderabad. It was formed under the banner of Hyderabad Bachao (Save Hyderabad), when some of the non-government organizations and citizens, concerned about environmental and developmental issues in and around Hyderabad city, came together in 24th June 2000. The main focus of the Forum is on advocacy of sustainable development, by highlighting the economic and ecological impacts of environmental problems likely to be created by the developmental activities being undertaken without proper appraisal and assessment.

The Federation of Association of Colonies and Apartments (FACA), has opposed the board’s move to consider each flat a unit while levying water charges. FACA had plans to go for mass agitations and signature campaigns while putting pressure on the board against charging flats on deemed supply of 15 Kilo Litre (KL) of water.
The HMWS&SB has of late started public suggestions meet. Interestingly the public suggestions meets are aimed at seeking new approaches to improve revenue collection, from the Resident Welfare Associations as well as the slums. The first public meet was inaugurated by the Minister for Municipal Administer and Urban Development, who appealed for increased public participation and cooperation to the board. It is interesting to note that, the state government as well as the board now felt the need of public participation while there is no provision made in the board’s act for public participation.

Except for a few exceptional individuals deeply involved in the affairs of civil society organisations, ordinary citizens seem to make little use of the platforms available for debating the pros and cons of municipal policies. All they want is good service for their home. They use both individual and collective levers in the form of complaints and demands regarding their immediate surroundings. All these individuals play a pivotal role by forming a local neighbourhood network, which can be divided along communal or political lines. This allows people to voice their needs. Hence, belonging to a community and the existence of a network of relationships with neighbours can be an important factor in determining the quality of service because it leads to the generation of common complaints entered in the section’s register. In the case of low-income households, contiguity of dwellings is likely to give rise to common problems and hence to the emergence of common demands/complaints.

In view of the multiplicity of agencies that handle city services, lack of inter-departmental coordination has been the single biggest difficulty plaguing municipal governance. These conflicts have surfaced between GHMC and HMWS&SB on priorities, funding and maintenance of works in matters of water supply. Reforms in water sector appeared not to have focussed on serving all, especially the poor and have become a privatisation or private sector participation initiatives. Public stand posts are removed denying water to the homeless while no effort is made to plug leakages and to better target subsidies and take them away from the rich. The water board on the other hand has taken a commercial approach to water supply and is more interested in revenue generation than serving the people. For example, there are provisions in the water supply rules of the water board, that a household can be
disconnected with water supply if the amount of the bill, either exceeds the amount paid as deposit or is not paid within the time fixed. Such disconnected water supply can only be reconnected on payment of all the arrears due to the board together with the disconnection charges and re-opening fees.\textsuperscript{46}

There are also provisions when the water board charges fine from the people wastage or misuse of water supplied by the board. For example, a person can be charged Rs 1000 as fine if he is found using water supplied for domestic purpose for non-domestic use. Simultaneously, the misuse or wastage of water supplied by water board is charged with Rs 200 fine. Though such initiatives help conserve potable water from getting wasted however implementation of such rules appeared to have been misplaced.

The present chapter discussed the provisioning of drinking water to the people in Hyderabad. The HMWS&SB in Hyderabad has taken several initiatives in accordance with the government’s policy to provide potable drinking water to all. However, the ever increasing population and the rapid pace of urbanisation in Hyderabad is a challenge to the HMWS&SB’s initiatives. Consequently the HMWS&SB’s ability to provide adequate quality water to the people it appears has been compromised. This has fuelled the private players in the form of packaged water and tanker water supply to proliferate rapidly. On the other hand, the civil society organisations and the voluntary organisations in the city have continuously campaigned putting pressure on the HMWS&SB as well as the government for better water delivery to the people. The discussion also highlighted the absence of people’s representatives not being a part of the HMWS&SB and the very little role played by Hyderabad Municipal Corporation has made water supply in Hyderabad a techno-bureaucratic activity. The next chapter deals with the survey regarding people’s access to drinking water in Hyderabad and their level of satisfaction with the present water supply set up in Hyderabad.

The municipalities are: L.B. Nagar, Malkajgiri, Quthbullapur, Patancheru, Serilingampalli, Kapra, Kukatpally, Ramachandrapuram, Uppal Kalan, Alwal, Rajendranagar, Gaddiannaram.

The metropolitan area of Hyderabad was notified under the Andhra Pradesh Urban (Dev.) Act 1975 and termed as "Development Area". This consists of the Municipal Corporation of Hyderabad (MCH), 10 municipalities and a vast area under Gram Panchayats. In order to plan for this composite area, the Government of Andhra Pradesh constituted on 2nd October 1975, the "Hyderabad Urban Development Authority" which is the planning authority for Hyderabad. HUDA has prepared two master plans and 20 Zonal Development plans for this area of which one master plan and 18 Zonal Development plans are already notified by law and in force. HUDA is entrusted with planning, regulation, control and coordination of urban growth (CDS 2004, www.huda.gov.in).

The notification to this effect was issued by the Government of Andhra Pradesh vide GO Ms no 274 MA 20-4-07.

This expansion does not make any changes to the jurisdiction of Hyderabad Airport Development Authority, Cyberabad Development Authority and Buddha Purnima Project Authority. When the Government constitute a full fledged Hyderabad Metropolitan Development Authority a view will be taken with regard to the above three UDAs which are basically functional units.

There was a clear cut difference between the jurisdiction of Municipal Corporation of Hyderabad (MCH) and the ten municipal towns those are surrounding MCH. These ten municipal towns were independent of MCH in their functioning and even had their separate water supply system. Hyderabad Metropolitan Water Supply & Sewerage Board (HMWS&SB) only supplied bulk water to the municipal towns and levied a certain amount for the same. The municipal towns themselves were responsible for the distribution in their municipal jurisdiction. These ten municipal towns got merged with the MCH and led to the creation of Greater Hyderabad Municipal Corporation (GHMC) in 2007.


M V Naidu, (ed), City of Secunderabad (Deccan), Secunderabad Municipal Corporation, 1955, p.27.


Ibid.

Ibid.

At this point, there was demand from the enroute villages to supply water to them for drinking purposes from the two water supply schemes (Rao 1989: 120).


Interview with First Chairman, Hyderabad Metro Water Supply and Sewerage Board (HMWS&SB) on July 04, 2008.

Interview with Manager, Adikmet, Sub-Division no-III, O& Div no-V, HMWS&SB, Hyderabad, July 23, 2009.


With the creation of GHMC, all the municipalities were merged into the earlier MCH. Participation of private sector in water distribution and operation and maintenance functions in these municipalities is actively being considered by the HMWS&SB.

Supplying water daily to the people of Hyderabad has been a longstanding promise of the government for the past several years.

Op cit, no. 19, p.12.

The Hindu, (a national daily published in Hyderabad), December 17-18, 2008.

The Hindu, December 19, 2008.


The Hindu, “Development to include urban poor, says Minister”, August 20, 2004.


Ibid, p. 43.

Ibid, p. 46


The project to bring Godavari water to the city for drinking purpose would be implemented in three phases. The phase I with a cost of Rs 4000 crores is expected to be completed by 2011 bringing 120 MGD water to the city.


The Hindu, August 28, 2008.

Interview with First Chairman, Hyderabad Metro Water Supply and Sewerage Board (HMWS&SB) on July 04, 2008.


Op cit no. 17.

The Hindu, "Monthly water billing from today”, August 1, 2006.

Op cit, No. 26, p.22.


The Hindu, April 16, 2005.

The Hindu, July 18, 2008.


The Hindu, July 18, 2008.

The Hindu, August 14, 2008.


Op cit, No. 26, p.22.

Water Supply Rules, the Andhra Pradesh Gazette, (No.36) Hyderabad, Thursday, October 25, 1990.