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Between Citizens and Institutions: The dynamics of the integration of Water Supply and Sanitation Services in Hyderabad

Agnès HUCHON
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AP On-line Services	*Andhra Pradesh On-line Services*
APUG	*Actors, Policies and Urban Governance*
BJP	*Bharatiya Janata Party*
CDA	*Cyberabad Development Authority*
CDP	*Comprehensive Development Plan*
FBH	*Forum for a Better Hyderabad*
HADA	*Hyderabad Airport Development Authority*
HAL	*Hindustan Aeronautics Limited*
HMWSSB	*Hyderabad Metro Water Supply and Sewerage Board*
HSUAP	*Hyderabad Slum Upgradation Action Plan*
HUDA	*Hyderabad Urban Development Authority*
HUDCO	*Housing and Urban Development Corporation*
IFDH	*International Foundation for Human Development*
JICA	*Japan International Cooperation Agency*
MCC	*Metro Customer Care*
MCH	*Municipal Corporation of Hyderabad*
MIM	*Majlis e Ittehadul Muslimeen*
MLA	*Member of Legislative Assembly*
MLD	*Million Litres per Day*
MP	*Member of Parliament*
NGO	*Non-Governmental Organization*
NSDP	*National Slum Development Programme*
QQSUDA	*Quli Qutb Shah Urban Development Authority*
RWA	*Residents' Welfare Association*
STP	*Sanitation Treatment Plant*
SWC	*Single Window Cell*
TDP	*Telugu Desam Party*
UCD	*Urban Community Development*
VIP	*Very Important Person*

PREFACE

By Loraine Kennedy[1] and Marie-Hélène Zérah[2]

This timely study by Agnès Huchon and Guillaume Tricot was conducted within the framework of a larger research programme on changing modalities of supply and demand of urban services in India's metropolitan cities.[3] Indeed, India's large cities have been undergoing rapid change as a result of economic reforms and their multifarious impacts. At the same time, profound political and social upheavals have been reshaping institutions and decision-making practices at all levels, with intensification from the early 1990s. Moreover, the 74th constitutional amendment, ratified in 1993, provided a framework for decentralization to urban local bodies and gave formal expression to a more general trend in favour of devolution of powers within the Indian polity. The research questions at the heart of this study were framed in this broad context. It is useful to briefly elaborate the conceptual framework of the overarching research programme, as well as its main hypotheses in order to better situate the findings from this case study.

The research programme, "Urban Actors, Policies and Governance" focused on four metropolitan cities in India (Delhi, Hyderabad, Kolkata and Mumbai). Begun in 2004 and conducted by Indian and European researchers, it started with the question "By whom

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[3] The full title of this programme is "Urban actors, policies and governance. The decision-making processes governing the demand and supply of collective goods and services in four Indian cities", under the scientific direction of Stéphanie Tawa Lama-Rewal and Joël Ruet. The programme was co-financed by several French public institutions including the CNRS, the French Ministry of Research, and the Centre de Sciences Humaines, New Delhi. For more information, see the research programmes on the CSH website: http://www.csh-delhi.com

and for whom are India's large cities governed?" The foremost objective was to evaluate what changes, if any, had occurred in the decision-making processes related to both supply and demand of urban services such as drinking water, sanitation, primary health and education, and PDS. The aim was to ascertain whether effective decentralization was taking place with regard to both city politics and urban management. If so, who were the new actors? Were locally elected officials empowered? Had inter-governmental relationships been redefined? How were interactions between state and civil society evolving?

Three main sets of questions were at the heart of the programme.[4] Firstly, how has urban governance been redefined? How are decision-making powers effectively distributed among different stakeholders: civil society organizations, private firms, service agencies, local administration, elected councillors, state government? What are the modalities of coordination among actors, and within the main organizations? What are the formal and informal negotiating mechanisms?

Secondly, what has been the impact of the new patterns of governance on the access of different social groups to collective goods and services? In other words, how can we characterize the social costs and benefits of local changes? Have new forms of participation in the management of urban infrastructure and delivery systems resulted in a more equitable service? How do these new arrangements function on the ground? It is necessary in particular to examine the spatial dimension of urban service delivery, including the deployment of physical infrastructure networks as well as social infrastructure, in order to analyze the relative integration of a city and to determine the main factors of segregation.

Lastly, how can the demand for urban services be characterized? What are the respective priorities of different social groups and

[4] The results will be presented in a forthcoming volume. The abstracts presented at the final seminar of this programme held in New Delhi in January, 2007, are available on the programme's website: http://www.csh-delhi.com/UAPG/index.htm

how effective are these groups in making their demands heard? Examining this set of questions involves unbundling the category of "civil society" to identify what types of organizations and individuals participate in collective decision-making processes, and what the nature of their action is. How does civil society mobilize around urban issues in the different cities? Through what channels does it express itself? In trying to understand the expectations of different sets of actors, it is necessary in some cases to analyze the ideological underpinnings of new policies that have emerged as a result of economic reforms and political decentralization, i.e., how are problems diagnosed? How are norms evolving with regard to the state's role in service delivery?

The authors of this CSH Occasional Paper address many of these issues through their detailed study of water supply and sanitation services in Hyderabad. In the first part, they focus on the institutional changes that have taken place with regard to the main service providers, namely, the Hyderabad Metro Water Supply and Sewerage Board (HMWSSB) and the Municipal Corporation of Hyderabad (MCH), and provide a critical analysis of both recent restructuring and current policies ostensibly aimed at providing uniform service throughout the metropolitan region. In order to evaluate how policies are played out on the ground and to test for spatial inequalities with regard to infrastructure and service levels, two distinct areas of Hyderabad, Sultan Shahi and Somajiguda, were selected for in-depth field surveys. These areas, which correspond to two electoral wards, manifest contrasting profiles, in terms of the built environment, the extent and age of water and drainage infrastructure, and the sociology of the population. Their findings, discussed in Part II, dispel a number of conventional ideas about unequal service levels between the old and new parts of the city and between different income groups, and offer a much more nuanced explanation for differential access using both social and spatial variables. The last part of this Occasional Paper addresses the demand side of the water supply and sanitation equation, and analyzes the ways in which different categories of users attempt to improve access or service levels. On the basis of detailed field

surveys, the authors explore the differing expectations of users, the various means used to channel grievances, e.g., residential associations, political leaders, local intermediaries, which reveal different modes of democratic interaction between the public and the authorities.

By engaging with a number of core issues, this study makes a concrete contribution to the debates surrounding both urban governance and decentralization in India's metropolitan cities. On one hand, it enhances our understanding of recent developments in Hyderabad, a city on the forefront of many urban reforms in recent years, including a number of experiments with privatization and co-production of urban services. On the other hand, its analytical method, which combines a macro study of institutional changes on the supply side with detailed field surveys to analyze both differential social and spatial access to service and household practices for improving service levels, offers numerous insights that are significant for studies of other metropolitan cities.

Agnès HUCHON, Guillaume TRICOT

INTRODUCTION

The purpose of this study is to review the changes that have taken place recently in water supply and sanitation services and examine the role of various stakeholders involved in urban governance in this sector. The UN Habitat Agency defines urban governance as follows:

"Urban governance is the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action can be taken. It includes formal institutions as well as informal arrangements and the social capital of citizens."[1]

The steady pace of urban growth in Hyderabad and its periphery (see Table 1) calls for a thorough reorganization of community services, starting with public utilities. The Hyderabad Metro Water Supply and Sewerage Board (HMWSSB), an organization under the control of the Andhra Pradesh Government, is in charge of water supply and sanitation while the Municipal Corporation of Hyderabad[2] (MCH) looks after the drainage of storm water and public toilets. What are the changes taking place today in the general policies in this sector? Who is responsible for initiating and implementing them? What is their impact on the general public? These are the main questions we address in this study.

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[1] UN Habitat.

[2] Municipal Corporation of Hyderabad is the core municipality surrounded by 12 peripheral municipalities. The whole entity constitutes the Hyderabad Urban Agglomeration.

Table 1: Urban growth in Hyderabad

	Area (Sq Km)	Population (million inhabitants)			Growth between 1991 & 2001
		1981	1991	2001	
MCH	172	2.10	3.05	3.63	**19 %**
Surrounding municipalities	419	0.38	0.99	1.7	**71.7 %**

Source: CDP Hyderabad, 2006

Policy decisions are supposed to be taken by HMWSSB's Board of Directors[3]. The Chief Minister of Andhra Pradesh is the Chairman of this administrative body whose official aim is to make potable water available to the city's population through private connections in response to social demand. Administrative reforms within the institution are supposed to have given more decision-making powers to officials in direct contact with users.

This general policy is the result of tension between two political imperatives. On the one hand, it seems likely that there is a connection between the liberal reforms implicit in the working of HMWSSB and the ideological leanings of the Andhra Pradesh Government. However, it is not quite clear to what extent the present Government headed by the Congress party is following the liberal agenda set by Chandrababu Naidu's TDP Government. By all appearances, plans to make Hyderabad a world-class city are still alive. On the other hand, the Government would like to reduce social inequalities by implementing special programmes for slum-improvement and by paying heed to citizens' demands. How does the implementation of the 74th amendment affect water-related matters? Is it not inconsistent with the centralizing tendencies of recent reforms?

[3] See Annex 1: HMWSSB's Organizational Structure.

To answer these questions, it is necessary to define the exact role of municipal corporators[4] in these areas, as one of the amendment's key aims is to empower them.[5] Are they directly involved in the formulation of major policies that influence accessibility to water? They seem to serve essentially as "buffers" or "go-betweens" at the local level for implementing the municipal policy of providing a uniform service to the entire population. They also help paper over the existing cracks in the service. To what extent do the public complaints that they refer to the authorities and the projects they propose affect the implementation of a more extensive scheme?

Under what terms and conditions does a proposal made by more or less centralized institutions satisfy the demands or viewpoints of individuals in the field? What are the mechanisms created upstream and downstream?

In other words, it is relevant to know how individuals and groups influence both strategic and operational policies formulated by the service's key stakeholders (HMWSSB, MCH and also elected corporators). Except for a few exceptional individuals deeply involved in the affairs of "civil society", ordinary citizens seem to make little use of the platforms available for debating the pros and cons of municipal policies. According to a survey conducted in the course of this study, many households do not have any fixed opinion about city-level debates or about what they can expect from the Government or HMWSSB. 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. Are these different initiatives sufficient to bring about an improvement in the service? Do they have any influence – even indirect – on its operational aspects or on strategic policies? Are they even taken into consideration?

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[4] MCH is divided into one hundred electoral constituencies called "wards". Each of these constituencies elects a representative known as the "ward corporator" or "ward councillor".

[5] Kennedy Loraine, 2005: page 1.

We are interested in understanding which affinities prevail when stakeholders decide on a mode of action or define their priorities in order to get mobilized. Sometimes territorial and community-based rationales coincide while at other times they are in conflict. In what way do they determine the type of stakeholders involved? The aims and activities of residents' associations will be studied carefully, but the interactions between the public and local leaders should not be ignored when analyzing the sharing of decision-making powers between various entities.

What is the impact of the present system of governance on the access of different social groups to water-related services in Hyderabad? It seems particularly important in the case of an urban service network to analyze the coordination between various actors at the local level or within the framework of a municipal project. 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 guide it in the case of people living outside these areas receiving homogenous supply. What is the importance of access to water and sanitation in a more systemic analysis cutting across various aspects of the issue of urban poverty? According to Sylvy Jaglin, urban integration includes spatial equality (functional and territorial diversity in addition to provision of equal access to urban resources), social equality (redistribution and a guaranteed minimum living wage for all) and inclusion in political life (desegregation, participation and democratization).[6]

To what extent can differential treatment in the access to water and sanitation resulting from a dialogue between various protagonists serve as the basis for socio-urban integration?

This study compares two municipal wards in Hyderabad: Somajiguda and Sultan Shahi. It was considered appropriate to choose these two wards because they are urbanized areas with very different traits: the urban fabric is mostly of recent origin in Somajiguda,

[6] Jaglin Sylvy, 2005.

which is characterized by dynamic commercial activity, while Sultan Shahi is a part of the Old City consisting mostly of residential areas. The stakeholders involved in the two areas are quite different from one another. In order to discern the respective features of the two areas more clearly and to study the differences between and within them, we surveyed households[7], interviewed some of the actors and consulted secondary sources[8].

[7] See Annex 6: Aims and Methodology of Survey, and Annex 7: Survey.

[8] See Bibliography.

I: POLITICAL WILL TO STANDARDIZE / MODERNIZE THE SERVICE

HMWSSB has been the subject of numerous administrative reforms and schemes during the last few years. These were intended to rationalize the service through a more efficient division of work, to provide greater satisfaction to consumers and make the most of the technological tools available for better management and greater transparency. At the same time, HMWSSB seems to be in favour of providing a uniform service within the city. Even though there are constraints on the implementation of all these policies, HMWSSB has shown itself to be very efficient and its limitations often appear to be linked to factors beyond its control or to a more structural malfunctioning of the system.

1. Medium and Long-term Objectives: Rationalizing the Service

a. Infrastructural Requirements

One of the public utility's main objectives is to close the gap between supply and demand. To assess increase in population and the demand for water, HMWSSB makes use of specialized research consultants[9] due to the absence of competent persons within the organization. These studies serve as a basis for planning major infrastructural projects to fulfil public demand and enable the utility to pride itself on having estimates of the growing demand for water upto 2021.

The latest project, which involves transporting water over a long distance from the Krishna River, has given rise to controversy and is dependent on multilateral funding (see Box 1). HMWSSB's accounts show a substantial increase in electricity costs and debt-

[9] According to HMWSSB's Finance Manager, after inviting tenders this study was entrusted to MacDonald, an English consultancy firm; interview conducted on September 4, 2006.

servicing. While HMWSSB had a budget surplus between 2002 and 2005 thanks to a state-approved increase in tariffs, it appears that the financial year 2005-2006 marked the beginning of a downward trend with a deficit of approximately Rs.493 million[10].

Confronted with this report, HMWSSB put up a revised proposal in 2006 for raising tariffs to get over the financial crisis. During the annual meeting, the Chief Minister, Y.S. Rajasekhara Reddy, refused to agree to the demand, saying there would not be a rise in tariffs nor would the Board be allowed to run up more debts.[11] The Chief Minister, who is also Chairman of HMWSSB, agreed to provide a subsidy of Rs.500 million to finance its operations. This gesture was apparently made possible by sharing a part of the development charges[12] levied by the Hyderabad Urban Development Authority (HUDA), the Cyberabad Development Authority (CDA) and the Hyderabad Airport Development Authority (HADA).

During the last few years, HMWSSB has made efforts to increase the production of potable water even as it plans to ensure uniform supply to the entire city. However, in view of the deficit incurred in 2005-2006, there is lack of political will to cover costs and this could make the policy of executing big projects unfeasible, moreover with impending requirements in terms of sanitation.

Although they are considered long-term projects, tangible consequences can nonetheless already be observed. This is particularly true of the Old City where the first phase of the Krishna project has made it possible to increase supply of water to

[10] See Annex 3: Changes in HMWSSB's budget.

[11] The Hindu, *YSR rejects Water Board's proposal*, August 9, 2006.

[12] Development or external betterment charges are levied on all new construction in special development zones like CDA and the airport zone (HADA). These one-time charges are supposed to finance infrastructure in the newly developed areas. In the area under CDA's jurisdiction, the rates were reduced by half and it was decided to rename them 'value addition charges'.

households[13] and has brought about significant improvement in the service.

Box 1: Financing of infrastructure by HMWSSB

During the last few years, financing and mobilizing funds from various backers and agencies have been one of the major challenges facing HMWSSB. It may be observed that the quest for funds was accentuated by the pace of investments required for increasing production. In this context, it is possible to distinguish several phases:

- Begun in the early 1990s and completed in 1998, HMWSSB's first big project forced it to approach the World Bank for a loan of Rs.3.5 billion. The project included the construction of the Singur Dam for supplying an additional 135 MLD to the city, the strengthening of institutional competencies and the improvement of the water distribution system as well as the basic structure of the sanitation system.*
- In 2000, following the inclusion of several neighbouring municipalities in HMWSSB's jurisdiction and the continuing growth of MCH population, it announced a further increase in its production thanks to water obtained from the Krishna Project. The work started in 2002 and was carried out in 3 phases. It was expected to supply an additional 1,022 MLD and required a massive budget of Rs.26 billion. During the first phase completed in 2004, a budget of Rs.10 billion was mobilized through several banking institutions: the Housing and Urban Development Corporation (HUDCO) gave a loan of Rs.3.5 billion, a further Rs.3.5 billion was given as subsidy by the Andhra Pradesh Government and HMWSSB issued bonds to cover the remaining amount of Rs.3 billion.**
- In 2005, a loan of Rs.5.13 billion was obtained to ensure the continuation of the Krishna Project and finance its second phase. After rescheduling the debt repayment, HMWSSB's monthly instalment was calculated at Rs.29.4 million. ***

[13] Interview with the local corporator, September 8, 2006. Information consistent with that provided by the Manager of the Sultan Shahi Section, August 28, 2006.

In addition to the need to invest in equipment for the production and distribution of drinking water, the growing need to recycle waste water forced HMWSSB to look for new funding agencies to set up Sanitation Treatment Plants (STP) at a later date. The Japan International Cooperation Agency (JICA) offered its help to restore the Hussain Sagar Lake, situated in the centre of the city of Hyderabad, especially by increasing the capacity of the Khairatabad STP (from 20 to 69 MLD) by setting up a project costing Rs.3.66 billion (including a loan of Rs.3 billion).****

** World Bank website, consulted on September 7, 2006 and Johnson Elizabeth, 2004.*
** The Hindu, *Krishna Water for Twin Cities*, April 14, 2004
*** CDP Hyderabad, 2006
**** *Japan Bank for International Cooperation* website, 2005

b. Outsourcing of Operations at the Consumers' End

The fact that HMWSSB is an autonomous body means that officially it can recover its costs (both operations and maintenance costs and investments) through payments made by consumers in order to avoid political interference and generate revenue for increasing production of water.[14] However, despite the avowed objectives declared in the Hyderabad City Development Plan,[15] it has not yet fully recovered its costs and even the amount recovered does not cover the expenditure incurred by the Board.

The intention of reducing the amount of outstanding unpaid bills is constantly reiterated in official speeches and is the recurring theme of the regular meetings between managers at all levels called "revenue meetings". In the spring of 2006, this policy was put into action by asking the manager of each section to install 120 meters every month. This directive seems to have been followed in some

[14] Davis Jennifer, 2004.

[15] "There is an urgent need to lower the non-revenue to 30% by the year 2011, 20% by the year 2016 and 15% by the year 2021" - CDP, chapter 4, 2006.

zones.[16] The introduction of meters induced a change in attitudes as people 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. There are frequent advertisements in the media about the checking of illegal water connections.

However, disconnection of illegal connections is still quite lax. After water consumption reaches a certain limit (to be decided by the section manager) or after assessing the use of extraction pumps, the consumer receives a warning; s/he is then given the option to pay his/her pending bills in instalments failing which supply is supposed to be disconnected. But actual disconnection is not very common.

Apart from introducing water meters in a systematic manner, HMWSSB 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. Four agencies[17] 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).[18] The main clause in the contract is the monthly distribution of bills. At present, consumers in each section are divided into two groups, each of which receives bills every alternate month from the private agency and the public utility. This change of responsibility every month ensures that the two entities keep a check on each other in time and space and HMWSSB receives regular feedback on their performance.[19]

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[16] Interview with the Manager of Kukatpally.

[17] AP Online Services, Excel Computers, Sri Rami Reddy & Co and Bhavani, according to The Hindu, *Monthly water billing from today*, August 1, 2006.

[18] Interview with HMWSSB's Finance Manager, September 4, 2006.

[19] Interview with HMWSSB's Finance Manager, September 4, 2006.

Following the example of the E-Seva[20] initiative, there is a proposal to allow consumers to pay their bills through the Internet. This measure was introduced on an experimental basis in Division No.7 in the city's northeast with the help of AP Online Services. If it is extended to the rest of the city, the job will be entrusted to another private agency.[21]

It is thus 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 benchmarking. 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 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.[22]

It may be noted in this regard that the involvement of the private sector in billing operations reveals certain similarities with the outsourcing of the garbage-collection service by the MCH.

c. Integration of Municipal Services into a Single Entity for the Whole City

All these changes should be considered from a long-term perspective at the level of the entire city because the centralized network requires largescale joint investments and also because the service should be quickly integrated for the whole city. Already in 1999, there was mention of the possibility of joining all the areas into one single entity.[23] In April 2005, a new project for integrating the areas under separate municipalities led to the birth of "Greater

[20] E-Seva is a recent initiative. More than 30 agencies have been established in Hyderabad to enable people to pay bills for public utilities, municipal taxes, etc. at the same counter.

[21] Interview with HMWSSB's Finance Manager, September 4, 2006.

[22] World Bank, 2004.

[23] The Hindu, *Not a New Plan*, July 3, 2005.

Hyderabad".[24] The main argument advanced by its promoters is the need for optimum coordination of the city's planning and development. There is, however, a great deal of local opposition to this proposal. In the first place, elected bodies and local authorities are not ready to give up their posts, prerogatives and decision-making powers. Further, civil society groups, such as the "Forum for a Better Hyderabad"[25], are mostly opposed to this project and see it as violating the spirit of the 74th amendment and of decentralization laws. The Forum also condemns the ambition, fired by the creation of Greater Hyderabad, to turn Hyderabad into a 'Mega City': its size would certainly attract more funds but it could also lead to greater and hitherto unknown problems and crises.[26]

Within the framework of this new entity, HMWSSB would assume new dimensions. Today, there is a noticeable difference in the infrastructure in Hyderabad city and its outlying areas which will have to be eliminated. HMWSSB would have to take over the water supply and sanitation services of the surrounding municipalities which are presently not as well equipped (and sometimes supplied with water in bulk). This change of scale would involve heavy investment, particularly to replace septic tanks by a network of sewers. Greater Hyderabad would firmly establish the policy of having a uniform water supply and sanitation service in the entire city and bringing all the consumers under the same public utility.

There is also the question of strengthening the capacities of the surrounding municipalities. Indeed, it should be pointed out that the institutions in Hyderabad are better managed than institutions in the outlying areas, under the purview of the municipalities. Recent urban growth in these areas has made it necessary to introduce

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[24] The State Government issued G.O. 704 to this effect on July 20, 2005.

[25] *Representation to the Hon'ble Chief Minister on Greater Hyderabad*, August 1, 2005, Vedakumar for FBH.

[26] Under the Government's proposal, 12 municipalities will be merged with Hyderabad, increasing the area from 172 sq.km to 725 sq.km.

more efficient organizational tools and mechanisms that the Government often does not have the time to develop.

d. General Trends in Andhra Pradesh

All these reforms and measures adopted by HMWSSB are by nature political in the sense that they have been instigated by the Andhra Pradesh Government.

Officially, the Board is an autonomous body. In this respect, its management staff admits that the utility has a certain amount of freedom to determine its own strategy. However, all its assets belong to the Government and the Chief Minister is the Chairman of its Board of Directors which deals with all sensitive matters. Further, only a small portion of the staff has joined HMWSSB while the majority is still under the Public Health Engineering Department which was earlier in charge of water supply.[27] How does this proximity between HMWSSB and the political world explain the latent tendencies of public utilities?

At present, public utilities are undergoing reforms in stages including the reorganization of their personnel. Government Order No. 5 issued in August 2006 by the Chief Minister – a much debated order which was finally withdrawn – anticipated approximately 65,000 layoffs in two of the biggest public sector enterprises, Singareni Collieries Company Ltd. (a mining company) and Andhra Pradesh State Road Transport Corporation. According to some of the Chief Minister's political opponents,[28] this process of "downsizing" current staff would amount to acquiescing to the terms and conditions laid down by multilateral backers when sanctioning loans.

While there is no question of HMWSSB laying off a part of its staff, it is interesting to note the growing involvement of the private sector (works and billing) in the Board's activities, this being one of

[27] Davis Jennifer, 2004.

[28] The Hindu, *AP public enterprise reform order scrapped*, August 15, 2006.

the key points of the Congress party's administrative policy. HMWSSB's Finance Manager justifies this step as being necessitated by the lack of qualified staff within the organization.[29] That is why all the studies and projects are outsourced.

A similar trend can be seen in the MCH, especially in the garbage collection sector. Jobs related to storm water (de-silting, maintenance, etc.) earlier performed by divisions are now outsourced because, according to municipal engineers, employment of private agencies and the ban on recruitment of new staff are a dominant trend. 700 private contractors are registered with MCH.[30] The Congress party in power seems to have partially embraced the TDP's ideas of modernization.

2. Short-term Objectives: Reinventing the Relationship with Consumers

a. Customer Satisfaction

According to a case study of the changes in the management of HMWSSB conducted in 1998, the then General Manager said, "We are trying to inculcate a new approach based on firm management." He mentioned three main points: the problems of public utilities cannot be solved exclusively by technical solutions, water and sanitation should be managed on commercial lines and the consumer should be the public utility's main concern.[31] The strategy then followed by HMWSSB to improve the service involved low-cost initiatives. A series of sporadic reforms based on this philosophy was undertaken to satisfy the clientele and change the mindset of HMWSSB's management (see Box 2). Even though the Metro Customer Care and Single Window Cell schemes were a part of the effort to draw closer to clients, they effectively amounted – counter-intuitively – to the re-centralization of client-related

[29] Interview with HMWSSB's Finance Manager, September 4, 2006.

[30] Interview with the Executive Engineer, MCH, Division III, August 30, 2006.

[31] ASCI, 1998.

services[32] with the help of new technologies. Before these departments were set up in the head office in Khairatabad, applications for new connections were deposited in the zonal sections and it was the same for complaints. How effective were these reforms?

Concerning Metro Customer Care (MCC), it seems quite clear that the introduction of new information and communications technologies made it possible on the whole to make the Board more responsive to its clients' grievances even though there was a significant increase in the number of complaints. Further, the managers of 120 sections, following the introduction of an "efficiency rating" system, are subject to the assessment of their efficiency in responding to complaints within the period stipulated in the Citizens' Charter[33]. But when Hyderabad as a whole is taken, this parameter is not very significant as all the zones do not have the same financial means and the same number of complaints. However, the "efficiency rating" concept is likely to be an incentive for neighbouring zones. Although the managers' ability to fulfil the Citizens Charter is not being properly assessed as yet, the Finance Manager claims that the definition of assessment criteria will be undertaken later as a necessary step for the future optimization of the internal administration.

Further, the introduction of information technology has made it possible to regulate problem-solution and make the Board's functioning more transparent by reducing minor corruption. The use of the telephone as a means of communication between consumers and the service-provider should lead to a more uniform service for all because complaints will no longer be identified personally. However, consumers are not sufficiently equipped for the utilization of this service because persons who do not have telephones are likely to be left out (even though it is a toll-free number). The survey has revealed that a significant

[32] Davis Jennifer, 2004.

[33] See Annex 2.

proportion of consumers has not yet got used to the idea of approaching MCC with complaints and many still prefer to approach HMWSSB staff to sort out their problems by going directly to the zonal office.

Box 2: Reforms to improve customer relations

Various reforms were undertaken in the late 1990s with regard to HMWSSB's services, which led to deep-seated change. We provide below a brief description of four major changes:

Metro Customer Care (MCC)
MCC was launched in February 1999 as a new department (open round the clock) in the HMWSSB 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.

Single Window Cell (SWC)
SWC was set up in April 1999 as a new department based in the HMWSSB head office to receive, process and coordinate all applications for new water and sewage connections.

Metro Water Board's Citizens' Charter (see Annex 2)
The third reform intended for consumers, undertaken by the Board in the late 1990s, was the proclamation (by the Chief Minister) of a Citizens' Charter in January 2000 laying down computable norms for implementing a wide spectrum of services.

Lok Adalat
Set up in 2000, the Lok Adalat holds 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.

Box prepared on the basis of:
- Caseley, 2003 (for the first three points)
- The Hindu, HMWSSB sets up Lok Adalat, November 10, 2000

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.

Another innovation intended to satisfy customers' expectations is based on the horizontal integration of services provided by different public utilities for payment of bills. The concept of the "E-Seva Centre", with more than thirty counters in the twin cities of Hyderabad and Secunderabad, seems to be a success and has attracted visits from elected representatives from outside Andhra Pradesh eager to see how it works.[34] The E-Seva Centre, due to economies of scope and its practical advantages, has become an emblem of urban good governance.

b. Improvement of Public Image

In keeping with its aim of customer satisfaction, HMWSSB has been working on its public image to project itself as being concerned with its consumers and their needs. One of the strategies employed by HMWSSB to enter into or maintain contact with consumers is use of the media to inform people about changes in service (interruptions, repairs, etc.), projects, reforms and innovations in its set-up, as also to raise public awareness. Water-related problems and HMWSSB's policies figure daily in the news. Appeals to save water or stories about raids for detecting illegal connections, for instance, are likely to convey the relevant message to readers.

[34] Visit of the Laotian Prime Minister on June 18, 2003, website of E-Seva Centre.

Likewise, MCC employees and the Public Relations Officer take heed of newspaper articles and attend to problems that have been made public as soon as possible.[35]

In concrete terms, HMWSSB holds a weekly press conference where the General Manager informs the press about the progress of various reforms introduced by the Board. The latter also takes part in the television show, *Face to Face,* during which representatives of major urban utilities meet consumers face to face.[36]

Box 3: An example of the publicity received by HMWSSB for dealing with the main concerns of the city's population

HYDERABAD: The Hyderabad Metro Water Supply and Sewerage Board (HMWSSB) has constituted emergency response teams all over the city to attend to sewer overflows, water supply leakages and other problems in the wake of heavy rain.
People may contact the teams of their respective areas over phone or by dialling the round-the-clock central emergency number 155313.
Equipment like first aid kit, ladder ropes, buckets, torches, de-watering pump sets, masks, raincoats, gum boots, crowbars, keys for opening manholes and vehicles have been kept ready.
Each emergency team will be headed by the Deputy General Manager (Engineering) and assisted by other support staff from the Board's engineering wing.

Extract from The Hindu, HMWSSB forms emergency teams, July 28, 2006

3. At what Level should the Service be Standardized?

Policies underlying major projects and customer satisfaction are part of a project that aims to provide the entire city access to high quality water. What are the steps taken and conditions created to

[35] Interview with S. Samsa, MCC official, September 4, 2006.

[36] Davis Jennifer, 2004.

make this service available to all and at what level do the authorities want to make service levels uniform? The present "norm" is to supply water for two hours every two days. Although its inhabitants do not seem to complain about this, Hyderabad does not compare well with other Indian cities (See Box 4). It is interesting to question its situation in terms of water rates because a look at pricing trends shows that they have been raised twice since 2002[37], bringing pressure to bear on both small and large consumers. The Board's senior officials having recently asked for another increase in rates, the question of finding funds for operating this model is very topical at the moment.

a. Connecting Individual Lines to the Network

"Socially relevant" policies

The reason for charging white ration card-holders[38] a preferential rate for individual lines connected to the potable water supply network is mainly to encourage people of lower income groups to apply for individual connections. As a matter of fact, compelled by the Andhra Pradesh Government, HMWSSB charges white ration card-holders applying for water connections only Rs.1,200 (about 21.4€) payable in twelve instalments instead of the normal rate of Rs.2,400 (42.8€). The difference is borne by the Government.

This policy implemented in August 2004[39] appears to be a success because 26,000 households have received water connections under the scheme.[40] However, do all white ration card-holders really belong to the poorest sections? According to Donatienne Ruby, it is extremely difficult for really underprivileged people to obtain these ration cards because it means spending a lot of time

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[37] See Annex 3 : Changes in HMWSSB's budget and rates.

[38] Households entitled to a white ration card are those below the poverty line (BPL), that is, households with an annual income of less than Rs. 24,000. This card enables them to obtain essential commodities at subsidized rates.

[39] The Hindu, *Development to include urban poor, says Minister*, August 20, 2004.

[40] Interview with HMWSSB's Finance Manager, September 4, 2006.

moving about the city, knowing how to fill out the form and understanding the various procedures involved.[41] For example, in the sample survey carried out during the course of the present study, 50% of households belonging to the first quartile of declared income had white ration cards, 40% in the second quartile, 20% in the third and none in the highest quartile. Further, it is not difficult to imagine that those who are termed migrants or temporary residents and those living in huts do not have these cards which can also serve as identity cards.

Moreover, is the target population capable of paying the preferential tariff? The poverty line has been set by MCH at Rs.24,000 per annum, or Rs.2,000 per month. In this situation, Rs.1,200 can be a substantial investment followed by payment of fixed monthly charges for water consumption. As for the price of water, concessional rates are only given on the basis of level of consumption[42] and do not depend on whether the user holds a white ration card. Therefore, the rate adjustments do not necessarily favour those who hold white ration cards.[43] Although HMWSSB's Finance Manager claims that the Board wishes to provide water through individual connections to the entire population so as to bring down the use of public taps and water-tankers, he admits that even in the long run it does not seem likely that it will be possible to do away with public taps for the poorest sections of the city's population. This is an admission that all the city's inhabitants do not have the means to get individual water connections.

Apart from providing access to water, there is also a technical dimension. In fact, connections can be given only to households in areas where this is physically possible. Approval of an application depends on two factors: not only must there be supply pipes of the right size, but the area must be recognized by the authority as being entitled to urban infrastructure.

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[41] Ruby Donatienne, 2004, page 78.

[42] See tariff schedule in Annex 3.

[43] Households without meters are charged a flat rate of Rs.100 irrespective of actual consumption.

A priori, the definition of a "socially relevant" policy today would be to envisage free supply of 5 cubic metres of water per month per household. The Finance Manager claims that taking this decision does not lie within the powers of the Board of Directors and it is for the political leadership to decide on such a policy. If the Government takes a clear position in this matter, HMWSSB will put it into effect. He says, "The Board cannot be totally commercial. But beyond (its own) means, (it has to) approach the Government to get access to more ample financial resources."

Lastly, a system of cross-subsidies between domestic and industrial consumers suggests the will to provide widespread access to water through individual connections. However, there is no evidence that the difference between the real cost per cubic metre of water for industrial consumption and its purchasing price will compensate for the cost of domestic connections. Moreover, as mentioned earlier, cross-subsidies between industrial and domestic connections are not specifically intended to benefit poor households.

The 24/7 Project

This project aims to supply water round-the-clock (24/7) to the entire city. It is necessary to point out that, compared to other Indian cities, the situation in Hyderabad is not very good as regards duration of water supply (see Box 4). If the Board does not quickly take steps to ensure continuous or at least daily water supply to its customers, it will face some real problems.

There have been regular reports in the newspapers about this project. However, HMWSSB officials feel that it will not be possible to implement it for a few more years. In fact, investments could be as high as Rs.25 billion[44] for laying new supply pipes, construction of reservoirs upstream, installing meters in homes as well as public taps. Three pilot projects are already in operation and should give an idea of the operational costs involved, peak consumption and the advantages of the system. However, the

[44] Times of India, *24x7, just a decade away*, August 31, 2006.

localities selected for this experiment have some peculiar characteristics. One project is taking place in Kukatpally[45] municipality (a northwest peripheral municipality of MCH bringing together nearly 400,000 inhabitants in 2006). The Kukatpally area in question consists mainly of middle-class households willing to pay for the service and a new and independent distribution network. Indeed, given the present state of the network in the metro area, continuous supply of water poses the risk of increased leakage from pipes. Would this leakage be compensated by a fall in consumption in an urban setting where water is said to be a rare commodity? Continuous supply means installing meters in all homes. Will it be possible to do this, for all sections of the population? Is this policy, which aims for universal coverage, not likely to exclude households that are unable to pay for individual connections? Preparations have already been made for the introduction of continuous water supply by removing public drinking water taps (at least in Kukatpally).[46] Even though some taps will remain, they are not intended to make the system more effective but to compensate for the inability of the centralized system to provide connections to all households.

Where can the households that are not covered by the city's supply system obtain water today? It is possible to tap ground water, but it is not fit for consumption and very few cases of tapping ground water were detected in the areas under study. Our studies indicate that this practice is much more common in the outlying areas. Some hand-pumps are also used when the water supply fails.

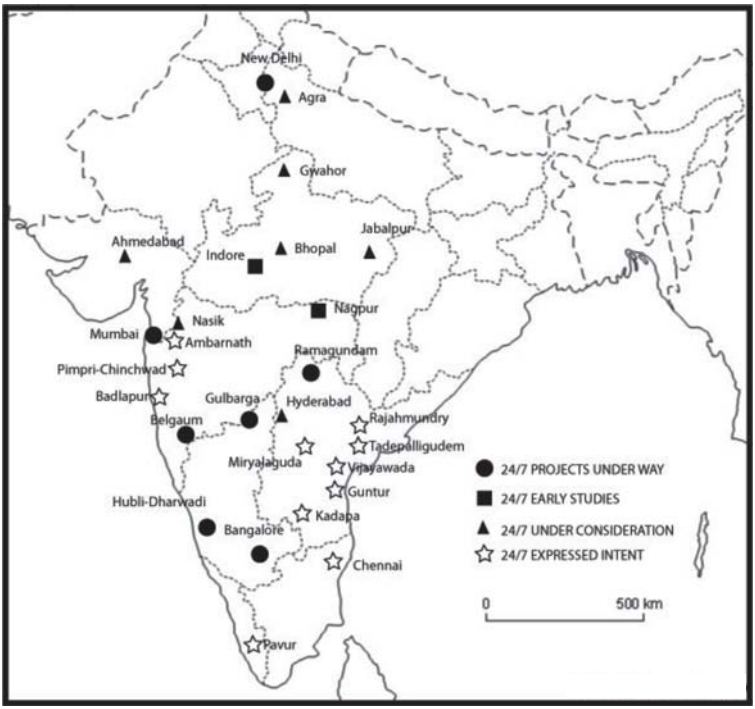
[45] Just before this study, in the framework of a European Union-sponsored programme (INUWASAPI), the authors carried out a three-month field study of water and sanitation services in Kukatpally municipality, taken to be broadly representative of conditions in the periphery of Hyderabad.

[46] Interview with the General Manager of HMWSSB, Kukatpally, May 1, 2006.

Box 4: Continuous water supply projects in India: What progress has been made?

24/7 water supply schemes are very much in vogue and there is talk of introducing them in all Indian cities. The benefits anticipated in the field of health seem to be the principal argument advanced by people and institutes in favour of this change. Nevertheless, the infrastructure available in most Indian cities for storage and distribution of water is not adequate to satisfy peak demand. In addition, old and dilapidated networks are a major limiting factor.

Figure 1: 24/7 schemes undertaken since 2002

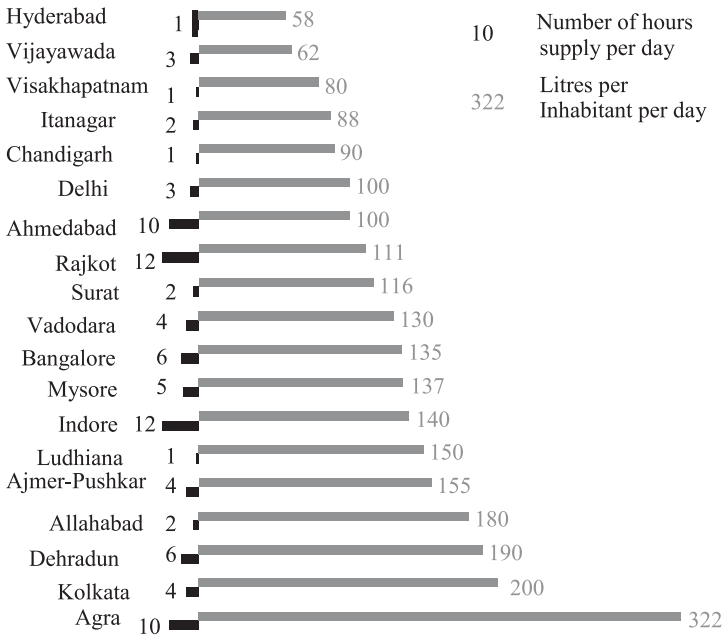


Source: Map drawn on the basis of:

- *24/7 map in India prepared by ASCI, 2005.*
- *Basic map: University of Aix-en-Provence, undated.*

When comparing water supply services in various Indian cities, it is interesting to compare the services available and study the conditions and duration of water supply in the major cities. With an average supply of one hour per day, Hyderabad is among the more poorly served cities in terms of duration of supply of potable water. The figures quoted in Figure 2 below, particularly regarding water consumption, are interesting not so much for their exact amounts but for the bigger picture they convey. An uninformed person would be surprised to discover that most Indian cities do not have continuous water supply.

Figure 2: Duration of supply and average consumption in Indian cities



Source: Figure based on "Benchmarking of water supply in JNNURM", ASCI, 2006.

b. Sewerage Network

The state of the service

Set up in 1931, the system for collection and disposal of sewage was initially designed for the twin cities of Hyderabad and Secunderabad, that is, a population of about 460,000 occupying an area of 54 square kilometres. In 1985, the Municipality undertook the development of the sanitation system and laid four trunk sewers. Two trunk sewers are situated to the north and two to the south of the Musi River.[47]

Hyderabad now has a sewerage network administered by HMWSSB. As for outlying municipalities, sewerage networks management comes under the purview of each local body. In view of the population density, individual sanitation solutions (e.g. septic tanks, etc.) were eliminated in the central part of the city but are still in use in the areas covered by the surrounding municipalities. Consequently, HMWSSB is now thinking of setting up a centralized sewage treatment plant for the twin cities. In contrast, an outlying city like Kukatpally, where sanitation comes under the purview of the local municipality, is trying to stress the importance of semi-decentralized solutions for sewage treatment in its sanitation development plan.[48] It is thus planning to set up seven semi-decentralized sewage treatment plants for an area with a population of 400,000.[49]

As for Hyderabad and Secunderabad, there are presently two plants for treating domestic sewage at Amberpet to the city's east and at Khairatabad in the centre with a capacity of 113 MLD and 20 MLD. Proposals for setting up new treatment plants were submitted by HMWSSB to make up for the shortfall because, according to MCH's overall development plan, only 23% of domestic sewage is now treated (133 out of 589 MLD).

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[47] CDP, 2006, chapter 4.

[48] Subani, *Comprehensive Sewerage Plan*, 2005.

[49] Huchon Agnès and Tricot Guillaume, 2006.

Table 2: HMWSSB's proposals for new STPs

Location of STP	Capacity (in MLD)
Amberpet	339
Nagole	171
Naliacheru	60
Zyaguda	21
	Total Increase: 592

Source: APPCB, interview with official in charge of disposal of solid and liquid wastes, May 10, 2006.

The area covered by the sewerage network has increased during the last few years. According to the overall development plan 2006, 70% of the area and 63% of the population under MCH would be covered. Multilateral financing from the Municipality (channelled through elected corporators) and the State Government (under Urban Community Development programmes) has made it possible to meet the infrastructure costs, particularly in areas designated as "slums" (see Part II.3).

Confusion between sewerage networks and storm water drainage

It should be noted that people and even officials are often confused because pipes meant for drainage of storm water often carry sewage, especially in areas occupied by the underprivileged. Although this is illegal, it is tolerated as it is considered necessary.[50] On this issue, MCH and HMWSSB collaborate, particularly in an emergency situation – like for example during the monsoon when rainwater flows into the sewage system. Relations have been established at the local level and mostly between the two departments in charge of maintenance. Emergency teams of both organizations work together when the need arises. A second type of periodic interaction takes place during meetings held to coordinate

[50] There is an historical as well as a topographic explanation. Before HMWSSB was set up in 1989, the steepness of the slope was used as a parameter by municipal engineers to decide whether to build a single network or separate networks. Interview with the HMWSSB's Technical Manager, September 4, 2006.

projects. Thus, during the planning stage, the two organizations invite each other's officials for discussions with consultants in charge of planning.[51]

Thus, even though the administrative and technical services of MCH and HMWSSB function separately, decisions and actions at different levels in overlapping areas are taken together quite harmoniously. Nevertheless, there is some overlap. At present, disposal of sewage and storm water is supposed to be under two separate organizations and each of them is in charge of developing the area under its purview. However, it is not clear whether HMWSSB is in charge of setting up the entire sewerage network, especially since it lacks the financial means.

As regards the charges for a new connection, the Board mentions in its tariff schedule different rates for connections to sewerage and supply networks.[52] There remains the question of connecting households to the sanitation network after they have been provided water connections: it seems that they are forced to pay even though for a substantial portion of the population this only means – at least from their viewpoint – a simple change from the storm water drainage system to the sewerage network. This makes it difficult – as can well be imagined – to persuade users to come forward on their own. A field study has shown that many buildings and commercial establishments have illegal connections to the storm water drainage network and have not yet applied to the Board for a connection to the sewerage network.[53] As a result, while the Board is deprived of its legitimate earnings, the Municipality has to bear additional expenses for the maintenance of drains. According to the "polluter pays" principle, the Municipality has decided to levy a tax on those who are not in a position to get a connection to the network. Those living close to a pipe maintained by the Board

[51] Interview with the HMWSSB's Technical Manager, September 4, 2006.

[52] HMWSSB website, http://www.hyderabadwater.gov.in/, consulted on September 26, 2006.

[53] Centre for Good Governance, 2003.

should apply for a connection and pay the tax levied by the Municipality until the connection starts functioning. Once a household is connected, a recurring tax is levied on the sale price of water for the collection of domestic sewage.[54] For laying the main pipes, the Board can also have recourse to contributions from the Government.

c. Storm Water Drainage

Drainage of storm water is the responsibility of MCH (and municipalities of outlying areas). The network is a legacy of the Nizam, especially in the Old City. In 1908, heavy floods following the overflowing of the River Musi caused 10,000 deaths.[55] A special department was set up and the entire drainage network was completed in 1910. Most of the drains date from this era. In 2000, heavy rain (800 mm in 24 hours)[56] again caused severe damage. MCH then employed a firm of consultants – Kirloskar Consultants of Mumbai – to draw up a scheme. Since then, both minor and major drains are being widened to keep up with urban growth. All storm water flows in the direction of the River Musi, following a path comparable and sometimes similar to the one taken by sewage. But spells of heavy rain continue to cause flooding in the streets.

Municipal engineers of various divisions of the MCH are in charge of maintenance and are empowered to take decisions regarding minor projects. But decisions related to large projects are taken by the central authority without consulting the local government.

Storm water drainage networks (investment and maintenance) are financed by municipal taxes and 40% of the budget is supposed to be spent on slum areas.

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[54] "Sewerage Cess" on consumers' bills.

[55] Interview with Rama Chandra Murthy, Municipal Engineer, Division 9, August 8, 2006.

[56] Interview with Rama Chandra Murthy, Municipal Engineer, Division 9, August 8, 2006.

Box 5: Decision-making processes related to municipal infrastructure (investment and maintenance)

The proposals move upwards in the case of minor schemes. The division puts up the proposal to the Commissioner. Such proposals are often supported by suggestions from local representatives. Larger projects are decided at the centre. The proposals must receive two types of sanctions:

- administrative sanction which is within the purview of the Commissioner. This sanction covers the finances for the project. The proposal is then sent to the head office which provides the money for the project's implementation.
- technical sanction determines the project's feasibility.

Decisions are taken at various levels depending on project size. Depending on the amount involved the person in charge of giving the administrative sanction changes:

< 1 lakh	Additional Commissioner (South Zone)
From 1 to 3 lakhs	Additional Commissioner (Projects)
From 3 to 20 lakhs	Commissioner
> 20 lakhs	"General Body" (100 elected councillors)

Things are different in the case of technical sanctions.

< 10 lakhs	Executive Engineer in charge of the Division
From 10 to 20 lakhs	Superintending Engineer (MCH Central)
From 20 to 50 lakhs	Chief Engineer (MCH Central)
Above 50 lakhs	State Government (AP)

Sources :
- Interview with Rama Chandra Murthy, Municipal Engineer, Division 9, August 8, 2006
- Interview with MRK Murthy, Municipal Engineer, Division 3, August 30, 2006

II: TESTING THIS POLICY AT THE LEVEL OF MUNICIPAL WARDS

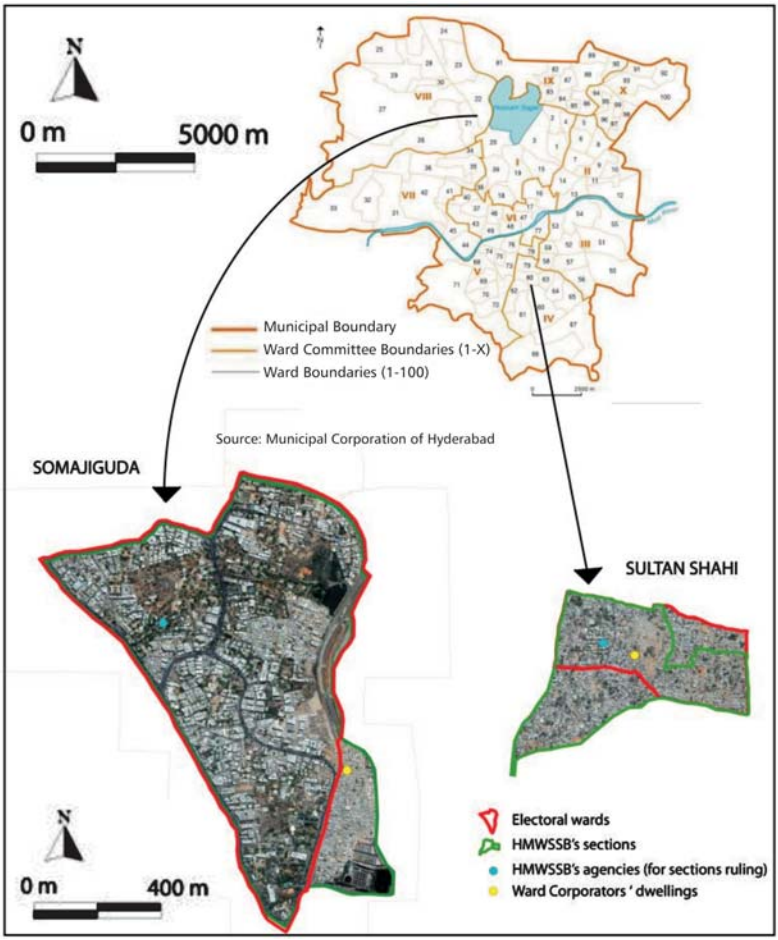
To decide whether the service provided by HMWSSB is truly uniform, it is necessary to study one after the other the role of several contextual factors in the implementation of the metropolitan policy at the local level. Is there a meeting point between supply and demand?

1. Slight Difference in Service between the Two Sections

The study's territorial framework

The two electoral wards under study are very similar to the two HMWSSB sections bearing the same names. However, their boundaries differ somewhat. Thus, the Somajiguda section includes the electoral ward as well as a slum called BS Maqhta while the Sultan Shahi section does not correspond exactly to the area covered by the electoral ward.

Figure 3: Geographical location of the electoral wards under study and the nearest sections



Sources:
- Map on top: Kennedy Loraine, 2005 (on the basis of information provided by MCH).
- 2 maps below: the basic material was obtained from Google Earth and the section boundaries were provided by the concerned sections of HMWSSB
Design: Huchon and Tricot, 2006

First, some preliminary observations. One important point pertains to the demarcation of the territory under HMWSSB. The Sultan Shahi section was recently joined with another section called Moghulpura (situated to the north of Sultan Shahi). The two combined sections are known by the name of Moghulpura. The merger was done because the two sections were under the same manager and they were both rather small. The information obtained and reported here refers most of the time to Sultan Shahi but sometimes also to Moghulpura as the union of two entities.

Secondly, as far as the number of inhabitants is concerned, the electoral wards were carved out in such a way that they had the same population as in 2002, i.e. about 40,000. The smaller area of Sultan Shahi thus represents a higher density. However, the urban dynamics in action is responsible for changes in population in each ward. Thus, the population in the Old City is decreasing while more attractive areas like Somajiguda are growing very fast.

The fact that electoral wards and sections do not correspond and the constant change in population make it difficult to assess the exact number of households in the sections administered by HMWSSB. At the central level, officials admit that this information is lacking[57]. Even then, it may be assumed that the number of inhabitants in the Somajiguda section is considerably higher than in the Sultan Shahi section.

[57] Interview with HMWSSB's Finance Manager, September 4, 2006.

Table 3: Facilities available for accessing water in the sections

	Somajiguda	Sultan Shahi [2]	Moghulpura
Number of tankers in HMWSSB's service	4 private and 1 government [3]	1 government	?
Number of borewells	55 [3]	69	?
Number of individual connections	4461[1]	3000	4979 [1]
Number of public taps	54 [3]	52	?
Rate of coverage	90 % [3]	90 %	

Sources:
(1) Interview with the Technical Manager of the Central Board, September 4, 2006 [central information base].
(2) Interview with the Manager of Sultan Shahi Section, August 27, 2006 [information communicated verbally].
(3) Interview with the Manager of Somajiguda Section, August 8, 2006 [information communicated verbally].

Although both Section Managers have verbally claimed that the connection rate is 90%, there is a considerable difference in the number of connections in the two entities. The large number of connections in Somajiguda could be due to the number of commercial establishments in the area. In effect, the 4,461 connections cover the totality of connections given to buildings, business premises and individual houses. Still, this difference is somewhat surprising because the number of buildings being higher, the number of inhabitants per connection should also be higher.

Little difference in service

The surveys conducted in the course of this study indicated that there is very little difference in access to water in the two zones. Differences are, however, located within municipal wards – and are in particular more pronounced within Somajiguda than within Sultan Shahi. So it is necessary to explain the reason for more uniform access to water in the latter than in the former.

Table 4: Means of accessing potable water in Sultan Shahi and Somajiguda (percentage of households surveyed)

		DRINKING WATER																	
		Individual connections		Public taps		Tankers		Mineral water		Private borewells		Collective borewells		Hand-pumps		Neighbours		Total	
DOMESTIC USES	Individual connections	73	46						7									126	
	Public taps				2													2	
	Tankers																	0	
	Mineral water																	0	
	Private borewells	24	33	2							2						4	65	
	Collective borewells																	0	
	Hand-pumps				2												4	6	
	Neighbours																	0	
	Total per ward	97	79	2	4	0	0	0	7	0	2	0	0	0	0	0	8	199	
	Total	176		6		0		7		2		0		0		8			

In red: result in Sultan Shahi
In blue: result in Somajiguda

How to read the Table: Of all the households surveyed, 24% of households in Sultan Shahi (and 33% in Somajiguda) use water from their individual connections to the municipal network for drinking water and water from private borewells for other uses not requiring potable water.

Among other sources used periodically, water-tankers may be mentioned in the case of 13 households in Somajiguda (4 in Sultan Shahi), public taps in the case of 4 households in Somajiguda (1 in Sultan Shahi), hand-pumps in the case of 10 households in Sultan Shahi (none in Somajiguda).

Source: Surveys conducted by the authors under the APUG Project, 2006

As regards consumption levels within the service, it was noted that the quantity of water allotted to Somajiguda is practically three times higher than the quantity allotted to Sultan Shahi. This difference may appear even more striking considering that the rate of leakage is probably higher in the Old City than in recently urbanized areas. Taking into account the number of connections

in each section, it appears that consumption per connection is almost twice as much in Somajiguda as in Sultan Shahi (993 litres per day per connection in Somajiguda against 503 litres in Sultan Shahi). The figures for Sultan Shahi were corroborated by data provided by HMWSSB's office in Moghulpura. It was also mentioned that there was an increase in the quantity supplied to the Old City in 2004-2005 following the commissioning of the Krishna river project.

The Krishna river project could bring about a significant difference in supply, but figures cannot always be taken at face value. It is necessary to further examine this significant difference because data on the number of households per connection and the average number of persons in each household is not available. There are many more apartment buildings or multi-storey buildings in Somajiguda than in Sultan Shahi. As water meters and bills are generally fixed for buildings, and not for each flat, that means that the number of households per connection is expected to be higher in Somajiguda than in Sultan Shahi. Although they are not completely representative, surveys conducted by the authors assign approximate values to these two parameters and suggest a different picture: according to these figures (see Table 6), average consumption per household can be calculated at 153 litres in Somajiguda against 193 litres in Sultan Shahi. However, when taking into account the number of persons in each household, average consumption per person is approximately 30 litres a day for both areas. This interesting finding, which would need to be confirmed with more extensive surveys, suggests a more nuanced picture of service levels on the ground.

Table 5: Consumption and earnings

	Somajiguda	Sultan Shahi [2]	Moghulpura
Number of connections	4,461 [1]	3,000	4,979 [1]
Million litres per day	4.43 [3]	1.51	2.57 [1]
Litres per day per connection	993	503	516
Billing per month (in lakhs of rupees)	22.44 [3]	8	?
Earnings per month (in lakhs of rupees)	21.22 [3]	3.5 to 4	4.88 [1]
Rate of recovery of bills	95% [1]	44 to 50 %	?

Sources:
(1) Interview with the Technical Manager of HMWSSB's Head Office, September 4, 2006 [information concerning August 2006].
(2)Interview with the Manager of Sultan Shahi Section, August 27, 2006 [information communicated verbally regarding an average month].
(3) Interview with the Manager of Somajiguda Section, August 8, 2006 [Monthly average for April, May, June and July 2006].

Table 6: Characteristics of connections

	Number of households per connection	Average number of persons in each household
Somajiguda	6.5	5.3
Sultan Shahi	2.6	6.4

Source: Surveys conducted by the authors under the APUG Project, 2006.

In view of the quantity of water supplied to each section, the billing amount for customers in Somajiguda is logically almost three times as much as that in Sultan Shahi. However, and this is one of the key points, the rate of recovery is much lower in Sultan Shahi. There can be numerous reasons for this lower rate of recovery,

one of which is the capacity of customers to pay. It is a fact that Somajiguda is a more affluent area than Sultan Shahi.

Within the service provided by the "parastatal" organization, quality seems to be an important factor of differentiation. Is the spatial configuration of the network responsible for the better treatment accorded to one of the two zones? Field studies do not provide an answer to this question as the residents of the two zones do not have identical frames of reference and fixing a rating of 1 to 3 for water quality therefore appears rather subjective. The media is useful when obtaining this type of information. In March 2005, *The Hindu* reported a jaundice epidemic supposedly caused by contamination of water in the municipal network.[58] Of the 70 cases of jaundice recorded by the Institute of Tropical Diseases, 50 were residents of the Old City. The causes of contamination, though not clearly identified, could give rise to all kinds of conjecture. It could be assumed that water from the Krishna supplied to residents was not properly treated or that it was contaminated in the distribution system. The first hypothesis is supported by the fact that the Krishna is the major source of supply for the Old City, while the second is supported by the fact that, the network being old, there is a high level of infiltration. The second hypothesis was advanced by the authorities. Following this epidemic, some storm water drains running close to water pipelines were made leak proof.[59]

In both Somajiguda and Sultan Shahi, almost all the people questioned said that water from the municipal network was considered good for health. However, the quantity and conditions of water supply are generally considered unsatisfactory, particularly due to irregular supply. The water supplied to households is managed differently in each home.

[58] The Hindu, *Outbreak of jaundice in city*, March 23, 2005.

[59] The Hindu, *Old city water pipelines to be remodelled*, March 28, 2005.

Strategies to compensate for shortfall in supply: Individual and semi-collective solutions

The service provided by HMWSSB under the control of the State Government is relatively uniform as far as the majority of residents of Hyderabad are concerned. The rate of connections provided is however lower in periurban areas, especially Kukatpally where it is about 70%.[60]

In addition to this difference between the city centre and the outlying areas, there is another factor of differentiation that becomes very obvious when you take into account the compensatory mechanisms used by a large number of people. Households try to make up for the shortfall in supply at the individual or semi-collective level. The more affluent households (see Part II-4), whose number is higher in Somajiguda than in Sultan Shahi, especially resort to private solutions to improve their water supply.

Table 7: Private solutions to improve water supply

	Under-ground tank	Over-head tank	Bore well	Pump to lift water	Suction pump	Filter	Drums	Buckets
Sultan Shahi	22%	20%	16%	9%	9%	48%	71%	18%
Somajiguda	67%	74%	37%	35%	4%	41%	28%	22%
Kukatpally	*35%*	*44%*	*41%*	*43%*	*?*	*25%*	*62%*	

Source: Surveys conducted by authors under the APUG Project, 2006.

For example, to offset irregular supply, many households have more or less sophisticated storage facilities equipped with automatic filling mechanisms. This introduces an important variable element in the differentiation of service as it can result in considerable time-saving. These households are thus protected from the hardships caused by irregular water supply.

[60] Huchon Agnès and Tricot Guillaume, 2006.

Ground water is another source of supply apart from what is received from the network. 37% of the households questioned in the more affluent ward have a borewelll as compared to only 16% in Sultan Shahi. In this ward, collective hand-pumps are used when there is a breakdown in service, which means that they are not used on a regular basis. But the water is used for all purposes. In Kukatpally, collective sources of ground water are used on a daily basis and the water is used only for some purposes. In this case, ground water serves as a buffer between supply and demand.

Some households have water-filters. Municipal tap-water is supposed to be of good quality but, during the monsoon, sewage water may get into water-pipes and cause water-borne diseases like jaundice. Households are, therefore, right not to trust the municipal water and take precautions to treat it at home or buy mineral water for drinking purposes. Although the percentage of households using filters is almost the same in the sample surveys of the two wards (41% in Somajiguda against 48% in Sultan Shahi), it seems that the really expensive filters like Aquaguard are more widely used in Somajiguda (10 households as compared to only 2 in Sultan Shahi). It should be noted that other less affluent households that cannot afford expensive filtering equipment may boil water and filter it through fine cloth or just allow the impurities to settle at the bottom.

The substitution/compensation mechanisms used by some households call for substantial investment – which increases the cost of every litre of water consumed – and in some ways duplicate the work of the public utility considering that filtering and storage are tasks already undertaken by HMWSSB. These operations can be done individually or collectively. Almost all multi-storey buildings have equipment like pumps, underground storage tanks and overhead (rooftop) storage tanks. As a collective facility, this equipment allows economies of scale. That is one explanation for the existence of a larger number of such facilities in Somajiguda where many households live in big buildings.

One device that goes against civic spirit is the use of pumps to draw water from the mains when water is supplied to the locality for a few hours. To do this, the pump is connected to a storage tank. This is a vicious circle: when one household adopts the practice, its neighbours are likely to follow suit for fear of being deprived of their rightful share of water. This is why it would be better to increase the pressure and quantity of water supplied. The practice appears to be more common in working class localities or at least more commonly admitted. For example, in BS Maqhta, these pumps seem to be widely used. Given the practice is strictly forbidden by law[61], its prevalence is probably understated in declarations made by households.

Use of tankers to access potable water is another means of obtaining good quality water for household purposes. This facility, provided free to people living in the poorer localities, is otherwise quite costly, the usual price being Rs.250[62] for 5,000 litres. With a frequency that varies a great deal according to geographical location – an issue that will be analyzed later – recourse to this source is also one of the key elements of the discriminatory practices followed by the public utility.

All these processes contribute to the differentiation in service that the authorities are incapable of regulating. The range and repercussions of individual and semi-collective behaviour are both social and environmental. As for exploitation of ground water sources, registration of all new borewells was made compulsory by law – to ensure collective and integrated management of these sources – only since the enactment in 2002 of the Andhra Pradesh Water, Land and Trees Act.

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[61] "*No device shall be used or possessed in the premises to suck water directly or indirectly from the mains or service pipes, failing which penal action will be taken under subsection (2) of sec.32 of the Act and other provisions thereto.*" Rules Supplement to Part I Extraordinary of THE ANDHRA PRADESH GAZETTE Published By Authority. http://www.hyderabadwater.gov.in/watersupplyrules.htm

[62] Around 4.5 €.

The service may appear uniform at first sight but is, in fact, variable when one takes into consideration all these practices and private equipment. It is, therefore, necessary to show how the inertia of networks acts as a critical factor in the definition and level of service provided to the public.

2. Old Urban Infrastructure and Economic Dynamism

When a city is old, its water supply and sewerage networks are bound to be old. The age of the installations will affect the size of pipelines, the pressure and quality of water and the number of leakages.

The two wards under study have completely different histories and hence the age of their urban infrastructure and buildings is also different. The surveys conducted for this research project showed that the geographical origin of the families residing in the two wards was an important factor. 33% of households questioned in Somajiguda[63] belong to Hyderabad as compared to 78% in Sultan Shahi. Only 7% of the people the authors came across in Somajiguda have always lived in their present houses as compared to 31% in Sultan Shahi.

It can be expected that the length of stay in the city and even in the same locality or house should give people a sense of belonging as well as an idea of the changes in the service and methods used to alleviate problems brought on by bad weather.

The 'seniority' of Sultan Shahi

Sultan Shahi is a locality in the Old City, which is the original settlement of Hyderabad. The city was founded in 1591 on the south bank of the River Musi. The historical centre of the city has inherited from the long rule of the Nizams a rich heritage of palaces and office buildings erected during a prosperous era when a lot of money was invested in the central part of the city. However, towards

[63] Birthplace of the person questioned.

the end of the 19th century, land to the south of the river became saturated and the city expanded to its north. The famous flood in 1908 led the Nizam to move his residence and his administration to the Koti area, north of the Musi. This event led to the construction of an effective network in Sultan Shahi to drain storm water, but following the departure of the city's dignitaries and traders, the Old City with its winding streets lost its lustre and attraction as an investment centre. With continuing migration from the city's centre to its northern parts followed by the migration of a section of its population to Pakistan at the time of Independence, mainly the less affluent sections of the population stayed on in the Old City and there was no attempt to improve the infrastructure dating from the grand old days. Particularly after Independence and the end of the Nizam's rule, the Old City's largely Muslim population probably felt somewhat neglected.

At present, the authorities are trying to compensate for this negligence by refurbishing the networks and other infrastructure. Water from the Krishna has already reached the Old City, improving supply. In the Sultan Shahi ward (and generally in the division that includes it), the Municipality, compelled by corporators, has joined hands with HMWSSB to lay new sewer pipes and make up for lack of infrastructure.[64] The investment of the Municipality in this field was very substantial in 2006. It is, in fact, a measure of public awareness of the seriousness of the issue (and of the lack of investment by HMWSSB, which claims nevertheless to invest uniformly[65]). However, the higher population density in Sultan Shahi, as compared to Somajiguda, has made it more difficult to lay underground pipes and install heavy machinery.

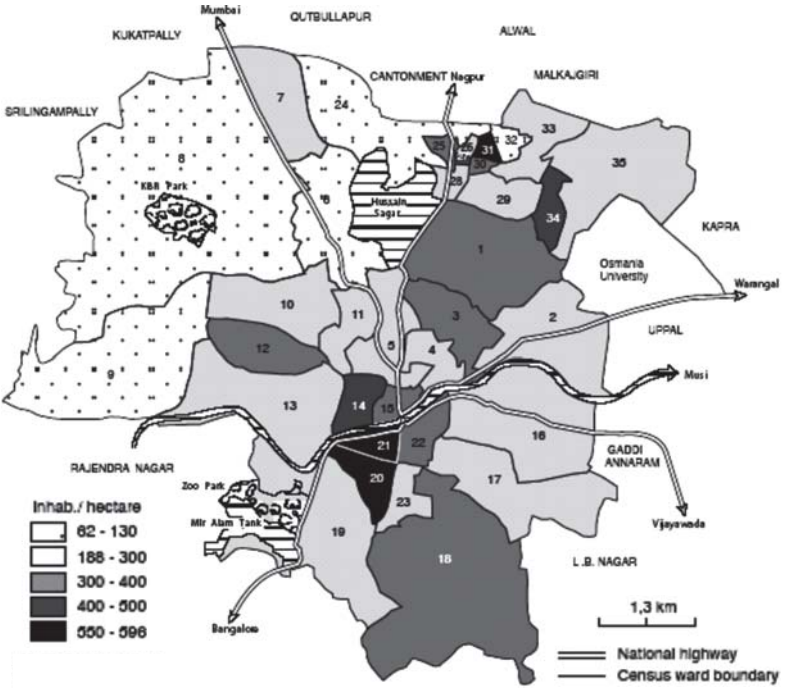
Political pressure is also a reason for repair of pipelines in the Old City. For instance, during the jaundice epidemic in the spring of 2005, the MLA from the MIM political party, representing the area, gave vent to his dissatisfaction with HMWSSB in the press. "The

[64] Interview with the Municipal Engineer, MCH, Division III, August 30, 2005.

[65] Interview with HMWSSB's Finance Manager, September 4, 2006.

board," he said, "does not have staff to handle the task of sewerage cleaning and their inaction is taking a toll among the Old City residents."[66] As a result, a fleet of water-tankers was sent to the area pending more extensive repairs of the city's drains.

Figure 4: Population density in 2001 in areas under MCH



Source : Census of India, 2001
Design : F. Landy

The newness of Somajiguda

In contrast, Somajiguda is both a new locality and a new centre. During the second half of the 20th century, urbanization followed a north by north-west direction. Somajiguda, which happened to be on its path, became more densely populated. With the urbanization of areas further north on the periphery of the area under MCH and

[66] The Hindu, *Outbreak of jaundice in city*, March 23, 2005.

other municipalities, Somajiguda came to occupy a central position.[67] In fact, the nodal point of the Somajiguda and Panjagutta traffic-circles is at the intersection of roads leading to all the major centres of the city, namely Abids to the south, Secunderabad to the north and east and Banjara Hills and Cyberabad to the west. The locality is also close to the airport at Begumpet.[68]

This central location served to promote high value-added and profitable activities. Population density is still not very high and there is place for the development of up-market commercial establishments as opposed to the "bazaar", even though one may find mixed commercial establishments around Amerpeet. Hyderabad Central, one of the many shopping centres but probably more 'central' than others, is a complex consisting of stores, restaurants and cinema halls. It constitutes a complete leisure and entertainment area for the city's residents. The Somajiguda ward also has many office buildings. Some of them house information technology companies attracted by the facilities created by the city's development. Again, Somajiguda has maintained some private green areas, particularly in the campuses of institutions like the Administrative Staff College of India and the Centre for Economic and Social Sciences.

All these activities contribute to a "virtuous" circle concerning real estate, because the cost of land is shooting up. Residential properties in this area are quite up-market: several attractive properties belong to VIPs while multi-storeyed apartment blocks are equipped with modern amenities. One locality called "Ministers' Enclave" contains the official residences of several ministers.

The coming together of these prestigious buildings – luxurious residential buildings, buildings housing big companies, shopping malls – is the reason for the fairly rapid development of infrastructural networks. The road network in particular is quite good in this ward.

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[67] Imbach Romain, 2005, page 38.

[68] Imbach Romain, 2005, page 46.

The water supply and sanitation networks were installed fairly recently and pipes are still being laid in some areas.

Both residential buildings and office buildings are more numerous in Somajiguda than in Sultan Shahi (where they are practically non-existent). Hence, there is a technical dimension at work here, allowing for fast and simple connections. Water is supplied to a building whose occupants then manage their individual connections on their own.

However, it is necessary to take into account the existence, though concealed, of a few slums in Somajiguda. The principal one is BS Maqhta with an older urban structure consisting of narrow lanes where the water supply network is older and sewers are mostly connected to the storm water drainage network. Users here claim that water pressure is very low.[69] Besides insufficient supply, narrowness of the pipes or widespread use of suction pumps to obtain more water could be the reason for the meagre quantity of water reaching a part of the locality. In any case, the network exists and most of the houses are connected to it. It is not easy to ascertain if all these connections are legal because the narrow pipes are not underground. However, the manager of this section did not acknowledge the existence of illegal connections in the locality.

To summarize, it can be said that the water supply and sanitation networks and even the storm water drainage system are in the process of being completed, renovated or re-laid and are fairly well developed in both wards and most houses, except in some slums, are connected to them. The main problem today is persuading residents to change their connections so that their domestic sewage is discharged into the sewerage network instead of the storm water drainage system. This calls for a policy of door-to-door canvassing. Households will not change their connections on their own because

[69] The President of the Greenlands Residents' Welfare Association, who lives here, feels that the residents' complaints are baseless and that they do not manage water properly.

they do not necessarily understand the difference between the two networks. People's lack of understanding on the difference between the two networks emerged in interactions with the surveyed households, and also in interviews with a local RWA office-bearer who highlighted the point.

Box 6: The centre-periphery equation: difference in access much more striking in Kukatpally

It would be interesting to compare the situation in Hyderabad with Kukatpally, located in the western suburbs where networks are already in place. Access to potable water is less widespread. In fact, this locality was urbanized quite recently and at a very fast pace, with its population growing at the rate of 56% between 1991and 2001. Water supply is under HMWSSB and sanitation under the Kukatpally Municipality. The networks have been developed quite efficiently but they cannot keep pace with population growth. In such a situation, there are several ways of accessing water: for drinking water, households use individual connections, public taps, tankers, leaks from water supply pipes, bottled mineral water and hand-pumps. Type of access is determined by the household's income as well as by the age of the building and legal status. In effect, the difference between recognized and unrecognized slums is much more marked here than in the central part of the city. Besides, more households resort to ground water. In the case of those who have the means – most do – it is used for domestic purposes and the reason for this distinction is more commonly seen here than in the wards under study in Hyderabad. Ground water is obtained not only from private borewells or hand-pumps but also from small local and more or less legal networks sometimes installed and financed by the Municipality. Several methods of access are combined to obtain the two types of water.

Table 8: Summary of different methods used by those surveyed to access water in Kukatpally

		Underground					No access	Total
		Private borewell	Open borewell	Public borewell	Public handpump	Private tanker		
Manjeera	Public connection	31		7	4	1	29	72
	Public tap	2	1	4			4	11
	Public tanker	1		4	2		2	9
	Neighbours	2			2			4
	Mineral water	1						1
	Leakages						1	1
No access					2			2
Total		37	1	15	10	1	36	100

According to surveys by Huchon A. and Tricot G., 2006

3. The Special Case of Slums and Underprivileged Localities

As a direct consequence of being home to a large number of poor people, underprivileged localities are often subjected to differential treatment by the commercially-oriented services of HMWSSB.

There are at least 811 slums in the twin cities. Among the seven "circles" (administrative divisions of the area covered by MCH), Circle I, in which Sultan Shahi ward and a small part of the Old City are located, has the largest number of slums (211, of which 174 are notified).

Table 9: Growth of slums in the MCH area and their population

Year	Number of Slums	Population
1962	106	120,000
1967	194	168,000
1972	282	300,000
1976	300	320,000
1977	Not obtained	380,000
1978	377	400,000
1979	455	408,000
1981	470	540,000
1986	662	859,000
1994	811	1,259,000

Source: 'Urban Community Development: List of Identified Slums', a report of the MCH[70].
Prepared by Uma Adusumilli, May 2001

At the level of the two electoral wards under study, there are three notified slums in the Sultan Shahi ward (consisting of 744 households or approximately 3,700 persons) and four in Somajiguda of which two are notified (432 households and around 2,100 persons). A detailed description of these seven localities is given below.[71] These descriptions are based on information collected by the "Hyderabad Slum Upgradation Action Plan". The purpose of this project – coordinated by ASCI – is to turn Hyderabad into a "city without slums" by drawing up a plan of action with the help of "Cities Alliance". However, it is important to point out that, according to our sources, there is a difference in the number of slums and their names. Thus, being recognized as slums by the authorities probably determines the quality of basic infrastructure and the seriousness with which support programmes are implemented.

[70] A later change in the list indicates that about 1,259,000 people live in 792 slums.

[71] The reliability of the information is rather questionable. As a matter of fact, according to the figures obtained, the distribution of households according to their annual income corresponds only in rare cases to the poverty line determined by MCH.

One important point is the age of the slum in question. As mentioned earlier, Somajiguda is a recently developed locality as compared to Sultan Shahi. The age of the locality is clearly related to the manner in which it is treated. While the slums in Sultan Shahi are practically a hundred years old, those in Somajiguda are 20 to 40 years old. Our investigations and the documents provided by the Urban Community Development (UCD) Department indicate that these slums – whether notified or not – have been authorized for basic infrastructure, particularly water supply and sanitation, more or less recently. One of the major differences is the officially recognized presence of a relatively large number of extremely poor households (earning less than Rs.10,000 a year) in the slums of Somajiguda. Nevertheless, the proportion of individual connections is higher in the slums of Somajiguda: 90% as compared to 51% in the slums of Sultan Shahi. This suggests that neither individual earnings nor the age of the slum are the main factors determining individual access to water in these slums. No doubt they do exert a certain amount of influence but there must be other reasons at work that can explain the relationship between these urbanized spaces and the presence of infrastructural networks. Again, the fact that slum population is higher in Sultan Shahi makes it more difficult to integrate it into the water and sanitation networks. In addition, the geographical location of the Somajiguda slums (placed next to the locality inhabited by ministers in the case of BS Maqhta and just near the affluent localities of Uma Nagar and Methodist Colony in the case of Mahabali Nagar and Kummari Basti) gives them the advantage of being close to efficient supply networks. As regards access to the sewerage network, it is rather doubtful if the information available is reliable because their number is always higher or at least equal to the number of connections to the network while it should be at par. Visiting some slums with the head of UCD projects gave a clearer idea of the stakes involved in these areas.

Table 10: Characteristics of slums in Somajiguda and Sultan Shahi

		Somajiguda				Sultan Shahi		
Name of slum		**BS Maqhta**	**Panjagutta**	**Kummari Basti**	**Mahabali Nagar**	**Harijan Basthi Kovabela**	**Harijana Basthi**	**Indira Nagar**
Area (in m²)		1,317	1,672	836	1,254	1,255	1,255	963
Age of slum		25 years	40 years	30 years	22 years	90 years	80 years	90 years
Whether notified		No	Yes	No	Yes	Yes	Yes	Yes
Number of households		225	130	55	22	100	80	564
Population		1,125	650	275	110	500	400	2,820
Households with an annual income of less than Rs.10,000		124	90	22	22	10	10	100
No. of individual connections		212	110	55	10	40	40	300
No. of public taps		5	2	2	1	2	3	10
Population with individual connections	No.	725	450	175	50	400	300	2,000
	%	64%	69%	64%	45%	80%	75%	71%
Population dependent on public taps	No.	275	100	75	30	100	75	725
	%	24%	15%	27%	27%	20%	19%	26%
Population using borewells	No.	125	100	25	30	0	25	100
	%	11%	15%	9%	27%	0%	6%	4%
Population using tankers	No.	0	0	0	0	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%

No. of wells		3	3	4	1	2	2	5
Households connected to sewerage network	No.	225	130	55	22	100	58	564
	%	100%	100%	100%	100%	100%	73%	100%
Households with individual toilets	No.	225	130	55	10	100	80	300
	%	100%	100%	100%	45%	100%	100%	53%

Source: UCD Department-Circle I, 2006
UCD Department-Circle 5, 2006

"Officially recognized" slums

During a group interview in Harijana Basthi (Sultan Shahi),[72] its residents declared that they had no problems with potable water supply. Households with the necessary financial means have individual connections; others draw water directly from the reservoir connected to the municipal network situated at the entrance of this locality. Another common facility provided under UCD programmes is a row of latrines constructed in the middle of the slum. The slum's representatives ensure that a separate sewerage system is provided. However, overflowing conduits are a major problem whenever there is heavy rain.

In B.S. Maqhta (Somajiguda) too, local leaders interviewed did not mention any particular problems regarding potable water supply.

In Indira Nagar (Sultan Shahi), the last slum where a group interview was conducted in the presence of the head of the UCD project, residents declared that they had been supplied water for the last several years. However, access to a separate sanitation network was provided only very recently because the sewers had been laid the previous year. Four or five hand-pumps are used when there is no water supply. The residents claim to receive enough water –

[72] Group interview conducted on August 30, 2006, in the presence of Mrs. Laxmi, in charge of UCD projects.

one and a half to two hours every two days. But the time of supply is not very regular: water is generally supplied from 2 p.m. to 3 p.m. but, on occasion, also in the middle of the night. The laying of sewage pipes (mentioned earlier) is an integral part of UCD projects for which funds were allocated in 2005-2006[73].

"Unofficial" slums

A slum in Somajiguda, standing apart from the others because it is not officially recognized as such, should also be mentioned. Living conditions seem more precarious there compared to the slums mentioned earlier because the inhabitants live in around fifty huts. The slum is built on a wasteland located opposite "Necklace Road" railway station (adjoining the Raj Bhavan road). The land is privately owned. The owners allow the construction labourers working for them on adjacent building sites to build temporary shelters. Since the land does not come under the Municipality, it is not entitled to normal infrastructure. Two interviews were conducted in this slum. The occupants of the land claim that they cannot vote because they need house numbers to get voter's cards (although one of them is a white ration card holder). As a result, they are neither considered residents of Somajiguda nor entitled to any infrastructure. One of the families lives in the slum only part of the year, returning to the village during harvesting season. However, the Municipality may sometimes intervene with a small contribution: for example, when a fire broke out in the slum last year, MCH gave twenty kilos of rice and Rs.2,250 to each household to help them tide over the hardship. As for access to water, the owners of the land have provided a tap as well as a hand-pump for the entire slum. The tap, connected to the municipal network, is situated about 300 metres away from the slum. Due to fights over water that broke out earlier, it was decided to appoint a person to take charge of the sale of water. Water is now sold at 50 paise (half a rupee) per bucket. Concerning representation, a designated leader acts as a mediator in matters concerning the residents and represents them in all dealings with the land-owners. Three common toilets have been built at the entrance to the slum.

[73] See Annex 5: Inventory of Fixtures in Slums/Projects in Sultan Shahi.

This striking difference of service between notified and "unofficial" slums sheds light on legality and land issues as key factors of treatment discrepancies.

When it comes to expanding the city's infrastructure, it may be asked what the requirements of the more underprivileged localities are. According to the Municipality's UCD department, the requirements of these slums in terms of infrastructure, if not already provided for, are quite meagre (without taking into account the Necklace Road slum). In Sultan Shahi, in particular, the existing infrastructure for water supply and sanitation (drainage of storm water, collection of domestic sewage and provision of toilets) is considered adequate. Only requirements in terms of public lighting need to be fulfilled. There are still some shortcomings in the four slums in Somajiguda, particularly Mahabali Nagar.

Box 7: The role of the Urban Community Development (UCD) Department

The UCD Department was set up within the municipal administration in 1967 to implement poverty alleviation programmes covering persons living below the poverty line in slums in the twin cities.*

There is a branch office in each of the seven municipal circles. According to the two project heads (Circles 1 and 5) we met, there is no major difference in approach to notified and non-notified slums as various tasks are undertaken without discriminating between them, in accordance with land laws. The only difference between these two types of localities is the percentage of people living below the poverty line.

Since one of the project heads mentioned that India is a "welfare state", it may be asked how UCD is financed and whether it gets funds from the Centre. At present, structure fees (not project funds) are borne by the municipal budget. At the economic level, 10% of the total amount collected as property tax by MCH and 30% of the subsidies received from the State and Central Governments provide funding for UCD projects. This funding, which is of fundamental importance for UCD, is permitted under the 74th amendment of the

Constitution (1994), which considers the reduction of urban poverty as legitimate action to be undertaken by local bodies.**
Funds are later allocated to each circle according to its requirements. Among the projects undertaken by UCD, it is necessary to mention the National Slum Development Programme (NSDP) started in the late 1990s and the early 2000s. Subsidized by the Central Government, its aim is to provide basic infrastructure like roads, drainage, potable water, public lighting, community centres, etc. in notified slums. 352 slums were supposed to be provided with facilities to access potable water and 408 with a sewerage system.*
Today, UCD is no longer involved in infrastructure development projects, but it uses its practical experience in the field to train people and initiate activities that can provide sustenance to the poor.

** MCH, Status report on Urban Community Development Services Cells, undated*
*** Uma Adusumilli, May 2001*

Funding

Improvement of public facilities gives rise to the problem of funding. In addition to the subsidy given by HMWSSB for providing connections to families holding white ration cards, it is necessary to raise funds from various sources for laying pipelines.

It seems that though UCD now concentrates on training programmes and strengthening competencies, it has traditionally played an important role in providing basic infrastructure (see Box 7), notably through the NSDP programme. In Sultan Shahi, the funding system is complex. For example, funds allocated under the NSDP programme (see Box 7) were transmitted to the Quli Qutub Shah Urban Development Authority (QQSUDA) after UCD had set up "Community Development Societies". During the three years that followed – from 1998-1999 to 2001-2002 – Rs.10 million were made available to QQSUDA for developing the slums of Sultan Shahi. However, a QQSUDA engineer admits that the Authority's activities are very limited (repairs on demand, laying narrow pipelines, etc.) because it cannot interfere in HMWSSB's overall plan for the

development of wider networks.[74] Thus, a sum of Rs.2.4 million was allotted via UCD in 2005-2006 to lay domestic sewage lines.

However, funds from municipal corporators and the tasks undertaken by HMWSSB have certainly contributed in large measure to bringing sewerage networks to these localities.

What is the future of slums?

Although there is a difference in access to infrastructure between slums and the rest of the city, recent improvements in slum areas due to the initiatives of various actors appear to have given some degree of satisfaction to the slum population. Public taps (and not tankers) still serve as a buffer providing potable water to those who do not have individual connections. Though their existence is not admitted, illegal connections would explain the present water supply level.

Thus, even though it may be said that HMWSSB projects try to adjust supply locally to users' needs, the attempt seems to depend on assistance from the Municipality and availability of funds from other sources. The Board does not wish to undertake the task of laying new pipelines entirely on its own in the absence of precise instructions from the Government. In actual practice, funding for this infrastructure has actually been separated to some extent (from funds for areas other than slums) because the UCD Department has taken credit for the proper laying of networks in these two wards. Public funding has played a major role in helping the Board (and other actors from time to time) to integrate the networks and common facilities. But once a household obtains an individual connection, it comes under HMWSSB's commercial activities and can no longer benefit from special assistance. Two questions arise regarding the consequences of this policy.

In the first place, is it realistic to expect the poorest households – entitled to subsidies – to pay for a long-term service and, if not,

[74] Interview with the Executive Engineer, QQSUDA, August 28, 2006.

what are the other methods of assistance available? Second, there does not seem to have been serious thinking at the higher levels on the issue of long-term management of public amenities. Public taps – presently suitable for one segment of the population – are a stopgap solution rather than the result of a well-planned long-term strategy. The idea is that public taps should disappear from the scene once there is continuous water supply. But here again, is the inclusive policy envisaged by the body in charge of water supply and sanitation adapted to the needs of slum-dwellers?

4. Inadequate Correlation between Standard of Living and Level of Service

Income and individual connections

One would imagine that there is a correlation between standard of living and level of service. But the situation on the ground is not clear. We provide below the profiles, derived from interviews, of seven households that do not have any individual connection to the public network.

Table 11: Profiles of households that do not have individual connections

Ward	Declared average monthly income (in rupees)	Source of drinking water
Somajiguda	2,500	Public tap
Somajiguda	40,000	Private well (+treatment) and private tanker
Somajiguda	3,000	Neighbours
Somajiguda	3,000	Neighbours
Somajiguda	3,500	Neighbours
Somajiguda	3,000	Public tap
Sultan Shahi	4,000	Public tap

Source: Result of surveys conducted by the authors under the APUG Project, 2006

The case of the household with a declared average income of Rs.40,000 per month is, by all evidence, quite surprising. It is a well-to-do family living in a very affluent-looking building in Somajiguda. The lady of the house is the secretary of the residents' association. It can, therefore, be assumed that the family is well aware of the services available in the building. But the family gets its drinking water by filtering ground water obtained from a private borewell serving the entire building. When there is water shortage, the building's tenants send for private tankers. They have applied for a connection to the HMWSSB network but seem quite satisfied with the water they consume at present. However, this case seems unusual. It shows that, if one can afford the treatment and storage devices required to drink ground water safely, it is possible to be satisfied with the water supply service without a public connection.

Except for this case, all the other households have an income below or equal to Rs.4,000 per month. Fetching water from neighbours or from a public tap is quite inconvenient, and takes up a lot of time and energy. These households belong to the low-income category of the surveys conducted in the course of this study. But they are not those with the lowest incomes. As a matter of fact, in our sample the five households with an income below Rs.2,500 happen to all have connections, the poorest among them living in Sultan Shahi.

Another noticeable factor is that the majority of households without a water connection included in our sample survey live in Somajiguda. Does this mean that the inhabitants of Sultan Shahi, who are generally poorer, receive better treatment in the overall fight against poverty than the poor population of Somajiguda hidden behind the facade of riches? In fact, our survey indicates that the average earnings per inhabitant are two to three times higher in Somajiguda than in Sultan Shahi. The reason for better service in Sultan Shahi may be that it is located in the heart of an area whose inhabitants share the same social situation.

Table 12: Average monthly family income (in rupees) in Somajiguda and in Sultan Shahi based on sample survey

	Somajiguda (41 households)	Sultan Shahi (40 households)
Average family income	26,878	10,730
Average income per inhabitant	5,055	1,638

Source: Result of surveys conducted by the authors under the APUG Project, 2006

However, it should be noted that the lower level of coverage in Somajiguda could be due to the fact that pipelines are still being installed in the area. Further, among the households without a connection in this ward, two are not legally considered to be inhabitants of Hyderabad. These are the two afore-mentioned households living in the slum on the wasteland on Necklace Road. The problem in their case is more serious as it involves the recognition of huts as dwellings.

In any attempt to find a more systematic explanation for the difference in access to individual connections in these two wards, it must be remembered that, according to our survey, the types of access are more diverse in Somajiguda than in Sultan Shahi. Moreover, the lowest incomes in Somajiguda are higher than those in Sultan Shahi (around Rs.2,000 per month). Households without connections in Somajiguda belong to the lowest income category in that locality. In Sultan Shahi, this is less frequent and such households do not necessarily belong to the lowest income category. So in Somajiguda, 86% of the total sample considered in the survey has access to an individual water connection against 45% of households with an income of less than Rs.4,000 per month.[75] The correlation between income and type of access thus seems much stronger in Somajiguda than in Sultan Shahi. This is possibly so because, in the latter, the service is already established and stable and therefore closer to the ideal of universal coverage.

[75] The sample consists of only eleven persons.

Income and satisfaction

Thus, the relationship between income and level of service is not very clear-cut in Sultan Shahi. But income can also be compared to satisfaction in order to determine whether the location of a dwelling plays a more important role than economic status.

Table 13: User satisfaction as compared to the rest of the city

Opinion about one's own service as compared to others	Somajiguda			Sultan Shahi		
	< Rs. 4,000 (11 house-holds)	Rs.4,000 to Rs. 9,999 (9 house-holds)	>Rs. 10,000 (21 house-holds)	<Rs. 4,000 (13 house-holds)	Rs.4,000 to Rs. 9,999 (19 house-holds)	> Rs. 10,000 (8 house-holds)
Better	18%	33%	42%	38%	47%	37.5%
Same	73%	44%	29%	46%	37%	37.5%
Worse	9%	22%	24%	15%	16%	25%
No opinion	0%	0%	5%	0%	0%	0%

Source: Result of surveys conducted by the authors under the APUG Project, 2006

Once again, the poorer inhabitants of Somajiguda seem to be less satisfied than the poorer inhabitants of Sultan Shahi, who are better integrated in the service. It also emerges that, in both areas, the more well-to-do households feel that the service is worse than in other places. This lack of satisfaction among high-income families may be because they are more used to demanding their rights. Perhaps this can be called the middle-class syndrome? Conversely, the poorest households seem to generally be under the impression that the level of service they receive is equal to that in other areas.

However, even though the question relates to the city as a whole, the "benchmark" of the interviewed persons may vary considerably; for example, it may be compared to a situation in the past, to the rest of the locality or to the city as a whole.

It may thus be concluded that even though the households that are not connected to the network undoubtedly belong to the low-income category, income is not a determining factor when it comes to quality of service. It is necessary to look elsewhere for the reason for the slight differentiation in quality of service.

5. Is there Uniform Implementation of Directives from Above by Section Offices?

Although there is no question of section offices adopting a policy for recovery of costs, it is interesting to see how the Board's directions are interpreted by the decentralized agencies.

Disconnection is a politically sensitive subject and, therefore, worth examining. Questioned about the uniformity of disconnection procedures in areas under HMWSSB's jurisdiction, the Finance Manager claimed that the same instructions are given to all agencies but, in actual practice, the situation differs in areas under MCH and it is necessary to modify the policy suitably. There is, therefore, no common limit for unpaid bills beyond which supply is disconnected. In some sections, the limit is Rs.20,000 whereas in others, Rs.100,000. Depending on the amount of unpaid bills and the section, the Divisional General Manager determines the latitude to be given to consumers before the decision is taken to cut off supply. The Sultan Shahi Manager sets the limit at Rs.10,000 while his counterpart in Somajiguda ensures that supply is disconnected when arrears are between Rs.2000 and Rs.5000. The latter also mentions the lack of staff to implement rules more strictly – the number of disconnections is consequently lower than what it should be. There is, therefore, greater tolerance towards non-payment in Sultan Shahi. The fact that the rate of recovery of bills is actually lower in Sultan Shahi (51% against 95% in Somajiguda)[76] seems proof of this indulgence. (See Part II.1)

Within the two sections, the Managers claim that they apply the disconnection policy uniformly to both affluent residents (VIPs and

[76] Interviews with two Section Managers, July 29 and August 28, 2006.

ministers in Somajiguda, etc.) and poor people (slum-dwellers). Is this a disadvantage for the poorest residents of Somajiguda as compared to the rest, who are mostly well-to-do?

In any case, it seems that the promptness with which the section responds to a household's demands depends a great deal on the amount of its unpaid bills. Especially in Somajiguda, where there are numerous complaints, priority is given to households with smaller arrears.[77] As we shall see in greater detail in the next part of this paper, the extent to which the Citizens' Charter is respected depends largely on the section.

Besides, the question of funds allocated to each section under the head of expenditure on operations and maintenance is of crucial importance. HMWSSB's management certifies that the allocation of funds is guided by the needs of each section because pipelines in some parts of the city are older than in others and the quality of equipment is not the same. In this context, one notes that the funds spent by the Board in Sultan Shahi on recurring expenditures are approximately four times lower than those spent in Somajiguda. What is the reason for this? There is no doubt that the infrastructure is more extensive in the latter but it is also newer. Can the first factor alone explain this difference in level of activity?

As a matter of fact, the electoral wards do not correspond exactly with the sections. The number of connections is said to be 50% higher in the Somajiguda section as compared to the Sultan Shahi section. Again, though its population density is lower, the Somajiguda section is spread over a larger area. Consequently, it requires larger expenditure than Sultan Shahi does. But do these structural differences justify a budget that is four times bigger?

The Managers of the two sections maintain that the funds available to them are sufficient. It may be assumed that the residents of the Somajiguda section are more vocal and also more aware of decline in service, which gives rise to action. But this hypothesis is yet to

[77] Interview with the Manager of HMWSSB's Somajiguda section, July 29, 2006.

be confirmed. A comparison of the funds allocated to the two sections involves several parameters. A look at the distribution of expenditure on operations and maintenance for the entire city would be both necessary and relevant.

Table 14: Expenditure related to water/sanitation by MCH and HMWSSB in the two wards

		HMWSSB (3)(4)			MCH (5)(6)			
	No. of voters	Expenditure on operations and maintenance	Receipts	Year	Expenditure incurred by the municipal engineer	Including the amount sanctioned by UCD for drainage	% of amount spent on slums	Year
Somajiguda	26,000 (1)	Rs. 1,800,000	Rs. 25,464,000	2006	Rs. 15,614,000		40%	2006-2007
Sultan Shahi	29,000 (2)	Rs. 480,000	Rs. 4,200,000	2006	Rs. 5,897,000	Rs. 2,740,000	65%	2005-2006

Sources:
(1) Interview with the Municipal Corporator from Somajiguda, August 10, 2006
(2) Ruby Donatienne, 2004
(3) Interview with the Manager of the Somajiguda Section, August 8, 2006
(4) Interview with the Manager of the Sultan Shahi Section, August 27, 2006
(5) Interview with the Municipal Engineer, Division 9, August 8, 2006
(6) Interview with the Municipal Engineer, Division 3, August 30, 2006

A part of the expenditure is meant for slums, 40% in Somajiguda against 65% in Sultan Shahi. This special concern for localities that are still under-equipped conforms to directives from above in this regard.

III: RESIDENTS RESORT TO SELF-HELP TO IMPROVE SERVICE

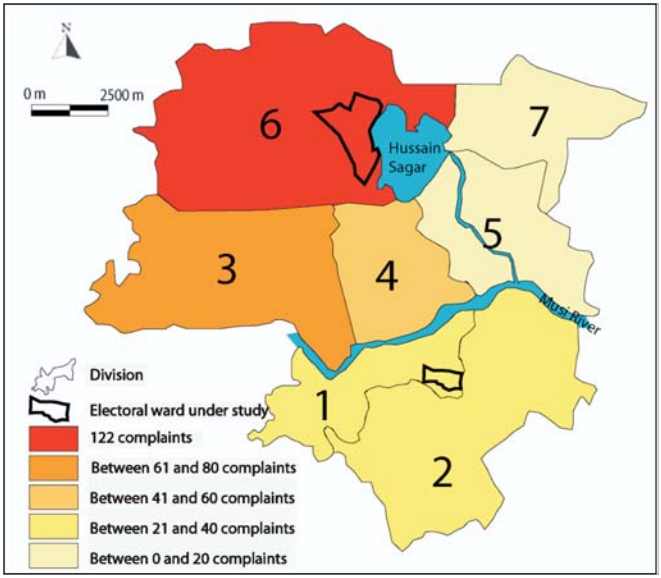
The residents of the two areas under study have resorted to several methods to resolve day-to-day problems which vary according to the location of their area and the economic segment to which they belong. The main focus here is to study decision-making processes and the relationship between users and the authorities or their elected representatives. We will first take up the question of individual grievances and then proceed to analyze prevailing collective practices.

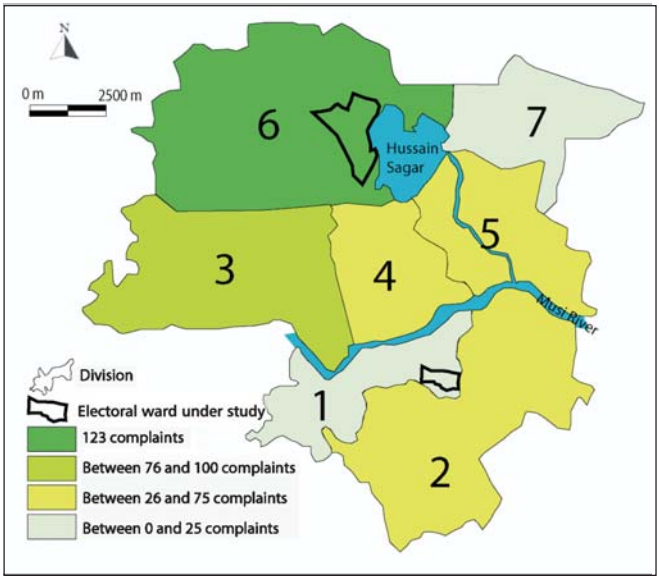
1. Individual Complaints: Differences in Response according to Locality

One way of getting the service improved, or at least of ensuring that it is properly maintained, is to directly contact HMWSSB (or MCH depending on the type of problem). The Board is presently keen on satisfying its clientele by streamlining the management of complaints so as to make it as quick and efficient as possible. The telephone complaint service is expected to regulate calls and ensure that all complaints receive a prompt response.

Does the method chosen for lodging a complaint – using the telephone or going personally to the HMWSSB office – depend on an individual's economic status? The sections are fairly efficient in resolving problems, but does prompt action depend on how the complaint is lodged?

Figure 5: Number of complaints lodged with MCC (red) and resolved (green) on September 4, 2006 in each MCH division under HMWSSB





Sources:
- Documentation provided by MCC on the state of complaints in the divisions on September 4, 2006
- Kumar Anil, Plan for augmentation of capacities for Water Supply System in GIS, 2003
- Kennedy Loraine, Municipal Corporation of Hyderabad wards and ward committees, 2002 elections
Design: Tricot Guillaume and Huchon Agnès, 2006

The ways in which people approach the grievance service, called Metro Customer Care (MCC), in different parts of the city differ greatly. The information contained in Figure 5 was obtained from the MCC Cell, which serves as a link between the office receiving complaints and local managers. It can be noted that the number of complaints is much higher in Division 6 situated to the north-west of the Hussain Sagar Lake than in the rest of the city. Somajiguda is located in this division, which also includes affluent localities like Banjara Hills and Jubilee Hills. An attempt will be made later to explain the reason for the polarization of complaints.

Further, it seems that the rate of efficient response to complaints is not really correlated to the number of complaints lodged (see Table 17). One would think that it would be difficult to attend to a large number of complaints within the allotted time, while a smaller number of complaints in a division – even though it may be fairly big – would be easier to handle. However, no correlation of this type is noticeable, either because the means of responding to complaints are proportionately divided or because the high level of complaints makes it possible to get the system working.

Table 15: Efficiency rate on September 4, 2006 in MCH divisions

1	2.70%
2	3.40%
3	40.60%
4	20.80%
5	30.60%
6	13.70%
7	9.10%

The efficiency rate corresponds to the percentage of complaints attended to within the time fixed by the Users' Charter (see Annex 2).

The percentage is calculated as follows: Number of complaints attended to within the prescribed period/(number of complaints pending at the beginning of the period + number of complaints received during the period)

Source: Documentation provided by MCC regarding the list of complaints in the divisions on September 4, 2006

The differences observed within the city are even more striking in the sections. The Somajiguda section received 77 complaints in five days from August 1 to 5 (2006) inclusive, while the Manager of Sultan Shahi received practically none.

Table 16: Statement of complaints lodged with MCC between August 4 and September 4, 2006

	Pending at the beginning of the period	Received	Resolved	Pending at the close of the period	Within the time limit	Beyond the time limit	Efficiency
Somajiguda	47	570	593	24	205	388	33.2%
Sultan Shahi	2		1	1		1	0%

Source: Documentation provided by MCC

In the course of one month corresponding to the end of the monsoon when there is a surplus of complaints linked to the rains, the first

section received 570 complaints through MCC while the second received none. One reason for the low recourse to MCC may be unwillingness to use the telephone. Further, the small size of the section, which does not have as much traffic on its roads as Somajiguda does, makes it less difficult for people to lodge complaints in person. Apparently, there is a telephone number in use through which the section can be contacted directly, and which helps bypass the new procedure of lodging complaints introduced by MCC. Some people also declare that they prefer to communicate their dissatisfaction directly to the technical staff in the field. Again, the residents of Sultan Shahi tend to approach the corporator quite frequently as will be seen later. Finally, as the following table reveals, the residents do not find it useful to resort to the MCC system due to its low efficiency. For these reasons, the residents of Sultan Shahi have not become used to the idea of approaching MCC with their complaints, unlike the residents of Somajiguda.

Table 17: Replies to the question, "Can you describe your dealings with HMWSSB?" (with regard to a complaint) on the time taken to respond to/solve the problem

	Somajiguda	Sultan Shahi
Fast	8	4
Slow	3	7

Source: Surveys conducted by the authors under the APUG Project, 2006.

Complaints in Somajiguda as well as in Sultan Shahi are essentially related to cuts in water supply, which seem to be rather frequent, and problems related to overflowing drains during the monsoon. Talking of problems in their own locality, households frequently complain that low pressure and irregular timings of water supply are the major issues in their area that need to be attended to.

Table 18: Detailed list of complaints in the Somajiguda Section: August 1 and 5, 2006

Description of complaints	Pending at the beginning of the period	Received	Resolved	Pending at the close of the period	Within the time limit	Beyond the time limit	Efficiency
Well	1			1			0%
Change of consumer category							
Change of line required							
Obstruction in pipeline	28	27	31	24	1	30	1.8%
Cleaning/ maintenance of meter							
Connection required							
Order for tanker	1	16	17		8	9	47.1%
Fluctuation in supply timings							
Overbilling and checking							
Illegal use of pump							
Low pressure	3	2	4	1	2	2	40%
Repair of domestic meter							
Repair of non-domestic meter							

Order for meter							
No water for "x" days	5	1	4	2	2	2	33.3%
Non-receipt of bill	1			1			0%
Others							
Pollution of water supply	3	3	3	3	1	2	16.7%
Replacement of manhole cover							
Cleaning of septic tank							
Overflowing sewer	22	28	28	22	18	10	36%
Repair of billing machine							
Overflow of rain water							
Additional tanker required							
Water leakage	2		2		2		100%
Total	66	77	89	54	34	55	24%

Source: Documentation obtained from the Somajiguda Section computer maintenance on August 6, 2006.

Table 19: Answers to the question: "For what type of problem do you contact HMWSSB?" (in case of complaints)

	Sultan Shahi	Somajiguda
Quantity of water	2	1
Sanitation	3	3
Quality of water	2	
Pressure		
Desilting	1	1
Timings	3	
Interruption of water supply	5	2
Connection	0	2

Source: Surveys conducted by the authors under the APUG Project, 2006.

Calls asking for water tankers are more frequent in Somajiguda: 129 tankers were ordered from August 4 to September 4, 2006, through MCC. It is possible that there is better publicity about the availability of this service in the northwestern part of the city than in the areas to the south of the Musi. To pinpoint other reasons for the "success" of the water tanker service, it is necessary to study the profile of the callers. Fourteen, or more than one-tenth of the total number of requests, came from the Centre for Economic and Social Sciences (CESS), an institution capable of paying for the service and also aware of how HMWSSB is organized and the services it offers. The water is probably used mainly for watering plants at the centre's flower gardens. Two orders came from Imperial Garden, a hall rented out for social functions, probably for the same purpose. It should also be noted that water tankers are generally ordered by "regulars". Thus, 73% of the orders are from people who solicit a tanker more than once a month while 44% of households that ask for a tanker do so two to seven times a month. The practice is thus more common among the residents of Somajiguda who can afford to pay for the extra water, though the high figure of 129 is not really representative of the whole section but rather of the 27 persons and institutions regularly asking for the service. In Sultan Shahi, no tanker was ordered through MCC during the entire period.

Thus, use of the new facilities provided by HMWSSB is not very widespread in Sultan Shahi. However, it is surprising that even direct complaints are not very common. In fact, the Manager claims that he receives, on an average, only one or two complaints a day through all means available – telephone calls to the section, through MCC, direct contact, etc. But it is possible that some of the complaints received directly by the Manager were not treated as such by him. Nevertheless, 49% of the residents of Sultan Shahi declare that they are in the habit of lodging complaints (against 57% in Somajiguda). But only 29% of these complaints are from individuals (against 54% in Somajiguda). In all likelihood, that is the main reason it appears that few people make use of services oriented towards increasing consumer satisfaction. What probably happens is that one person representing an entire group lodges a number of complaints on its behalf; hence the number of individuals lodging complaints seems small.

Income may be an explanatory factor for determining whether complaints are lodged individually or jointly. In Sultan Shahi, the results corroborate this: the residents are more economically vulnerable and not in a position to go to the section personally each time there is a complaint. This is probably less so the case in Somajiguda, where the population is more mixed.

Table 20: Percentage of households contacting HMWSSB for problems (according to income)

	< Rs.4,000 per month	**From Rs.4,000 to Rs. 9,999**	**> Rs.10,000 per month**
Somajiguda	45% (out of 11 households)	100% (out of 9 households)	48% (out of 21 households)
Sultan Shahi	31% (out of 13 households)	50% (out of 18 households)	87% (out of 8 households)

Source: Surveys conducted by the authors under the APUG Project, 2006.

It is possible that the relationship of residents to the public utility differs according to localities and that in the Old City they are less demanding. The sociological reasons for this difference in behaviour towards the public utility merits a broader and deeper study.

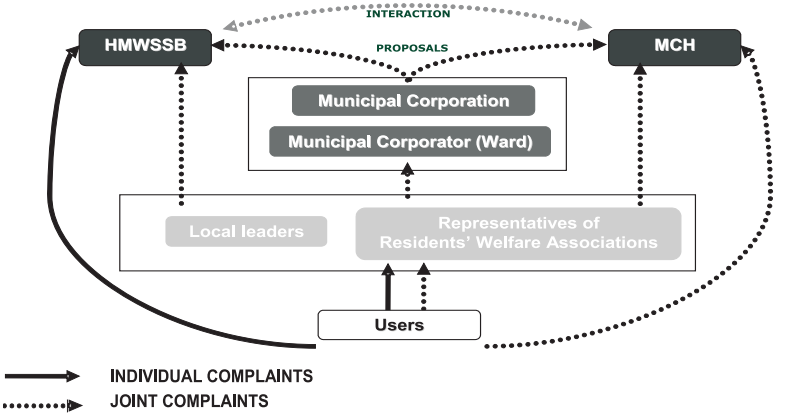
2. Representation: Need for Intermediaries

It emerged during group interviews that individual complaints are mainly related to minor problems. When it comes to major problems affecting several households, other methods are generally used to lodge complaints. Among these, several levers used by residents to instigate action may be mentioned.

a. Neighbourhood Democracy

Individual action is generally taken when a problem affects a single connection. But, very often, such a problem also affects other households in the neighbourhood (low pressure, interruption of service, etc.). The improvement expected by the complainant is, therefore, personal but the resolution of the problem benefits the whole locality. Joining hands to get individual complaints attended to can sometimes lead to group action. Lodging an individual complaint for a problem that affects an entire street or even a locality is often considered ineffective by the residents. Moreover, some residents may not be used to dealing with officials and prefer to seek the help of an intermediary closer to them.

Figure 6: Channel followed by complaints and proposals for the improvement of water and sanitation services (when they are not dealt with within HMWSSB or MCH)



Thus, according to the results of the survey, joint complaints account for 46% of the total complaints in Somajiguda and 71% in Sultan Shahi. It has already been seen that lodging a complaint in the conventional manner is less common in Sultan Shahi where approaching the nearest intermediaries with a grievance is normal practice. Joint complaints in Somajiguda are probably lodged at the level of the locality or the building because a large proportion of the population lives in apartment buildings or housing societies.

Thus, a problem that is common to the entire street gives rise to formal discussions among the residents and a group, usually consisting of men, is delegated to meet the officials concerned or another local actor. The very fact of being approached as a community leader contributes to the emergence of these individuals as public actors. Armed with a certain degree of legitimacy in the form of a political mandate or as representatives of an association, these community leaders are no doubt driven by personal motives but are generally considered to be effective as intermediaries for resolving problems.

Among such intermediaries, one may mention individuals appointed earlier during the implementation of UCD programmes in Sultan Shahi.[78] They are to be found in particular in slums where they organize meetings regularly to discuss local problems. They have access to UCD officials who consult them whenever the need arises. Such leaders are also to be found in Somajiguda, but here they act in a more informal manner and do not intervene directly in the resolution of problems related to water and sanitation.

Another type of leader is to be found among the members of local associations. For example, the members of the Gangaputra caste in Sultan Shahi have formed a society. They have several offices and organize celebrations on the occasion of festivals and other community functions. The society also attends to problems faced by the community's members regarding water.[79] The Bhola Sankar Basti Committee, an association in BS Maqhta in the Somajiguda ward, seems to play a similar role. Small local associations of this type, based on locality, religious and caste affiliations, or other common points, are quite numerous.

Lastly, persons with political power can also serve as go-betweens. For example, the municipal corporator of Somajiguda has relations among the people of her ward who keep her informed about the latest developments pertaining to the area. Political parties may have dealings among themselves, but it is an accepted fact that belonging to a particular party means approaching the elected representative from that party, irrespective of his/her rank. Residents' associations constitute a more institutionalized form of local representation, which will be described later.

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

[78] Group interview conducted on August 30, 2006, in the presence of Mrs. Laxmi, in charge of UCD projects.

[79] Interview with the president of Gangaputra Society, August 7, 2006.

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.

A final observation on the collective nature of these complaints is that they seem to diminish as income levels rise. John Harriss comes to the same conclusion in his study of Delhi: "It is clear that people – especially poorer people – most commonly undertake problem-solving together with their neighbours."[80]

Table 21: Links between income and joint complaints according to surveys

Average declared monthly income (in Rs.)	Below 4,000	4,000 – 10,000	Above 10,000
Percentage of joint complaints (among persons making complaints)	82%	63%	35%

Source: Surveys conducted under the APUG Project, 2006.

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. It is also possible that the more well-to-do households have better or easier access to the political and administrative spheres and, therefore, do not need to bother about intermediaries.

b. The Municipal Corporator: A Representative of the People and a Partner of the Administration?

MCH is divided into one hundred electoral constituencies called "wards". Each of these constituencies elects a representative known as the "ward corporator" or "ward councillor". Corporators, elected for a five-year term, are in charge of the development of their

[80] John Harriss, 2005, page 4.

electoral constituencies. Together with MLAs (Members of Legislative Assembly) and MPs (Members of Parliament), they constitute a "General Body" which meets once in six weeks. These representatives are involved in water access issues. What are their links with the parastatal? Distribution of duties is not dictated by official rules – which creates confusion – but rather takes the form of improvised arrangements in reality: interaction between individual corporators and HMWSSB depends on various factors such as personal relationships, 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.

In the decentralization process launched in India with the amendment, the municipal corporator can be seen to play a crucial role because s/he is the elected representative closest to the people. At a higher level, there are "Wards Committees" consisting of elected municipal councillors and nominated high-level officials who do not have any voting rights. All problems of a common nature are discussed during meetings which are a convenient forum that brings together these two sets of concerned actors. Each "Wards Committee" includes ten electoral wards (see Figure 6).

Every corporator receives an allowance of Rs.4 million to develop his/her ward.[81] Out of this amount, at least Rs.1 million must be spent on sewage collection. This budget is, however, indicative. There is a large amount of flexibility, as very often the estimates for a municipal corporator's proposals exceed the budget provided for the purpose.[82] In such cases, the administration deliberates. Municipal corporators are perceived by the administrative bodies as local representatives and privileged negotiating partners who communicate to them the needs and complaints of the people. They

[81] Or Rs.400 million for all local corporators. This amount may be compared with the budget proposals put up by MCH for the financial year 2006-2007: Rs.10.18 billion, or an increase of Rs.3.26 billion as compared to the previous year 2005-2006. (The Hindu, *MCH to discuss budget proposals,* January 30, 2006).

[82] Interview with the Executive Engineer of MCH, Division 9, on August 8, 2006. The Sultan Shahi corporator claims to have mobilized an additional Rs.7.5-8 billion through his proposals.

are thus expected to put up proposals for localities neglected by the administration, in accordance with the people's grievances.

It should be noted that MLAs and MPs also have at their disposal funds for developing the areas they represent. However, they are rarely mentioned by the people surveyed as being the leaders approached with grievances (in the surveys conducted during the course of this study, they were never cited as the main intermediaries for communicating complaints to the authorities concerned). On the contrary, the municipal corporator is mentioned frequently, particularly in Sultan Shahi where he seems to play a central role. 31% of households questioned in Sultan Shahi (14 out of 45 households) said they contact the municipal corporator whenever they have a problem as compared to 11% (5 out of 46) in Somajiguda.

Together with the proposals forwarded by municipal corporators, which are studied and most of which are included in the plans drawn up by MCH and HMWSSB, the latter also plan additional projects to fulfil what are in their view complementary requirements. In fact, the corporators' budget turns out to be insufficient.

It may be asked to what extent this dual approach to decision-making – bottom-up and top-down – satisfies the demands of the local population. Is the municipal corporator truly a representative of the people and does s/he have the means to satisfy the needs of all in his/her ward? To answer this question, it is important to look at the relations that municipal corporators in the two constituencies have with their constituents.

According to two municipal corporators interviewed, they were elected because their commitment to local associations preceded 2002: one of them claims he took considerable interest in local matters while the other was a member of a *mahila* (women's) group set up by UCD in the under-serviced locality of BS Maqhta, situated just outside the electoral constituency of Somajiguda. Neither had a very strong political base before the election and this raises

questions about their being chosen as the candidates of their respective parties. Furthermore, the political plank on which they got elected appears to be quite weak.

Municipal corporators are elected by direct universal suffrage and the candidate getting the majority of votes in the first round is declared the winner. However, the position and conduct of all political parties seem to be more or less similar in this democratic process. Concerning the BJP, presently in power in the Sultan Shahi constituency, the local elected representative admits that door-to-door canvassing is carried out to win support for the party. Thus, the households likely to vote for the BJP are registered on payment of Rs.5 as proof of a kind of membership in the party. The party supposedly garnered the support of 7,000 voters in this manner. When the election took place later, of the 20,000 people entitled to vote in Sultan Shahi, 14,000 cast their vote, out of which more than 4,000 were in favour of the BJP candidate.

Though elections appear at first sight to be democratic and secular, they are used by political parties to divide voters along communal lines. This tendency is particularly noticeable in Sultan Shahi where the parties are each more or less officially identified with a particular community. The corporator belongs to the Gangaputra community (fishermen by caste). This community has an association called the Gangaputra Society, defined by its president[83] as a mutual assistance group with three to four thousand members. According to some who were questioned in the field, it seems that the municipal corporator was elected because he belongs to this particular caste. If, in an urban environment, an electoral constituency or a municipal ward can be treated as a substitute for the village,[84] it is interesting to make a connection with the influence of the caste system on elections in rural areas.[85] In particular, it is relevant to underscore the concept of a "dominant caste", which appropriates political and

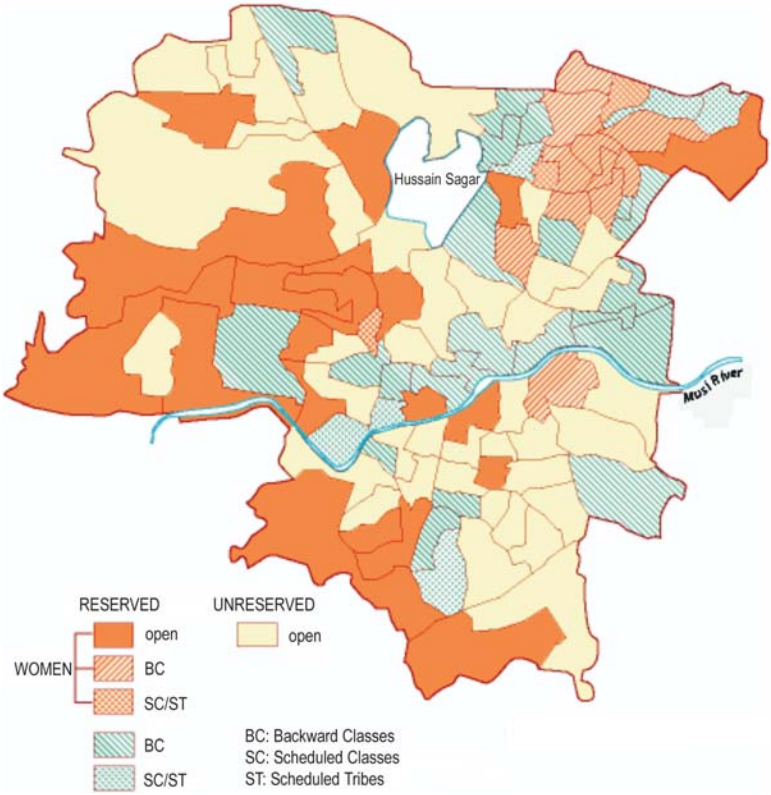
[83] Interviewed on August 7, 2006.

[84] Sivaramakrishnan KC, 2004.

[85] Deliège R., 2004, page 173.

economic power at the local level on account of its numerical strength. In Sultan Shahi, the representative of the Gangaputras was elected because his community is numerically dominant in the area. It is equally important to note that the Gangaputra caste is classified as "BC" (Backward Class). Hence, the system of seat reservation in MCH gives an advantage to this community because the seat in Sultan Shahi constituency is reserved for a member of the "BC" (see map in Figure 7). However, as regards his politics after being elected, the corporator claims to represent all communities in the locality without granting special favours to any particular community.

Figure 7: Different categories of seats in MCH elections in 2002.



Source: Kennedy Loraine, 2005.
Graphic design: Aimée Lafitte (CNRS, ADES)

Indira Nagar (one of the slums notified by UCD) situated to the south-west of Sultan Shahi is inhabited by a community belonging to the "SC" (Scheduled Caste) category whose members are said to have had close links with the Congress party for a very long time.[86] It would seem, from an interview with the representative or "convenor" of the SC section of the Congress party, that he has a grouse against the present municipal corporator. Do complaints voiced by the political leader have any real basis or are they an expression of the ideological and/or dogmatic opposition between the two parties? At the end of the group interview, however, it appeared that people are generally satisfied and do not hesitate to voice their demands to the corporator, especially regarding sewer pipes laid the previous year (cf. first project in Annex 4).

Finally, in Bela locality, also in Sultan Shahi, the communal logic is very evident. According to the president of a Residents' Welfare Association (RWA), the locality is totally dominated by Hindus and it is therefore not possible to approach the Muslim MLA with the residents' problems. The office-bearer also declared that, as president of the RWA, he supported the present municipal corporator at the time of elections and, therefore, he is treated well whenever he approaches him with the locality's demands.

The concept of community seems to play a very important role in the election of a municipal corporator. This is very obvious in Sultan Shahi where communities and localities overlap. It is, however, more difficult to assess during a corporator's term of office to what extent s/he favours the members of his/her own community over others by communicating their complaints to the administrative bodies.

In Somajiguda, the community-linked parameter is less visible because the associations with which we were in contact were based on different identity criteria. These organizations appear more territory based than community based. They receive two to three

[86] Ruby Donatienne, 2004.

complaints per week, smaller in number than in Sultan Shahi. This would explain the predominant practice in Sultan Shahi of residents taking the help of the municipal corporator to get the administrative bodies to listen to their complaints instead of going directly to MCC. The Sultan Shahi corporator thus acts as a go-between to convey both minor and major complaints whereas the corporator of Somajiguda seems to concentrate more on the larger problems facing the ward. For instance, the people of BS Maqhta, the biggest slum in Somajiguda, seem to be happy with their relationship with the municipal corporator who has helped them draw up requests regarding major infrastructure-related problems. These problems range from public lighting to drainage and sewerage systems.

In Sultan Shahi as in Somajiguda, municipal corporators seem to have good relations with HMWSSB and MCH. The managers say that they respond as soon as possible to corporators' demands, provided it is within their capacity to do so, and the corporators in turn seem to be quite comfortable in their dealings with these officials whether for minor problems or more important proposals. From the way the corporator is elected in Sultan Shahi, it is easy to presume that he might be inclined take prompt action when complaints pertain to his community, giving precedence to a patron-client relationship over the duties of an elected representative. However, going by evidence in the field, this is not so clear even though interviews suggest that, with regard to recurring and day-to-day problems, complaints from his own community get a better hearing.

The logic at work in Somajiguda is of a different nature, based more on territorial factors. The following section deals with this subject.

3. Arrangements of Residents' Associations: Joint Representation and Common Equipment

By forming associations, residents join hands and institutionalize the two methods available to them to improve the service provided

to people, namely joint representation and common equipment. Further, their collective nature increases pressure on their negotiating partners and can create economies of scale.

a. To Support and Relieve or Substitute Public Authorities?
Improving quality of life – above all, the service infrastructure – is the *raison d'être* of residents' associations. The inhabitants of a locality thus get together to ensure a pleasant living environment for themselves and their families. These associations are often limited to a housing society, a group of houses constructed by a single builder for a particular class of people, or a block of apartments.

Associations limited to a single building look after private equipment in the premises while the scope of action of colony associations covering an entire locality includes public spaces and they interact more closely with the administrative bodies. There are many residents' associations covering entire localities in both Sultan Shahi and Somajiguda, two in the former and many in the latter. Some of them enjoy a very special position with preferential services as in the case of the "Ministers' Enclave". The residents' associations we are concerned with are situated in ordinary residential areas such as Uma Nagar and Bela Colony. Among these, the Greenlands RWA was formed by combining three associations – BS Maqhta, Uma Nagar and Methodist Colony – with the specific goal of organizing street cleaning and garbage collection.

Are these associations expected to make up for the deficiencies in the services provided by the authorities? If so, how are the responsibilities divided? Residents' associations intervene in a wide range of areas. They may act directly as, for example, in the maintenance of neighbourhood parks, organization of leisure activities and festivities, security and providing of day-care facilities for children. They may also influence public utilities by coordinating services with the competent authorities as in the case of garbage management, water supply, maintenance of roads and power supply.

Representation

The residents of such localities seem to complain directly about minor and individual problems. For example, the president of Uma Nagar Association circulates the telephone number of HMWSSB among residents of the area. When there are major problems such as overflowing underground pipes flooding the street and interruptions in water supply affecting the whole locality, complaints are sent through the office-bearers of the residents' association. The presidents of the Bela Colony and Uma Nagar associations are contacted daily with such complaints. They in turn contact the section staff whom they know well and with whom they have a privileged relationship. The president of the Uma Nagar RWA claims that he first contacts the lower rungs, approaching the higher-ups only if the problem is not solved.

The Greenlands Association, in contrast, does not act as an intermediary and does not enjoy very good relations with HMWSSB, according to a high office-bearer. It concentrates mainly on the problem of garbage collection. The inhabitants of BS Maqhta resort to other, less institutional, channels.

In Somajiguda, the representative role of associations tends to play out in opposition to the elected corporator, competing for legitimacy and representation. Voluntary workers assert themselves as disinterested individuals performing the role of communicating the needs of the local populace. They explicitly question the democratic nature of the "traditional democratic machinery" and describe themselves as "social workers".[87] Their aim is to reduce the gap between demand and supply of services, especially where water is concerned.

The office-bearers of the Greenlands and Uma Nagar RWAs, both in Somajiguda, dismiss the role of the politician. The Uma Nagar Association, it would seem, has no contact with the corporator who is described as only interested in those areas that could win votes. According to an office-bearer, there are not enough residents in the locality to constitute a vote-bank.

[87] The president of the Uma Nagar Colony RWA, August 5, 2006.

On the contrary, in BS Maqhta, the slum to which the Greenlands president belongs, the corporator is very involved and the two leaders seem to vie with each other to get the locality's problems solved. According to the Greenlands president, politicians are afraid to interfere when RWAs become too powerful. He claims to have received messages asking him to refrain from getting too involved in the locality's affairs. This conflict is supposedly the reason for the failure of a youth group he had tried to set up. He asserts that his organization's success in the realm of garbage collection is due to the politician's lack of interest in a matter considered too humdrum and requiring little financial investment. He goes so far as to talk of corruption, saying, "It is not so easy to work with politicians because many people give money and we don't."

The president of the Bela Colony RWA presents a contrast. He supports the corporator and has promised him that the residents of the locality will vote for him during elections. It is a matter of *quid pro quo*: the corporator takes particular interest in the locality's affairs while the president can approach him any time with his problems. Their understanding is strengthened by their political loyalty: both belong to the same party, the BJP.

Coordination

Residents' associations can take direct action for improvement of local services. One of their goals, in fact, is to go beyond compensatory action and be associated at the planning stage. The construction of a new sanitation network in 2002 in the Methodist and Uma Nagar colonies would serve as a good example of this type of action. Two-thirds of the cost of about Rs.600,000 were borne by the Government. The remaining amount was raised by the residents themselves, with a contribution of Rs.1,600 per household in Uma Nagar Colony. The system was designed to satisfy the locality's needs for the next twenty years. The project was "mutually decided" with HMWSSB; the MCH was also involved in the proceedings since the laying of pipes meant cutting across roads.

This cooperation with the public utility had a profound effect on the management of garbage in the Greenlands area which is now considered a model. High office-bearers of the RWA regret the fact that they are not associated with organizing water supply in BS Maqhta. According to them, this is because the main problem is not quantity, which was increased in 1998, but management: in spite of having individual connections and access to public taps, the residents are not satisfied and a lot of water is wasted.

In 1998, an effort was made to promote exchange of ideas on the improvement of urban services through the setting up of a forum for a "Green Hyderabad", a platform for consultations whose message to MCH was clear: "We have to pay taxes. We would like to know what you will do for us in return. So how can we help you to improve your service?" The organizers wanted to define their priorities clearly. In this process, traditional political channels were bypassed. To start with, the forum brought together 120 associations to discuss "urban governance". Unfortunately, no solution emerged from this initiative.

Table 22: Distinctive features of Somajiguda and Sultan Shahi localities

	SOMAJIGUDA						SULTAN SHAHI	
	Uma Nagar Colony[1]		Methodist Colony[2]		Greenland Colony[2]		Bela Colony[3]	
	Details	Comments	Details	Comments	Details	Comments	Details	Comments
Date of creation	1970s		1950s		1995		2002	
Number of households	250		60				100	
Subjects	Security, day-care centres, leisure, green belts, etc.		Garbage, green belts, roads, leisure, representation		Garbage		Represen-tation, garbage	
Collective charges	75		30		?		5	
Other methods of financing	Individual private sponsors, MCH		Individual private sponsors, MCH		MCH			
Frequency of elections	2 years							
Frequency of internal meetings in the locality	Monthly							

	SOMAJIGUDA						SULTAN SHAHI	
	Uma Nagar Colony[1]		Methodist Colony[2]		Greenland Colony[2]		Bela Colony[3]	
	Details	Comments	Details	Comments	Details	Comments	Details	Comments
Type of problems for which the association is a negotiating partner (frequency)	Major Every other day	For minor problems, it has distributed HMWSSB's direct telephone number			None		All	
Action related to water and sanitation	2002, construction of sanitation network	Rs.600,000 of which 2/3 contributed by government and 1/3 by residents. Executed by HMWSSB.	2002, construction of sanitation network	Rs.600,000 of which 2/3 contributed by government and 1/3 by residents. Executed by HMWSSB.	None	Would like bulk water supply	Demand for cleaning reservoir, but no action taken	
Relations with HMWSSB	Excellent	The GM sometimes attends meetings					Good relations	While individuals have to wait for a long time, all they have to do is to pick up the receiver
Relations with the ward corporator	None	The politician is avoided. It is not an area that will win him votes.			Distrust	He is supposed to have received threats for being too involved in local matters	Exchange of courtesies	Quick disposal of problems against promise of votes

Sources:

(1) Interview with the president of Uma Nagar RWA, August 5, 2006.

(2) Interview with the secretary of Greenlands RWA, August 5, 2006.

(3) Interview with the president of Bela RWA, July 25, 2006.

Importance of voluntary workers

The system of residents' associations seems quite effective because the services provided to these localities are of relatively good quality, or at least problems are solved much faster than in other areas.

However, all RWA presidents stress the fact that their associations are entirely dependent on the commitment of voluntary workers. The associations were set up after colonies were built; hence, their existence depends on residents' goodwill. For example, the Bela Colony association was set up a long time ago but it was largely inactive until the incumbent president took over the reins. The presidents of the two associations studied in Somajiguda are retired army officers who devote all their energy to the common cause of local issues. These local actors, deeply involved in the day-to-day life of their respective localities, emphatically complain about the wait-and-watch attitude and even lack of civic engagement of their co-residents: the latter are said to wake up only in times of crisis and to not even pay their dues regularly.

The local leaders declare that participation in a locality's affairs takes time and effort, affecting their family life and professions. Besides, an association's efficiency is threatened each time an official gets transferred or corporators change, because its functioning is based on interpersonal relations that have to be rebuilt. Given that residents' associations seem quite unstable, voluntary workers would like them to be more institutionalized so that they become more viable, especially at the financial level. Though supposedly disinterested, these voluntary workers would like some kind of compensation in the form of recognition. One sign of recognition that adds to an association's prestige is being served faster than ordinary users by the public utility and getting the General Manager of the HMWSSB section to attend local meetings.

Durability

The Greenlands RWA office-bearer admits that recognition, if it assumed institutionalized form and resulted in material advantages, would give more stability and durability to residents' associations. His association has a Memorandum of Understanding with MCH, an advantage enjoyed by only two associations in the city. Another advantage could be handing over to the association the resources available for a locality's development, but this could raise the problem of trust in the person to whom the money is given. Yet another idea advanced by him involves promoting competitiveness between

associations so that the people involved get certain benefits. However, he points out that there is the risk of politicians insinuating themselves into residents' associations if the latter become too important.

b. Question of Social Redistribution

Undeniably, residents' associations mobilize local human resources and improve the lives of people. But their existence is also linked to a lack of socio-economic homogeneity in the city. It is to be noted that they are usually formed in well-to-do localities with the aim of satisfying demands that the public authorities are not capable of fulfilling entirely. In short, residents' associations have collective projects whenever they have the means to execute them. Consequently, organizing a circumscribed community for the purpose of providing collective services raises the question of the spatial redistribution of investments – both human and financial – within the framework of urban services. Is the growing number of residents' associations not synonymous with an increase in the different levels of service and does it not imperil the Boards' plans to bring the entire city under universal coverage?

Expressing an opinion on this issue would be difficult without analyzing its various aspects. As far as water and sanitation are concerned, it should be noted that the residents of the localities under study, which have their own RWAs, are still connected to the network through individual connections. Thus, the service they get does not essentially differ from that provided to other citizens. A more functional difference could perhaps be introduced if the locality were to buy water in bulk from the public utility and take responsibility for distributing it within its territory. This, for example, is the case in Kukatpally where some RWAs take over the responsibility of storing water in water towers and distributing it to individual users in addition to taking charge of maintenance and billing.[88] This assumption of tasks normally performed by the public body is not a bad thing in itself because it relieves the latter of its responsibilities in certain specific areas besides providing greater

[88] Huchon Agnès and Tricot Guillaume, 2006.

satisfaction to some users. It is based on the reasoning that it is good to adapt to local needs, for example in terms of the timings and quantity of supply. HMWSSB is finding it increasingly difficult to meet the requirements of a rapidly growing city, especially in areas like Somajiguda[89] and in outlying districts, and the intervention of residents' associations can be of great help.

However, such developments are likely to bring about a significant change in the overarching general service. Will it lead to a functional de-linking of urban space? Or will it play the role of a leader or forerunner by contributing to the advancement of the service? In the first place, it should be noted that such local organizations pay for their water at the normal rate of Rs.6 per cubic metre charged by the public utility for the lowest slab. This means that the supply is highly subsidized because the true production cost is much higher.[90] In a situation where the public utility's deficit is subsidized by the Andhra Pradesh Government, this seems unwarranted. It would be in the public utility's interest to lay down suitable conditions so that these collective bodies can continue to function without jeopardizing the system based on cross-subsidies.

In this context, other models that initially appeared more equitable have been tried out and could solve the problems mentioned above. In the Greenlands Residents' Welfare Association, several socio-economic strata have been combined by clubbing B*S* Maqhta with the Uma Nagar and Methodist Colonies. This makes it possible to benchmark, use cross-financing and allow a mixed locality, one part of which is under-serviced, to move up the scale. However, it turned out that the institutional set-up was based on a system that did not raise much money, the only source being garbage management bringing in around Rs.30,000 per month for the residents of all three areas. However, the arrangement helped generate economies of scale. As for larger projects such as the

[89] According to the president of Uma Nagar Colony, thirty years ago there were 44 households in the colony while today there are 250.

[90] About Rs.22 per cubic metre for water from the River Krishna. Interview with the SIG Manager of HMWSSB, May 2006.

laying of a sewerage pipe, the Uma Nagar and Methodist Colonies joined together and left out BS Maqhta. To what extent is it possible to club together localities with different socio-economic backgrounds when it is a matter of executing costly projects? The problem of slums in outlying areas condemned to neglect by their poverty persists because they are not very likely to be included in such projects. The State Government in its role as overall planner, coordinator and regulator can make an important contribution by ensuring that these area-wise institutional arrangements are based on win-win reasoning not only for the beneficiaries but for the entire community.

This experience could, however, serve as a model in cases where different socio-economic groups are involved. Institutions are aware of the effectiveness of this model, but they have not attempted to replicate it in order to encourage people to take interest in local affairs. It seems this approach should be adopted from the bottom up without relying on the support of official institutions to form such forums. According to the Greenlands office-bearer, just one other attempt was made to set up a forum bringing together several residents' associations of Hyderabad in Tarnaka in the eastern part of the city. With the support of an NGO called International Foundation for Human Development (IFDH), a permanent committee federating the RWAs of Tarnaka was set up in an area with a population of 65,000 consisting of 17 RWAs representing localities and 180 associations representing the residents of buildings.[91] For the last three years, a local newspaper, *Tarnaka Times*, has kept the residents informed about meetings, discussions, the results of earlier meetings as well as ongoing projects (http://tarnakatimes.tripod.com). Viewed from the angle of urban governance, this project is interesting on several counts. First, as mentioned earlier, it brings together people belonging to different socio-economic strata. Second, unlike many other local initiatives, it seems to have lasted and is different from the usual associations because of its obvious professionalism. It is a forum where people

[91] IFDH website consulted on September 10, 2006.

from different strata can express themselves freely. Several "functional units" have been set up to take action in various domains. Thus, there is an education and culture cell, a sports cell, a legal cell, a security committee, a senior citizens' forum and the Tarnaka Consumers' Council. As for problems related to water, the permanent committee is equally active. In the monthly issue published in June 2006, there were reports on meetings held with HMWSSB to find out how the rates for connecting buildings to the sewerage network could be lowered.[92] Communications from HMWSSB regarding future disconnection of supply to certain buildings are also published in the paper.

It is, however, important to avoid one important pitfall. With reference to the example set by Delhi where several residential localities have become closed or "gated" communities, residents' associations are regarded as a crucial factor in the domain of security and have only been very modestly involved in providing infrastructural needs.[93] Likewise, in Somajiguda, and in Hyderabad as a whole, the entire range of activities hinging on security is of fundamental importance for many residents' associations. In the Uma Nagar Colony RWA, for instance, there was a meeting on security in the locality the day before our interview with its president. This meeting was attended by no less than 45 people, a matter of great satisfaction to the association's office-bearers who are not used to seeing so many people at a meeting. Security is also a predominant concern in some professional communities in Kukatpally (for example, the HAL colony) that are completely cut off from the outside world and do not allow entry to outsiders.

In Hyderabad, and specifically in the two wards under study, the coming together of residents in the form of RWAs has increased their lobbying power with the public utility in charge of water supply and the Municipality. This, in turn, seems to have led to an improvement in water supply. However, water is not their sole

[92] Tarnaka Times (No. 39), June 2006. Available on the Internet http://tarnakatimes.tripod.com/id4.html

[93] Sivaramakrishnan KC, 2004.

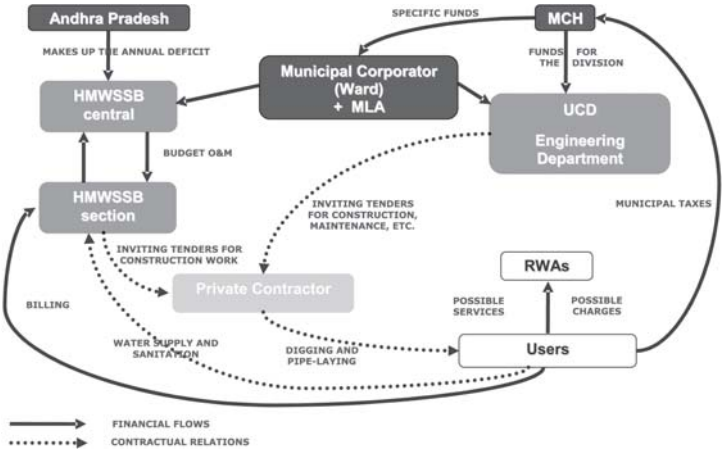
preoccupation; it is just one of the many issues taken up. If living conditions such as cleanliness of the immediate surroundings and overall quality of life are included, there is no doubt that localities that have RWAs generally have an advantage over localities that do not. It is up to the residents and to HMWSSB to find a service suited both to the demands of users and to equitable spatial distribution based on spatial unity. Today, public monopoly of water supply is a major safeguard against dissension. But there is a seeming lack of mechanisms for collective representation going beyond area- or community-based organizations in view of setting up an effective and viable system of equitable distribution.

CONCLUSION

Despite its stated objective of improving the integration of the water and sanitation sectors, HMWSSB's plans for extending its effective jurisdiction over the entire metropolitan area have not yet been realized. It seems unlikely that, at least in the medium term, it will be able to fulfil its goal of becoming an overall managerial body capable of satisfying public demand by providing universal and homogenous supply.

In fact, analysis of the ongoing urban processes in the two wards under study has given rise to the hypothesis that there is a dynamic interaction between urbanized spaces and the diversification of supply, and this diversification increases with the rhythm of population growth and the extension of infrastructure networks. This can be explained mainly by the fact that the public utility cannot for the time being fulfil public demand in terms of quality and quantity in rapidly developing areas like Somajiguda or in the more distant suburbs.

Figure 8: Interaction between actors for creation of new infrastructure and major maintenance work



Some of the beneficiaries are not mentioned here in spite of their sporadic participation, e.g. Central Government (financing of UCD projects) and QQSUDA (occasional intervention). Similarly, MPs with funds at their disposal have not been mentioned.

Consequently, the rationale underlying the differentiation of supply would appear to be a response to the diverse requirements of an urban society that no single public utility can satisfy.[94] According to this reasoning, the various actors involved in urban governance take over from one another and make it possible to adapt the service to diverse expressions of demand. This could be treated as an intermediate phase; it is, however, apparent that the different actors are now firmly rooted with regard to the mechanisms of water supply and sanitation services in Hyderabad and their activities are, in some cases, essential to keep people satisfied. This myriad of actors is more or less the same in both the wards (see Figure 8), but their behaviour is remarkably different and as such compels the public utility to adapt its objectives to the locality in question.

In Sultan Shahi as well as in Somajiguda, the municipal corporator plays a pragmatic role in the ward's public affairs, but s/he does not have enough latitude to play a truly political role. In both localities, the corporator strives to ensure that areas not fully assimilated in the network are brought up to the required level by supporting their demand for decent basic infrastructure. In the Old City, the corporator is a decisive link in the long chain representing the public utility's logistics, especially where its daily operations are concerned, because s/he acts as a catalyst and serves as a conduit for both individual and collective complaints. In Somajiguda, in contrast, the system of RWAs is more dominant as a means of satisfying the residents' higher than "average" demand. The residents of this area also make more frequent use of the services set up by the public utility to ensure the satisfaction of its clientele (water tankers).

Even though they are not part of the formal decision-making bodies, the public's representatives involved in urban governance are in contact with the administration at the municipal level for the resolution of problems related to day-to-day management. Although activities which go against the ideal of a homogenous universal service have no place in the official discourse (supply of water tankers, contacts with corporators for installation of

[94] Jaglin Sylvy, July 2005.

second class infrastructure in slums, etc.), it seems the management of infrastructure will, in the future, require more than ever before different levels of actors to communicate people's demands and provide support for making the responses to users/ consumers flexible and efficient. Thus, residents' associations, municipal corporators and the Board's sections in different localities have every reason to continue to coexist. As a result, the public utility, if it does not intend to take over the roles of all the actors involved in urban governance, will have to find new methods of negotiation, recognition and assimilation of stakeholders in the overall institutional structure.

Finally, it should be pointed out that execution of the Board's ambitious plans for uniform water supply seems difficult given the growing environmental challenges and also because the financial investment needed for this purpose is enormous. As it has already been mentioned, actors representing civil society constitute vital human capital, on which the public utility can depend at the local level. From the technical and financial points of view, it is difficult to judge the feasibility of such a project and whether the choice of universal infrastructure networks would indeed be an appropriate model for the entire range of users. It would, however, be useful to explore the social consequences of universal coverage. According to Marvin and Graham, extending the networks to all parts of the city is a necessary step towards "integrating urban spaces".[95] In Somajiguda, there is evidence of this at the neighbourhood level because the concern about urban amenities constitutes the foundation on which all other collective activities are based and encourages "social bonding" through the formation of RWAs. But does it follow that a techno-spatial organization based on varying levels of service would necessarily result in urban fragmentation?[96] The provision of water and sanitation networks is not likely to bring about any socio-urban integration of disconnected areas like Sultan Shahi, Somajiguda

[95] Graham Stephen and Marvin Simon, 2001.

[96] May Nicole, Veltz Pierre, Landrieu Josée, Spector Thérèse, 1998.

and the outlying districts of Hyderabad because there is no social interaction between their inhabitants with regard to the management of this infrastructure. As far as people feeling neglected by the authorities, surveys show that this feeling is not limited to the difference in the level of access to water and sanitation facilities but is founded on pre-existing socio-economic disparities. The most critical question is whether it is possible to avoid excluding the underprivileged sections of society from a service that is undoubtedly in the process of being standardized for the city as a whole.

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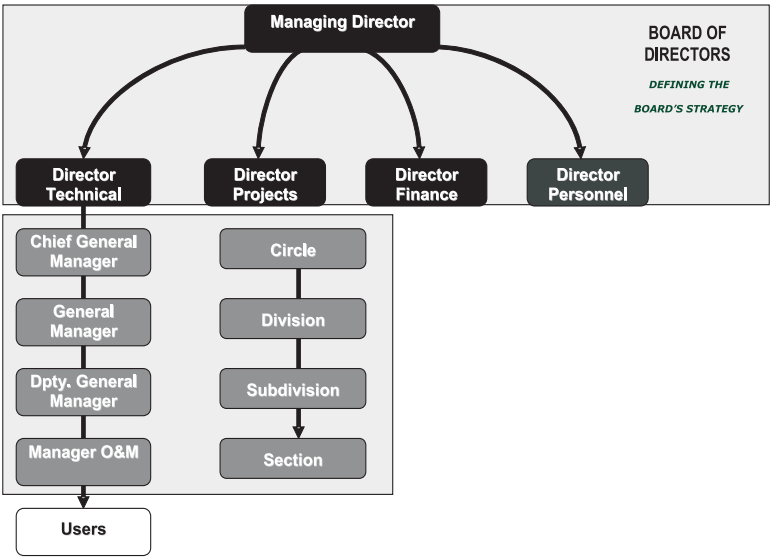
ANNEX 1: HMWSSB'S ORGANIZATIONAL STRUCTURE



Note: The Board of Directors includes all the directors as well as the Chief Minister of Andhra Pradesh, the Minister for Administration and Urban Development and the representatives of institutions involved in health and water.

HMWSSB was set up in December 1989. Its jurisdiction has expanded since and its policy is oriented towards consumer satisfaction.

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 HMWSSB 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. According to Sini Elizabeth Johnson, this staff seems to be insufficient and overworked[97].

Apart from this hierarchy, a large number of individuals serve HMWSSB indirectly as the latter outsources many of its services to private operators.

There are thirteen trade unions within HMWSSB but only one, which has the largest number of members among the employees, has the right to discuss the Board's policies and take part in the proceedings of disciplinary councils. Other unions can only convey their members' grievances to the management. According to the Financial Director, it is not necessary to belong to a union to voice one's grievances. Further, the first and third Saturdays of every month are set aside as "Employees' Grievances Day" when the Board's conference room opens its doors to employees for two hours in the afternoon.

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 4 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: operations and maintenance, finance, projects and human resources. HMWSSB employs 7,560 people. Expansion of the area under the Board's control has led to greater decentralization in decision-making related to operational matters. Nevertheless, all policies are decided by a central administrative body (see Box 1).

Within the framework of this decentralized organization, managers enjoy a certain amount of freedom in dealing with matters related to operations and maintenance and collection of dues, but decisions regarding small investments can be taken only with prior permission

[97] Sini Elizabeth Johnson, 2004.

from senior officials. However, policies related to connections and complaints were centralized after the setting up of MCC and SWC in Khairatabad, as described in the main body of this paper.

Decisions related to investments depend on the amount involved and should conform to the following categories:

Amount in Rupees	**Level**
Up to 20,000	Section
Up to 100,000	Division
Up to 500,000	Circle
Above 500,000	Director-General

ANNEX 2: HMWSSB'S CITIZENS' CHARTER

The Citizens' Charter was drawn up in 2000 with the objective of providing greater satisfaction to the Board's clientele. The Charter has fixed the minimum and maximum number of days for attending to a complaint from the date of receipt.

Nature of complaints	Redressal in Days	
WATER SUPPLY	**Minimum**	**Maximum**
No water supply for "X" days	3	4
Low water pressure	3	4
Polluted water supply	3	4
Erratic timing of supply	2	3
Water leakage	2	3
Change of category of consumption	7	10
Change of line requested	7	15
Illegal use of pump	1	2
SEWERAGE		
Sewage overflow on the road	2	3
Choking at customer premises	1/3	1
Replacement of missing manhole cover	1	2
Private septic tank cleaning	7	15
METERING AND BILLING		
Excess bill and verification	7	10
Non-receipt of water bill	7	10
Cleaning and maintenance of meters	7	10
Domestic meter repair and replacement	7	10
Meter repair non-domestic	1 1/2	7
REQUEST FOR SERVICE		
Tanker required for additional water in the area under the Board's jurisdiction	1	2
OTHERS		
Complaints related to borewells, PPCs, illegal connection, etc.	1	7

Source: Boards displayed in every HMWSSB section

ANNEX 3: CHANGES IN HMWSSB'S BUDGET AND RATES

The Table below shows the changes in HMWSSB's budget from 2000 to 2006. After registering a surplus during the first three years, the budget shows a deficit in 2005-2006 in spite of a substantial increase in receipts. The impact of the high expenditure incurred by the Board after commissioning the Krishna Project is clearly evident in the budget. It would be interesting to monitor the changes under the heads of expenditure on electricity and loan repayment, which account for the budgetary deficit.

Changes in the HMWSSB budget during the last few years

	2005-06	2004-05	2003-04	2002-03	2001-02	2000-01
Receipts (in million rupees)						
Billing for water and sanitation		1,937.139	1,638.105	1,532.924	1,091.116	1,117.250
Charges for new connections		676.862	431.169	523.762	268.475	246.207
Other receipts		91.743	86.802	66.613	58.005	22.667
Interest		12.000	11.355	2.275	1.906	793
TOTAL	3,295.0	2,717.744	2,167.431	2,125.574	1,419.502	1,386.917
Expenditure (in million rupees)						
Personnel		674.163	608.296	578.660	587.864	557.802
Electricity		803.447	483.083	512.301	495.229	469.619
Chemicals		24.586	27.226	22.580	20.681	21.490
Maintenance of network		578.518	528.965	406.242	256.053	190.371
Administration and other expenditure		95.499	125.754	133.434	111.553	141.216
Sub-total A		2,176.213	1,773.324	1,653.217	1,471.380	1,380.498

	2005-06	2004-05	2003-04	2002-03	2001-02	2000-01
Surplus/Deficit before amortization and interest		541.531	394.107	472.357	-51.878	6.419
Interest		201.756	126.961	87.078	15.413	2.823
Amortization		270.400	161.366	157.098	145.976	134.082
Sub-total B		472.156	288.327	244.176	161.389	136.905
TOTAL (A +B)	3,788.0	2,648.369	2,061.651	1,897.393	1,632.769	1,517.403
Surplus/(Deficit)	(493.0)	69.375	105.780	228.181	(213.267)	(130.486)

Source:
- For the years 2000-2001 to 2004-2005, information obtained from CDP Hyderabad, 2006.
- For the year 2005-2006: The Hindu, YSR rejects water board's proposal, August 2006.

Concerning the rates for water, there has been a considerable increase during the last fifteen years. The last hike took place in 2005.

Rates for domestic connections (including immovable fixtures since 2002) without meters

Minimum charges (rupees/month)		
Size of pipes	**From 1993 to 2002**	**Since 2002**
15 mm	120 (no details available about the rates charged according to the size of connection)	90
20 mm		270
25 mm		600
40 mm		1,500
50 mm and above		3,200

Rates for domestic connections with meters

Price per KL (in rupees)			
Consumption	**From 1993 to 2002**	**From 2002 to 2005**	**Since 2005**
Up to 15 cubic metres per month	40 (fixed monthly charge)	6	6
From 15 to 25 cubic meters per month	3		8
From 25 to 30 cubic metres per month	5		
From 30 to 50 cubic metres per month		10	15
From 50 to 100 cubic metres per month			20
From 100 to 200 cubic metres per month			25
From 200 to 500 cubic metres per month		30	35
Above 500 cubic metres per month	10	Rs. 30 for total consumption	

Rates for connections for buildings

Price per KL (in rupees)	
Consumption	**From 1993 to 2002**
Minimum monthly charge	500 (fixed monthly charge)
Up to 300 cubic metres per month	3
From 300 to 500 cubic metres per month	5
Above 500 cubic metres per month	10

Price per KL (in rupees)	
Consumption	**Since 2002**
Up to the agreed quantity[98]	6
Above the agreed quantity	25

Source:
- HMWSSB website www.hyderabadwater.gov.in, May 5, 2006, webpage updated in 2002.
- The Andra Pradesh Gazette, Part II extraordinary, published with permission from HMWSSB, Hyderabad, 2005-01-28 (registered HSE-49/2003-2005).
- Saleth and Dinar, 1997.

[98] The agreed quantity was changed in 2002. From 30 cubic metres per apartment, the maximum quantity was reduced to 15 cubic metres per apartment.

ANNEX 4: SOME FACTS AND FIGURES ABOUT HMWSSB'S WATER SUPPLY

As the organization responsible for water management in metropolitan Hyderabad, HMWSSB is in charge of planning, designing, constructing, executing and maintaining the water and sanitation networks. The area under its jurisdiction includes the territory under MCH in the case of water supply and sanitation networks and four of the surrounding Municipalities (L.B. Nagar, Gaddi Annaram, Kukatpally, Qutbullapur) where the responsibility for supplying water was gradually transferred to this semi-public organization in the 1990s. Under what conditions does HMWSSB function? What are the general characteristics of the services it provides?

Hyderabad is situated in the Krishna basin on the banks of the River Musi. Its average annual rainfall is 700 to 800 mm over a period of about 100 to 120 days. The history of water supply in the city is traced below in some detail:

Importance of water in the area: A historical legacy

Hussain Sagar, an artificial lake situated in the city's centre, was initially the only source of water in Hyderabad. It was created in 1562 with water from the River Musi and covered an area of about 13 sq. km. Later, several other lakes were created by the rulers of the Qutb Shahi dynasty. In 1894, Hussain Sagar was the principal source of water supplied through pipes to the city's residents. A filtering system consisting of sandbeds, through which water was allowed to percolate, ensured supply of good quality water to the low-lying areas to the north of the River Musi.

As the city spread, it was found that the lake was no longer capable of satisfying its daily requirement of water. As a result, two other lakes were formed: Osmansagar (1913) and Himayatsagar (1927). Apart from providing potable water to Hyderabad and

Secunderabad, these lakes were also supposed to serve the purpose of controlling floods, especially after the great flood of 1908. For several decades, they were able to satisfy the requirements of the twin cities. In 1961, the capacity of 170 million litres per day (MLD) was just enough to satisfy the needs of a population of 1.2 million. In 1965, the Government of Andhra Pradesh decided to draw water from the River Manjeera, a tributary of the Godavari, to supply the city. A capacity of 273 MLD was reached in two stages (1965 and 1972). After HMWSSB was set up in 1989, a new dam was built in Singur in 1991 on the River Manjeera to augment the city's water supply. Despite this, water supply has been limited to one hour every two days since 1993 because supply is insufficient to meet demand. New projects came up only ten years later.

Attempt to cover the gap between supply and demand of potable water

In November 2002, HMWSSB launched a project to tap the waters of the River Krishna (see chart below). According to the City Development Plan (CDP) for Hyderabad, this source was expected to supply 261 MLD in 2006. Its capacity is to be increased to 681 MLD in 2011 and 1,362 MLD in 2021.[99] This change in the production profile is supposed to cover the gap between supply and demand. However, use of this source proved to be very costly in terms of the electricity required to bring it to the city: the pipeline covers a distance of more than 130 km and it is impossible to depend entirely on the gravitation system (see HMWSSB's accounts in Annex 3).

[99] RAINWATER HARVESTING, *Hyderabad's water blues: Lakes, rivers fall prey to urbanization*, 2003.

Resources used by Metropolitan Hyderabad

Source	Osman Sagar	Himayat-sagar	Manjeera Dam	Singur Reservoir	Nagarjun Sagar Reservoir
River *	Musi	Esi	Manjira	Manjira	Krishna
Type of system *	Gravity	Gravity	Gravity	Gravity	Pumping
Distance to the city *	15	9,6	58	80	116
In operation since*	1922	1927	1965	1991	2004
Initial production capacity (in thousands of cubic metres) **	102	68	273	170	341
Production in 2005 (in thousands of cubic metres) *******	**68**	**50**	**203**	**346**	**261**
Average cost of production of one cubic metre ****	Rs.3		Rs.12		Rs.22

Sources:

** Maria Saleth R. and Dinar Ariel, 1997.*

*** Rainwater Harvesting, 2003.*

****CDP Hyderabad, 2006.*

***** Kabeer, Interview on May 2, 2006.*

In 2005, the metro city's daily production capacity was 928 MLD for a population of 5,750,000, as recorded by the 2001 census.[100] Data relating to the volume of harnessed water vary slightly according to the different sources. The data also vary according to season, especially in the case of the lakes Osmansagar and Himayatsagar which rarely reach their full capacity due to a fall in the inflow of water. In fact, the spread of the city to areas that once provided water to these two lakes has caused a fall in the net annual recharge of ground water and led to their contamination by sewage. This has endangered the future of these lakes.

The general condition of the network has also led to substantial technical losses. Although official documents placed the average daily consumption at 163 litres per head in 2003 in the City Development Strategy, this figure seems to be based on production and does not take into account technical losses which amount to about 40% according to HMWSSB, particularly since the figure mentioned in the study conducted under the JNNURM[101] programme is 58 litres per head.

We provide below data obtained from the City Development Plan, which gives some information about the general condition of water supply in the areas under MCH and surrounding municipalities.

[100] CDP, 2006.

[101] Jawaharlal Nehru National Urban Renewal Mission.

Some facts about water supply in areas under MCH and surrounding Municipalities

	MCH (2001)	10 surrounding Municipalities (2001)
Population (2001)	3,633,000	1,718,000
Water produced (distributed by the HMWSSB network) (in cubic metres)	613,000	167,000
Water produced (delivered by HMWSSB tankers) (in cubic metres)	95,000	
Daily per capita water production	163	
% of population with water connections	70 %	43 %
Number of persons connected (deducted from the previous line)	2,543,100	738,740
Area covered by the network	xxxxxxx	xxxxxxx
Number of houses connected	372,960	194,600
Number of buildings connected		
Water supply in bulk		
Number of public taps	5,092	3,061
Non revenue water	40 % (estimate)	60 % (estimate)

Source: CDP Hyderabad, 2006

ANNEX 5: INVENTORY OF FIXTURES IN SLUMS/PROJECTS IN SULTAN SHAHI

Infrastructure requirements in slums according to UCD Departments in Somajiguda and Sultan Shahi

Name of slum	Harijan Basthi Kovabela	Harijana Basthi	Indira Nagar	BS Maq-hta	Panja-gutta	Kum-mari Basti	Maha-bali Nagar
Ward	Sultan Shahi	Sultan Shahi	Sultan Shahi	Soma-jiguda	Soma-jiguda	Soma-jiguda	Soma-jiguda
Drinking water							
Pipes (metres)	-	-	-	-	-	-	150
Individual taps	-	-	-	13	20	-	12
Borewells	1	-	1	-	-	-	1
Drainage (metres)				200	-	-	50
Storm water drains	-	-	-	-	-	-	50
Sewer lines	-	-	-	-	-	-	50
Roads (metres)				-	-	-	-
CC Roads	-	-	-	100	100	100	100
BT Roads	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-
Electric lighting	2	1	2	5	5	5	2
Individual toilets	-	-	-	-	-	-	12

Source: Documents prepared under HSUAP programme, 2006. Provided by UCD Departments.

Projects for which funds were transferred by the Sultan Shahi UCD Department in 2005-2006

Description of work	Sector	Amount (in rupees)
Laying of 300 mm pipeline from 23-4-320 Ganga Putra Sangam to Indira Gandhi Statue in Sultan Shahi W-23	Collection of domestic sewage	785,000
Laying of 300 mm pipeline from Jai Hind Hotel to Chaitanya Press 23-4-10 in Sultan Shahi W-23	Collection of domestic sewage	790,000
Laying of 300 mm pipeline from Masid Mubarakkunissa 23-4-483 to Thakur Swaroop Singh Ashok Pillar in Sultan Shahi W-23	Collection of domestic sewage	765,000
Laying of 300 mm pipeline from 23-3-502 to Bakshi Bazar Outpost in Sultan Shahi W-23	Collection of domestic sewage	400,000

Source: Document provided by Sultan Shahi UCD Department

Agnès HUCHON, Guillaume TRICOT

ANNEX 6: AIMS AND METHODOLOGY OF SURVEY CONDUCTED THROUGH QUESTIONNAIRES

Aims

The main theme of this part of the APUG programme was to study supply and demand in the fields of water and sanitation in the dual context of economic liberalization and political decentralization.

By adopting a bottom-up approach, the questionnaire was expected to clarify the situation regarding supply available to households in the two municipal wards. In view of the preparatory fieldwork done earlier in the city, it was possible to pre-identify the types of supply:

Access to water supplied by HMWSSB		**Access to ground water**		**Access to water through private operators**
Individual	Collective*	Individual	Collective*	Individual
Connection	Connection (building)	Borewell	Borewell	Water tanker
Water tanker	Water tanker		Hand-pump	Bottled mineral water
	Public tap			

** The word collective is used here in a very wide sense because it concerns any complex with more than two households living either in different buildings or in one big building where they, whether they like it or not, have common access to a water supply service. Therefore, this category can cover all households living in a building as well as households forming a territorial unit provided with water through common equipment.*

In addition to these modes of access, it is necessary to take into account parameters related to material improvements in the quality of service that are generally the result of private initiatives and investments (storage tanks, pumps, etc.).

Taking this classification for granted, we tried to find out the factors that influence the practices adopted by users in relation to water supply. Are the differences in the level of service based on the existing socio-economic infrastructure in the two areas? Are solely territorial criteria responsible for the prevalence of a particular type of service in the case of some households? Is the deliberate choice of collective solutions related to the existence of certain social groups or religious or professional communities or communities with a historical link to these localities?

Various proposed sanitation services were also studied (drainage/ underground sewerage, open drains, septic tanks or absence of any kind of facilities).

It was possible to compare the results obtained within each of the two wards and also between them. These enabled us to gauge the scale of area-wise differentiation, if it existed at all.

Studying demand proved to be more complex because of the possible bias of a semi-systemic approach (not fully taking into account other heads of expenditure incurred by households).

Besides, we tried to determine the way in which individuals or social groups can influence both strategic and operational policies regarding supply drawn up by the key stakeholders (the public utility as well as local elected representatives and the municipal administration). Two levers of action were analyzed:

On one hand, how can households improve the service through individual initiatives? Different reforms, focused on customer satisfaction, introduced by HMWSSB during the 1990s led to the setting up of institutional devices and services to respond to customers' demands and complaints. In this context, it was necessary to examine how users have collectively appropriated the system and to get a feedback on their feelings on the issue. Similarly, the possibilities of personal contacts with local elected

representatives (municipal corporators as well as MLAs) were listed and analyzed through formal and informal interactions.

On the other hand, numerous field surveys enabled us to explain collective action. We were very keen to identify the key stakeholders who represent the people and pressure the administration and political representatives. Are they really representative of the people involved? What is the basis of their legitimacy? Are dialogue and eventual negotiations unilateral or are they initiated by the administration by holding meetings?

Finally, to assess the impact that differences in service can have on urban fragmentation, we tried to find out through our interaction with users whether they (or a particular segment of the population) feel that they are disadvantaged compared to the rest of the population in terms of access to potable water and sanitation. Equally interesting was the attempt to explain the origin of this system of representation. Was it the result of observation, of the media (newspapers, TV, etc.), of a general feeling of resentment caused by discriminatory practices already existing at various levels, etc? How did the respondents view the administration, the local elected representatives and the methods presently in use for improving the service?

To assess the feelings of the inhabitants regarding the level of service and their more or less formal relationship with officials and politicians, we deliberately chose to ask open questions. Though more difficult to deal with, these enabled us to judge their impressions and interactions with greater precision.

Methodology and selection of samples

On the basis of these objectives, 46 copies of a questionnaire were canvassed in Somajiguda and 45 in Sultan Shahi. No doubt such a small sample is not very representative of the people living in the two wards. The households questioned were chosen at random and we tried our best to cover the two localities completely. We also tried to diversify our samples according to the type of residence

on the basis of our observations. The selected samples represent, though not fully, the proportion of households living in slums, individual houses and apartment buildings.

The questionnaire was prepared with the idea of subsequently contacting the people's representatives. Apart from helping us gain knowledge about the area under study, distribution of the questionnaire was the first step towards establishing contact with individuals playing a role in collective affairs.

ANNEX 7: SURVEY CARRIED OUT IN SOMAJIGUDA AND SULTAN SHAHI

0. Household profile

0.0 What is the name of the locality?.....

0.1 How many members are in the household ?

No. of Adults	
No. of Children (below 11 years)	

0.2 What are the occupations of the household members? Could you give us an approximation of the household monthly average income?

No	**Member** (father, mother …)	Occupation	**Monthly average household Income**
1			
2			
3			
4			

0.3 Do you have a ration card? **Y / N** (Circle)
If yes, pink or white (Circle)

0.4 Do you belong to any organizations or "social groups"?

Social participation	**Y/N**	**Which one?**
Political involvement		
Community (caste association, religious organization)Thrift and credit or Self-Help GroupsWomen's organization (Mahila Mandal)		
Involvement in an association (ex: RWA)		

Is there any association/support group that you know in your area dealing with water/sanitation/solid waste issues?
.....

0.5 Report:

TICK the good combination	**Slum**	**Colony**	**Other**
Apartment			
Independent house			
Hut			

0.6 What is your occupancy status?

Own	Rented (rent: ……..)	Others

0.7 Please mention the number of sub-units in your house/apartment. ..... (excluding bathroom/toilets)

0.8 How many years have you been living in this house/flat? .....

0.9 Where is your native place?

Hyderabad	Elsewhere in Andhra Pradesh	Other states

When did you come to Hyderabad?.....Why?.....….

1. ACCESS TO WATER

1.1 Where does the water you consume come from? Could you give us details about the ways you get water?

Origin	**Usage** *(tick)*	**Uses** *(Cooking /drinking **(D)** or domestic uses **(O)**)*	**Quality of water*** *1,2,3*	**Frequency** *Alternate/ daily time of supply*	**Distance** *(Inside home or distance from home)*	**Number of families**	**How much do you pay** *Per month*
Connection at home							
Public stand post					xxxxxxx xxxxx		
Public tanker							
Mineral water					xxxxxxx xxxxx	xxxxxxx xxx	
Private borewell							
Public borewell					xxxxxxx xxxxx		
Hand pump							
Private tanker							
Others							

* Quality: Good—1, Moderate—2, Contaminated—3

1.2 How regularly do your bills come?

Every month	Every 2 months	Other period:……..	No billing

1.3 Do you pay your bills regularly? **Y / N** (Circle)

1.4 Do you know people in your area (Somajiguda/Sultan Shahi) who do not pay their bills?
If yes, why?

……

1.5 What happens if you do not pay?

……

1.6 Have members of your household ever suffered from waterborne diseases?

If yes, circle which one: diarrhoea, dysentery, jaundice, typhoid, cholera, gastroenteritis, chikungunya, other: ……

1.7 Do you treat your water? Y / N (Circle)

If yes, which type of treatment do you use?

……

1.8 Are you aware of the new schemes of the Board to introduce 24 hours supply in one part of the city? **Y / N** (Circle)

What do you think about it?

……

2. ACCESS TO SANITATION

2.1 Where do you discharge your wastewater? (tick)

Underground drainage	**Open drains**	**Septic tank**	**Outside**	**Others**

2.2 Where do your household members go for toilet purposes?

Facilities	**Usage** (tick)	**Number of families**	**Distance**
Private toilets with septic tank			
Private toilets with underground sewerage			
Private toilets with open drains			
Public toilets with septic tank			
Public toilets with underground sewerage			
Outside			
Others			

3. ACCESS TO COMPLEMENTARY FACILITIES

3.1 Do you have to supplement your water supply with other sources? Do you store water?

Facilities	**Usage** (tick)	**Number**	**Origin of water** (GW or HMWSSB)
Base tank			
Overhead tank			
Borewell with motor			xxxxxxxxxx
Motor only to lift water up			
Filter			
Drums			
Buckets			

4. SATISFACTION

4.1 Are you satisfied with the water supply and drainage service?
Y / N (Circle)

What kind of improvement would you like for your water supply or drainage?

……

4.2 (Only for interviewees living in Sultan Shahi) Do you have any contact with the Quli Qutab Shah Development Authority in connection to water or drainage?
Y / N (Circle)

4.3 Are there official meetings organized where you can get information and express your demands in terms of water supply and sanitation?
Y / N (Circle)
How often?

.....

Who usually organizes them?

.....

4.4 Have you ever contacted the Water Board when you had a problem?
Y / N (Circle)

If so, what problem:

……

If so, whom do you contact? At what level? In which office?

Section ……	Circle ……..	HMWSSB main office ……	Others: ……

Could you describe your experience? (e.g. treated well, getting fast results, given a file number, etc.)

……

4.5 Do you ever approach the officers at the MCH when you have a problem with water supply or drainage?
Y / N (Circle)

If so, whom or which department?

……

Could you describe your experience?

……

4.6 Do you approach your ward Corporator (or the MLA) when you have a problem?
Y / N (Circle)

4.7 Are the complaints individual or collective?

……

4.8 Is there any organization/person who takes the demands of the locality to the MCH or the Water Board or the main political parties:

RWA	NGO : ……..	Association Name: ……..	Community leader	Ward councillor	MLA	Leaders of political parties: ……..	Owner	No

(In case of organization) Do you take part in the activities of this organization?
Y / N (Circle)

Could we have any contact?

.....

4.9 What do you think of the quality of your water supply/ sanitation, in comparison with other inhabitants of Hyderabad?

Better	Same	Worse

4.9.1 Can you explain? (technical reasons, political reasons, etc.)

……

Do you know that from (Circle):
- what you saw on the newspaper/TV/internet?
- what your acquaintances told you?
- what you saw?

4.10 According to you, what is the most important problem – related to water – in your locality?

……

4.11 According to you, what is the most important problem – related to water – in Hyderabad?

……

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Between Citizens and Institutions: The Dynamics of the Integration of Water Supply and Sanitation Services in Hyderabad

SUMMARY

Urban growth in Hyderabad has underscored the need for restructuring urban services, starting with public utilities. What changes are taking place in this sector? Who initiates and implements policies? What is their impact on the public? These questions are addressed in this detailed study of Hyderabad's water supply and sanitation services. The paper focuses on institutional changes with regard to the main service providers – the Hyderabad Metro Water Supply and Sewerage Board and the Municipal Corporation of Hyderabad – and provides a critical analysis of restructuring and policies ostensibly aimed at providing uniform service throughout the metropolitan region. In order to evaluate how policies play out on the ground, two distinct areas of the city were selected for field surveys. In this way, the spatial dimension of urban service delivery – including deployment of physical infrastructure networks as well as social infrastructure – was examined in order to analyze the relative integration of a city and to determine the main factors of segregation. The findings dispel a number of conventional ideas about unequal service levels between the old and new parts of the city and between different income groups, and offer a more nuanced explanation for differential access using both social and spatial variables. The paper also addresses the demand side of the water supply and sanitation equation, analyzing the ways in which different categories of users try to improve access or service levels. The authors explore user expectations and the various means deployed to channel grievances, which reveal different modes of democratic interaction between the public and the authorities.

This study contributes to debates surrounding urban governance and decentralization in India's cities. On one hand, it enhances understanding of recent developments in Hyderabad, a city on the forefront of many urban reforms in recent years. On the other hand, its analytical method – combining a macro study of institutional changes on the supply side with field surveys to analyze differential social and spatial access to service and household practices for improving service levels – offers numerous insights that are significant for studies of other metropolitan cities.

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