



Financing and Monitoring Urban Water Supply and Sanitation in Gujarat

CEPT University

June 2011

**FINANCING AND MONITORING
URBAN WATER SUPPLY AND SANITATION IN GUJARAT**

CEPT University

June 2011

Contents

Abbreviations

Acknowledgements

Executive Summary

1. Introduction

1.1 Population Trends	1
1.2 Income, Poverty and Slums	3
1.3 UWSS Service Levels – Interstate comparisons	5

2. Assessment of Sector Finance

2.1 Volume and Main Sources of UWSS Sector Finance	10
2.2 Priority of Urban and UWSS Funding in State and Urban Development	12
2.3 Consolidation of Urban Sector Programmes	13
2.4 Devolution and Allocation Principles	15
2.5 Sustainability and Local Absorption Capacity	26
2.6 Measures to Strengthen Sector Finance Arrangements	32

3. Sector Monitoring Arrangements

3.1 Institutional and Fund Flow Arrangements	35
3.2 Urban Sector Monitoring in Gujarat	37
3.3 Dissemination of Sector Information	41
3.4 Management Systems and Institutionalisation for Monitoring	43
3.5 Measures for Strengthening UWSS Sector Monitoring	45

References 48

Annex A 56

List of Tables

1.1 Trends in Urbanisation for Selected States in India	2
1.2 Population Projections for Selected States in India	2
1.3 Distribution of Urban Population in Different Classes of ULBs in Gujarat	3
1.4 Trends in Urban Poverty in Selected States in India	4
1.5 Share of Slum Population in Selected States in India, 2001	5
1.6 Share of Slum Population by Type of ULBs in Gujarat, 2009	5
1.7 Access to Piped Water Supply in Indian States (% urban population), 2001	6
1.8 Households with Improved Water Supply (%) – 2005–06	6
1.9 Trends in Access to Improved Source of Drinking Water Supply, Urban	6
1.10 Main Source of Drinking Water (% of Households)	7
1.11 Access to Toilets in Indian States (% Urban Population), 2001	7
1.12 Access to Toilets Within Premises for Slums versus Other Areas, 2002	8
1.13 % of Urban Households with Type of Sanitation Facility, 2005–06	8
1.14 Trends in Access to Toilets, Urban (% of Total Households)	8
1.15 Access to Sewerage Facilities in Large Cities, 2000	9
1.16 Garbage Collection and Disposal Arrangements	9
2.1 Estimated UWSS Sector Investment Finance in Gujarat and Main Sources	11
2.2 Priority of UDD and Devolution in State Budget and Finances, 2005–11	12
2.3 Priority of UWSS, 2005–11	13
2.4 An Overview of Urban Sector Programmes, 2005–10	14
2.5 Formula based Devolution for Central and State Grants	16
2.6 Conditions on the Purpose and Use of Grants and Schemes	17
2.7 UWSS Share in Partially Tied Funding	18
2.8 Estimated Fund Utilisation by Municipal Corporations versus Municipalities	18
2.9 Flow of Funds from State Government to ULBs	19
2.10 Mandatory and Optional Reforms under JNNURM	19
2.11 Extent of Reform-linked Funding	20
2.12 Reforms under the Government of Gujarat’s New Scheme SJMMSVY	20
2.13 Extent of Funds Earmarked for the Poor from the State Budget	22
2.14 Selected Programmes/Schemes for the Urban Poor with UWSS Funding	23
2.15 Share of Municipal Corporations versus Municipalities 2005–10	25
2.16 Sources of UWSS Finance for Municipal Corporations versus Municipalities, 2005–10	26
2.17 Earmarking in UDD Budget by type of ULBs	26
2.18 Requirements and Gaps in Meeting O&M Expenditures for UWSS Sector, 2008–09	28
2.19 % Recovery of O&M Expenditure Through Local Taxes and Charges	28
2.20 Municipal Own Income to Total Income (%)	29
2.21 Availability of Human Resources for UWSS Among ULBs	30

3.1 Estimated UWSS Sector Resource Flows by Agencies, 2008–09	36
3.2 Monitoring Processes for TFC and SFC Grants	39
3.3 Monitoring Processes for a Central and a State Programme	40
3.4 Status of ULB Websites in Gujarat	42
3.5 Details of Information Posted on ULB Websites	43
3.6 Monthly Online Reporting by ULBs	45

List of Figures

1.1 Location of Urban Local Bodies in Gujarat	3
2.1 UWSS Fund Flow in State Budget, 2008–09	13
3.1 A Framework for Sector Monitoring Arrangements	35
3.2 UWSS Fund Flows Arrangements, 2008–09	36
3.3 Framework for Monitoring within Sector Strategic Decision-making	38

Annex Tables

A2.1 Allocations and Estimates for Urban Development Department	56
A2.2 Estimated Allocation for UWSS	60
A2.3 Assumptions, Sources for Allocations and UWSS Share	64
A2.4 Assumptions Related to Conditions on the Use of Funds	68
A2.5 Budget Summary for GoG, UDD and GWSSB	70
A2.6 Estimated UWSS Sector Investment Finance in Gujarat and Main Sources	71
A2.7 Population projection for Gujarat State, Urban	71
A2.8 Share Flow of Funds from State Government to ULBs	72
A2.9 Share of Municipal Corporations versus Municipalities in UWSS Finance, 2005–10	74
A2.10 Selected Programmes/Schemes for Urban Poor with Possible UWSS Funding	74
A2.11 Per capita recurrent expenditure on UWSS Service Delivery, 2008–09	75
A2.12 Reclassification of Census town categories by HPEC	75
A2.13 Number of ULBs in Gujarat according to population class of HPEC	75
A2.14 HPEC norms on Per Capita O&M for UWSS Service Delivery	76
A2.15 Per Capita Norms for O&M from HPEC for Type of ULBs of Gujarat	76

Abbreviations

ADB	Asian Development Bank
BPMC	Bombay Provincial Municipal Corporation Act
BSUP	Basic Services for Urban Poor
CAA	Constitutional Amendment Act
CAG	Comptroller and Auditor General
CDP	City Development Plan
CEO	Chief Executive Officer
CIDCO	City and Industrial Development Corporation of Maharashtra Ltd
CMAG	City Managers' Association of Gujarat
CPCB	Central Pollution Control Board
CPHEEO	Central Public Health and Environmental Engineering Organisation
CRC	Central Review Committee
CSS	Centrally Sponsored Scheme
DES	Directorate of Economics and Statistics
DLHS	District Level Household Survey
DoF	Department of Finance
DoM	Directorate of Municipalities
DPR	Detailed Project Report
DSS	Decision support systems
DUDA	District Urban Development Agency
DWSSDU	Delhi Water Supply and Sewerage Disposal Undertaking
EIUS	Environment Improvement in Urban Slums
FC	Finance Commission
GDP	Gross Domestic Product
GERRP	Gujarat Earthquake Rehabilitation and Reconstruction Project
GIA	Grant In Aid
GIDB	Gujarat Industries Development Board
GMA	Gujarat Municipalities Act
GMFB	Gujarat Municipal Finance Board
GoG	Government of Gujarat
GoI	Government of India
GR	Government Resolution
GSDMA	Gujarat State Disaster Management Authority
GSY	Garib Samruddhi Yojana
GUDC	Gujarat Urban Development Company Ltd
GUDM	Gujarat Urban Development Mission
GWSSB	Gujarat Water Supply and Sewerage Board

HLC	High Level Committee
HPEC	High Powered Expert Committee
HPR	Half-yearly Progress Report
HUDCO	Housing and Urban Development Corporation Ltd.
IDSMT	Integrated Development of Small and Medium Towns
IDTA	Integrated Development of Tribal Areas
IHSDP	Integrated Housing and Slum Development Programme
ILCS	Integrated Low Cost Sanitation
JBIC	Japan Bank for International Corporation
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
lpcd	litres per capita per day
M&E	Monitoring and Evaluation
MC	Municipal Corporation
MEEP	Municipal Energy Efficiency Project
MIS	Management Information System
MLD	Million Litres per Day
MMSJSVY	Mukhya Mantri Swarna Jayanti Shaheri Vikas Yojana
Mn	Million
MoF	Ministry of Finance
MoHUPA	Ministry of Housing and Urban Poverty Alleviation
MoUD	Ministry of Urban Development
MPLAD	Members of Parliament Local Area Development
MSWM	Municipal Solid Waste Management
NFHS	National Family Health Survey
NGO	Non-governmental Organisation
NIUA	National Institute of Urban Affairs
NSDP	National Slum Development Programme
NSSO	National Sample Survey Organisation
O&M	Operation and Maintenance
PAS	Performance Assessment System
PDL	Public Disclosure Law
QPR	Quarterly Progress Report
RTI	Right to Information
SFC	State Finance Commission
SJMSVY	Swarnim Jayanti Mukhya Mantri Shehari Vikas Yojana
SLB	Service Level Benchmark
SLF	Shared Landfill Sites
SLNA	State Level Nodal Agency

STP	Sewage Treatment Plant
SWM	Solid Waste Management
TCPO	Town and Country Planning Organisation
TERI	Tata Energy Research Institute
TFC	Twelfth Finance Commission
TPM	Third Party Monitoring
UBSP	Urban Basic Services for Poor
UDD	Urban Development Department
UDP	Urban Development Programme
UGD	Under Ground Drainage
UIDSSMT	Urban Infrastructure Development Scheme for Small and Medium Towns
ULB	Urban Local Body
ULCS	Urban Low Cost Sanitation
UWSS	Urban Water Supply and Sanitation
WB	World Bank
WRA	Water Regulatory Authority
WRD	Water Resources Department

Acknowledgements

The Performance Assessment System (PAS) Project aims at developing systems for measurement, monitoring and improvement of urban water supply and sanitation (UWSS) performance in Gujarat and Maharashtra. This report is an assessment of the funding and monitoring arrangements of the UWSS sector in Gujarat.

In preparing this assessment, we have relied significantly on discussions with various government officials and the data and information that they have shared with our team. We have benefited greatly from the insights provided by them in these meetings. We have also drawn on the budget documents and other relevant reports that are available in the public domain. It is important to note that the Government of Gujarat and several urban local bodies in the state follow open dissemination and make available many reports on their websites.

The work on this review and baseline assessment was carried out by a team led by Meera Mehta and Dinesh Mehta and included Saswati Beliappa and Dhruv Bhavsar. Initial support was provided by Sejal Patel, Maitree Patel and Niraj Naik.

Meera Mehta
*CEPT University,
Ahmedabad, India*

Dinesh Mehta
*CEPT University
Ahmedabad, India*

Executive Summary

This paper describes finance and monitoring of urban water supply and sanitation in Gujarat. In Gujarat these services are provided by urban local bodies (ULBs) though investment funding is largely provided by the Government of Gujarat (GoG) and Government of India (GoI). The paper assesses the flow of funds for urban water and sanitation, and examines its monitoring framework.

Gujarat is one of the most urbanised states in India and has been urbanising at an accelerated pace in recent years. The urban population of Gujarat was 18.9 million in 2001, of which nearly 40 per cent resided in the three large cities of Ahmedabad, Surat and Vadodara. Gujarat has seen significant growth in income in the past few years. The state's economy at current prices recorded an annualised growth rate of 15 per cent for the past six years (2004–05 to 2009–10), one of the highest in the country. Along with this rise in income, Gujarat has done well to reduce urban poverty over the past decades. From a high poverty level in 1973–74 at 53 per cent, share of urban poor in total urban population has come down to 13 per cent in 2004–05. Poverty reduction in urban areas is also reflected in the relatively lower share of urban population (19.6 per cent) that resides in slums in Gujarat compared to other urbanised states.

At the aggregate, access to water and sanitation in urban Gujarat has improved. By 2001, about 91 per cent of urban population in Gujarat had access to piped water supply, exceeding the national average by almost 20 per cent, thus putting Gujarat among the first three states in India in terms of access to the service. National Sample Survey Organisation (NSSO) 2002 data provides details of the situation in slum areas, where access to improved sources is 77 per cent. Gujarat also fares well in providing access to toilets and sewerage facilities in urban areas. Gujarat provides better garbage disposal arrangements in slums as well as non-slum other areas.

A. Assessment of Sector Finance

The urban water supply and sanitation sector finance is reviewed in the context of decentralisation in the state. For urban water supply and sanitation, the responsibilities for ensuring services for water supply, sanitation and solid waste management in Gujarat are with ULBs. Though higher levels of government continue to provide a significant portion of funds for the required capital investments, finance for operation and maintenance falls under the purview of the ULBs. Sources of public funds include all three tiers of government – central, state and local. User finance accrues through user and connection charges paid to the ULBs as service providers. There is limited commercial funding through borrowing from banks and municipal bonds, but almost no private sector investment in the sector. Over the past six years, annual capital investment in the urban water supply and sanitation (UWSS) sector is estimated to have risen from Rs 6 billion to Rs 24.6 billion. The estimate for 2010–11 at Rs 24.6 billion shows a three-fold increase at current prices, or 27 per cent per annum in real terms since 2005–06. The share of state government in this funding is the highest at an average of 57 per cent over this period. In addition, it is estimated that during 2005–06 to 2008–09, average annual operation and maintenance (O&M) expenditure on UWSS was Rs 5.9 billion by the seven municipal corporations and Rs 2.0 billion by 159 municipalities

The three main funding sources of sector investment finance in Gujarat include:

- Central government funding through:* Central Finance Commission (CFC) grants, funding for Centrally Sponsored Schemes (CSS), Members of Parliament Local Area Development (MPLAD) grants and programmes, and externally funded projects.
- State government funding through:* transfers and grants-in-aid, various schemes and programmes of urban development department, and the state contribution in centrally sponsored schemes.
- ULB own finances:* mainly to meet their share of central/state schemes and mobilised through internal surplus and/or borrowing.

Estimated UWSS Sector Investment Finance in Gujarat and Main Sources (%)

Sources of funds	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average per annum*
	Actual	Actual	Actual	Actual	Revised estimate	Budget	
Investment finance							
Central grants, centrally sponsored schemes (CSP), MPLAD grants and externally funded projects	25.3	38.3	28.5	26.5	17.9	23.5	26.7
State grants, schemes and share in CSPs including GWSSB for water supply	64.3	42.2	53.5	53.2	67.2	62.3	57.1
ULB share in funding	10.4	19.5	18.0	20.3	15.0	14.2	16.2
Total	100	100	100	100	100	100	100
Total UWSS investments (in Rs billion)	5.8	10.6	11.9	15.7	21.2	23.0	14.7
Recurrent Expenditure (O&M) (in Rs billion)	5.9	7.6	8.9	9.2	<i>na</i>	<i>na</i>	7.9
Total Sector Finance (in Rs billion)	11.7	18.2	20.8	24.9	<i>na</i>	<i>na</i>	18.9

Source: Investment finance: refer Annex tables A2.2, A2.3 ad A2.6 for details; recurrent expenditure: based on data from the GMFB Nanakiya Parishthiti 2005-06 to 2008-09.

Notes: Totals may not add up due to rounding; *Average for investment finance is for the period 2005-6 to 2010-11, and for recurrent expenditure is for 2005-06 to 2009-09. Total annual sector finance is thus a total of these two different averages.

During 2005-06 to 2010-11, Urban Development Department (UDD) share in total state budget has averaged about 5.7 per cent. Of the total UDD plan funding, over 56 per cent has been estimated to be used for UWSS. In addition, UWSS also receives funding from the Water Resources Department (WRD) for bulk water supply. Gujarat also fares well in terms of devolution of funds to ULBs. Over the past four years, a large proportion of UDD funds were devolved through different grant-in-aid and schemes to ULBs, amounting to an average of 11 per cent of state's own revenue receipts. This compares favourably with other states such as Karnataka and Tamil Nadu which have about 10 per cent of state tax and non-tax revenue for devolution to ULBs. The state government funds account for nearly 57 per cent of the capital investments in the sector, and central government contributes 27 per cent of the capital investments. The ULB share mainly reflects the mandatory contribution in centrally sponsored schemes such as the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and Urban Integrated Development of Small and Medium Towns (UIDSSMT). Lack of consolidated data on municipal finance makes it difficult to assess the extent of utilisation funds transferred to the ULBs.

A.I Consolidation of the Urban Sector Programmes

The GoG's emphasis on the urban sector began in 2005, celebrated as the Urban Year as a part of 'Vibrant Gujarat' programme focusing on 'a comprehensive and holistic urban governance vision'. By the end of 2005, attention on urban was further strengthened with the GoI's JNNURM programme under which four cities in Gujarat (Ahmedabad, Surat, Vadodara and Rajkot) received funding. In addition, the UIDSSMT component under the JNNURM programme also provided small funds for about 60 ULBs in Gujarat. In 2007, the GoG decided to consolidate different programmes. The first was consolidation of various programmes for inclusive development through the 'Garib Samrudhi Yojana (GSY)'. GSY included programmes related to access to basic services for the poor as well as the 'Umeed' scheme for training urban youth for employment. The second was the launch of 'Nirmal Gujarat Campaign' (NCC) which focused on urban environment, particularly sanitation and cleanliness and developing a city-level plan for water and sanitation.

The most recent umbrella framework, the Swarnim Jayanti Mukhya Mantri Shehari Vikas Yojana (SJMMSVY) has a more explicit focus on administrative and governance reforms to increase sustainability of urban investments with a new feature of reform linked funding. Thus, over the past five years, the GoG has made efforts to consolidate various programmes under one umbrella. However, more efforts are necessary to translate this into consolidation of funding to reduce fragmentation in funding flows, and related reporting requirements at the local level. This will also help to improve links between investments and service delivery performance.

A.II Devolution and Allocation Principles

Urban sector funding takes place through a large number grants and schemes, with different criteria for devolution or allocation of funds to sectors and ULBs. Besides central grants and schemes, these include sharing of two main taxes (entertainment and professional) and compensation for abolition of octroi. In addition, the state government has several schemes for urban development and for UWSS in particular. Most grants and schemes require preparation of project proposals, and a host of approvals and reporting requirements.

A.III Fiscal Decentralisation

Five aspects of fiscal decentralisation, which also affect delivery of UWSS services, are identified:

Dimension of fiscal decentralisation	Central government funds	State government funds	Total urban development funds
Predictability (% share of formula based to total funds)	8.5	31.3	20.5
Local autonomy (% share of partially tied funds to total funds)	73.9	89.5	81.5
Reforms linked (% share of reform-linked funds to total funds)	93.0	12.4	42.1
Earmarking for the poor (% of total funds earmarked for the poor)	23.8	11.5	16.1
Horizontal equity % share of municipal corporations % share of municipalities	83.1 16.9	35.4 64.6	60.0 40.0

a. Predictability in local funding: Only 21 per cent of plan funds are devolved to ULBs by formula-based transfers. These include CFC grants and share in entertainment and professional taxes. The remaining plan funds are determined on the basis of proposals prepared by ULBs. There is some predictable funding through the three-year 'model town' scheme under the SJMMSVY which provides fixed funds based on type of ULBs.

b. Local autonomy and capacity in the use of funds: Except for the non-plan grants for octroi compensation, all other funds are tied – though they offer some degree of freedom. Of the total plan funds, about 82 per cent are for development works for basic or local public services and represent tied funding. It is estimated that about 71 per cent of these funds (or about 58 per cent of total) are used for UWSS. All tied funding place considerable emphasis on preparation of project proposals. ULBs have to compete for these funds and since funding is provided on first-cum-first-served basis, the ULBs that have the necessary internal capacity to prepare detailed project reports, or have funds to hire consultants to prepare such funding proposals, are able to get more benefits.

The lack of capacity is reflected in low utilisation (of about 50 per cent) of funds devolved/transferred to municipalities. Low utilisation may also result from transfer of funds in the last quarter of the financial year which makes it difficult to utilise these funds in the same year. Better tracking of funds backed by regular MIS-backed implementation monitoring and technical support is required.

c. Use of funds as incentive for reforms: A new trend in urban development funding in India is to link such funding to some sector reforms. Most of the funding from the central government for the urban sector is linked to reforms. The GoG has also introduced performance linked funding under the SJMMSVY with a focus on 'transparency in governance, consumer-centric approaches and increased financial viability of public services'. Despite this innovative approach, the actual experience with implementation of reforms needs to be better assessed. Although Gujarat has been able to implement many of the reforms, it has lagged behind in terms of cost recovery and collection efficiency of property taxes. Effective implementation of these reforms requires capacity building support to ULBs.

d. Earmarking funds for the poor: The JNNURM required ULBs is to institutionalise "internal earmarking of funds in their budgets specifically for basic services to the poor" with a recommended norm of 25 per cent of municipal budget. In response to this mandatory reform, the GoG has adopted a policy of requiring ULBs to earmark 20 per cent of its budget for urban poor. In 2009–10, 16 per cent of the total plan budget of the UDD was earmarked for the urban poor through various programmes. Of this, nearly 24 per cent of central government programmes for urban development and 12 per cent of state funds and grants were earmarked for the poor. The higher proportion of allocation for poor for the central government programmes is due to its focus on housing. The trend in increased allocation for the poor suggests that there are sufficient funds to provide access to basic services to all urban poor. Under the Nirmal Gujarat Sanitation Programme (NGSP), the GoG has provided increased funding and subsidies for individual toilets to make Gujarat an "Open defecation free state".

e. Horizontal equity between municipal corporations and municipalities: There is an overt bias of government funding for the large cities. While the share of population residing in municipal corporations in Gujarat is 58 per cent, they receive nearly three-fourths of the total UWSS finance. This is even more pronounced for central programmes: municipal corporations receive 85 per cent of central government schemes. On the other hand, the state government has balanced this by increasing the share of municipalities to over 65 per cent in recent years.

A.IV Sustainability and Local Absorption Capacity

While the recent trends in investment funding levels suggest adequate funding to meet state government targets, it is possible that programmatic funding through JNNURM and other state programmes may not be sustainable, because of the limited capacity among ULBs to execute projects and to operate and maintain the services.

a. Investment funding to meet state government targets: The GoG has laid down its own service standards for UWSS, for example, 100 lpcd for all, underground sewerage system in all ULBs, and so on. The total investment required to meet these targets is estimated to be Rs 120 billion. The estimated budget allocation last year for UWSS was about Rs 23 billion. Thus, it is possible that these targets can be achieved in the next five years. However, to sustain these investments, many measures to improve service performance – such as reducing non-revenue water, reducing electricity expenses, higher cost recovery and improving financial sustainability, etc – are needed.

b. (In)Adequacy of O&M expenditures and recovery of O&M costs: While capital investments are made through state government funds, the O&M is required to be done by ULBs. In Gujarat all ULBs spend very little on O&M: the municipal corporations spend Rs 167 per capita which is only about 24 per cent of the norm; the smaller municipalities are worse off as they spend only about 15 per cent of the norm. Underspending on O&M has grave implications for the quality of water and sanitation services. This underspending reduces the life of the asset and results in unsafe service. This deferred maintenance increases future investments requirements. This problem is compounded further as even this inadequate O&M expenditure is not recovered fully through local taxes and charges. Only 64 per cent of expenditure on water supply is recovered. This is despite the fact that full recovery of O&M costs is an important local level mandatory reform under the JNNURM and has been agreed to by all the state governments and ULBs. As there is no metering or volumetric tariff by ULBs in Gujarat, most use a general water tax which is levied on all properties along with property tax or a special charge levied per water connection. Despite low cost recovery, the ULBs are reluctant to raise water tax, and the GoG had to lay down a minimum annual water charge per connection. Ideally such a state government mandate should also focus on cost recovery through reduction in inefficiencies resulting from illegal connections, low coverage levels, low collection efficiency, physical water losses due to leakages and unduly high electricity consumption due to inappropriate pumping machinery and design of distribution network.

c. Human resource capacity among ULBs: Besides fiscal capacity, another key constraint in sustainability of services is in human resource capacities with ULBs. Our survey in 2008–09 showed that municipalities have only 50 to 60 per cent of the approved staff, with many of them working as daily wagers. The UDD has made an effort to create three common state cadres for: (i) Municipal Accounts Officer; (ii) Municipal Health Officer; and (iii) Municipal Engineer, over and above the existing state cadre of Municipal Chief Officer. However, the staff is yet to be appointed and it will be a while before this will make any difference to service delivery in ULBs. It is useful to draw on successful experience from Senegal and Mali where a tripartite agreement between the national government, local government and private sector is made to provide technical and operational support.

d. Structural reforms for performance incentives for staff: It is important to ensure that staff has necessary incentives for improved performance. There is a global consensus on the need to separate operation from policy and regulatory functions. In many countries, this is achieved through more autonomous water utilities that are given operational independence and autonomy in staffing and remuneration. A wide range of developing countries in Asia and Africa use this model for water supply service delivery. In India a few cities such as Delhi, Chennai, Bengaluru and Hyderabad use this approach of autonomous utilities. However, these utilities have less autonomy in staff

recruitment, remuneration and autonomy in procurement, which are considered important in some of the more successful utilities in Africa and Asia.

A.V Measures to Strengthen Sector Finance Arrangements

There has been a significant rise in finances for urban infrastructure in recent years. The continued economic growth and related rise in public resources have made it possible for both the GoI and GoG to allocate large resources to urban infrastructure. As a result, funds available to local governments for investments in urban water supply and sanitation systems have increased and are likely to further increase over the next five years. While this will help create new infrastructure, there are several issues related to translating this investment into improved service delivery.

a. Need for fiscal consolidation and service delivery orientation in sector programmes: The GoG has introduced the notion of umbrella programmes, which need to be translated into consolidation of schemes and fiscal transfers to effectively plan and monitor progress and outcomes. With such consolidation, a clearer focus on performance improvement in service delivery is needed.

b. Need to increase predictability of transfers to ULBs: At present, only 25 per cent of funds devolved to ULBs in Gujarat is formula linked and predictable. This needs to be increased so that ULBs have a better idea of resource availability over the medium term to undertake more effective planning. This can be done by increasing their share in taxes as well as by making a longer and transparent commitment through the state schemes as, for example, has been done under the SJMMSVY for the model town component.

c. Technical support to smaller municipalities: While there is an increase in funds for urban infrastructure, there is also an increase in 'unutilised' funds. Measures to improve fund absorption would require project development and implementation support to ULBs. This may be done by providing technical staff to the ULBs, as is being proposed in Gujarat through a cadre of municipal engineers. However, it is also possible to create technical support centres and support small business enterprises to provide technical help to municipalities.

d. Effective implementation of earmarking for the poor: While the GoG has made efforts to introduce norms for earmarking budget resources for the poor, this has not been implemented at local level. A few issues need to be addressed for effective implementation. First, the extent of actual allocations needs to be tracked regularly. It is also important to assess effectiveness of services provided for the poor. For example, toilets built for the poor remain unused due to absence of waste disposal arrangement.

e. Improving capacity for sustainable O&M of new infrastructure: A key constraint in delivery of WSS services by ULBs in Gujarat has been inadequate attention to sustainability of operations. For most ULBs the basic data (maps and asset profiles) on their infrastructure is not available. This makes it difficult to develop effective and efficient O&M strategies. Most ULBs fail to recover O&M expenditures through local taxes and fees. This is due to inadequate tariffs, low billing and collection rate, high level of illegal connections, water losses and inefficiencies in use of energy. Addressing these issues will require not only some simple steps to improve efficiencies such as water and energy audits, but also some bold steps to ensure that non-performing ULBs are 'penalised' and better performing ULBs are rewarded.

f. Addressing data issues for sector finance: Despite the high priority given to urban infrastructure, it is not easy to track allocations and expenditures for urban water supply and sanitation. There are a plethora of schemes and funds flow from various departments and agencies of the government. There is a need to develop a system that consolidates financial information, and outcomes from all the

schemes and programmes. This requires better tracking and reporting of expenditure by ULBs. Assessment of sector finance also requires a follow through to identify outputs, intermediate results and outcomes. At present, ULBs submit progress reports on each scheme separately to the funding agencies. What is needed is a consolidation of these reports at the ULB and state level.

B. Sector Monitoring Arrangements

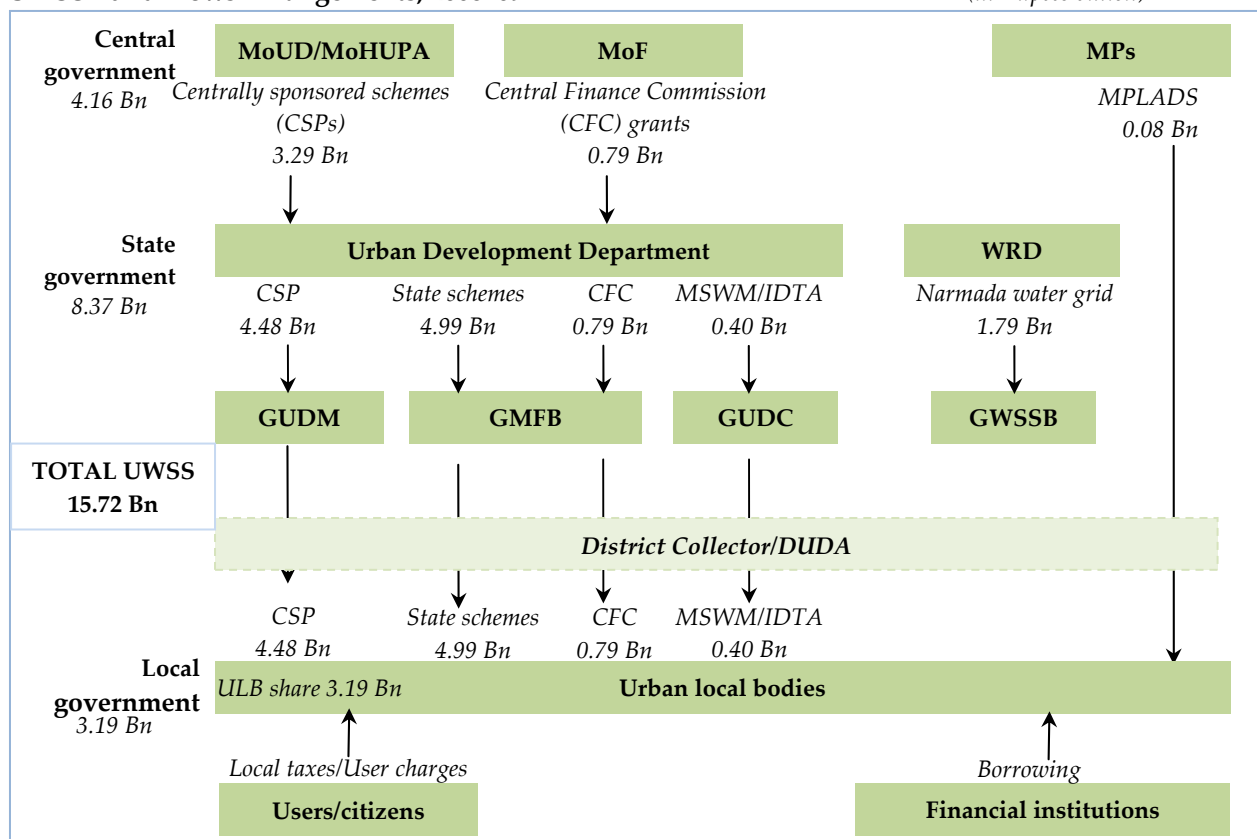
A majority of funds for urban infrastructure are provided by central and state governments to ULBs. These funds are routed through various departments and agencies of the state government. Monitoring the use of these funds and related physical achievements (outputs) is a key part of programme implementation. Monitoring is also necessary to track commitments to various reforms that the state government and ULBs have made for availing funds under central government programmes like JNNURM and state government programmes like MMSVY.

B.I Institutional and Fund Flow Arrangements

Urban Water and Sanitation financing is a part of urban development in Gujarat and takes place through three main institutions, the Gujarat Urban Development Mission (GUDM), Gujarat Municipal Finance Board (GMFB) and Gujarat Urban Development Company (GUDC).

UWSS Fund Flows Arrangements, 2008–09

(in Rupees billion)



Notes: DUDA: District Urban Development Authority; GMFB: Gujarat Municipal Finance Board; GUDC: Gujarat Urban Development Company; GUDM: Gujarat Urban Development Mission; GWSSB: Gujarat Water Supply and Sewerage Board; MoHUPA: Ministry of Housing and Urban Poverty Alleviation; MoUD: Ministry of Urban Development; MPLAD: Member of Parliament's Local Area Development; WRD: Water Resources Department.

B.II Urban Sector Monitoring in Gujarat

UWSS monitoring in Gujarat is a part of the urban sector monitoring. There is considerable reporting requirement for ULBs: they are required to provide information on grants and on project implementation that are funded by the GoI and GoG; there is routine monitoring of ULBs for administrative matters, finances, and personnel related topics.

a. Programme implementation monitoring is the most widely practised monitoring system and is used for all grants, centrally sponsored schemes and the state government's own schemes. This adds up to over 40 different grants and schemes. Each ULB in Gujarat has to probably report on more than half of these grants and schemes. The monitoring processes and systems for central and state level programmes and grants vary in terms of approaches, incentives, information flow and use of information. In general, the programmes funded by central government have more elaborate review and reporting requirements (for instance, the JNNURM requires a 12-page quarterly progress report from each ULB, with an additional three pages for each ongoing project). For the Nirmal Gujarat programme, the state government has introduced physical inspection of projects by a higher authority and by an independent entity as a part of the monitoring process.

Performance monitoring: Current urban sector monitoring does not seem to include any systematic performance monitoring, though some information on outcomes (such as for access to toilets or for per capita supply of water) is often collected. As per the recommendation of the 13th Finance Commission, each state government and ULB is expected to notify service standards that will be achieved by them for water supply, waste water, solid waste management and storm water drainage.

B.III Dissemination of Information

Over the past few years, increased attention is being placed on the need for information dissemination to citizens by all public authorities. This is in response to the Right to Information Act (RTI), 2005 as well as the public disclosure requirements under the JNNURM reforms.

a. RTI-related dissemination efforts. The RTI and the Gujarat Right to Information Rules, 2005, provide citizens the right of access to information from public authorities. The UDD website provides ULB-wise information on programme monitoring in the form of *patraks* (formats) filled by the ULBs. Some local bodies have appointed information officers and have posted basic information on their websites. For example, the Municipal Corporation of Surat makes available information on its performance monitoring process and performance indicators on its website.

b. Public disclosure requirements under JNNURM reforms: Under JNNURM, the state government is required to enact a Public Disclosure Law (PDL). In response to this, the GoG has suggested that existing municipal laws adequately ensure disclosure to the public and hence, enactment of a separate law is not very relevant.

c. Websites of ULBs: A review of various websites of ULBs in Gujarat suggests that only 42 ULBs (25 per cent of total ULBs) have their own websites. Most municipalities have their websites in Gujarati. The information on water and sanitation is limited to obtaining new water/sewerage connections.

B.IV Management Systems and Institutionalisation for Monitoring

Programme implementation reporting requires tracking inputs (mainly funds) and physical outputs. However, it has been difficult to track the flow of funds and their use. This has meant that only preliminary estimates of capital expenditure on UWSS have been possible in this study. However, its composition across different sub-sectors has not been possible. Systematic performance monitoring is

not carried out at present, though data on some outcomes does get collected. Recognising that further work is needed, the UDD plans to develop a special central Management Information System (MIS) that combines these various efforts through appropriate information and reporting requirements. At present reporting takes place through two main systems: (a). Monthly online reporting through a set of formats (*patraks*); and (b) Programme progress reports – Data Project and Financial Management System (DPFMS). “30 monthly formats and more than 70 annual statements are being generated, reviewed and monitored on a regular basis for all municipalities”.¹

Monitoring of the financial status, reforms and roles and responsibilities of the ULBs is undertaken annually by the Gujarat Municipal Finance Board (GMFB). At present, though this information is collected by the Board, it is not validated, collated and analysed systematically owing to shortage of staff. A Data Project and Financial management centre has been created and it is planned to develop a “standard MIS and decision support system across all municipal corporations and municipalities with regional sub-portals for effective connectivity and networking”. These activities have not yet begun.

B.V Measures for Strengthening UWSS Sector Monitoring

The analysis presented in this report highlights various efforts made by the GoG. Although online programme monitoring has been set up, its use is limited. Monitoring can be improved if the various physical databases are interconnected through an online management information system.

a. Management information system: The UDD has already identified the need for developing a good MIS. It will be important to first develop clarity on the areas to be monitored and identify key indicators. Second, it would be necessary to link various databases to support monitoring. Finally, it will be necessary to design online systems with regular updates.

b. Need for systematic performance monitoring: At present there is no system for performance monitoring. The Service Level Benchmark (SLB) initiative of the GoI provides a nationally agreed set of UWSS indicators. In addition, under the ongoing PAS Project, additional indicators for equity and non-sewered cities have also been developed. These efforts need to be systematically incorporated in the GOG’s urban monitoring systems.

c. Decision support system connected to various databases and MIS: The monitoring system comprising various databases, set of indicators for performance monitoring provide a strong basis for introducing decision support systems (DSS) tools to aid in state-level financial allocation decisions. An annual performance report for the sector using Key Performance Indicator (KPI) results could also be prepared as a decision-support tool.

d. Improving dissemination through state/ULB websites: Our quick review of dissemination efforts suggests that information on urban water supply and sanitation is limited. Greater details in terms of current status and government’s goals along with current performance status would possibly go a long way in highlighting the state government’s achievements in the sector. At the ULB level a large number of websites are not updated.

e. Institutional strengthening and capacity building for monitoring: Monitoring of the sector is seen as reporting by ULBs to the state government. These reports are not used at ULB level for planning and budgeting. The DSS tools developed by PAS can help in developing performance improvement plans. However, capacity will need to be built for use of monitoring linked-DSS tools at state and ULB levels.

¹ UDHUD (2010), p. 19.

1. Introduction

This paper on sector finance and monitoring of urban basic services in Gujarat provides an assessment of the situation in Gujarat. The basic services covered under the paper include water supply, waste water, sanitation, and solid waste management. In Gujarat these services are being provided by ULBs though investment funding has been largely provided by higher levels of government including the GoG and GoI. Different sources of funds through inter-governmental transfers and special programmes are identified. The paper also assesses whether with the estimated financial flows, the Sector will be able to meet goals and targets set by the GoI and GoG. It also points to the need to take into account other interventions beyond financial resources alone, particularly in the light of decentralisation and the apparent lack of capacity in smaller towns for implementing sector policy. It reviews sector information and monitoring systems as one such key facilitating mechanism.

Information sources used in this analysis include secondary sources of information such as GoG Budgets, annual reports of the GMFB, project/programme progress reviews by the GUDM, project preparatory reports of the GUDC and information gathered from the Gujarat Water Supply and Sewerage Board (GWSSB), Directorate of Municipalities (DoM), Gujarat Pollution Control Board, and so on. The description of monitoring systems is based on secondary sources of information as well as discussions with stakeholder agencies in Gujarat.

This chapter shows that Gujarat has done well on poverty reduction and in provision of water and sanitation services. These achievements are compared with other states in India. The next chapter looks at the sources and volume of finance for the sector along with principles of allocation and use. It also highlights the issues in sustainability of investments. The final chapter looks at arrangements for monitoring, highlighting the need to introduce performance assessment.

1.1 Population Trends

Gujarat is one of the most urbanised states in India; the pace of urbanisation has accelerated in recent years. The share of urban population has grown from 17.3 per cent in 1911 to 42.5 per cent in 2011, with a steady growth (Table 1.1). The decadal growth for urban population in Gujarat between 2001 and 2011 was 35.8 per cent, which was higher than the national figure. With 42.5 per cent urban population in 2011, it is among the most urbanised states in India. With an urban population of 25.7 million in 2011, Gujarat's share of total urban population in India is 6.8 per cent.

Population projections by the Registrar General and Census Commissioner of India indicate that the level of urbanisation by 2026 for India is expected to be 38 per cent, and is expected to cross 50 per cent for Gujarat.

Table 1.1: Trends in Urbanisation for Selected States in India

State	Level of urbanisation (% urban to total population)										
	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011
Andhra Pradesh	10.1	10.2	11.1	13.4	17.4	17.4	19.3	23.3	26.9	27.3	33.5
Gujarat	17.3	18.0	18.2	21.2	23.9	24.4	26.6	29.6	32.9	37.4	42.5
Karnataka	11.6	13.8	15.3	16.9	23.0	22.3	24.3	28.9	30.9	34.0	38.5
Maharashtra	15.1	18.5	18.6	21.1	28.8	28.2	25.2	82.8	38.7	42.4	45.2
Tamil Nadu	15.1	15.8	18.0	19.7	24.3	26.7	30.3	33.0	34.2	44.0	48.4
All India	10.2	11.0	11.8	13.6	16.8	17.5	18.7	27.0	24.8	27.8	31.1

Source: Various Census of India documents, 1991, 2001 and 2011.

Table 1.2: Urban Projections for Selected States in India

State	% share of urban to total population		
	2001	2011	2026
Andhra Pradesh	27.3	33.5	34.0
Gujarat	37.4	42.5	53.0
Karnataka	34.0	38.5	49.3
Maharashtra	42.4	45.2	61.0
Tamil Nadu	44.0	48.5	74.8
All India	27.8	31.1	38.2

Sources and notes: 2001: Census of India 2001 and 2011; 2026: Based on projections reported in Registrar General and Census Commissioner (2006), Figure 12, p. xix.

Size-class distribution of urban areas in Gujarat: In 2001² nearly 58 per cent of the total urban population in Gujarat resided in the seven cities that are classified as municipal corporations. This concentration of urban population increases to nearly 60 per cent if urban agglomerations around these cities are taken into account. Nearly 40 per cent of urban population of Gujarat is in the three large cities of Ahmedabad, Surat and Vadodara.

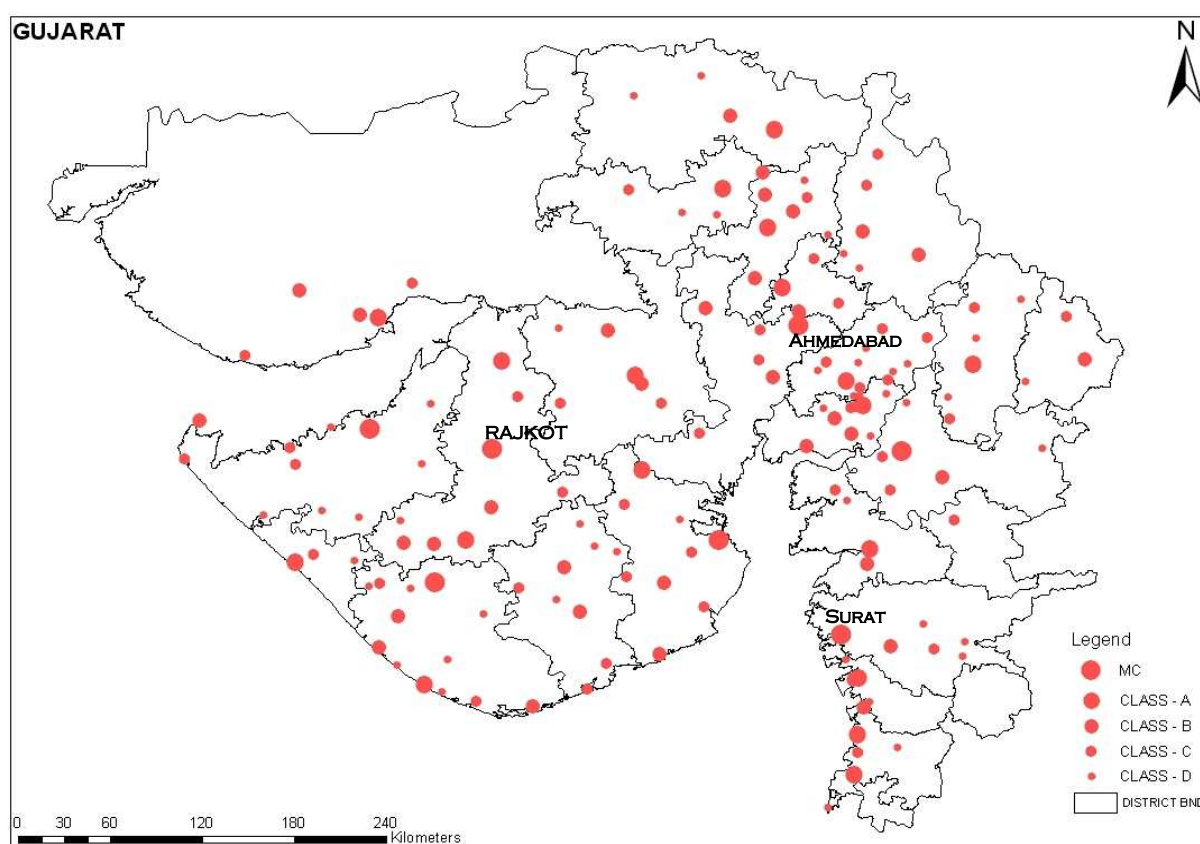
The population growth across different categories of cities and urban local bodies also highlights the importance of larger cities. Much of the growth in the past has been in the municipal corporations; and this trend is expected to continue. In 2009, the share of the state's urban population in municipal corporations is estimated to be 57.5 per cent. The smaller ULBs which are classified as municipalities are divided into four categories based on their population size and local importance. Of these the share of smaller Class B, C and D towns was only 28 per cent of the total urban population in the state in 2001, and it is estimated to have gone down to 26 per cent in 2009 (Table 1.3). However, in terms of sheer number of ULBs, they represent nearly 85 per cent of total ULBs.

² At the time of writing this report, this information for the year 2011 was not available.

Table 1.3: Distribution of Urban Population in Different Classes of ULBs in Gujarat

Category of ULB	Number of ULBs	Total population in 2001 (in mn)	% to total urban population	Population in 2009 (in mn)	% to total urban population
Municipal corporation	7	9.7	57.5	14.5	58.4
Municipalities					
Class A (more than 100,000)	18	2.4	14.0	3.8	15.4
Class B (50,000 to 100,000)	33	2.1	12.4	2.9	11.5
Class C (25,000 to 50,000)	44	1.5	8.7	2.0	7.9
Class D (less than 25,000)	64	1.2	7.4	1.7	6.8
Total	166	16.9	100.0	24.8	100.0

Sources and notes: 2001: Based on Census of India, 2001. It does not include the other 74 Census towns with a population of 1.4 million which do not have urban local governments; 2009: Projections using ratio method done in the PAS Project.

Figure 1.1: Location of Urban Local Bodies in Gujarat


1.2 Income, Poverty and Slums

Gujarat has seen significant growth in income in the past few years. It is seen as a “frontline performer state ever since the accelerated economic reforms began in India in 1991–92. Gujarat has a very well diversified and dynamic economy with a large and expanding industrial sector and a high degree of commercialised agriculture and allied activities.”³ “The state has a target to achieve 11.2 per cent growth during the 11th Five-Year Plan, as against 9 per cent set for the nation. The state’s economy at current prices has recorded an annualised growth rate of 15.04 per cent for the past six years (2004–05 to 2009–10), one of the highest in the country”. Encouraged by its growth in State Domestic Product (SDP), the state now plans to achieve 14 per cent and 15 per cent growth of SDP in

³ Dholakia, R. (2006), p.1.

2010–11 and 2011–12, respectively⁴. Its average annual per capita income at current prices in 2008–09 at Rs 49,251 is 23 per cent higher than the national average. It shows an increase of 8.4 per cent over the previous year.⁵

Not only is the state prominent in economic growth, its cities are also among the ‘richest’ cities of India. Ahmedabad and Surat, the two main cities in Gujarat, figure prominently in the top cities in India in terms of growth and average income. Surat’s average annual household income in 2007–08 was Rs 432,201, which is slightly lower than Mumbai, the richest city in India in terms of average annual household income. “After adjusting for cost of living, the diamond hub of Surat is now the richest city in India. Between 2004–05 and 2007–08, Surat’s middle class doubled in size and its low income category was reduced by a third.”⁶

Urban poverty: Along with this rise in income, Gujarat has done well to reduce urban poverty over the past decades. From a high poverty level in 1973–74 at 53 per cent, share of urban poor in total urban population has come down to 13 per cent in 2004–05, though the all India urban figures remained at 28.3 per cent. Particularly, over the last decade, there is a significant decline in urban poverty in the state as compared to other major states of India.

Table 1.4: Trends in Urban Poverty in Selected States in India

State	1973–74	1983–84	1993–94	2004–05
Andhra Pradesh	50.6	36.3	38.3	28.0
Gujarat	52.6	39.1	27.9	13.0
Karnataka	52.5	42.8	40.1	32.6
Maharashtra	43.9	40.3	35.2	32.2
Tamil Nadu	49.4	46.9	39.8	22.2
All India	49.0	40.8	32.4	28.3

Note: Figures in cell refer to percentage of population below the poverty line.

Source: Planning Commission 1997 and 2007b, as reported in MoHUPA and UNDP (2009) Table 1.9, p. 10.

Slums in urban areas are seen as a manifestation of urban poverty. The poverty reduction in urban areas of Gujarat is also reflected in relatively lower share of urban population that resides in slums (Table 1.5). The estimation of slum population is based on a definition used by Census 2001. The definition included all notified slums, all areas recognised as ‘slums’ by state/local government, which may not have been formally notified as slum under any Act, or a compact area of at least 300 population (or about 60–70 households) of “poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facility”. The NSSO, for its 58th round survey in slums, uses similar definition, except that it also considers a smaller compact area of 20 households. The NSSO estimate of slum population in Gujarat was 19.6 per cent of total urban population in Gujarat – which is among the lowest among key states in India (Table 1.5).

⁴ Government of Gujarat (2010).

⁵ Based on Directorate of Economics and Statistics (2010), p. ix.

⁶ Based on a news report on NCAER (2008), as posted on <http://trendsniff.com/2008/09/16/targeting-top-20-growth-cities-in-india/>, downloaded on December 4, 2010.

Table 1.5: Share of Slum Population in Selected States in India, 2001

State	Slum population to state urban population (%)	State slum population to total slum population in India (%)
Andhra Pradesh	34.9	9.6
Gujarat	19.6	4.9
Karnataka	16.5	3.9
Maharashtra	34.8	19.0
Tamil Nadu	26.7	9.8
All India	26.3	100.0

Source: MHUPA and NBO (2010), Table 2B, p. 21.

Information from the PAS survey suggests a further decline of slum population. Based on information collected from ULBs in Gujarat, it is estimated that slum dwellers account for 17.7 per cent of total urban population in 2009. The share is higher in larger municipal corporations. Municipal corporations and larger Class A and B municipalities also have larger slums settlements as compared to the smaller Class C and D municipalities (Table 1.6).

Table 1.6: Share of Slum Population by Type of ULBs in Gujarat, 2009

Category of ULB	Number of ULBs	% population in slums to total urban population	Number of slum settlements	Average households per settlement
Municipal corporation	7	19.3	2862	204
Municipalities				
Class A (more than 100,000)	18	14.0	537	180
Class B (50,000 to 100,000)	33	14.8	423	196
Class C (25,000 to 50,000)	44	17.5	422	161
Class D (less than 25,000)	64	16.6	437	135
Total	166	17.7	4681	190

Source: Based on data collected from round 1 survey of all ULBs in Gujarat under the Performance Assessment System Project in CEPT University.

1.3 UWSS Service Levels – Interstate Comparisons

A review of service levels suggests that cities in Gujarat have done better than cities in other states in water supply, sewerage, sanitation and solid waste management. Information on access to these services and their quality is mainly available from a number of different household surveys that have been done over the past decade, starting with the household level information collected as a part of the Census of India in 2001. In addition, surveys of slum and non-slum households were done by the NSSO in 2002. Results from the Third National Family Health Surveys (NFHS-3) are available for 2005 and from the District level Household and Facilities Surveys for 2002 and 2007.⁷ These are used to assess and compare service levels in Gujarat with other large and highly urbanised states including Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu.

⁷ NSSO (2003), International Institute for Population Sciences (IIPS) and Macro International (2007); International Institute for Population Sciences (2006); International Institute for Population Sciences (2010).

Performance on water supply: Between 1981 and 1991, access to piped water in urban areas of the state had improved by about 18 per cent. By 2001, about 92 per cent of Gujarat's urban population had access to piped water supply, exceeding the national average by almost 20 per cent and ranking among the first three states in India in terms of access to the service (Table 1.7). Based on a comparative assessment across states, Zerah (2006) also notes that Gujarat is among the few states in India that ensure a better delivery mode and better service standards in water supply.

Fig. 1.7: Access to Piped Water Supply in Indian States (% urban population), 2001

State	Access to improved water supply
Andhra Pradesh	78.0
Gujarat	92.0
Karnataka	89.0
Maharashtra	92.0
Tamil Nadu	83.0
All India	68.0

Source: Census of India 2001.

The information from NFHS for 2005 suggests that access to piped supply was nearly 97 per cent, of which over 82 per cent had access through taps on their premises. Another 5 per cent had other on-premise sources. While about 9 per cent relied on public taps or standpipes, most had to walk for less than 30 minutes. Data on access to improved sources from District Level Household Survey (DLHS) for 2002 and 2007 also indicates good performance by Gujarat with nearly 98 per cent of households having access to improved water sources in 2007, an increase of nearly 18 per cent over five years.

Table 1.8: Households with Improved Water Supply (%), 2005–06

State	Improved water supply			Time to obtain water		
	Piped on premises	Public tap/standpipe	Others	On premises	Less than 30 minutes	More than 30 minutes
Andhra Pradesh	46.6	37.2	15.6	55.0	34.0	10.7
Gujarat	82.3	8.8	5.9	87.4	9.1	3.0
Karnataka	39.9	31.4	16.9	66.0	22.2	11.4
Maharashtra	81.3	14.2	3.6	86.9	10.5	2.4
Tamil Nadu	37.5	45.6	10.6	49.1	39.3	11.5
All India	50.7	20.3	24.0	70.5	22.4	6.9

Source: Analysis based on National Family Health Survey (NFHS-3), 2005–06,

Table 1.9: Trends in Access to Improved Source of Drinking Water Supply, Urban

State	Access to improved source of drinking water supply (% of total households)	
	2002	2007
Andhra Pradesh	56.8	98.2
Gujarat	80.1	97.8
Karnataka	58.1	93.9
Maharashtra	77.8	97.7
Tamil Nadu	40.5	97.6
All India	56.7	94.4

Source: Analysis based on District Level Household Survey (DLHS-2), 2002–04 and District Level Household and Facility Survey (DLHS-3), 2007–08.

Through its 58th round of surveys, the NSSO suggests that 92 per cent of households had access to improved sources in Gujarat in 2002. NSSO 2002 data also provides details of the situation in slum areas. It shows that access to improved water sources in slums was available to 77 per cent of households. Of the slum households, about 19 per cent report that water is not available in sufficient quantities.

Table 1.10: Main Source of Drinking Water (% of Households)

State	Tap		Tube well/handpump		Others	
	Non-slum	Slum	Non-slum	Slum	Non-slum	Slum
Gujarat	92	77	7	16	0.7	7.6
Maharashtra	91	94	6	3	2.9	3.3
Andhra Pradesh	79	77	10	14	10.8	9.0
Karnataka	89	79	6	21	4.9	0.2
Tamil Nadu	83	82	8	5	8.6	13.8
All-India	73	80	20	15	6.9	5.1

Source: NSSO, 2004. Table 29: Number of households by major source of drinking water per 1,000 households.

Sewerage and sanitation: Gujarat also fares well in terms of access to toilets and sewerage facilities. The 2001 Census reported that 76 per cent households had 'latrines within the house' (Table 1.11); NSSO reports access to toilets for 83 per cent of households in urban Gujarat (Table 1.12); NFHS reports access to improved toilets for 72 per cent urban households with another 13 per cent using shared toilet facilities (Table 1.13); and the DLHS reports 79 per cent of households with access to improved toilet facilities (Table 1.14). Notwithstanding the need for a system of coordination/cross-verification of data and definitions across sources, Tables 1.7 to 1.14 suggest that urban Gujarat has done better than many other states in India in terms of sanitation access. The situation in slums, as reported in Table 1.12, seems to be relatively better than other states – though 31 per cent households without latrines in slums is rather high.

Table 1.11: Access to Toilets in Indian states (% Urban Population), 2001

State	Access to toilets within premises
Andhra Pradesh	66.0
Gujarat	76.0
Karnataka	72.0
Maharashtra	53.0
Tamil Nadu	77.0
All India	63.0

Source: Census of India 2001.

Table 1.12: Access to Toilets within Premises for Slums versus Other Areas (% Households), 2002

State	Slum and squatter		Other areas		All Urban	
	Owned/shared septic tank or flush	No latrine	Owned/shared septic tank or flush	No latrine	Owned/shared septic tank or flush	No latrine
Andhra Pradesh	55	37	77	15	73	20
Gujarat	46	31	84	6	83	7
Karnataka	30	40	60	18	58	20
Maharashtra	11	18	72	14	57	15
Tamil Nadu	37	41	72	21	70	22
All-India	27	32	68	16	63	18

Source: Report No. 488 Housing Condition in India 2002, Housing Stock and Construction, March 2004.

Table 1.13: Urban Households by Type of Sanitation Facility, 2005–06 (%)

State	Improved sanitation facility	Shared facility	Other unimproved facility	Open defecation
Andhra Pradesh	51.6	19.4	4.5	24.3
Gujarat	72.3	13.3	2.7	11.7
Karnataka	57.1	19.9	5.5	17.1
Maharashtra	48.9	36.7	1.9	12.1
Tamil Nadu	33.3	19.7	20.5	26.5
All India	52.8	24.2	6.0	16.8

Source: Analysis based on National Family Health Survey (NFHS-3) 2005–06.

Table 1.14: Trends in Access to Toilets, Urban (% of Total Households)

State	Access to improved toilet facility	
	2002	2007–08
Andhra Pradesh	77.0	82.1
Gujarat	79.2	82.4
Karnataka	67.8	59.3
Maharashtra	58.3	80.8
Tamil Nadu	62.4	67.5
All India	66.2	75.9

Source: Analysis based on District Level Household Survey (DLHS-2), 2002–04 and District Level Household and Facility Survey (DLHS-3), 2007–08.

Information on access to sewerage facilities is available from the National Institute of Urban Affairs (NIUA) (2005). This study was conducted in nearly 300 large cities across 13 states in India in 2000. According to this study, in Gujarat, nearly 56 per cent of urban population had access to sewerage facilities. Access to sewerage in Gujarat was higher than the national average, but lower than other major Indian states such as Maharashtra and Karnataka.

Table 1.15: Access to Sewerage Facilities in Large Cities, 2000

State	Access to sewerage facilities
Andhra Pradesh	24.0
Gujarat	56.0
Karnataka	57.0
Maharashtra	64.0
Tamil Nadu	48.0
All India	45.0

Source: Computed from the National Institute of Urban Affairs (NIUA) (2005) which provides city-wise population covered by the sewerage system. For the national average, only large states have been considered.

A comparison of sewage generation versus available treatment capacities in metropolitan and Class I cities across Indian states based on recent studies by the Central Pollution Control Board (CPCB) and City Development Plans (CDP) under the JNNURM reveals that three of four JNNURM cities in Gujarat (Ahmedabad, Surat and Vadodara) have 100 per cent sewage treatment capacity (CPCB 2009 and CDP, Surat 2006). Availability of sewage treatment capacity in Class I towns in Gujarat at 46 per cent of total cities is significantly higher than the national average of 32.5 per cent (CPCB 2009).

Solid waste management: Gujarat fares better than the overall average for India with regard to availability of garbage disposal arrangements in slums as well as non-slum/other areas (Table 1.15). The lack of garbage disposal arrangements in non-slum areas is reported by only 8 per cent non-slum households in urban areas in the state, as against the more than double national average of 19.2 per cent. Similarly, the proportion of slum households reporting a lack of garbage disposal arrangements is lower in Gujarat (22.7 per cent) than the all-India average (~26 per cent). However, garbage disposal arrangements by ULBs are available to 44 per cent slum households in Gujarat. This was lower than the all-India averages. In Gujarat, there is a greater contribution by the residents themselves in organising garbage collection arrangements for slum and non-slum households (Table 1.16).

Table 1.16: Garbage Collection and Disposal Arrangements

State	Slums/non-slum	Arrangement of garbage disposal (% households)			
		By ULB	By residents	Others	No arrangement
Andhra Pradesh	Slum	66	15	0	19
	Non-slum	69	13	5	13
Gujarat	Slum	44	33	0	23
	Non-slum	50	37	4	8
Karnataka	Slum	54	7	0	39
	Non-slum	68	14	3	15
Maharashtra	Slum	83	3	0	14
	Non-slum	80	9	1	10
Tamil Nadu	Slum	73	5	1	21
	Non-slum	77	12	1	10
All-India	Slum	63	10	1	26
	Non-slum	59	18	4	19

Source: NSS Report 488: Housing Condition in India, 2002: Housing Stock and Constructions.

2. Assessment of Urban Water and Sanitation Finance

An urban water supply and sanitation sector finance and monitoring system needs to be viewed in the context of decentralisation. Decentralisation in India has its legislative basis in the 74th Constitutional Amendment Act which, for the first time, provided a constitutional status to ULBs. The state municipal laws and policies, however, determine the expenditure responsibilities of ULBs and provide fiscal authority. In Gujarat, the responsibilities for ensuring services for water supply, sanitation and solid waste management are of the ULBs. While the state government continues to provide a significant portion of funds for the required capital investments, financing the O&M falls under the purview of ULBs.

Decentralisation in the state has a long history and is well established. The Ahmedabad Municipal Committee was established in 1834. Municipal corporations are constituted and function under the Bombay Municipal Corporations Act, 1949, whereas the municipalities are under the Gujarat Municipalities Act, 1963, which was enacted after the formation of a separate state of Gujarat in 1960. In 2009 there were seven municipal corporations and 159 municipalities. All ULBs are regularly elected.

ULBs in Gujarat are responsible for the provision of UWSS services. However, financing of urban water supply and sanitation sector in Gujarat, as in most states in India, takes place through complex arrangements that involve all three tiers of government – central, state and local. Operational costs are usually recovered through user charges and connection fees paid by consumers to the ULBs. There is limited commercial funding through borrowing from banks and municipal bonds, but almost no private sector investment in the sector.

This section outlines the volume and composition of UWSS funding over the past five years. It traces the allocations by size of cities, and for programmes focused on the poor. The allocation decisions are assessed across the main sources of funds, highlighting the possible use of performance information to make more informed (evidence-based) decisions. It has been difficult to compile information from various sources and personal interviews to arrive at the total UWSS funding in the state. A number of assumptions had to be made to arrive at the water supply and sanitation shares of state and ULB funds, as data is neither consolidated nor assessed by sectors. Suggestions to address these data issues are discussed further in the last section of this chapter.

2.1 Volume and Main Sources of UWSS Sector Finance

Total estimated UWSS finance in 2010–11 was Rs 23 billion. It has increased three-fold at current prices, or 25.7 per cent per annum in real terms, since 2005–06. The share of state government in this funding is high, at an average of 52 per cent over this period.

Since 2005–06, annual investment in the UWSS sector is estimated to have risen from Rs 5.9 to Rs 23.0 billion (Table 2.1), showing an increase of 27.3 per cent per annum in real terms. A number of assumptions had to be made to arrive at these broad estimates as described in Table 2.2. Where possible, UWSS estimates are based on projects actually taken up or utilisation reported by ULBs. In case of other grants, share of UWSS is estimated on the basis of share of UWSS in local capital expenditure in 2008–09.⁸

⁸ The share of UWSS in ULB total capital expenditure was reported to be 34.8 per cent for municipal corporations and 29.8 per cent for municipalities in 2008-09 as per information from the first round of surveys of all ULBs in Gujarat under the PAS Project,

The three main funding sources of UWSS finance in Gujarat are:

- Central government funding through CFC) grants, funding for Centrally Sponsored Schemes (CSS), MPLAD grants and programmes, and externally funded projects.
- State government funding through transfers and grants-in-aid, various schemes and programmes of the UDD, and the state's contribution in centrally sponsored schemes.
- ULB own finances mainly to meet their share of central/state schemes, and mobilised through internal surplus and/or borrowing.

The state government funds have been the dominant source for UWSS finance in the last five years. State funds account for 57 per cent of total investments, with central funds contributing another 27 per cent; the remaining 16 per cent came from ULBs as their share of central programmes. The state funds also include investments for the state-wide water supply grid for Narmada Water (Rs 1.8 billion) which is expected to provide bulk water supply from Narmada water to 91 ULBs.⁹ The ULB funds reported in Table 2.1 mainly reflect the ULB share in centrally sponsored schemes such as the JNNURM and UIDSSMT. While some ULBs may further invest their own internally raised funds in UWSS, separate data on this is not available at present. Similarly, at the ULB level, separate information on debt servicing for past borrowing for UWSS investments is not available.

Table 2.1: Estimated UWSS Sector Investment Finance in Gujarat and Main Sources (%)

Source of funds	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	Average per Annum*
	Actual	Actual	Actual	Actual	Rev	Budget	
Investment finance							
Central grants, centrally sponsored schemes (CSP), MPLAD grant and	25.3	38.3	28.5	26.5	17.9	23.5	26.7
State grants, schemes and share in CSPs including GWSSB for water supply grid	64.3	42.2	53.5	53.2	67.2	62.3	57.1
ULB share in funding	10.4	19.5	18.0	20.3	15.0	14.2	16.2
Total	100	100	100	100	100	100	100
Total UWSS investments (in Rs billion)	5.8	10.6	11.9	15.7	21.2	23.0	14.7
Recurrent Expenditure (O&M) (in Rs)	5.9	7.6	8.9	9.2	<i>na</i>	<i>na</i>	7.9
Total Sector Finance (in Rs billion)	11.7	18.2	20.8	24.9	<i>na</i>	<i>na</i>	18.9

Source: Investment finance: refer Annex tables A2.2, A2.3 ad A2.6 for details; recurrent expenditure: based on data from the GMFB Nanakiya Parishthiti 2005–06 to 2008–09.

Notes: Totals may not add up due to rounding; *Average for investment finance is for the period 2005–6 to 2010–11, and for recurrent expenditure is for 2005–06 to 2009–09. Total annual sector finance is thus a total of these two different averages.

Total UWSS sector finance also includes expenditure on O&M incurred by the ULBs. Based on information reported by ULBs, the total estimated average annual expenditure on O&M incurred is Rs 5.9 billion by the seven municipal corporations and Rs 2.0 billion by the 159 municipalities.

Annex Table A2.3 provides details of sources used and assumptions made to arrive at the estimates. While these provide a reasonable approximation of UWSS sector finance, efforts will be needed to streamline the available data to better capture the extent of sector finance and its distribution.

⁹ Government of Gujarat (2010b).

2.2 Priority of UWSS Funding in the State

Over the past few years, increased priority for urban development in the state budget has also led to increase in UWSS finance. Urban allocations in Gujarat compare favourably with other states in India. In Gujarat, the urban development funding is through several programmes.

Urban water supply and sanitation in Gujarat is financed mainly through the UDD budget. Over the past six years, the UDD share in total state budget has averaged about 5.7 per cent (ranging from 1.9 to 8.0 per cent). Gujarat has done well in terms of devolution of funds to ULBs. Over the past four years, a significant amount of funds were devolved to ULBs, amounting to 11 per cent of state's own revenue receipts (Table 2.2). This compares favourably with other states such as Karnataka and Tamil Nadu where about 10 per cent of state tax and non-tax revenue is earmarked for devolution to ULBs.¹⁰

Table 2.2: Priority of UDD and Devolution in State Budget and Finances, 2005–11

	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	Average (2005–06 to 2010–11)
	Actual	Actual	Actual	Actual	Rev	Budget	
Total state budget (Rs billion)	342.5	392.2	427.0	519.2	595.5	687.1	493.9
Total UDD budget (Rs billion)	6.6	15.1	22.3	40.9	47.8	49.9	30.5
UDD total budget as a share of total state budget (%)	1.9	3.8	5.2	7.9	8.0	7.3	5.7
Total UDD Plan budget (Rs billion)	2.9	9.7	17.7	22.5	23.4	25.9	17.0
UDD Plan budget as a share of total UDD budget (%)	43.7	64.6	79.1	55.1	48.9	51.8	57.2
Total devolution from UDD to ULBs (Plan and non-Plan) (Rs billion)	4.8	12.8	20.2	38.5	45.2	47.4	28.2
State's own revenue receipts (Rs billion)	–	–	290.4	341.6	369.7	430.5	358.0
UDD (Plan and non-Plan) devolution as a share of state's own revenue receipts* (%)	–	–	7.0	11.3	12.2	11.0	10.4

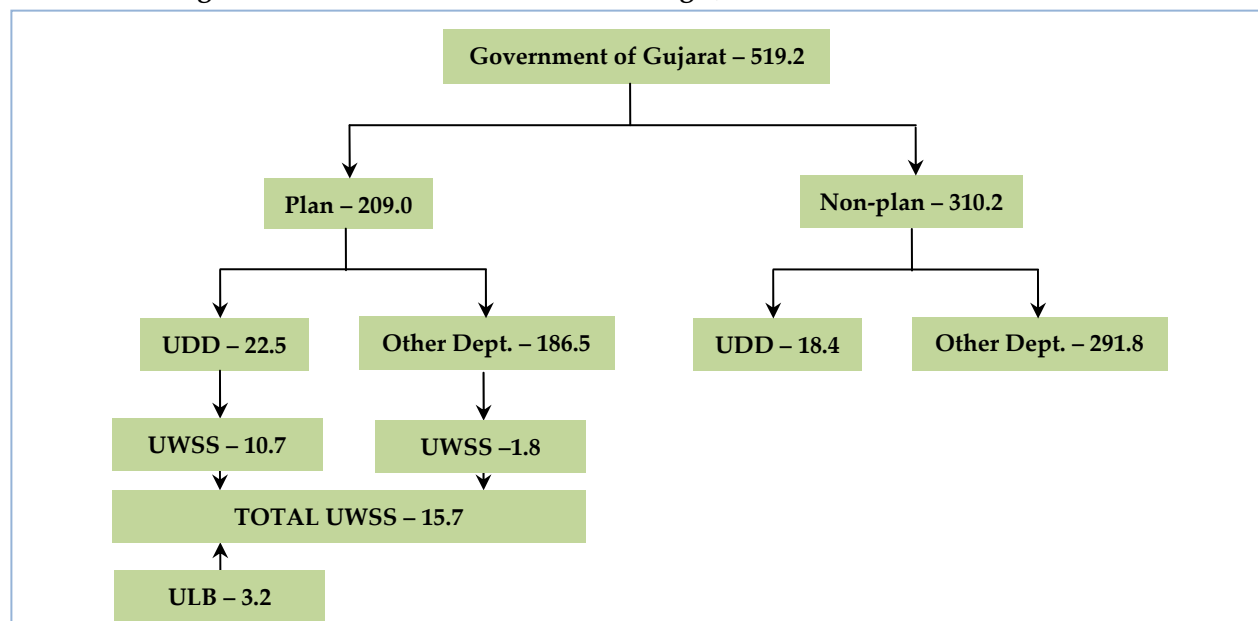
Sources: For further details, refer to Annex Table A2.5. Note: *As data for state government's own revenue receipts was available only from 2007–08 to 2010–11, average has been taken for these years.

Of the total UDD plan funds, it is estimated that 56 per cent of funds are used for UWSS (Table 2.3). UWSS allocations essentially flow from both urban infrastructure as well as housing programmes. It is also seen that an increased budget for the UDD also translates into higher UWSS allocations. The WRD of the state government also funds investment for bulk water supply. From these sources, the UWSS sector finance in Gujarat is estimated to have reached Rs 23 billion in 2010–11, from Rs 6 billion 2005–06.

¹⁰ Based on GoI (2010), Annex 10.2 which gives details of recommendations made by the SFCs of different states.

Figure 2.1: UWSS Fund Flow in State Budget, 2008–09

(in Rs billion)



Source: State Budgets, DoF, GoG, state budgets, 2005–09; DoF, GoG, revised estimates 2009–10 and DoF, GoG, budget estimates 2010–11.

Table 2.3: Priority of UWSS, 2005–11

	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	Average (2005–06 to 2010–11)
	Actual	Actual	Actual	Actual	Revised estimate	Budget	
Total UDD Plan budget (Rs billion)	2.9	9.7	17.7	22.5	23.4	25.9	17.0
Total estimated UWSS allocations/use for capital expenditure (Rs billion) excluding GWSSB and ULB share	1.6	6.1	8.1	10.4	15.4	15.9	9.6
Estimated UWSS funding as a share of total UDD Plan budget (%) excluding GWSSB and ULB share	54.4	62.5	45.7	46.3	65.8	61.8	56.1
UWSS per capita (Rs) including GWSSB	230	385	442	557	787	825	538

Source: State budgets, DoF, GoG, state budgets, 2005–09; DoF, GoG, revised estimates 2009–10 and DoF, GoG, budget estimates 2010–11; GWSSB (2010). For projected population: Source: Report of the Technical Group on Population Projections Constituted by the National Commission on Population, May 2006, Census of India, Refer Annex Table A2.7 for details.

2.3 Consolidation of Urban Sector Programmes

Over the past five years, the GoG has attempted to consolidate various urban and UWSS schemes and programmes under umbrella programmes.

In 2005, the GoG initiated the 'Urban Year' as a part of its 'Vibrant Gujarat' programmes focusing on 'a comprehensive and holistic urban governance vision'.¹¹ During 2005, attention on the urban sector was further strengthened with the GoI's JNNURM programme under which four cities in Gujarat (Ahmedabad, Surat, Vadodara and Rajkot) were taken up as Mission cities. Under the JNNURM,

¹¹ UDHUD (2010), p. 2

Gujarat has emerged as one of the leading states in terms of formulation and implementation of projects. In addition, the GoI also made funds available for 52 other towns under its UIDSSMT.

In 2007, the government's focus shifted to consolidation of different national and state programmes. The first on the list was consolidation of various programmes for inclusive development through its 'Garib Samruddhi Yojana' (GSY). This included programmes related to access to basic services for the poor as well as the 'Umeed' scheme for employment-related training for urban youth. A second effort at consolidation was the launch of the 'Nirmal Gujarat Campaign' (NCC) in the same year. The NCC focused on the urban environment, particularly sanitation and general cleanliness in urban centres. Emphasis was also placed on developing an overall city-level services plan for water and sanitation.

Table 2.4: An Overview of Urban Sector Programmes, 2005–10

Programme name	Programme highlights
Nirmal Gujarat Programme (NGP) (2007)	<ul style="list-style-type: none"> ▪ Launched in 2007; the GoG celebrated that year as 'Nirmal Gujarat Year' covering all ULBs ▪ Its mission is "holistic, integrated thrust to ensure clean land, clean water and air, generating an overall cultural awareness with people's participation and empowering women to ensure improved productivity in the state" ▪ It covers low-cost sanitation, solid waste management, potable drinking water, cleansing of streets, drains, clean city initiative, incentive grant against collection of "Safai Kar", energy audit scheme
Garib Samruddhi Yojana (GSY) (2007)	<ul style="list-style-type: none"> ▪ A result-oriented action plan to integrate urban poor in the mainstream of development process ▪ Focus on multiple results: permanent employment, health, education, housing, roads, power and other services to urban poor • Main objectives include: provide all infrastructure facilities in urban poor localities, sanitised and healthy environment, affordable ownership dwellings for all, and lead towards slum-free towns • 20% of grants from UDD budget and 20% of income of all ULBs to focus on the poor • Rs 13,000 crore allocated for GSY over five years
Swarna Jayanti Mukhya Mantri Shaheri Vikas Yojana (SJMMSVY) (2009)	<ul style="list-style-type: none"> ▪ Launched by the GoG in 2009 to overcome pressure on urban centres, as well as to support and sustain Urban 2005 vision with achieve administrative and fiscal reforms in all ULBs ▪ Salient features include: reform-linked scheme, incorporating and consolidation of various existing schemes, an overall outlay of Rs 7,000 crore over three years, focus on towns and cities other than JNNURM cities, focus on urban poor and urban green

Sources: UDHUD (2010); GSY: <http://www.gudm.org/GSY/English.pdf>; SJMMSVY: <http://www.udd.gujarat.gov.in/udd/SJMMSVY.pdf>

The most recent umbrella framework, the SJMMSVY attempts to meld the earlier efforts along with a more explicit focus on administrative and governance reforms to increase sustainability of urban investments. A new feature of reform-linked funding assistance has also been introduced under the SJMMSVY. These reforms focus on: (a) improving cost recovery for different services by reducing costs and improving revenue collection; (b) meeting sanitation and housing performance targets for the poor; and (c) ensuring regular maintenance and repairs of local infrastructure through appropriate private sector participation.

Thus in the past five years, the GoG has made an effort to consolidate various programmes under one umbrella. However, as we review later, more effort is necessary to reduce fragmentation in funding flows, reducing the number of schemes and related reporting requirements at the local level. This will also help to improve links between investments and service delivery performance. It will help enhance efficiency, effectiveness and local sustainability of the investments made in the sector.

2.4 Devolution and Allocation Principles

Devolution of funds to ULBs takes place through various transfers and grant schemes. While predictability is low, considerable autonomy is provided to ULBs through partially tied funds. Central government funds are mostly linked to infrastructure investment in large cities, while the state government has placed greater emphasis on smaller municipalities.

Urban sector funding takes place through a large number grants and schemes, each with different criteria for devolution or allocation to different ULBs. The transfers include central grants and schemes, sharing of taxes (entertainment and professional) and compensation for abolition of octroi. In addition, the state government has several schemes for urban development and for UWSS in particular. Most grants and schemes require preparation of project proposals followed by a series of approvals and reporting requirements.

Five aspects of decentralisation are discussed below. This discussion is important as more than 80 per cent of the capital funding for urban water and sanitation is by the state and national government. The manner in which the funds are devolved at the local level has an important bearing on the ability of the ULBs to provide services. The five aspects are:

- Level of predictability in funding (Table 2.4).
- Level of autonomy for ULBs in the use of funds (Table 2.5).
- Reform and performance-linked funding (Table 2.6).
- Funds earmarked for the poor (Table 2.7).
- Horizontal equity between municipal corporations and smaller municipalities (Table 2.8).

Predictability in funding: About 21 per cent of plan funds are devolved through formula-based transfers. These funds mainly include the CFC grants and sharing of entertainment and professional taxes (Table 2.5). The remaining 79 per cent of plan funds are determined on the basis of proposals submitted by ULBs. Even when formula-based allocations are used (for example, for entertainment tax), ULBs are required to submit project proposals. The actual transfer takes place only after technical approval of these projects and satisfactory progress in implementation. The three-year 'model town' scheme under the SJMMSVY does provide fixed funds based on type of ULBs. Specific annual budget allocation of Rs 1.8 billion has been made for this, which is almost 50 per cent of annual formula-based funding over the past six years as reported in Table 2.5.¹²

Local autonomy and capacity in the use of funds: Local autonomy in the use of devolved funds is determined from the extent to which ULBs have control over deciding their use across different purposes and sectors. In this sense, only the non-Plan grants for octroi compensation are untied. These are linked to the past octroi revenues, though no automatic increase in these is planned. ULBs can choose to use this grant for any purpose. Over the past three years, the octroi compensation grant is about 42 per cent of total devolution/allocation to the ULBs. Recent reports, however, suggest that actual disbursement of octroi compensation grant has not been done in full and in time.¹³

¹² Under this scheme fund allocation is made by Size-Class of cities. Allocation is for three years and includes: Rs 100 million for Class A municipalities, Rs 70 million for Class B municipalities, Rs 40 million for Class C municipalities and Rs 30 million for Class D municipalities (GoG 2009).

¹³ Based on News article in Times of India, dated 21/01/2011, Website link:

<http://timesofindia.indiatimes.com/city/ahmedabad/AMC-in-dire-straits-after-octroiabolition/articleshow/7329942.cms#ixzz1BxluEyDn>

Table 2.5: Formula based Devolution for Central and State Grants

Grants/schemes	Criteria for devolution/allocation to ULBs	Purpose and use	Total funding (Rs billion) from 2005–06 to 2010–11
Central Finance Commission grants	Devolved on the basis of weighted per capita grant – weighted by ULB type (MC-1, Class A-2, Class B-4, Class C-6, Class D-8)	Development of basic services (water, sanitation)	3.4
Upgradation of Standards of Administration recommended by 12 th Central Finance Commission		For improved database, administration	0.2
Entertainment tax	25% of entertainment tax is transferred to Vajpayee Nagar Vikas Yojana; the remaining 75% is devolved on the basis of weighted per capita grant – weighted by ULB type (MC-1, Class A-2, Class B-4, Class C-6, Class D-8)	Development of basic services (water, sanitation); 20% of funds have to be used for urban poor related schemes	2.4
Grant-in-aid for entertainment tax on cable TV/dish amenities	Devolved on the basis of weighted per capita grant – weighted by ULB type (MC-1, Class A-2, Class B-4, Class C-6, Class D-8)	For development works of basic amenities in MCs; municipalities use this for meeting any gaps in salaries	0.1
Grant-in-aid for professional tax	50% of professional tax collected from jurisdiction of ULB in previous year	Development works for public facilities and basic amenities	3.3
Incentive grant to corporation for development work as compensation for octroi (Plan fund component)*	Average octroi income in the ULB past three years before abolition of octroi	Development works for public facilities and basic amenities	11.5
Total funds on formula basis (over 2006–06 to 2010–11)			20.9
Share of UDD funds on formula basis as a share of total plan funds (%)			(20.5%)
Average annual funds on formula basis (Rs billion)			3.5

Sources: Refer Annex Tables A2.1, A2.3 and A2.4 for details of sources and assumptions. Note: Numbers may not add up due to rounding. Notes: * In addition, Rs 50 billion was also transferred as non-Plan for octroi for the municipal corporation for the period 2008–09 to 2010–11, and Rs 16.2 billion was transferred to municipalities for the period 2005–06 to 2010–11.

All other grants and schemes, represent tied funding – though there different degrees of freedom in use of these funds. Several grants and schemes are meant for basic infrastructure and ULBs can decide on a specific infrastructure as illustrated in Table 2.6. Detailed data on the actual use of these funds across sectors is not readily available for all grants. However, details compiled by either the GUDM or GMFB for some grants and schemes is reported in Table 2.7.

Of the remaining grants and schemes, about 16 per cent of funding is through fully tied grants that require ULBs to use these funds for sector specific schemes for UWSS. These include schemes that focus on water (for instance, Amrut Dhara) or on sanitation, particularly through the Nirmal Gujarat programme. Only 3 per cent of funding is tied for other sectors, clearly reflecting the priority being accorded to UWSS within urban development.

Table 2.6: Conditions on the Purpose and Use of Plan Funds

Extent of local autonomy (type of use or condition required)	Grants/schemes	Total funding – 2009–10 (Rs billion) (% to total UDD Plan funds)
Fully untied	No Plan schemes are fully untied	0.0 (0.0%)
Partially tied: use for development works of any local basic services/public amenities – no specific sector required, but actual allocations determined on the basis of CDP and approved project proposals	Central Finance Commission, entertainment tax, professional tax, incentive grant for MCs, assistance under Swarnim Sidhhi, JNNURM, UIDSSMT, urban development fund, Vajpai Town Development Scheme, Nagar Vikas Srinidhi	19.1 (81.5%)
Sector specific use required (UWSS)	Drainage scheme, Nirmal Gujarat (sanitation), Amrut Dhara (water), municipal Solid waste project, sakhi mandals (sanitation), BSUP and IHSDP (housing and services for the poor), NSDP and EIUS (slum development), low cost sanitation, Nirmal Gujarat	3.7 (15.7%)
Sector specific use required (other sectors)	Preparing sub-regional plan, Kevadia Area Development Authority, Creation of GUDC, Gujarat Integrated Township Scheme, SJSRY, roads, bridges, etc	0.6 (2.8%)
Total	Total Plan funds of the UDD	23.4 (100.0%)

Sources and notes: Refer Annex Tables A2.1, A2.3 and A2.4 for details of sources and assumptions.

All Plan funds place considerable emphasis on preparation of project proposals by ULBs. In a sense, ULBs have to compete for these funds as grants are allocated to the ‘first off the block’. Additionally, such efforts usually require a CDP that provides a city-level framework of infrastructure development in the ULB. Studies and inquiries in a few cities across different categories suggest that while the larger municipal corporations have the capacity to prepare CDPs and detailed project reports (DPRs), other ULBs do not have the necessary internal capacity.¹⁴

¹⁴ See, for example, PAS Project (2010) and Joshi (2011, forthcoming).

Table 2.7: UWSS Share in Partially Tied Funding

Grants/schemes	Total funding – 2009–10 (Rs billion)	UWSS share Rs billion (% to total funds)
JNNURM	5.8	3.5 (61.0%)
Central Finance Commission	0.6	0.6 (95.0%)
State grant	0.7	0.2 (34.7%)
State scheme	12.0	9.1 (76.0%)
Total	19.1	13.5 (70.6%)

Sources and notes: Refer Annex Tables A2.1, A2.3 and A2.4 for details of sources and assumptions.

The use of these grant funds for UWSS requires considerable capacity at the ULB level. The lack of such capacity is reflected in relatively low utilisation of funds devolved/transferred to the ULBs, particularly the smaller municipalities as shown in Table 2.8. While municipal corporations seem to be able to utilise the funds available at their disposal, municipalities are unable to do so. Besides constraints of human capacity, some of the grants often require matching funds which is a problem for many of the smaller ULBs. Lack of capacity of smaller towns to address procedural requirements is another issue that hampers access to Plan funds for smaller towns.¹⁵

Table 2.8: Estimated Fund Utilisation by Municipal Corporations versus Municipalities

Total capital expenditure as % of estimated devolution	2006–07 (Actual)	2007–08 (Actual)	2008–09 (Actual)
Municipal corporations	119%	80%	86%
Municipalities	53%	56%	31%

Source: Nanakiya Parishthiti, 2006–07 to 2008–09, GMFB, Gandhinagar.

Besides the capacity constraints, the low utilisation of grants may also result from inefficiencies in the actual transfer processes. Grants are often disbursed to ULBs in the last quarter of the financial year, making it difficult for them to utilise these funds in the same year. This is also reflected in the routing of state government funds to ULBs through GMFB. Table 2.9 highlights the unpredictability in these transfers, with actual transfers ranging from 218 to 77 per cent of budget allocation. Better tracking of funds supported by regular MIS-backed implementation monitoring and technical support can help improve this performance.

The available data on aggregate ULB capital expenditure suggests that it is less than the total transfers to ULBs as reported in Table 2.9. Although ULB reports submitted to the GMFB do provide these details, this information is not analysed systematically at present. This information is not part of any MIS.

¹⁵ Refer Kundu (2001) for a detailed discussion on the absorption capacity of smaller ULBs in Gujarat, which has hampered access to grants under poverty alleviation schemes of the central government due to inability to obtain matching loans from banks and access to entertainment tax transfers, owing to their lack of capacity to furnish satisfactory progress reports to the GMFB.

Table 2.9: Flow of Funds from State Government to ULBs

	2005–06	2006–07	2007–08
Total fund flow to ULBs			
Total devolution from UDD to ULBs (Plan and non-Plan) (Rs billion)	4.8	12.8	20.2
Total capital expenditure by ULBs (Rs billion)	4.5	11.2	15.4
Total capital expenditure by ULBs as a % of total funds transferred	93.2	87.5	76.2
Fund flow through GMFB			
State budget allocation through GMBB (Rs billion)	2.3	3.3	10.8
GMFB disbursement to ULBs (Rs billion)	4.9	2.5	9.4
Budget allocation actually disbursed (%)	217.5	77.1	86.8

Source: For total fund flow to ULBs: State budgets, DoF, GoG, state budgets, 2005–09; 2009–10 and 2010–11; Nanakiya Parishthiti, 2006–07 to 2008–09, GMFB, Gandhinagar. For funds routed through the GMFB refer Annex Table A2.8 for sources. Note: This includes only the funds routed through the GMFB and for which disbursement details were available.

Reform-linked funding: A new trend in urban development funding by the national government is to get state and local governments' commitments for specific reforms to avail funding. The GoI started this in 2005 with its funding through the JNNURM which required the participating state and local governments to sign a Memorandum of Agreement to undertake specific reforms over a seven-year period. The reforms listed in Table 2.10 mainly focus on governance and ULB finances. Thus, almost 93 per cent of total funding of national government programmes and grants for the urban sector has been tied to reform implementation (Table 2.10).

Table 2.10: Mandatory and Optional Reforms under JNNURM

ULB-level mandatory reforms	State-level mandatory reforms ¹⁶	Optional reforms ¹⁷
Double entry based accounting system	Repeal of Urban Land Ceiling and Regulation Act	Revision of bye laws
Introduce e-governance	Reform of land control laws	Simplification of procedure: conversion to non agricultural
Property tax reforms	Rationalisation of stamp duties: reduce it to 5%	Introduction of property title certification system
Property tax collection efficiency to increase to 85%	Enactment of Public Disclosure Law	Earmarking 20–25% of land for EWS/LIG
Levy of user charges to achieve full recovery of operation and maintenance costs	Enactment of Community Participation Law	Computerised process of land registration
Internal earmarking of funds for poor	Associating elected ULBs with city planning function	Rain water harvesting made mandatory and bye laws for recycled water
Provision of basic services to poor		Administrative and structural reforms and encouraging public-private partnerships

Source: Based on MOUD (n.d.).

¹⁶ In respect of people-oriented schemes relating to water supply and sanitation, the state-level mandatory reforms for repeal of Urban Land Ceiling and Regulation Act and reform of Rent Control Act may be taken as optional.

¹⁷ ULBs under the JNNURM will have the freedom to opt for any two reforms from the optional category in each year of implementation.

Table 2.11: Extent of Reform-linked Funding in Gujarat

Source of funding	Grants/schemes requiring reform commitments	Total funding – 2009–10 (Rs billion) (% to total Plan funds in source)
Central programmes	JNNURM, UIDSSMT, BSUP and IHSDP (housing and services for the poor) – including state share of centrally sponsored schemes	8.0 (93.0%)
State programmes	Assistance under SJMMSVY for municipal corporations/municipalities	1.8 (12.4%)
Total	Reform-linked funding from central and state government as a share of total Plan funds for UDD	9.8 (42.1%)

Sources and notes: Refer Annex Tables A2.1, A2.3 and A2.4 for details of sources and assumptions.

Despite this innovative approach of reform- and performance-linked funding, the actual experience with implementation of reforms under the JNNURM has not been very promising. For example, Ramchandran (2011) observes in relation to reform implementation under JNNURM that: “The harsh reality is that while a moderate implementation of reforms has taken place, many states and cities lag behind in completing milestones.” Although Gujarat has been able to implement many of the reforms, it has lagged behind in full cost recovery of urban services and collection of property taxes. In Gujarat, local taxes and charges for UWSS are linked to property tax collection, and this remains an area of concern. More importantly, an assessment of quality of reform implementation is also needed. One reform, for example, that has lagged behind in Gujarat is the introduction of appropriate user charges to ensure full recovery of O&M costs of basic services. Even for cities that seem to have high cost recovery, this has been achieved through an ad hoc increase in tax/user charges, rather than a systematic reduction in inefficiencies such as water losses, illegal connections and improving collection efficiency. An equally important concern is the need for more rigorous monitoring of these reforms.

Table 2.12: Reforms under the Government of Gujarat’s New Scheme, SJMMSVY

ULB financial performance	Service coverage
1. Improved efficiency in collection of arrears in local taxes and charges, and current demand of local taxes and charges	1. 100% coverage of all households in the ULBs through individual toilets and where necessary through ‘pay-and-use’ toilets’ by March 2011
2. Improved coverage and efficiency in collection of professional tax	2. 100% coverage of all properties for door-to-door collection of segregated solid waste by March 2011
3. Reducing the gap in recovery of O&M costs of local services such as water, waste water, streetlight and municipal solid waste management	3. Reduction in response time for consumer complaint redressal for services related to water supply, waste water and streetlights
4. Reduction in share of administration in total recurrent expenditure	4. Under the Garib Samruddhi Yojana (GSY) provision of houses with all services to at least 30% of poor households by March 2011
5. Increase in total revenues through local taxes and charges	5. Provision of training to at least 30% of urban unemployed by March 2011
6. Reduction in ULB’s electricity bills and increased use of non-conventional energy sources	6. Development of green cover for at least 5% of ULB area and a 2-hectare garden for every 25,000 population

Source: Based on GoG (2009).

The GoG has also introduced performance-linked funding for the SJMMSVY, which was introduced in 2009–10. It is tied to a set of reforms and performance measures that focus on ‘transparency in

governance, consumer-centric approaches and increased financial viability of public services'.¹⁸ To get funding under this scheme, a ULB has to sign a Memorandum of Understanding that covers implementation of measures related to financial performance, coverage of basic services and consumer grievance redressal.

However, the effective implementation of these reforms will require developing the capacity of ULBs for preparing and implementing them. In this respect, the state government would find it useful to review the efforts in Uganda and Tanzania, where specific support is provided to improve performance of local governments supported by third party monitoring. The specific performance areas are similar to those under the JNNURM and SJMMSVY and include "financial management, fiscal capacity, planning and budgeting, transparency and accountability, interaction between higher and lower local governments, human resource development, procurement, project implementation, and council functional processes".¹⁹ However, there are three differences in terms of actual funding and implementation that would be worth exploring further: (a) the capital funding for infrastructure is only provided to those local governments that meet the minimum levels set for performance measures to ensure proper utilisation of funds, unlike the promise of meeting reform conditions under JNNURM within a set time period; (b) a specific capacity-building grant that aims to support local governments in meeting these minimum conditions and improve performance; and (c) "an assessment of performance is done in retrospect to reward local governments that perform well by giving them 20 per cent more and penalise those that perform poorly by giving them 20 per cent less than their Local Development Grant allocation".²⁰ This assessment is done through third party monitoring.

A second important aspect for implementing a performance-linked grant system is to have specific parameters to assess goals of service delivery and of the related reforms needed to achieve these goals. The GoI's SLB initiative provides a set of indicators that can be used for this purpose.²¹ The indicators for goals and reforms as well as local actions for UWSS developed under the PAS Project also provide such a framework.²² This allows a better link between the reforms and service delivery goals that are outlined. Systematic assessment of these links will also become possible.

Earmarking funds for the poor: The analysis presented in Table 2.13 suggests that in 2009–10, about 16 per cent of the total Plan budget of the UDD was earmarked for the urban poor through various programmes. Of this, nearly 29 per cent of central government programmes for urban development and 10 per cent of state funds and grants were earmarked for the poor.

¹⁸ Based on GoG (2009).

¹⁹ Ministry of Local Government (2006), p 4.

²⁰ Ministry of Local Government (2006), p 4.

²¹ Based on GoI (2009).

²² Based on CEPT University (2010).

Table 2.13: Extent of Funds Earmarked for the Poor from the State Budget

Source of funding	Grants/schemes earmarked for the poor	Total funding for the poor – 2009–10 (Rs billion) (% to total Plan funds in source)
Central funds	BSUP and IHSDP (housing and services for the poor), NSDP and EIUS (slum development), SJSRY – including state share of centrally sponsored schemes	2.0 (29.0%)
State funds	Entertainment tax, Nirmal Gujarat, low cost sanitation, electricity connections, etc	1.8 (9.5%)
Total	Total funds earmarked for the urban poor as a share of total Plan funds for UDD	3.8 (16.1%)

Sources and notes: Refer Tables A2.1, A2.3 and A2.4 for details of sources and assumptions.

A number of schemes and programmes by both the GoI and the state government focus specifically on the urban poor. Table 2.13 highlights the schemes from which possible provision for UWSS funding for the poor can be made. In recent years, in both central and state funding, there is an increase in earmarked funding for the poor, as well as consolidation of different schemes. While such a consolidation may be good, it also indicates a move away from provision of basic services – which was the focus of Environment Improvement in Urban Slums (EIUS), Urban Basic Services for Poor (UBSP), National Slum Development Programme (NSDP) and Urban Low Cost Sanitation (ULCS) – to housing. Under the JNNURM, the two schemes of Basic Services to the Urban Poor (BSUP) and Integrated Housing and Slum Development Programmes (IHSDP) suggest a shift to provision of housing instead of focusing on universal access to house-level basic services. A number of researchers have highlighted the fiscal issues in ensuring universal subsidised housing.²³ While the trend in increased allocation for the poor suggests that there is likely to be sufficient funds to provide universal access to basic services, provision of housing to all appears difficult with available resources.

The GoG has launched two consolidated programmes focused on the poor. The first, titled Shaheri Garib Samruddhi Yojana (SGSY), focused on provision of basic amenities to peri-urban areas and in slum settlements. However, funding was limited and the attempt to bring all existing schemes under one umbrella did not work out. The Nirmal Gujarat Sanitation Programme (NGSP) attempted consolidation with an increased level of funding. For urban water and sanitation the NGSP focused on subsidies for individual toilets (*Vyaktigat Sauchalay*) to make Gujarat an ‘open defecation free state’. While this scheme has led to considerable increase in access to individual toilets, more attention is needed on disposal of waste as the toilets in several slum settlements are not connected to sewerage and also do not have septic tanks. The prevailing subsidy rules distort incentives enabling the contractors to take up ‘toilets with sewerage’ even when access to sewerage is not actually possible.²⁴

²³ See, for example, Mehta and Mehta (2010), Annez et al. (2010) and Kundu and Samanta (2011).

²⁴ A CEPT University student project in one of the ULBs in Gujarat with a population of about 150,000 suggests that out of the 1,600 toilets constructed under this scheme, nearly a half were not used as they lacked access to sewerage. CEPT University (2010).

Table 2.14: Selected Programmes/Schemes for the Urban Poor with Possible UWSS Funding

Programmes/schemes	Purpose	Fund allocation criteria	Funding pattern	Number of ULBs covered	Average annual allocation/disbursement (Rs million)
Government of India Programmes					
BSUP (2005–12)	To provide shelter and basic services to urban poor in JNNURM cities; convergence of all central housing and infrastructure programmes for poor	Allocation of funds among states is on the basis of their proportion of population living in urban slums to total urban slum population in the country	Centre:state:ULB 50:20:30	5	1,622
IHSDP (2005–12)			Centre: state/ULB 80:20; Min. beneficiary contribution of 12% for general category and 10% for SC/ST/weaker sections included in 20% state/ULB share	23	91
NSDP (1996–2007)	–	–	Centre: 70% loan and 30% grant	12 in 2005	229
Urban Basic Services for Poor (from Seventh Five-Year Plan: 1985 – 2007)	Provision of basic services to urban poor	NA	Centre:state 60%:40%	–	16
Government of Gujarat Programmes					
Nirmal Urban (individual and pay and use toilet schemes) (2007–08)	Open defecation free cities; provision of safe sanitation to all		Pay and use toilets: GoG subsidy up to Rs 0.4 million for a toilet block; rest by ULB; Individual toilets: GoG subsidy – Rs 4,000 per unit till 2007–08; beneficiary contribution – Rs 900 per unit	168	769
Shaheri Garib Samruddhi Yojana (2007)	Provision of basic amenities to peri-urban areas and slums	–	–	168	74
EIUS (1978–2006)	Provision of basic infrastructure in slum settlements	–	100% grant for project costing up to Rs 1 million – initially from the centre and later from the state	NA	15

Sources: Government of India programmes: Various Five-Year Plan documents available on www.planningcommission.gov.in; JNNURM website – <https://jnnurmmis.nic.in>; GoG programmes: Information brochure on schemes/programme issued by the GMFB. Notes: (a) For Nirmal Gujarat, 60 per cent budget allocated for sanitation services is assumed to be for the urban poor, based on detailed break up of Nirmal Gujarat budget head as reported by the GMFB, (b) Data on fund allocation/disbursement is for the latest available years; and (c) The reported allocation or disbursement is for a limited number of years as per available information. Details are given in Annex Table A2.10.

In addition to such specific programmes and schemes, one of the required reforms under the JNNURM is to institutionalise “internal earmarking of funds in ULB budgets specifically for basic services to the poor”. This requires reforms in “budgeting and accounting systems” and “setting targets for expenditure incurred on delivery of services to the poor”. The “Ministry of Housing and Urban Poverty Alleviation (MoHUPA) recommended norm is 25 per cent of municipal budget including funds flowing from higher level governments”. This is to be adopted by “the State and each municipal body of the State”.²⁵

In response to this mandatory reform, the GoG has adopted a policy that requires ULBs to earmark 20 per cent of grants from the state UDD budget for urban poor. It has also made it mandatory for ULBs in the state to earmark the same proportion of their own revenue income for the urban poor. The two Government Resolutions (GRs) that support this are:

- **GR No. 52CH-2006-0794-B, dated: 31 January, 2007, UDD, Government of Gujarat, Gandhinagar**, which states that 20 per cent of the total budgetary allocation from the state government to ULBs for development works should be allocated for the urban poor. The GoG has also mandated that 20 per cent of municipal budgets be earmarked for the purpose.
- **GR No. MFB/1191/1949/2, dated: 26 September, 1994, UDD, Government of Gujarat, Gandhinagar**, specifies criteria for allocation of entertainment tax. It states that 20 per cent of the total amount should be used for the welfare of the urban poor. The balance 80 per cent is then allocated to ULBs stipulating that water supply related works are to be accorded first priority; sewerage and storm water drainage second priority; and public health works third priority (out of 10 items) for utilisation of entertainment tax funds by ULBs.

An earlier provision in the Bombay Provincial Municipal Corporation (BPMC) Act, required the municipal corporation to use 10 per cent of its own income for providing basic facilities in areas predominantly populated by members of Scheduled Castes, Scheduled Tribes and other socially and economically backward section of the population.²⁶ However, despite these stated intentions, it is difficult to assess the actual allocations made for the poor by ULBs as separate data on this for each local body is not readily available. Interestingly, no such provision could be found for municipalities under the relevant statute of Gujarat Municipalities Act, 1963.

The JNNURM reform also requires each ULB to constitute a ‘Basic Services for Urban Poor Fund’; set rules for contributions to, and disbursement from, this fund; and “create and operate appropriate budgetary mechanism to ensure that funds allocated for urban poor get spent on urban poor”.²⁷ However, a review of budget documents from ULBs in Gujarat does not suggest that a separate fund has been set up nor is there a separate budget head explicitly for this purpose, though a few ULBs do report on their spending on the poor. For example, the Ahmedabad Municipal Corporation (AMC)

²⁵ Based on NIUA (2010), p 68-70.

²⁶ The provision under the BPMC Act 1949 is: “It shall also be incumbent on the Corporation to make, in its budget for every official year, provision for making expenditure to the extent of such amount, not exceeding ten per cent, of its income for such year other than the income from the proceeds of the Transport Undertaking and any other specified items of income as the State Government may, from time to-time, determine and notify in the Official Gazette, for the purpose of providing basic facilities, like water supply, drainage, sanitation, street lights, medical aid, slum clearance and such other matters in areas predominantly populated by members of Scheduled Castes, Scheduled Tribes and other socially and economically backward class of people, and if the expenditure so provided for is not fully incurred in the official year for which it is provided, the balance shall be carried forward in the budget of the next succeeding year.” (Section 63(2): 2 (a)).

²⁷ Based on NIUA (2010b).

reports its direct and indirect allocations for weaker sections, were 12.7 and 17.4 per cent of the AMC's own income for the 2010–11 budget.²⁸ It also includes details of the allocation for the urban poor.

Horizontal equity between municipal corporations and municipalities: Table 2.14 shows that municipal corporations receive nearly three-fourths of the total UWSS finance though their population share is 58 per cent.²⁹ This is more pronounced for central programmes, which have provided more than 85 per cent of the total funds to the municipal corporations (routed through the state). On the other hand, state government has balanced this by increasing the share of municipalities to over 65 per cent in recent years.

The disparity between municipal corporations and municipalities partly reflects the bias of national programmes for large cities. One of the reasons cited for lower share of municipalities is that access to these funds requires preparation of projects and follow-up with state government agencies. The smaller municipalities do not have this capacity. In response to these concerns, the state government under its new programme of SJMMSVY, has identified a panel of technical consultants to work with municipalities for developing CDPs and preparing DPRs. Municipalities will be able to use their services and access the Rs 1.8 billion per annum funds earmarked for them. While this is a welcome move, further efforts are needed to build the capacity of ULBs and technical consultants to focus on improving service delivery and service efficiency³⁰ rather than simply creating additional infrastructure which has been the practice in the past.

Table 2.15: Share of Municipal Corporations versus Municipalities in UWSS Finance, 2005–10 (%)

Type of funds		2005–06	2006–07	2007–08	2008–09	2009–10	Average (2005–06 to 2009–10)
Central programmes and grants (CPG)	Municipal	51.0	73.3	66.7	84.5	87.4	83.1
	Municipalities	49.0	26.7	33.3	15.5	12.6	16.9
	Total Funds (Rs billion)	1.1	4.9	4.1	5.3	4.9	4.1
State programmes and grants (SPG)	Municipal corporation	25.1	19.2	75.5	49.6	34.4	35.4
	Municipalities	74.9	80.8	24.5	50.4	65.6	64.6
	Total Funds (Rs billion)	0.8	1.2	4.2	5.4	10.8	4.5
ULB contributions (ULB)	Municipal	98.8	98.1	97.1	97.5	97.4	97.1
	Municipalities	1.2	1.9	2.9	2.5	2.6	2.9
	Total Funds (Rs billion)	0.6	2.1	2.1	3.2	3.1	2.2
Total UWSS finance	Municipal	54.4	71.3	76.5	74.0	58.7	60.0
	Municipalities	45.6	28.7	23.5	26.0	41.3	40.0
	Total Funds (Rs billion)	2.5	8.2	10.4	13.9	18.8	10.8

Source: Refer Annex Table A2.9 for details.

²⁸ Own income includes local taxes and charges as well as transfers such as grant in lieu of octroi abolition and other revenue grants. The estimated share of the socio-economically weaker population is estimated to be 30 per cent of total population. Indirect allocation for the poor is estimated as 30 per cent of total allocation for general urban infrastructure such as water supply and roads (AMC 2010).

²⁹ As per Census of India results, population share of municipal corporations in total urban population was 58 per cent in 2001.

³⁰ See, for example, discussion in the next section for Kalol, a city with a population of 150,000.

Table 2.16: Sources of UWSS Finance for Municipal Corporations versus Municipalities, 2005–10 (%)

		2005–06	2006–07	2007–08	2008–09	2009–10	Average (2005–06 to 2009–10)
Municipal corporations	CPG	42.0	61.4	34.2	43.9	38.6	44.0
	SPG	14.4	4.1	39.8	25.9	33.5	23.5
	ULB	43.6	34.5	26.0	30.2	27.9	32.4
UWSS Finance in municipal corporations	Total	1.37	5.86	7.98	10.30	11.07	7.32
Municipalities	CPG	48.0	55.6	55.5	22.8	7.9	38.0
	SPG	51.4	42.8	41.9	75.0	91.0	60.4
	ULB	0.6	1.7	2.6	2.2	1.1	1.6
UWSS Finance in municipalities (Rs in billions)	Total	1.15	2.36	2.46	3.63	7.77	3.47

Source: Refer Annex Table A2.9 for details.

Note: CPG: Central programmes and grants; SPG: State programmes and grants; ULB: Urban local body contributions.

Table 2.17: Earmarking in UDD Budget by type of ULBs

Allocation of budget to programmes/grants	2005–06	2006–07	2007–08	2008–09	2009–10	Average (2005–06 to 2009–10)
For municipal corporations	0.0	51.3	69.9	59.7	51.3	47.8
For municipalities	47.8	26.6	16.5	28.6	38.0	32.2
Not earmarked	52.2	22.1	13.5	11.7	10.7	19.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total UWSS finance (Rs in billion)	2.5	9.1	16.8	22.1	22.8	14.6

Source: Refer Annex Table A2.4 for details.

2.5 Sustainability and Local Absorption Capacity

While total investment funding seems sufficient to meet the current demand for water and sanitation services, the challenge is to provide for this in a sustained manner. This is further compounded by gaps in local human resource capacity and lack of focus in structural reforms that can enhance performance-linked incentives for staff.

A feature of successful decentralisation is when functional and fiscal decentralisation are well matched. Funding through local revenues and from intergovernmental transfers should be sufficient to meet all the obligatory functions of the ULB. When this does not happen, it creates not only imbalances in service delivery but leads to issues in sustainability of services as well.

While the level of funding of UWSS investments is sufficient in the short run in Gujarat to achieve the immediate targets set by the state government, there is a question regarding the long term sustainability of these investments. Three issues deserve close attention to improve the chances of long term sustainability: the need for adequate expenditure on O&M for UWSS services; extent of cost recovery of, at least, O&M (recurrent) costs to be able to operate the services effectively and generate an adequate surplus for immediate capital investment requirements; and, adequate human capacity in the ULBs for efficient and equitable service delivery. The issue of human capacity is also linked to incentives for staff to ensure good performance in delivery of water and sanitation services.

Investment funding to meet state government targets: On several of UWSS service delivery targets, the GoG has laid down clear objectives such as providing at least 100 lpcd water supply to all cities, and ensuring that all urban citizens have access to a water supply connection and a safe toilet facility. The government also plans to provide full sewerage facilities in all towns. The total investment required to meet these targets is estimated to be Rs 120 billion.³¹ Given the fact that the average annual investment is around Rs 23 billion, it is possible to achieve the targets in the next five years. As nearly 75 per cent of the Rs 23 billion is the state and local government share, it is possible to achieve the targets even if the national programme funding is withdrawn.

To sustain these investments, focus will also need to be on areas that help improve service delivery and financial viability. For example, to reduce wastage of treated water all ULBs need to conduct at least a preliminary water audit and carry out basic leakage management measures along with metering. Metering would also help in demand management as shown in a few places in India already.³² Similarly, energy audits are required for all ULBs to bring down energy consumption. Identification of all consumers for billing and regularisation of illegal connections also needs to be prioritised as also adherence to service charters for consumers with a responsive consumer grievance redressal system. For effective planning and maintenance, all ULBs will also need to develop asset management systems.³³

(In)Adequacy of O&M expenditures and recovery of O&M costs: Adequacy of O&M expenditures is assessed using the norms suggested by a recent report of the High Powered Executive Committee (HPEC).³⁴ Unlike capital investments, funding of O&M in the state has been inadequate when compared with estimates of O&M expenditure requirements using the norms (Table 2.18). Comparison of per capita actual expenditure in 2008–09 with the O&M norms for water and sewerage reveals a huge gap. Municipal corporations spent only Rs 207 and Rs 71 per capita per annum on O&M for water supply and sewerage, respectively, which is only 35 and 20 per cent of required levels. The smaller municipalities also show similar gaps, spending only 14 to 45 per cent of requirements. Underspending on O&M has implications for the quality of water and sanitation services provided as it leads to poor service delivery as well as decapitalisation of investments in assets.

³¹ This is based on block cost norms derived from recent detailed project reports of UWSS approved by the GoG.

³² While detailed studies are not available, anecdotal information from Navi Mumbai Municipal Corporation (Maharashtra) and Hubli-Dharwad Municipal Corporation (Karnataka) suggest that when backed by appropriate pricing, consumer metering lowers water demand. See, for example, Mendonca (2010), ASCI (2008a) and ASCI (2008b). Chauhan (2010) also shows similar results at a smaller level of a housing society in Ahmedabad.

³³ Utilities and local governments in Australia and Canada are regarded as good practices in asset management. While ULBs in Gujarat will take a long time to reach such levels, a start needs to be made. This also needs to be facilitated by supporting ULBs to first develop a good database on assets that will enable better maintenance and planning. Introduction of such practices will be essential to sustain the infrastructure created through the additional investments being made in the sector.

³⁴ Ahluwalia (2011).

Table 2.18: Requirements and Gaps in Meeting O&M Expenditures for UWSS Sector, 2008–09

Type of ULB	Actual expenditure as a % of required O&M expenditure			
	Water supply	Sewerage	Solid waste	UWSS sector
Municipal corporations	35.3	20.7	90.2	39.6
Municipality Class A	28.1	15.3	63.7	29.3
Municipality Class B	35.1	14.2	74.5	33.3
Municipality Class C	35.9	21.4	69.5	37.1
Municipality Class D	45.4	19.9	66.1	42.1

Notes: Actual expenditure is as reported in the PAS Survey for 2008–09. Required expenditure is estimated using the per capita norms suggested by HPEC and reported in Ahluwalia (2011). For sewerage, only those cities that have sewerage systems are considered. Refer Annex Table A2.11, A2.12, A2.13, A2.14, A2.15 for details.

This low O&M spending suggests that required maintenance is deferred and this increases future requirements for investments. Zerah (2006), in her assessment of UWSS sector finance in India remarks, “The main cause for worry is really the weak internal resource base of ULBs, insufficient to bridge the gap and incur expenditure related to operation and maintenance.”³⁵ This probably holds true for Gujarat as well. In addition, there will be O&M requirements for management of open drainage, septage from septic tanks and solid waste management as well. The low O&M expenditure is a major cause for concern and bridging this gap shall be the key to the overall performance of the sector in Gujarat.

Further, the ULBs are unable to recover even this inadequate O&M expenditure through local UWSS related taxes and charges as reported in Table 2.19. The situation is even worse for solid waste management. Municipal corporations do slightly better than municipalities. This is despite the fact that full recovery of O&M costs is an important local level mandatory reform under the JNNURM and this has been agreed to by all ULBs benefiting from these investments. Recognising the need to improve cost recovery for these services, the GoG has introduced this as major reform area under its new SJMMSVY.

Table 2.19: % Recovery of O&M Expenditure through Local Taxes and Charges

	Municipal corporations	Municipalities
Water supply	64.2	59.8
Waste water	49.2	51.5
Solid waste management	28.4	22.6
Waste water and solid waste management	37.8	29.3
All – water supply, waste water and solid waste management	50.6	34.1

Source: Results from the first round of survey of all ULBs under the CEPT University’s PAS Project.

Revenue generation from local services is done mainly through local taxes and fixed charges as there is no metering of water connections in Gujarat. Most ULBs use a general water tax levied on all properties along with property tax, or a special water tax levied only on those properties that have water connection. Water tax is levied as a fixed annual charge and collected along with the property tax bills. There is some variation across ULBs, with about 30 per cent levying only general water tax, another 27 per cent levying only a special water tax and 44 per cent levying both taxes. In recent years, the GoG has instructed all municipalities to fix charges for special water tax above a specified

³⁵ Zerah, Mare-Helene (2006), p. 142.

rate.³⁶ Ideally such a state government mandate should have also focused on cost recovery through reduction in inefficiencies resulting from illegal connections, low coverage levels, low collection efficiency, physical water losses due to leakages and unduly high electricity consumption due to inappropriate pumping machinery and design of distribution network. For example, analysis done for a municipality in Gujarat suggests that even after the state government mandated tariff level for special water tax, a 540 per cent increase would be needed to achieve full recovery of O&M costs. However, if measures are taken to reduce various inefficiencies, the required increase for full recovery of O&M costs can be brought down to only 25 per cent.³⁷ A gradual reform process to reduce these inefficiencies would also help to improve delivery of services.

Analysis of municipal finance in Gujarat for the past four years suggests that the share of municipal own income to total income is only 35 per cent for municipal corporations and 42 per cent for municipalities (Table 2.20). For the former, this used to be higher at 70 to 80 per cent, but declined significantly after the abolition of octroi. On the other hand, for municipalities in recent years, there have been efforts to increase their own income. This suggests the overall dependence of ULBs on state funding, which hampers sustainability of UWSS services.

Table 2.20: Municipal Own Income to Total Income (%)

ULB	2005-06	2006-07	2007-08	2008-09
Municipal corporations	83.4	83.0	69.9	35.3
Municipalities	30.0	44.8	39.5	42.4

Source: Based on data from the GMFB, Nanakiya Parishthiti, 2005-06 to 2008-09.

Note: Own income includes: octroi (till applicable year), property tax, consolidated tax, light tax, general water tax, special water tax, general sanitary tax, special sanitary tax, drainage tax, vehicle tax, theatre tax and toll tax.

Human resources capacity among ULBs: Besides fiscal capacity, another key constraint in sustainability of services is human resource capacities with ULBs. This is evident from the situation regarding availability of staff in municipal corporations and municipalities in Gujarat. In 2004, the UDD had formed a Special Committee to review the minimum levels of staff required for different departments across municipalities by class size.³⁸ The committee had specified the staff required for different types of ULBs. However, the survey in 2008-09 showed that municipalities, in general, have only 50 to 60 per cent of the sanctioned staff; municipal corporations, however, fare somewhat better. Even for the available staff, a large proportion is non-technical, often temporary or daily wagers, particularly in municipalities. Thus, despite the GoG's efforts to specify minimum staffing requirements, ULBs do not have adequate staff. Studies in one of the ULBs in Gujarat also suggest similar results for sanitation when compared to Central Public Health and Environmental Engineering Organisation norms.³⁹

³⁶ Based on GR No. NPL/4510/CFa-1/M, Dated April 21, 2010, on Minimum special water tax for water supply in ULBs of Gujarat state, all municipalities were required to levy minimum annual charges: (a) Rs 600 for ½" residential connection and small commercial properties; (b) Rs 1,000 for larger commercial properties; and (c) Rs 2,250 for industrial properties.

³⁷ Based on studies in Kalol, a ULB with a population of 125,000 as reported in PAS Project (2011, forthcoming).

³⁸ According to GR No: NPM/1089/1122/R, UDD, Gandhinagar, Government of Gujarat on Minimum Standard and Criteria for Municipal Staff to be maintained at ULB level dated 22/1/2004 directed the municipal bodies to maintain a minimum number of staff for different departments.

³⁹ Based on a study by students at CEPT to develop a City Sanitation Plan in a class A ULB. CPHEEO norms are as per CPHEEO (2000), Chapter 19, pp 424-428.

Table 2.21: Availability of Human Resources for UWSS among ULBs

	Municipal corporations	Municipalities
Total filled staff positions as a % of approved positions		
Water supply	72.9	53.4
Waste water and sanitation	63.7	59.2
Solid waste management	80.8	51.2
Technical staff as a % of total staff		
Water supply	20.8	6.6
Waste water and sanitation	37.9	3.6
Solid waste management	38.6	0.8
Share of daily wagers to total staff (%)		
Water supply	16.3	67.5
Waste water and sanitation	19.8	60.5
Solid waste management	84.8	55.4

Source: Based on results from Round 1 survey across all ULBs under the PAS Project. Sanctioned staff is as reported by the ULB.

In response to this, the GoG had made a provision for ‘Techno-Sathis’, trainee engineers who were appointed to support municipal engineers. While this concept was used effectively by some ULBs, more details are not available and the practice has now been discontinued.

In 2007, the GoG made another effort to create three common state cadres for a municipal accounts officer, a municipal health officer and a municipal engineer, over and above the existing state cadre of municipal chief officer.⁴⁰ While ULBs are supposed to mobilise salaries for this staff from their own budgets, considering the weak financial conditions and limited income sources of D-Class municipalities, the GoG has decided to increase its share for salary and wages of these four state cadres from 75 per cent to 90 per cent and has made a special allocation in the 2010–11 Budget. In reality, for many ULBs, the senior position of a municipal engineer remains vacant, which adversely affects service delivery.

Based on the recommendation of the 2004 Special Committee, the GoG also decided to restructure District Urban Development Agency (DUDA) to make it responsible for implementation of new schemes, mainly the SJMMSVY. A special budget allocation was also made for this purpose. It is not very clear whether this will help address capacity issues in project development and implementation particularly with smaller municipalities. The GoG has also empanelled private consultants to assist the smaller ULBs in developing projects and provide project management support in implementation. The recruitment is done at the state government level and they are also paid by the state agencies. It may be worth exploring the approach taken under the Kerala rural water supply and sanitation programme: the support organisations that work with the gram panchayat enter into a tripartite memorandum of understanding and the payment of fees to the former is done by the latter.⁴¹ This gives the gram panchayats a greater role and helps build their capacity.

The GUDC also provides support to ULBs through its state-level projects of regional landfill sites for disposal of solid waste and for municipal energy efficiency projects (MEEP) for water and streetlights. The support includes detailed background studies, selection of appropriate consultants and service providers and implementation. For MEEP, private firms are engaged to carry out energy audits, as

⁴⁰ As per the GR No: NPM-102005/2054-R, UDD dated 28/9/2007

⁴¹ World Bank (2009)

service providers.⁴² Similar support is being provided by the GMFB to all ULBs in moving to a computerised property tax system and billing as well as for developing a computerised financial management system through double entry accounting systems. This is being done through 20 chartered accountants' firms in Gujarat.⁴³ Such efforts are also needed for assisting the smaller ULBs in asset management and maintenance.

It may be useful to also draw on the successful experience from some of the smaller African countries such as Senegal and Mali in evolving tripartite technical support and maintenance contracts.⁴⁴ Essentially this focuses on providing professional support to the smaller ULBs for routine operations such as meter reading and pump repairs, as well as for specialist services such as financial management, tariff setting, business planning, efficiency improvement for non-revenue water, tariff collections and consumer grievance redressal.⁴⁵

Structural reforms for performance incentives for staff: While the numbers and capacity of human resources within ULBs is important for planning and service delivery, it is equally important to ensure that staff has the necessary incentives for improved performance. This is more difficult as it is linked to both administrative processes as well as institutional and structural issues. While some of these issues are covered in the administrative and structural reforms under JNNURM, it is not very clear how well these nuances are captured in implementation.

For water supply, globally there is some consensus on the need for separation of operation from policy and regulatory functions. In many countries, this is achieved through more autonomous water utilities that give operational independence to staff. Often these are publicly owned by local, state or national governments depending on their jurisdiction. A wide range of developed and developing countries use this model for water supply service delivery including, for example, Australia, the Netherlands, Singapore, and several cities in the United States of America from the developed countries, and Cambodia, Burkina Faso, Vietnam, Uganda and Kenya from the developing world. In India a few cities such as Delhi, Chennai, Bengaluru and Hyderabad use this approach of autonomous utilities. A recent announcement by the Greater Mumbai Municipal Corporation suggests interest to explore an autonomous status for water supply.⁴⁶ However, these Indian utilities have less autonomy than similar utilities in other parts of the world.⁴⁷

While such changes in basic organisational structure of service delivery suggest major departures and may be difficult to implement⁴⁸, it would be worth exploring mechanisms that help ULBs to mimic some of the principles from autonomous utilities as has been done successfully by the National Water and Sewerage Corporation of Uganda.⁴⁹ For this, it would also be useful to refer to some of the administrative and structural reforms under the JNNURM which have not been addressed in Gujarat.⁵⁰ Administrative reforms – particularly those related to rewarding good performance,

⁴² Based on GUDC, et al. (n.d.) and details from: http://www.reeep.org/file_upload/5557_tmpphpwUBrRE.pdf

⁴³ NIUA (2010), chapters 3 and 10.

⁴⁴ For Senegal Fall (n.d.) and for Mali: Allély Didier (n.d.).

⁴⁵ See, for example, discussions on such professional services of small towns in Pilgrim (2003), Pilgrim et al. (2007) and publications of the World Bank's Town Water Supply and Sanitation Initiative.

⁴⁶ Mahamulkar (2011a) and Mahamulkar (2011b).

⁴⁷ See, for example, Baietti (2006) and Araral (2010) chapter 6.

⁴⁸ For example, they would require thorny issues of asset pricing and transfer, need autonomy in staff recruitment and procurement to be really effective and, most importantly, will require a good and independent regulator. While not impossible, these are difficult issues to address.

⁴⁹ See, for example, Mugisha, Berg and Muhairwe (2005).

⁵⁰ See chapters 8 and 9 NIUA (2010).

strengthening internal processes, and improving citizen interface – are still required to be strengthened. ULBs are also required to use standardised service level benchmarks (SSLB) to periodically measure and report on their performance. Ideally these should be also linked to staff performance assessments. For this, it would be useful to look at a recent move to introduce staff performance assessment to the Results Framework Documents for many GoI ministries.⁵¹

Structural reforms under the JNNURM address institutional structures at both state and local levels. However, these do not address the issues of operational autonomy for water supply services and its separation from policy and regulatory functions as evident from successful global experiences.

2.6 Measures to Strengthen Sector Finance Arrangements

Measures to strengthen UWSS sector finance need to focus on improving service delivery orientation in financing and include: fiscal consolidation, increasing predictability, effective implementation of schemes for the poor, sustainable capacity support to ULBs through innovative market-based solutions and improving sustainability by local cost recovery and human resource capacity.

The analysis presented above clearly highlights that over the past half-a-decade, both the GoI and GoG have accorded high priority to urban infrastructure, and urban water supply and sanitation in particular. Continued economic growth and related rise in public resources have made it possible for both national and state governments to significantly increase funds for urban development. It is likely that funds available to local governments for investments in urban water supply and sanitation systems are likely to further increase over the next five years. While this will help address infrastructure constraints, several additional concerns need to be addressed for their effective absorption and efficient service delivery.

Need for fiscal consolidation and service delivery orientation in sector programmes: The GoG has, over the past five years, introduced the notion of umbrella programmes focusing on different aspects such as: water and sanitation under Nirmal Gujarat, focus on the poor under Garib Samruddhi Yojana and focus on financial and governance reforms under the SJMMSVY. However, there is a need to consolidate schemes and fiscal transfers to be able to effectively plan and monitor progress and outcomes. Such consolidation will also make it easier for ULBs to develop city-wide sectoral plans, for instance, for water supply and sanitation. The current focus is on ‘infrastructure projects’, that is, creating new infrastructure rather than improving service delivery. A clearer focus on performance improvement in service delivery is needed in all ULBs.

Need to increase predictability of transfers to ULBs: At present, only 25 per cent of funds devolved to ULBs are predictable by being clearly based on a formula. An increase in the proportion of predictable resources for ULBs would provide a better idea of resource availability over the medium term to undertake more effective planning. This can be done by increasing their share in taxes as well as by making a longer and transparent commitment through the state schemes as, for example, has been done under the SJMMSVY for the model town component. The Third State Finance Commission for Gujarat which has been recently constituted will need to consider these aspects.⁵²

⁵¹ Indian Express (2011), MOUD (2011) and MHUPA (2011).

⁵² In February 2011, the GoG announced setting up of the Third State Finance Commission under the Chairmanship of Mr Bharat Gariwala. This is established as per the requirement under Article 243-1 of 73rd and 243-y of 74th Constitutional Amendment Act.

Technical support to smaller municipalities: Experience over the past decade suggests that the smaller ULBs are likely to face a significant constraint in effectively absorbing any additional investment funds. So far utilisation of allocated funds has been low for these ULBs. It is important to improve local fund absorption. This would include support in project development as well as for project implementation. Such capacity building support and facilitation for project preparation will help to improve the design and implementation of projects. ULBs will also get effective results by choosing their own priorities across local services. The state government does provide support to ULBs under a few programmes for preparation of CDPs and detailed project reports (DPRs). However, ULBs also need more sustained support for various specialist services such as business planning, city-wide service planning, strategic planning for improved cost recovery, asset management, etc. The small private sector enterprises in Gujarat need to be roped in to provide these services more effectively. In addition, support is also needed for improving routine services such as billing and collection, consumer grievance redressal and regularisation of illegal connections. This can be done through a market-based approach by tapping small service providers in the private sector or among non-governmental organisations (NGO). For this, however, government support will be needed to empanel service providers and help build their capacities for facilitating economies of scale through aggregation where needed.

Effective implementation of earmarking for the poor: The GoG has made efforts to introduce schemes as well as norms for earmarking budget resources for the poor. However, a few issues need to be addressed. First, the extent of actual allocations is not tracked on a regular basis for different cities though a few ULBs (such as Ahmedabad) do report this in their budget. A better tracking and monitoring of allocations for the poor is needed. Even more importantly, it is essential to monitor and assess effectiveness of services for the poor. For example, while toilets are being built for the poor on a large scale in urban areas, there are problems due to absence of waste disposal arrangements, resulting in toilets not being used. Similarly, given the GoG's goal of universal coverage, there is a need to move beyond a few pilot projects to a city-wide approach. Implementation of such an approach will require adequate information on access of services for all slum households. It will also be useful to develop appropriate subsidy policies that are well targeted.

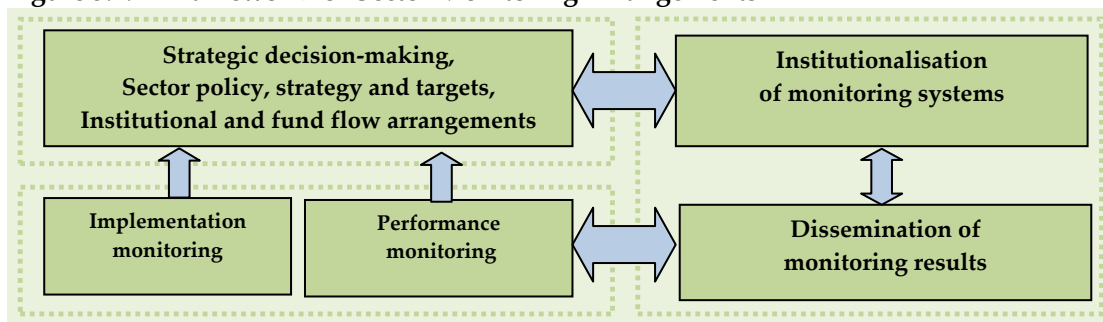
Improving capacity for sustainable O&M of new infrastructure: A key constraint in delivery of WSS services by ULBs in Gujarat has been inadequate attention to the technical and financial aspects of O&M. The technical aspects are reflected in inadequate human resource capacity as well as a lack of detailed technical information of the infrastructure investments. The asset management practices are not known in most ULBs. Even basic data on their assets is not available, and there is no plan of rehabilitation and replacement of assets. This makes it difficult to ensure effective and efficient operation and, especially, maintenance. Regarding financing, the situation is equally critical with most ULBs unable to spend the required amount of funds on O&M of UWSS. Despite the low expenditure, they fail to ensure full recovery of O&M expenditures. It is also likely that low expenditures are due to poor maintenance, resulting in poor service levels. It also hides other inefficiencies such as high (and often unknown) level of physical water losses and inefficiency in use of electricity which is generally more than 50 per cent of total expenditure. Low recovery is not only due to inadequate tariffs but equally due to low billing and collection inefficiencies, and an unknown (and probably high) level of illegal users. Addressing these issues will require water and energy audits. Some bold steps are also needed to ensure that there is operational autonomy for service delivery for ULBs for staff recruitment, and to provide incentives for staff to work towards improved performance.

Addressing data issues for sector finance: There are a few clear directions from this analysis for improving information related to UWSS sector finance. At present, despite the priority accorded to UWSS, it is not easy to track the UWSS allocation and expenditure. It is important to improve tracking and reporting of funds. Alternatively, if sector programmes are consolidated in the budget as suggested in the discussion above, it will be easier to track this expenditure. Second, it is important to identify outputs, intermediate results and outcomes for the sector. This is very difficult at present, as information on outcomes is collected neither from ULBs nor from the consumers. When such information becomes available, as planned under the ongoing PAS Project, it will be possible to carry out such assessments. These issues are discussed further in the next chapter on monitoring to assess the possibility of linking financial inputs with outputs and results.

3. Sector Monitoring Arrangements

Annually, about Rs 26 billion (USD 580 million) of funding from the UDD budget is allocated to the urban sector and channelled to 166 ULBs in Gujarat through different agencies in the UDD. As reviewed in the previous chapter, a significant part of the Plan funds from this is used for UWSS. Ideally, monitoring should play a key role in ensuring proper implementation and in assessing the extent to which these funds achieve the goals set out by the national and state governments. In addition, focus should also be on: use of monitoring in strategic decision-making for setting sector goals and budgeting, dissemination to share results with key stakeholders and to institutionalise monitoring through appropriate institutional responsibilities and systems to gather and analyse information.

Figure 3.1: A Framework for Sector Monitoring Arrangements



Source: Adapted from WSP (2007) and Mehta et al. (2007).

To assess sector monitoring practices, the next section (3.1) discusses the institutional and fund flow arrangements. Then, the different types of monitoring used by key agencies are documented and assessed in section 3.2. In Gujarat, while programme implementation monitoring is carried out on a regular basis and also reviewed and disseminated, a major lacuna seems to be the lack of any performance or outcome monitoring. Further efforts are required to focus on performance monitoring, and create effective connections between different monitoring systems to ensure efficiency and institutional sustainability.

3.1 Institutional and Fund Flow Arrangements for Urban/UWSS Sector in Gujarat

As reviewed in the previous chapter, UWSS financing is a major part of urban development in Gujarat. Most urban development funding takes place through three main institutions within the UDD, namely, the GUDM, the GMFB and Gujarat Urban Development Company (GUDC). Table 3.1 and Figure 3.2 present an overview of fund flows into the UWSS sector from various sources and the key institutions involved in the process.

The GUDM is state-level nodal agency (SLNA) for implementing JNNURM and UIDSSMT programmes. Its key functions include: assistance to programme ULBs in technical matters, capacity building and IEC; project appraisal, obtaining financial sanctions; management of grants and revolving funds and fund release; and monitoring of project implementation and reforms, and submission of progress reports to the GoI. It manages about 29 per cent of UDD funds going to ULBs, mainly from centrally sponsored schemes.

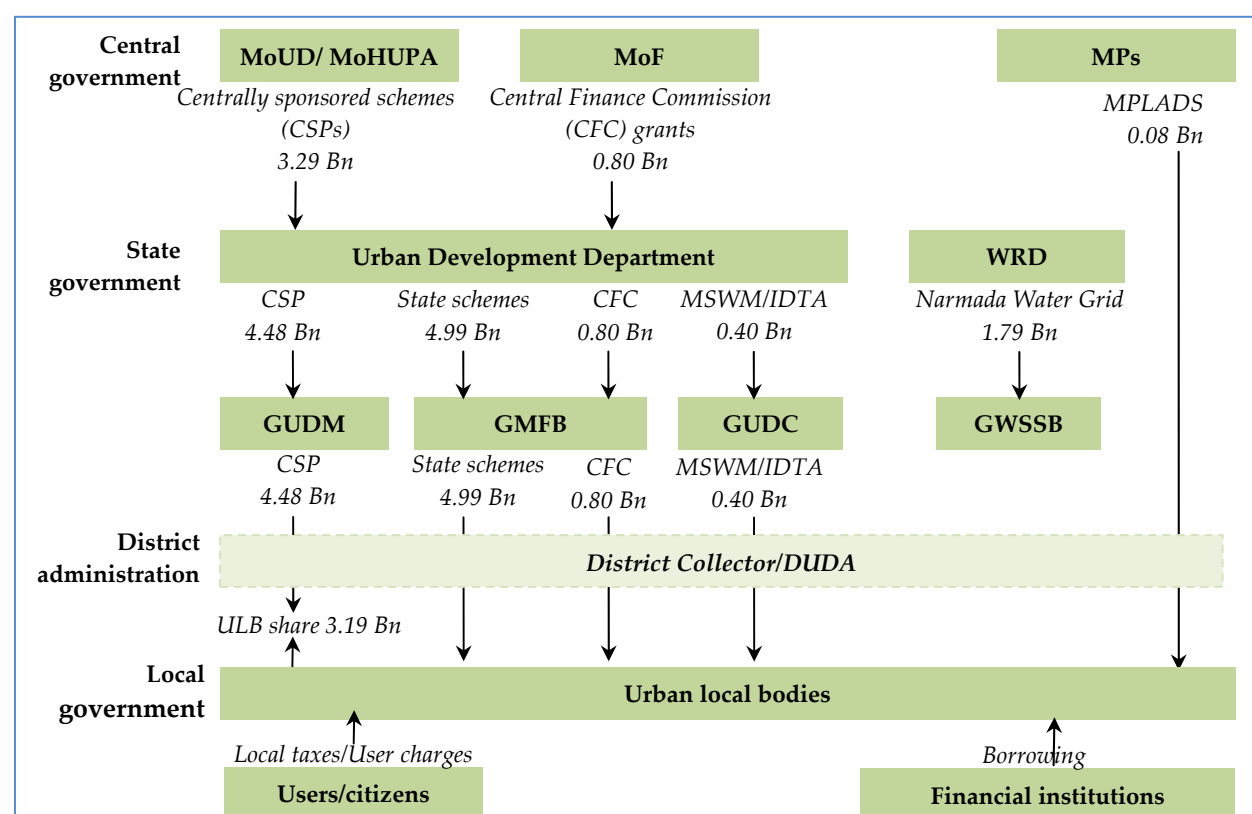
Table 3.1: Estimated UWSS Sector Resource Flows by Agencies, 2008–09 (Actuals in Rs billion)

Type of funding	GUDM	GMFB	GUDC	DUDA	GWSSB	ULB	Total
Central programmes and transfers							
Central Finance Commission grants		0.79					0.79
Centrally sponsored schemes (JNNURM, UIDSSMT/IDSMT, BSUP, IHSDP, NSDP,	3.29						3.29
MPs' Local Area Development scheme				0.08			0.08
State programmes and transfers							
State grant-in-aid/other devolution		2.10					2.10
State schemes		2.89					2.89
State share in central programmes (JNNURM, UIDSSMT, IDSMT, BSUP, IHSDP)	1.19						1.19
MSWM and integrated development of tribal areas			0.40				0.40
Narmada Master Plan (Drinking WS Grid)					1.79		1.79
ULB own funds							
Contribution for central programmes by						3.19	3.19
Total	4.48	5.78	0.40	0.08	1.79	3.19	15.72

Sources: Refer Annex A2.1 for details of allocations. Agency responsibilities are based on discussions with agencies in the UDD.

Figure 3.2: UWSS Fund Flows Arrangements, 2008–09

Rupees billion



Notes: DUDA: District Urban Development Authority; GMFB: Gujarat Municipal Finance Board; GUDC: Gujarat Urban Development Company; GUDM: Gujarat Urban Development Mission; GWSSB: Gujarat Water Supply and Sewerage Board; MoHUPA: Ministry of Housing and Urban Poverty Alleviation; MoUD: Ministry of Urban Development; MPLAD: Member of Parliament's Local Area Development; WRD: Water Resources Department.

The second agency is the GMFB, which is the nodal agency for routing all Plan and non-Plan grants (of the CFC and state government) and all state schemes for specific sub-sectors. This amounts to about 37 per cent of UDD funds.

The third agency, GUDC, has in the past dealt with funding from international agencies such as the World Bank and the Asian Development Bank (ADB). However, more recently, it has been involved in developing the new Township Policy and supporting ULBs in more innovative projects of energy audits and solid waste management. It is involved in creating regional landfill facilities for safe disposal of municipal solid waste.

In addition to these agencies, specific programmes for the poor are also implemented and monitored by the district administration, particularly the district collector and DUDA. They play an important role in the regular monitoring and review of municipalities. They also focus on progress in implementation of projects and schemes, and receive progress reports of central and state government funded programmes.

A monthly video conference is held at the district collector's office where all municipalities participate in the review attended by state officials including the principal secretary, urban development, CEO of the GUDM and the DoM. The video conference serves as a review and problem solving meeting. This system of review/monitoring is useful for quick decision-making and mid-course corrections. It also helps in flow of information between different tiers of government and regular feedback from the state to ULBs.

3.2 Urban Sector Monitoring in Gujarat

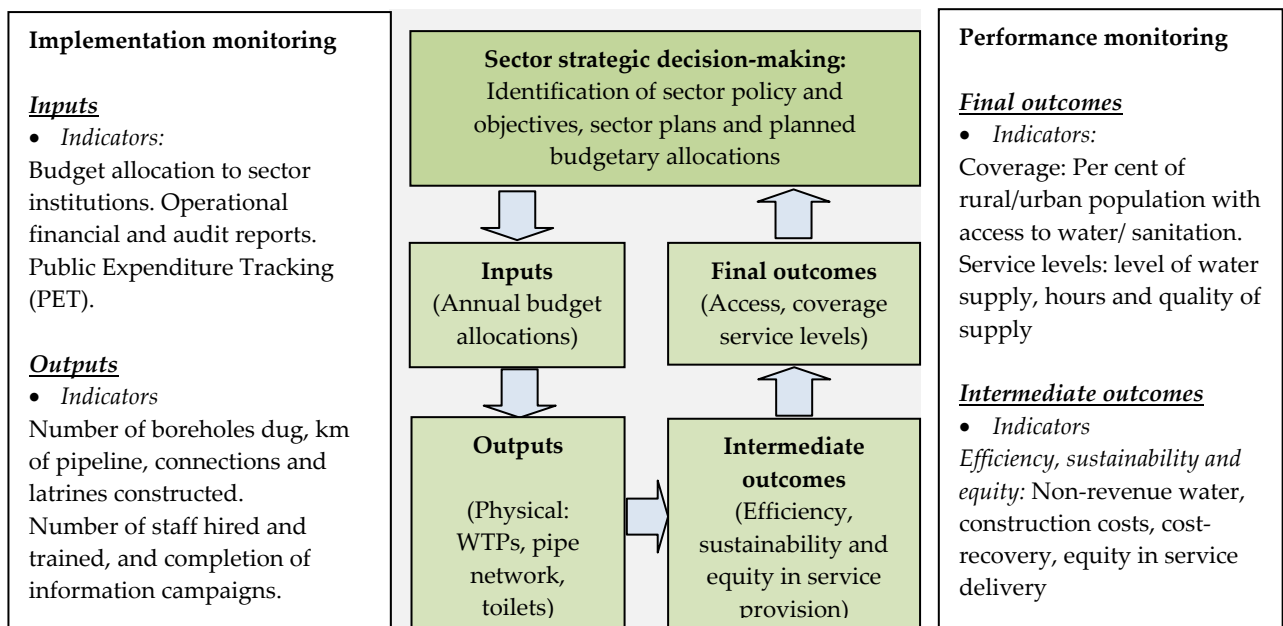
There are key differences between strategic performance monitoring and programme implementation monitoring. While the latter largely focuses on inputs and outputs, the former addresses intermediate results and outcomes (figure 3.3).⁵³ In Gujarat, the focus is more on programme monitoring rather than performance monitoring.

UWSS, as a sector, is not dealt with separately for monitoring in Gujarat; it comes within the ambit of the larger urban sector monitoring. This is in line with the structure, mandate and *raison d'être* of urban sector institutions. Monitoring in the urban sector mainly focuses on programme implementation monitoring, for grants and from the central government and programmes of the state government. In addition, there is regular or routine monitoring for administrative matters and ULB finances. All these together add up to considerable reporting requirements for ULBs especially due to the separate formats for each grant and scheme. Greater harmonisation and simplification of reporting/monitoring formats would help lower the burden on ULBs. However, there is a clear gap in terms of performance monitoring that requires attention.

Programme implementation monitoring is the most widely applied monitoring system and is used for all grants (from the CFC and state government), centrally sponsored schemes and the state government's own schemes. At present, there are nearly 45 different grants and schemes operating in the state – and each ULB would, at any stage, probably need to report on about half of these. Also, monitoring processes for central- and state-level programmes differ a great deal in terms of approaches, incentives, information flow and use of information, as reported in Tables 3.2 and 3.3. While grants are more predictable and based on a formula, allocation of funds for programmes and schemes depend on how fast a ULB can prepare project proposals.

⁵³ See, for example, Mehta et al. (2007), Thomson (2006), and Huang Gia (2007).

Figure 3.3: Framework for Monitoring within Sector Strategic Decision-making



Source: Adapted from Mehta et al. (2007).

- Monitoring of central and state government grants: The GMFB is the state-level agency responsible for transfer of both Central and State Finance Commission grants to ULBs. The monitoring process for entertainment tax transfers, which represents the process followed for most grants, is taken as a case for the purpose of comparison with processes for 12th Finance Commission (TFC) (GoI) transfers. Table 4.2 provides a comparison of two systems and processes. The focus of the central government, with respect to monitoring of TFC transfers, is on timely release of funds by the State (GMFB) to the ULBs and adherence to guidelines of the TFC for using the grant funds for specific purposes (mainly, UWSS). The devolution mechanism, review, monitoring and reporting system, institutional responsibilities, timeframes and procedures for release of second/subsequent instalments, audit requirements and procedures, disincentives to state disbursement, and so on, for TFC grants are well defined. However, audit reports or monitoring and review reports are not disclosed.

In case of government grant of entertainment tax, a series of 14 formats, each for a specific purpose/situation in the cycle of use of the transferred amount, is required for a ULB to access the grant. The focus of the state government is on these access procedures, rather than on monitoring the outcomes. The GMFB monitors physical and financial progress and fund utilisation for works undertaken using entertainment tax grants to ensure that related criteria are adhered to. Some of the issues in the monitoring and approval process of entertainment tax and other transfers for development works are: (a) devolution is not linked to ULB performance or reforms; (b) annual reporting does not allow for mid-year course correction; (c) collation or compilation of reports received from ULBs is not undertaken by the GMFB owing to shortage of staff, preventing comparative performance assessment; and (d) emphasis is placed only on financial reporting; physical achievement/asset creation is not verified on the ground.

Table 3.2: Monitoring Processes for TFC and SFC Grants

	Finance Commission grants, GoI (fund transfer to ULBs through GMFB)	Entertainment tax grant (fund transfer to ULBs through GMFB)
Process	Monitoring at state level by High Level Committee (HLC) comprising: Chief Secretary, GoG (chair), Secretaries of Finance, Panchayati Raj (PR) and UDD; Physical and financial targets set and monitored by HLC along with grant conditionality (% allocation for UWSS); HLC meets every quarter to review grant utilisation. Central Review Committee, GoI comprising Ministries of PR, UD, Finance and Home Affairs reviews annual HLC reports on releases and utilisation	Reporting by ULBs to GMFB (agency responsible for transfer of grant to ULBs)
Audit	Independent audit conducted by Controller and Auditor General (CAG) on release and use of grants; reported to GoI	No separate audit
Incentives/disincentives	Disincentive for delay (>15 days) in transfer to ULBs – GoI withholds amount not spent on UWSS, until it receives confirmation on rectification	Disincentive in form of withholding of funds for lack of timely reporting
Reporting and frequency	Quarterly statements on fund disbursements submitted by GMFB to GoG and reported to GoI Minutes of HLC quarterly review meetings and allocation details for subsequent instalment furnished by HLC to CRC Annual certificate of % grants spent by ULBs on UWSS and release certificate for previous instalment provided by State Finance Secretary GoG provides details of O&M cost recoverable by ULBs on water supply schemes	Formats for ULBs to submit annual progress report, annual expenditure statement for works using entertainment tax grant, and a completion certificate
Information collected/monitored	Fund release by GMFB – timely/delayed Purpose for which grant utilised – whether utilised as per TFC guidelines	Physical/financial progress Extent of fund utilisation
Use	For decision on further release of funds	For decision on further release of funds

Source: Based in discussions with GoG officials.

- *Central and state programme/scheme monitoring:* The features of monitoring systems and processes of a central programme (UIDSSMT, representing the JNNURM/UIDSSMT genre of reform-linked programmes) and a relatively new state programme (Nirmal Gujarat – individual toilets and pay and use toilets) are presented in Table 3.3.

Central programmes have features such as third party monitoring, specific indicators to monitor ULB progress, system of awards/incentives, and monitoring of commitments on reforms. Third party monitoring is undertaken for JNNURM/UIDSSMT projects by the NIUA and the Town and Country Planning Organisation (TCPO), respectively for Gujarat state. Independent monitoring of implementation of reform commitments by independent firms has also been recently introduced.

In general, central programmes require more elaborate review and reporting mechanisms. However, the state government, with the Nirmal Gujarat programme, has introduced physical inspection of projects by a higher authority and by an independent entity. Independent monitoring is undertaken for the 'Individual toilet and Pay and use toilet' schemes under Nirmal Gujarat by the City Managers' Association of Gujarat (CMAG); the DUDA is also required to check a sample of toilets. Discussions with the GMFB reveal that some issues related to monitoring of the scheme need to be addressed, including the timely inspection of constructed toilets by the DUDA to avoid delays in approval/disbursement, and

the need for a standard reporting format for inspection. However, despite this, it is a step forward in monitoring of state schemes which, until recently, did not have field-based physical verification or independent monitoring – most other state government schemes do not have either of the two. These are largely focused on the extent of fund utilisation and whether funds are used for the intended purpose.

Table 3.3: Monitoring Processes for a Central and a State Programme

	UIDSSMT Programme and IHSDP, GoI	Nirmal Gujarat – Individual Toilet/Pay and Use Toilet Scheme, GoG
Process	Monitoring by SLNA (GUDM): Periodic monitoring of project progress and reform commitments (against baseline information submitted by ULBs at start of project) and fund utilisation through specific formats; and reporting through UDD, GoG to MoUD, GoI Third party monitoring and reporting by TCPO to MoUD/GoG on progress	Monitoring/physical inspection of scheme implementation by chief officer of a municipality; random inspection undertaken by the sub-divisional magistrate. The subsidy is released post-inspection by DUDA. Third party monitoring by CMAG of actual implementation
Audit	Yes; Audited project accounts submitted by ULBs to GUDM	No
Performance linked	Release of funds (second instalment onwards) linked to physical and financial progress and adherence to timelines; performance awards for implementation of pro-poor reforms under IHSDP	No
Incentives/disincentives	Disincentive for delay (>15 days) in transfer to ULBs; GoI withholds amount short spent on UWSS, until it receives confirmation on rectification	Disincentive in form of withholding of funds for lack of timely reporting
Application of technology	GoI plans to operationalise online system of reporting/monitoring (in other states, such as Andhra Pradesh, online monitoring system is already in place)	No
Reporting and frequency	Quarterly progress reports (physical and financial progress); half-yearly reports (status of reforms, physical and financial progress); utilisation certificates for grants released; reports submitted in specified formats	Inspection reports (of works implemented by NGOs) by chief officers and DUDA (10% sample sub-projects) submitted to GMFB annually; annual inspection reports by CMAG (100% sub-projects) submitted to GMFB
Information collected/monitored	Physical/financial progress, implementation of reforms; fund utilisation; indicators on level and quality of services	GMFB collates ULB-wise data in its Patraaks for 'Pay and use and Individual toilet' schemes
Use	For decision on further release of funds ULB-level tracking	For decision on further release of funds

Source: Based in discussions with GoG officials.

Performance monitoring: A good performance monitoring system would require clarity on both intermediate and final outcomes (see Figure 3.3). Current urban sector monitoring does not seem to include any systematic performance monitoring, though some information on outcomes (such as for access to toilets or for per capita supply of water) is often collected. A lesson from international benchmarking efforts is that effective monitoring requires not only information on indicators (for example, per capita), but also the variables that are used to derive the indicator (for example, total water supplied per day and the population served). With this information, validation of outcomes becomes possible.

In this light, the performance-based grants as per the 13th Finance Commission recommendations are a good move. This grant requires state governments to assess and publish information on service performance. To quote: “For a start, state governments must notify or cause all the municipal corporations and municipalities to notify by the end of a fiscal year (31 March) the service standards for four service sectors – water supply, sewerage, storm water drainage, and solid waste management proposed to be achieved by them by the end of the succeeding fiscal year.”⁵⁴ From 2011, each state government is expected to collect, analyse and publish information related to target service performance for all urban local governments. The key performance indicators in this list include both intermediate and final outcomes for water supply, waste water, solid waste management and storm water drainage. Proper measurement and monitoring of these will, therefore, become necessary.⁵⁵

For systematic performance monitoring, it would also be necessary to work out clear links with the state budget process as discussed in the previous chapter. While considerable funding to ULBs gets used for UWSS investments, this is not tracked at present, making it difficult to develop any clear links between inputs/outputs and sector performance. Ideally, performance monitoring would help establish links with the budget and assess the outcomes achieved through various budget allocations.⁵⁶

3.3 Dissemination of Sector Information by Government of Gujarat and ULBs

Over the past few years, there has been increased awareness and attention on the need for information dissemination to citizens by all public authorities. A number of different initiatives have been under way in this regard, both as a response to the Right to Information Act (RTI), 2005, and as public disclosure requirements under the JNNURM reform commitments both at state and ULB levels.

RTI-related dissemination efforts. The RTI and the Gujarat Right to Information Rules, 2005, provide for right of access to information from public authorities by citizens, to promote transparency and accountability in the working of public authority. Chapter 2, Section IV of RTI calls for proactive disclosures under the Act. Following this principle, in 2008, the UDD, GoG, has placed on its website detailed information on state schemes in the urban sector, related budget provisions, details on staffing, roles, responsibilities of officers, contact details and salaries.

A State Information Commission has been constituted in Gujarat; while at the ULB level municipal corporations have created RTI Cells, with public information officers at their helm. Information is mainly disclosed by ULBs through their websites as well as media coverage of events. The UDD website also provides ULB-wise details on programme monitoring done through various online monitoring formats filled by ULBs. These provide brief details of status and programme implementation for water supply, sanitation, solid waste management and municipal finance.⁵⁷ However, while ULBs are required to report on a monthly basis, these are only occasionally updated on the UDD website.

⁵⁴ GoI (2010), p. 169.

⁵⁵ However, in March 2011, the state government appears to have collected this information from ULBs and published it without validation or check with other similar information that are collected routinely from ULBs.

⁵⁶ For examples of WSS performance monitoring, see Thomson (2006) for Uganda and Hoang Gia (2007) for Senegal.

⁵⁷ This is discussed in more detail later. See Table 3. 6.

At the ULB level, disclosure norms of RTI have been adopted in the municipal corporations of Ahmedabad and Surat. The Municipal Corporation of Surat also makes available information on its performance monitoring process and performance indicators for critical functions (for instance, urban infrastructure and municipal finance) on its website. Surat and Jamnagar are among the few municipal corporations that publish updated or the latest annual budgets and financial information as well as list of works/projects under way; however, physical and financial progress of projects is not in the public domain.

Public disclosure requirements under JNNURM reforms: Under the JNNURM, a state-level mandatory reform requires enactment of a Public Disclosure Law (PDL) which is meant “to institute transparency and accountability in the functioning of municipalities through publication of information... and release of quarterly performance information to all stakeholders.”⁵⁸ The main objectives of the PDL include: “(a) to provide appropriate financial and operational information on various municipal services to citizens and other stakeholders; (b) to promote efficiency and consistency in the delivery of public goods and services by the municipality; and (c) to enable comparison over time (of a particular ULB) and space (between ULBs) by disseminating information in a structured, regular and standardised manner. The enactment of the PDL refers to making appropriate provisions in the state-level municipal statute(s) to ensure that these disclosures are mandatory”.⁵⁹

A review of checklists for PDL for the four mission cities in Gujarat shows that the GoG has essentially suggested that “since the provisions in the Bombay Provisional Municipal Corporations Act, Gujarat Municipalities Act and the Right to Information Act adequately ensure disclosure to the public, further enactment of a separate law is not very relevant. However, if GoI provides guidelines, the state government will initiate the enactment of a new Law.”⁶⁰ It is pointed out that wide publicity is given to the agenda items of Standing Committee and the General Board. It is also suggested that all municipal corporations have websites where “accounts, expenditure and budgetary provisions” are generally posted. For the Vadodara Municipal Corporation also citizen charters for civic services are in place.

Websites of ULBs: A review of various websites of ULBs in Gujarat suggests that only 42 ULBs (25 per cent) have their own websites; of these at least six were not working at the time of review (Table 3.4). Interestingly, participation in JNNURM/UIDSSMT does not seem to have much impact on the share of municipalities with working websites. Most of the smaller municipalities have their websites in Gujarati.

Table 3.4: Status of ULB Websites in Gujarat

Presence and status of website	ULBs covered as JNNURM mission cities or under UIDSSMT		Other cities	Total ULBs
	Municipal corporations	Municipalities	Municipalities	
Working websites	6	9	21	36
Non-working websites	1	3	2	6
No ULB websites	0	37	87	124
Total ULBs	7	49	110	166

Source: Based on a web search for, and a review of, websites during December 2010.

⁵⁸ NIUA (2010), p 28.

⁵⁹ NIUA (2010), p 28.

⁶⁰ GoG (n.d.), p 1.

Only limited information on water and sanitation services is posted on the ULB websites. This is largely limited to consumer outreach for new water and sewerage connections and the status of complaints under the consumer grievance redressal system.

Table 3.5: Details of Information Posted on ULB Websites

	Information on ULB Websites for UWSS	Reports on GoI/GoG projects	Other Key Information
JNNURM mission cities (Ahmedabad, Surat, Vadodara and Rajkot)	Forms for new water/sewerage connections; customer grievance redressal systems and tracking complaint status; water quality monitoring reports posted daily by Ahmedabad and Surat; AMC provides detailed SWM information, SMC provides UWSS performance information (SLB) and RMC provides information access to services in slum areas	Information on projects taken up under JNNURM and status on reform commitments	Names and contact details of key officials; Ward-wise list of below poverty line (BPL) families; municipal budgets and income/expenditure
Other municipal corporations and municipalities	Forms for new water/sewerage connections; customer grievance redressal systems and tracking complaint status	No reports on UIDSSMT or other GoG projects	Ward-wise list of below poverty line (BPL) families; municipal income/expenditure, a few cities provide details of taxes and budgets

Source: Based on a web search for, and a review of, websites during December 2010.

The four JNNURM mission cities provide information on the projects taken up under JNNURM and the status of the various reforms to which the ULB has committed. However, only Rajkot Municipal Corporation posts quarterly and monthly progress reports for JNNURM sub-projects on its website, and provides fairly comprehensive descriptions of its ongoing projects. Under the JNNURM reform commitment for PDL, all mission cities have indicated that they will provide detailed services-related information within the first three years. Similar commitments would implicitly be there for the 52 ULBs that have signed the MoA under the UIDSSMT. A quick review of ULB websites, however, suggests that there is not much information on service levels and quality as envisaged under this reform. The Surat Municipal Corporation is the only ULB to provide detailed performance information for key services using the SLB framework. There is also a wide variation in what is being reported by different ULBs. The smaller municipalities are yet to initiate such disclosure practices.

3.4 Management Systems and Institutionalisation for Monitoring

A good urban monitoring system will need to be supported by management information systems that appropriately link and connect various databases to provide useful results for decision making at both state and local levels.

Programme implementation reporting as discussed above requires tracking inputs (mainly fund allocation through state and ULB budgets) and physical outputs. The context of decentralisation, and fund flow and institutional arrangements described (Figure 3.2) makes it rather complex to track fund utilisation. While this data does exist, it is not tracked systematically to enable a robust assessment of funds available and spent on UWSS for each ULB and for the state as a whole. Based on some simplifying assumptions, preliminary estimates for capital expenditure on UWSS have been made. However, decoding its composition across different sub-sectors has not been possible. Similarly, while data on outputs or physical facilities built (or capacity building activities conducted) does exist,

it is also not compiled systematically. Ideally, this data on physical outputs needs to be collated to generate a profile of the ULB's water and sanitation assets. Some work has been done to develop an asset register for municipalities under the Gujarat Municipal Accounting Reform Project. This information will need to be updated using the data on physical outputs. Systematic performance monitoring is not carried out at present, though data on some outcomes does get collected. In addition, online tracking of project implementation as envisaged under the JNNURM has not been set up as yet.

Recognising that further work is needed, the UDD plans to develop a special central MIS that combines these various efforts through appropriate information and reporting requirements. It has set up a special committee for introduction of e-governance under the SJMMSVY to introduce an MIS with the relevant formats and mechanisms to provide feedback to all ULBs.⁶¹ It also aims to enable all ULBs to set their targets and systems to monitor progress on these targets. This would mean that such a system would need to go well beyond the routine monitoring that the current UDD online reporting system focuses on – it needs to include both programme implementation and performance monitoring in its scope.

At present reporting takes place through two main systems:

Monthly online reporting through a set of formats (patraks): Initially municipalities were required to submit a large number of *patraks* filled manually through spreadsheet-based formats and reported separately to each agency within the UDD. However, over time, there has been an attempt to streamline this reporting by rationalising and reducing the number of formats. Further, an online reporting system for ULBs was introduced by the state government in 2008. Through this, data is filled online and checked at the district headquarters and uploaded to the state government website.

Programme progress reports – Data Project and Financial Management System (DPFMS): ULBs report on various schemes and programmes as well as on their financial performance through varied formats. So far this had been mostly done through physical hand-filled copies. “30 monthly formats and more than 70 annual statements are being generated, reviewed and monitored on a regular basis for all municipalities.”⁶² These are largely for state programmes and schemes. Some of the central programmes also require reporting on progress achieved on various reforms.

Monitoring of the financial status, reforms and roles and responsibilities of ULBs is undertaken annually by the GMFB through *patraks*/formats designed for the purpose. At present, though this information is collected by the GMFB, it does not validate, collate and analyse it systematically owing to a shortage of staff. The information is therefore currently not used in decision making. Besides municipalities, municipal corporations also report to GMFB for monitoring purposes. Of the six formats on UWSS reported by municipal corporations to the UDD, three are routine reports, while others are for reporting on programmes/a combination of the two.

A data project and financial management centre has been created; it is planned to develop a “standard MIS and decision support system across all municipal corporations and municipalities with regional sub-portals for effective connectivity and networking”. These activities are being taken up by the e-governance committee set up by the UDD.

⁶¹ As reported in letter no. *parach-102009-178-S*, dated 9 June 2009 (pp. 21-23) from the Deputy Secretary, UDD, GoG.

⁶² UDHUD (2010), p 19.

Table 3.6: Monthly Online Reporting by ULBs

Sr no	Format no	Details of information reported	Agency
Water supply and sanitation			
1	1-A	Planning drinking water	GUDM
2	1-B	Approved projects under UIDSSMT	GUDM
3	1-C	Progress under Amrut Dhara and 12th Finance Commission	GMFB
4	2	Underground drainage	GUDM
5	3-A	Pay and use toilets progress report	GMFB
6	3-B	Pay and use toilets NGO-wise details	
7	3-C	Pay and use toilets NGO-wise status	
8	3-D	Progress report under Nirmal Shauchalya Yojana	
9	3-E	Pay and use toilets – Physical and financial planning	
10	3-F	Individual toilets – Physical and financial planning	
11	4-A	SWM door-to-door collection	GUDC
12	4-B	SWM vermicompost details	
Programmes for the urban poor			
13	5-A	Slum areas – Infrastructure facilities	DOM
14	5-B	Slum areas – Construction of new houses	
15	6-A	Umeed – Centres	GUDM
16	6-B	Umeed – For other municipalities	GUDM
Administration and financial reforms and monitoring			
17	7-A	Demand of tax – Current year	DOM
18	7-B	Tax recovery	
19	7-C	Professional tax	
20	7-D	Maintenance expenses	
21	7-E	Establishment expenses details	
22	8	E-governance	GUDC
23	9	Financial management	
24	10-A	Special project for ULB's identity (<i>Agavi Olakh</i>)	DOM
25	11-A	Establishment details of municipalities	
26	11-B	Income/pension details of municipalities	
27	11-C	Outsourcing details	
Urban environment			
28	10-B	Urban green plan	Nirmal Gujarat
29	10-C	Lake development	GMFB

Source: Based on http://www.udd.gujarat.gov.in/Default_files/VCPatrakwise.htm, as downloaded on March 30, 2011.

3.5 Measures for Strengthening UWSS Sector Monitoring

The analysis presented above highlights the efforts made by the GoG through various agencies in urban development for setting up monitoring systems. An online programme monitoring has been set up for the state government's own programmes. However, many other programmes are still monitored through a paper trail. To improve efficiency, better connections are needed among various physical databases through an online management information system. While doing this, emphasis also needs to be placed on introducing systematic ULB level performance monitoring. The following key measures to strengthen UWSS sector monitoring have been identified.

Management information system: The UDD has already identified the need for developing a good MIS for the urban sector as a whole. The first step for this is to develop clarity on types of monitoring and consensus on related indicators (for example, for performance monitoring, the SLBs can serve as indicators). Second, it would be necessary to identify different databases and how they could be connected to support main types of monitoring and related institutional responsibilities. This would include various current forms of physical databases that would be needed. Ideally, it would be useful to move to online reporting for most databases. Finally, design of online systems with protocols for access to regular updates with good quality information will also need to be established. All this together will help develop a good management information system.

Need for systematic performance monitoring: As noted above, it is essential to set up a performance monitoring systems for basic urban services. The recent SLB initiative of the MoUD provides a nationally agreed set of indicators for urban water supply, waste water and sanitation and solid waste management. In addition, under the ongoing PAS Project additional indicators for equity and non-sewered cities have also been developed. Besides periodic/annual updates on information to generate these indicators, this monitoring system will also need to be linked to programme implementation monitoring to be able to see the impact of funding through various programmes and schemes on performance in service delivery. For setting up such a monitoring system a first step would be to use the information on service level indicators of PAS project as baseline and develop a monitoring system. The key is to make this system acceptable/owned by the ULBs and state government. While this process has been initiated under the PAS Project, common agreement will need to be reached across key stakeholders in the government.

Decision support system connected to various databases and MIS: The overall monitoring system comprising various databases, set of indicators for programme implementation and performance monitoring and a MIS that links these will provide a strong basis for introducing DSS tools to aid in state level financial allocation decisions. Similarly, appropriate DSS tools will need to be developed for use by ULBs, their complexity varying by the size class and type of ULBs.

Improving dissemination through state/ULB websites: Our quick review of dissemination efforts suggests that while the state government does provide considerable information on its activities in general on its website, specific information on urban water supply and sanitation is limited. Greater details in terms of current status and government's goals along with current performance status would go a long way in highlighting the state government's achievements in the sector. Similarly, good practice examples across sub-sectors and ULBs would also be useful. At the local level, a large number of ULBs do not have functioning websites, despite e-governance being introduced many years ago. Even of those ULB websites that are functioning, many have not been updated for years and do not have information on activities and performance.

Institutional strengthening and capacity building for monitoring: The institutional arrangements for funding and monitoring are quite clear at the state level as shown in section 3.1. However, within the ULBs there is no monitoring. It is seen more as reporting upwards to various state agencies rather than for use internally to improve performance. Also, clear assignment of roles within one or more of the state agencies will be needed to set up a common MIS. This can be linked to a performance assessment system and then used to develop and deploy various DSS tools to link the monitoring systems with decision making. At both the ULB and state levels, institutional strengthening and capacity building are needed in terms of building monitoring and review processes within the staff roles and tasks. Particularly, capacity will need to be built for use of monitoring-linked DSS tools at state and ULB levels. Capacity building would also include adequate hardware and software capacities. An assessment of state agencies and ULBs for this will be needed.

Gujarat is one of the few states in the country that has made its focus on urban development explicit, both in terms of policies as well as in fund allocations. It is not solely dependent on central government funding for urban development, but has used central government funds to kick-start many activities. Large amounts of resources are being deployed for the sector – the state now needs to move towards assessing the outcome of these infrastructure investments in a more systematic manner. The PAS Project’s assessment of service level benchmarks is the first step in developing a baseline. It is now imperative that the state government develops an appropriate monitoring system, and builds capacity of ULBs to use this assessment for performance improvement. Only then will the investment in urban infrastructure be targeted at where it is most needed.

References

- Acharya, S., and R. Mohan. 1996. *An Analysis of Projected Urban Infrastructure Investment Costs in India*. Ministry of Finance, Government of India, New Delhi.
- ADB. 2007. *Benchmarking and Data Book of Water Utilities in India*. Ministry of Urban Development and Asian Development Bank, New Delhi.
- Ahmedabad Municipal Corporation. 2010. 'Budget Document of Ahmedabad Municipal Corporation for 2010–11'. Downloaded from website: www.egovamc.gov.in
- Ahluwalia, Isher. 2011. 'Report on Indian Urban Infrastructure and Services'. Report of the High Powered Expert Committee (HPEC), March.
- Allély, Didier. n.d. "Support/consulting/controlling services for drinking water supply systems paid out of water sales". Mimeo.
- Annez, Patricia, Alain Bertaud, Bimal Patel, and V.K. Phatak. 2010. 'Working with the market: A new approach to reducing slums in India'. Wolfensohn Center for Development at the Brookings Institution, mimeo.
- Araral E. 2010. 'A Comparative Analysis of Urban water Supply in India and Cambodia', in G. Ramesh et al. (ed.). *Urban Infrastructure and Governance*. Routledge, India.
- ASCI. 2008a. 'Karnataka Water Board, Improvement in O&M of Water Supply System in Hubli-Dharwad'. National Urban Water Awards Nominee (2008): Retrieved in April 2011 from <http://www.waterawards.in/2008-nominee-profile-kwb.php>
- ASCI. 2008b. 'Navi Mumbai Municipal Corporation, Implementing Continuous (24x7) Water Supply System'. National Urban Water Awards Winner (2008): Retrieved in April 2011 from <http://www.waterawards.in/2008-winner-profile-nmmc.php>
- Baieti, Aldo, W. Kingdom, and M. Ginneken. 2006. *Characteristics of Well Performing Public Water Utilities*. Water Supply and Sanitation Working Note No 9, World Bank.
- Census of India. 1981. *Town Directory: Gujarat 1981*. Directorate of Census Operations, New Delhi.
- _____ 1991. *Town Directory: Gujarat 1991*. Directorate of Census Operations, New Delhi.
- _____ 2001. *Town Directory: Gujarat 2001*. Directorate of Census Operations, New Delhi.
- _____ 2001. *Slum Census 2001*. Directorate of Census Operations, New Delhi.
- Central Pollution Control Board (CPCB). 2009. *Status of Water Supply, Wastewater Generation and Treatment in Class I Cities and Class II Towns of India*. Central Pollution Control Board, Ministry of Environment and Forests, New Delhi.
- CEPT University. 2010. 'Performance Measurement System for Urban Water Supply and Sanitation: Volume I – Approach and Framework'. Mimeo.

Chauhan, Shefali. 2010. 'Metering leads to 50% saving in water consumption'. *Dainik Bhaskar*, Ahmedabad, January 30.

Dave, Kapil. 2010. 'Half of Gujarat will live in cities', *Daily News and Analysis*, June 2.

Dholakia, R. 2006. 'Growth acceleration and potential in Gujarat'. Working paper no 2006-02-02, Indian Institute of Management, Ahmedabad. Mimeo.

Directorate of Economics & Statistics. 2006. *Statistical Handbook 2005–06*. Government of Gujarat, Gandhinagar.

_____ 2010a. *Key Statistics of Gujarat State 2009–10*. Government of Gujarat, Gandhinagar.

_____ 2010b. 'Socio-economic review Gujarat state: 2009–10'. Government of Gujarat.

Department of Finance (DoF). 2005. *State Budget 2005–06*. Department of Finance, Government of Gujarat, Gandhinagar.

_____ 2006. *State Budget 2006–07*. Department of Finance, Government of Gujarat, Gandhinagar.

_____ 2007. *State Budget 2007–08*. Department of Finance, Government of Gujarat, Gandhinagar.

_____ 2008. *State Budget 2008–09*. Department of Finance, Government of Gujarat, Gandhinagar.

_____ 2009. *Revised Estimate 2009–10*. Department of Finance, Government of Gujarat, Gandhinagar.

_____ 2010. *Estimated Budget 2010–11*. Department of Finance, Government of Gujarat, Gandhinagar.

Fall, Madio. n.d. 'Public-Private Partnerships in Rural Water Supply: The Senegalese Experience'. Presentation, Water and Sanitation Program, Africa. Mimeo.

Fugelsnes, Thomas, and Luc Hoang Gia. 2010. 'Water and sanitation web platforms: WatSan and mWater'. Presentation, Water and Sanitation Program, Africa. Mimeo.

Government of Gujarat. 2010a. 'Socio-Economic Review 2009–10'. Bureau of Economics and Statistics, Government of Gujarat. Mimeo.

Government of Gujarat. 2010b. 'Statewide Water Supply Grid in Gujarat'. Mimeo. Downloaded from <http://www.gwssb.org/pdf/narmadaprojects.pdf>

Gujarat Municipal Finance Board (GMFB). 2009. *Nanakiya Parishthiti 2005–06 to 2008–09*, Gujarat Municipal Finance Board, Gandhinagar (unpublished).

_____ 2007. *The Details of Scheme-wise and Year-wise Grant Received and Grant Disbursed 2002–03 to 2006–07*. Gujarat Municipal Finance Board, Gandhinagar (unpublished).

_____ 2008. *The Details of Scheme-wise and Year-wise Grant received and Grant Disbursed 2007-08*. Gujarat Municipal Finance Board, Gandhinagar (unpublished).

_____ 2009. *The Details of Scheme-wise and Year-wise Grant received and Grant Disbursed 2008–09*. Gujarat Municipal Finance Board, Gandhinagar (unpublished).

_____ 2010. *Twelfth Finance Commission Grant to Local Bodies (ULBs): Utilisation Update as of 31.3.10*. Gujarat Municipal Finance Board, Gandhinagar (unpublished).

Gogoi, Trishna. 2006. *Indicators of Equity and Efficiency Criteria in the SFC Devolution Formula for Municipalities*. CEPT Masters Thesis, CEPT University, Ahmedabad (unpublished).

Government Resolution No./Mu.E.A.S/Water Charges/2007/PA/4/Kh-4, Government of Gujarat, Gandhinagar.

Government Resolution No. NPL/4510/CFa-1/M, Dated April 21, 2010, Government of Gujarat, Gandhinagar.

Government Resolution No. NPL/4510/CFa-1/M, Dated April 21, 2010, Government of Gujarat, Gandhinagar.

Government of Gujarat. n. d. "Checklist of reforms: Public disclosure law for Rajkot", mimeo.

_____ 1998. *Report on Urban Local Bodies in Gujarat State: Third (Final) Report of Gujarat Finance Commission*. GoG, Gandhinagar.

_____ 2009. 'GR No: SJY/102009/1515/Dh on Swarnim Jayanti Mukhyamantri Shaheri Vikas Yojana (SJMMSVY)'. Dated 17/11/2009, UD&UH Dept.

_____ 2010. *Budget Speech, 2010–11*. Government of Gujarat, Gandhinagar.

Government of Uganda, Ministry of Water and Environment. 2005. *Water and Sanitation Sector Performance Report 2005*.

Government of Uganda, Ministry of Water and Environment. 2006. *Water and Sanitation Sector Performance Report 2006*.

Government of Uganda, Ministry of Water and Environment. 2008. *Water and Sanitation Sector Performance Report 2008*.

GoI, Ministry of Water Resources. 2002. *National Water Policy*. Ministry of Water Resources, New Delhi.

GoI, Ministry of Urban Development. 2009. *National Urban Sanitation Policy*. Government of India, New Delhi.

GoI, Ministry of Finance. 2010. *Report of the Thirteenth Finance Commission, 2010–15, Volume I: Report, Chapter 10 and Annex 10*. Government of India, New Delhi.

GUDC. 2008. *Gujarat Municipal Sewerage Project: Initial Project Note* (submitted to JICA). Gujarat Urban Development Company, Gandhinagar (unpublished).

GUDC. 2008. *Gujarat Municipal Water Supply Project: Initial Project Note* (submitted to World Bank). Gujarat Urban Development Company, Gandhinagar (unpublished).

GUDC. 2009. *Municipal Solid Waste Management Project, Fund Utilisation as of 26-05-09*. Gujarat Urban Development Company, Gandhinagar (unpublished).

GUDC. 2009. *Presentation to the Chief Minister on Integrated Infrastructure Development in Tribal Areas of Gujarat*. 17-01-09 (unpublished).

GUDC. IL&FS Ecosmart, and USAID-ECO III. n.d. 'Municipal energy efficiency projects in Gujarat'. Mimeo.

GUDM. 2009. *Statement on Approved Projects Sanctioned under UIG as of August, 2009*. Gujarat Urban Development Mission, Gandhinagar (unpublished).

GWSSB. 2010. *Master Plan for State-wide Water Supply Grid in Gujarat (status as on March 2010)*. Gujarat Water Supply and Sewerage Board, Gandhinagar, Mimeo.

GWSSB. n.d. *Drinking Water Security for Future Generations*. Gujarat Water Supply and Sewerage Board, Gandhinagar.

http://rwss.ap.nic.in/pred/rws_login_frm.html.

<http://www.gudcltd.com/public/GERRP%20Financial.pdf>.

http://www.planningcommission.gov.in/reports/genrep/bkpap2020/9_bg2020.pdf.

http://www.urbanindia.nic.in/moud/programme/ud/uidssmt_pdf/statewise_town.xls; status as on June 30, 2010.

<http://www.urbanindia.nic.in>.

Hirway, I. 2005. 'Ensuring Drinking Water to All: A Study in Gujarat'. Paper prepared for the 4th IWMI-TATA Annual Partners Research Meet, February 24–26.

Hirway, I., and Subhrangsu Goswami. 2006. 'Status of Drinking Water in Coastal Saurashtra: Need for Area Specific Approach'. Paper submitted to Coastal Salinity Prevention Cell, Ahmedabad.

International Institute for Population Sciences (IIPS), and Macro International. 2007. *National Family Health Survey (NFHS-3), 2005–06: India: Volume I*. Mumbai: IIPS.

International Institute for Population Sciences (IIPS). 2006. *District Level Household Survey (DLHS-2), 2002–04: India*. Mumbai: IIPS.

International Institute for Population Sciences (IIPS). 2010. *District Level Household and Facility Survey (DLHS-3), 2007–08: India*. Mumbai: IIPS.

Jamnagar Municipal Corporation. 2009. *Detailed Project Report for Underground Drainage System in Jamnagar* under World Bank funded Integrated Coastal Zone Management Programme, JMC, Jamnagar.

Hoang Gia, Luc. 2007. 'Setting up the Monitoring and Evaluation System for the Programme on Safe Drinking Water and Sanitation for The Millennium (PEPAM)'. Report prepared for the Water and Sanitation Program, Africa. Mimeo.

Indian Express. 2011. *For Performing Babus, Centre clears cash incentive plans*. March 21: Retrieved on March 22 2011.

http://epaper.indianexpress.com/IE/IEH/2011/03/22/ArticleHtmls/22_03_2011_001_006.shtml?Mode=1

- Joshi, Ravi. 2011 (forthcoming). 'Finance related Decision-Making Processes in ULBs of Gujarat'. Mimeo.
- Kimanzi, Gibert. n.d. 'Challenges of Rural Water Sub-Sector Reform Within the Context of Decentralisation in Uganda'. Directorate of Water Development, Ministry of Water, Lands and Environment, Kampala, Uganda. Mimeo.
- Kundu, A. n.d. 'Infrastructure Financing and Emerging Pattern of Urbanisation: A Perspective'. http://www.planningcommission.gov.in/reports/genrep/bkpap2020/9_bg2020.pdf.
- Kundu, A. 2000. 'Trends and Patterns of Urbanisation and their Economic Implication'. *India Infrastructure Report 2000*, Oxford University Press, New Delhi.
- Kundu, A. 2001. "Institutional Innovations for Urban Infrastructure Development-The India Scenario", in *Good Urban Governance Campaign-India Launch: Learning from One Another*, UNCHS (Habitat), New Delhi, September 4 to 6.
- Kundu D., and D. Samanta. 2011. 'Redefining the Inclusive Urban Agenda in India'. *Economic and Political Weekly*, January 29, Vol xlvi, No 5, pp 55–63.
- Mahamulkar, Sujit. 2011a. 'BMC plans separate water body for water supply'. *Hindustan Times*, February 11.
- _____ 2011b. 'Separate water body will solve woes: Expert'. *Hindustan Times*, February 12.
- Mathur, M.P. et al. 2007. *Norms and Standards of Municipal Service Delivery in India*. NIUA, New Delhi.
- Mathur, O.P. 2009. *National Poverty Reduction Strategy 2010–2020: Slum Free Cities*. The National Institute of Public Finance and Policy, New Delhi.
- Mathur, O.P. 2009. *Slum Free Cities : A New Deal for the Urban Poor*. National Urban Poverty Reduction Strategy, 2010–2020 A.D., The National Institute of Public Finance and Policy, (NIPEP), July 2009.
- Mehta, Meera, Anne Christensen, and Thomas Fugelsnes. 2007. 'Country Level Sector Information and Monitoring Systems for Water Supply and Sanitation – A Systematic Approach to Integrating Performance Monitoring and Sector Strategic Decision-making'. Water and Sanitation Program, Africa. Mimeo.
- Mehta, Meera, and Dinesh Mehta. 2010. 'A Glass Half Full: Urban Development 1990s to 2010'. *Economic and Political Weekly*, July 10, Vol xlv No 28, pp 20–23.
- Mendonca, George. 2011. 'NMMC proposes water meters for all city consumers'. *Mumbai Mirror*, July 31.
- Ministry of Local Government. 2006. 'Assessment Manual for Higher and Lower Local Governments'. For World Bank funded Uganda Local Government Support Programme, Republic of Uganda.
- Ministry of Housing and Poverty Alleviation (MoHUPA) and United Nations Development Programme (UNDP). 2009. 'India Urban Poverty Report 2009'. Government of India.

Ministry of Housing and Urban Poverty Alleviation (MoHUPA) and National Building Organisation (NBO). 2010. 'Report of the Committee on Slum Statistics and Census'. Government of India.

_____ 2011. 'Results Framework Document for Ministry of Housing and Urban Poverty Alleviation', (2010–2011). Retrieved on March 24 2011. <http://performance.gov.in/RFD%202010-11/Syndicate%206/Housing%20and%20urban%20poverty%20alliviation.pdf>.

MoUD (Ministry of Urban Development). n.d. 'Overview: Jawaharlal Nehru National Urban Renewal Mission'. <http://jnnurm.nic.in/nurmudweb/toolkit/overview.pdf>

_____ 2011. 'Results Framework Document for Ministry of Urban Development', (2010–2011). Retrieved on March 24 2011. <http://performance.gov.in/RFD%202010-11/Syndicate%206/URBAN%20DEV.pdf>.

Central Public Health and Environmental Engineer Organisation (CPHEEO). 2000. 'Manual on Municipal solid waste management'. Ministry of Urban Development.

_____ 2010a. 'Progress Reports on JNNURM'. From website downloaded on December 25, 2010. Ahmedabad: http://www.jnnurm.nic.in/nurmudweb/Reforms/reform_data/AHMEDABAD.pdf.
Rajkot: http://www.jnnurm.nic.in/nurmudweb/Reforms/reform_data/RAJKOT.pdf.
Surat: http://www.jnnurm.nic.in/nurmudweb/Reforms/reform_data/SURAT.pdf.
Vadodara: http://www.jnnurm.nic.in/nurmudweb/Reforms/reform_data/VADODARA.pdf.

_____ 2010b. 'Quarterly progress reports for UIDSSMT'. From website downloaded on December 25, 2010. http://www.urbanindia.nic.in/programme/ud/uidssmt_pdf/ulb_opt_reforms.ppt

Mohanty, P.K., B.M. Misra, Rajan Goyal, and P.D. Jeromi. 2007. *Municipal Finance in India: An Assessment*. Development Research Group Study, No 26, Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai.

Mugisha S., S. Berg, and W. Muhairwe. 2005. 'Using Internal Incentive Contracts to Improve Water Utility Performance: The Case of Uganda's NWSC'. *Water Policy* Vol 9 No 3 pp 271–284, IWA Publishing.

Nadkarni, M. 2004. *An Ecosystem Approach to Sanitation, Report Commissioned by the Mayor's Office, CERNA, Ecole des Mines de Paris, Paris*, referred in Zerah Zerah, Mare-Helene (2006), "Urban Water and Waste Water", *India Infrastructure Report, 2006*, Oxford University Press, New Delhi.

NCAER. 2008. 'The next urban frontier: Twenty cities to watch'. A report as posted on <http://trendsniiff.com/2008/09/16/targeting-top-20-growth-cities-in-india/>, downloaded on December 4, 2010.

NIUA. 2005. 'Status of Water Supply, Sanitation and Solid Waste Management in Urban Areas', 1999.

NIUA. 2010a. 'Handbook on Primers: JNURRM'. For Ministry of Urban Development, Government of India.

NIUA. 2010b. 'Status of municipal accounting systems in selected urban local bodies of India'. Report done by ICRA Management Consulting Services Limited for Indo-USAID FIRE Project.

NSSO. 2003. *NSS Report No. 486, Condition of Urban Slums 2002*, NSS 558th Round (July 2002–December 2002), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India, New Delhi

NSSO. 2004. *NSS Report No. 488, Housing Condition in India 2002*, NSS 558th Round (July 2002–December 2002), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India, New Delhi

NSSO. 2004. *NSS Report No. 489, Housing Condition in India, 2002: Household Amenities and Other Characteristics*, NSS 558th Round (July 2002–December 2002), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

PAS Project. 2010. 'Process Mapping for Baseline Assessment among ULBs in Gujarat'. Presentation, mimeo.

PAS Project. 2011 (forthcoming). 'A New Approach to 100% Recovery of O&M Costs – A Case Study of Kalol Municipality, Gujarat'. Mimeo.

Pethe, A., B.M. Mishra, and P.B. Rakhe. n.d. *Strengthening Decentralisation: Augmenting the Consolidated Funds of the States by the Thirteenth Finance Commission: A Normative Approach*, Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai. <http://www/rbi.org.in/scripts/PublicationsView.aspx?ld=11400#URB>

Pilgrim, Nick. 2003. 'Town water supply: Building success factors into basic reforms'. Town WSS Initiative, World Bank, presentation, mimeo.

Pilgrim, Nick, Bob Roche, John Kalbermatten, Cathy Revels, and Mukami Kariuki. 2007. 'Principles of Town Water Supply and Sanitation, Part 1: Water Supply'. World Bank Working Note No 13.

Ramachandran, M. 2011. 'JNNURM: A Balance Sheet'. *Economic Times*, January 15.

Registrar General (RG) and Census Commissioner. 2006. 'Population Projections for India and the States'. Census of India, New Delhi.

Oomen, M.A. 2005. 'Twelfth Finance Commission and Local Bodies'. *Economic and Political Weekly*, May 14.

Planning Commission, GoI. 1983. *Report of the Task Force on Housing and Urban Development*, Planning Commission, Government of India, New Delhi, quoted in Mathur, M.P. et al. (2007), *Norms and Standards of Municipal Service Delivery in India*, NIUA, New Delhi.

Planning Commission. 1997. 'Estimates of Poverty'. Press release dated March 11.

_____ 2002. *Tenth Five Year Plan, 2002 –07*, Vol I, II and III, Planning Commission, Government of India, New Delhi.

_____ 2007a. *Eleventh Five Year Plan, Vol I*, (2007–12), Planning Commission, Government of India, Oxford University Press, New Delhi.

_____ 2007b. 'Estimates of Poverty'. Press release dated March 21.

Ramanathan R. 2008. 'Building Urban India'.
<http://www.livemint.com/2008/10/22234810/building.urban.india.html>

TERI. 2001. *Regulatory Framework for Water Services in Gujarat*. Tata Energy Research Institute, New Delhi.

Thomson, Mike, and Mathias Ofumbi. 2006. 'Water and Sanitation Sector Information and Monitoring Systems in Uganda'. Report prepared for the Government of Uganda and Water and Sanitation Program, Africa, mimeo.

Urban Development and Urban Housing Department (UDHUD). 2010. 'Inclusive Urban Development for Swanim Gujarat'. Government of Gujarat.

_____. 2011. 'Best practices in urban development'. Presentation at the seminar on urban infrastructure development, Vibrant Gujarat, Gandhinagar. Mimeo.

Vaidya, C., and Brad Johnson. 2001. 'Ahmedabad Municipal Bond: Lessons and Pointers'. *Economic and Political Weekly*, July 28.

Water and Sanitation Program. 2007. 'Proceedings of International Workshop on Country-level Sector Information and Monitoring Systems (SIMS) for Water and Sanitation in Africa'. Nairobi, March 27–29, 2007. Mimeo.

Water and Sanitation Program, South Asia. n.d. *Situation Analysis of Urban Sanitation in Maharashtra*, Water and Sanitation Department, Government of Maharashtra and WSP-SA, unpublished report.

World Bank. 2006. 'India – Water Supply and Sanitation: Bridging the Gap between Infrastructure and Service'. *Background Paper on Urban Water Supply and Sanitation*, The World Bank, New Delhi.

World Bank. 2009. 'Implementation Completion Report for the Kerala Rural Water Supply and Sanitation Project'. India, South Asia Region.

World Water Assessment Program. 2006. 'Uganda National Water Development Report 2005'. Prepared as a case study for the 2nd UN World water Development Report, UN Water.

Zerah, Mare-Helene. 2006. 'Urban Water and Waste Water'. *India Infrastructure Report 2006*, Oxford University Press, New Delhi.

Annex

Annex Table A2.1: Allocations and Estimates for Urban Development Department

Sr No	Grants/schemes	Allocation/investments and estimates for UDD						Total
		(Rs million)						
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	
1	I. CENTRAL GOVERNMENT							
2	Multilateral and MPLAD Fund	1539	530	530	530	530	925	4584
3	MPLAD scheme	530	530	530	530	530	530	3180
4	GEERP	1009	0	0	0	0	0	1009
5	Jamnagar sewerage project	0	0	0	0	0	395	395
6	Central Grant/Centrally Assisted Programme for Urban Development (including State Government Share)	638	4970	3777	5336	4896	5369	24986
7	UDP-15 Upgradation of Standards of Administration recommended by 12 th Central Finance Commission	578	1077	652	602	602	10	3521
8	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – Central share	0	3095	2059	4290	4116	4826	18387
9	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – Central share	0	708	1066	444	178	533	2928
10	UDP-10 Grants-in-aid to small and medium towns	60	90	0	0	0	0	150
11	Central Grant/Centrally Assisted Programme for Urban Poor	210	562	1418	1550	1518	1876	7135
12	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – Central share	0	230	1158	1373	1251	1788	5799
13	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – Central share	0	53	260	178	266	89	846
14	UDP-12 UBSP	7	25	0	0	0	0	32
15	UDP-23 National Slum Development Programme (NSDP)	203	254	0	0	0	0	457
16	Total Central Assistance through Grant/Scheme/Programme	848	5532	5195	6886	6414	7245	32120
17	Total Central Assistance through Grant/Scheme/Programme + Multilateral Funding and MPLAD Grant	2387	6062	5725	7416	6944	8170	36704
18	II. STATE GOVERNMENT							
19	State Grant	976	1083	8079	6059	11808	11949	39953

Sr No	Grants/schemes	Allocation/investments and estimates for UDD						
		(Rs million)						
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total
20	UDP-25 Allocation of receipts from entertainment tax to Gujarat Municipal Finance Board	413	413	413	393	393	393	2415
21	UDP-8 Grants-in-aid to urban local bodies for entertainment tax on cable TV/disc antenna	20	20	20	20	20	20	120
22	Grant-in-aid for professional tax to ULBs (UDP 21, 22, 23, 43)	500	500	896	897	262	262	3316
23	UDP-49 Incentive grant-in-aid to municipal corporations for development works – <i>including octroi compensation from 2008-09</i>	0	0	6750	4750	0	0	11500
24	UDP Grant-in-aid to municipal corporations for development works under Swarnim Siddhi (SS) (to be opened)	0	0	0	0	4084	4000	8084
25	UDP-56 Assistance to municipalities for making Model Towns and achieving Swarnim Siddhi (to be opened)	0	0	0	0	7050	7050	14100
26	UDP-36 Grants-in-aid to ULBs for drainage scheme	43	150	0	0	0	0	193
27	Grant-in-aid to municipalities to meet the expenditure of salary and wages of municipal state cadre	0	0	0	0	0	125	125
28	UDP-Assistance to urban local bodies for formation and encouragement of Sakhi Mandals (to be opened)	0	0	0	0	0	100	100
29	State Scheme/Programme for Urban Development	601	2253	2931	8436	4039	4431	22692
30	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – State share	0	1234	821	1710	1641	1924	7329
31	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – State share	0	89	134	56	22	67	369
32	UDP-7 Contribution towards Urban Development Funds	4	104	104	104	17	10	343
33	Nirmal Gujarat (Sanitation)	0	0	981	1344	1400	1400	5125
34	UDP-8 Financial assistance to urban development authorities for identified infrastructure scheme	10	0	0	0	0	0	10
35	UDP Amrut Dhara Yojana	140	389	0	0	0	0	529
36	UDP-4 Vajpai town development	124	275	820	5176	879	500	7775

Sr No	Grants/schemes	Allocation/investments and estimates for UDD						
		(Rs million)						
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total
	scheme							
37	UDP-33 Solid waste management	152	152	0	0	0	0	304
38	Lake development for drinking water supply	0	0	1	0	0	0	1
39	GIA to urban/area development authorities	0	0	0	0	0	450	450
40	UDP-16 Revolving fund for urban infrastructure for municipalities	100	0	0	0	0	0	100
41	UDP-21 Strengthening of urban local bodies by providing staff and training	6	10	0	0	0	0	16
42	UDP-40 Award to Best Municipality	65	0	0	0	0	0	65
43	UDP-6 Good Governance initiative municipalities	0	0	70	46	80	80	276
44	State Schemes for the Poor	50	199	595	681	542	724	2791
45	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – State share	0	91	462	547	499	713	2312
46	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – State share	0	7	33	22	34	11	107
47	UDP-11 Environment improvement in slums	15	0	0	0	0	0	15
48	UDP-3 Scheme for urban poor rehabilitation (GSY)	0	0	100	111	10	0	221
49	UDP Urban low cost sanitation	35	101	0	0	0	0	136
50	Total State Scheme/Programme	651	2453	3525	9117	4581	5155	25482
51	Total State Share Excluding GWSSB	1627	3535	11604	15176	16389	17104	65435
52	Funding from Other Departments than UDD							
53	Central Finance Commission (CFC) grants – SCST and TSP	250	0	176	209	206	1202	2043
54	GWSSB Master Plan for state-wide water supply grid in Gujarat	2965	2366	1442	1786	2358	2085	13002
55	Total State Share Including GWSSB	4592	5901	13046	16962	18747	19189	78437
56	Central grants, centrally sponsored schemes (CSP), MPLAD fund and externally funded projects	2637	6062	5901	7625	7150	9372	38747
57	State grants, schemes and share in CSPs including GWSS for water supply grid	4592	5901	13046	16962	18747	19189	78437
58	ULB share (Only UWSS)	798	3212	3212	4818	4818	4890	21749
59	Total Urban Development Grant/Scheme/ULB Contribution for	8027	15175	22160	29406	30715	33451	138934

Sr No	Grants/schemes	Allocation/investments and estimates for UDD						
		(Rs million)						
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total
	Gujarat State							

Source: State budgets, DoF, GoG, state budgets, 2005-09; DoF, GoG, revised estimates 2009-10 and DoF, GoG, budget estimates 2010-11; GWSSB (2010), 'Master Plan for State Wide Water Supply Grid in Gujarat, figs as on March 2010', mimeo.

Annex Table A2.2: Estimated Allocation for UWSS

(Rs million)

Sr No	Grants/schemes	Allocation/investments and estimates for UWSS							Assumption for UWSS
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total	
1	I. CENTRAL GOVERNMENT								
2	Multilateral and MPLAD Fund	430	80	80	80	80	475	1222	
3	MPLAD scheme	80	80	80	80	80	80	477	15%
4	GEERP	350	0	0	0	0	0	350	34.70%
5	Jamnagar sewerage project						395	395	Actual Exp.
6	Central Grant/Centrally Assisted Programme for Urban Development (including State Government Share)	570	3650	2941	3633	3261	3487	17542	
7	UDP-15 Upgradation of Standards of Administration recommended by 12 th Central Finance Commission	549	1023	619	572	572	10	3345	95%
8	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – Central share	0	1888	1256	2617	2511	2944	11217	Actual Exp.
9	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – Central share	0	708	1066	444	178	533	2928	100%
10	UDP-10 Grants-in-aid to small and medium towns	21	31	0	0	0	0	52	34.70%
11	Central Grant/Centrally Assisted Programme for Urban Poor	210	321	213	233	228	281	1486	
12	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – Central share	0	34	174	206	188	268	870	15%
13	UDP-19 Integrated Housing and Slum Development Programme - IHSDP (Garib Samruddhi Yojana, GSY) – Central share	0	8	39	27	40	13	127	15%
14	UDP-12 UBSP	7	25	0	0	0	0	32	100%
15	UDP-23 National Slum Development Programme (NSDP)	203	254	0	0	0	0	457	100%
16	Total Central Assistance through Grant/Scheme/Programme	780	3972	3154	3865	3488	3768	19028	
17	Total Central Assistance through Grant/Scheme/Programme + Multilateral Funding and MPLAD Grant	1210	4051	3234	3945	3568	4243	20250	
18	II. STATE GOVERNMENT								
19	State Grant	367	474	2803	2102	9061	9139	23946	

Sr No	Grants/schemes	Allocation/investments and estimates for UWSS							Assumption for UWSS
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total	
20	UDP-25 Allocation of receipts from entertainment tax to Gujarat Municipal Finance Board	143	143	143	136	136	136	838	34.70%
21	UDP-8 Grants-in-aid to urban local bodies for entertainment tax on cable TV/disc antenna	7	7	7	7	7	7	42	34.70%
22	UDP Grant-in-aid for professional tax to ULBs (UDP 21, 22, 23, 43)	174	174	311	311	91	91	1151	34.70%
23	UDP-49 Incentive grant-in-aid to municipal corporations for development works – <i>including octroi compensation from 2008-09</i>	0	0	2342	1648	0	0	3991	34.70%
24	UDP Grant-in-aid to municipal corporations for development works under Swarnim Sidhi (SS) (to be opened)	0	0	0	0	2859	2800	5659	70.00%
25	UDP-56 Assistance to municipalities for making Model Towns and achieving Swarnim Siddhi (to be opened)	0	0	0	0	5968	5968	11936	Actual WSS- 57%
26	UDP-36 Grants-in-aid to ULBs for drainage scheme	43	150	0	0	0	0	193	100%
27	Grant-in-aid to municipalities to meet the expenditure of salary and wages of municipal state cadre	0	0	0	0	0	38	38	30%
28	UDP Assistance to urban local bodies for formation and encouragement of Sakhi Mandals (to be opened)	0	0	0	0	0	100	100	100%
29	State Scheme/Programme for Urban Development	375	1514	1937	4275	2734	2974	13810	
30	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) - State share	0	753	501	1043	1001	1174	4471	Actual Exp.
31	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – State share	0	89	134	56	22	67	369	100%
32	UDP-7 Contribution towards Urban Development Funds	1	36	36	36	6	3	119	34.7%
33	Nirmal Gujarat (Sanitation)	0	0	981	1344	1400	1400	5125	100%
34	UDP-8 Financial assistance to urban development authorities for identified infrastructure scheme	3	0	0	0	0	0	3	34.7%

Sr No	Grants/schemes	Allocation/investments and estimates for UWSS							Assumption for UWSS
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total	
35	UDP Amrut Dhara Yojana	140	389	0	0	0	0	529	100%
36	UDP-4 Vajpai Town Development Scheme	43	95	285	1796	305	174	2698	34.7%
37	UDP-33 Solid waste management	152	152	0	0	0	0	304	100%
38	Lake development for drinking water supply	0	0	1	0	0	0	1	100%
39	GIA to urban/area development authorities	0	0	0	0	0	156	156	34.7%
40	UDP-16 Revolving fund for urban infrastructure for municipalities	35	0	0	0	0	0	35	34.7%
41	UDP-21 Strengthening of urban local bodies by providing staff and training	0	0	0	0	0	0	0	0%
42	UDP-40 Award to Best Municipality	0	0	0	0	0	0	0	0%
43	UDP-6 Good Governance initiative municipalities	0	0	0	0	0	0	0	0%
44	State Schemes for the Poor	50	116	174	197	90	109	735	
45	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – State share	0	14	69	82	75	107	347	15%
46	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – State share	0	1	5	3	5	2	16	15%
47	UDP-11 Environment improvement in slums	15	0	0	0	0	0	15	100%
48	UDP-3 Scheme for Urban Poor Rehabilitation (GSY)	0	0	100	111	10	0	221	100%
49	Urban low cost sanitation	35	101	0	0	0	0	136	100%
50	Total State Scheme/Programme	425	1630	2111	4472	2824	3083	14545	
51	Total State Share Excluding GWSSB	791	2104	4915	6575	11885	12222	38491	
52	Funding from Other Departments than UDD								
53	Central Finance Commission (CFC) grants – SCST and TSP	271	0	151	218	218	1167	2024	Actual Exp.
54	GWSSB Master Plan for state-wide water supply grid in Gujarat	2965	2366	1442	1786	2358	2085	13002	GWSSB Master plan; based on per capita expenditure
55	Total State Share Including	3756	4470	6357	8361	14243	14307	51493	

Sr No	Grants/schemes	Allocation/investments and estimates for UWSS							Assumption for UWSS
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Revised estimate	2010-11 Budget	Total	
	GWSSB								
56	Central grants, centrally sponsored schemes (CSP), MPLAD fund and externally funded projects	1480	4051	3384	4163	3786	5409	22274	
57	State grants, schemes and share in CSPs including GWSS for water supply grid	3756	4470	6357	8361	14243	14307	51493	
58	ULB share (only UWSS)	606	2061	2142	3192	3170	3259	14429	
59	Total Urban Development Grant/Scheme/ULB Contribution for Gujarat State	5842	10582	11883	15716	21198	22975	88196	

Annex Table A2.3: Assumptions, Sources for Allocations and UWSS Share

Sr No	Grants/schemes	Assumptions made for UWSS	Source of data
1	I. CENTRAL GOVERNMENT		
2	Multilateral and MPLAD Fund		
3	MPLAD scheme shift to other departments	UWSS share: 15%	
4	GEERRP	UWSS share : 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	http://www.gudcltd.com/public/GERRP%20Financial.pdf
5	Jamnagar sewerage project	Based on actual project cost approved	DPR for Sewerage System in Jamnagar under World Bank funded Integrated Coastal Zone Management Programme
6	Central Grant/Centrally Assisted Programme for Urban Development		
7	UDP-15 Upgradation of Standards of Administration recommended by 12 th Central Finance Commission	UWSS share: 95% (Based on utilisation update as of 31.3.10 given by GMFB)	DoF, GoG, State Budgets, Actual for 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11; GMFB, Twelfth Finance Commission Grant to Local Bodies (ULBs), Utilisation Update as of 31.3.10 MoF, GoI, Report of the 13 th Finance Commission, New Delhi, Annex 10
8	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – Central share	State share: 28.5% (Based on JNNURM cost sharing formulae of Centre:State:ULB = 50:20:30); UWSS share: Based on actual project cost approved	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11; JNNURM Approved Project Cost as of 31.03.2010 from www.urbanindia.nic.in GUDM, Approved Projects Sanctioned under UIG August, 2009
9	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – Central share	State share: 28.5% (Based on JNNURM cost sharing formulae of Centre:State:ULB = 90:10:10); UWSS share: Based on actual project cost approved	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11; www.urbanindia.nic.in/moud/progranne/ud/uidssmt_pdf/statewise_town.xls ; status as on 30th June, 2010
10	UDP-10 Grants-in-aid to small and medium towns	UWSS share : 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
11	Central Grant/Centrally Assisted Programme for Urban Poor		
12	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – Central share	UWSS share: 15% (Based on actual project cost approved)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
13	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – Central share	UWSS share: 15% (Based on actual project cost approved)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
14	UDP-12 UBSP	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
15	UDP-23 National Slum	100% (Based on actual	DoF, GoG, State Budgets, 2005–06 – 2008–

Sr No	Grants/schemes	Assumptions made for UWSS	Source of data
	Development Programme (NSDP)	expenditure)	09; Revised Estimate 2009–10 and Budget Estimate 2010–11
16	II. STATE GOVERNMENT		
17	State Grant		
18	UDP-25 Allocation of receipts from entertainment tax to Gujarat Municipal Finance Board	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
19	UDP-8 Grants-in-aid to urban local bodies for entertainment tax on cable TV/disc antenna	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
20	Grant-in-aid for professional tax to ULBs (UDP 21, 22, 23, 43)	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
21	UDP-49 Incentive grant-in-aid to municipal corporations for development works – <i>including octroi compensation from 2008–09</i>	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
22	UDP Grant-in-aid to municipal corporations for development works under Swarnim Sidhi (SS) (to be opened)	70% (Based on actual allocation for UWSS under budget head)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
23	UDP-56 Assistance to municipalities for making Model Towns and achieving Swarnim Siddhi (to be opened)	57% (Based on actual allocation for UWSS under budget head)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
24	UDP-36 Grants-in-aid to ULBs for drainage scheme	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
25	Grant-in-aid to municipalities to meet the expenditure of salary and wages of municipal state cadre	30%	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
26	UDP Assistance to urban local bodies for formation and encouragement of Sakhi Mandals (to be opened)	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
27	State Scheme/Programme for Urban Development		
28	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – State share	State Share: 28.5% (Based on JNNURM cost sharing formulae of Centre:State:ULB = 50:20:30); UWSS share: Based on actual project cost approved	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11; JNNURM Approved Project Cost as of 31.03.2010 from www.urbanindia.nic.in GUDM, Approved Projects Sanctioned under UIG August, 2009
29	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – State share	State Share: 28.5% (Based on JNNURM cost sharing formulae of Centre:State:ULB = 90:10:10); UWSS share: Based on actual project cost approved	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11; www.urbanindia.nic.in/moud/programme/ud/uidssmt_pdf/statewise_town.xls; status as on 30th June, 2010
30	UDP-7 Contribution towards	UWSS share : 34.7% (% UWSS	DoF, GoG, State Budgets, 2005–06 – 2008–

Sr No	Grants/schemes	Assumptions made for UWSS	Source of data
	Urban Development Funds	Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	09; Revised Estimate 2009–10 and Budget Estimate 2010–11
31	Nirmal Gujarat (Sanitation)	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11; GMFB, The Details of Scheme-wise and Year-wise Grant received and Grant Disbursed, 2005–06 – 2007–08
32	UDP-8 Financial assistance to urban development authorities for identified infrastructure scheme	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
33	UDP Amrut Dhara Yojana	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
34	UDP-4 Vajpai Town Development Scheme	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
35	UDP-33 Solid waste management	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
36	Lake development for drinking water supply	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
37	GIA to urban/area development authorities	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
38	UDP-16 Revolving fund for urban infrastructure for municipalities	UWSS share: 34.7% (% UWSS Expenditure to Total Capital Expenditure at state level) based on PAS Round I result	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
39	UDP-21 Strengthening of urban local bodies by providing staff and training	UWSS share: 0%	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
40	UDP-40 Award to Best Municipality	UWSS share: 0%	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
41	UDP-6 Good Governance initiative municipalities	UWSS share: 0%	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
42	State Schemes for the Poor		
43	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – State share	State share: 28.5% (Based on JNNURM cost sharing formulae of Centre:State:ULB = 50:20:30); UWSS share: 15% (Based on actual project cost approved); Assumed state share	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11
44	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – State share	State Share: 11.2% (Based on JNNURM cost sharing formulae of Centre:State:ULB = 90:10:10); UWSS share: 15% (Based on actual project cost approved)	DoF, GoG, State Budgets, 2005–06 – 2008–09; Revised Estimate 2009–10 and Budget Estimate 2010–11

Sr No	Grants/schemes	Assumptions made for UWSS	Source of data
45	UDP-11 Environment improvement in slums	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005-06 – 2008-09; Revised Estimate 2009-10 and Budget Estimate 2010-11
46	UDP-3 Scheme for Urban Poor Rehabilitation (GSY)	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005-06 – 2008-09; Revised Estimate 2009-10 and Budget Estimate 2010-11
47	Urban low cost sanitation	100% (Based on actual expenditure)	DoF, GoG, State Budgets, 2005-06 – 2008-09; Revised Estimate 2009-10 and Budget Estimate 2010-11
48	Funding from Other Departments than UDD		
49	Central Finance Commission (CFC) grants – SCST and TSP	100% (Based on actual expenditure)	GMFB, 12 th Finance Commission Grant to local bodies (ULBs), Utilisation Update as of 31.3.10
50	GWSSB Master Plan for state-wide water supply grid in Gujarat	RWSS expenditure subtracted from total expenditure; Expenditure proportionate to urban population worked out to estimate UWSS component for years 2005-06 to 2009-10. For 2010-11, average of three previous years adjusted to state GDP growth	GWSSB, Master Plan for state-wide water supply grid in Gujarat, figs as on March 2010

Annex Table A2.4: Assumptions Related to Conditions on the Use of Funds

Sr No	Grants/Schemes	Table 2.5: Conditions on the Use of Grants/Schemes			Table 2.10: Reform Linked Funding		Table 2.12: Funds Earmarked for the Poor		Table 2.16: Earmarking in UDD Budget by type of ULBs		
		Parti-ally tied	Sector specific use required (UWSS)	Sector specific use required (other sectors)	Central programme	State programme	Central fund	State fund	Municipal corporations	Municipality (NP)	Not earmarked – (municipal corporations + NP)
	UDD Budget Items										
1	I. CENTRAL GOVERNMENT										
2	Multilateral and MPLAD Fund										
3	MPLAD scheme	√									√
4	GEERP	√								√	
5	Jamnagar sewerage project		√						√		
6	Central Grant/Centrally Assisted Programme for Urban Development										
7	UDP-15 Upgradation of Standards of Administration recommended by 12 th Central Finance Commission	√									√
8	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – Central share	√			√				√		
9	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – Central share		√		√					√	
10	UDP-10 Grants-in-aid to small and medium towns	√								√	
11	Central Grant/Centrally Assisted Programme for Urban Poor										
12	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) - Central share		√		√		√		√		
13	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – Central share		√		√		√			√	
14	UDP-12 UBSP		√				√				√
15	UDP-23 National Slum Development Programme (NSDP)		√				√				√
16	Total Central Assistance through Grant/Scheme/Programme										
17	Total Central Assistance through Grant/Scheme/Programme + Multilateral Funding and MPLAD Grant										
18	II. STATE GOVERNMENT										
19	State Grant										
20	UDP-25 Allocation of receipts from entertainment tax to Gujarat Municipal Finance Board	√						√			√
21	UDP-8 Grants-in-aid to urban local bodies for entertainment tax on cable TV/disc antenna	√									√
22	Grant-in-aid for professional tax to ULBs (UDP 21, 22, 23, 43)	√							√	√	

Sr No	Grants/Schemes	Table 2.5: Conditions on the Use of Grants/Schemes			Table 2.10: Reform Linked Funding		Table 2.12: Funds Earmarked for the Poor		Table 2.16: Earmarking in UDD Budget by type of ULBs		
		Parti-ally tied	Sector specific use required (UWSS)	Sector specific use required (other sectors)	Central programme	State programme	Central fund	State fund	Municipal corporations	Municipality (NP)	Not earmarked – (municipal corporations + NP)
23	UDP-49 Incentive grant-in-aid to municipal corporations for development works – <i>including octroi compensation from 2008–09</i>	√							√		
24	UDP Grant-in-aid to municipal corporations for development works under Swarnim Sidhi (SS) (to be opened)	√				√			√		
25	UDP-56 Assistance to municipalities for making Model Towns and achieving Swarnim Siddhi (to be opened)	√				√				√	
26	UDP-36 Grants-in-aid to ULBs for drainage scheme		√							√	
27	Grant-in-aid to municipalities to meet the expenditure of salary and wages of municipal state cadre			√						√	
28	UDP Assistance to urban local bodies for formation and encouragement of Sakhi Mandals (to be opened)		√							√	
29	State Scheme/Programme for Urban Development										
30	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG) – State share	√			√				√		
31	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT) – State share		√		√					√	
32	UDP-7 Contribution towards Urban Development Funds	√								√	
33	Nirmal Gujarat (Sanitation)		√					√			√
34	UDP-8 Financial assistance to urban development authorities for identified infrastructure scheme		√						√		
35	UDP Amrut Dhara Yojana		√							√	
36	UDP-4 Vajpai Town Development Scheme	√								√	
37	UDP-33 Solid waste management		√							√	
38	Lake development for drinking water supply		√								√
39	GIA to urban/area development authorities		√								√
40	UDP-16 Revolving fund for urban infrastructure for municipalities		√							√	
41	UDP-21 Strengthening of urban local bodies by providing staff and training			√						√	
42	UDP-40 Award to Best Municipality			√						√	
43	UDP-6 Good Governance initiative municipalities			√						√	
44	State Schemes for the Poor										
45	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP) – State share		√		√		√		√		

Sr No	Grants/Schemes	Table 2.5: Conditions on the Use of Grants/Schemes			Table 2.10: Reform Linked Funding		Table 2.12: Funds Earmarked for the Poor		Table 2.16: Earmarking in UDD Budget by type of ULBs		
		Parti-ally tied	Sector specific use required (UWSS)	Sector specific use required (other sectors)	Central programme	State programme	Central fund	State fund	Municipal corporations	Municipality (NP)	Not earmarked – (municipal corporations + NP)
46	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY) – State share		√		√		√			√	
47	UDP-11 Environment improvement in slums		√				√				√
48	UDP-3 Scheme for Urban Poor Rehabilitation (GSY)		√				√				√
49	Urban low cost sanitation		√				√				√

Annex Table A2.5: Budget Summary for GoG, UDD and GWSSB (Rs billion)

	2005–06 <i>Actual</i>	2006–07 <i>Actual</i>	2007–08 <i>Actual</i>	2008–09 <i>Actual</i>	2009–10 Revised estimate	2010–11 Budget	Average (2005–06 to 2010–11)
State Budget							
State Government Own Revenue Receipts (A+B)	–	–	290.35	341.59	369.71	430.45	358.03
A. Tax revenue	–	–	251.55	297.00	321.24	368.61	309.60
B. Non-Tax revenue	–	–	38.80	44.59	48.47	61.84	48.43
TOTAL State (development work)	214.95	252.84	270.23	359.53	401.71	458.59	326.31
TOTAL State (non-development work)	126.53	138.06	155.34	157.99	192.76	227.08	166.29
TOTAL State (grant-in-aid and contribution)	1.00	1.32	1.47	1.68	1.06	1.39	1.32
TOTAL State (dev + non-dev + grant)	342.49	392.22	427.04	519.2	595.53	687.06	493.92
UDD Budget							
TOTAL UDD (Plan)	2.89	9.72	17.67	22.54	23.37	25.88	17.01
TOTAL UDD (Non-Plan)	3.72	5.33	4.66	18.4	24.44	24.08	13.44
TOTAL UDD (Plan + Non-Plan)	6.61	15.05	22.33	40.94	47.81	49.97	30.45
GWSSB Budget							
GWSSB Master Plan for state-wide water supply grid in Gujarat	2.97	2.37	1.44	1.79	2.36	2.09	2.17

Source: State Budgets, DoF, GoG, State Budgets, 2005–09; DoF, GoG, Revised Estimates 2009–10 and DoF, GoG, Budget Estimates 2010–11; GWSSB (2010), "Master Plan for State Wide Water Supply Grid in Gujarat, figs as on March 2010", mimeo.

Annex Table A2.6: Estimated UWSS Sector Investment Finance in Gujarat and Main Sources (Rs billion)

	2005–06 <i>Actual</i>	2006–07 <i>Actual</i>	2007–08 <i>Actual</i>	2008–09 <i>Actual</i>	2009–10 <i>Revised estimate</i>	2010–11 <i>Budget</i>	<i>Average per Annum*</i>
Central grants, centrally sponsored schemes (CSP), MPLAD fund and externally funded projects	1.48	4.05	3.38	4.16	3.79	5.41	3.71
State grants, schemes and share in CSPs including GWSS for water supply grid	3.76	4.47	6.36	8.36	14.24	14.31	8.58
ULB share in funding	0.61	2.06	2.14	3.19	3.17	3.26	2.40
Total	5.84	10.58	11.88	15.72	21.2	22.97	14.69
Recurrent Expenditure (O&M)	5.87	7.6	8.94	9.22	na	na	7.91
Total Sector Finance	11.71	18.18	20.82	24.93	na	na	18.91

Source: State Budgets, DoF, GoG, State Budgets, 2005–09; DoF, GoG, Revised Estimates 2009–10 and DoF, GoG, Budget Estimates 2010–11; GWSSB (2010), “Master Plan for State Wide Water Supply Grid in Gujarat, figs as on March 2010”, mimeo.

Annex Table A2.7: Population Projection for Gujarat State – Urban (in million)

Year	2005	2006	2007	2008	2009	2010
Urban population (based on population projection)	20.864	21.351	21.839	22.328	22.818	23.310

Source: Report of the Technical Group on Population Projections Constituted by The National Commission on Population May 2006, Census of India.

Annex Table A2.8: Share Flow of Funds from State Government to ULBs (Actual allocation v/s disbursement of funds from State Govt. to ULBs)

Sr No	Grants/schemes	Actual allocation/investments for UDD			GMFB disbursement to ULBs		
		(Rs million)					
		2005-06 Actual	2006-07 Actual	2007-08 Actual	2005-06 Actual	2006-07 Actual	2007-08 Actual
1	UDP-15 Upgradation of Standards of Administration recommended by 12 th Central Finance Commission	578	1077	652	820	408	224
2	UDP-16 JNNRRM for Urban Infrastructure and Governance (UIG)	0	4329	2880	0	4329	2880
3	UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP)	0	321	1620	0	321	1620
4	UDP-18 Urban Infrastructure Development Scheme for small and medium towns (UIDSSMT)	0	797	1200	0	797	1200
5	UDP-10 Grants-in-aid to small and medium towns	60	90	0	60	90	0
6	UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY)	0	60	293	0	60	293
7	UDP-12 UBSP	7	25	0			
8	UDP-23 National Slum Development Programme (NSDP)	203	254	0	203	254	0
9	UDP-25 Allocation of receipts from entertainment tax to Gujarat Municipal Finance Board	413	413	413	1116	413	413
10	UDP-8 Grants-in-aid to urban local bodies for entertainment tax on cable TV/disc antenna	20	20	20	89	20	20
11	Grant-in-aid for professional tax to ULBs (UDP 21, 22, 23, 43)	500	500	896	1810	500	641
12	UDP 49 Incentive grant-in-aid to municipal corporations for development works – <i>including octroi compensation from 2008-09</i>	0	0	6750	0	0	6750
13	UDP-36 Grants-in-aid to ULBs for drainage scheme	43	150	0	43	150	0
14	UDP-7 Contribution towards Urban Development Funds	4	104	104	0	8	67
15	Nirmal Gujarat (Sanitation)	0	0	981	0	0	324
16	UDP-8 Financial assistance to urban development authorities for identified infrastructure scheme	10	0	0	10	0	0
17	UDP Amrut Dhara Yojana	140	389	0	490	382	0
18	UDP-4 Vajpai Town Development Scheme	124	275	820	124	275	760
19	UDP-33 Solid waste management	152	152	0	152	152	0
20	Lake development for drinking water supply	0	0	1	0	0	1
21	UDP-16 Revolving fund for urban	100	0	0	100	0	0

	infrastructure for municipalities						
22	UDP-21 Strengthening of urban local bodies by providing staff and training	6	10	0	6	10	0
23	UDP-40 Award to Best Municipality	65	0	0	65	0	0
24	UDP-6 Good Governance initiative municipalities	0	0	70	0	0	11
25	UDP-11 Environment improvement in slums	15	0	0	23	17	157
26	UDP-3 Scheme for Urban Poor Rehabilitation (GSY)	0	0	100	0	0	18
27	Urban low cost sanitation	35	101	0	35	101	0
28	Total Urban Development Grant/Scheme/for Gujarat State through GMFB	2284	3285	10806	4962	2530	9385

Source: State Budgets, DoF, GoG, State Budgets, 2005–09; DoF, GoG, Revised Estimates 2009–10 and DoF, GoG, Budget Estimates 2010–11.

Annex Table A 2.9: Share of Municipal Corporations versus Municipalities in UWSS Finance, 2005–10 (Rs million)

Year		2005–06	2006–07	2007–08	2008–09	2009–10 (Revised)	Average
Central Programmes and Grants	Municipal corporations	577	3599	2730	4520	4275	3140
	Municipalities	553	1309	1364	827	614	934
	Total	1130	4908	4093	5348	4889	4074
State Programmes and Grants (sans GWSSB)	Municipal corporations	198	240	3174	2672	3704	1998
	Municipalities	593	1008	1030	2718	7077	2485
	Total	791	1247	4205	5390	10781	4483
ULB Contribution	Municipal corporations	599	2020	2079	3111	3087	2179
	Municipalities	7	40	63	81	83	55
	Total	606	2060	2142	3192	3170	2234
Total	Municipal corporations	1374	5858	7983	10303	11066	7317
	Municipalities	1153	2357	2457	3627	7775	3474
	Total	2528	8215	10440	13930	18840	10791

Annex Table A2.10: Selected Programmes/Schemes for the Urban Poor with Possible UWSS Funding

Grants/schemes	Allocation/investments and estimates for UDD						
	(Rs million)						
	2005–06 (Actual)	2006–07 (Actual)	2007–08 (Actual)	2008–09 (Actual)	2009–10 (Revised estimate)	2010–11 (Budget)	Average
UDP-17 Scheme for JNNURM Basic Service (Garib Samruddhi Yojana) for Urban Poor (BSUP)	0	321	1620	1920	1750	2500	1622
UDP-19 Integrated Housing and Slum Development Programme – IHSDP (Garib Samruddhi Yojana, GSY)	0	60	293	200	300	100	91
UDP-23 National Slum Development Programme (NSDP)	203	254	0	0	0	0	229
Urban Basic Services for Poor (UDP-12-UBSP)	7	25	0	0	0	0	16
Nirmal Urban (individual and pay and use toilet schemes) (60% of budget allocation)	0	0	588	806	840	840	769
Shaheri Garib Samruddhi Yojana (UDP-3 Scheme for Urban Poor Rehabilitation)	0	0	100	111	10	0	74
UDP-11 Environment improvement in slums	15	0	0	0	0	0	15

Source: State Budgets, DoF, GoG, State Budgets, 2005–09; DoF, GoG, Revised Estimates 2009–10 and DoF, GoG, Budget Estimates 2010–11.

Annex Table A2.11: Per Capita Recurrent Expenditure on UWSS Service Delivery, 2008–09 (Rs/annum)

Type of ULB	Water supply 2008–09	Sewerage 2008–09	Solid waste 2008–09	UWSS sector 2008–09
Number of cities reporting data (%)	97	86	84	–
Municipal corporations	207	71	160	438
Municipality Class A	138	44	86	268
Municipality Class B	172	41	84	298
Municipality Class C	132	44	79	255
Municipality Class D	127	32	75	234
Total all ULBs	181	65	128	374

Sources: Per capita expenditure for 2008–09: Population and Actual recurrent expenditure on UWSS taken from PAS Round I result, 2008–09.

Notes: Number of towns having sewerage system: 67; Cities do not report recurrent expenditure for 12 cities. Data on population and recurrent expenditure for 55 cities have been taken into consideration to calculate the per capita O&M for sewerage.

Annex Table A2.12: Reclassification of Census Town Categories by HPEC

Census class	Reclassified *	Population size
Cities		
Class I	Class IA	>5 million
	Class IB	1 million–5 million
	Class IC	100000–1 million
Towns		
Class II	Class II	50000–100000
Class III	Class III	20000–50000
Class IV	Class IV+	<20000
Class V		
Class VI		

Annex Table A2.13: Number of ULBs in Gujarat Categorised According to Population Class of HPEC

Type of ULB	Reclassification of Census town category by HPEC						Total
	Class IA	Class IB	Class IC	Class II	Class III	Class IV+	
	>5 million	1 million – 5 million	100000– 1 million	50000– 100000	20000– 50000	<20000	
Municipal corporations	1	3	3	0	0	0	7
Municipality Class A	0	0	18	0	0	0	18
Municipality Class B	0	0	0	33	0	0	33
Municipality Class C	0	0	0	0	44	0	44
Municipality Class D	0	0	0	0	18	46	64
Total	1	3	21	33	62	46	166

Annex Table A2.14: HPEC Norms on Per Capita O&M for UWSS Service Delivery

Per capita operations and maintenance cost (PCOM) (in Rs)				
City size class	Water supply	Sewerage	SWM	UWSS sector
Class IA	797	414	269	1542
Class IB	613	373	189	1237
Class IC	491	290	135	994
Class II	491	290	113	926
Class III	368	207	113	730
Class IV+	245	145	113	545

Sources: Report on Indian Urban Infrastructure and Services, The High Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services, March 2011.

Annex Table A2.15: Per Capita Norms for O&M Derived from HPEC for Type of ULBs of Gujarat

Type of ULB	Water supply	Sewerage	Solid waste	UWSS
	(Rs)	(Rs)	(Rs)	(Rs)
Municipal corporations	587	343	177	1176
Municipality Class A	491	290	135	994
Municipality Class B	491	290	113	926
Municipality Class C	368	207	113	730
Municipality Class D	280	162	113	597

Source: HPEC norms on per capita O&M for UWSS sector.

Note:

- Classification of cities based on population is different in HPEC and Gujarat ULBs. Thus per capita norms for O&M have been arrived at by clubbing Class IA, IB and IC from HPEC and using their weighted average to enable comparison with municipal corporations for Gujarat data.
- Similarly, weighted averages from Class III & IV + from HPEC have been compared against municipality Class D for Gujarat.

The Performance Assessment System (PAS) Project

The Performance Assessment System (PAS) Project aims to develop appropriate methods and tools to measure, monitor and improve delivery of water and sanitation in cities and towns in India. The PAS Project includes three major components of performance measurement, performance monitoring and performance improvement. It covers all the 400+ urban local governments in Gujarat and Maharashtra.

CEPT University has received a grant from the Bill and Melinda Gates Foundation for the PAS Project. It is being implemented by CEPT University with support of Urban Management Centre (UMC) in Gujarat and All India Institute of Local Self-Government (AIILSG) in Maharashtra.

PAS Project

CEPT University

Kasturbhai Lalbhai Campus, University Road, Navrangpura, Ahmedabad 380 009 Gujarat, India

Tel: +91-79-26302470

Fax: 91-79-26302075

www.pas.org.in