PEARL-CA PROJECT

2013

Knowledge Needs Assessment Study

Synthesis Report

Research Study Series Number 124

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KNOWLEDGE NEEDS ASSESSMENT STUDY

Synthesis Report

Faridabad, Amritsar, Patna, Visakhapatnam, Coimbatore and Bhubaneswar

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FOREWORD

The launch of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2005 brought about a sea-change in the way urban areas are managed across India. However, even eight years thereafter, urban local bodies are struggling to implement reforms, and to implement infrastructure projects in a timely and cost effective manner. Efforts at capacity building of urban local bodies have been deficient, both in terms of scope as well as the long term institutionalisation of capacities.

To respond to this challenge, the Ministry of Urban Development, Government of India set-up a Peer Experience and Reflective Learning (PEARL) Network with the purpose of providing knowledge management solutions in JNNURM cities as well as networking them. The National Institute of Urban Affairs (NIUA) has been serving as the National Coordinator of PEARL since its inception. To bring in international knowledge and expertise into the network, NIUA teamed up with Cities Alliance and World Bank Institute to create a Knowledge Network Support Unit (KNSU) housed within NIUA.

Experience from around the world suggests that urban local bodies in India need to invest in systematic knowledge management. Rather than depending solely on capacity building activities that target individual capacity, the ULB should pursue institutionalisation of the capacity that is created.

In the above context, this knowledge needs assessment (KNA) study is the need of the hour. For the first time, internal processes and knowledge flow dimensions have been assessed to determine how well knowledge flows happen. The study disaggregates findings according to various hierarchies in urban local bodies making it more useful for planning knowledge management interventions. The report indicates the need to include governance reforms within urban local bodies to complement capacity building initiatives so that the knowledge can be sustained in the mid- to long-run. The report also presents a number of useful recommendations, some of them easily achievable, in terms of knowledge interventions that can create a lasting impact.

The KNA tool has been developed and presented in a manner that other urban local bodies can undertake a self-assessment of their knowledge needs. I hope that all JNNURM urban local bodies use this tool to undertake a self-assessment of knowledge needs to derive key barriers and challenges to effective knowledge management. This will help them create sustainable capacities within their institutions.

Jagan A. Shah
Director

PREFACE

The need to undertake a knowledge needs assessment study emerged from an international workshop on knowledge management organised by National Institute of Urban Affairs in 2011 with knowledge support of World Bank Institute and Cities Alliance, and under aegis of the Ministry of Urban Development, Government of India. The workshop established a general consensus that in context of achieving improved implementation of the Jawaharlal Nehru National Urban Renewal Mission in target urban local bodies, India needs to move from traditional approaches of capacity building towards a more holistic approach of knowledge management. However, knowledge management being a relatively new area with limited international evidence - and almost no national evidence - on what works, it was agreed that the first step would be to develop a KNA tool and pilot KNA studies across selected ULBs.

Thus started a long partnership between Centre for Environmental Planning and Technology (CEPT) Ahmedabad and NIUA; between the two, pilot KNA studies for eight urban local bodies were undertaken. Of these eight, two were undertaken in the first phase based on which the KNA tool was finalised, thereafter being followed by six additional studies in the second phase. This Synthesis Report presents the overall findings of the six city KNA studies. I hope urban local bodies and other stakeholders find conclusions of this report useful, both in terms of structuring knowledge management interventions in urban local bodies, as well as for using the KNA tool for purposes of self-assessment.

The journey of preparing this report has been long and arduous - yet professionally fulfilling - taking close to two years to complete all stages of the study. The study faced numerous challenges which the team overcame using alternate approaches. Lack of data and information pertaining to skills and knowledge management, as well as lack of a culture of undertaking self-evaluation in Indian urban local bodies were the two biggest challenges that we overcame.

The report is structured into three sections. The first section introduces the study and presents the methodological aspects of the study. The second section presents the on-ground situation observed across the pilot cities where the KNA was undertaken, while the third section presents the overall trends and barriers identified along with a way forward. A series of annexes providing detailed data and information collected are available in respective KNA study reports for the six cities prepared by NIUA and CEPT.

There are innumerable people to thank whose support ensured that this report would reach its logical conclusion. Unfortunately, there is space to mention just a few. Foremost, I thank staff and officials of urban local bodies who supported us in this endeavour not only in terms of giving their

valuable time but also in terms of providing insightful inputs towards development of the KNA tool. Thanks are due to Saswat Bandyopadhyay and Sarbeswar Praharaj from CEPT for their resourcefulness and thought leadership, to Ajay Suri from Cities Alliance for his counselling, troubleshooting and technical guidance, and to Andre Herzog, Emil Francis de Quiros, Victor Vergara and Bhavna Bhatia from World Bank Institute for their knowledge guidance and support. This report would have never seen the light of the day if NIUA had not bestowed its faith in my ability to deliver this product; a special thanks to Jagan Shah Director NIUA, Debjani Ghosh Coordinator PEARL, Kanha Ram, and Poornima Singh for their continued support, as well as to Chetan Vaidya and Vijay Dhar for their guidance in the early stages of the study.

It was a privilege to work on this study and I sincerely hope the evidence it generates helps various stakeholders in their respective domains develop informed interventions that create a better knowledge environment within urban local bodies, something which is critical to take our cities, and with it our country, into the next level of functioning.

Satmohini Ray

CONTENTS

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

AMC	:	Amritsar Municipal Corporation
BMC	:	Bhubaneswar Municipal Corporation
BUIDCo	:	Bihar Urban Infrastructure Development Company
CDP	:	City Development Plan
CEPT	:	Centre for Environment Planning and Technology
CMC	:	Coimbatore Municipal Corporation
CMOH	:	Chief Medical Officer, Health
CPHEEO	:	Central Public Health and Environmental Engineering Organisation
DEAS	:	Double Entry Accounting System
DPR	:	Detailed Project Report
GOI	:	Government of India
GVMC	:	Greater Visakhapatnam Municipal Corporation
HUIDB	:	Haryana Urban Infrastructure Development Board
JNNURM	:	Jawaharlal Nehru National Urban Renewal Mission
JNNURM-2	:	Jawaharlal Nehru National Urban Renewal Mission Phase-II
KM	:	Knowledge Management
KNA	:	Knowledge Needs Assessment
KNSU	:	Knowledge Network Support Unit
M&E	:	Monitoring and Evaluation
MCF	:	Municipal Corporation of Faridabad
MEPMA	:	Mission for Elimination of Poverty in Municipal Areas
MoUD	:	Ministry of Urban Development
NBCC	:	National Buildings Construction Corporation Limited
NGO	:	Non-government Organisation
NIUA	:	National Institute of Urban Affairs
O&M	:	Operation and Maintenance
OD	:	Organisation Development
PEARL	:	Peer Experience and Reflective Learning Network
PMC	:	Patna Municipal Corporation
PPP	:	Public Private Participation
SPUR	:	Support Program for Urban Reforms in Bihar
SWM	:	Solid Waste Management
ULB	:	Urban Local Body
VUTCL	:	Visakhapatnam Urban Transport Company Limited
WBI	:	World Bank Institute

1. Introduction

1.1 Purpose

This report presents a synthesis of findings of knowledge needs assessment (KNA) studies undertaken for six cities in India viz., Faridabad, Amritsar, Patna, Visakhapatnam, Coimbatore and Bhubaneswar.

The purpose of this report is to inform knowledge management and capacity building initiatives currently being undertaken through the Peer Experience and Reflective Learning Network(PEARL) that was set-up by the Ministry of Urban Development (MoUD), Government of India (GOI) towards providing knowledge management solutions in cities accessing the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

1.2 Background

National Institute of Urban Affairs (NIUA) is the National Coordinator of PEARL under JNNURM. A PEARL Knowledge Network Support Unit (KNSU) has been set up by NIUA towards providing knowledge management solutions in JNNURM cities; the Cities Alliance and the World Bank Institute (WBI) are providing technical support to this initiative.

The challenge on JNNURM is two-fold: low know-how to implement reform components, and weak capacities to structure and implement large infrastructure projects. The Knowledge Management (KM) support being provided by KNSU is expected to facilitate PEARL provide state-of-art and informed knowledge management support, with the overall purpose of ensuring that targeted cities are able to access JNNURM better.

As part of the KM support exercise, KNSU commissioned two KNA studies for the west zone cities of Rajkot and Ahmadabad as part of a pilot phase; the learning from these studies was shared at a workshop in Ahmadabad on 8 April 2011. Based on the deliberations, it was decided to scale up the pilot to six additional cities in India based on which comprehensive KM strategies and action plans can be developed for JNNURM cities. Findings from these six additional cities were shared at a workshop in Delhi on 27 April 2012. Feedbacks received were subsequently incorporated into these individual KNA studies, and work initiated on preparation of a report to synthesise findings from these individual KNA studies.

The findings and recommendations of this report, as well as its timings, are opportune considering that GOI is in the process of preparing and launching the second phase of JNNURM (JNNURM-2). JNNURM-2 is likely to substantially increase emphasis on strengthening and internalisation of capacities at the urban local body (ULB) level through improved knowledge management. Findings of this report could facilitate decision makers in understanding where knowledge management interventions need to be targeted.

1.3 Need for Knowledge Management

The capacity building component set up under JNNURM (5% of the total sanction central allocations) has not been very successful in delivering desired outcomes and envisioned results, as demonstrated by JNNURM performance so far. The capacity building approach, so far, has been inclined towards delivering structured training to ULBs and state officials. Lessons learnt demonstrate a need to strengthen knowledge management – improving knowledge sharing and learning. Key tenets of knowledge management include:

- focus on improving self-knowledge as a sustainable means of creating institutional capacities;
- identify barriers that impede knowledge development and address these – these barriers could be organizational-specific or program-specific; and
- identify means of overcoming such barriers.

1.4 Objectives

This study will help to:

- assess knowledge needs of cities to implement urban reforms and urban infrastructure projects under JNNURM and JNNURM-2;
- identify benefits that ULBs (and state institutions) perceive will accrue to them from peer-/shared-learning;
- assess the current state of learning, including obstacles and opportunities; and
- create the basic framework for knowledge management - design an organizational and/or program for knowledge support and sharing.

1.5 Rationale for City Selection

A city ranking of all JNNURM cities of north, east and south India was undertaken based on the following criteria:

- Population size - cities with above 4 million population were scored 1, between 1-4 million were scored 2, below 1 million were scored 1 on the assumption that cities with population of 1-4 million are traditionally constrained by weak capacities to implement large infrastructure projects, while cities with 4 million plus population have capacities to do so. Cities with less than 1 million population were scored low on the assumption that the magnitude of problems are not as critical as in the previous brackets.
- Proportion of ACA released for UIG projects - states above 50% release as of December 2010 were scored 1, cities achieving between 30-50% release were scored 2, while those with below 30% release scored 3 on the assumption that cities with higher ACA utilization have existing capacities to implement large infrastructure projects.
- City level (mandatory + optional) reforms implemented - cities while had managed to implement 80% of city-level reforms as of Dec 2010 were scored 1; cities with 40-80% reforms completed were scored 2, while cities below 40% reforms completed were scored 3.

Based on the above criteria, cities/towns with highest scores were considered the weakest and targeted for purpose of this study. The final list of six cities was selected from this lot based on ease of access and probability of getting information from these cities.

1.6. Methodology

KNA targeting local governments has hitherto been an uncharted territory in India. This mandated the need to develop an approach that allowed flexibility for modifications based on initial learning from the first two pilots undertaken earlier (Ahmadabad and Rajkot). The following approach was developed in a consultative manner by all key stakeholders, both towards undertaking the KNA as well as being able to adopt a critical approach towards testing the methodology for further refinements.

1. Stakeholder consultation/participation ensuring buy-in of all stakeholders. This had two objectives: (a) having common understanding of objectives of knowledge support and sharing (overall program), its challenges, and likely rewards; and (b) creating opportunity

for stakeholder buy-in and commitment (through open participation) and stimulate dialogue and exploration about knowledge support and sharing.

2. Stakeholder mapping ensuring inclusion of all officials and staff (at all levels), elected representatives, and other concerned stakeholders.

3. Assessing present levels of ULBs knowledge support and sharing assets and activities. This included (a) identifying where institutional knowledge is located (including possible repositories), and (b) identifying patterns of knowledge flow in the ULB. The latter being an intensive and complex exercise focused on: (a) assessing needs of the ULB with respect to JNNURM reforms and project implementation, (b) identifying unmet needs and capacity gaps, and (c) identifying barriers for overcoming above needs. Identifying unmet needs and capacities was further structured in respect to (a) staff (skills, incentives, and time), and (b) program (procedures, tools, etc.).

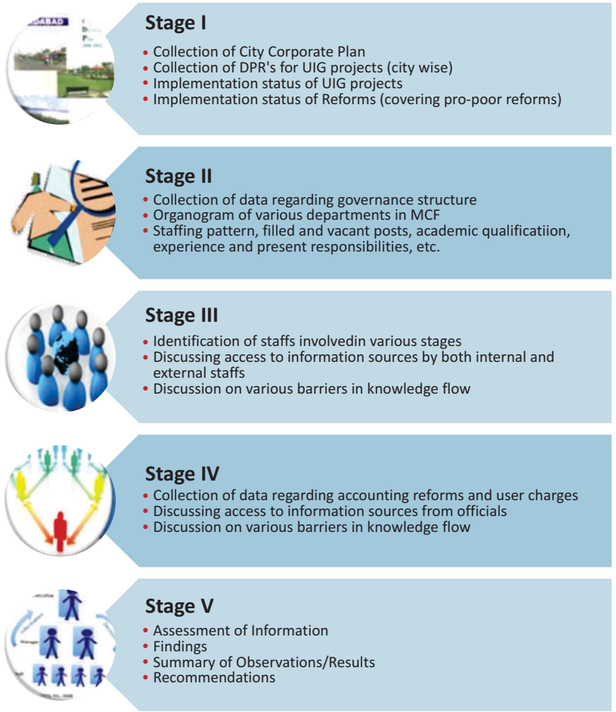
4. Learning from past which included identifying (i) key learning from the past, (ii) behavioural changes required for improved knowledge support and sharing, (iii) performance incentives/disincentives required, (iv) stakeholder perception of potential solutions, and (v) likely costs and benefits of potential solutions.

5. Identifying quick wins based on solutions identified above, i.e., solutions that are easy to accept, easy to implement, and have the greatest returns – implementation focus should be on these in the short-term.

6. Balancing between organization and programmatic needs assessment was critical as a programmatic need assessment alone could have missed out the overall context in which the ULB works, while an organization needs assessment alone could have missed out the finer details that lead to success/failure of JNNURM implementation. A balanced mix between the two was therefore used.

Key target areas suggested for the assessment included (i) strategy formulation (including city development plan, spatial plan and linkages with annual budgeting exercise), (ii) governance (including assessing whether ULB is structured to respond to JNNURM challenges and citizen's demand for quality services) (iii) culture and behaviours (norms and attitudes towards work, etc.), (iv) technology and tools (in context of JNNURM and ULB as a whole), (v) policy, incentives and participatory approach to planning and service delivery, (in context of JNNURM and ULB as a whole), and (vi) monitoring and evaluation. Figure 1.1 presents the stages of the KNA exercises undertaken.

Figure 1.1: Stages of a KNA Exercise



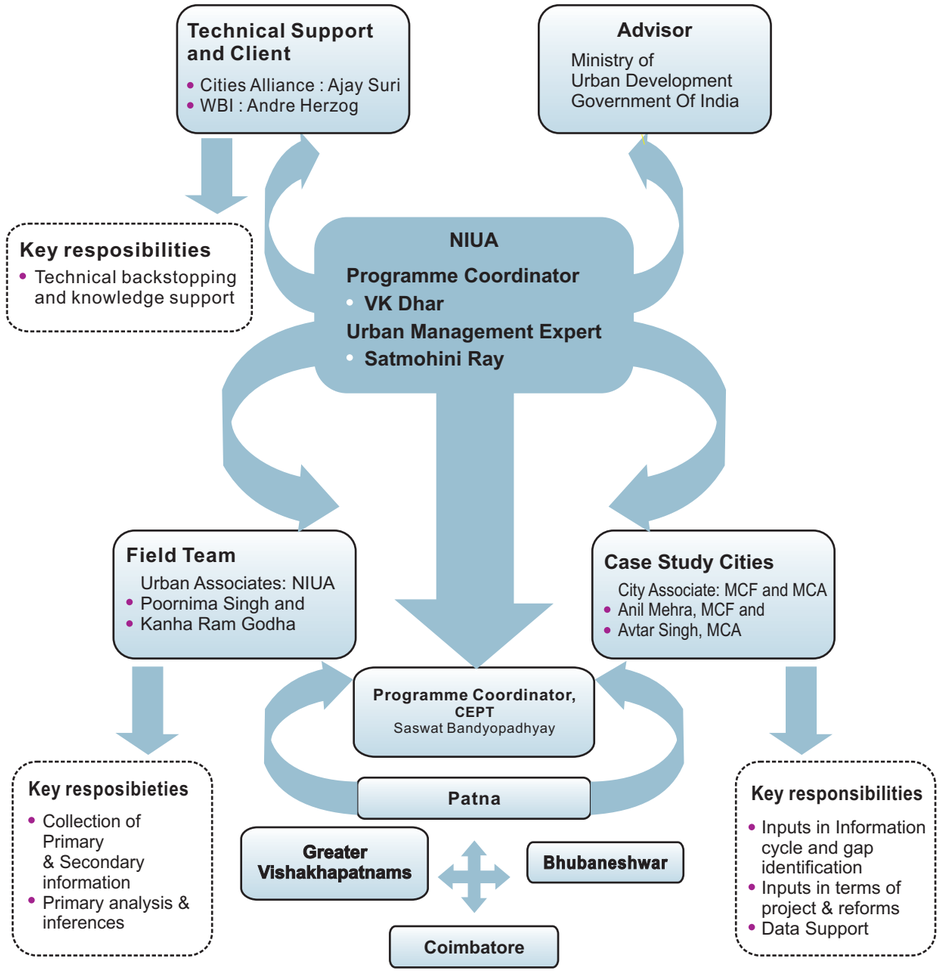
1.7 Stakeholder Engagement

As can be seen from Figure 1.1, the entire exercise underwent a number of stakeholder consultations. These consultations were held at city and state level while undertaking the city KNA studies, while three national workshops were held to develop the approach and share findings of the key outputs of the study. A list of key stakeholders engaged with is in Annex 1.1.

1.8 Project Organisation Structure

The KNSU is based out of NIUA and engages directly with the PEARL network housed out of NIUA. The Director NIUA is the Project Director for this study; the team is extended technical support by WBI and Cities Alliance. Centre for Environment Planning and Technology (CEPT) Ahmedabad is NIUA's project partner in the initiative. The Project Director engages and reports directly to MoUD. The project organisation structure is in Figure 1.2.

Figure 1.2: KNA Study Project Organisation Structure



1.9. Structure of Report

This report is structured into three sections and five chapters. Section 1 introduces the study and presents the methodological aspects of the study. The introduction chapter presents the background, objectives and rationale for the study, while the second chapter presents the risks and limitations of the study as well as the framework for identification of KNA developed under the pilot phase of this study and nuanced based on learning from the scale-up done across additional six cities.

Section 2 presents the on-ground situation observed across the city KNA studies. Chapter 3 introduce the cities and present governance, staffing and status of JNNURM reforms and projects in these cities, while Chapter 4 presents the analyses of key findings across these cities including project cycle analysis, information network and flow, status of capacity development, and presents knowledge needs identified as well as barriers in the city that hinder effective knowledge transfer.

Section 3 presents the way forward. Chapter 5 highlights key observations and trends observed, recommendations of the study team, and the way forward in terms of converting the findings of this study into implementable action points.

A series of Annexes providing detailed data and information collected are available in respected KNA study reports by NIUA and CEPT.

2. Project Planning and Management

2.1 Risks and Limitations of KNA

Learning from the earlier pilot as well as this stage of the study, the following limitations have been identified. It is important to recognize the following limitations as 'lessons learnt' rather than a shortcoming of this study or this approach.

1. The information base in some cities was found very weak; even basic information on project status was not available to start with in some cities. Some analysis had to be drawn out from secondary studies in such cases.

2. It is not easy to collect/receive all the necessary information as ULBs struggle to provide some of these (for e.g., information on present skill levels, education qualifications, training records, etc.) as they are not attuned to responding to such requests.

3. ULB staffs are usually reluctant to provide objective self-assessments of critical problem areas/issues. Usually, this requires a period of long and intensive relationship building. This has also to do with the weak system of feedbacks in the working cultures of ULBs in India. As a result, feedback/inputs received usually are not objective and such risks have to be subsumed. This problem may, however, be overcome if ULBs undertake KNA exercises using a self-assessment technique (or internalize a KNA approach) rather than a third-party leading the process.
4. Information is not always available in the form required and translating this to the needs of the study can lead to 'information transmission losses'. For e.g., some ULBs maintain

registers of basic qualifications of all employees but not necessarily higher qualification. Using this data only for assessing education qualification levels may lead to incorrect observations.

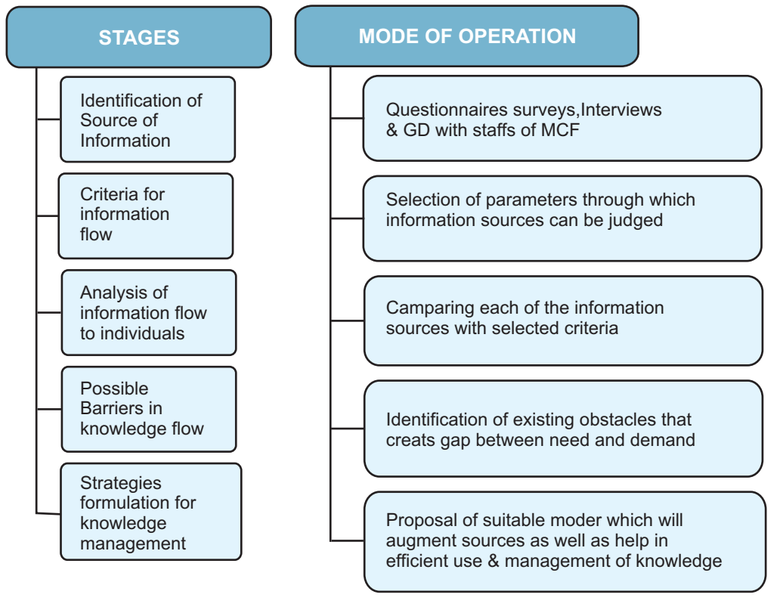
5. The larger issue of who represents a ULB remains a concern. Is it the Mayor or the Commissioner/Executive Officer or the General Body or staff of the ULB? Assessing the knowledge needs of all these stakeholders within limited timeframe and restricted budgets could lead to focusing on stakeholders on whom data is readily available.

6. The restricted resources available within this Project also means alternate (more elaborate) approaches to undertaking a KNA is not possible. However, recognizing that this exercise needs to be 'light' as ULBs may be required to self-assessment themselves (or with limited support), the proposed approach seems an optimal one.

2.2. Framework for Identification of KNAs

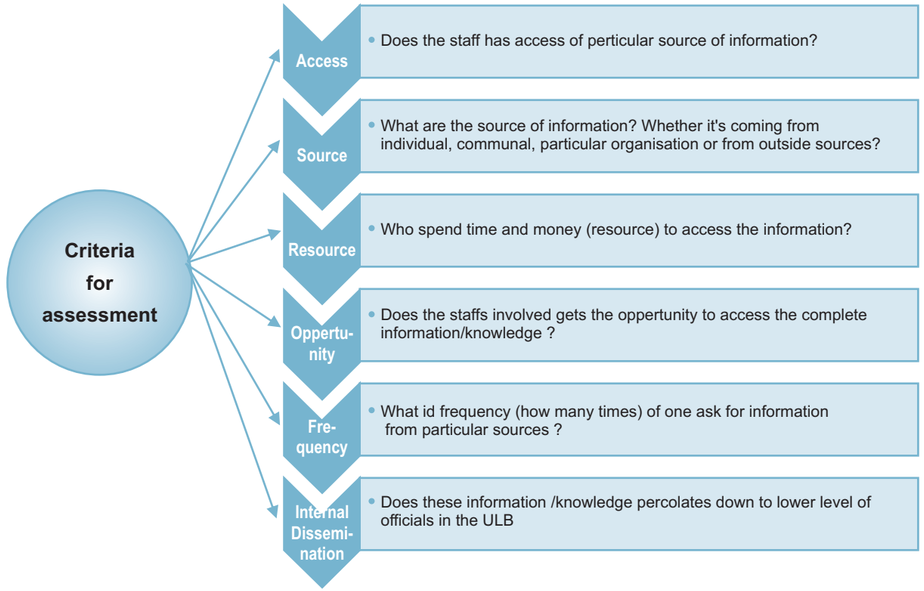
The analytical study of infrastructure projects at its various stages helped the team identify different links as well as flow of information along with gaps in knowledge understanding and access. The study provided an opportunity to assess the level of information availability and flow at five stages. This is presented in Figure 2.1.

Figure 2.1.: Five Stages Identified for Assessment of Existing Level of Information



Using the above model, a six-criteria model was developed to derive an understanding of how information/knowledge flows within and outside the organisation. The six criteria model includes access, source, resources, opportunity, frequency and internal dissemination and is presented in Figure 2.2.

Figure 2.2: The Six-Criteria Model for Assessing Flow of Information



3. Current Status

3.1. City Profiles

Getting an overall understanding of the six pilot ULBs is important for understanding the returns received from them and analysed in this report. Table 3.1 presents demographic and service-level information on the six ULBs. Barring Amritsar, all five cities demonstrate rapid urbanisation rate in the previous decade with Faridabad and Visakhapatnam demonstrating over 50% increase in population. In terms of basic services, most cities are struggling with providing adequate piped water supply, solid waste management (SWM) services, and sewerage provision to their citizens. Thus, the need for these cities to access JNNURM is clearly spelt out.

Table 3.1: Demographic Information of Pilot ULBs

Name	Area (sq.km)	Population (2001) in lakh	Population (2001) in lakh	Water Supply Coverage (2010)	SWM Coverage (2010)	Sewarage Coverage (2010)
Amritsar	114.95	11.01	11.33	66.4%	75.7%	65.8%
Bhubaneswar	146.8	6.58	8.37	45.0%	28.2%	17%
Coimbatore	105.6	9.3	10.6	N.A.	N.A.	N.A.
Faridabad	207.9	10.55	17.5	N.A.	N.A.	N.A.
Patna	99.5	13.7	16.8	41.5%	20%	30%
Visakhapatnam	111.0	9.69	17.3	N.A.	N.A.	N.A.

Source: Census 2001, Census 2011, SLB 2010 (MoUD), SPUR (2011), Individual CDPs.

Table 3.2 presents an overall picture of how the ULBs have performed under JNNURM so far, based on their ability to utilise sanctioned funds. As seen, most ULBs have struggled with utilisation of JNNURM fundson account of weak capacities to development and implement projects, as well as implementation of the reforms agenda. Of the six pilots, Visakhapatnam with a 72% utilisation rate has performed the best while Patna with a 4% utilisation has performed the worst.

Table 3.2: Profile of Pilot ULBs

Name	State	Economic Driver(s) of the City	Amount of Resources Sanctioned by GOI (Rs. Crore)	Amount of Resources Released by GOI (Rs. Crore)	Proportion of ACA utilised
Amritsar	Punjab	Tourism/religious, Industry	242.00	116.56	49%
Bhubaneswar	Odisha	Administrative	458.60	285.63	34%
Coimbatore	Tamil Nadu	commercial and business hub	412.72	292.52	60%
Faridabad	Haryana	Industry, Commerce	349.54	314.59	64%
Patna	Bihar	Administrative Commercial	291.15	81.67	4%
Visakhapatnam	Andhra Pradesh	Trade Commerce	774.00	669.92	72%

Source: JNNURM website access from www.jnnurm.nic.in on 08/04/2013

3.2. Governance Structures

The comparative governance structures are presented in Table 3.3. Annex 3.1 presents details of governance structures of all study cities.

Organisation structure. Most ULBs present a horizontal organisation structure. Horizontal organisation structures are beneficial where the organisation culture believes in cutting down mid-level management allowing effective communication flows between the top and the bottom of the organisation. Horizontal structures also work well if employees are high capacities to undertake tasks and devolved decision making powers. However, most ULBs in India do not follow such work ethos. Centralisation of decision making, communication with senior managers through pre-determined formal channels, and weak capacities make a pre-dominantly horizontal organisation structure ill-fitted. Also, large infrastructure project cycle management and reforms implementation require a high degree of inter-departmental coordination in a horizontal structure. Without informal and rapid means of communication between various departments, a horizontal structure increases bureaucratic hurdles as information has to first go to the top of the department and flow down from the top of the other concerned department. It may be concluded therefore, that an organisation development exercise is required to determine how to improve inter-departmental communication within a ULB. It is also important for this exercise to consider increase in devolution of decision-making powers, increase in informal inter-departmental communications, and capacity augmentation.

Table 3.3: Comparative Governance Structures

State	Amritsar Punjab	Faridabad Haryana	Patna Bihar	Bhubaneswar Odisha	Visakhapatnam Andhra Pradesh	Coimbatore Tamil Nadu
Type of Organaisation Structure	Vertical	Horizontal	Horizontal	Vertical	Horizontal	Horizontal
Plitical Set-up	• Mayor • Senior Deputy Mayor • Deputy Mayor • MCA political wing: 65 Councillors • 65 wards and Ward Councillors	• Mayor • Deputy Moyor • Political wing -40 members • 35 wards and Ward Councillors • Members of Parliament, and State Legislative Assembly members • Members of Council of the State and members of State Legislative Council	• Mayor • Deputy Mayor • 72 Ward Councillors • Members of the House of People and The State Legislative Assembly • Members of the Council of the State and the members of the State Legislative Council	• Mayor • Deputy Mayor • 60 Ward Councillors • Ward Committees with the area Corporators as the Chairperson and representatives of Mayor and Municipal Commissioner as members.	• Mayor • 72 Ward Coummittees represented by Area Sabha member, Chaired by Corporators	• Mayor • Deputy Mayor • 100 Ward Councillors • Ward Committee is headed by Chairman (elected by Councillor of that particular Zone
Standing Committee Structure	Nine Standing Committees	12 Standing Committees	Nine Standing Committees	Nine Standing Committees	One Standing committee consisting of all Chairpersons of the wards committees and Mayor as the Chair	Six functional Standing Committees
Staff	Staff - Regular 4295	Staff - Regular 4347 , Contractual 1510	Staff - Regular3606, Contractual: 861 1	Staff- Regular 1400, Contractual 1414	Staff - Regular 3176, Contractual 7329	Staff- Regular 4424
Share of contractual staff to total staff	N.A.	25.7%	70.4%	50.2%	69.8%	N.A.
Vacant/ Sanctioned Posts	1333/4347	882/4295	918/3606	430/1400	N.A.	800/4424
Share of vacant posts	30.7%	20.5%	30.3%	30.7%	N.A.	26.6%
Number of Departments and Cells	39 Departments	15Departments : 6 Cells	9 Departments	13 Departments	7 Departments	10 Departments

Source: all data collected by NIUA and CEPT during UKNA study, 2011/2012. Other sources, wherever used, have been separately indicated.

Political set-up. The senior-most decision maker in all ULB is the Mayor, an elected representative. The Mayor is supported by various standing committees, ward committees, Councillors, etc. in decision making. However, day-to-day activities of the ULB are led by the Municipal Commissioner, an appointed civil servant.

Staffing. Staffing is a major concern in most ULBs. Freeze on new recruitments have meant that ULBs have vacancies of between 20-30%. This forces the ULB to promote personnel who are not trained/experienced in specialist areas to ensure mid- to senior-positions are covered. For example, in PMC, the tax inspectors include people who have been promoted from conservancy department. This causes barriers when reforms initiatives on property tax are initiated. The proposal of JNNURM-II to look at creation of municipal cadre in each state could be a potential to restructure and induct staff based on specialist skills and experience. To overcome staffing shortage, ULBs hire personnel on contract basis. Share of contractual staff range from 25% to 70% with a majority of ULBs reporting over 50% of their total strength as contractual. Most of these contractual staff is used to deliver on-ground services (SafaiKaramcharis, etc.) but, many take up mid-level positions also. Since contracts are always done on a yearly basis, it causes motivational issues as the staff do not have long-term job security.

Table 3.4 presents details on key institutions and individuals that play an important role in implementation of the CDP in pilot cities.

CDP preparation. CDP preparation in all ULBs was led by external consultants. As a result, ownership of CDP is found limited as is institutional memory of the CDP preparation exercise. Even if ULBs engage consultants in preparing CDPs, it is important that the exercise is driven from within the ULB with effective cross-departmental engagement. This will be critical in preparation of second generation CDPs under JNNURM-2.

Table 3.4: Key Institutions and Individuals Involved in Implementation of JNNURM

Item	Amritsar	Faridabad	Patna	Bhubaneswar	Visakhapatnam	Coimbatore
1.. CDP Prepared by	Consultant	Consultant	Consultant	Consultant	Corporation	Consultant
2. Insitutions in charges of reforms (ULB level)	Municipal Corporation	Municipal Corporation	Municipal Corporation/ SPUR Project (DFID)	Municipal Corporation	Municipal Corporation	Municipal Corporation
3. Institutions in charges of implementation of projects	1. Municipal Corporation (SWM, housing) 2. Para-statal (elevated road, water supply)	1. Municipal Corporation (water supply projects) 2. Haryana Urban Development Authority (para statal)	1. Bihar Urban Infrastructure Deveopment Company (BUIDCO) (para-statal) - lead for all projects	1. Odisha Water Supply and Sewerage Board (OWSSB) (para-statal) - lead on project development	1. Greater Visakhapatnam Municipal Corporation (GVMC) 2. Visakhapatanam Urban Transport	1. Municipal Corporation 2. Private partner (SWM project under PPP mode)
			2. Municipal Corporation	2. Municipal Corporation	Comapny Limited (VUTCL) - SPV set-up for transport project	
4. Other Institutions Directly Involved		1. National Building Construction Corporation (NBCC) - contracted for design, construction, handover of sewerage projects	1. Support Program for Urban Reforms (SPUR) -DFID-funded project supporting in procurement, quality check, etc.	1. Public Health Engineering Organisation (PHEO) for consultation purposes	1. Visakhapatnam Urban Development Authority - planning and implementation	
5. Leed for JNNURM Reforms at ULB level	Municipal Commissioner	Municipal Commissioner	• Municipal Commissioner • SPUR project team	Municipal Commissioner	• Municipal Commissioner • May or	Municipal Commissioner
6. Lead for JNNURM Project Implementation	Superintending Engineer, MC Medical Officer, AMC	Executive Engineer (JNNURM),MCF	• Genrral Manager (Technical) BUIDCO • Engineer, PMC	• Project Engineer, PMU-II, OWSSB • Engineer, BMC	• Superintending Engineer, GVMC	• City Health Officer, CMC

Source: all data collected by NIUA and CEPT during UKNA study, 2011/12. Other sources, wherever used, have been separately indicated

Multiplicity of institutions. A key concern raised in most ULBs, Table 3.4 clearly indicates that while the reform action is largely led by the ULB, development and implementation of infrastructure projects are not. In almost all cases, para-statal agencies were engaged for this purpose and barring a couple of ULBs, the assessments indicate that key processes were led by para-statal agencies instead of the ULB itself. This may be due to weak capacities in the ULB, but a stronger ULB engagement in key processes may likely have created some capacities within the ULB to undertake projects at such large scale. In some cases, para-statal agencies are also mandated to provide basic infrastructure in urban areas

(Patna, Bhubaneswar, etc.) and this multiplicity of institutions led to substantial delays in getting projects approved and implemented. As we proceed towards JNNURM-2, it may be useful for ULBs and para-statal agencies to assess how multiplicity of functions between various institutions can be addressed.

3.3. Staffing Pattern

The ULBs were found to have vacancies between 20% and 30% (refer Table 3.3) with an aggregate vacancy reported of 24.1%. In terms of absolute numbers, most vacancies are found in the lower level positions (Class III and Class IV), although vacancies in higher level positions were found to be the one most 'crippling' in terms of implementing JNNURM reforms and implementing projects. Table 3.5 presents a comparison of department-wise and class-wise staffing patterns, with some aggregation done for reporting of department-wise staffing pattern to facilitate comparison between ULBs.

Note:

1. C/DW – contract/daily wage staff
2. For Class-Wise Staffing Pattern, only sanctioned posts are considered. For purposes for analysis, Class-IV or Grade-IV staff include all staff at Class-IV/Grade-IV or below.
3. Aggregation of departments have been done to arrive at comparable figures.
4. N.A. – not available
5. For purposes of

3.4. Working Areas, Qualification and Language Proficiency

Education qualification of key staff engaged in implementation of JNNURM reforms and projects, along with their language proficiency, is presented in Table 3.6.

Table 3.5: Department-Wise and Class-Wise Staffing Patterns

Item	Amritsar			Faridabad			Patna			Bhubaneshwar			Visakhapatnam			Coimbatore		
Population of ULB (2011 ; in lakh)	11.33			17.5			16.8			8.37			17.3			10.6		
Area of MC (sq.km)	N.A.	..		207.9			99.5			146.8			111			105.6		
Department -Wise Staffing Pattern	Sanctioned	C/DW	Total	Sanctioned	C/DW	Total	Sanctioned	C/DW	Total	Sanctioned	C/DW	Total	Sanctioned	C/DW	Total	Sanctioned	C/DW	Total
1. Commissioner (including Joint Comm, Addn Comm., etc.)	4	0	4	3	NA	3	NA	NA		3	NA	3	4	0	4	NA	NA	
2. General Administration	521	12	533	204	NA	204	NA	NA		150	NA	150	267	0	267	NA	NA	
3. Engineering/ Water and Sewerage	1161	514	1675	511	NA	511	NA	NA		40	NA	40	1118	1332	2450	NA	NA	
4. Accounts/ Finance/Audit	21	0	21	4	NA	4	NA	NA		20	NA	20	4	0	4	NA	NA	
5. Health and Sanitation/ Conservancy	1554	754	2308	2494	NA	2494	NA	NA		600	NA	600	1605	5568	7173	NA	NA	
6. Town Planning	32	1	33	122	NA	122	NA	NA		0	NA	0	38	0	38	NA	NA	
7. Revenue	-		0	333	NA	333	NA	NA		90	NA	90	92	0	92	NA	NA	
8. Fire Brigade			0	152	NA	152	NA	NA		0	NA	0	0	0	0	NA	NA	
9. Others	1054	229	1283	679	NA	679	NA	NA		497	NA	497	49	388	437	NA	NA	
Total	4347	1510	5857	4295	NA	4502	NA	NA		1400	NA	1400	3177	7288	10465	NA	NA	
Class-Wise Staffing Pattern	Sanctioned	Vacant	Vacy in %	Sanctioned	Vacant	Vacy in %	Sanctioned	Vacant	Vacy in %	Sanctioned	Vacant	Vacy in %	Sanctioned	Vacant	Vacy in %	Sanctioned	Vacant	Vacy in %
10. Class-I	16	NA	NA	20	2	10	NA	NA		50 ~~10~~	~~5~~ ~~2~~	~~10~~ ~~20~~	NA	NA		NA	NA	
11. Class-II	54	NA	NA	58	16	27.5	NA	NA		380	130		NA	NA		NA	NA	
12. Class-III	659	NA	NA	435	45	10.3	NA	NA			277	43.2	NA	NA		NA	NA	
13. Class-IV	3618	NA	NA	3782	819	21.6	NA	NA		960	414	28.9	NA	NA		NA	NA	
Total	3374			4295	882	20.5	NA	NA		1400		30.3	NA	NA		NA	NA	

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

Table 3.6: Department-Wise Staff Skill and Proficiency Levels

Item		Amritsar		Faridabad		Patna		Bhubaneswar		Visakhapatnam		Coimbatore	
Dept.	Position	Qualification	Language Proficiency	Qualification	Language Proficiency	Qualification	Language Proficiency	Qualification	Language Proficiency	Qualification	Language Proficiency	Qualification	Language Proficiency
Engineering	Chief Engineer	BE Civil	EHR	BE Civil	EHR	BE Civil	EHR	M.Tech	EHR	M.Tech	EHR	Dip Civi	ER
	Executive Engineer	BE Civil	EHR	BE Civil	EHR	BE Civil	EHR	BE Civil	EHR	BE Civil	EHR	BE Civil	ER
	Junior Engineer	Dip Civil	EHR	Dip Civil	EHR	Dip Civil	EHR	Inter	HR	BE Civil	EHR	BE Civil	ER
Town Planning	Head Town Planner	M.Plan	EHR	M.Plan	EH	BE Civil	EHR	NA	NA	BE Civil	EHR	BE Civil	ER
	Deputy Town Planner	M.Plan	EHR	M.Plan	EH	Dip Civil	EHR	NA	NA	BE Civil	EHR	Dip Civil	ER
Revenue Finance	Senior Taxation Off.	Graduate	EHR	Graduate	EHR	NA	NA	LL.B.	EHR	NA	NA	NA	NA
	EDPMangr/Collector	Graduate	HR	Graduate	EHR	NA	NA	BA	HR	LL.B.	HR	NA.	NA
Public Health	Sr. \Ch. Medical Off.	PG Dip	EHR	NA	NA	Grad	EHR	ME	EHR	M.Tech	EHR	Grad Dip	ER
	Medical Officer	MBBS	EHR	MBBS	EHR	Non-Mat	R	ME	EH	Grad	EHR	BE Civil	ER
	Conservancy Officer	BE Civil	HR	BE Civil	EHR	Matric	R	Be Civil	HR	Dip Civil	EHR	Grad Civil	ER
Others	Data Entry Officer	DCA	EHR	DCA	EHR	NA	NA	NA	NA	BA	HR	NA	NA
	Ch. Engineer (water)	BE Civil	EHR	BE Civil	EHR	BE Civil	EHR	BE Civil	EHR	M.Tech	EHR	BE Civil	ER
	Head Finance	BE Civil	EHR	NA	NA	NA	NA	B.Com	EHR	NA	NA	NA	NA

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

Legend

Qualification: Post Graduate Degree/Diploma; Graduate Degree; Graduate Diploma; Matriclate; Non-Matriclate; Not Available

Language: English ,Hindi Regional (EHR); Hindi Regional (HR); Only Hindi/ Regional (R); English, Hindi; English, Regional (ER); Not Available

Manpower skills and language. In most instances, required academic qualifications to undertake their roles and responsibilities were demonstrated by senior and mid-level technical officials. Some exceptions are seen in case of Patna and Coimbatore. In terms of command over language, most senior officials have proficiency in Hindi and English making it easy for them to attend training in regional or national training institutes. However, for junior officials/staff, language is a barrier wherein care needs to be taken in terms of the mode of delivery of training. In

case of Coimbatore, knowledge of Hindi is found very weak. This has implications on how and where the staff can be trained although South India has numerous regional training institutions that can cater to this requirement. Importantly, it was noted that most officials did not have strong computer skills and found it challenging to work in a computerised environment. The need for computer training is therefore essential.

3.5. Status of JNNURM Reforms

Table 3.7 provides the status of JNNURM reforms in the target cities. Visakhapatnam and Coimbatore have achieved most of the target reforms. This could be on account of the fact that both Andhra Pradesh and Tamil Nadu had initiated public financial management reforms before JNNURM was launched. Amritsar was found the most lagging ULB in terms of reforms implementation, largely on account of ULB staff not understanding how the reforms were to be implemented, and also on account of weak in-house capacities to implement the same. Faridabad and Patna have initiated all reform activities.

Table 3.7: Status of JNNURM Reforms

Reform		Amritsar	Faridabad	Patna	Bhubaneswar	Visakhapatnam	Coimbatore
ULB-level reforms							
Mandatory Reform	1. e-Governance						
	2. Modern municipal accountingsystem						
	3. Property tax (85% coverage)						
	4. Property tax (80% collection efficiency)						
	5. User charge						
	6. Internal earmarking of funds for pro-poor dev.						
	7. Provision of basic services to urban poor						
Optional Reform	8. Revision of building byelaws						
	9. Computerised registration of land and property						
Optional Reform	10. Mandatory rainwater harvesting						
	11. Bye-law on use of recycled water						
	12. Administrative reforms						
	13. Structural reforms						
	14. Encourage public private partnerships (PPP)						
State-level reforms							
	15. 74thCAA (transfer of 12th Schedule functions)						
	16.. Constitution of DPC						
	17. Constitution of MPC			Not Appl	Not Appl		
	18. Transfer of city planning functions						
	19. Reforms in rent control						
	20. Rationalisation of stamp duty to 5%						
	21. Repeal of ULCRA						
	22. Enactment of community participation law						
	23. Enactment of public disclosure law						
	24. Property title certification system						
	25. Earmarking 25% of development land for EWS housing						
	26. Conversion of agriculture land to non-agriculture land						

Source: JNNURM website (status as of 31/12/2012) accessed from www.jnnurm.nic.in on 08/04/2013, and KNA studies done by NIUA and CEPT, 2011/12

Legend: Completed; Not completed (initiated); Not completed (not initiated)

3.6. Status of JNNURM Projects

Table 3.8 presents the status of JNNURM projects in each city.Barring Faridabad, most ULBs have been unable to utilise more than 50% of sanctioned project amounts in around one-third to half of their projects. Key reasons for ULBs' inability to implement these projects are discussed in the following section.

Table 3.8: Status of JNNURM Projects

Type of Project	Sub-Type	Amritsar	Cost (crore)	Faridabad	Cost (crore)	Patna	Cost (crore)	Bhuba-neswar	Cost (crore)	Vis'pat-nam	Cost (crore)	Coimba-tore	Cost (crore)
Transport	Elevated Road	PSA	149.49	None		None		None		None		None	
Transport	BRTS/ bus purchase	PSA	33.33	None		None		MC	573.25	SPV	452.93	None	
Drainage	City drainage	None		PSA	30.65	None		None		None		None	
Drainage	City storm water dr.	None		None		None		PSA	68.33	MC	9.21	PSA	226.75
Drainage	Renewal project	None		None		None		None		MC	72.27	None	
Sewerage	Inner city renewal	MC	36.90	PSA	103.83	None		PSA	498.91	MC	37.08	None	
Sewerage	STP, trunk constt.	None		None		None		None		MC	244.44	PSA	377.12
SWM	Integrated SWM	PPP	4.53	PPP	76.54	MC	36.95	None		None		MC	96.51
SWM	Landfill, etc.	None		None		None		None		None		None	
Water Supply	City augmentation	MC	19.01	PSA	493.5	PSA	426.98	None		MC	62.28	PSA	113.74
Water Supply	Inner city renewal	MC	52.97	None		None		None		MC	39.76	None	
Water Supply	Supply to new areas	None		None		None		None		MC	240.74	None	
Water Supply	Supply to new areas	None		None		None		None		MC	46.00	None	
Water Supply	Supply to new areas	None		None		None		None		MC	23.40	None	
Water Supply	Supply to new areas	None		None		None		None		MC	190.18	None	
Water Supply	Supply to old city	None		None		None		None		MC	47.93	None	
Others	Lake/canal consrvn.	None		None		None		MC	6.01	MC	3.39	None	
Housing	Low cost housing	None		MC	25.26	None		None		None		None	
Housing	Low cost housing	MC	10.30	MC	38.96	None		None		None		None	

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

Note: the above are based on findings of NIUA and CEPT undertaken in mid-2012. Status may have changed since then.

Legend

Completed/complete ACA released

Under completion/ >50% ACA released

Under completion/ <50% ACA released

Information not available

No Projects under this category

Abbreviations used:

Type of the Implementing agency denoted as MC,PSA, and SPV
MC –projects implemented by municipal corporation
PSA – projects implemented by para-statal agency
SPV – projects implemented by Special Purpose Vehicle
SWM – solid waste management
PPP – PPP between MC and private partner
None – no project of this type

3.7 Selection of Projects and Reforms for Study

Constraints of time and resources meant that the NIUA team picked up two reforms and two projects in Ahmedabad and Faridabad, while the CEPT team picked one project and one reforms each in the remaining four ULBs. Table 3.9 presents a list of reforms and projects identified for each ULB for purpose of undertaking detailed knowledge needs assessment.

4. Key Findings

4.1. Stakeholder mapping

Table 4.1 presents an overall assessment of stakeholders involved in each project selected. Based on Table 4.1, Figure 4.1 presents a consolidated stakeholder map. It is clear that ULB has largely led as the coordination agency for JNNURM projects, while design and implementation agencies have been external stakeholders, largely consultants contracted by para-statal agencies. Thus, the role of the ULB has been minimal in development and implementation of projects. However, for operation and maintenance (O&M) functions, all infrastructure created are handed over to the ULBs.

Due to lack of engagement in project planning, design and implementation, most ULBs were not willing to own the projects. Discussions at city-level consultants demonstrated that most ULBs thought that the projects could have been implemented using different design parameters that

would have made O&M easier. Consequently, O&M of services provided through these projects suffered. Another reason for poor O&M was attributed to lack of resources to undertake O&M, as well as lack of technical and managerial expertise to manage O&M functions. With large projects being executed under JNNURM, it is critical that ULBs' capacity in undertaking effective O&M, from both technical and managerial expertise, is augmented.

Table 3.9: Reforms and Projects selected for Detailed Study

City	Reform Selected	Reason for Selection	Name of Project Selected	Reason for Selection
Amritsar	• Introduction of computerised accrual-based double entry accounting system • User charge reforms andrecovery(water supply)	SinceAmritsar didnot take ahead any reformproperly, the same reforms as Faridabad were selected so that Amritsar could learn from Faridabad	• Integrated solid wastemanagement system • Provision of housing for economically weaker section	One solid waste and one housing project was selected to balance the Faridabad projects
Bhubaneswar	Implementa tion of e-governance	Picked up to learn from Coimbatore experience	Integrated sewerage project	Information was available on this project more easily. Also more engagement of the MC was seen.
Coimbatore	Implementa tion of e-governance	Considered a good practice by other cities so picked up so that other cities could learn from this experience	Integrated solid waste management project	Good learning opportunity expected from this project so picked up.
Faridabad	• Introduction of computerised accrual-based double entry accounting system • User charge reforms and recovery (water supply)	Faridabad took self- initiative in implementing both these reforms, and struggled in implementati on of one of these. So both werepicked up.	• Revam ping/laying of seweragesystem in Old Faridabad • Augmentation of water supply and distribution system	One water supply and one sewerage project was selected
Patna	Property tax reforms	Property tax was the only reform where some work had been initiated so as picked up	Improvement and augmentation water supply system	Patna hadoriginally only two projects approved, so a water supply project was picked up
Visakhapatnam	Internal earmarking of funds for pro-poor development	Picked up to provide a balance across of reforms across cities. Also, Visakhapatnam started working on this quite early so opportunities to learn by other cities	Implementation of bus rapid transit system	Since BRTS is a new concept and many other cities are trying to implement this system, so picked up

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

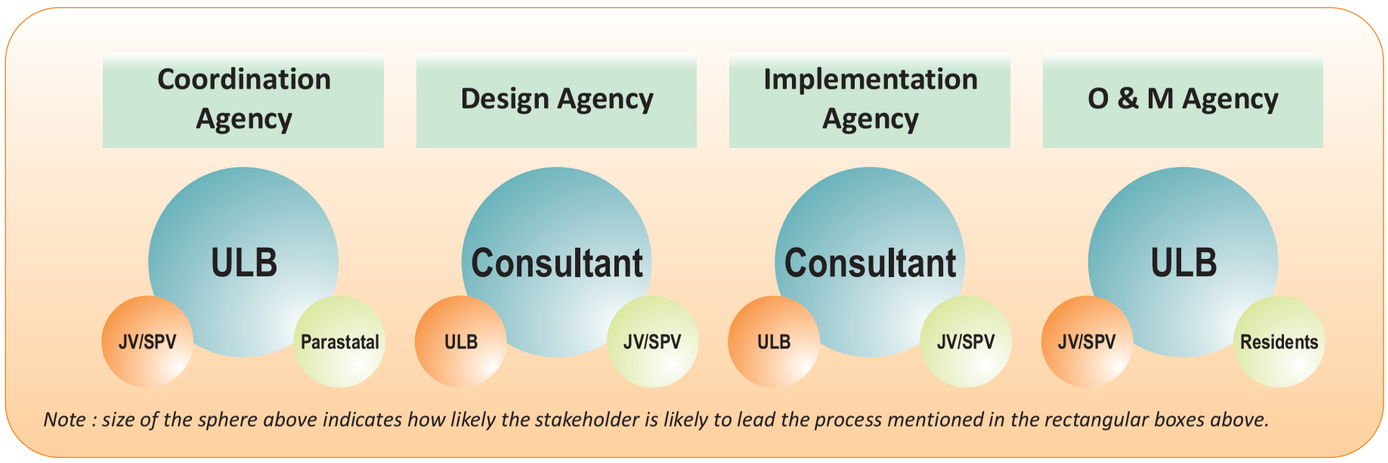
Table 4.1: Stakeholder Mapping for Target Projects

S.No.	Name of project	Coordinating Agency	Procurement of Design Agency	Design	Procurement of Implementation Agency	Implemen -tation	O&M
1.	Improvement and augmentation water supply system in Patna	BUIDCO SPUR Project	BUIDCO	IL&FS	BUIDCO	BUIDCO	PMC
2.	Integrated Sewerage Project for Bhubaneswar City	BMC	BMC	IIT-Roorkee	BMC	BMC	BMC
3.	Bus Rapid Transport System, Greater Visakhapatnam	VUTCL[1]	VUTCL	VUTCL	VUTCL	VUTCL	VUTCL (GVM Cafter concession period)
4.	Solid Waste Management Project, Coimbatore	CMC	CMC	CMC	CMC	CMC	CMC
5.	Augmentation of Water Supply and Distribution System for Faridabad	MCF	HUIDF	NBCC	NBCC	NBCC	MCF
6.	Revamping of Sewerage System and Sewerage Treatment Works Project	MCF	MCF	NBCC	NBCC	NBCC	MCF
7.	Integrated Solid Waste Management System for Amritsar	MCA	MCA	Private partner	MCA	Private partner	Private partner
8.	Economically Weaker Section Housing, Amritsar	MCA		MCA		MCA	Residents

VUTCL[1]- SPV between Greater Visakhapatnam Municipal Corporation (GVMC), Andhra Pradesh State Road Transportation Corporation (51% equity),
Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

Note:1. 1. HUIDF: Haryana Urban Infrastructure Development Board
2. NBCC: National Buildings Construction Corporation Limited
3. MCF: Municipal Corporation of Faridabad
4. CMC: Coimbatore Municipal Corporation
5. VUTCL: Visakhapatnam Urban Transport Company Limited
6. BMC: Bhubaneswar Municipal Corporation
7. IIT: Indian Institute of Technology
8. BUIDCO: Bihar Urban Infrastructure Development Company
9. SPUR: Support Program for Urban Reforms
10. DFID: Department for International Development
11. MCA: Municipal Corporation of Amritsar

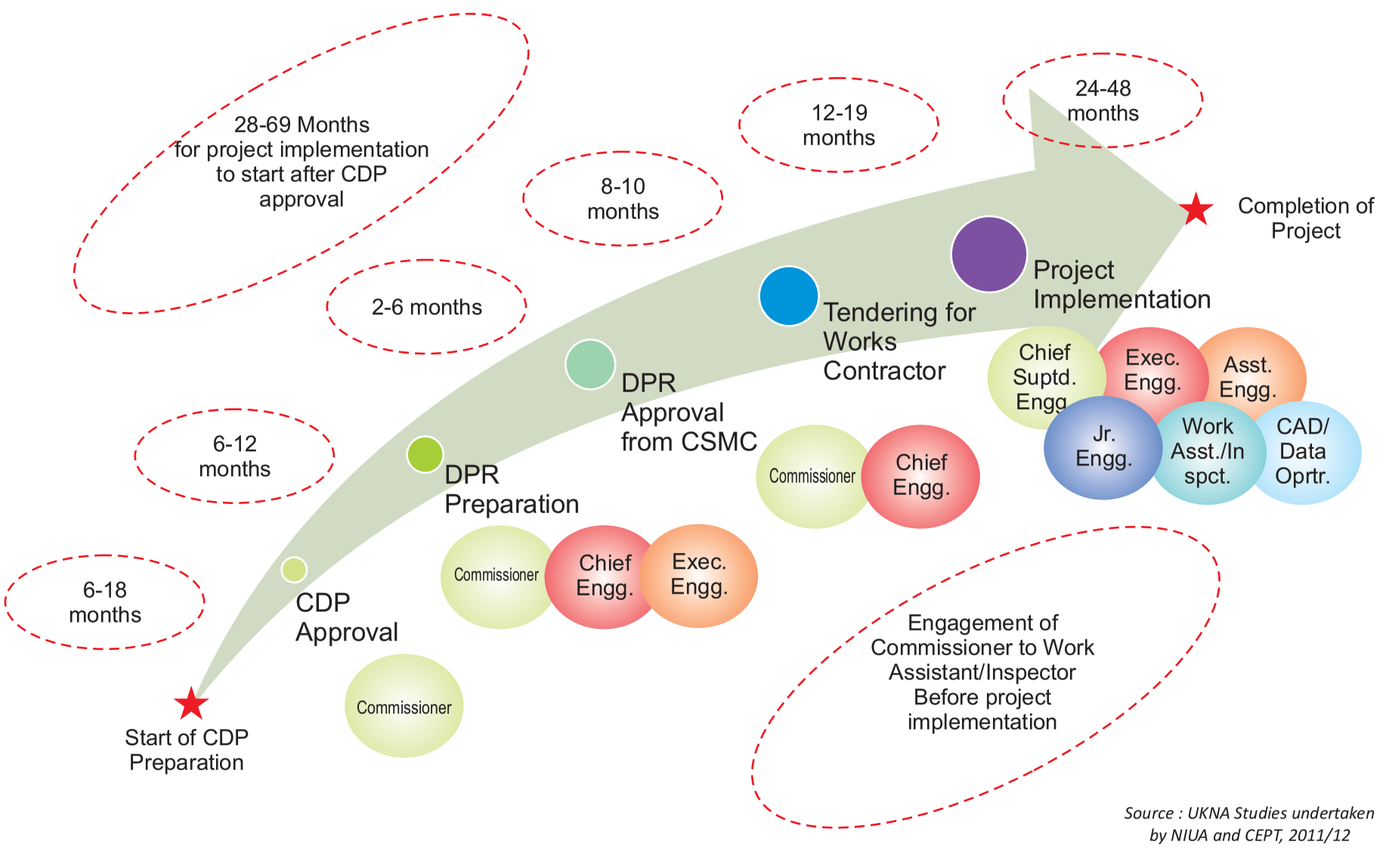
Figure 4.1: Stakeholder Map



4.2. Project Cycle Analysis

Figure 4.2 presents the project cycle timelines observed in pilot cities. After CDP approval, it took between 2.5 years to 5 years for project implementation to start, including preparation of detailed project reports (DPRs), soliciting necessary approvals, and works tendering. While DPR preparation exercise was quick (2-6 months), primarily as they were led by external consultants, the DPR approval process took between 8-10 months. These were due to delays in receiving feedback from central sanction monitoring committee (CSMC) as well as weak capacities within the ULB to update the DPR based on the CSMC feedback. However, most critical path was the works tendering after DPR approvals. As most ULBs did not have past experience of tendering large-value projects, the actual tendering process took between 12 to 18 months. Procurement skills and procurement management, therefore, are two critical technical areas that ULB staff needs to build on in order to improve JNNURM performance. On an average, projects took between two to three years for implementation, which is also quite long.

Figure 4.2: Project Development and Implementation Timelines



Source : UKNA Studies undertaken by NIUA and CEPT, 2011/12

4.3. Information Network and Flow

Parameters selected for needs assessment – as presented in the methodology earlier – were linked with formal and informal sources of information, and the same was mapped. This was done to understand where the source of information is located, if the individual has resources to use them, and if yes, then how often, and finally is the information/knowledge gained shared towards becoming an organisational resource. All case studies presented a set of different findings, and it is difficult to present all of them here. An aggregate using an arithmetic mean approach was used to arrive at a common finding. Table 4.2(a) presents the aggregate finding for senior decision making officials (Municipal Commissioner, etc.). Figure 4.4(b) presents the aggregate finding for senior technical officers (Superintending Engineer, General Manager (Technical), etc.). Figure 4.4. (c) presents the aggregate finding for mid-level technical officials (Assistant Director, Executive Engineer, Junior Engineer, etc.). Figure 4.4(d) presents the aggregate finding for junior officials (Draftsman, Work Assistant, etc.).

Table 4.2(a): Information Flow Analysis and Gap Assessment for Senior Decision Makers

SENIOR TECHNICAL OFFICERS[2]		Access	Source	Opportunity	Frequency	Dissemination
Formal Sources	Libraries/Books/ Hard copy Reports					
	Computer/Internet Access					
	Toolkits & Guidelines					
	Training/Workshops/City Tours					
	Academic Institutions					
	Private Consultants					
Informal Sources	Media/Associate Sources					
	Friends/Officials from other city					
	Stakeholder Consultation					
LEGEND		100% YES	100% ACCESS ORGANISATIONAL	100% YES	DAILY	FULLY DISSEMINATED
		75-99% YES	MOSTLY ORGANISATIONAL	75-99% YES	MOSTLY DAILY	RARELY DISSEMINATED
		50-74% YES	MOSTLY OUTSOURCES	50-74% YES	MOSTLY WEEKLY	NOT DISSEMINATED
		1-50% YES	100% ACCESS OUTSOURCED	1-50% YES	ONLY WEEKLY	NOT DISSEMINATED
		NO ACCESS		NO ACCESS	RARELY	

[2]Includes General Manager (BUIDCO) and Commissioner, AMC.
Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

As can be seen from Table 4.2(a), most senior decision makers have access to information through various sources. Most of these sources are organisational (I.e. provided for from within the organisation/administrative set-up). However, this stakeholder group performed poorly in terms of using opportunities, as well as in terms of dissemination of information received. Hence, the institutional memory/learning is likely to be lost on transfer of senior decision makers (usually 1-3 years tenure). This also meant that important communications on JNNURM were not necessary effectively disseminated to lower level staff within the organisation. The lack of a platform within the ULB for dissemination of learning, findings, information received, etc. made this job even more difficult, and overall, there was a barrier in free flow of information within the ULB itself. Interestingly, the table also indicates that the senior-most decision makers did not have effective access to training, workshops and study tours, as well as to academic institutions. These are matters of concern but probably reflecting the fact that the respondents belonged to Patna and Amritsar, both which do not have access to strong academic/training institutions in the region. In terms of stakeholder consultation, while the respondents indicated that they had daily access, it was probably reflective of their day-to-day meetings with senior officials within the organisation, and not with broader stakeholders (private sector, civil society, academia, etc.) as a whole.

Table 4.2(b): Information Flow Analysis and Gap Assessment for Senior Technical Officers

SENIOR TECHNICAL OFFICERS[2]		Access	Source	Opportunity	Frequency	Dissemination
Formal Sources	Libraries/Books/ Hard copy Reports					
	Computer/Internet Access					
	Toolkits & Guidelines					
	Training/Workshops/City Tours					
	Academic Institutions					
	Private Consultants					
Informal Sources	Media/Associate Sources					
	Friends/Officials from other city					
	Stakeholder Consultation					
LEGEND		100% YES	100% ACCESS ORGANISATIONAL	100% YES	DAILY	FULLY DISSEMINATED
		75-99% YES	MOSTLY ORGANISATIONAL	75-99% YES	MOSTLY DAILY	MOSTLY DISSEMINATED
		50-74% YES	MOSTLY OUTSOURCES	50-74% YES	MOSTLY WEEKLY	RARELY DISSEMINATED
		1-50% YES	100% ACCESS OUTSOURCED	1-50% YES	ONLY WEEKLY	NOT DISSEMINATED
		NO ACCESS		NO ACCESS	RARELY	

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

As see from Table 4.2(b), Senior Technical Officers largely have access to information through various sources, but primarily through books, guidelines, toolkits, and the internet. Some of the respondents also had access to training, workshop and study tours, as well as academic institutions through organisational channels. However, in terms of opportunity, this group had less opportunity compared to the senior decision makers. On the other hand, in terms of dissemination, while the overall levels remain poor, unlike the senior managers this group does undertake dissemination of information within the organisation. This is probably because this group has to work with peers and junior officers for project cycle management, and reforms implementation efforts. However, information sharing was being done informally by this group, again suggesting the need for a formal information sharing platform in the ULB.

Table 4.2(c): Information Flow Analysis and Gap Assessment for Mid-Level Officers

MID-LEVEL TECHNICAL OFFICERS[2]		Access	Source	Opportunity	Frequency	Dissemination
Formal Sources	Libraries/Books/ Hard copy Reports					
	Computer/Internet Access					
	Toolkits & Guidelines					
	Training/Workshops/City Tours					
	Academic Institutions					
	Private Consultants					
Informal Sources	Media/Associate Sources					
	Friends/Officials from other city					
	Stakeholder Consultation					
LEGEND		100% YES	100% ACCESS ORGANISATIONAL	100% YES	DAILY	FULLY DISSEMINATED
		75-99% YES	MOSTLY ORGANISATIONAL	75-99% YES	MOSTLY DAILY	MOSTLY DISSEMINATED
		50-74% YES	MOSTLY OUTSOURCES	50-74% YES	MOSTLY WEEKLY	RARELY DISSEMINATED
		1-50% YES	100% ACCESS OUTSOURCED	1-50% YES	ONLY WEEKLY	NOT DISSEMINATED
		NO ACCESS		NO ACCESS	RARELY	

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

[4] Includes Asst. Director, Urban Planning, PMC; Assistant Project Engineer (2), BMC; Assistant Town Planner, CMC; Exec. Engineer, AMC; Assistant Manager, AMC

As can be seen from Table 4.2(c), mid-level technical officers have less access and opportunity to access information compared to their senior colleagues. However, they have access to information from non-organisational sources (consultants, DPRs of other cities, etc.) that their senior group does not seem to have. The level of dissemination also is higher than their senior groups, and like the senior technical officers, information sharing is largely informal. Interestingly, compared to senior technical officers, this group seems to have lesser access to information from internet and toolkits/guidelines. In terms of opportunity also, this group is inferiorly placed compared to their seniors. This may be due to the heavy burden of day-to-day responsibilities that are usually undertaken by mid-level officers.

Table 4.2(d): Information Flow Analysis and Gap Assessment for Junior Officers

MID-LEVEL TECHNICAL OFFICERS[5]		Access	Source	Opportunity	Frequency	Dissemination
Formal Sources	Libraries/Books/ Hard copy Reports					
	Computer/Internet Access					
	Toolkits & Guidelines					
	Training/Workshops/City Tours					
	Academic Institutions					
	Private Consultants					
Informal Sources	Media/Associate Sources					
	Friends/Officials from other city					
	Stakeholder Consultation					
LEGEND		100% YES	100% ACCESS ORGANISATIONAL	100% YES	DAILY	FULLY DISSEMINATED
		75-99% YES	MOSTLY ORGANISATIONAL	75-99% YES	MOSTLY DAILY	MOSTLY DISSEMINATED
		50-74% YES	MOSTLY OUTSOURCES	50-74% YES	MOSTLY WEEKLY	RARELY DISSEMINATED
		1-50% YES	100% ACCESS OUTSOURCED	1-50% YES	ONLY WEEKLY	NOT DISSEMINATED
		NO ACCESS		NO ACCESS	RARELY	

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

[5] Includes Draftsman, PMC; Assistant Engineer, GVMC; Work Inspectors, GVMC; Sanitary Inspector, CMC; EDP Manager, MCF.

As can be seen from Table 2.4(d), junior-level technical officers have lesser access to information, and opportunities for accessing or sharing information. In terms of frequency of access and dissemination/access to information within peers also, this group seems to be the worse off than all of the earlier groups studied. This is also to do with the fact that information flows/dissemination within ULBs are weak as seen in previous tables. In terms of source of access to information, in most cases, it is organisational indicating that this group is not able to benefit from information that their senior groups garner from external sources (consultants, reports from other cities/agencies, etc.).
If we compare all four tables, some common issues/concerns can be identified; these are presented below:

1. The senior-most echelons of the ULB have high levels of access to information and this access reduces as one goes down the command chain. This demonstrates that knowledge and information does not flow effectively within any ULB.
2. ULBs do not have either informal means or formal platforms for information sharing and dissemination. As a result, knowledge/information accessed by senior staff usually fails to percolate down to his/her junior staff, and even peers.
3. Levels of information sharing and dissemination are low at senior decision making level, increase slightly at senior and mid-level technical officer level, and again reduce at junior levels.
4. Frequency of access to information/knowledge reduces down the hierarchy.
5. Most ULB employees access knowledge/information through organisational sources. Their ability/opportunity to access knowledge/information through external sources is limited and reduces down the hierarchy.
6. Senior- and mid-level technical officers have higher access to knowledge/information through workshops, trainings, study tours, etc. compared to senior decision makers and junior technical officers. As a result, it is critical that this group remains in ULB workforce for some time so that the institutional memory can stay with the organisation. Usually, officials at this level are on deputation from various state departments, and leave the ULB as soon as the concerned projects get over.
7. Access to internet (or probably ability to use internet productively) reduces down the hierarchy.
8. All groups respond positively in terms of accessing information/knowledge through stakeholder consultation. However, this is probably reflective of respondents' day-to-day meetings than a broader range of stakeholders (private sector, NGOs, academia, etc.) as a whole.

Based on above, it is clear that there is a need for (i) better information and knowledge flow within an ULB either through informal sources, or through a formal platform; (ii) frequency of access to knowledge should remain same within the organisation which will require a central point in HR section managing a database of training received/knowledge management activities accessed; (iii) improving access to the internet and education staff of how to use internet effectively especially in terms of access peer material through sites set up by JNNURM (PEARL, etc.); (iv) providing opportunities to staff across the organisation to access relevant knowledge from non-organisation sources including from the private sector or academic institutions; (iv) increasing understanding of how relevant stakeholder engagement can be done and how that can be used for effective knowledge growth at an individual and departmental level.

4.4. Commonly Used Information, Knowledge and Capacity Development Products

Table 4.3 presents some of the commonly used information, knowledge and capacity development products that ULB officials use and have access to. Most officials depend heavily on information provided by external consultants on specific project elements, as well as on toolkits, guidelines, manuals, etc. developed as part of JNNURM. In case of Patna, support from an externally aided project is available. However, this reduces the incentives for officials to look out or seek for new information on their own. Since all ULBs opt to learn from DPRs, engineer drawings, etc., collation and dissemination of a set of 'good' DPRs prepared under JNNURM may be of interest to ULB officials.

4.5. Information/Knowledge Needs and Summary of Major Barriers Identified

Table 4.4 presents the summary of information and knowledge needs identified by the various cities, while Table 4.5 presents the critical barriers identified. The findings are presented in four clusters. 'Technical' are those that are directly related to need for improved access to knowledge and information on technical issues such as project cycle management, GIS, property tax, slum upgradation, etc. Managerial' are those that are related to effective management of projects and reforms processes including need for improved knowledge and skills on project management, strategic decision making, procurement, etc. 'Behavioural' are those related to how the ULB does business including on taking a coordinated approach to knowledge management, stakeholder management, motivation, incentives, etc. 'Institutional' are those that reflect need/barrier arising due to institutional challenges such as lack of inter-departmental coordination, lack of vision, lack of coordination between elected representatives and administrative officials, etc. Below each need, a set of six boxes corresponding to the six pilots are indicated, with highlights made corresponding to ULBs where the need/barrier was identified. Any need/barrier having the most corresponding boxes highlighted, therefore, is the most important in terms of the overall situation. Collated observations from both these tables, as well as from this section as a whole, are presented in the following section.

Table 4.3: Commonly Used Information, Knowledge and Capacity Development Products in ULBs

Name of ULB	Products Developed as Part of Project Cycle (by consultants)	Products Developed Pre-JNNURM/ updated parallel to JNNURM	Products Developed as part of JNNURM	Products Developed by OthersProjects
Amritsar, Punjab	DPRs, engineering designs	Legal and regulatory	Tendering documents	None
Bhubaneswar, Odisha	DPRs, engineering designs	Engineering books, legal and regulatory, CPHEEO guidelines	JNNURM Toolkits, model documents,documents prepared by NIUA,ASCI, etc., City tours	None
Coimbatore, TN	DPRs, engineering designs includingfrom other projects sources from consuling firms	CPHEEO guidelines IRC guidelines, IS Codes for Design, National Building Codes, Engineering Books, legal and regulatory (Acts, Building Codes, etc.)	JNNURM Toolkits,E-Govn, E-Procurement, newsletters/journals of NIUA, ASCI,YASHADA etc., exposure visits to other JNNURM cities	None
Faridabad, Haryana	DPRs, engineering designs	Legal and regulatory	Tendering documents, accounting manual	None
Patna, Bihar	DPRs, engineering designs, Master Plan	Legal and regulatory (Acts, etc.)	Toolkits, accounting manual	Guidelines, documents, etc. prepared by bilateral agency (DFID) project
Visakhapatnam, AP	DPRs, engineering designs including from other JNNURM cities	CPHEEO guidelines, Engineering Books, legal and regulatory (Acts, Building Codes, etc.)	JNNURM Toolkits, documents prepared by CGG,ASCI, NIUA, etc., exposure visits to other JNNURM cities	Documents prepared by MEPMA

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

Table 4.4: Information/Knowledge Needs Identified in ULBs

Technical	Managerial	Behavioural	Institutional
Technical expertise on work on large and high value projects Am Bh **Co** Fa Pa Vi	Managerial expertise on large projects Am Bh **Co** Fa Pa Vi	Better coordinated management of ULB capacity building Am Bh **Co** **Fa** Pa **Vi**	Increase awareness among end users on the service improvements achieved/ reforms undertaken Am **Bh** **Co** Fa Pa Vi
Need to increase computer literacy among staff Am **Bh** Co Fa **Pa** Vi	Single consistent strategy for project management (including time and cost management) required. Am Bh **Co** Fa Pa **Vi**	Stakeholder interest management Am Bh **Co** Fa Pa Vi	
Improve skills on use of GIS, GPS tools for tax and planning purpose Am Bh Co Fa Pa Vi	Coordinated capacity building approach required for the ULB Am Bh Co Fa Pa Vi		
Technical know-how on land rights (notification, denotification of slums, tenure security, etc.) Am Bh Co Fa Pa Vi	Working with civil society organisations Am Bh Co Fa Pa Vi		
Maintenance of services (city services and slum services) Am **Bh** Co Fa **Pa** Vi	Procurement skills - both works and services (consultants, etc.); contracts and bid management Am **Bh** Co Fa **Pa** Vi		
Conflict resolution/ dispute resolution around land acquisition Am Bh Co Fa Pa Vi	Creating public awareness Am Bh Co Fa Pa Vi		

Technical	Managerial	Behavioural	Institutional
Financial structuring of projects Am Bh Co Fa Pa Vi Engaging with the private sector/ accessing capital market for infrastructure delivery Am Bh Co Fa Pa Vi Monitoring and evaluation of projects and reform Am Bh Co Fa Pa Vi Implementation of property tax reforms, including increase of tariffs, etc. Am Bh Co Fa Pa Vi Implementation of DEAS reform Am Bh Co Fa Pa Vi	Establishment of JNNURM Revolving Fund and its operations Am Bh Co Fa Pa Vi		

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

Table 4.5: Critical Barriers Identified on Access to Knowledge/Information in ULBs

Technical	Managerial	Behavioural	Institutional
Limited awareness on information and capacity building opportunities available at mid- and junior-levels Am Bh Co Fa Pa Vi No motivation exists to learn new techniques/ technologies Am Bh Co Fa Pa Vi Lack of dependable data / data management systems, including on the poor Am Bh Co Fa Pa Vi Language barriers make it difficult to access learning, especially e-learning Am Bh Co Fa Pa Vi Computer awareness almost negligent Am Bh Co Fa Pa Vi	No ULB level database exists on training programs undertaken and names of participants Am Bh Co Fa Pa Vi Excessive workload on quality staff Am Bh Co Fa Pa Vi State-level monitoring of JNNURM as a whole is not effective Am Bh Co Fa Pa Vi	Learning from implementing JNNURM projects not mainstreamed into day-to-day ULB functions (smaller projects, etc.) Am Bh Co Fa Pa Vi Lack of motivation to implement reforms below decision making level Am Bh Co Fa Pa Vi Training programs undertaken but no assessment done on their effectiveness Am Bh Co Fa Pa Vi	Lack of coordination between various departments and agencies Am Bh Co Fa Pa Vi Lack of a common vision between political and techno-administrative stakeholders Am Bh Co Fa Pa Vi Lack of any information/ knowledge sharing platform in ULB Am Bh Co Fa Pa Vi Overdependence on external consultants Am Bh Co Fa Pa Vi

Source: UKNA Studies undertaken by NIUA and CEPT, 2011/12

SECTION 3 – WAY FORWARD

5. Study Findings and Way Forward

5.1. Observations and Recommendations

The synthesis study indicates that knowledge management within ULBs is very weak. In addition, technical knowhow and project management skills to manage large infrastructure projects and reforms action are extremely limited. Compounding is the problem of multiplicity of institutions that provide services, and weak inter-departmental coordination within ULBs.

Traditionally, the primary means of acquiring new knowledge has been through training. As Indian ULBs usher towards a new era of large infrastructure project cycle management, and reforms implementation, new means of sharing knowledge and information within organisations, as well as with peer institutions is required. The urban sector environment in India, with advent of JNNURM-2,is well-poised to make this happen, if the right catalyst is provided.

Many states are gearing to set-up/professionalise municipal cadres to respond to the increased skill demands at the ULB level. Some states such as Andhra Pradesh and Madhya Pradesh have already taken positive steps in this direction, and there is a lot to learn from these states. Learning from both these states indicate that an organisation development (OD) approach is required that looks at both institutional restructuring to respond to new challenges, as well as knowledge management and capacity building to cater to needs of the next generation ULBs.

Table 5.1 below outlines key findings of this study and presents a set of recommendations that can be taken up under the PEARL program as a whole, as well as under the Cities Alliance funded component of PEARL.

Table 5.1: Key Observations and Recommendations

	Observations	Recommendations
1.	Technical knowhow on a range of subjects is very weak. These include: • project cycle management (identification, development, implementation) of large infrastructure projects; • financial structuring of projects; • O&M of city wide and slum services; • skills on use of GIS and GPS; • notification and de-notification of slum areas, and tenure security; • conflict resolution on land acquisition/management issues; • structuring of PPPs and accessing capital markets; • implementation of property tax reforms; implementation of double entry accrual based accounting reforms; • procurement and procurement management; • monitoring and evaluation; • creating public awareness; • setting-up and operationalisation of JNNURM Revolving Fund; and • e-governance and other e-based tools for improved performance management.	• Prepare a series of knowledge dissemination activities that focus on these areas. New ways of creating learning within ULBs will have to be developed so that knowledge can be better institutionalised. • States should look at creation of professional municipal cadres. This will create a potential to restructure and induct staff based on specialist skills that are required for ULB functioning. Improved ULB functioning is likely to create increased own revenue generation that could pay for a substantial part of likely revenue costs for inducting new staff. • For areas such as PPPs, accessing market finance, respective state urban departments may consider setting up a PPP Cell that can provide support to all ULBs in the state. • For ensuring effective coordination of reforms across ULBs, dedicated reforms Cell/Units may be set-up at the state urban departments. This has been done in Andhra Pradesh (MEPMA), Madhya Pradesh (MSU), among other states.
2.	Computer training is essential	Staffs need to be trained and motivated to use computers for everyday work. Computerisation of key functions such as revenue, payroll/pension, administration should be undertaken first to allow all related departments to follow suit.
3.	Peer learning plays an important role in knowledge transfers.	Collation and dissemination of a set of 'good' DPRs prepared under JNNURM may be of interest to ULB officials. Peer networks such as PEARL can be used as an effective tool for knowledge management in ULBs.
4.	Frequency of access to knowledge reduces down the hierarchy	Need for creating a central point in HR section managing a database of training received/knowledge management activities accessed, so that a coordinated approach to knowledge management can be taken.
5.	Poor access to internet, especially in mid- and lower-echelons of the ULB	The role of internet in knowledge acquisition and management in ULB needs strengthening.

	Observations	Recommendations
6.	Most knowledge acquisition is from organisational sources	ULB staff should be encouraged to access knowledge from non-organisation sources including from the private sector, academic institutions, etc.
7.	Stakeholder engagement for knowledge management is weak	ULB staff need to be capcitated and motivated to engage with NGOs, consultants, academic institutions, etc. for effective knowledge acquisition at an individual and departmental level.
8.	Centralisation of decision making powers	Need to increase devolution of decision-making powers (both functional and financial).
9.	Lack of common vision between elected representatives and administrative machinery	Need to ensure coordinated approach between elected representatives and administrative team
10.	Weak inter-departmental coordination within the ULB	An OD exercise may be undertaken to determine how to improve inter-departmental communication within a ULB. The OD exercise should also look at how the ULB can be (re)structured best to achieve its objectives, as well as take into account potential interest of the state to create professional municipal cadres.
11.	Ineffective inter-departmental communication; information flow within ULBs is weak	Create informal inter-departmental communication channels, especially when implementing projects on a mission-mode approach.
12.	Multiplicity of institutions for service delivery	The OD exercise can help identify various areas where multiplicity of functions happen, and can suggest means of addressing these. cities like Bhubaneswar and Visakhapatnam have set-up dedicated JNNURM Cell and have benefitted through defined responsibility and greater accountability.
13.	Lack of clear linkage between budgetary provision for knowledge acquisition and results achieved	Clear budgetary links between knowledge acquisition and results to be achieved needs to be brought in towards motivating ULB staff
14.	Public awareness on the reforms agenda and improved service provision is not observed	Need to Increase awareness among end users on service improvements achieved/reforms undertaken
15.	Weak motivation among ULB staff to access new knowledge	Motivation of ULB staff to acquire new knowledge/information by linking it to performance assessment may be introduced.
16.	Effectiveness of training undertaken by ULB staff not available	Proper training impact evaluation needs to be undertaken after training has been provided – this should be done at end of the training as well as after six months of provision of training.
17.	Language barriers are critical barriers in receiving training	Care should be taken that training is provided in a language that is acceptable to the concerned trainees.
18.	Overdependence on external consultants	ULBs will need to continue using services of external consultants. However, ownership of the project cycle management and reforms implementation should remain within the ULB
19.	Formal knowledge needs assessment not undertaken in ULBs	Awareness on the need for undertaking formal KNA in a ULB is important.

5.2. Way Forward

Based on the above observations and recommendations, three actions under way forward are presented:

1. Adapt PEARL Network so that it is able to respond to the recommendations indicated earlier more proactively. A PEARL team meeting can be undertaken to discuss findings of this report, and brainstorm on how PEARL best can respond to the identified challenges.

2. Pilot OD Study in at-least one of the six pilot ULBs. This study can be undertaken by a specialist organisation contracted by NIUA under the PEARL-CA component.

3. Share report and findings with regional training institutes so that they can incorporate suitable recommendations into their present approach of delivery capacity building activities.

ANNEX

Annex 1.1: List of People Met

Name	Designation and Organization
FARIDABAD	
Dr. D. Suresh	Commissioner, Municipal Corporation, Faridabad
Mr. Anil Mehta	XEN, MCF, Faridabad
Mr. D.K. Mittal	Assistant General Manager, NBCC, Faridabad
Mr.R. S. Yadav	Project Manager, NBCC, Faridabad
Mr. V. Kaushik	Accountant, MCF, Faridabad
Mr. Anil Batra	Establishment Officer, MCF, Faridabad
Mr. C. K. Katara	Chief Engineer, MCF, Faridabad
AMRITSAR	
Mr. Dharmapal Gupta	Commissioner, Municipal Corporation, Amritsar
Account Department, Municipal Corporation of Amritsar	
Mr. Prem Kumar	Deputy Controller Finance and Accountant
Mr. Ashwani Bhagat	Accountants
Mr. Manu Sharma	Accountants
Mr. Pankaj Kapoor	Accountants
Mr. Manmohan Arora	Accountants
Mr. Chiranjivlal	Accountants
BSUP Project Team	
Mr. VK Anand	XEN, MCA
Mr. Avtar Singh	A.E., MCA
Mr. R.S Kahlon	J.E., MCA
SWM Team	
Dr. Yogesh Arora	Medical Officer
Mr. BhawaniShanker	Superintendent
Mr. G.S. Bhullar	Chief Sanitary Inspector
Mr. Harjeet Singh	Chief Sanitary Inspector
Mr. M. Singh	Manager, Anthony Waste Handling Cell Pvt. Ltd.
Mr. Anil Chandala	Workshop Manager, Anthony Waste Handling Cell Pvt. Ltd.
Mr. A. Singh	Workshop Manager, Anthony Waste Handling Cell Pvt. Ltd.
User Charges Team	
Mr. Jasvinder Singh	Superintendent Engineer
Mr. Sunny Makkar	System Manager
Mr. Ranjit Singh	Draftsman
Mr. Anil Arora	Superintendent

PWSSB	
Mr. Arvind Mahajan	Executive Engineer
Mr. Harinder Kumar	Superintendent Engineers
Mr. Ramesh Sehghal	
PATNA	
Mr.Hashi Shekhar Sharma	Principal Secretary, UD&HD, Bihar
Mr.Chandrama Singh	Addl. Municipal Commissioner, PMC
Mr. Ravindra Kumar	Chief Engineer, Water Supply, PMC
BHUBANESHWAR	
Mr.SaurabhGarg	Commissioner cum Secretary, U&HDD, Orissa
Mr. Vishal K. Dev	Commissioner, BMC
Smt. SumitaSarkar	Establishment Officer, BMC
Mr. Shekhar Suman	IT Associate & Cluster Coordinator, SPUR: BMC
Mr. Siddharth Pujari	Principal Consultancy: IT- PMU, BMC
Er. B. K. Parida	Project Engineer, OWSSB
Er. SarbeswarBarik	OWSSB
Mr.Abhai Krishna Sinha	Chief General Manager, BUIDCo
COIMBATORE	
Mr.T.K. Ponnusamy	Commissioner, CMC
Mr. K. Boopathy	Superintending Engineer, CMC
Mr. A. Lakshmanan	Executive Engineer, CMC
Mr. M. Ravi	Junior Engineer, CMC
Mr. K. Meenakumari	Junior Assistant, CMC
Mr. G. Srinivassan	JE, CMC
Mr. S. Baskar	Coordinator, City Technical Advisory Group
VISHAKAPATNAM	
Dr.Rajenda Krishna	Head HRD, VMC
Mr. Ravi	Executive engineer, JNNURM, VMC
Mr. D Venkataratnam	Chief city planner, VMC
Mr. BD Rambabu	Project coordinator UCD projects, VMC

Annex 3.1: Administrative Structure, etc.

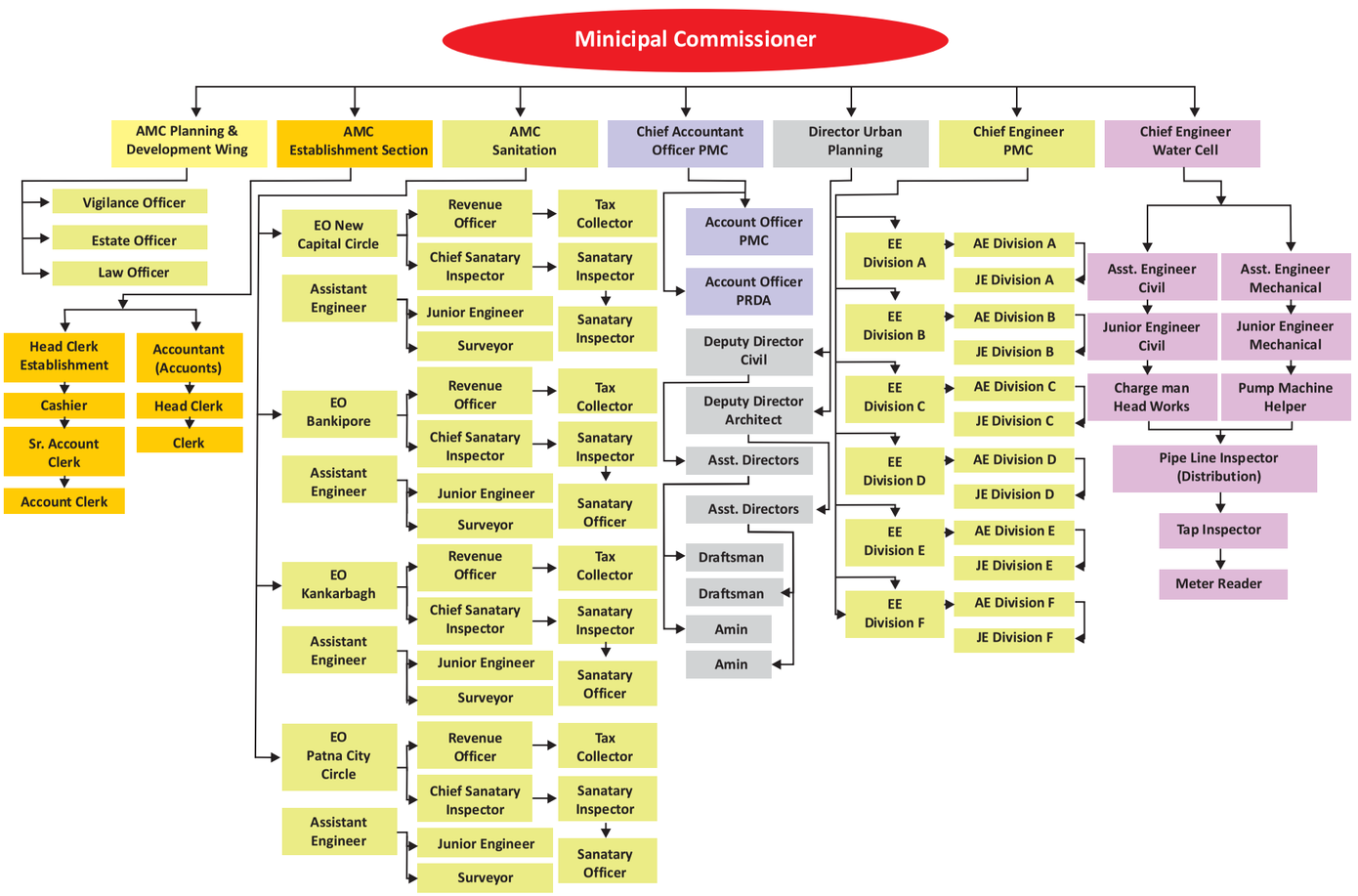
Annex 3.1(a):

State	Amritsar	Faridabad	Patna	Bhubaneswar	Visakhapatnam	Coimbatore
Executive Structure	Punjab Staff – 1 Municipal Commissioner 1 Additional Commissioner 1 Assistant Commissioner 1 Dep. Controller (F&A) 1 Dep. Controller (L&A) 1 Secretary JEO 1 Superintendent 1 Head Clerk 1 Junior Clerk 1 Clerk 1 Peon 1 Senior Engg (Civil) 1 Sr. Engg. (O&M) 2 Executive Engg 2 SDO 2 Junior Engg. 2 Builder 1 Chief Fire Officer 1 Medical & Health Off	Haryana Staff – Regular 4347, Contractual 1510 1 Municipal Commissioner 3 Joint Municipal Commissioner 1 Joint Commissioner 1 Sr.Tax Officer 2 Zonal and Tax Off. 1 EDP Manager 1 Chief Engineer 4 Executive Engg. 6 Asst. Engg (Spl) 18 Asst. Engineers 5 Junior Engineers 1 Med. Health Off 2 Medical Officers 2 Conservancy Off 2 Admin Off 1 Asst. Manager 1 Dy.Environ. Off 1 Registrar Birth and Death 3 Sanitary Supervisors 4 Sanitary Inspector 1 Chief Town Planner 1 Town Plan off 2 Sub Engineers 1 Law Officer 2 Sub Officers 1 Chief Fire Officer 1 Chief Vigilance Off 1 Vigilance Off Tech 1 Chief Accountant 1 Chief Auditor 6 Assistant Auditor JNNURM team: 1 Chief Engineer 2 Executive Engineer 2 Asst Engineer 1 Addl. Asst Engineer 1 CAD Operator 1 Data Entry Officer	Bihar Staff- Regular 3253, Contractual 861 1 Municipal Commissioner 3 Additional Municipal Commissioners 4 Executive Officers 4 Revenue officers 4 Tax Collectors 4 Chief Sanitary Officers 1 Chief Accountant 2 Accountant officers 1 Director Urban Planning 1 Chief Engineer, PMC 4 Executive Engineers 6 Assistant Engineer 1 Chief Engineer, PMC, Water Board 2 Assistant Engineer 2 Junior Engineer	Odisha Staff- Regular 1137, Contractual 1414 1 Municipal Commissioner 1 Deputy Commissioner 1 City Engineer 2 Executive Engineer 1 Chief Municipal Medical Officer 1 City Health Officer 1 Project Officer (JnNURM) 1 Slum Improvement Officer 1 Establishment Officer 1 Chief Finance Officer 1 Statistical Officer 1 Environment Officer 1 Asst. Engineer, Electrical 2 Asst. Health Officer 1 Grievance Cell in charge	Andhra Pradesh Staff- Regular 3176, Contractual 7329 1 Municipal Commissioner 2 Additional Commissioner 6 Zonal Commissioner 1 City Planner 1 Dy. City Planner 6 Asst. City Planners 1 Chief Medical Officer, Health 1 Senior Medical Officer, Health 6 Assistant Medical Officers, Health 6 Sanitary Supervisors 1 Project Director, Community Dev. 1 Project Co-ordinator, UCD 11 Assistant Project Director, UCD 1 Chief Engineer, CEO 5 Superintending Engineer, CEO 5 Superintending Engineer, Works 4 Executive Engineers, Works 6 Dy. Executive Engineers, Works	Tamil Nadu Staff- Regular 4424 1 Municipal Commissioner 1 Deputy Commissioner 3 Assistant Commissioners, HO 4 Zonal Assistant Commissioners 1 City Health Officer 1 Assistant City Health Officer 2 Medical Officer 4 Zonal Sanitary Officer 1 City Engineer 2 Executive Engineer 2 Assistant Executive Engineer 10 Assistant Engineer 1 Town Planning Officer 1 Asst Town Planning Officer 1 Supt. Engineer, JnNURM 2 Executive Engineer, JnNURM 2 Assistant Engineer, JnNURM 1 Public Relation Officer 1 Chief Engineer, Water works 5 Assistant/Junior Engineer

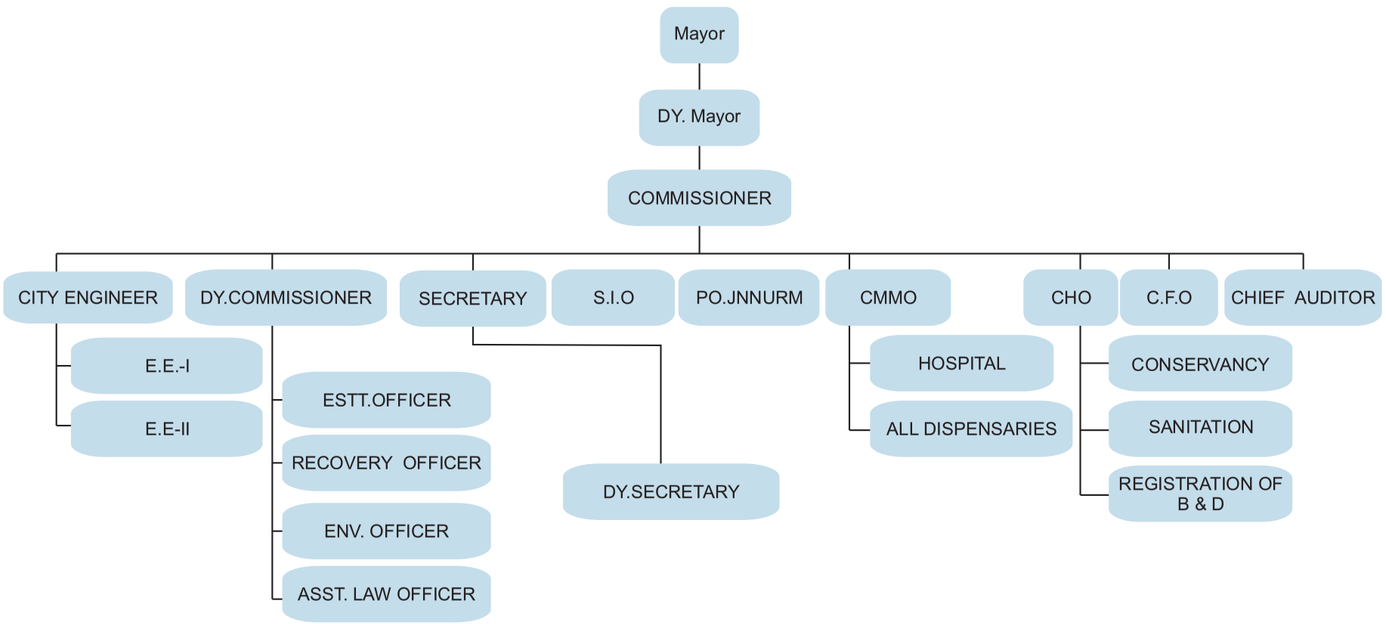
State	Amritsar	Faridabad	Patna	Bhubaneswar	Visakhapatnam	Coimbatore
Department alisation	Departments in MCA – 39; Key Departments: Health Water Supply General Administration Horticulture Sanitation/Sewerage Revenue/Tax Town Planning Engineering/Public Works Finance and Accounts	Cells in MCF – 6; No. of departments – 15 Administrative Sanitation and Health Engineering Legal Planning Fire Brigade	Departments in PMC- 9 Engineering Health & Sanitation Revenue Finance & Accounts Legal Urban Planning Water Supply Education Estate	Departments in BMC- 13 Finance Health & Sanitation Engineering Holding Tax Licence Market Electrical Environment Urban Poverty Alleviation IT-PMU Establishment Land and Assets Recovery and Enforcement	Departments in GVMC- 7 Health and Sanitation Engineering Parks, Leisure and Cemeteries (PL&C) Town Planning Urban Community Development Revenue Finance and Accounts Human resource development	Departments in CMC- 10 Engineering Public Health Town Planning Accounts Education Revenue JnNURM Legal Water supply and drainage Public Relation

Annex 3.1(b): Organisation Structure of Studied City Corporations

Patna Municipal Corporation

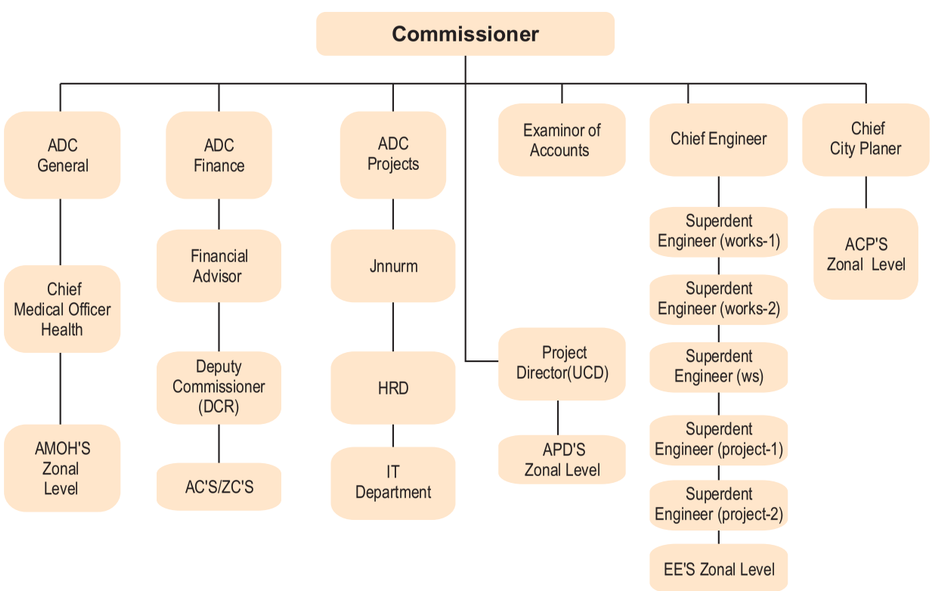


Bhubaneswar Municipal Corporation

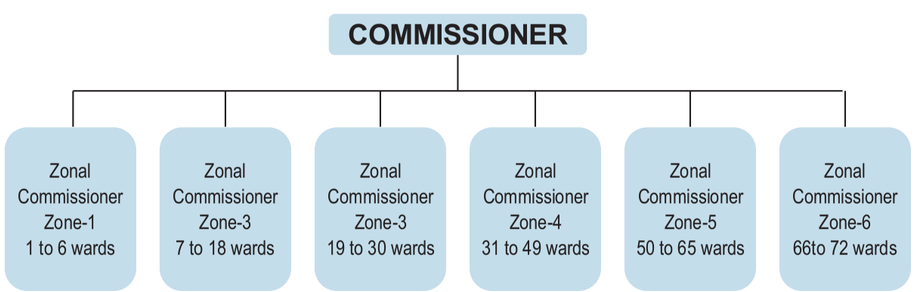


Greater Visakhapatnam Municipal Corporation

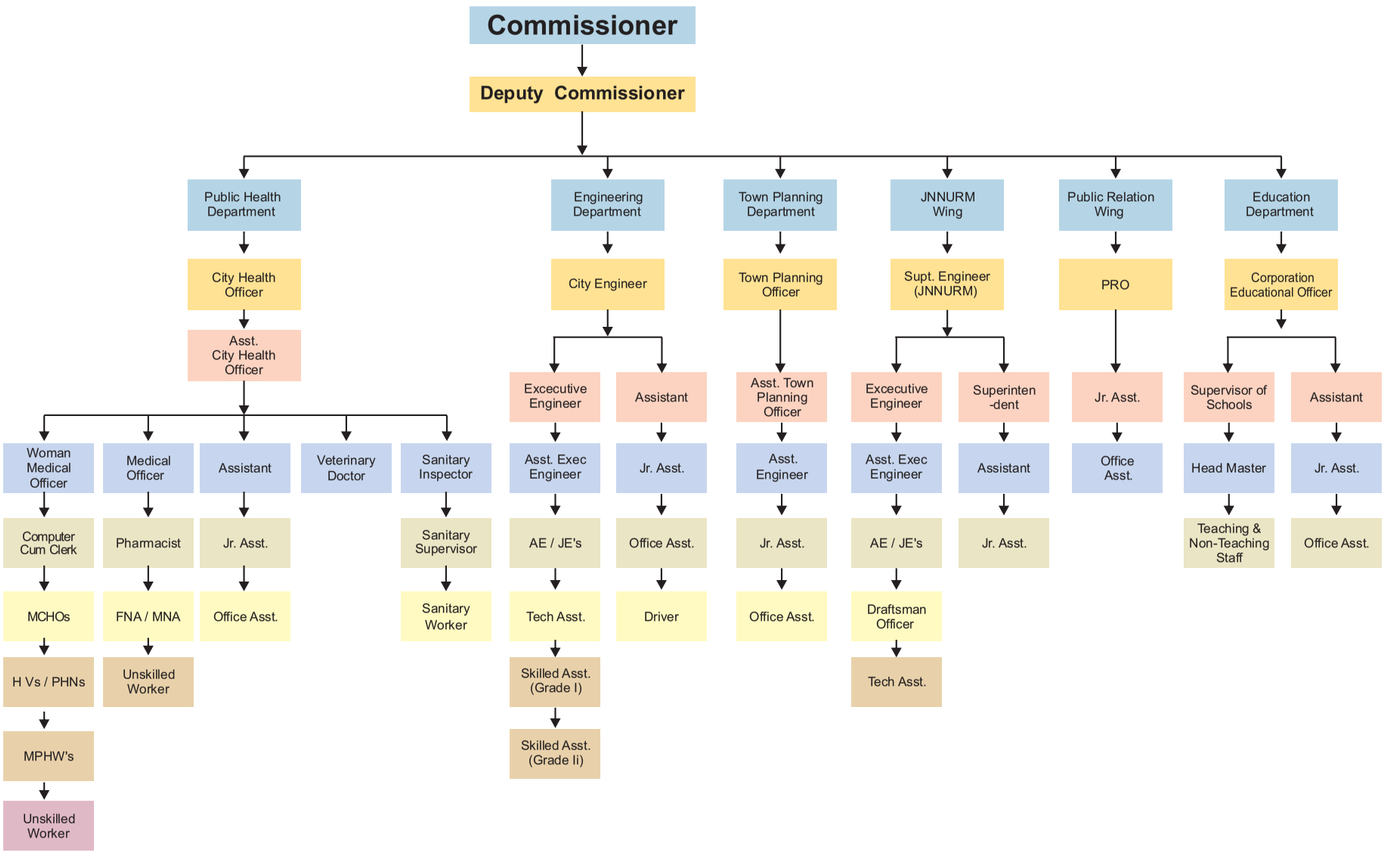
Administrative Wing



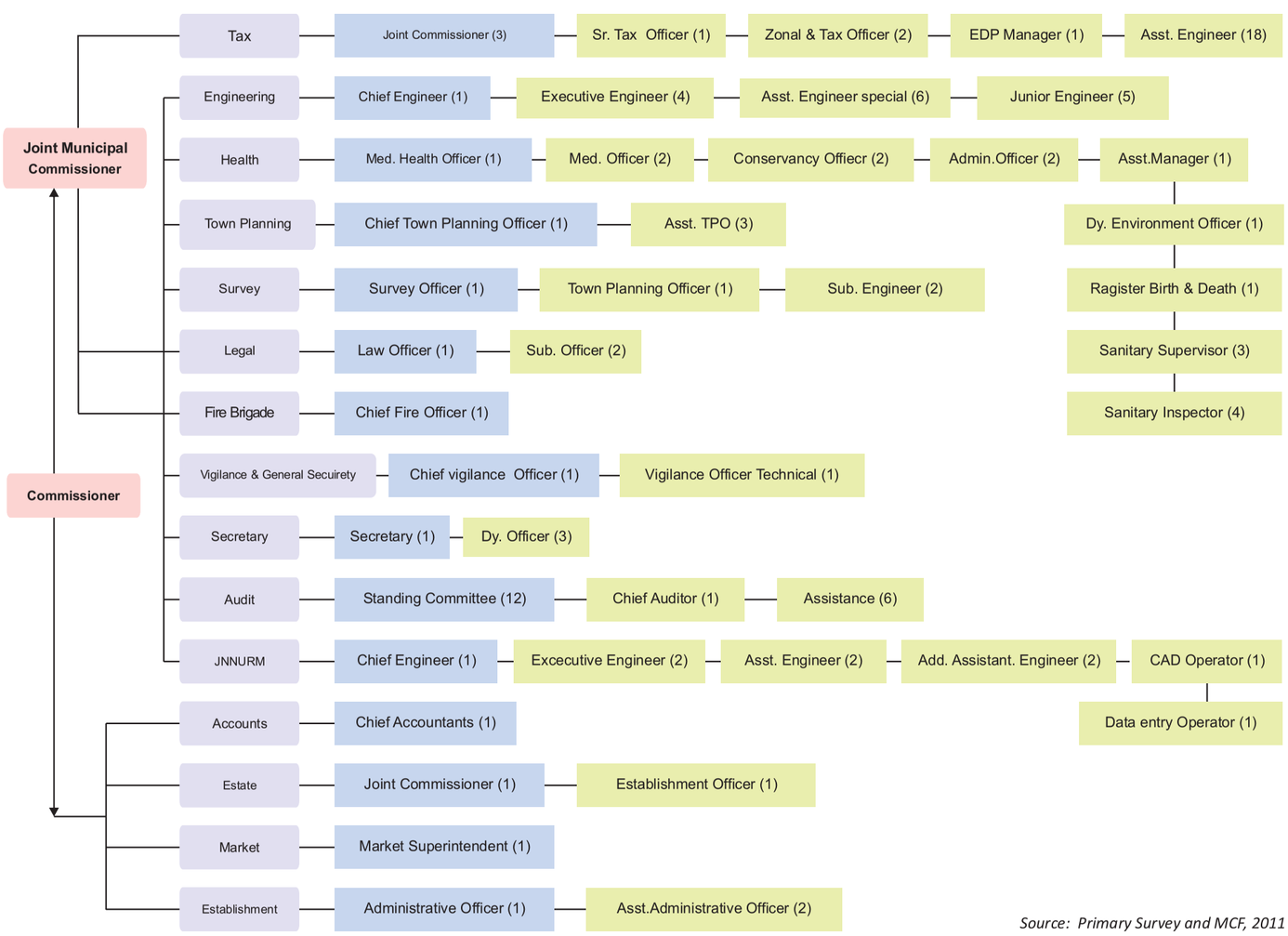
Zonal Organization Structure



Coimbatore Municipal Corporation

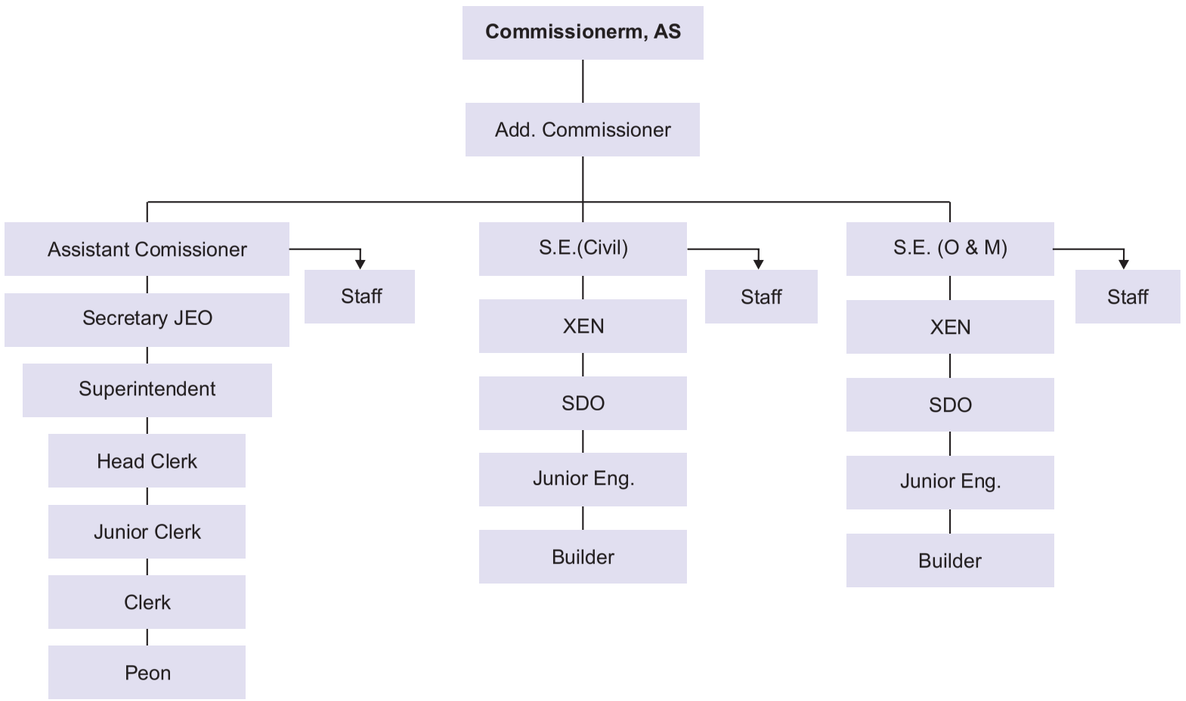


Faridabad Municipal Corporation



Source: Primary Survey and MCF, 2011

Amritsar Municipal Corporation



Annex 3.2: JNNURM Reform Scorecard for selected cities (as on 31.12.2012)

BHUBANESHWAR

Sl. No.	Reform Committed	Complex/Non-Complex	Target Date	Present Status	Points Achieved
	ULB LEVEL REFORMS				
1	E-Governance set up	Non-Complex	2007-08	Achieved	10.00
2	Shift to Accrual based Double Entry Accounting	Non-Complex	2006-07	Achieved	10.00
3	Property Tax (85% coverage)	Non-Complex	2009-10		0.00
	Property Tax (90% collection efficiency)	Non-Complex	2010-11		0.00
4	100% Cost Recovery (Water Supply)	Non-Complex	Not Committed		0.00
	100% Cost recovery (Solid Waste)	Complex	2011-12 (75%)		0.00
5	Internal Earmarking of Funds for Services to Urban Poor	Non-Complex	2007-08	Achieved	10.00
6	Provision of Basic Services to Urban Poor	Non-Complex	2011-12		0.00
	STATE LEVEL REFORMS				
7	74th CAA (Transfer 12 sch. Functions)	Complex	2010-11	Achieved	5.00
	74th CAA (Constitution of DPC)	Non-Complex		Achieved	5.00
	74th CAA (Constitution of MPC)	Complex	NA	NA	0.00
8	Transfer-City Planning Function	Complex	2008-09	Achieved	5.00
	Transfer-Water Supply & Sanitation	Non-Complex	2009-10	Achieved	5.00
9	Reform in Rent Control	Complex		Achieved	10.00
10	Stamp Duty rationalization to 5%	Complex	2007-08	Achieved	10.00
11	Repeal of ULCRA	Non-Complex	NA	Achieved	10.00
12	Enactment of Community Participation Law	Non-Complex	2007-08		0.00
13	Enactment of Public Disclosure Law	Non-Complex	2007-08	Achieved	10.00
	OPTIONAL REFORMS				
14	Introduction of Property Title Certification System in ULBs	Complex	2009-10		0.00
15	Revision of Building Bye laws – streamlining the Approval Process	Non-Complex	2009-10	Achieved	10.00
16	Revision of Building Bye laws – To make rain water harvesting mandatory	Non-Complex	2007-08	Achieved	10.00
17	Earmarking 25% developed land in all housing projects for EWS/LIG	Complex	2008-09	Achieved	10.00
18	Simplification of Legal and Procedural framework for conversion of agricultural land for non-agricultural purposes	Complex	2007-08	Achieved	10.00
19	Introduction of computerized process of Registration of land and Property	Non-Complex	2008-09	Achieved	10.00
20	Byelaws on Reuse of Recycled Water	Non-Complex	2010-11	Achieved	10.00
21	Administrative Reforms	Complex	Not Committed	Achieved	10.00
22	Structural Reforms	Complex	2008-09		0.00
23	Encouraging Public Private Participation	Non-Complex		Achieved	10.00
				Total Points (Complex) =	60.00
				Total Points (Non Complex) =	110.00

AMRITSAR

Sl. No.	Reform Committed	Complex/Non-Complex	Target Date	Present Status	Points Achieved
	ULB LEVEL REFORMS				
1	E-Governance set up	Non-Complex	2008-09		0.00
2	Shift to Accrual based Double Entry Accounting	Non-Complex	2007-08	Achieved	10.00
3	Property Tax (85% coverage)	Non-Complex	2009-10		0.00
	Property Tax (90% collection efficiency)	Non-Complex	2009-10		0.00
4	100% Cost Recovery (Water Supply)	Non-Complex	2009-10		0.00
	100% Cost recovery (Solid Waste)	Complex	Not committed		0.00
5	Internal Earmarking of Funds for Services to Urban Poor	Non-Complex	2011-12	Achieved	10.00
6	Provision of Basic Services to Urban Poor	Non-Complex	2011-12		0.00
	STATE LEVEL REFORMS				
7	74th CAA (Transfer 12 sch. Functions)	Complex	2007-08		0.00
	74th CAA (Constitution of DPC)	Non-Complex	2007-08	Achieved	3.00
	74th CAA (Constitution of MPC)	Complex	2007-08	Achieved	3.50
8	Transfer-City Planning Function	Complex	2007-08		0.00
	Transfer-Water Supply & Sanitation	Non-Complex		Achieved	5.00
9	Reform in Rent Control	Complex	2007-08		0.00
10	Stamp Duty rationalization to 5%	Complex	2010-11	Achieved	10.00
11	Repeal of ULCRA	Non-Complex	NA	Achieved	10.00
12	Enactment of Community Participation Law	Non-Complex	2007-08		0.00
13	Enactment of Public Disclosure Law	Non-Complex	2007-08		0.00
	OPTIONAL REFORMS				
14	Introduction of Property Title Certification System in ULBs	Complex	2008-09		0.00
15	Revision of Building Bye laws – streamlining the Approval Process	Non-Complex	2008-09	Achieved	10.00
16	Revision of Building Bye laws – To make rain water harvesting mandatory	Non-Complex	2008-09	Achieved	10.00
17	Earmarking 25% developed land in all housing projects for EWS/LIG	Complex	2009-10	Achieved	10.00
18	Simplification of Legal and Procedural framework for conversion of agricultural land for non-agricultural purposes	Complex	2008-09	Achieved	10.00
19	Introduction of computerized process of Registration of land and Property	Non-Complex	2008-09	Achieved	10.00
20	Byelaws on Reuse of Recycled Water	Non-Complex	2008-09	Achieved	10.00
21	Administrative Reforms	Complex	2011-12		0.00
22	Structural Reforms	Complex	2007-08		0.00
23	Encouraging Public Private Participation	Non-Complex	2008-09	Achieved	10.00
				Total Points (Complex) =	33.50
				Total Points (Non Complex) =	88.00

COIMBATORE

Sl. No.	Reform Committed	Complex/Non-Complex	Target Date	Revised Target Date	Present Status	Points Achieved
	ULB LEVEL REFORMS					
1	E-Governance set up	Non-Complex			Achieved	10.00
2	Shift to Accrual based Double Entry Accounting	Non-Complex			Achieved	10.00
3	Property Tax (85% coverage)	Non-Complex	2005-06		Achieved	5.00
	Property Tax (90% collection efficiency)	Non-Complex	2005-06		Achieved	5.00
4	100% Cost Recovery (Water Supply)	Non-Complex	2011-12		Achieved	5.00
	100% Cost recovery (Solid Waste)	Complex	2011-12			0.00
5	Internal Earmarking of Funds for Services to Urban Poor	Non-Complex			Achieved	10.00
6	Provision of Basic Services to Urban Poor	Non-Complex	2011-12			0.00
	STATE LEVEL REFORMS					
7	74th CAA (Transfer 12 sch. Functions)	Complex	2007-08		Achieved	3.50
	74th CAA (Constitution of DPC)	Non-Complex	2007-08		Achieved	3.00
	74th CAA (Constitution of MPC)	Complex	2007-08	2009-10	Achieved	3.50
8	Transfer-City Planning Function	Complex			Achieved	5.00
	Transfer-Water Supply & Sanitation	Non-Complex			Achieved	5.00
9	Reform in Rent Control	Complex	2008-09	2011-12	Achieved	10.00
10	Stamp Duty rationalization to 5%	Complex	2009-10	2011-12	Achieved	10.00
11	Repeal of ULCRA	Non-Complex	NA		Achieved	10.00
12	Enactment of Community Participation Law	Non-Complex	2008-09	2009-10	Achieved	10.00
13	Enactment of Public Disclosure Law	Non-Complex	2006-07		Achieved	10.00
	OPTIONAL REFORMS					
14	Introduction of Property Title Certification System in ULBs	Complex	2009-10			0.00
15	Revision of Building Bye laws – streamlining the Approval Process	Non-Complex	Not Committed	2009-10	Achieved	10.00
16	Revision of Building Bye laws – To make rain water harvesting mandatory	Non-Complex	2005-06		Achieved	10.00
17	Earmarking 25% developed land in all housing projects for EWS/LIG	Complex	Not Committed			0.00
18	Simplification of Legal and Procedural framework for conversion of agricultural land for non-agricultural purposes	Complex	2006-07		Achieved	10.00
19	Introduction of computerized process of Registration of land and Property	Non-Complex			Achieved	10.00
20	Byelaws on Reuse of Recycled Water	Non-Complex	2008-09		Achieved	10.00
21	Administrative Reforms	Complex	2007-08		Achieved	10.00
22	Structural Reforms	Complex	2007-08		Achieved	10.00
23	Encouraging Public Private Participation	Non-Complex	2008-09		Achieved	10.00
					Total Points (Complex) =	**62.00**
					Total Points (Non Complex) =	**133.00**

FARIDABAD

Sl. No.	Reform Committed	Complex/Non-Complex	Target Date	Present Status	Points Achieved
	ULB LEVEL REFORMS				
1	E-Governance set up	Non-Complex	2011-12	Achieved	10.00
2	Shift to Accrual based Double Entry Accounting	Non-Complex	2009-10		0.00
3	Property Tax (85% coverage)	Non-Complex	2009-10	Achieved	5.00
	Property Tax (90% collection efficiency)	Non-Complex	2009-10		0.00
4	100% Cost Recovery (Water Supply)	Non-Complex	2011-12		0.00
	100% Cost recovery (Solid Waste)	Complex	2011-12		0.00
5	Internal Earmarking of Funds for Services to Urban Poor	Non-Complex	2007-08	Achieved	10.00
6	Provision of Basic Services to Urban Poor	Non-Complex	2011-12		0.00
	STATE LEVEL REFORMS				
7	74th CAA (Transfer 12 sch. Functions)	Complex	2010-11	Achieved	3.50
	74th CAA (Constitution of DPC)	Non-Complex	2007-08	Achieved	3.00
	74th CAA (Constitution of MPC)	Complex	Not Commited	Achieved	3.50
8	Transfer-City Planning Function	Complex	2009-10	Achieved	5.00
	Transfer-Water Supply & Sanitation	Non-Complex		Achieved	5.00
9	Reform in Rent Control	Complex	2009-10		0.00
10	Stamp Duty rationalization to 5%	Complex	2010-11		0.00
11	Repeal of ULCRA	Non-Complex		Achieved	10.00
12	Enactment of Community Participation Law	Non-Complex	2007-08	Achieved	10.00
13	Enactment of Public Disclosure Law	Non-Complex	2007-08	Achieved	10.00
	OPTIONAL REFORMS				
14	Introduction of Property Title Certification System in ULBs	Complex	2010-11		0.00
15	Revision of Building Bye laws – streamlining the Approval Process	Non-Complex	2009-10		0.00
16	Revision of Building Bye laws – To make rain water harvesting mandatory	Non-Complex		Achieved	10.00
17	Earmarking 25% developed land in all housing projects for EWS/LIG	Complex	2009-10	Achieved	10.00
18	Simplification of Legal and Procedural framework for conversion of agricultural land for non-agricultural purposes	Complex	2010-11		0.00
19	Introduction of computerized process of Registration of land and Property	Non-Complex	2010-11	Achieved	10.00
20	Byelaws on Reuse of Recycled Water	Non-Complex	2011-12		0.00
21	Administrative Reforms	Complex	2010-11	Achieved	10.00
22	Structural Reforms	Complex	2009-10		0.00
23	Encouraging Public Private Participation	Non-Complex	2009-10	Achieved	10.00
				Total Points (Complex) =	**32.00**
				Total Points (Non Complex) =	**93.00**

VISHAKAPATNAM

Sl. No.	Reform Committed	Complex/Non-Complex	Target Date	Revised Target Date	Present Status	Points Achieved
	ULB LEVEL REFORMS					
1	E-Governance set up	Non-Complex	2006-07		Achieved	10.00
2	Shift to Accrual based Double Entry Accounting	Non-Complex	2007-08		Achieved	10.00
3	Property Tax (85% coverage)	Non-Complex	2005-06		Achieved	5.00
	Property Tax (90% collection efficiency)	Non-Complex	2006-07		Achieved	5.00
4	100% Cost Recovery (Water Supply)	Non-Complex	2005-06		Achieved	5.00
	100% Cost recovery (Solid Waste)	Complex	2005-06		Achieved	5.00
5	Internal Earmarking of Funds for Services to Urban Poor	Non-Complex			Achieved	10.00
6	Provision of Basic Services to Urban Poor	Non-Complex	2011-12		Achieved	10.00
	STATE LEVEL REFORMS					
7	74th CAA (Transfer 12 sch. Functions)	Complex	2007-08		Achieved	3.50
	74th CAA (Constitution of DPC)	Non-Complex			Achieved	3.00
	74th CAA (Constitution of MPC)	Complex	2007-08		Achieved	3.50
8	Transfer-City Planning Function	Complex	2007-08		Achieved	5.00
	Transfer-Water Supply & Sanitation	Non-Complex	2007-08		Achieved	5.00
9	Reform in Rent Control	Complex	2007-08	2009-10		0.00
10	Stamp Duty rationalization to 5%	Complex	2009-10		Achieved	10.00
11	Repeal of ULCRA	Non-Complex	2006-07		Achieved	10.00
12	Enactment of Community Participation Law	Non-Complex	2007-08		Achieved	10.00
13	Enactment of Public Disclosure Law	Non-Complex	2007-08		Achieved	10.00
	OPTIONAL REFORMS					
14	Introduction of Property Title Certification System in ULBs	Complex	2011-12			0.00
15	Revision of Building Bye laws – streamlining the Approval Process	Non-Complex	2007-08		Achieved	10.00
16	Revision of Building Bye laws – To make rain water harvesting mandatory	Non-Complex	2005-06		Achieved	10.00
17	Earmarking 25% developed land in all housing projects for EWS/LIG	Complex	2007-08		Achieved	10.00
18	Simplification of Legal and Procedural framework for conversion of agricultural land for non-agricultural purposes	Complex	2006-07		Achieved	10.00
19	Introduction of computerized process of Registration of land and Property	Non-Complex	2005-06		Achieved	10.00
20	Byelaws on Reuse of Recycled Water	Non-Complex	2006-07		Achieved	10.00
21	Administrative Reforms	Complex	2007-08		Achieved	10.00
22	Structural Reforms	Complex	2007-08		Achieved	10.00
23	Encouraging Public Private Participation	Non-Complex	2009-10		Achieved	10.00
					Total Points (Complex) =	**67.00**
					Total Points (Non Complex) =	**143.00**

PATNA

Sl.No	Reform Committed	Complex/Non-Complex	Target Date	Present Status	Points Achieved
	ULB LEVEL REFORMS				
1	E-Governance set up	Non-Complex	2007-08		0.00
2	Shift to Accrual based Double Entry Accounting	Non-Complex	2007-08		0.00
3	Property Tax (85% coverage)	Non-Complex	2008-09		0.00
	Property Tax (90% collection efficiency)	Non-Complex	2011-12		0.00
4	100% Cost Recovery (Water Supply)	Non-Complex	2011-12 (80%)		0.00
	100% Cost recovery (Solid Waste)	Complex	2011-12 (90%)		0.00
5	Internal Earmarking of Funds for Services to Urban Poor	Non-Complex	2011-12	Achieved	10.00
6	Provision of Basic Services to Urban Poor	Non-Complex	2011-12		0.00
	STATE LEVEL REFORMS				
7	74th CAA (Transfer 12 sch. Functions)	Complex		Achieved	5.00
	74th CAA (Constitution of DPC)	Non-Complex		Achieved	5.00
	74th CAA (Constitution of MPC)	Complex	NA	NA	0.00
8	Transfer-City Planning Function	Complex	2007-08		0.00
	Transfer-Water Supply & Sanitation	Non-Complex		Achieved	5.00
9	Reform in Rent Control	Complex	2007-08		0.00
10	Stamp Duty rationalization to 5%	Complex	2010-11		0.00
11	Repeal of ULCRA	Non-Complex		Achieved	10.00
12	Enactment of Community Participation Law	Non-Complex	2007-08		0.00
13	Enactment of Public Disclosure Law	Non-Complex	2007-08	Achieved	10.00
	OPTIONAL REFORMS				
14	Introduction of Property Title Certification System in ULBs	Complex	2010-11		0.00
15	Revision of Building Bye laws – streamlining the Approval Process	Non-Complex	2008-09		0.00
16	Revision of Building Bye laws – To make rain water harvesting mandatory	Non-Complex		Achieved	10.00
17	Earmarking 25% developed land in all housing projects for EWS/LIG	Complex	2010-11		0.00
18	Simplification of Legal and Procedural framework for conversion of agricultural land for non-agricultural purposes	Complex	2010-11		0.00
19	Introduction of computerized process of Registration of land and Property	Non-Complex	Not Committed	Achieved	10.00
20	Byelaws on Reuse of Recycled Water	Non-Complex	2006-07		0.00
21	Administrative Reforms	Complex	2008-09		0.00
22	Structural Reforms	Complex	2009-10		0.00
23	Encouraging Public Private Participation	Non-Complex	2008-09	Achieved	10.00
				Total Points (Complex) =	**5.00**
				Total Points (Non Complex) =	**70.00**