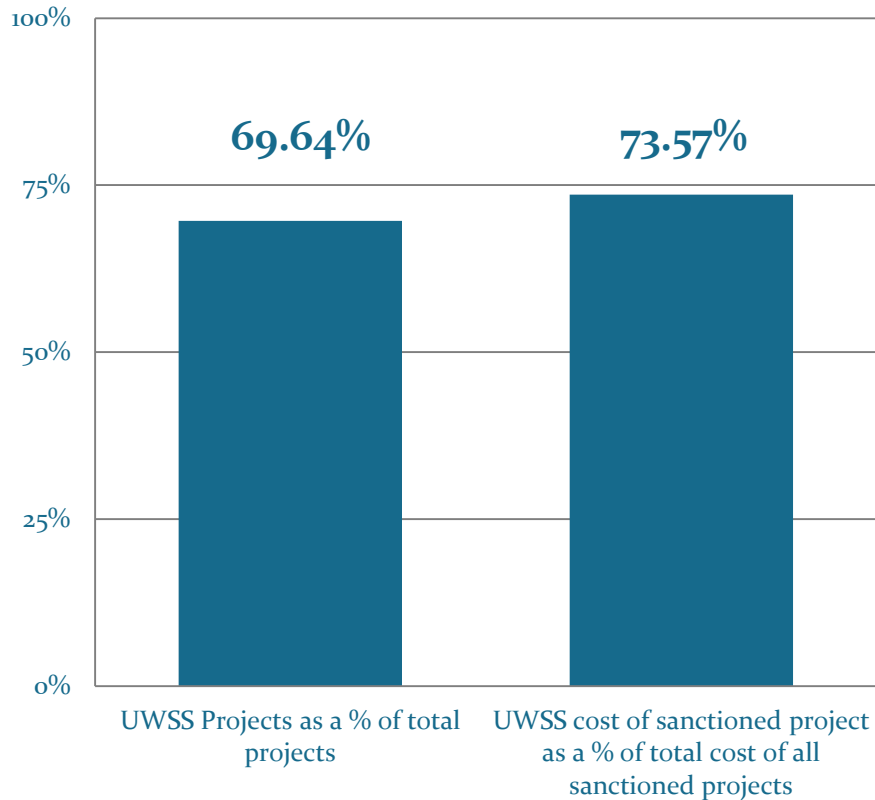




Performance assessment systems for improved service delivery

UWSS under JNNURM

JNNURM FUNDING



- **UWSS = water supply, sewerage, solid waste, storm water drainage**
- **367** projects worth **Rs. 44129 crore** sanctioned for UWSS
- Nearly **75% of total** investment in UWSS

Need for Performance Information in urban water and sanitation

3

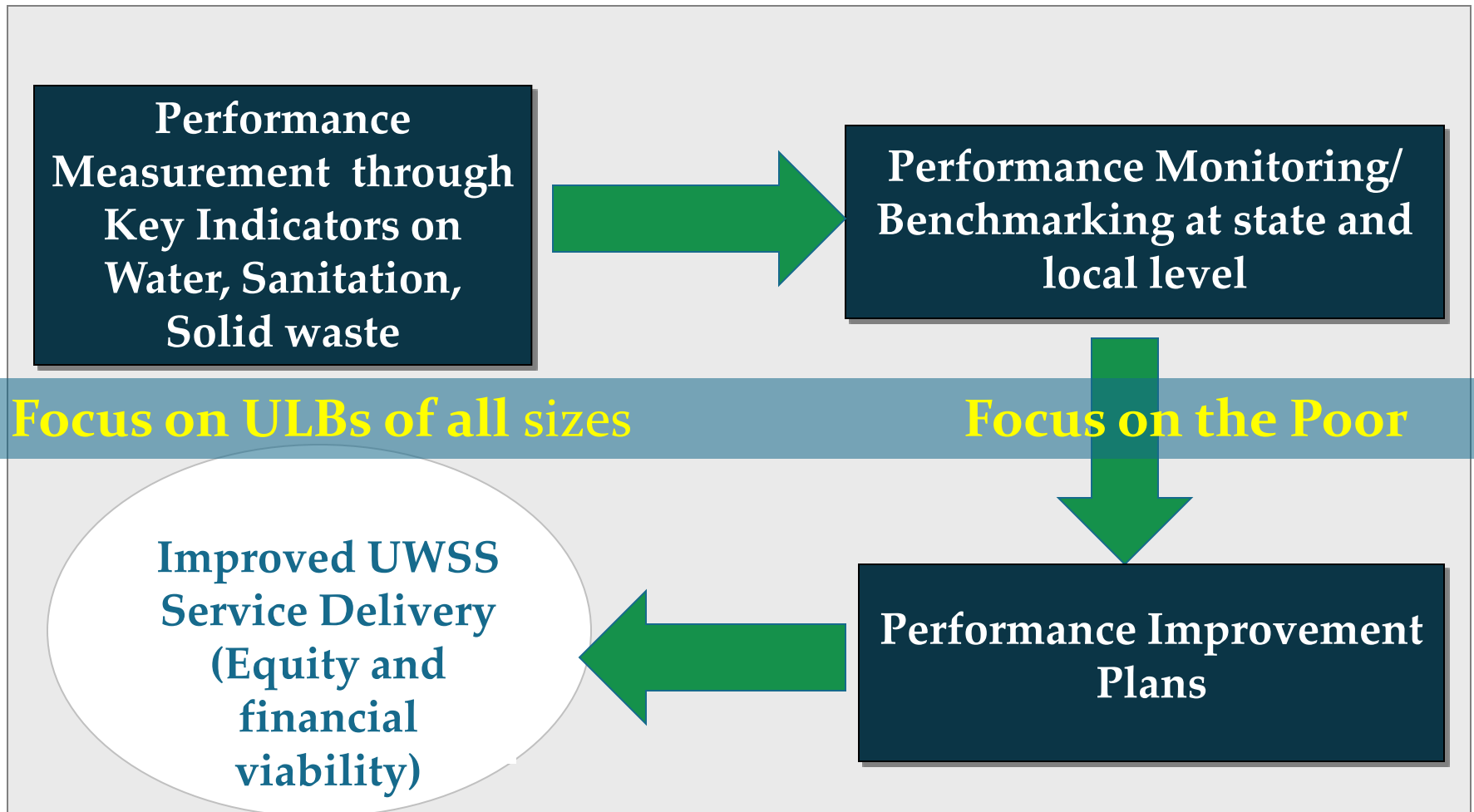
- Aggregate statistics suggest good coverage of water and sanitation in urban areas in India
- BUT little is known about the **quality, level and financial sustainability of service**
- Only limited information on **access of urban poor** households to water and sanitation is available
- Lack of WSS information leads to misallocation of resources
- Difficult to assess **impact of past investments**

Need to move from reform linked to outcome liked funding in JNNURM-2 and state programs



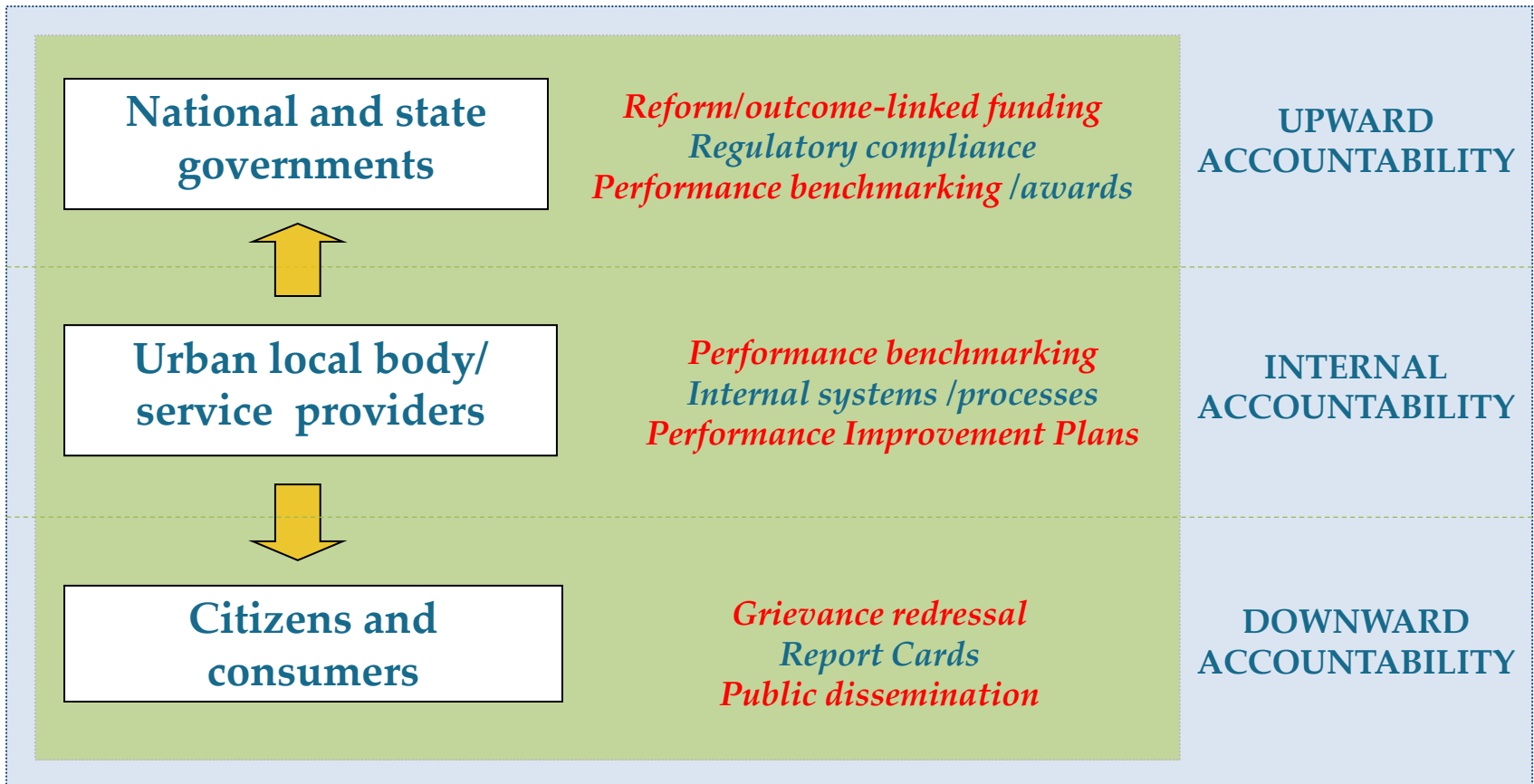
WHAT IS PAS?

A sustainable statewide performance assessment system for improving access to the poor and un-served, and achieve financial sustainability

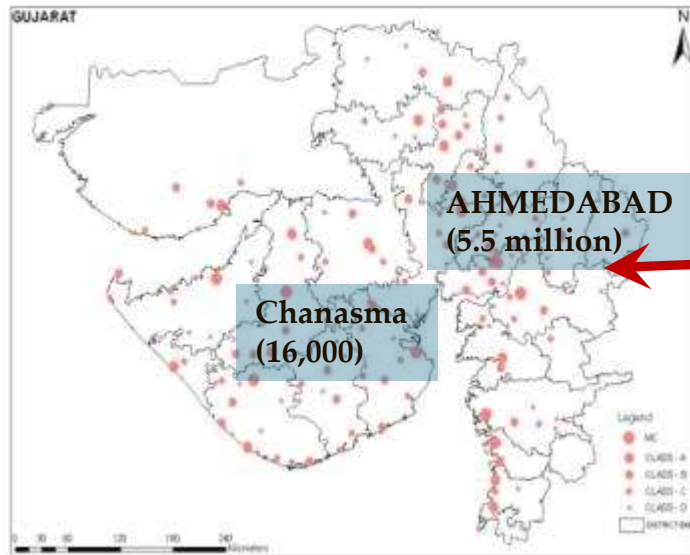


Improving Accountability

Need for robust information on service delivery performance



States and Urban Coverage - PAS Project



Gujarat State

166 Urban Centers

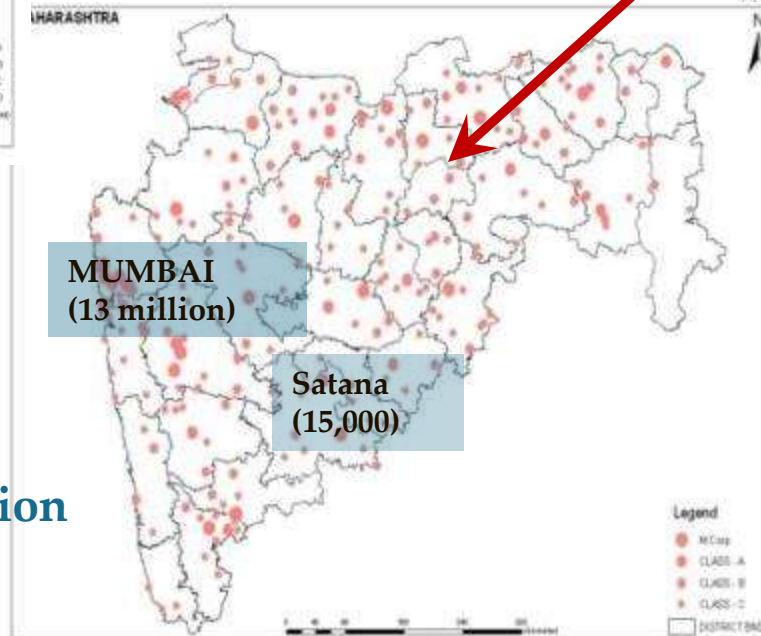
Population – 26 million



Maharashtra State

248 Urban Centers

Population – 51 million



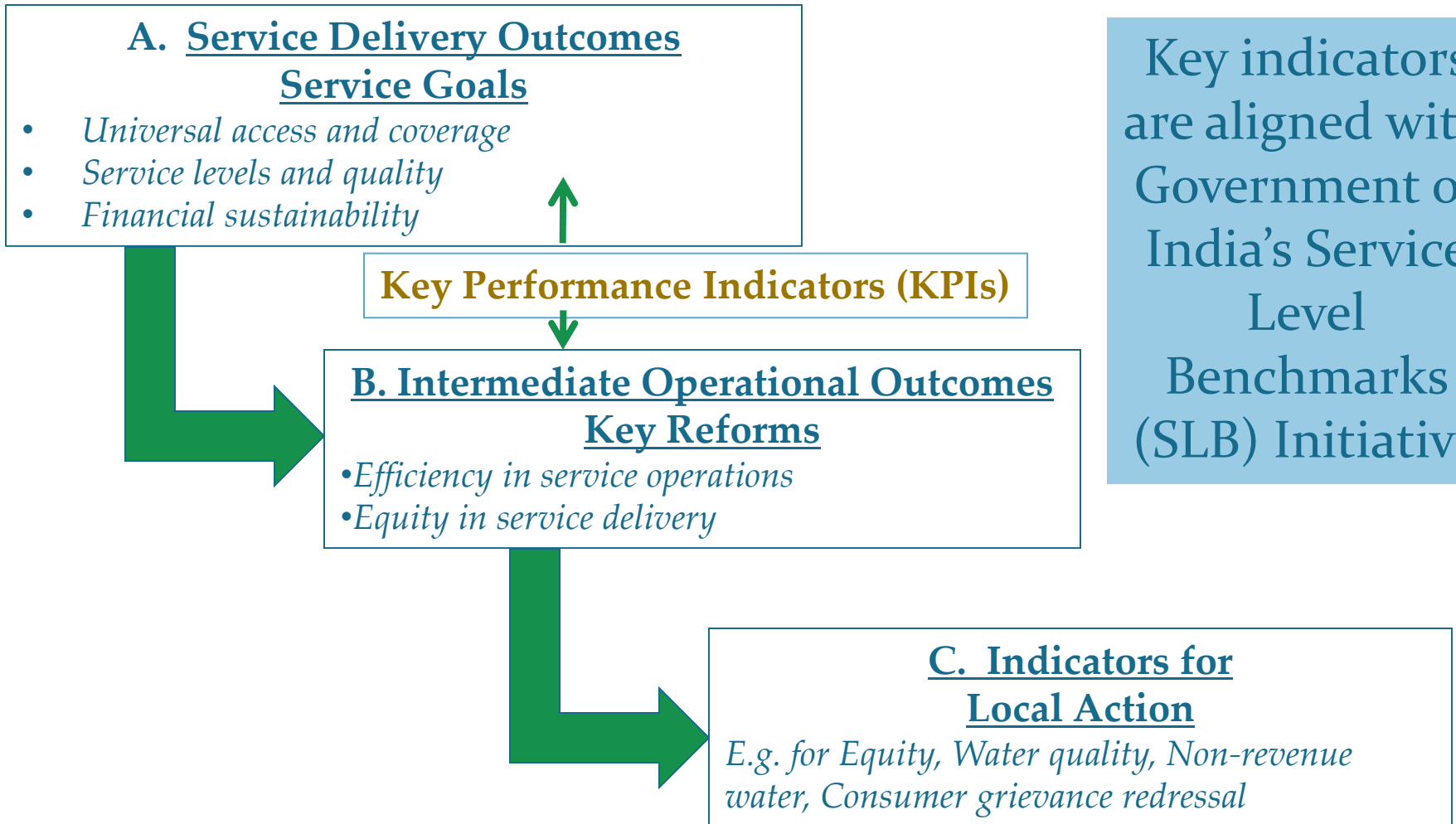
7

Performance Measurement

Measurement Framework

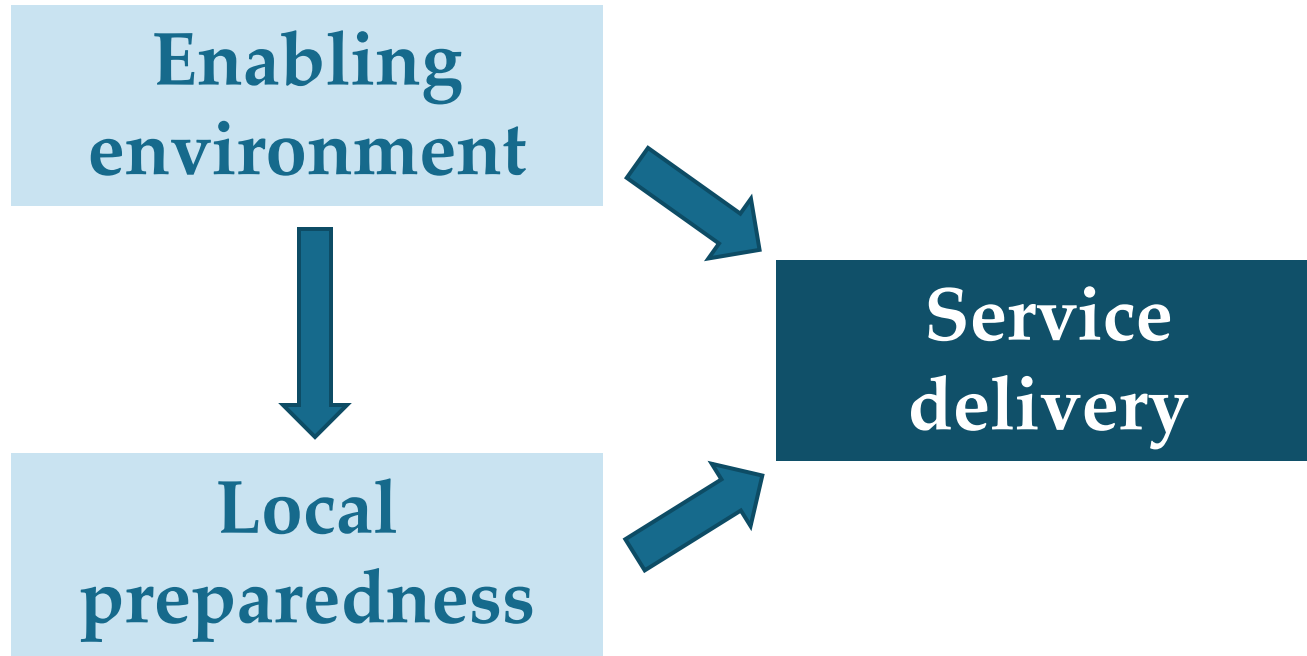
Goals-Reforms-Local Action

8



Framework for Equity Assessment

9



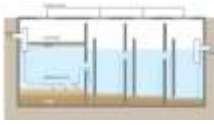



Equity Assessment – PAS Project

10

- **Service provider surveys**
 - ULB surveys – Services in slums (water, toilets, sewerage, SWM); policy, finance for slum services and connection processes
 - Slum settlement surveys – service levels, quality
 - Mapping of slum locations (50 cities) and detailed plans of each slum (Ahmedabad) for use in planning
- **Household surveys**
 - State level (by size class of cities) estimates for slum and non-slum households for: access and coverage, service levels and quality, costs and complaint redressal

Adding Indicators for Non-sewered Cities

				
Capture	Collection	Conveyance	Treatment	Recycle n Reuse
Sewered cities				
<ul style="list-style-type: none"> • Coverage of toilets (residential & non residential) 	<ul style="list-style-type: none"> • Coverage of wastewater network services 	<ul style="list-style-type: none"> • Collection efficiency of wastewater network 	<ul style="list-style-type: none"> • Adequacy of wastewater treatment capacity • Quality of wastewater treatment 	<ul style="list-style-type: none"> • Extent of reuse and recycling of wastewater
Non Sewered cities				
<ul style="list-style-type: none"> • Coverage of toilets (residential & non residential) • Coverage of households with toilets 	<ul style="list-style-type: none"> • Coverage of properties with safe disposal system • Number of connections to septic tanks in the city • % of septic tanks cleaned annually 	<ul style="list-style-type: none"> • Number of septage sucking machines/1000 septic tanks 	<ul style="list-style-type: none"> • Presence of septage treatment facilities • % capacity of plant to wastewater generated • Adequacy of primary treatment capacity • Extent of primary treatment 	<ul style="list-style-type: none"> • Reused supply water

Cities with sewerage

Cities with onsite sanitation systems

Data Collection Tools: excel -> online

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performance assessment system

Home Performance Assessment Resources Important Links About Us News Story Data Entry

PERFORMANCE ASSESSMENT SYSTEM (PAS) PROJECT ROUND 2 Bhavnagar

General Information Water Supply Sewerage and Drainage Solid Waste Management Equity Related Information Contacts

Equity Related Information : 2010

1. Status

General Details

Name	UNIT	2009-2009	2009-2010
1.1 Number of projects/works	Number	95	
1.2 Population in slums	Number		
1.3 Households in slums	Number	12888	
1.4 Households in slums	Number	0	
1.5 Total number of slums notified by state	Number		
1.6 Number of slums that have been notified since Census 2001	Number		

nod Nagarpalika

II. Water Production, Storage and Distribution - a

Water Sources For Municipal Supply

Sources	Average Daily volume (in MLD)			If D or H, specify method of treatment	Are estimated cost at source?
	Functional (A)	Non-Functional (B)	Met (C)		
Groundwater			2.2	H	H
Surface water (Overflows)					H
Duliyachay Reservoir			0.75	H	H
Duliyachay-Treated water					H
Other sources?					H
Total	0.0	0.0	2.95		H

1. Representation of water sources from projects to be commissioned in the next three years (2009-2012)

2. If Yes, capacity additional augmentation to present supply (MLD)

3. Number of wells used for ground water supply

Name of well	Type of well (Tube well)	Depth of well (m)	Avg depth of ground water (m)	Average daily quantity of water	Method of measurement of quantity of water



Annual Cycle over 5 years
Collection, verification, analysis,
gradual integration with state
systems, two-way flow of
information

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Performance Monitoring

Performance Monitoring

Gujarat and Maharashtra state wide PAS web portal for performance monitoring

- ❑ Web portal set up
- ❑ Differential access by user category
- ❑ Includes:
 - ✓ Tools for measurement
 - ✓ Monitoring results at state and local level
 - ✓ Tools for improvement
 - ✓ Good practices for improvement
 - ✓ Local language

pas performance assessment system

Username:
Password: **Login**

Home Performance Assessment Resources About Us Search Eng Usal DPTL **usf**

The Project

The project is to develop a Performance Assessment System (PAS) for Urban Water supply and Sanitation using appropriate methods and tools to measure, monitor and improve delivery of the services in cities and towns in India.

State Profile
36% of the cities in DSC are solely dependent on groundwater as their source of water supply.
Learn More in State Profiles

City Profile
45% of the slum settlements in AEC do not have water supply connections at household level.
Learn More in City Profiles

Features
2.5 billion people do not have access to adequate sanitation, roughly two fifths of the world's population.
Read More in Features

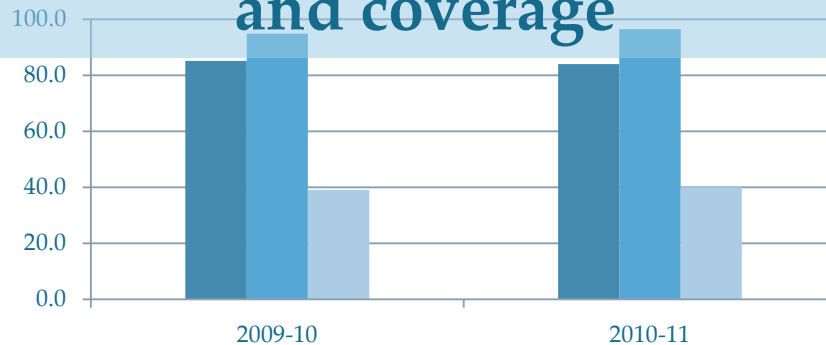
Start opened in 10/14/2014
© 2014-2014 DPTL University. All rights reserved.

pas.org.in

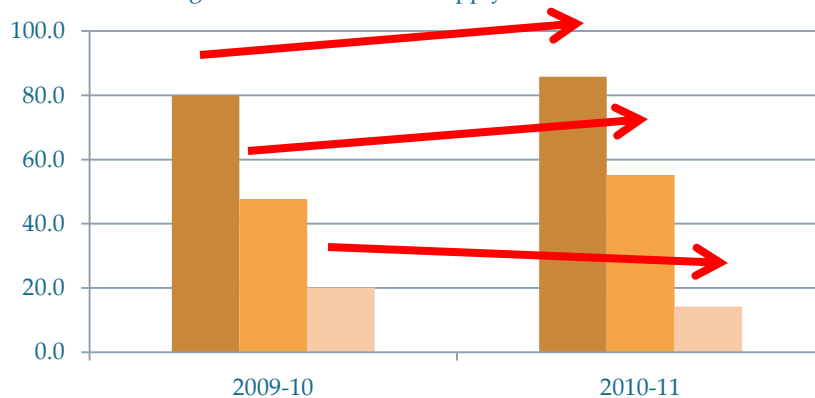
Services in Slums – 2009-10 & 2010-11

15

Trend analysis for access and coverage



■ % of slum settlements having internal water supply network
 ■ % of population with access to improved water services in slums
 ■ Coverage of individual water supply connections in slums



■ % of population with access to improved sanitation services in slums
 ■ Coverage of individual toilets in slums
 ■ % Slum HHs defecating in open

Enabling Environment Policies and funding

□ **Policy Support:** 95% of cities surveyed have a policy provision to provide UWSS services to slum settlements

□ **Pro-poor budget allocations:** The annual budget allocations for pro poor service provision ranges from 2-20%, with > 50% reporting 20% allocation

16

Performance Improvement

PIP Toolkit for Decision Making

✓ enables the utility **to benchmark itself with its peer group** and universal norms

✓ comprehensive list of **actions and improvement measures**

✓ distinction between **'low-cost no-cost' and capital intensive** interventions

✓ **impact of actions** on service delivery, revenues, costs, and financing

✓ enables an **assessment of financial sustainability**

The screenshot displays the PIP Toolkit software interface, which is divided into several sections:

- Input Sheet:** A table for entering data for various indicators across different years (2010-2015).
- Performance Scorecard:** A summary table showing performance indicators for Water and Waste Water, comparing the selected year (2015) against benchmarks, state averages, and class A performance.
- Reports:** A section for generating reports based on the input data.

Performance Scorecard - Water

Performance Indicator	Unit	Benchmark	State	Class A	Baseline	For selected year
Coverage of connections at household level	%	100%	52.72%	68.8%	68.8%	68.8%
Coverage of water supply connections in slum households	%	100%	14.19%	17.87%	17.87%	17.87%
Per capita supply of water	litre/day	180.00	89.55	124.49	89.55	89.55
Continuity of water supply	hours	24.00	3.68	3.87	3.87	3.87
Extent of non-revenue water	%	0%	33.48%	33.71%	43.38%	43.02%
Extent of functional metering of water connections	%	100%	53.07%	53.07%	0.0%	0.0%
Quality of water supply	%	100%	97.75%	98.61%	98.0%	98.0%
Efficiency in reticulation of pipelines	%	100%	94.45%	95.0%	95.0%	95.0%
Unit electricity cost of production of water supply	\$/GJ		87.77%	85.4%	81.8%	81.8%
Efficiency in collection of water charges	%	100%	88.15%	88.8%	88.8%	88.8%
Extent of cost recovery in water supply services	%	100%	88.15%	88.8%	88.8%	88.8%

Performance Scorecard - Waste Water

Performance Indicator	Unit	Benchmark	State	Class A	Baseline	For selected year
Coverage of the utility access to individual homes	%	100%	0.00%	0.0%	17.0%	17.0%
Coverage of individual toilets in Slum Households	%	100%	0.00%	0.0%	13.0%	13.0%
Number of toilets installed with septic tanks	%	0%	0.00%	0.0%	13.0%	13.0%
Success of bio-sand filters in individual household connections	%					

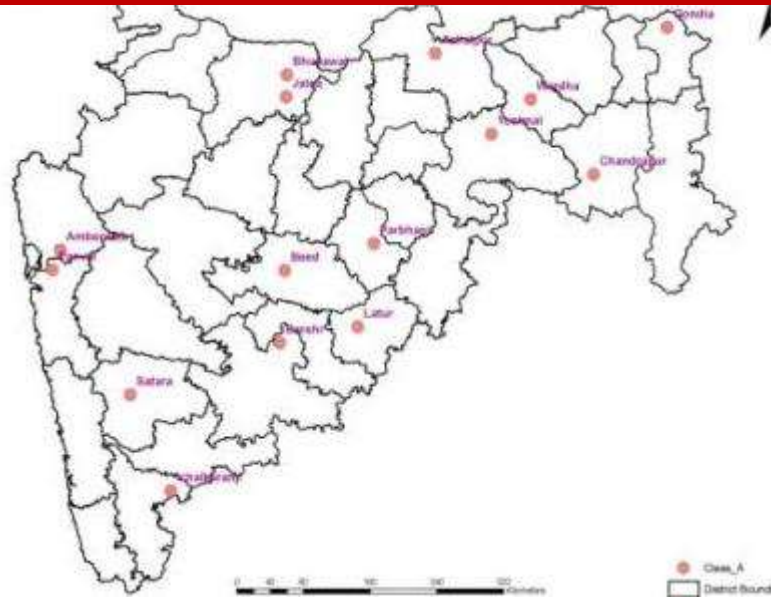
Performance Improvement Plans

PIPs are being prepared for 15 Class A cities of Maharashtra to make cities open defecation free and have 24x7 water supply.



About 32% population resort to open defecation due to lack of safe sanitation facilities.

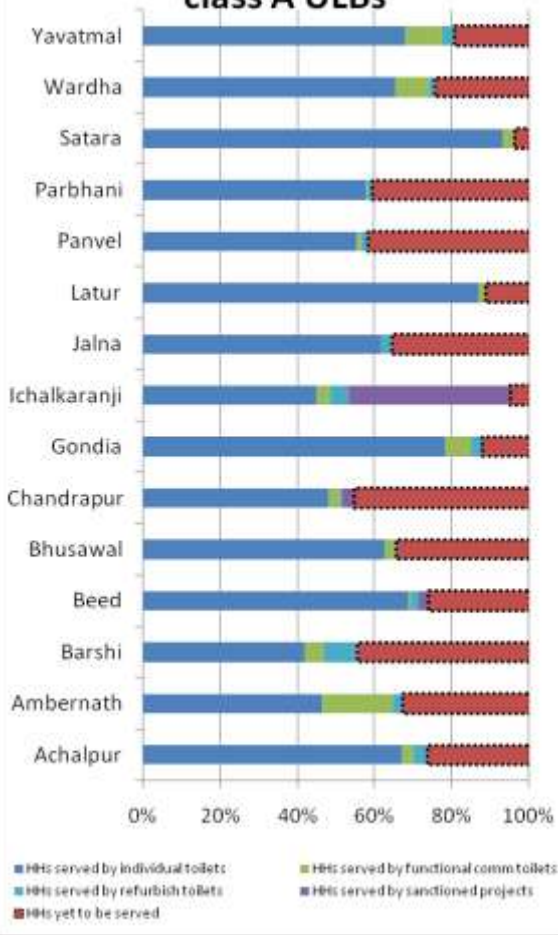
9 cities do not supply water daily.
Average 1.5 hours of water supply



Plan for Open Defecation Free Cities

I] Assessment of toilet facilities and gap to reach ODF

Status of toilet facilities in class A ULBs



II] Strategy for OD plan formulation

Life-cycle costing

In just a span of 5 years, the construction and O&M cost of community toilet outweighs expenditure on provision of individual toilet

In 10 years, community toilets prove to be 25% more expensive

In addition, individual facilities provide better service and privacy.

The proposal includes providing individual toilets. In areas with space limitation group toilets for 3 - 5 households.

Proposed toilet share to meet gap
 Individual toilets = 75%
 Shared toilets = 25%

III] Proposal for ODF for 15 cities

Targeted community mobilization and IEC campaign

Number of toilets required:
 Individual toilets = 136,115
 Shared toilets = 15,124

Funding requirements:

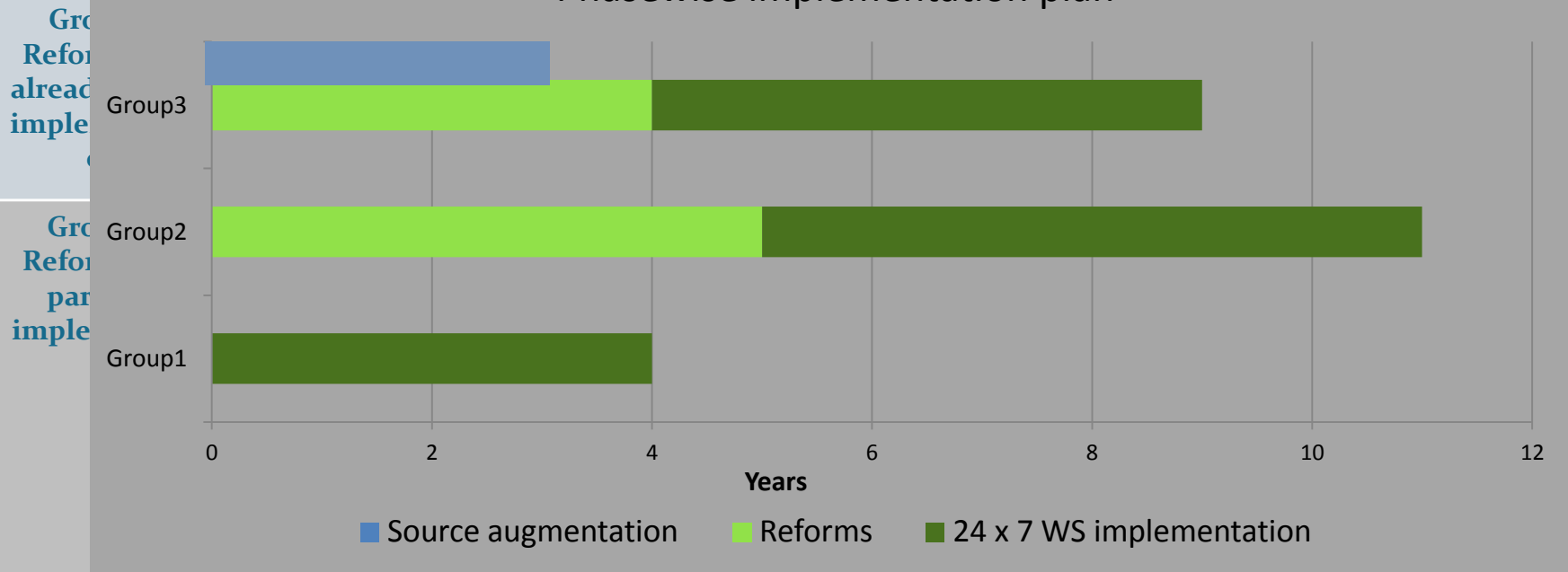
Public funds required	Rs. 293 cr
Beneficiary contribution	Rs. 71 cr
IEC campaign costs	Rs. 63 cr

Total expenditure = Rs. 430 cr

Moving Towards 24 x 7 Water Supply

Group	Cities	Consumer survey	Water audit & leak detection and Energy audit	GIS mapping and Hydraulic modeling	DMA demarcation and installation of Bulk flow meters	Selection and implementation of pilot zone for 24 x 7	Introduce metering and volumetric tariff	Implementation in the whole city*	TOTAL COST FOR IMPLEMENTING 24 X 7 # (Rs crore)
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Phasewise implementation plan



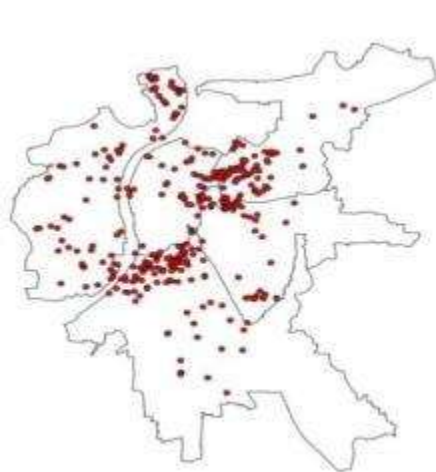
Group 3: Need to first augment water sources	Wardha								34
	Jalna								106
	Latur								115
	Parbhani								155

GIS based Slum Information System

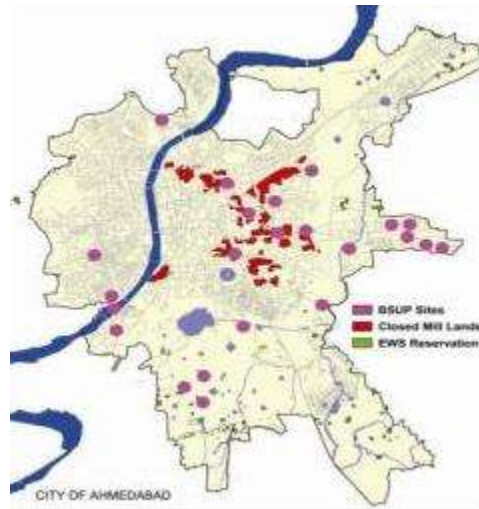
Tools for Decision Making

- Helps in policy decisions and effective planning; ranging from a single slum settlement to the entire city.

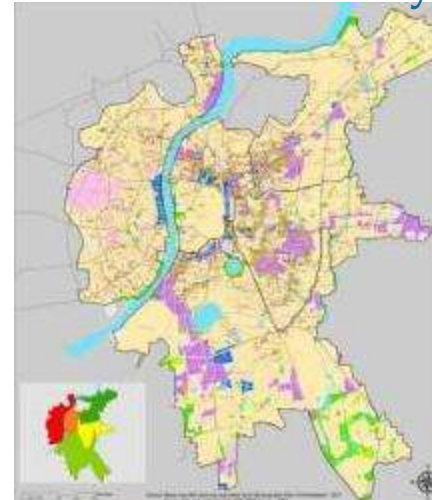
Identification of slums that need to be relocated



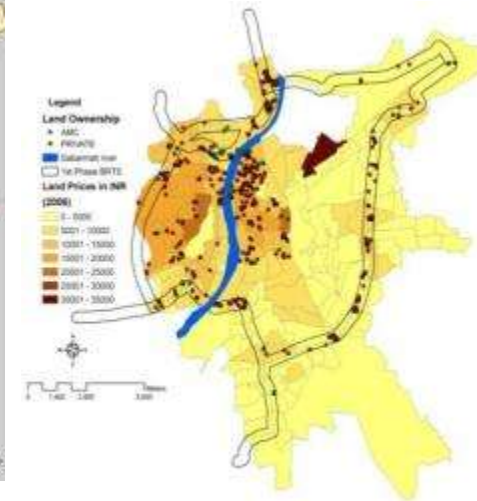
Land bank Identification



Location of slums w.r.t. land use of city



Slum pockets located on High land price



- Identify the slums under different various slum redevelopment model
- Decision making in Infrastructure Planning and implementation
- Allows the inter-departmental linkages and regular updating of slum database

Demonstration: Web Enabled GIS Based MIS for Slums

AHMEDABAD MUNICIPAL CORPORATION



Map Browser Analysis About Us Exit



Name of Zone

WEST

Name of Wards

VASNA

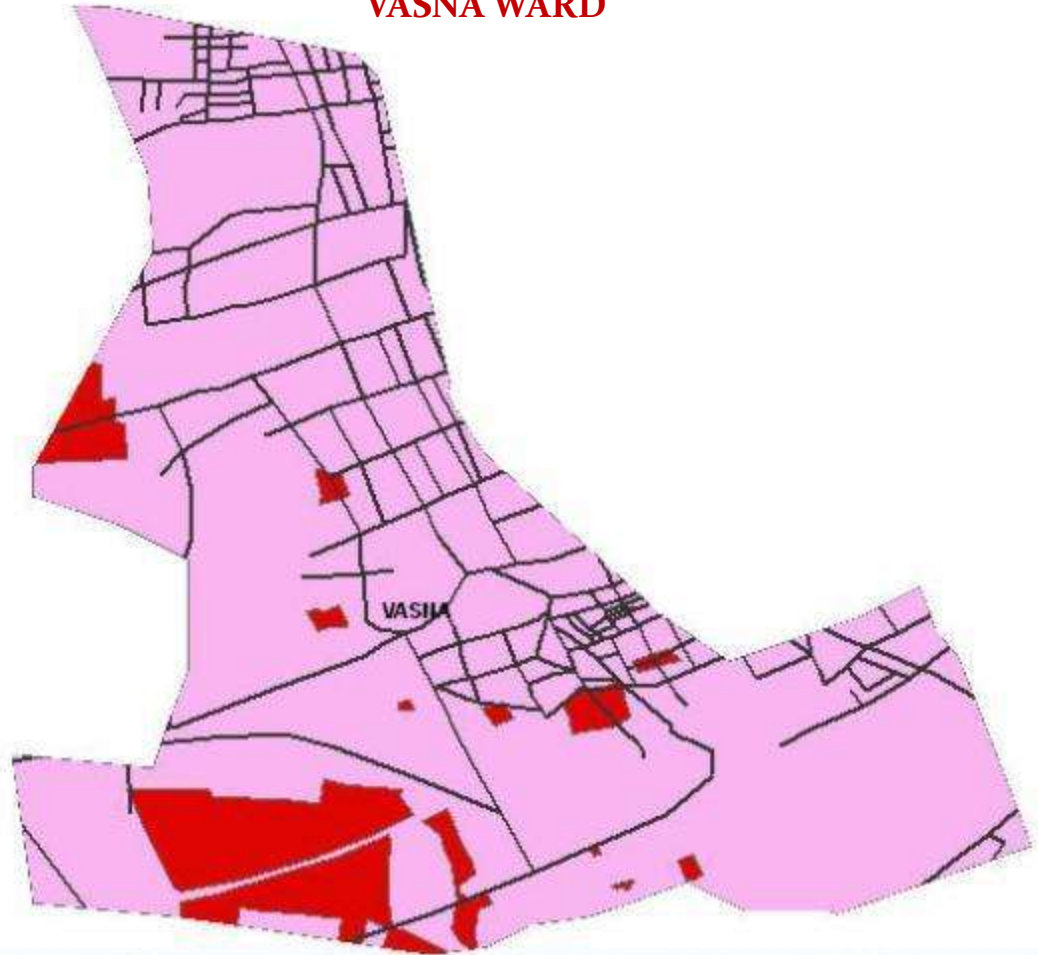
Name of Slums

No. of Slums : 16



SLUM

VASNA WARD



Demonstration: GIS Based MIS for Slums: Jadiba Nagar

AHMEDABAD MUNICIPAL CORPORATION



Map Browser Analysis About Us Exit



Name of Zone
WEST

Name of Wards
VASNA

Name of Slums
JADIBA NAGAR

SLUM : JADIBA NAGAR

No. of Huts : 146



Web enabled GIS based MIS module will be linked with e-governance through AMC intranet System

Summing Up

24

- Setting up **robust performance assessment systems** is critical for accountability for improved service delivery
- Performance benchmarking not as a one-off report but as a **mainstreamed annual cycle** by state and local governments
- Explicit **inclusion of equity, non-sewered sanitation**
- Linking **measurement to improvement** with simple **support tools** and consultative processes
- Ensuring **local ownership and dissemination**



Thank You

www.pas.org.in

www.spcept.ac.in

meeramehta@cept.ac.in