

SaniPlan: A Performance Improvement Planning Model

A Step by Step Guide for Users

Manual Part II

SaniPlan

Conventionally, city engineers identify projects for infrastructure provision; consultants prepare a detailed project report and it is implemented with grant funding from donors or central/provincial governments. In both cases, outputs are discussed in physical terms but seldom in terms of improvement in service levels. The focus is on projects rather than service improvements.

SaniPlan provides a multi-year planning framework with a focus on improving performance in services. A key feature of the model helps develop a feasible financing plan for both capital and operating expenditures of the improvement proposals.



The model is built around following three modules



Performance Assessment module helps assesses the entire service chain of the three sectors and identify gaps in service provision through performance indicators developed under the PAS Programme.

Action Planning module helps identify actions needed to improve services. Specific actions for data improvement, improvement in existing system, building new infrastructure and policy interventions have been built-in. The user can tailor each selected action for phasing, quantify improvement and costing (both capital and operational). Different scenarios can be developed to target local priorities.

Financing Plan module helps to develop a feasible financing plan for capital and operating expenditure. The Financing Plan is developed through an iterative process with key decisions related to funding sources for each action, internal transfers, and tariff revisions including introduction of new taxes (e.g. a local sanitation tax).

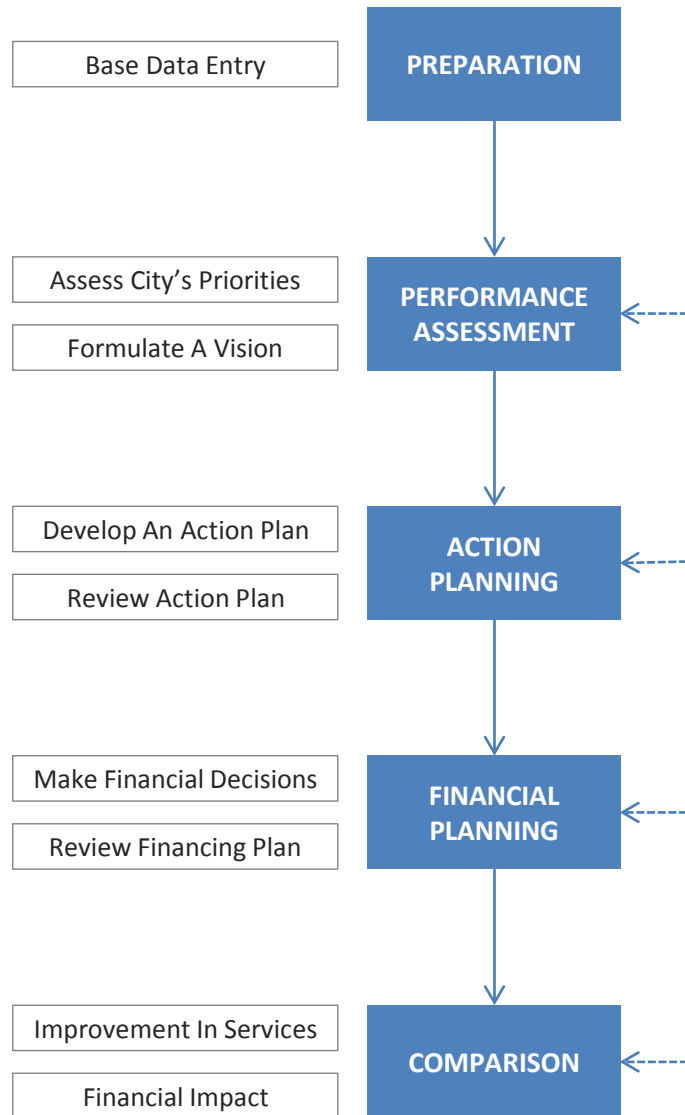
Using SaniPlan

Use of the model involves following 5 stages:

- 1. Preparation** – Information related to existing services (water supply, wastewater and SWM) is entered in the model, their finances and overall finances of the local government are also entered
- 2. Performance assessment** – The model measures performance of the city using information entered by the user. This can be compared with other entities/service providers to formulate a vision, decide priorities and identify possible improvement actions
- 3. Action Planning** – Developing an action plan by designing (phasing, quantum of improvement, capital and O&M cost, revenue generation) of individual improvement actions and assessing their impact on services
- 4. Financial planning** – preparation of a feasible financial plan that considers both capital expenditure and O&M of old and new assets
- 5. Comparison** – involves comparison of different improvement alternatives in terms of improvement in services, capital and O&M expenditure and impact on consumer tariffs

As the figure alongside presents, though the five stages follow a sequence, the entire process is very iterative in nature.

These five stages are arranged sequentially as sheets in an excel workbook, table in the following sheet describes the contents of each worksheet in brief.



SaniPlan - Structure

Stage	Worksheet name	Description/content
Preparation	General info	Name of the city, base year, currency, counting system, contact persons in the city and the organisation/s using the model
	WSS info	Base data of demography, water supply, sanitation and SWM services for base year
	Finance info	Municipal finance information for the last 6 years and demand collection balance statements for the last three years
	Indicator info	Indicator values for the province, peer group and/or cities in the vicinity with which the city would like to compare their performance
Performance Assessment	Perf Assessment	Analysis of present performance levels leading to identification of sectoral goals and improvement priorities
Action Planning	WS Plan	Improvement actions for water supply sector
	WW Plan	Improvement actions for waste water sector
	SWM Plan	Improvement actions for SWM sector
	Summary of PIP	Impact of improvement actions on service levels across plan period
Financial Planning	Action Plan Finance	Review of financial implications from Action plan
	Financial projections	Forecasting of municipal finances based on past trends
	Financing Plan	Preparation of feasible capital and operating plan for local government
Comparison	PIP options	Enables comparison of PIP options internally
	Dashboard	For using an external dashboard to compare sanitation improvement plans

This Document

This document is the second part of the 3 part manual for SaniPlan.

Part 1 – Approach

This paper describes the overall approach of SaniPlan.

SaniPlan takes a structured approach to planning sanitation services in cities. Based on local priorities cities can iteratively select key actions required for service improvement, and prepare a Financing Plan that allocates funding for both capital and operating expenditure.

Part 2 – Illustrated Step-by-Step guide for users:

This document provides a step by step guidance for using the SaniPlan model.

Saniplan is built around three functional modules: Performance Assessment, Action Planning, and Financial Planning. It has a Preparation stage where all relevant data are to be keyed in, and a post-Planning comparison stage where various scenarios planned can be compared before final decision is made.

Part 3 – Application

This document takes the user through a real use case of SaniPlan, in a bid to help the user familiarise with the tool better.

A citywide Faecal Sludge Management (FSM) Plan was prepared for Wai Municipality in Maharashtra. The user is guided through the various actions required for achieving the FSM objectives, the activation of respective actions in the excel model, the aspects of financial planning etc. Different scenarios are developed based on the choice of different toilet types, conveyance options, treatment technologies, and financing options. The comparison of these scenarios using the comparison tool is demonstrated.

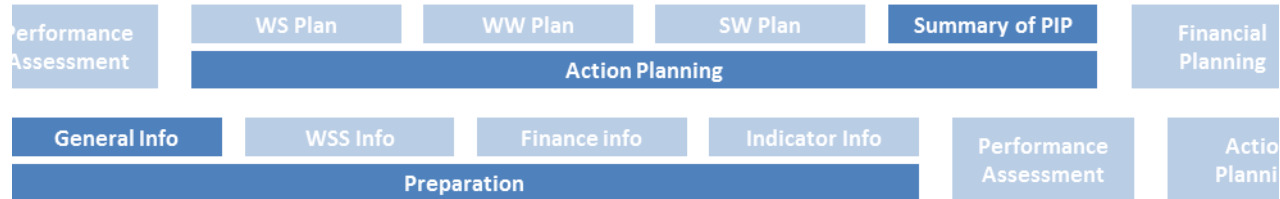
General Instructions

The top portion of each sheet contains some standard elements (numbered in image below and explained alongside)

The screenshot shows the top portion of a spreadsheet sheet. At the top, there is a dark blue header bar with the text "PERFORMANCE ASSESSMENT SYSTEM PROJECT" and a logo "pas performance assessment system". Below this is a lighter blue bar with "SANIPLAN - A Performance Improvement Planning Model". The main content area is divided into sections: "MODULE I: PERFORMANCE ASSESSMENT" (callout 1), "WATERSUPPLY, WASTEWATER AND SWM SECTOR INFORMATION" (callout 2), and a sub-section with tabs for "Demography", "Water Supply", "FSM and WW", and "SWM". The "Water Supply" tab is active, showing instructions for using the sheet (callout 3) and a "Reset" button (callout 5) and a "Print" button (callout 6). The instructions text includes: "Information related to water supply, FSM and wastewater and solid waste management services has to be filled for the Base year. For each sector, details are to be captured across full service chain. Source of information, assumption if any or any other information related to entered values that other users of the model will need should be entered in remarks section. A list of information required is provided below: WATER SUPPLY: Water production, treatment, distribution, connections and taxes/charges; FSM and WASTEWATER: Details of sewerage and non-sewerage areas, toilet facilities, onsite sanitation systems, wastewater and/or FS treatment, disposal, reuse, taxes/charges; SOLID WASTE: Solid waste generation, collection, transportation, disposal & treatment and taxes/charges".

- 1 Name of the **module**
- 2 Name of the **sheet**
- 3 **Navigation bar** for the sheet
- 4 **Instructions** for using the sheet
- 5 **Reset:** This switch resets the sheet and enables a fresh start by **DELETING** all the input cells in the sheet.
- 6 **Print:** This switch prints the sheet for a pre-defined settings. Print settings for all the sheets enable legible prints on A4 sized papers

In the following sections, a band shown as seen at the bottom of the sheet helps navigate through the remaining document. The relevant stage is expanded to include all the sheets involved. The stage and sheet are highlighted as seen in images alongside. **All the boxes are hyperlinked for easy navigation.**



Preparation

Performance Assessment

Action Planning

Financial Planning

Comparison

6

Preparation

This is the first stage and as the name suggests involves ground work for use of the model. In this phase, information of the three services (or only the service for which improvement is being planned) is to be entered. If the model is to be used for financial planning, then information of finances of the local government is also to be entered.



Calibration of Plan period in model

Base year of the model	2014	1
Start year of model	2015	
End year of model	2024	
Date of initiation of FSM Planning process	June 2012	
Date of completion of FSM Planning process		

For financial years that span over 2 calendar years, mention the starting year. Ex for FY-2012-13, mention 2012

Details of the city

Name	Wai
Block/ Taluka	Wai
District	Satara
State/Province	Maharashtra
Country	India
Class of local government	Class C
Mayor/President	Mr Bhushan Gaekwad
Commissioner/Chief Officer	Ms Asha Raut
Telephone No.	
Fax No.	
Email ID	cowai@gmail.com
Website	
Currency	INR
Counting system	Lakh - Crore

2

3

Details of city officials involved in FSM planning process

Details of key contact persons	Name	Designation	Phone No.	E-Mail
General Administration				
Water Supply	Mr Gaekwad	Engineer		
Wastewater	Mr Gosavi	Sanitary inspector		
Solid waste				
Urban community development (UCD)				
Accounts				
Tax department				

Details of team members/other consultants involved in FSM planning process

Name	Organisation	Designation	Phone No.	E-Mail
Aasim	CEPT	RA		aasim@gmail.com
Upasana	CEPT	RA		upasana@gmail.com
Paresh	CEPT	RA		paresh@gmail.com
Saurabh	Urcon			

1 Base year – Financial year in which the model is being used. All the sector information provided is assumed to be for this year. Finance related information for this financial year and preceding five years can be used in the model.

2 Currency - The dropdown list against this input includes the following currencies:

Code	Currency	Code	Currency
BDT	Bangladeshi taka	LKR	Sri Lankan rupee
BTN	Bhutanese ngultrum	NPR	Nepalese rupee
CNY	Chinese yuan	PHP	Philippine peso
EUR	Euro	PKR	Pakistani rupee
GBP	Pound sterling	THB	Thai baht
IDR	Indonesian rupiah	USD	United States dollar
INR	Indian rupee	VND	Vietnamese dong

The model is currency neutral and change in currency even at a later stage does not change any of the figures in the model.

3 Counting system –Globally, big numbers are counted in millions, billions, etc., many Asian countries use lakhs, crores, etc. These two systems are provided as dropdown list in this cell. **This input is used for back-end calculations and therefore shouldn't be altered after the finance information has been entered.**

WATERSUPPLY, WASTEWATER AND SWM SECTOR INFORMATION

- 1 Demography
- Water Supply
- FSM and WW
- SWM

Instructions for using this sheet

Information related to water supply, FSM and wastewater and solid waste management services has to be filled for the Base year. For each sector, details are to be captured across full service chain. Source of information, assumption if any or any other information related to entered values that other users of the model will need should be entered in remarks section. A list of information required is provided below:

WATER SUPPLY: Water production, treatment, distribution, connections and taxes/charges

FSM and WASTEWATER: Details of sewer and non-sewered areas, toilet facilities, onsite sanitation systems, wastewater and/or FS treatment, disposal, reuse, taxes/charges

SOLID WASTE: Solid waste generation, collection, transportation, disposal & treatment and taxes/charges

1 Navigation bar

2 **Import data from checklist:** For cities using PAS portal to monitor their service levels, some of the required information is available in its checklist that can be downloaded by logging in at www.pas.org.in. After clicking on this button, browse to provide path of checklist, the information will be imported in this sheet. **One needs to check for 'NA' and 'ND' values imported from checklist as they lead to value errors in dependent cells**

3 **Remarks:** Source of information, assumptions (if any), or any other information that may be needed in future or by other users should be entered here.

I Demography information

2 Import data from Checklist

A Population details

Sr. No.	Particulars	Census 2001	Census 2011	Remarks
1	Total population	31,110	36,053	
2	Slum population	1,500	2,140	
3	Total number of households	6,538	7,580	
4	Total number of slum households	298	342	

B Population growth rate assumptions

Sr. No.	Particulars	Unit	Value	Remarks
1	Decadal population growth rate: 2001 - 2011	Based on actual growth rate for 2001 and 2011	15.3%	
2	Decadal population growth rate: 2011 - 2021	Estimated growth rate	15.3%	

C Number of properties

Sr. No.	Particulars	Residential properties	Non-residential	Remarks
1	Total number of properties in city at present <i>NOTE: Count all the properties irrespective of whether they are assessed for property tax or not</i>	7,948	1,709	
2	Annual growth rate for increase in properties	0%	5%	
3	Total number of properties assessed for taxation <i>NOTE: Count only those properties that are assessed in present</i>	7,948	1,709	

D City Area and wards

Sr. No.	Particulars	Unit	Value	Remarks
1	Jurisdictional area of city	Sq. km	3.6	
2	Inhabited area of city	Sq. km	1.4	
3	Number of municipal wards	Numbers	19	
4	Number of slum settlements in city	Numbers	4	

MUNICIPAL FINANCE INFORMATION

Municipal Finance Water Supply FSM and WW SWM Taxes/User charges

Availability and status of budgets

Particulars	2009	2010	2011	2012	2013	2014
Availability of budget (tick if available)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Select type of budget figures provided for each year		Actuals	Actuals	Actuals	Revised estimates	Budget estimates
Abbreviation for budget type		(A)	(A)	(A)	(RE)	(BE)

I Municipal revenue and expenditure

All figures in INR Lakhs

Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)
	Opening balance		315.2	300.2	473.3	743.5	858.0
	Property tax		85.8	86.9	142.1	200.7	250.1
	Other taxes and charges		72.6	64.6	98.0	174.3	182.5
	Other receipts (non-tax + grants)		601.6	656.0	761.9	1,013.9	971.4
	Total revenue receipts	-	760.0	807.5	1,002.0	1,389.0	1,403.9
	Revenue expenditure		802.1	724.7	918.3	1,169.3	1,320.7
	Capital receipts		196.5	644.0	128.9	962.6	688.2
	Capital expenditure		188.3	958.6	215.0	939.1	471.2

II WSS revenue and expenditure

All figures in INR Lakhs

A Water Supply							
Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)
	Water related taxes and charges						
	Other receipts						
	Total revenue receipts						
	Revenue account expenditure						
	Capital receipts						
	Capital expenditure						
B FSM and Wastewater							
Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)
	Wastewater related taxes and charges	-	-	-	-	-	-
	Other receipts	-	-	-	-	-	-
	Total revenue receipts	-	-	-	-	-	-

1 Availability and Status of budgets: Financial information of the base year and preceding 5 years can be entered in the SaniPlan. One need to tick in the respective checkbox to indicate availability of information for each year. **This information is available through budgets of the local government as well as audited financial statements.** Where available, the latter should be preferred over the former.

In a typical budget document, budget estimates (BE) for the coming FY, revised estimates (RE) for current year and Actuals for previous n years is available. If the information is available, one also needs to indicate if the information is actual, revised estimate or budget estimate in the following row.

Particulars	2009	2010
Availability of budget (tick if available)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Select type of budget figures provided for each year		Actuals
Abbreviation for budget type	Actuals	(A)
	Revised estimates	
	Budget estimates	

2 Municipal Finance: Collated information for all the departments (incl. water supply, sanitation and SWM) of the municipality is to be entered here.

3 Units: All the information in this sheet is entered in units mentioned here ([selected earlier](#)) unless otherwise specified

II WSS revenue and expenditure All figures in INR Lakhs

A Water Supply							
Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)
	Water related taxes and charges						
	Other receipts						
	Total revenue receipts						
	Revenue account expenditure						
	Capital receipts						
	Capital expenditure						

B FSM and Wastewater							
Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)
	Wastewater related taxes and charges	-	-	-	-	-	-
	Other receipts	-	-	-	-	-	-
	Total revenue receipts	-	-	-	-	-	-
	Revenue expenditure	55.5	68.5	84.9	111.6	121.2	108.0
	Capital receipts	-	-	-	-	-	-
	Capital expenditure	-	-	-	-	-	-

C Solid waste management							
Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)
	SWM related taxes and charges						
	Other receipts						
	Total revenue receipts						
	Revenue expenditure						
	Capital receipts						
	Capital expenditure						

III Taxes and user charges All figures in INR Lakhs

A Demand, Collection and Balance statement							
Sr. No.	Particulars	2012 (A)		2013 (RE)		2014 (BE)	
		Demand	Collection	Demand	Collection	Demand	Collection
CURRENT DEMAND							
1	General property tax	112.6	94.9	111.6	91.8	111.6	91.8
2	Water supply related taxes and charges						
3	FSM and wastewater related taxes and charges						
4	Solid waste related taxes and charges						
5	Others	111.2	90.4	134.7	112.5	134.7	112.5
	Total	223.8	185.3	246.3	204.3	246.3	204.3
ARREAR DEMAND							
1	General property tax	66.2	46.9	37.6	19.3	37.6	19.3
2	Water supply related taxes and charges						
3	FSM and wastewater related taxes and						
4	Solid waste related taxes and charges						
5	Others	53.2	40.0	52.0	37.8	52.0	37.8
	Total	119.4	86.9	89.6	57.1	89.6	57.1

4 WSS Finance: Information for Water supply, wastewater and FSM and SWM are to be entered separately. **If the model is being used for any one of the three sectors, information of only that sector should be entered.**

5 Taxes and User Charges: Demand and collection of all taxes and user charges for base year (collection may have to be estimated based on collection efficiency of previous year) and two preceding years are to be entered here.

Typically, local governments levy property tax or consolidated property tax on all properties in their jurisdiction and levy either tax or user charges for each of the services. Bills are raised at the beginning of the financial year and collected over next few months.

Generally, this information is readily available with the accounts department from 'Demand Collection Balance' (DCB) table

If the model is being used for any one of the three sectors, information of only that sector should be entered.

Information of Key Performance Indicators

Water Supply

WW and FSM

Storm Water

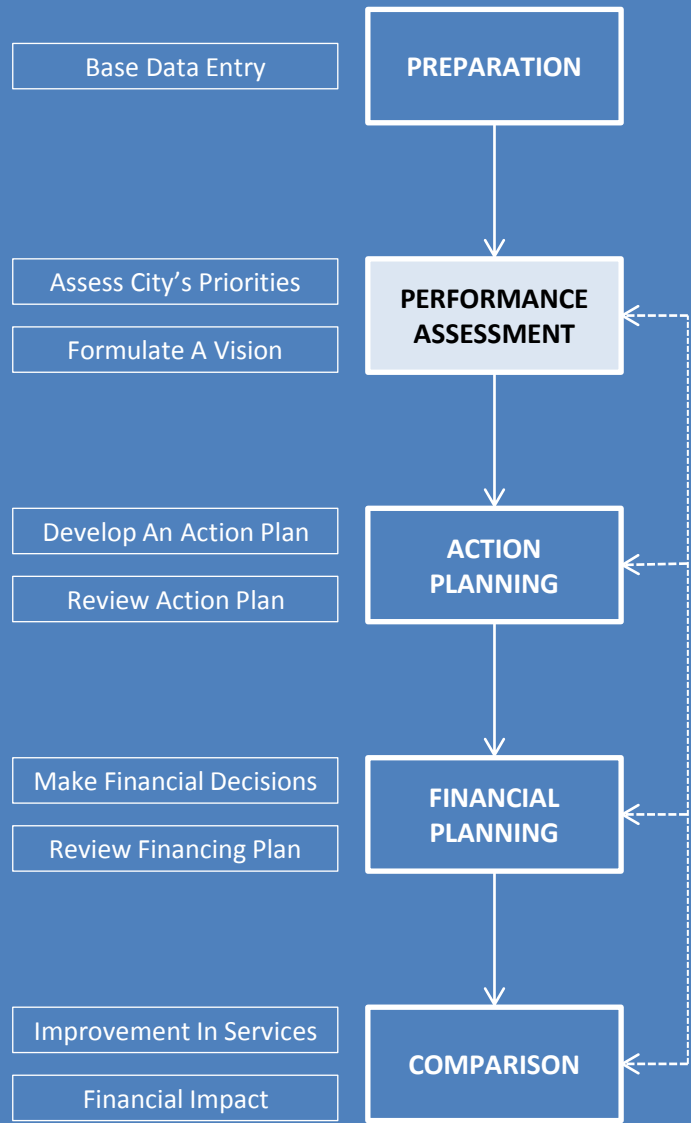
SWM

KPI	Benchmark	Unit	Province avg	Peer group	City 1	City 2	ABC	XYZ
WATER SUPPLY SERVICES								
Coverage of individual water supply connections in city	100	%	100	75	68	74	72	73
Total households with direct water supply network connection as percentage of total households in city.								
Coverage of individual water supply connection in slums	100	%	58	35	55	59	54	63
Slum households with direct water supply network connection as percentage of total slum households in city.								
Per Capita supply of water at consumer end	70	lpcd	88	117	89	92	80	88
Total water supplied to consumers expressed by population served per day.								
Extent of metering of water connections	100	%	0	10	10	10	12	15
Number of functional metered water connections as percentage of total water supply connections.								
Extent of Non revenue water	15	%	20	23	22	17	20	23
Difference between total water produced (ex-treatment plant) and total water sold expressed as percentage of total water produced.								
Continuity of water supply	24	hours/day	1	1	2	1	1	2
Average number of hours of pressurized water supply per day.								
Efficiency in redressal of customer complaints	80	%	90	72	92	90	92	91
Number of water supply related complaints redressed within 24 hours as percentage of total number of water supply related complaints received.								
Quality of water supplied	100	%	100	87	96	97	94	98
Percentage of water samples that meet or exceed specified potable water standards as defined by CPHEEO.								
Efficiency in collection of WS charges	90	%	58	41	50	67	64	59
Current year revenues collected, expressed as percentage of total operating revenues, for the corresponding time period.								
Cost recovery in WS services	100	%	69	27	66	65	68	76
Total operating revenues expressed as percentage of total operating expenses incurred in the corresponding time period.								
FSM and WASTE WATER SERVICES								
Coverage of Toilets	100	%	75	77	77	77	72	74
Extent to which citizens have access to a toilet (whether individual or community) in a service area.								
Coverage of sewage network services	100	%	42	62	45	39	37	36
Extent to which underground sewerage (or sewage collection network) has reached out to individual properties across service area.								
Collection efficiency of sewage network	100	%	81	78	90	83	90	55
Quantum of wastewater collected as percentage of normative sewage generation in the city.								
Adequacy of Sewage treatment capacity	100	%	96	98	90	91	93	89
Secondary treatment (removing oxygen demand and biological solids) capacity available as percentage of normative wastewater generated.								
Extent of reuse and recycling of treated wastewater	20	%	12	10	6	5	7	2

1 KPI: This column lists all the Key Performance Indicators followed by their definitions. The navigation bar at the top can be used for easy browsing between the four sectors.

2 Entities for comparison: Users can compare performance of their city with average of the province/state and peer group as well as four other entities of their choice - leading or neighboring cities.

For Indian states that use our online module for Service Level Benchmarking, this information for the state, peer groups and cities is available on www.pas.org.in



Performance Assessment

This stage enables the user to identify priorities based on the city's current service performance by comparing its Key Performance Indicators (KPIs) against the nationally suggested benchmarks as well as performance of other entities. It also helps identify specific local/ contextual areas that need improvement by reviewing relevant charts for each of the four KPI themes viz; Access and coverage, Service levels and quality, Efficiency in service operations, and Financial Sustainability).

PERFORMANCE ASSESSMENT SYSTEM PROJECT



SANIPLAN - A Performance Improvement Planning Model

MODULE I: PERFORMANCE ASSESSMENT

Reset Print

PERFORMANCE ASSESSMENT

Water Supply

FSM and WW

Solid Waste Management

Sectoral Vision

Instructions for using this sheet

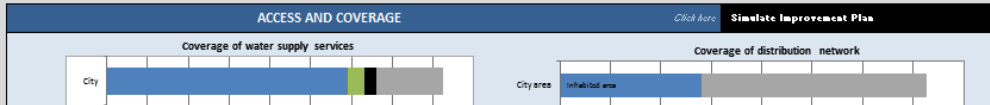
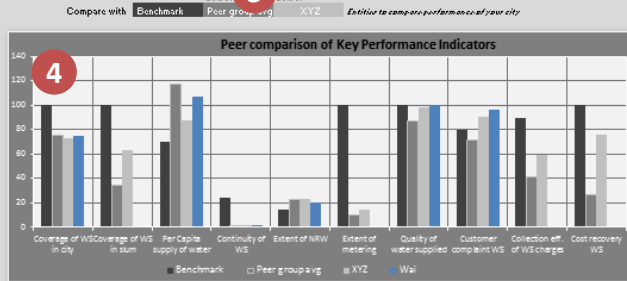
This sheet enables the user to identify priorities based on the city's current service performance by comparing the Key Performance Indicators (KPIs) against the nationally suggested benchmarks as well as performance of peers as specified by the users. It also helps to identify specific local contextual areas that need improvement by reviewing the relevant charts for each of the four KPI themes (I. Access - coverage and equity, II. Service levels and quality, III. Efficiency in service operations, and IV. Financial Sustainability). Actions are suggested for each theme. It is also recognized that each action may affect more than one KPI as illustrated in the Action-KPI matrices. Actions are grouped into four categories depending on the nature of their implementation.

A. Data improvement measures	These actions will help improve data quality which is often poor, though will not directly impact the performance levels.
B. Process/policy improvement measures	These actions highlight the process or policy areas that need to be addressed in implementation.
C. Existing system improvement measures	These actions highlight the scope for improving existing infrastructure which may help achieve desired results at low-cost.
D. Create new infrastructure	These actions include new infrastructure projects that can be undertaken.

The full set of selected actions helps to define an overall sectoral vision for improvement - goals and planning priorities. This chart (Row 266 onwards) is generated by selecting all relevant actions using the check box provided against each KPI and action.

I WATER SUPPLY

Key Performance Indicator	Value
<input type="checkbox"/> Coverage of individual water supply connections in city	75%
<input checked="" type="checkbox"/> Coverage of individual water supply connection in slums	0%
<input type="checkbox"/> Per capita supply of water at consumer end (lpcd)	107
<input type="checkbox"/> Continuity of water supplied (hours/day)	1.50
<input type="checkbox"/> Extent of Non-revenue water	20%
<input type="checkbox"/> Extent of functional metering of water supply connections	0%
<input type="checkbox"/> Quality of water supplied	100%
<input type="checkbox"/> Efficiency in redressal of customer complaints	36%
<input type="checkbox"/> Efficiency in collection of water supply charges and taxes	0%
<input type="checkbox"/> Cost recovery in water supply services	0%



1 **Performance:** This table presents the performance of the city in terms of Key performance indicators.

2 Check boxes are provided besides each indicator. One should check this box if the indicator needs improvement. The checked indicator will get highlighted (as shown in figure below). The KPI will also be listed in *Sector Goals* at the bottom of the sheet (as seen in image below)

<input type="checkbox"/> Coverage of individual water supply connections in city	75%
<input checked="" type="checkbox"/> Coverage of individual water supply connection in slums	0%
<input type="checkbox"/> Per capita supply of water at consumer end (lpcd)	107

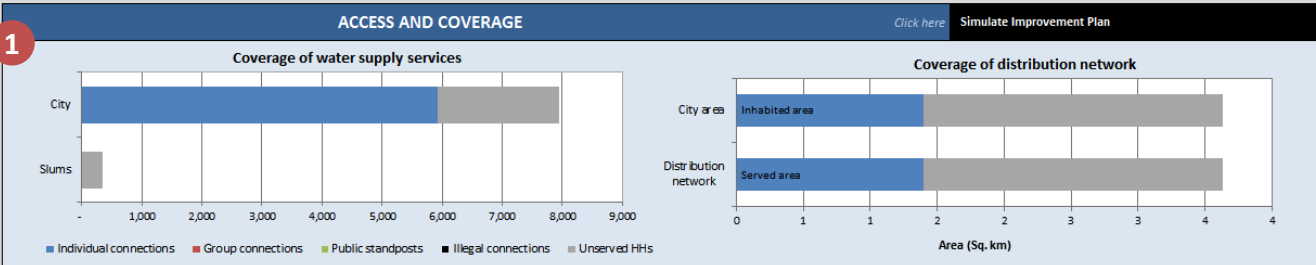
3 Select the entities city would like to compare its performance with. The information for these entities is provided in [Indicator info sheet](#)

Compare with: Benchmark Peer group avg XYZ Entities to compare performance of your city

Select Province avg Peer group avg City 1 City 2 ABC XYZ

4 This chart compares performance of the city with entities selected above

1



1

Theme wise LAIs: Main LAIs detailing KPIs are presented here. This helps to delve deeper and understand exact nature and quantum of the problem.

2

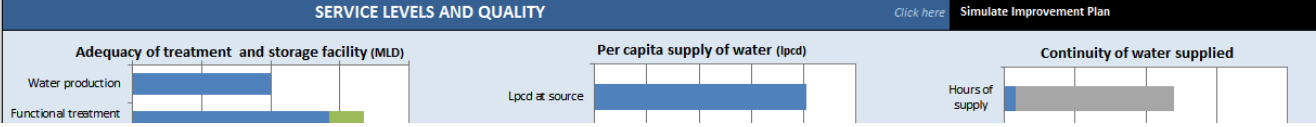
Impact of actions on KPIs

Actions for performance improvement	Coverage of individual connections in city	Coverage of individual connections in slums	Per capita supply of water	Continuity of water supplied	Extent of non-revenue water	Extent of functional metering	Quality of water supplied	Efficiency in redressal of complaints	Efficiency in collection of water supply charges	Extent of water supply cost recovery
A) Data improvement measures										
<input type="checkbox"/> Household survey to assess water supply services										
<input type="checkbox"/> Computerise water supply records										
B) Process/Policy improvement measures - No cost										
<input type="checkbox"/> Process improvement for new water supply connection applications										
<input type="checkbox"/> Policy for providing individual water connections in slums										
C) Existing system improvement measures - Low cost										
<input type="checkbox"/> Regularise unauthorised water supply connections										
<input type="checkbox"/> Increase connections using existing water supply distribution network										
<input type="checkbox"/> Convert stand posts/public taps into group connections										
D) Create new infrastructure - High cost										
<input type="checkbox"/> Lay new water supply distribution network										
<input type="checkbox"/> Lay internal infrastructure of water supply lines in slums										

The KPIs and LAIs are classified into 4 themes viz;

1. Access and Coverage
2. Service levels and quality
3. Efficiency in service operations
4. Financial sustainability

3



2

Action – KPI Matrix: Every action will make an impact on more than one KPI. The Corresponding yellow cell in this matrix indicate that the action will make an impact on the indicator.

3

Check boxes are provided besides each action. One should check this box if the action is locally relevant. indicator needs improvement. The checked action will get highlighted (as shown in figure alongside). The action will also be listed in *Planning Objectives* at the bottom of the sheet (as seen in image alongside)

- Regularise unauthorised water supply
- Increase connections using existing w
- Convert stand posts/public taps into g

The actions are categorised as follows;

1. Data improvement
2. Process/policy improvement
3. Existing system improvement
4. Create new infrastructure

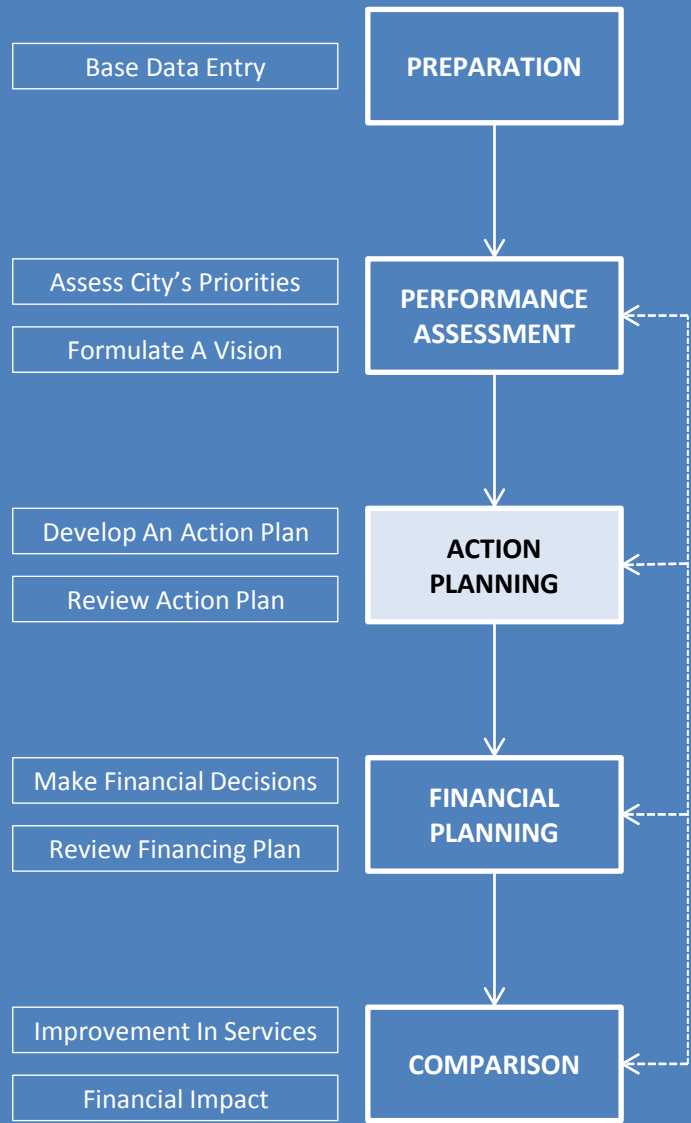
SECTORAL VISION AND PRIORITIES FOR IMPROVEMENT

WATER SUPPLY	WASTEWATER	SOLID WASTE
SECTOR GOALS 1		
Coverage of individual water supply connection in slums	Coverage of households with individual toilets in city	Extent of segregation of solid waste
Continuity of water supplied (hours/day)	Coverage of households with individual toilets in slums	Extent of solid waste recovered
Extent of functional metering of water supply connections	Coverage of households with adequate sanitation system	Extent of cost recovery in solid waste services
Cost recovery in water supply services	Efficiency of wastewater and septage collection system	
	Adequacy of wastewater and septage treatment capacity	
	Quality of wastewater and septage treatment	
	Extent of reuse/recycling of treated wastewater and septage	
	Extent of cost recovery in wastewater services	
PLANNING OBJECTIVES 2		
Household survey to assess water supply services	Surveys and monitoring of open defecation sites	Computerise solid waste records
Computerise water supply records	Policy for providing sanitation services in slums	Prepare management plan to efficiently deploy manpower and resources
Regularise unauthorised water supply connections	Improve condition of existing individual toilets by providing safe sanitation disposal system	Procure equipments for street sweeping and drain cleaning
Increase connections using existing water supply distribution network	Improve condition of existing Public toilets	Procure equipments for door to door solid waste collection (collection bins, ghantagaadis, containerised cycle rickshaw, handcarts etc.)
Lay internal infrastructure of water supply lines in slums	Information, education and communication (IEC) campaigns for sanitation awareness	Information, education and communication (IEC) campaign for awareness of solid waste management
Improve water supply quality surveillance	Construct new individual toilets	Engage with private service providers to provide solid waste services
Repair existing water treatment plant to improve water quality	Construct new group toilets	Track movement of solid waste transportation vehicles to achieve optimum operational efficiency
Conduct water audit	Process improvement for new sewerage connection applications	Improve processes for maintaining daily logs of solid waste across S/WM value chain
Map water supply and wastewater network	Improve processes for regular cleaning of drains and sewers	Segregation of collection and transportation of solid waste
Improve processes for regular checking of water losses	Upgrade open surface drains to closed drains for storm water drainage	Install litter bins at public places
Policy to introduce universal consumer meters	Lay new settled sewer for wastewater conveyance	Repair existing solid waste processing plant
Improve processes for management of consumer complaints	Procure new suction emptier trucks	Procure new vehicles for solid waste collection and transportation
Reduce losses at water treatment plant	Construct/augment fecal sludge treatment plant	Construct new solid waste transfer station
Reduce losses in treated water transmission network	Construct/augment treatment plant for effluent and sullage	Install weigh bridges to quantify solid waste collected and transported
Improvement in water supply distribution network	Construct closed surface drains for storm water drainage	Construct new solid waste processing plant
Plugging of leakages at valves		Improve processes for management of consumer complaints
Replacement of service line connections		Process to obtain authorisation from concerned authorities and furnish annual report of compliance
Improve consumer grievance redressal system		Improve consumer grievance redressal system

1 Sector Goals: All the KPIs selected as discussed [earlier](#) are listed here.

2 Planning Objectives: All the actions selected as discussed [earlier](#) are listed here.

These actions are also highlighted in respective plan sheets ; discussed in more detail [here](#)



Action Planning

This stage involves designing (phasing, quantum of improvement, capital and O&M cost, revenue generation) of all or some improvement actions identified earlier and assessing their impact (both individually and collectively) on service levels

I Access and coverage

1

Data improvement measures

Unit	Metric	Description	2015	2016
WW1	Household coverage in sewer main/collector services	Indicator	Number of households in city	7,341
		Improvement	Percentage of households which coverage to be extended	11
		Finance	Per household cost of service	Cost/household
WW2	Coverage of non-servicing of open defecation sites	Indicator	Number of open defecation sites	11
		Improvement	Percentage of open defecation sites	11
		Finance	Total cost to extend the service	Cost/open defecation site
WW3	Coverage of non-servicing of public premises	Indicator	Number of public premises	11
		Improvement	Percentage of public premises	11
		Finance	Total cost to extend the service	Cost/public premises

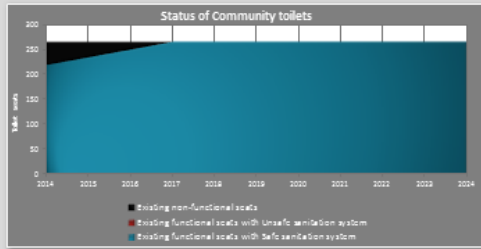
Process/Policy improvement measures

Unit	Metric	Description	2015	2016
WW4	Multiple	Rating for providing sanitation services in slums		

Existing system improvement measures

Unit	Metric	Description	2015	2016
WW5	Improve condition of existing individual toilets by providing safe sanitation disposal system	Indicator	Number of households with septic tanks connected to sewerage network	183
		Improvement	Number of households with septic tanks connected to sewerage network	2
		Finance	Total number of households with septic tanks connected to sewerage network	131
		Indicator	Number of households with septic tanks connected to sewerage network	131
		Improvement	Number of households with septic tanks connected to sewerage network	183
		Finance	Block cost of upgrading pit latrine to septic tanks	83
		Indicator	Block cost of upgrading pit latrine to septic tanks	18,188
		Improvement	Block cost of upgrading pit latrine to septic tanks	183
		Finance	Block cost of upgrading pit latrine to septic tanks	183
		Indicator	Block cost of upgrading pit latrine to septic tanks	183

2



1 **Improvement actions:** The three plan sheets viz; WS Plan, WW Plan and SW Plan are essentially a list of improvement actions for water supply, wastewater and Solid waste management sectors respectively.

2 Relevant charts show impact of improvement action/s on services and finances. These graphs display collective impact of all the actions in each of the four themes (listed [here](#)). These graphs are intended to guide users calibrate the actions, for example if the desired outcome is not achieved a user can recalibrate relevant action/s.

Service related graphs have solid fills while finance related graphs have translucent fills.

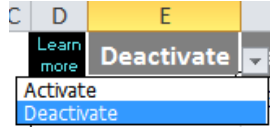
Action Planning process enables users to select and design different actions in order to meet the sector goals set out earlier. The planning objectives identified in 'Performance Assessment' sheet include a set of actions that need to be implemented in a city for improving service delivery. Each individual action needs to be activated and calibrated (explained in following [slide](#)) as output based tangible targets in these sheets. Calibration includes setting targets, timeline, costs and potential income mobilization. The full set of these calibrated actions will form an overall citywide implementation plan across the 10-year plan period.

WW02	Learn more	Deactivate	Surveys and monitoring of open defecation sites	
		Improvement	- Periodic updation time of survey	Number of years
		Finance	- Total cost to conduct the survey - Cost of updating the survey	Lump-sum Cost/ updation
WW03	Learn more	1 Activate	Computerise wastewater records	2
		Finance	- Total cost of computerisation of records - Annual recurring cost for updating the records	Lump-sum Cost/ updation

All the actions are compiled in an easy to use tabular structure as explained below. Further each action is numbered for ease in communication between different members/organisations working together

2 **Process/Policy improvement measures**

WW04	Learn more	Activate	Policy for providing sanitation services in slums
------	------------	-----------------	--



1 **Activate/Deactivate:** A simple drop-down switch on top left corner of table to 'Activate/Deactivate' an action. By activating switch, the corresponding action is included in the Action Plan.

6 **3** **Existing system improvement measures**

WW05	Learn more	3 Activate	Improve condition of existing individual toilets by providing safe sanitation disposal system	2015	2019
		Baseline	<ul style="list-style-type: none"> - Number of households with septic tanks connected to unsafe open/ closed drains for effluent disposal - Number of households with unsafe pit latrines connected to open/ closed drains - Total number of households with unsafe sanitation disposal system 	Non-slum household	Slum household
				3,816	189
				211	2
		Improvement	<ul style="list-style-type: none"> - Of the total households with unsafe sanitation disposal system, number of households to be upgraded to safe system - Onsite sanitation system with septic tanks connected to soak pits for effluent disposal (%) - Onsite sanitation system with septic tanks connected to settled sewer for effluent disposal (%) - Sewered sanitation system linked to existing sewerage network (%) - Sewered sanitation system linked to new sewerage network to be proposed (%) 	4027	191
				100%	100%
				0%	0%
				Specify details safe sanitation disposal systems for upgradation of toilets:	
		Finance	<ul style="list-style-type: none"> - Block cost of upgrading pit toilets to onsite septic tanks (per toilet) - Block cost of upgrading effluent disposal system to soak pits (RS/ toilet) - Block cost of upgradation by connecting to sewerage or settled sewer network (NOTE : For construction of connection chamber, do not consider connection cost here) - Percentage cost of upgradation to be borne Beneficiaries 	30,000	
60%	60%				
WW06	Learn more	Activate	Improve condition of existing Community toilets		
			Super-structure	2015	2017

Light blue colour of box indicates actions identified in Performance assessment sheet



The colour turns to dark blue if action is actually activated.



Any action can be activated irrespective of whether they were identified earlier or not (i.e. box being grey or light blue; colour is only indicative)

2 **Phasing:** These two cells on top most right corner of table turn blue when an action is activated. User has to fill in implementation period of the action. First cell is for starting year of action and second cell is for completing year of action.

WW02	Deactivate	Surveys and monitoring of open defecation sites	
		Improvement	- Periodic updation time of survey Number of years Lump-sum Cost/ updation
WW03	Activate	Computerise wastewater records	
		Finance	- Total cost of computerisation of records Lump-sum - Annual recurring cost for updating the records Cost/ updation

3 **Learn more:** This is a hyperlinked cell placed on top most left corner of table. It leads to another sheet 'Annexure', where detailed guidelines for calibrating the action are provided.

Learn more

2 **Process/Policy improvement measures**

WW04 **Activate** Policy for providing sanitation services in slums

3 **Existing system improvement measures**

WW05	Activate	Improve condition of existing individual toilets by providing safe sanitation disposal system	2015	2019	
		Baseline	Non-slum household	Slum household	
		Improvement	- Number of households with septic tanks connected to unsafe open/ closed drains for effluent disposal	3,816	189
			- Number of households with unsafe pit latrines connected to open/ closed drains	211	2
			- Total number of households with unsafe sanitation disposal system	4,027	191
		Finance	- Of the total households with unsafe sanitation disposal system, number of households to be upgraded to safe system	4027	191
			<u>Specify details safe sanitation disposal systems for upgradation of toilets:</u>		
- Onsite sanitation system with septic tanks connected to soak pits for effluent disposal (%)	100%		100%		
- Onsite sanitation system with septic tanks connected to settled sewer for effluent disposal (%)					
Finance	- Sewered sanitation system linked to existing sewerage network (%)				
	- Sewered sanitation system linked to new sewerage network to be proposed (%)	0%	0%		
	- Block cost of upgrading pit toilets to onsite septic tanks (per toilet)	30,000			
	- Block cost of upgrading effluent disposal system to soak pits (Rs/ toilet)				
Finance	- Block cost of upgradation by connecting to sewerage or settled sewer network (NOTE : For construction of connection chamber, do not consider connection cost here)				
	- Percentage cost of upgradation to be borne Beneficiaries	60%	60%		
WW06	Activate	Improve condition of existing Community toilets			
		Super-structure	2015	2017	

A hyperlink to lead user back to the action is provided in column 'I' in annexure sheet

4 **Baseline:** These are first set of rows in a table displaying important background information about the Action. It will facilitates decision making for the user.

5 **Improvement:** Next set of rows are for filling in information about improvement in performance envisaged by implementing the action. Instructions for calculating this are provided in Action guidelines of Annexure.

6 **Finance:** These are last set of rows to fill in basic financial details to implement the Action like basic block cost estimates, O&M expenses and revenue generation.

Costs are to be provided in current year prices, the model adjusts cost escalation for projects beginning later

To assess the impact of Action Plan, traffic light analysis is done across the 10-year time line with respect to benchmark values of KPIs. An option is also provided to customise these benchmark values from default benchmarks, which were adopted from 'Standardised Service Level Benchmarks (SSLB)' of MoUD, Gol. The first set of tables use the full set of Indicators developed under the PAS Project. A second table (row 198 onwards) also reports separately on KPIs specified by SSLB -MOUD for the 10-year period

NOTE: TO CALCULATE FINANCE INDICATORS, PLEASE FILL 'FINANCIAL PROJECTIONS' SHEET FIRST FOR FORECASTING OF BUSINESS AS USUAL SCENARIO OF MUNICIPAL FINANCE.

Traffic light analysis of Key Performance Indicators

Traffic light analysis based on KPI values compared against benchmark values

Select method for fixing traffic light ranges	Red	Orange	Green
II. CUSTOMIZE BENCHMARKS	50%	50%-90%	> 90%
I. STANDARD SLB BENCHMARKS	Defined by MoUD, Gol		
II. CUSTOMISE BENCHMARKS	Defined by user as per your priorities		

2b

Ranges for Wastewater KPIs

SLB Benchmark	Customise value	Red	Orange	Green
100%	100%	0%	50%	90%
100%	90%	0%	45%	81%

2c

I PAS performance indicators

2a View/edit ranges for traffic light analysis of Key performance indicators - pl see the table on the right column Q onwards

B Performance of FSM and Wastewater services

Performance levels	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Access and coverage											
Coverage of households with individual and group toilets in city	68%	67%	75%	82%	90%	97%	96%	96%	95%	95%	94%
Number of households with access to individual and group toilets as percentage of total households in city.											
Coverage of households with individual and group toilets in slums	53%	62%	71%	80%	88%	96%	95%	95%	94%	94%	93%
Number of households in slum settlements with access to individual and group toilets as percentage of total slum households.											
Coverage of households with improved sanitation facility in city	87%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of households with access to some kind of toilet facility (individual and community toilet), as percentage of total households in city (as defined by Joint Monitoring Program)											
Households resorting to open defecation in city	13%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Number of households in city without any safe sanitation facility and resort to open defecation, as percentage of total households in city.											
Households dependent on community toilet facilities	28%	29%	25%	18%	10%	3%	4%	4%	5%	5%	6%
Number of households dependent on functional community toilet facilities near their houses as percentage of total households in city.											
Non-functional community and public toilets	17%	11%	6%	0%	0%	0%	0%	0%	0%	0%	0%
Number of non-functional community and public toilet seats as percentage of total community and public toilet seats.											

1

1 **Impact assessment:** This sheet presents the impact of action plan on services through KPIs and LAIs and uses **traffic light** system for easy viewing and detect anomaly if any. The default values used for this analysis are as below
Red < 50%
Orange 50-90%
Green > 90%

2 **Customising Traffic Lights:** The model by default uses indicator values to calculate values for the three lights. For extreme cases these values can be customised by following these 3 steps

- 2a – tick on the check box to view the customization table on the right
- 2b – select II. Customize benchmarks
- 2c – enter base values.

It is important to provide inputs in the required cells after 2b, otherwise the model will consider zero as the corresponding benchmark.



Financial Planning

This stage involves reviewing financial impacts of the action plan and mobilising finances for capital and O&M expenditure

Inflation assumptions

1

Sr. no	Particulars	Unit	Value
1	Inflation for capital expenditure items	% per annum	7.0%
2	Inflation for O&M cost items	% per annum	5.0%
3	Inflation for revenue generated	% per annum	3.0%

NOTE: Estimate inflation rate based on average trend of last five years. Please refer to statistics published by Government of India (GoI) for the same. These inflation rates shall be applied to all financial projections, therefore arrive at best possible estimates.

I WSS revenue and expenditure

All figures in INR Lakhs

B FSM and Wastewater

Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	FSM and Wastewater related taxes and	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Other receipts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Receipts from PIP Actions	-	-	-	-	-	-	0.8	50.8	65.1	80.3	83.4	86.6	90.0	93.6	97.3	101.2
	Total revenue receipts	-	-	-	-	-	-	0.8	50.8	65.1	80.3	83.4	86.6	90.0	93.6	97.3	101.2
	Revenue account expenditure (BAU)	-	68.5	84.9	111.6	121.2	108.0	129.2	135.7	142.5	149.6	157.1	164.9	173.2	181.8	190.9	200.4
	O&M expenditure incurred from PIP actions	-	-	-	-	-	-	2.5	16.9	24.2	25.4	26.6	28.0	29.4	30.8	32.4	34.0
	Total revenue account expenditure	-	68.5	84.9	111.6	121.2	108.0	131.7	152.6	166.6	174.9	183.7	192.9	202.5	212.6	223.3	234.4
	Capital receipts (BAU)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CapIn for PIP actions	-	-	-	-	-	-	284.3	263.2	221.5	232.5	248.8	-	-	-	-	-
	Total capital receipts	-	-	-	-	-	-	284.3	263.2	221.5	232.5	248.8	-	-	-	-	-
	Capital expenditure (BAU)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CapEx requirement of PIP actions	-	-	-	-	-	-	345.3	301.1	256.9	242.2	259.1	-	-	-	-	-
	Total capital expenditure	-	-	-	-	-	-	345.3	301.1	256.9	242.2	259.1	-	-	-	-	-

II Non-WSS revenue and expenditure

All figures in INR Lakhs

A Revenue account

Sr. No.	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Property tax	-	85.8	86.9	142.1	200.7	250.1	253.9	253.0	254.4	256.9	259.7	262.9	266.2	269.7	273.3	277.1
	Other taxes (except WSS)	-	72.6	64.6	98.0	174.3	182.5	18.8	30.6	40.5	49.9	59.3	68.9	78.9	89.2	99.9	111.1
	Other receipts (non-tax + grants)	-	601.6	656.0	761.9	1,013.9	971.4	892.5	929.1	967.2	1,006.9	1,048.3	1,091.4	1,136.2	1,182.9	1,231.5	1,282.1
	Additional income from improvement measures	-	-	-	-	-	-	13.6	15.6	10.7	10.2	2.5	1.0	0.7	0.7	0.7	0.8
	Total revenue receipts	-	760.0	807.5	1,002.0	1,389.0	1,403.9	1,178.7	1,228.3	1,272.9	1,323.9	1,369.8	1,424.1	1,482.0	1,542.5	1,605.5	1,671.0
	Revenue expenditure	-	733.6	639.6	806.7	1,048.1	1,212.7	920.3	960.8	1,003.1	1,047.4	1,093.8	1,142.3	1,193.1	1,246.3	1,302.0	1,360.3
	Capital receipts	-	136.5	644.0	128.9	962.6	688.2	-	-	-	-	-	-	-	-	-	-
	Capital expenditure	-	188.3	958.6	215.0	939.1	471.2	-	-	-	-	-	-	-	-	-	-

III Municipal Finance Summary

All figures in INR Lakhs

Sr. no	Particulars	2009	2010 (A)	2011 (A)	2012 (A)	2013 (RE)	2014 (BE)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Opening Balance	-	-	-	-	-	-	-	67	194	327	499	685	840	1,017	1,194	1,371

Preparation

Performance
Assessment

Action
Planning

Financial Projections

Action Plan Finance

Financing Plan

Financial Planning

Comparison

23

I Inflation assumptions

1

Sr. no	Particulars	Unit	Value
1	Inflation for capital expenditure items	% per annum	7.0%
2	Inflation for O&M cost items	% per annum	5.0%
3	Inflation for revenue generated	% per annum	3.0%

in average statistics % for the applied to all at best

1

Inflation: Inflation for following three types of items are to be entered here

- Capital works** – to calculate price escalation
- O&M cost items** – to calculate escalation in O&M costs of old and new assets/services
- Revenue generated** – to calculate increase in revenue generated through improvement actions

I WSS revenue and expenditure

B FSM and Wastewater

Sr. No.	Particulars	2009	2010 (A)
	FSM and wastewater related taxes and	-	-
	Other receipts	-	-
	Receipts from PIP Actions	-	-
	Total revenue receipts	-	-

2a

Sr. No.	Particulars	2009	2010 (A)
	Revenue account expenditure (BAU)	-	68.5
	O&M expenditure incurred from PIP actions	-	-
	Total revenue account expenditure	-	68.5

3a

Sr. No.	Particulars	2009	2010 (A)
	Capital receipts (BAU)	-	-
	CapIn for PIP actions	-	-
	Total capital receipts	-	-

4a

Sr. No.	Particulars	2009	2010 (A)
	Capital expenditure (BAU)	-	-
	CapEx requirement of PIP actions	-	-
	Total capital expenditure	-	-

4b

2014 (BE)	2015	2016	2023	2024
-	-	-	-	-
-	-	-	-	-
-	0.8	5	97.3	101.2
-	0.8	5	7.3	101.2

2014 (BE)	2015	2016	2023	2024
108.0	129.2	1	90.9	200.4
-	2.5	-	32.4	34.0
108.0	131.7	15	3.3	234.4

2014 (BE)	2015	2016	2023	2024
-	-	-	-	-
-	284.3	26	-	-
-	284.3	26	-	-

2014 (BE)	2015	2016	2023	2024
-	-	-	-	-
-	345.3	30	-	-
-	345.3	30	-	-

II Non-WSS revenue and expenditure

A Revenue account

Sr. No.	Particulars	2009	2010 (A)
	Property tax	-	85.8
	Other taxes (except WSS)	-	72.6
	Other receipts (non-tax + grants)	-	601.6
	Additional income from improvement measures	-	-
	Total revenue receipts	-	760.0

2b

Sr. No.	Particulars	2009	2010 (A)
	Revenue expenditure	-	733.6

3b

Sr. No.	Particulars	2009	2010 (A)
	Capital receipts	-	196.5
	Capital expenditure	-	188.3

4c

2014 (BE)	2015	2016	2023	2024
250.1	253.9	25	73.3	277.1
182.5	18.8	3	99.9	111.1
971.4	892.5	9	315	1,282.1
-	13.6	-	0.7	0.8
1,403.9	1,178.7	1,22	5.5	1,671.0

2014 (BE)	2015	2016	2023	2024
1,212.7	920.3	96	02.0	1,360.3

2014 (BE)	2015	2016	2023	2024
688.2	-	-	-	-
471.2	-	-	-	-

3

Revenue expenditure: For **Business as usual (BAU)** scenario for the sector and non sector are to be projected separately. These include all the day to day expenses towards operations of the offices and services

4

Capital receipts and expenditures: Committed capital expenditures for on-going and sanctioned projects and receipts committed towards the same are to be entered here.

Finances of on-going and/or committed projects that are activated in the action plan should not be considered in financial projections.

III Municipal Finance Summary

Sr. no	Particulars	2009	2010 (A)
	Opening Balance	-	-

2014 (BE)	2015	2016	2023	2024
-	-	-	194	1,371

I Financial summary

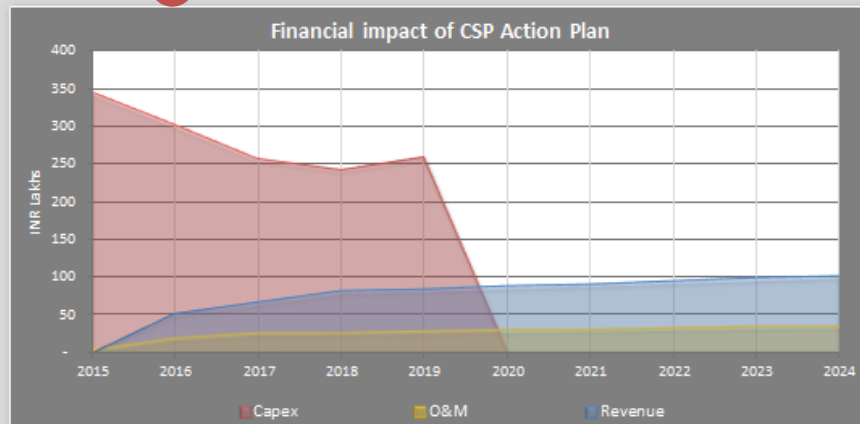
Select SECTOR **TOTAL WSS**

5

All figures in INR Lakhs

Financial Summary	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Capital expenditure	345	301	257	242	259	-	-	-	-	-	1,405
Additional O&M expense	3	17	24	25	27	28	29	31	32	34	250
Additional revenue	1	51	65	80	83	87	90	94	97	101	749

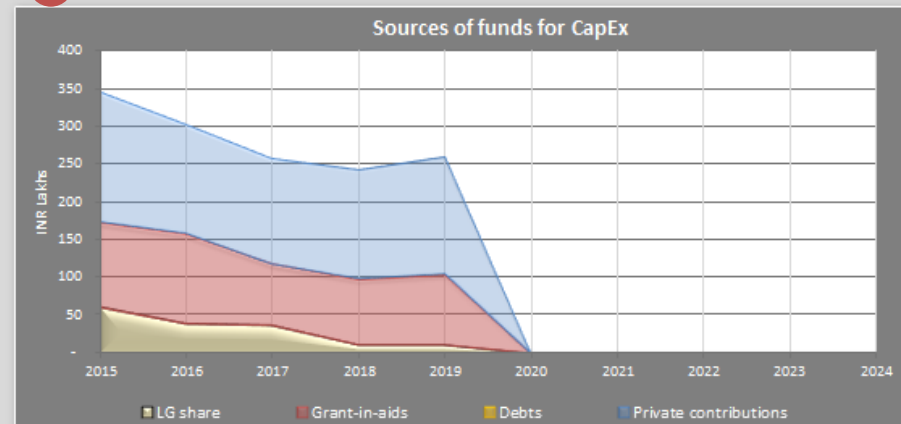
6



All figures in INR Lakhs

Sources of funds	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Central Grants	62	66	45	48	52	-	-	-	-	-	274
State Grants	50	53	36	39	41	-	-	-	-	-	219
External Debts	-	-	-	-	-	-	-	-	-	-	-
Private/ PPP	16	17	4	-	-	-	-	-	-	-	37
Beneficiary share	157	127	136	145	155	-	-	-	-	-	720
LG share	61	38	35	10	10	-	-	-	-	-	154

7



II Action Plan summary

All figures in INR Lakhs

IMPROVEMENT ACTIONS			SUMMARY OF CAPITAL EXPENDITURE										SOURCES OF FUNDS FOR CAPITAL EXPENDITURE							
Sector colour code	Water supply	Wastewater	Solid waste	Click here to view Summary of PHASING <input type="radio"/> CAPEX PLAN <input checked="" type="radio"/> O&M PLAN										Against each action, mention percentage share of funding possible through either of these funding sources (%)						
NOTE: RE-ENTER INPUTS IN THIS TABLE EACH TIME ACTIONS ARE ACTIVATED OR DEACTIVATED																				
Actions	Type	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total CapEx	Central Grants	State Grants	Debt	Private / PPP	Beneficiary	LG share (% and Rs. lakhs)		
Policy for providing sanitation services in slums	Process/ Policy											0						100%		
Improve condition of existing individual toilets by providing safe	Existing system	64										64					60%	40%	26	
Improve condition of existing Community toilets	Existing system	22	25	26								74					100%	74		

Preparation

Performance Assessment

Action Planning

Financial Projections

Action Plan Finance

Financing Plan

Comparison

Financial Planning

25

IMPROVEMENT ACTIONS			SUMMARY OF CAPITAL EXPENDITURE										SOURCES OF FUNDS FOR CAPITAL EXPENDITURE							
Sector colour code: Water supply Wastewater Solid waste 1			Click here to view Summary of <input type="radio"/> PHASING <input checked="" type="radio"/> CAPEX PLAN <input type="radio"/> O&M PLAN 3										Against each action, mention percentage share of funding possible through either of these funding sources (%) NOTE: RE-ENTER INPUTS IN THIS TABLE EACH TIME ACTIONS ARE ACTIVATED OR DEACTIVATED							
Actions 2	Type		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total CapEx	Central Grants	State Grants	Debt	Private / PPP	Beneficiary	LG share (% and Rs. lakhs)	
Policy for providing sanitation services in slums	Process/ Policy												0				100%			
Improve condition of existing individual toilets by providing safe	Existing system		64										64					60%	40%	26
Improve condition of existing Community toilets	Existing system		23	25	26								74						100%	74
Construct new individual toilets	New infrastructure		198	212	226	242	259						1,137	20%	16%			60%	4%	45
Construct new public toilet blocks	New infrastructure		4	4	4								12				100%			
Increase septage collection with existing suction emptier trucks	Existing system												0						100%	
Procure new suction emptier trucks	New infrastructure												25				100%			
Construct/augment fecal sludge treatment plant	New infrastructure												93	50%	40%				10%	9

2 Actions: All the actions activated in the three plan sheets are collated and presented here with its type, phasing, capital expenditure, etc. The actions are color coded for three sectors.

1 Color codes for the actions listed as explained above

3 This portion is dynamic and a user can select to view phasing, annual capital requirement or annual O&M requirements for each action by using radio buttons.

Click here to view Summary of PHASING CAPEX PLAN O&M PLAN

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024

Click here to view Summary of PHASING CAPEX PLAN O&M PLAN

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024

1	2	4	4	4	4	5	5	5	5
0	0	0	0	0	0	0	0	0	0
1	1	1	2	2	2	2	2	2	2
	13	14	14	15	16	17	17	18	19
		5	5	6	6	6	7	7	7

4 This portion presents the total capital cost and users can decide **source of capital finance** for each project. One can enter percentage share of Grants from higher governments, debt and PPP for each action. Share of beneficiaries is applicable for provision of toilets and this input is to be provided while activating the relevant action in WW plan sheet.

It is assumed that the remaining share for each individual action will be borne by the local government.

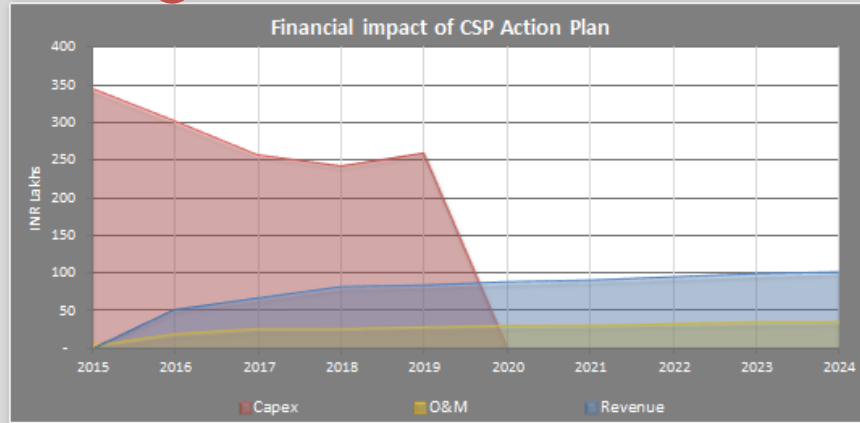
I Financial summary

Select SECTOR TOTAL WSS 5

All figures in INR Lakhs

Financial Summary	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Capital expenditure	345	301	257	242	259	-	-	-	-	-	1,405
Additional O&M expense	3	17	24	25	27	28	29	31	32	34	250
Additional revenue	1	51	65	80	83	87	90	94	97	101	749

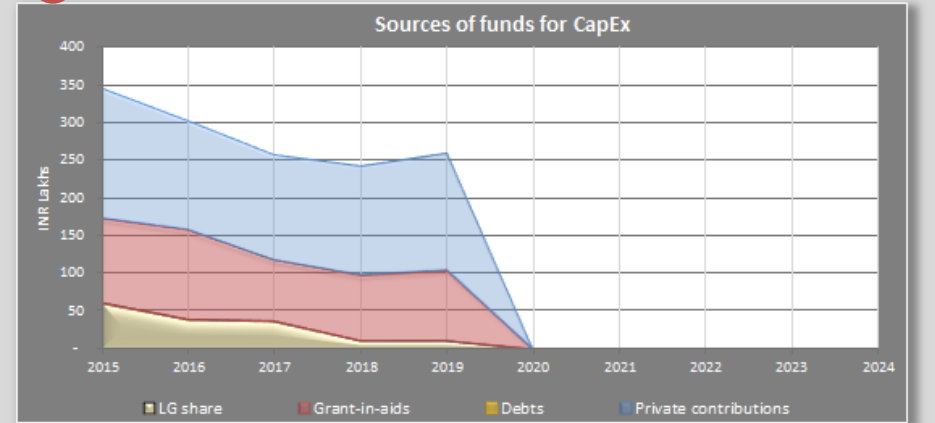
6



All figures in INR Lakhs

Sources of funds	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Central Grants	62	66	45	48	52	-	-	-	-	-	274
State Grants	50	53	36	39	41	-	-	-	-	-	219
External Debts	-	-	-	-	-	-	-	-	-	-	-
Private/PPP	16	17	4	-	-	-	-	-	-	-	37
Beneficiary share	157	127	136	145	155	-	-	-	-	-	720
LG share	61	38	35	10	10	-	-	-	-	-	154

7



5 User can choose the sector for which they wish to view financial summary by choosing from the drop-down list.

5 The table and graph presents financial summary of the action plan (for selected sector) in terms of annual and total capital expenditure, O & M expenditure and additional revenue generated

7 The table and graph presents cumulative annual capital requirement and sources as decided in point 4 on previous slide for sector selected in point 5

Select SECTOR TOTAL WSS

Financial Summary TOTAL WSS
WATER SUPPLY
WASTE WATER
SOLID WASTE

Preparation

Performance Assessment

Action Planning

Financial Projections

Action Plan Finance

Financing Plan

Comparison

Financial Planning

In this sheet user decides on ways to meet the operational expenses of new assets and mobilise the local government's share of capital expenses. The sheet is divided in three parts viz; summary of financing plan, financing plan and measures to enhance own source revenue.

FINANCING PLAN

Summary of Financing Plan

FINANCING PLAN

Revenue Enhancement Measures from Own Sources

Summary of Financing Plan

CAPITAL EXPENDITURE PLAN

OPERATING EXPENDITURE PLAN

REVIEW OF EXTERNAL FINANCING

REVIEW OF TAXES AND CHARGES

KEY FINANCING DECISIONS

IMPACT OF FINANCING PLAN ON MUNICIPAL FINANCES

NON-WSS TAXES

Measures to increase revenue from own income sources

TAXES AND CHARGES FOR WATER SUPPLY SERVICES

FDM AND WASTEWATER TAXES AND CHARGES

TARIFFS FOR SOLID WASTE MANAGEMENT SERVICES

Improvement in revenues from own income sources

Improvement in revenues of water supply services

Improvement in revenues of FSM and wastewater services

Improvement in revenues of solid waste services

A Summary of Financing Plan: Presents cumulative summary of all the decisions in action plan finance sheet and following two sections in this sheet.

B Financing Plan: This portions of the sheet allows users to make following three decisions

1. Allocation of non-WSS revenue surplus
2. Allocation of WSS revenue surplus
3. Meet capital deficit (if any) through debt

C Enhance own revenues: by levying and/or revising taxes and/or user charges for non-WSS and three sectors separately

[More..](#)

[More..](#)

[More..](#)

Measures to increase revenue from own income sources of IG

NON-WSS TAXES

TAXES AND CHARGES FOR WATER SUPPLY SERVICES

FDM AND WASTEWATER TAXES AND CHARGES

TARIFFS FOR SOLID WASTE MANAGEMENT SERVICES

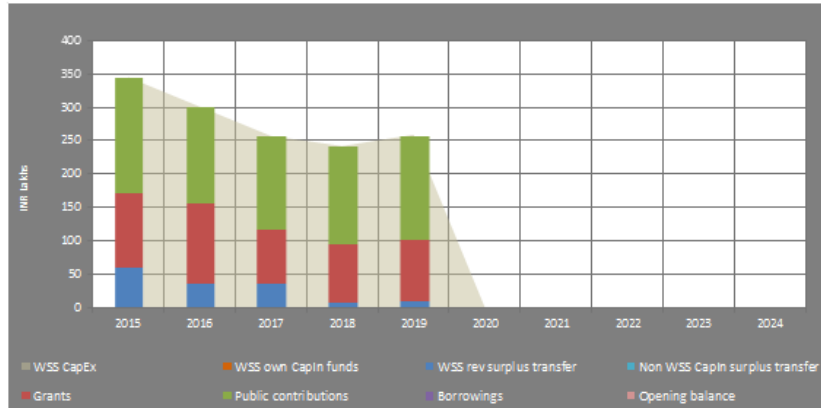
Improvement in revenues from own income sources

Improvement in revenues of water supply services

Improvement in revenues of FSM and wastewater services

Improvement in revenues of solid waste services

CAPITAL EXPENDITURE PLAN

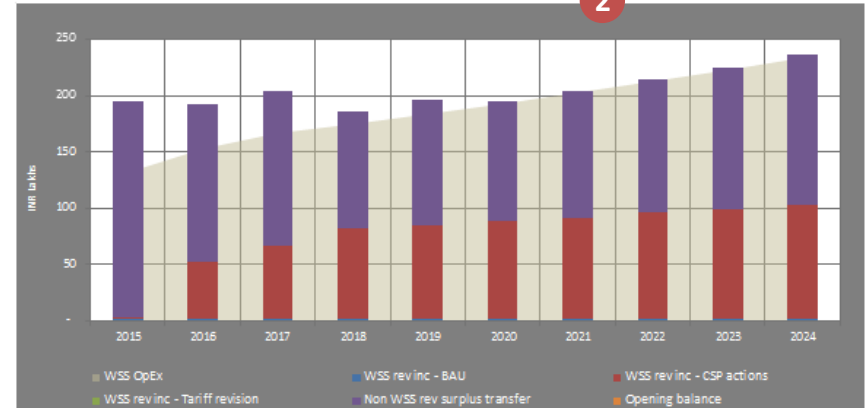


1

REVIEW OF EXTERNAL FUNDING

Sources of funds	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Already approved CapIn	0	0	0	0	0	0	0	0	0	0	0
Internal fund transfers for CapEx	61	38	36	9	10	0	0	0	0	0	154
Grant-in-aids	112	119	81	87	93	0	0	0	0	0	493
Private contributions	173	144	140	145	155	0	0	0	0	0	757
Borrowings	0	0	0	0	0	0	0	0	0	0	0
Debt servicing requirement	0	0	0	0	0	0	0	0	0	0	0
DSCR feasible :-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	-

OPERATING EXPENDITURE PLAN



2

REVIEW OF TAXES AND CHARGES

Average tax demand (per household per annum)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Property tax	1156	1156	1156	1156	1156	1156	1156	1156	1156	1156	1156
Wastewater tax	0	0	0	0	0	0	0	0	0	0	0
Annual septic tank emptying charge	500	500	500	500	500	500	500	500	500	500	500
Sewerage tax	0	0	0	0	0	0	0	0	0	0	0
Annual demand from HHs depending on septic tanks	1656	1656	1656	1656	1656	1656	1656	1656	1656	1656	1656
Annual increment	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operating ratio feasible :-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3

1 The chart and table presents the total capital expenditure and sources of funds for each year. In addition the table also presents the city's Debt Service Coverage Ratio (DSCR).

2 The chart and table presents the total O&M expenditure of the city and source of funds to meet these expenses.

3 This table presents the impact of revisions in tariffs (property tax and taxes related to WSS) on households.

KEY FINANCING DECISIONS

Financing Plan	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
OPERATING PLAN											
1. Income generated from PIP actions											
Additional income generated	1	51	65	80	83	87	90	94	97	101	749
2. Revised FSM charges and tariffs <small>Link to Review FSM and W/W tariffs</small>											
Additional income generated	-	-	-	-	-	-	-	-	-	-	-
3. Revised own income sources like Property tax <small>Link to Review property tax</small>											
Additional income generated	14	16	11	10	2	1	1	1	1	1	58
4. Allocate Non-FSM revenue surplus <small>Link to Review past trends</small>											
Non-FSM revenue surplus	259	267	270	445	721	1,003	1,292	1,588	1,831	2,202	14,344
Propose allocation of surplus for Sanitation/FSM sector	132	140	102								434
	74%	52%	38%	0%	0%	0%	0%	0%	0%	0%	4%
For Non-FSM sectors	67	127									194
	26%	48%	0%	0%	0%	0%	0%	0%	0%	0%	2%
Operating ratio	0.7	0.8	1.0	2.2	***	***	***	***	***	***	***
CAPITAL PLAN											
1. External sources of funds											
Already approved FSM Capln	-	-	-	-	-	-	-	-	-	-	-
Grants from Central & State government *	112	119	81	87	93	-	-	-	-	-	493
Private contribution through PPP and Beneficiaries *	173	144	140	145	155	-	-	-	-	-	757
<small>* Linked from Municipal Finance account, * Linked from Action Plan finance account</small>											
2. Allocate FSM revenue surplus for capital funding 6											
FSM revenue surplus	61	38	-	-	-	-	-	-	-	-	99
Propose allocation of surplus for FSM CapEx	61	38	-	-	-	-	-	-	-	-	0%
	100%	100%	-	-	-	-	-	-	-	-	0%
3. Allocate Non-FSM Capln for FSM capital funding <small>Link to Review past trends</small> 7											
Non-FSM Capln surplus	-	-	-	-	-	-	-	-	-	-	-
Propose allocation of surplus for FSM CapEx	-	-	-	-	-	-	-	-	-	-	-
4. External borrowings 8											
Debt from Action Plan finance	-	-	-	-	-	-	-	-	-	-	-
Additional debt required				36							36
Terms and conditions of debt	Rate of interest		10%		Moratorium period (Number of years)		3		Period of Borrowing (Number of years)		15
Debt servicing requirement	-	-	-	-	-	6	6	6	6	6	25
Debt service coverage ratio	NA	NA	NA	NA	NA	NA	-69.17	***	***	***	***

IMPACT OF FINANCING PLAN ON MUNICIPAL FINANCES

Budget heads	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
REVENUE ACCOUNT										
FSM and wastewater services (FSM) 1										
Opening balance	-	-	-	-	(95)	(196)	(302)	(421)	(546)	(678)
Revenue receipts	133	191	167	80	83	87	90	94	97	101
Revenue expenditure	132	153	167	175	184	193	209	219	229	240
FSM Revenue account status	61	38	-	(95)	(196)	(302)	(421)	(546)	(678)	(817)
Services other than FSM and wastewater (Non-FSM) 2										
Opening balance	-	-	-	100	445	721	1,003	1,292	1,588	1,831
Revenue receipts	1,179	1,228	1,273	1,324	1,370	1,424	1,482	1,542	1,605	1,671
Revenue expenditure	920	961	1,003	1,047	1,094	1,142	1,193	1,246	1,302	1,360
Non-FSM Revenue account status	259	267	270	445	721	1,003	1,292	1,588	1,831	2,202
CAPITAL ACCOUNT										
FSM and wastewater services (FSM) 4										
Opening balance	-	-	-	-	(9)	(19)	(19)	(19)	(19)	(19)
Capital receipts	345	301	257	233	249	-	-	-	-	-
Capital expenditure	345	301	257	242	259	-	-	-	-	-
FSM Capital account status	-	-	-	(9)	(19)	(19)	(19)	(19)	(19)	(19)
Services other than FSM and wastewater (Non-FSM) 5										
Opening balance	-	-	-	-	-	-	-	-	-	-
Capital receipts	-	-	-	-	-	-	-	-	-	-
Capital expenditure	-	-	-	-	-	-	-	-	-	-
Non-FSM Capital account status	-	-	-	-	-	-	-	-	-	-
EXTRAORDINARY ACCOUNT										
Opening balance	-	-	-	-	-	-	-	-	-	-
Receipts	-	-	-	-	-	-	-	-	-	-
Expenditure	-	-	-	-	-	-	-	-	-	-
Extraordinary account status	-	-	-	-	-	-	-	-	-	-
OVERALL MUNICIPAL FINANCE										
Total receipts	1,717	1,720	1,697	1,805	2,043	2,017	2,254	2,488	2,725	2,966
Total expenditure	1,717	1,720	1,529	1,464	1,537	1,335	1,402	1,465	1,531	1,600
Closing balance	-	-	168	341	506	682	852	***	***	***

KEY FINANCING DECISIONS

Financing Plan	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
OPERATING PLAN											
1. Income generated from PIP actions											
Additional income generated	1	51	65	80	83	87	90	94	97	101	749
2. Revised FSM charges and tariffs <small>Link to Revised FSM and W/W tariffs</small>											
Additional income generated	-	-	-	-	-	-	-	-	-	-	-
3. Revised own income sources like Property tax <small>Link to Revised property tax</small>											
Additional income generated	14	16	11	10	2	1	1	1	1	1	58
4. Allocate Non-FSM revenue surplus <small>Link to Review past trends</small>											
Non-FSM revenue surplus	259	267	210	445	721	1,003	1,292	1,588	1,831	2,202	6,394
Propose allocation of surplus for Sanitation/FSM sector	132	140	102	0%	0%	0%	0%	0%	0%	0%	434
For Non-FSM sectors	67	127	0%	0%	0%	0%	0%	0%	0%	0%	194
Operating ratio	0.7	0.8	1.0	2.2	***	***	***	***	***	***	2%

IMPACT OF FINANCING PLAN ON MUNICIPAL FINANCES

Budget heads	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
REVENUE ACCOUNT										
FSM and wastewater services (FSM)										
Opening balance	-	-	-	-	(95)	(196)	(302)	(421)	(546)	(678)
Revenue receipts	193	191	167	80	83	87	90	94	97	101
Revenue expenditure	132	153	167	175	184	193	209	219	229	240
FSM Revenue account status	61	38	-	(95)	(196)	(302)	(421)	(546)	(678)	(817)
Services other than FSM and wastewater (Non-FSM)										
Opening balance	-	-	-	100	445	721	1,003	1,292	1,588	1,831
Revenue receipts	1,179	1,228	1,273	1,324	1,370	1,424	1,482	1,542	1,605	1,671
Revenue expenditure	920	961	1,003	1,047	1,034	1,142	1,193	1,246	1,302	1,360
Non-FSM Revenue account status	259	267	270	445	721	1,003	1,292	1,588	1,831	2,202

1 The four rows present cumulative revenue account of WSS services.

Generally at the beginning of financial planning process, the WSS revenue account shows deficit (highlighted in red) in all or later years. The intention is to meet this deficit through internal transfers (from non-WSS revenue surplus) or revising taxes/user charges for WSS.

2 The four rows present non-WSS revenue account.

Generally non-WSS revenue account will have surplus in some if not all years. Deficit, if any in non-WSS account can be met through revision in property tax rates or levying new non-WSS tax. One needs to refer to respective Municipal Administration Act to check taxes that the local body could levy

3 Allocation of non-WSS revenue surplus: for WSS and non-WSS sectors, past trends can be viewed on the right by ticking the check-box. Unallocated sums are carried forward as opening balance in next year.

These transfers make an impact on WSS and non-WSS revenue surplus.

TRANSFER OF NON-FSM REVENUE SURPLUS FOR FSM						
NON-FSM SURPLUS	2009	2010	2011	2012	2013	2014
Non-FSM Revenue surplus <small>(All figures are in Rs lakhs)</small>						
Surplus amount	0	0	0	0	0	0
Transfer to FSM (%)	0%	0%	0%	0%	0%	0%
Transfer amount	0	0	0	0	0	0
Non-FSM Capex surplus						
Surplus amount	0	0	0	0	0	0
Transfer to FSM (%)	0%	0%	0%	0%	0%	0%
Transfer amount	0	0	0	0	0	0

CAPITAL PLAN

1. External sources of funds											
Already approved FSM Capln *	-	-	-	-	-	-	-	-	-	-	-
Grants from Central & State government *	112	119	81	87	93	-	-	-	-	-	493
Private contribution through PPP and Beneficiaries *	173	144	140	145	155	-	-	-	-	-	757
<i>* Link to from Municipal Finance account, * Link to from Action Plan finance account</i>											
2. Allocate FSM revenue surplus for capital funding											
FSM revenue surplus	61	38	-	-	-	-	-	-	-	-	99
Propose allocation of surplus for FSM CapEx	61	38	-	-	-	-	-	-	-	-	0%
	100%	100%	-	-	-	-	-	-	-	-	-
3. Allocate Non-FSM Capln for FSM capital funding											
Non-FSM Capln surplus	-	-	-	-	-	-	-	-	-	-	-
Propose allocation of surplus for FSM CapEx	-	-	-	-	-	-	-	-	-	-	-
4. External borrowings											
Debt from Action Plan finance	-	-	-	-	-	-	-	-	-	-	-
Additional debt required	-	-	36	-	-	-	-	-	-	-	36
Rate of interest (%)	-	-	-	-	10%	-	-	-	-	-	-
Moratorium period (Number of years)	-	-	-	-	3	-	-	-	-	-	-
Period of Borrowing (Number of years)	-	-	-	-	15	-	-	-	-	-	-
Debt servicing requirement	-	-	-	-	-	-	6	6	6	6	25
Debt service coverage ratio	NA	NA	NA	NA	NA	NA	-69.17	****	****	****	-

CAPITAL ACCOUNT

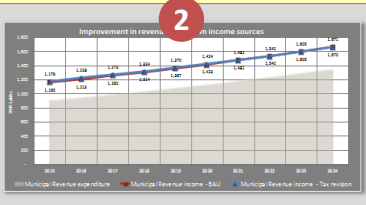
FSM and wastewater services (FSM)											
Opening balance	-	-	-	-	-	-	(9)	(19)	(19)	(19)	(19)
Capital receipts	345	301	257	233	249	-	-	-	-	-	-
Capital expenditure	345	301	257	242	259	-	-	-	-	-	-
FSM Capital account status	-	-	-	-	-	(3)	(19)	(19)	(19)	(19)	(19)
Services other than FSM and wastewater (Non-FSM)											
Opening balance	-	-	-	-	-	-	-	-	-	-	-
Capital receipts	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	-	-	-	-	-	-	-	-	-	-	-
Non-FSM Capital account status	-	-	-	-	-	-	-	-	-	-	-
EXTRAORDINARY ACCOUNT											
Opening balance	-	-	-	-	-	-	-	-	-	-	-
Receipts	-	-	-	-	-	-	-	-	-	-	-
Expenditure	-	-	-	-	-	-	-	-	-	-	-
Extraordinary account status	-	-	-	-	-	-	-	-	-	-	-
OVERALL MUNICIPAL FINANCE											
Total receipts	1,717	1,720	1,697	1,805	2,043	2,017	2,254	2,488	2,725	2,966	
Total expenditure	1,717	1,720	1,529	1,464	1,537	1,335	1,402	1,465	1,531	1,600	
Closing balance	-	-	168	341	506	682	852	***	***	***	

- 6 Allocation of WSS revenue surplus: All or part of WSS revenue surplus can be allocated towards WSS capital expenditure, unutilized surplus is seen as opening balance in the following year.
- 7 Allocation of non-WSS capital income for WSS capital works where allowed. Most capital grants these days are project specific and may not be diverted for other projects.
- 8 Debt: Remaining capital expenditure (after deciding sources in Action Plan Finance and internal transfers) can be funded through debts. One needs to enter conditions of debt and assess DSCR to ensure timely repayment

- 4 The four rows present cumulative capital account of WSS services. Generally at the beginning of financial planning process, the WSS revenue account shows deficit (highlighted in red) in all or later years. The intention is to meet this deficit through internal transfers (from WSS revenue surplus) or debt.
- 5 The four rows present non-WSS capital account. Ideally this should be balanced shouldn't show deficit as the purpose of SaniPlan is to formulate a financing plan for WSS.

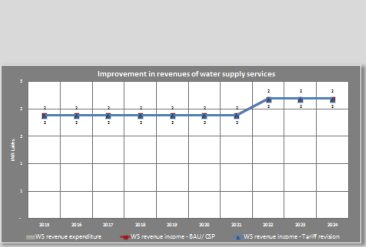
1a **NON-WSS TAXES**

Measure	Current Value	Target	Year for completion
1. Review number of properties served for taxation	1,000	1,000	2025
2. Review collection efficiency of Property Tax	95%	98%	2025
3. Review rates Property tax demand per property	1,000	1,000	2025
4. Review other taxes and charges levied by LG	1,000	1,000	2025
5. Introduce new taxes	1,000	1,000	2025



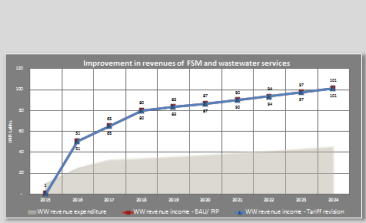
1b **TAXES AND CHARGES FOR WATER SUPPLY SERVICES**

Measure	Current Value	Target	Year for completion
1. Review connection charges for water supply connection	2,000	2,000	2025
2. Water supply charges based on flat rate	1,000	1,000	2025
3. Water supply charges based on volumetric tariff (litre per kilolitre)	0.00	0.00	2025
4. Water tax linked to general property tax	0.00	0.00	2025



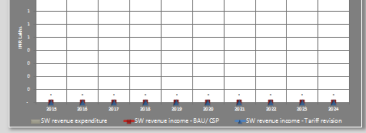
1c **FSM AND WASTEWATER TAXES AND CHARGES**

Measure	Current Value	Target	Year for completion
1. Review connection charges for sewerage connection	1,000	1,000	2025
2. Review rates sewerage tax demand per property	1,000	1,000	2025
3. FSM and Wastewater tax based on flat rate	1,000	1,000	2025
4. FSM and Wastewater tax linked to general property tax	0.00	0.00	2025
5. Septic tank emptying charges	1,000	1,000	2025
6. Sewerage water charges	1,000	1,000	2025



1d **TARIFFS FOR SOLID WASTE MANAGEMENT SERVICES**

Measure	Current Value	Target	Year for completion
1. Solid waste charges based on flat rate	1,000	1,000	2025
2. Solid waste tax linked to general property tax	0.00	0.00	2025



1 These boxes list **Revenue enhancement Measures** for Non-WSS, Water supply, Wastewater and FSM and Solid waste management sectors respectively. These include levying new taxes/charges, reviewing rates of connection charges and taxes/user charges, etc. The following table lists all the measures provided in SaniPlan. The following slides explain each type of action in detail.

2 These charts present the impact of revenue enhancement measures on finances of the respective sector. The impact is also seen in respective revenue accounts (discussed in this [slide](#))

Non-WSS Taxes 1a	Water related taxes and charges 1b	FSM and WW related taxes and charges 1c	SWM related taxes and charges 1d
Improve billing efficiency	Levy/revise new connection charges	Levy/revise new connection charges - Sewerage	Levy/revise flat rate tariff
Improve collection efficiency	Levy/revise flat rate tariffs	Levy/revise new connection charges – Settled sewer	Levy/revise tax linked to property tax
Revise Property tax	Levy/revise volumetric tariffs	Levy/revise flat rate tariffs	
Revise other non-WSS taxes	Levy/revise tax linked to property tax	Levy/revise tax linked to property tax	
Introduction of a new tax	Levy/revise water benefit tax	Sewerage benefit tax	Septic tank emptying charges

1. Review number of properties assessed for taxation

Improve billing efficiency of property tax by increasing number of properties assessed	%	Current billing efficiency	Proposal for improvement		
			Targeted efficiency	Year to start improvement	Year for completion
		92%	98%	2015	2017

2. Review collection efficiency of Property Tax

Improve collection efficiency of property tax	%	Current collection efficiency	Proposal for improvement		
			Targeted efficiency	Year to start improvement	Year for completion
Collection efficiency of current demand		83%	95%	2015	2016
Collection efficiency of arrear demand		64%	80%	2015	2016

3. Review average Property tax demand per property

Average general property tax demand per property (Rs/property/annum)		1,156								
Percentage increment in property tax demand/property	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
			10%						10%	

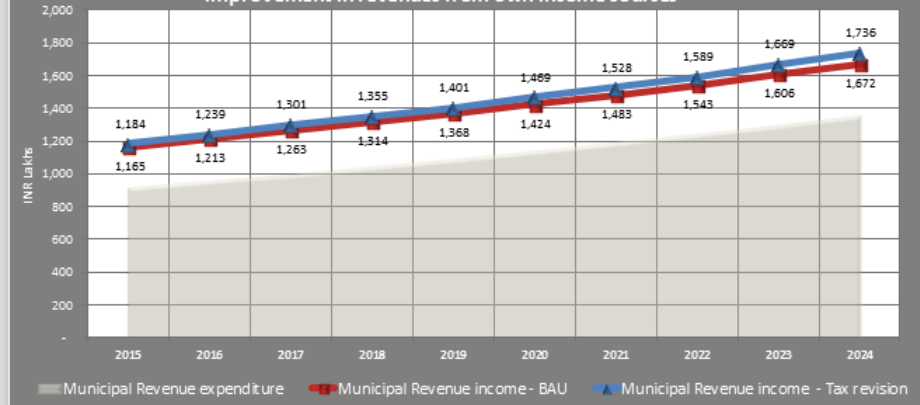
4. Review of other taxes and charges levied by LG

Aggregate demand of other taxes and charges in last year (INRLakhs)		135							Avg. demand/property/annum INR		1,394										
Percentage increment in other taxes and charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	

5. Introduce new tax

Expected year wise collection by levying the new tax	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024

Improvement in revenues from own income sources



1 Review billing efficiency: There is a possibility that all properties/connections in the city are not assessed for taxation.

For Property tax, this action enables the city to plan to increase percentage share of properties assessed for taxation. Current billing efficiency is displayed alongside for reference. **The user needs to provide input regarding timeline and targeted efficiency.** The model distributes the improvement equally over this period.

For water and sewerage connections, this action is included as part if the action plan itself. (actions WS05 and WW16)

2 Review collection efficiency: This action enables the local government to improve collection efficiency of taxes/user charges. Collection efficiency in the base year is provided for reference. The user needs to provide **inputs of time frame and targeted collection efficiency** of both current demand and arrears. The model distributes the improvement equally over this period.

For water, wastewater and SWM, this action is included as part if the action plan itself. (actions WS42, WW36 and SW29)

3. Review average Property tax demand per property												
Average general property tax demand per property (Rs/property/annum)											1,156	
Percentage increment in property tax demand/property	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
	2		10%			10%			10%			

4. Review of other taxes and charges levied by LG												
Aggregate demand of other taxes and charges in last year (INR Lakhs)											135	
Avg. demand/property/annum INR											1394	
Percentage increment in other taxes and charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		

5. Introduce new tax												
Expected year wise collection by levying the new tax	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		

2. Water supply charges based on flat rate													
Is flat rate based user charges levied for water supply services by LG?											Yes		
Rst/connection/annum											1,800		
If No, and if planned to levy then start it from which year?											Year		
Percentage increment in flat rate based water supply charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
	2												

3. Water supply charges based on volumetric tariff (Rs. per kl)													
Are metered connections charged volumetrically by the LG?											No		
Non-slum											0.0		
Resi. Slum											0.0		
Comm./Instit.											0.0		
Others											0.0		
If No, and if planned to levy volumetric billing for metered water supply connections then start it from which year?											Year		
Percentage increment in volumetric tariff rates	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
					1								

4. Water tax linked to general property tax													
Are water related taxes charged linked to property tax?											No		
% of general property tax											0.00%		
If No, and if planned to levy then start it from which year?											Year		
Revised percentage of general property tax for water supply tax	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
					1								

5. Water supply benefit tax													
Is water benefit tax based levied?											No		
Rst/connection/annum											0		
If No, and if planned to levy then start it from which year?											Year		
Percentage increment in water benefit tax	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
					1								

3. FSM and Wastewater tax based on flat rate													
Are wastewater charges levied on flat rate basis?											No		
Mode of charging											-		
Flat rate/unit											0		
If No, and if planned to levy then start it from which year?											Year		
Percentage increment in flat rate based user charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
					1								

4. FSM and Wastewater tax linked to general property tax													
Are wastewater related taxes charged linked to property tax?											No		
% of general property tax											0.0%		
If No, and if planned to levy then start it from which year?											Year		
Revised percentage of general property tax for wastewater tax	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
						1							

6. Sewerage user charges													
Is sewerage user charges levied by LG?											NO		
Rst/connection/annum											0		
If No, and if planned to levy then start it from which year?											Year		
Percentage increment in user charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
						1							

TARIFFS FOR SOLID WASTE MANAGEMENT SERVICES												
											Back to O&M Plan	

1. Solid waste charges based on flat rate													
Are SWM charges levied on flat rate basis?											No		
Mode of charging											-		
Flat rate/annum											0		
If No, and if planned to levy then start it from which year?											Year		
Percentage increment in flat rate based user charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
					1								

2. Solid waste tax linked to general property tax													
Are SWM related taxes charged linked to property tax?											No		
% of general property tax											0.0%		
If No, and if planned to levy then start it from which year?											Year		
Revised percentage of general property tax for solid waste tax	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024			
						1							

All the actions for levying/revising user charges in Financing Plan Sheet

Levy/revise tax/user charges

These actions enable the city to start levying the tax/charge as well as revise them.

1 To start levying the tax/user charge, the city needs to decide the year it will start levying it, its base (mode) and rate. The city can choose the 'base' to suit to the local laws and context

2 If the city is already levying the tax/user charge, SaniPlan provides an option to revise it on an annual basis; the city can decide the interval as well as the revision in terms of percentage increase.

TAXES AND CHARGES FOR WATER SUPPLY SERVICES

[Click](#)

[Back to O&M Plan](#)

1. New connection charges for water supply connection

New half inch residential non-slum connection charge					<i>Flatconnection</i>	2,100					
New half inch residential slum connection charges					<i>Flatconnection</i>	2,100	<i>0% subsidy given to poor households</i>				
Percentage increment/ reduction in connection charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
- Average increment for all connection types <i>(Fix rate multiple from above blue box link)</i>	1						10%			10%	
- Residential slum connection charges				7%			7%			7%	

FSM AND WASTEWATER TAXES AND CHARGES

[Click](#)

[Back to O&M Plan](#)

1. New connection charges for sewerage connection

Does the city have sewerage network?					NO	Non-resi conn. charge	Resi non-slum conn. charges	Resi slum conn. charges			
					NO	0	0	0			
Details of new sewerage network in city, if proposed					NO	0	0	0			
Percentage increment/ reduction in connection charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
- Non-residential conn. charge											
- Residential non-slum conn. charge	2										
- Residential slum conn. charge											

2. New connection charges for settled sewer connection

Details of new settled sewer network in city, if proposed					Year	Non-resi conn. charge	Resi non-slum conn. charges	Resi slum conn. charges			
					NO	0	0	0			
Percentage increment/ reduction in connection charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
- Non-residential conn. charge	2										
- Residential non-slum conn. charge											
- Residential slum conn. charge											

Levy/revise tax/Connection charges

This action is applicable for water supply and sewerage and settled sewer connections.

- 1 For situations where such charges are already levied, the city can revise them. SaniPlan allows revising these charges annually.
- 2 For cities that are newly laying network, they can set the connection charges in respective actions in the corresponding plan sheets and revise them in this sheet.

Septic tank emptying charges

From financial planning perspective, this is a unique action as it may need a change in mode of levying, cities may charge when they empty the septic tank or charge annually whether or not the septic tank is emptied (especially if they provide a regulated emptying service)

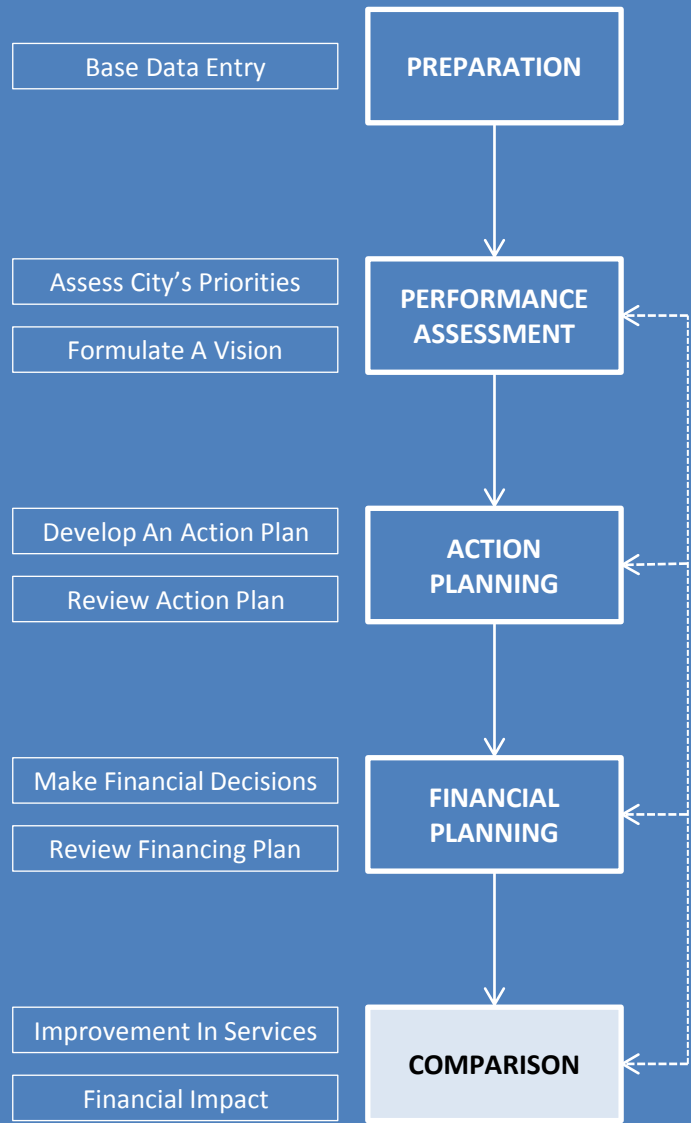
- 3 For cities currently collecting charges when they empty septic tanks, SaniPlan allows revision as well as change to charging it as an annual flat rate tax
- 4 For cities that do not provide the service or do not charge, they may choose to start with collecting charges when they empty and later change to charging annually

5. Septic tank emptying charges

Does the city provide septic tank emptying service					3	Yes	Mode of charging	Flatrate/unit		
							At the time of emptying	500		
Start levying charges for emptying - Mode 1	<i>Year</i>						At the time of emptying			
Start levying charges for emptying - Mode 2	<i>Year</i>				2015		Annual charge for scheduled emptying	100		
Percentage increment in user charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
				20%			20%			

5. Septic tank emptying charges

Does the city provide septic tank emptying service					4	No	Mode of charging	Flatrate/unit		
							-	-		
Start levying charges for emptying - Mode 1	<i>Year</i>				2015		At the time of emptying	500		
Start levying charges for emptying - Mode 2	<i>Year</i>				2020		Annual charge for scheduled emptying	100		
Percentage increment in user charges	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
				20%			20%			



Comparison

This stage helps users compare various improvement alternatives for their impact on services and financial impact. This can be done internally as well as through an external dashboard.

KEY ASPECTS OF PERFORMANCE IMPROVEMENT PLAN

CLICK HERE TO CUSTOMIZE KPI WEIGHTAGES FOR SECTOR SCORE. BY DEFAULT, ALL KPIs ARE GIVEN EQUAL WEIGHTAGES.

1 Name of PIP option This option

PERFORMANCE ASSESSMENT				
Sector scores*	Water supply	Waste water	Solid waste	
Start year of Plan - 2014	0%	25%	50%	
End year of Plan - 2024	0%	75%	50%	
*Prevalence improved				

ACTION PLAN SUMMARY				
Number of Improvement	Water supply	Waste water	Solid waste	
Public policy improvement	0	1	0	
Existing system improvement	0	3	0	
New infrastructure	0	4	0	

FINANCING PLAN SUMMARY				
CapEx Plan		OpEx Plan		
Public	30	Public	100%	WSS revenue, 10
Private contrib.,	1537	Non-WSS Donator,	434	Tariff provision,
				72
Capital Plan feasible? No		Operating ratio feasible? No		
Tariff (Rs/HH/annum)	Property tax	Water supply	Waste water	Solid waste
Start year of Plan - 20	155	0	100	0
End year of Plan - 202	155	0	100	0

1 This box (marked by dotted red line) assesses the improvement plan formulated in this workbook. Each sector is scored through improvement in KPIs. **This box can be copied to other workbook/s for comparison.**

2 Hyperlinks to modify the action plan or financing plan if the desired improvement in sector is not observed

2 Modify ACTION PLAN to alter sector perform: WS Plan WW Plan SW Plan

Modify FINANCING PLAN to alter financing: Action Plan finance Financing Plan

3 Space to paste box (explained in point 1 above) from other workbook. Space to compare upto 5 other action plans is provided in this sheet.

SUMMARY OF PIP OPTIONS

3 PIP OPTION 1

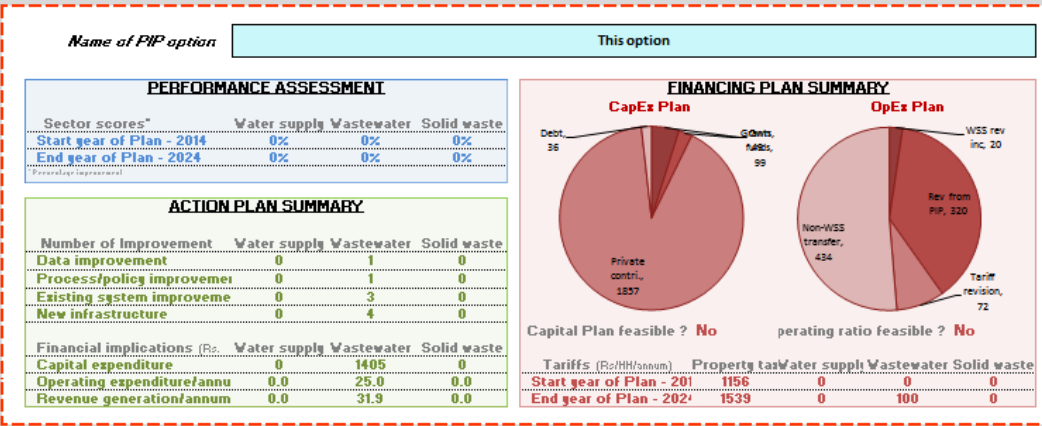
PIP OPTION 1				
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>				
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>				

CSP OPTION 2

Sector scores, capital expenditure, O&M expenditure, additional revenue generated and tariffs required to sustain the services can be compared to make a decision.

KEY ASPECTS OF PERFORMANCE IMPROVEMENT PLAN

4a CLICK HERE TO CUSTOMIZE KPI WEIGHTAGES FOR SECTOR SCORE. BY DEFAULT ALL KPIS ARE GIVEN EQUAL WEIGHTAGES.



SUMMARY OF PIP OPTIONS

Define weightages of Key performance indicators for Sector Score

4b Select method for allocating weightages to KPI: **II. CUSTOMISE WEIGHTAGE**

4c **Customise weightages**
Customise weightages to define a scoring pattern based on your city's priorities. Provide weightages to each KPI in a scale of 1 to 10.

WATER SUPPLY SERVICES			Equal
Coverage of individual water supply connections in city	5	10	10
Coverage of individual water supply connections in slums	5	10	10
Per capita supply of water at consumer end	5	10	10
Continuity of water supply	5	10	10
Extent of Non Revenue W	5	10	10
Extent of metering of water connections	5	10	10
Quality of water supplied	5	10	10
Efficiency in redressal of customer complaints	5	10	10
Efficiency in collection of water supply charges	5	10	10
Cost recovery in water supply services	5	10	10

WASTEWATER SERVICES			Equal	Customis	Example
Coverage of individual household toilets in city	5	10			10
Coverage of individual household toilets in slums	5	10			10
Coverage of households with adequate sanitation system	5	10			10
Efficiency of wastewater and septage collection system	5	10			10
Adequacy of wastewater and septage treatment capacity	5	10			10
Quality of wastewater and septage treatment	5	10			10
Extent of reuser/recycling or treated wastewater and	5	10			10
Efficiency in redressal of customer complaints	5	10			10
Efficiency in collection of wastewater charges and taxes	5	10			10
Extent of cost recovery in wastewater services	5	10			10

SOLID WASTE MANAGEMENT			Equal	Customis	Example
Coverage of household level solid waste services in city	5	10			10
Coverage of household level solid waste services in slums	5	10			10
Efficiency of collection of solid waste	5	10			10
Extent of segregation of solid waste	5	10			10

4 **Weighing priorities:** To arrive at the sector score, the model gives equal weightage to all the KPIs by default. If user intends to prioritise some specific indicators, this weightage can be customised as follows

- Tick in the check-box. This will display the box on the right in above image
- Select customise weightage from the drop-down list
- Provide input in blue cells.

SUMMARY OF SANIPLAN OPTION

Selection of comparison parameters

Select Performance indicators for comparison

1	Coverage of households with improved sanitation facility in city
2	Septic tanks cleaned annually in city
3	Adequacy of septage treatment capacity

Refer sheet -
Summary of PIP Plan

Select improvement actions for comparison

1	Policy for providing sanitation services in slums
2	Improve condition of existing individual toilets by providing safe sanitation disposal system
3	Improve condition of existing Community toilets
4	Construct new individual toilets
13	
14	
15	

2

Export Dashboard for
Upload

Summary of SANIPLAN option

1

Scenario name	Individual toilets	Regulated- 3 yrs	SDB	Innovative finance
---------------	--------------------	------------------	-----	--------------------

Capital expenditure

Rs. 2162 lakhs

1 Give the PIP scenario an appropriate and meaningful name. The values entered here will be used to name the dashboard file (when saved in the next step). Here, the four aspects focussed in the scenario have been entered to make it meaningful.

2 Click the “Export Dashboard...” button to save the dashboard sheet as a separate excel file. After creating different scenarios, and exporting, the **comparison tool** can be used to compare them side by side.

Sanitation options for comparison

Create your options by selecting appropriate mode to improve coverage of toilets, wastewater management and financing mechanism

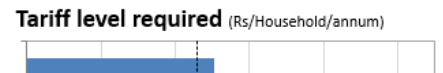
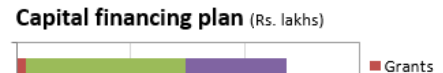
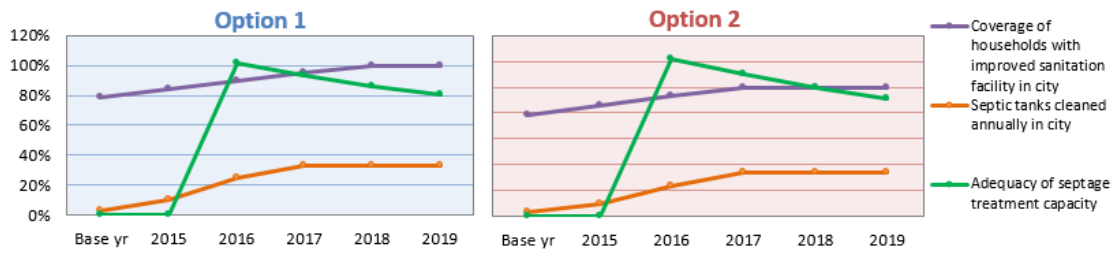
3

Select Toilet option	Individual toilets	Individual toilets	Select Toilet option
Select Conveyance regime	Regulated- 3 yrs	Regulated- 3 yrs	Select Conveyance regime
Select Treatment technology	SDB	Sintex Package treatment Plant	Select Treatment technology
Select financing mechanism	Innovative finance	Innovative finance	Select financing mechanism

	Option 1	Option 2
Toilet	Individual toilets	Individual toilets
Conveyance	Regulated- 3 yrs	Regulated- 3 yrs
Treatment	SDB	Sintex Package treatment Plant
CapEx	2161.59	2177.36
O&M	19.91	29.15

All figures are in Rs. Lakhs

Impact on service levels



1 Import Scenarios for Comparison

2

Toilet	Conve
1 Individual toilets	Regul
2 Individual toilets	Regul
3 Individual + Community toilets	Regul
4 Individual + Community toilets	Regul
5 Individual + Group toilets	Regul
6 Individual toilets	Dema
7 Individual + Group + Community toilets	Regul
8 Individual + Group + Community toilets	Dema

1 Click this button to import all the scenarios that were saved in the previous step. In the dialog box that opens up, select all the relevant excel files.

2 Lists all the scenarios imported

3 Select from the dropdowns to compare

END