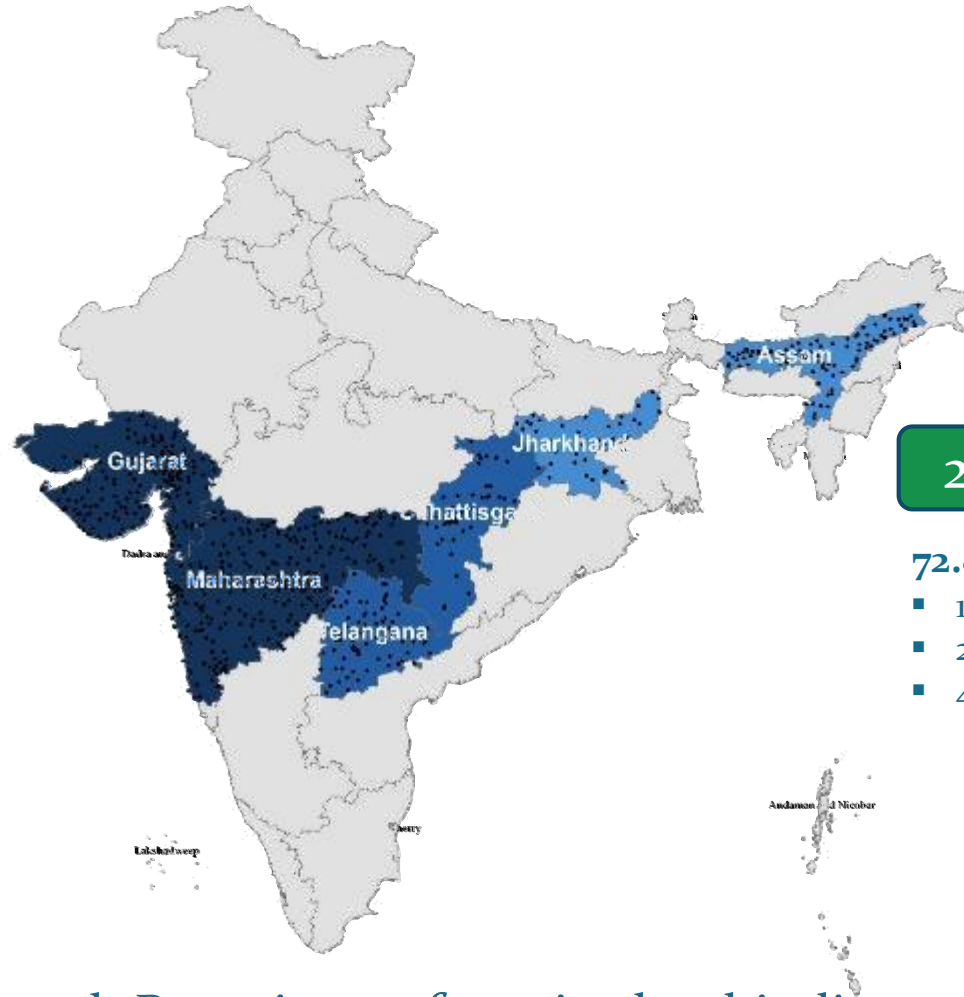




ODF Sustainability and ODF+ City level experiences

CEPT team
(supported by a grant from BMGF)

CEPT work with cities : PAS... Performance Assessment System...the Largest Database on Urban Sanitation in India



2009-416 Cities

68 Million population

- 167 Cities of Gujarat
- 249 Cities of Maharashtra

.....continued for 8 years

2015- 463 Cities

72.8 Million population

- 168 Cities of Gujarat
- 259 Cities of Maharashtra
- 43 Cities of Chhattisgarh

2016- 908 Cities

96.5 Million population

- 168 Cities of Gujarat
- 364 Cities of Maharashtra
- 168 Cities of Chhattisgarh
- 69 Cities of Telangana
- 96 Cities of Assam
- 43 Cities of Jharkhand

PAS web portal: Repository of service level indicators of more than 1800 cities covering 18 states over a period of 3 years.

Information available at www.pas.org.in

And the journey continues...

Long Partnership with cities in Maharashtra . .

2008-09

Performance Assessment System (PAS) Project

242 cities ---- > 384 cities

2011-12

Performance Improvement Plans

15 class A cities

2012

Exploring ODF Cities

Mahad, Satara and Others

2012-13

City Sanitation Plans

4 small and medium towns (Wai, Sinnar, Ambejogai, Hingoli)

2013

Implementation support for Sanitation Improvement

Support to Wai & Sinnar

2014-15

Demand Based Technical Support

12 interested cities

2015

Support to Swachh Maharashtra Mission

State Government and all 384 Cities in Maharashtra

2016

Implementation of Septage Management Plan

6 pilot cities in State (Wai, Sinnar, Akot, Umred, Chiplun, Gevrai)

Wai- A small town in Maharashtra



Famous
Ghats on the
banks of the
**river
Krishna**

A holy
pilgrim town,
known as
Dakshin Kashi

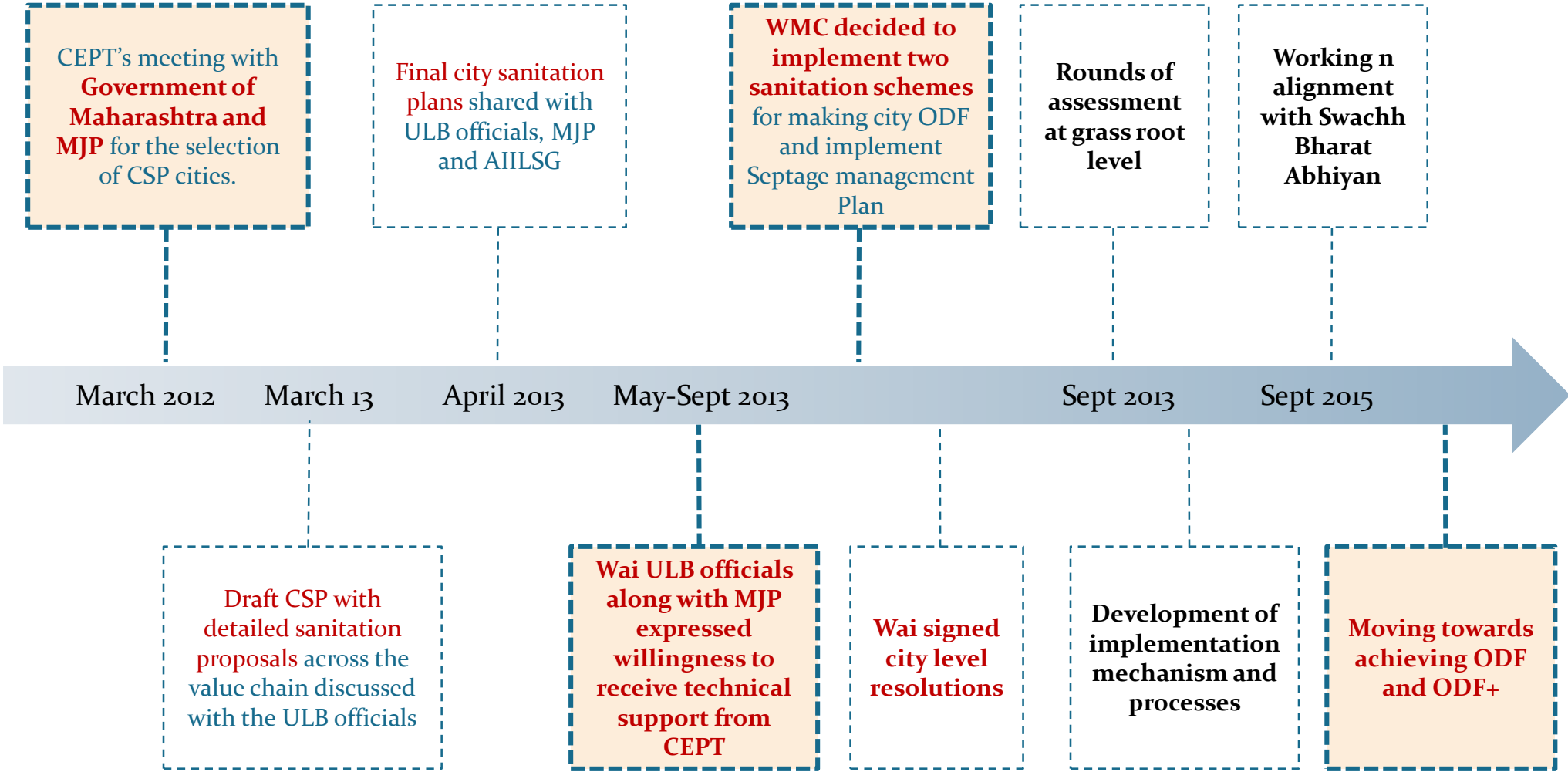
Major
attraction for
Bollywood film
location

Wai diaspora
Willing to
contribute to
improving
Wai



**Population
36,000. But
2100 of total
7500 families
in Wai did not
have access to
own toilets !!**

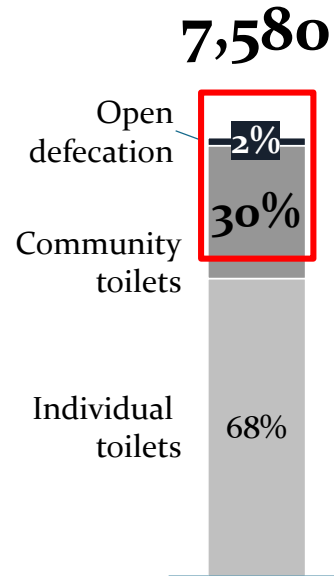
CEPT engagement in Wai



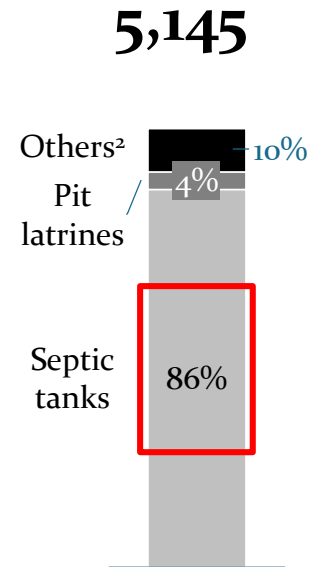
Status of Sanitation in Wai in 2011



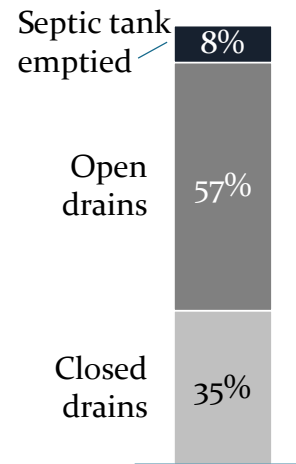
Access to type of sanitation
(Number of HH)



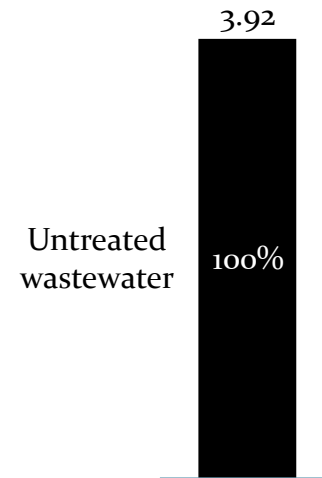
Method of collection of waste¹
(Number of HH)



Methods of conveyance of waste



Treatment of wastewater
(in MLD)



Disposal of waste
(in MLD)

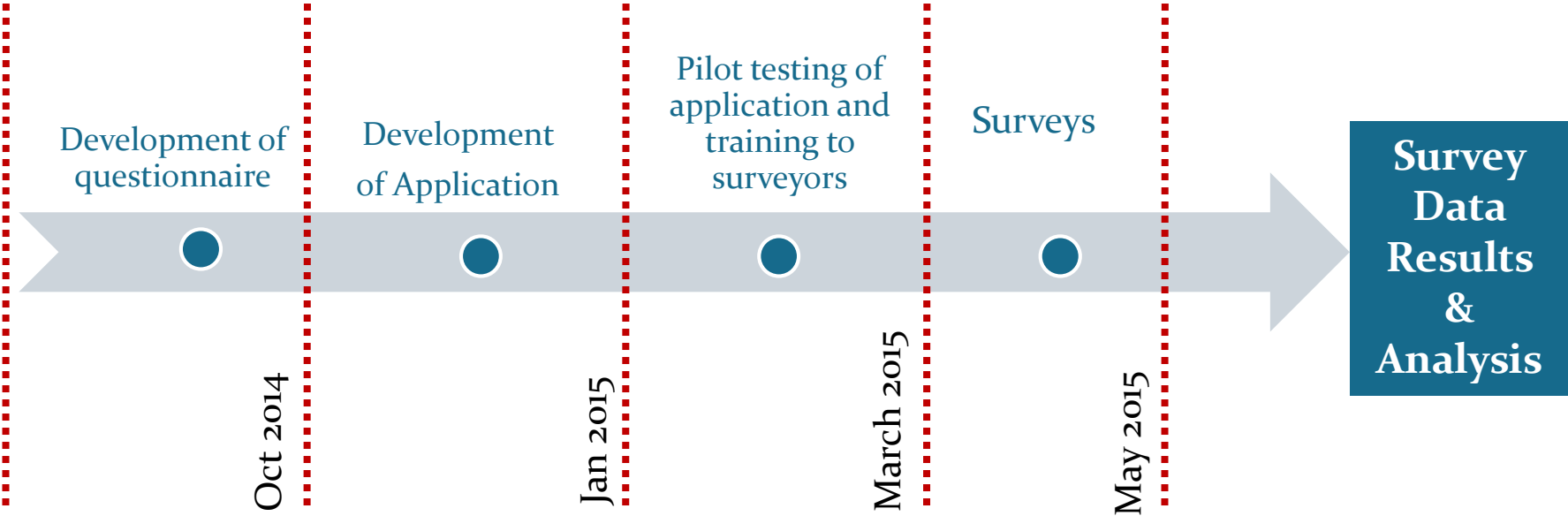


Property Level Sanitation Surveys

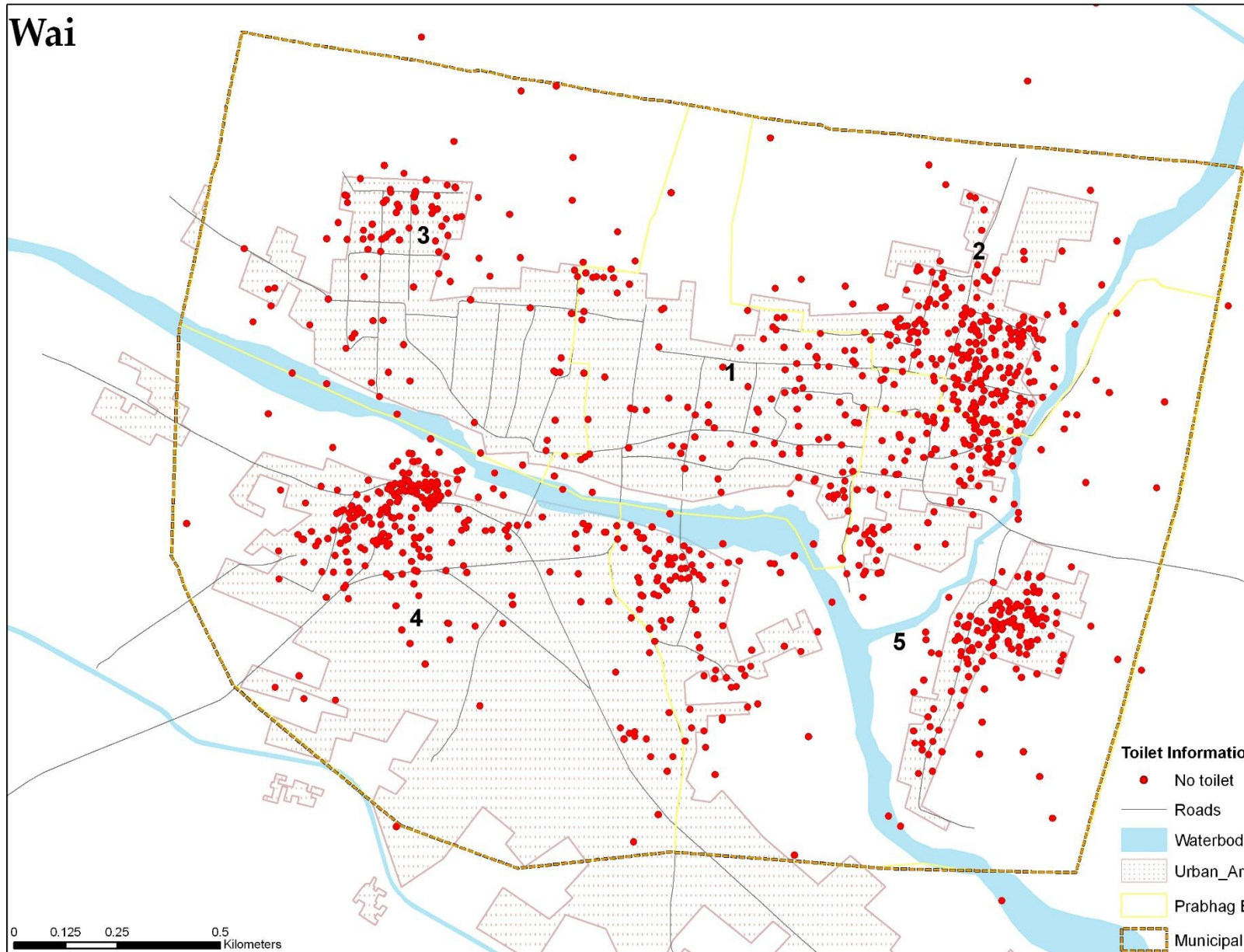


SaniTab

To generate household level database for monitoring of both the sanitation schemes



Survey Results-2015



83% have own toilets

2.1% resort to OD

“Can not afford” is the key reason for not having toilet

51% are willing to construct group toilet

40% are willing to take loan

99% toilets are connected to septic tank

Average frequency of cleaning of STs is 6 years

School Sanitation Assessment

Public & Private Schools- Existing Status

6 Public Schools

No. of Girls- **1570**
Toilets- **14**
Urinals- **27**

No. of Boys- **765**
Toilets- **6**
Urinals- **25**

Teaching Staff
69

Non- Teaching Staff
11

Total Number of Students - **2335**

15 Private Schools

No. of Girls- **4936**
Toilets- **23**
Urinals- **100**

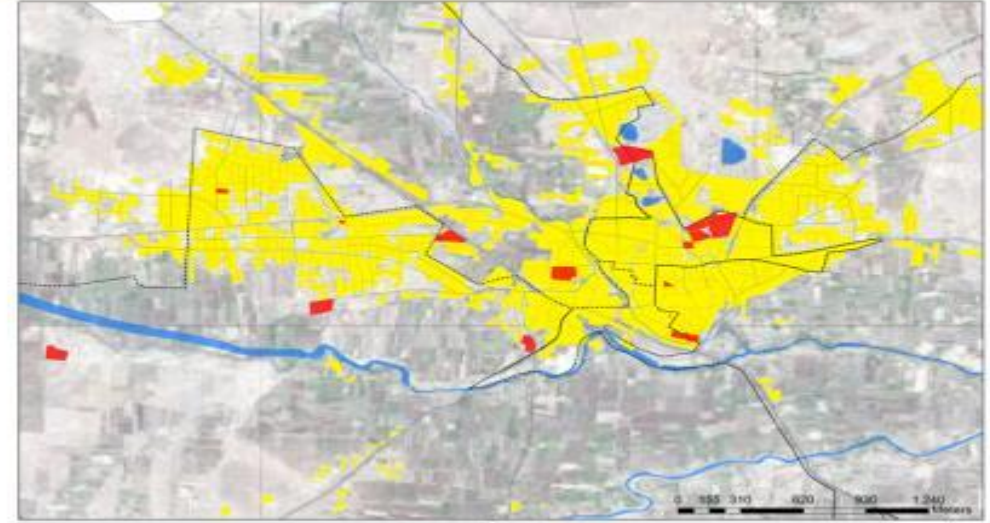
No. of Boys- **6768**
Toilets- **18**
Urinals- **121**

Teaching Staff
317

Non- Teaching Staff
83

Total Number of Students - **11,704**

Locations of Schools in Sinnar



Legend

Summary of Proposals

Total - INR **12** Million for New Construction

INR **0.6** Million for Annual O&M of School Toilets

Public Schools
New Construction
INR **2.1** Million
(43 Toilets + 65 Urinals)

Private Schools
New Construction
INR **9.8** Million
(188 Toilets + 348 Urinals)

Estimated Annual
O&M Contract Value
INR **0.13** Million

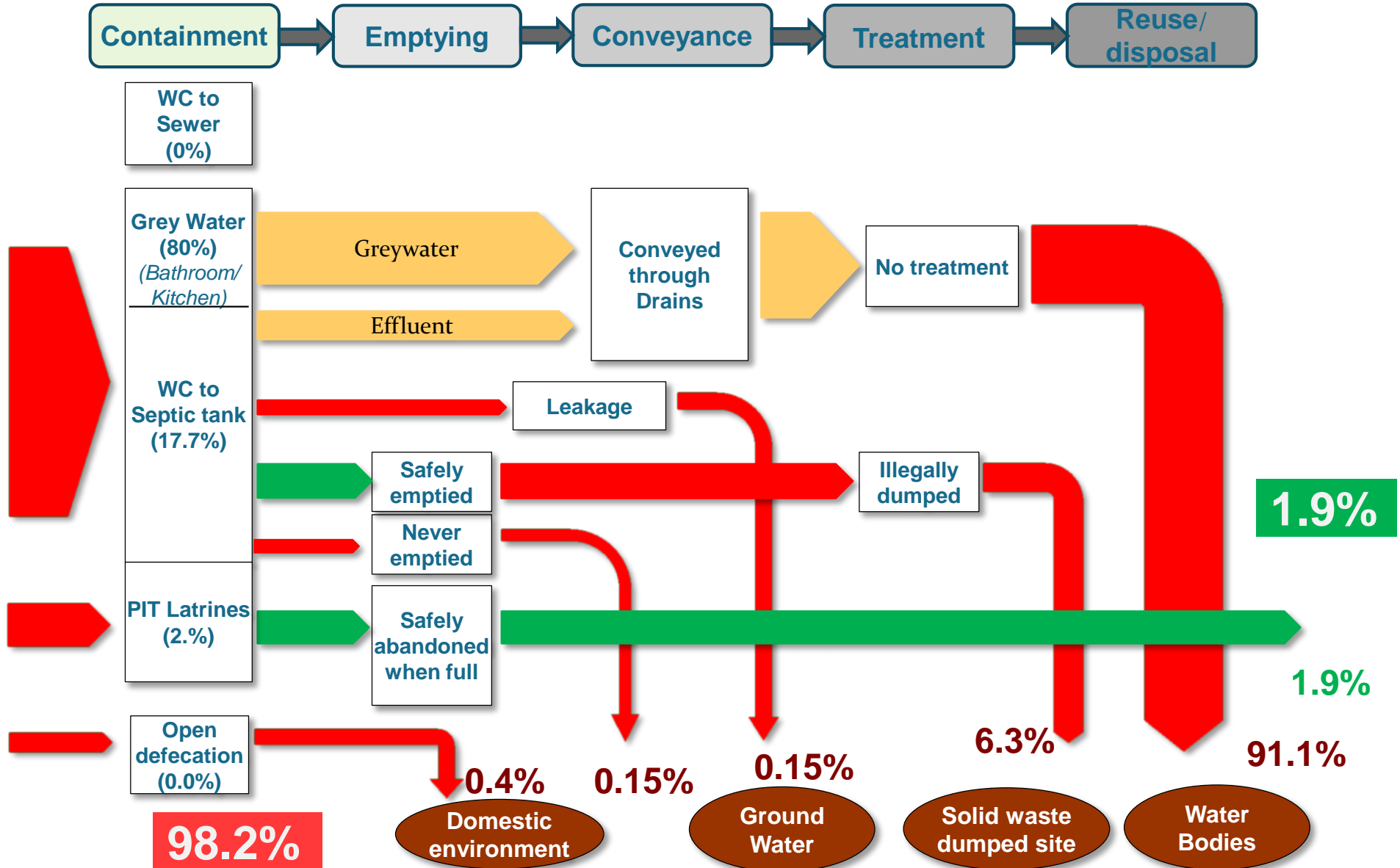
INR **0.46** Million

Condition of Toilets in Public Schools



Key Challenge: Beyond toilets

Existing Situation



Crude Disposal of Septage at dump site



A septic tank emptying truck being emptied like this is equivalent to 2000 people defecating in the open!

Saniplan- a decision support model

A Performance Improvement Planning tool for Urban Water Supply and Sanitation

Conventional Approach

'PROJECT'
based approach

Focus on achieving:
OUTPUTS

Starting point is an assessment of available grant funding – **SUPPLY DRIVEN**

Focus on developing **INDIVIDUAL PROJECTS** of various sectors

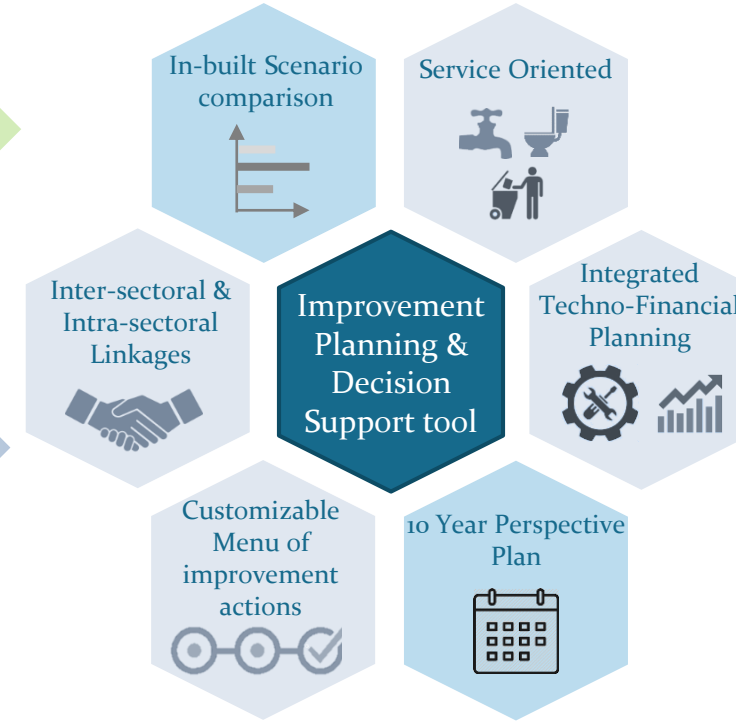
SANIPLAN Approach

'SERVICE'
based approach

Focus on achieving:
OUTCOMES

Starting point is measurement of current performance and local priorities – **NEED DRIVEN**

Focus on developing integrated **SECTORAL SOLUTIONS**



City Sanitation Plan

Open Defecation Free City Plan

FSM Planning

WATSAN Developing Plan

Performance Improvement Plan

Sanitation options for comparison

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

Select Option 1

WW disposal: Septic Tank + Soak pit (SS) | Settled Sewer (SSt) | Conventional Sewer (CS)

Toilet: Individual (selected), Individual + group, Indiv + group + community

Select financing mechanism: Self Financed (SF)

Select Option 2

WW disposal: Septic Tank + Soak pit (SS) | Settled Sewer (SSt) | Conventional Sewer (CS)

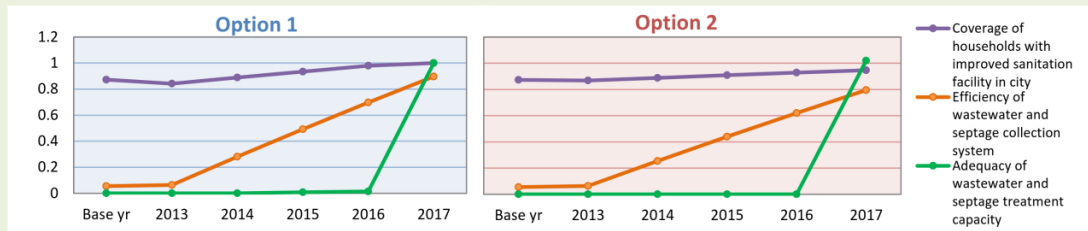
Toilet: Individual (selected), Individual + group, Indiv + group + community

Select financing mechanism: Self Financed (SF)

	Option 1	Option 2
Toilet	Individual	Individual
WW disposal	SS	CS
CapEx	1420.21	3006.76
O&M	3.01	43.47
Revenue	9.73	32.83

All figures are in Rs. Lakhs

Impact on service levels



Financial implications



Summary of Action plan

Select mode: CAPITAL EXPENDITURE

Option 1	2014	2015	2016	2017	2018
Improve collection efficiency of WS	-	-	-	-	-
Improve existing individual toilets	18.8	10.0	10.7	11.4	-
Refurbishment of existing septic tanks	11.9	12.7	-	-	-
New individual toilets	228.8	244.8	262.0	280.3	-
New public toilet blocks	2.9	3.1	-	-	-
Increase septage collection with	0.6	-	-	-	-
Soak pits for WW disposal	-	-	-	-	-
New suction emptier trucks	-	11.4	-	-	-
Fecal sludge treatment plant	10.7	-	-	-	-

Option 2	2014	2015	2016	2017	2018
Improve collection efficiency of WS	-	-	-	-	-
Improve existing individual toilets	15.6	16.7	17.8	19.1	-
New individual toilets	163.4	174.9	187.1	200.2	-
New public toilet blocks	2.4	2.5	-	-	-
New sewerage network	290.7	311.0	332.8	356.1	-
Sewage treatment plant	99.9	106.9	114.3	-	-

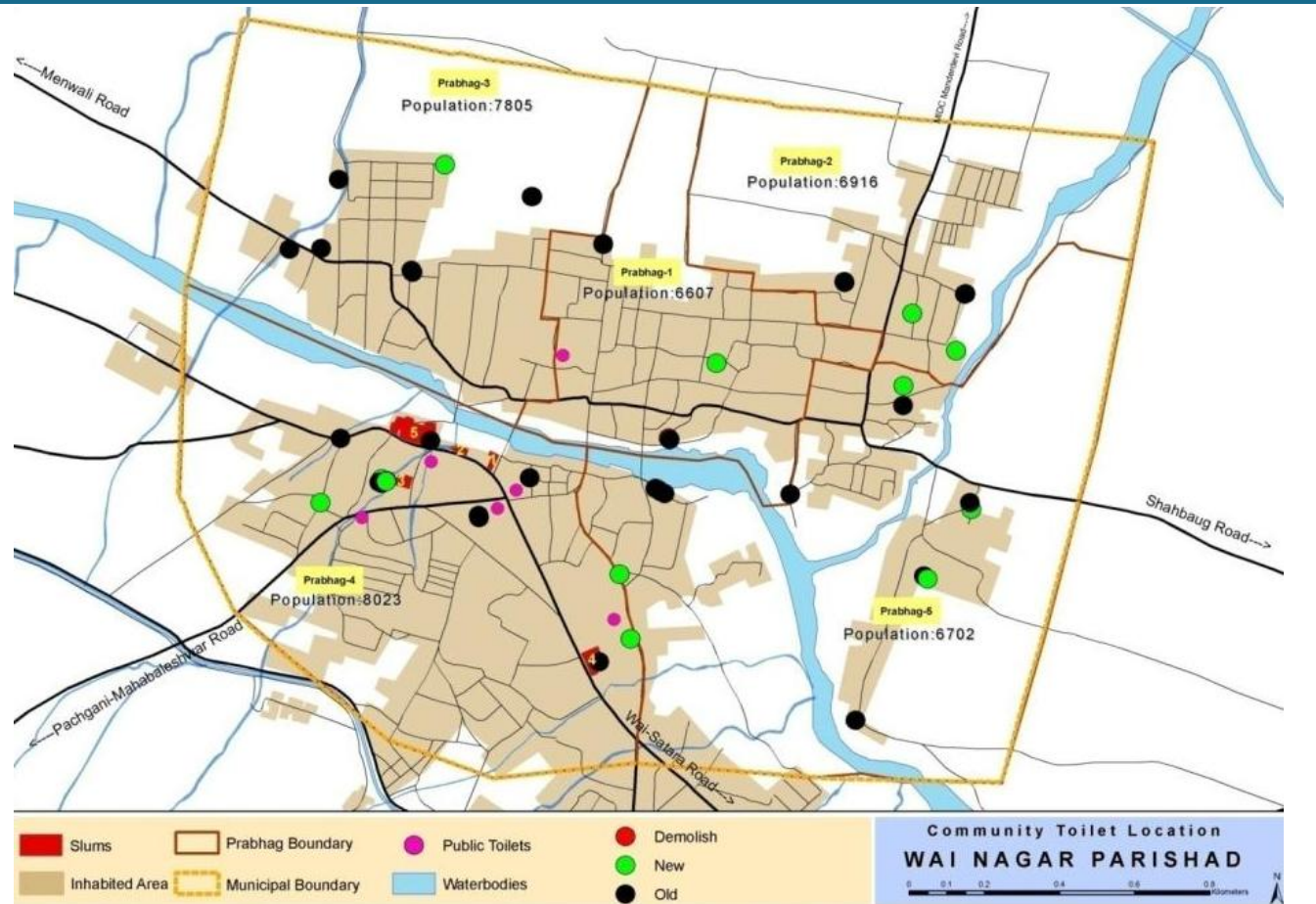
SaniPlan: Dashboard

Helps to examine alternative actions

Allows to compare various scenarios related to finance, technology choice and tariff implication

City aspired for “sewerage” system but agreed that it was inappropriate and ‘unaffordable’

Strategy to Move away from Community Toilets



Ward Level Meetings on sanitation strategy



Awareness generation activities . . .

Awareness materials for FSSM



Wai Nagarpalika, Wai



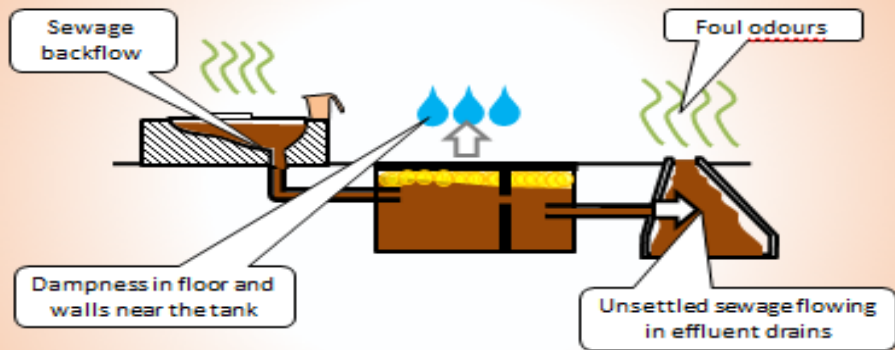
Wai Municipal Council has devised a unique
“Scheduled Cleaning of Septic Tanks scheme”



A first of its kind in the country under which
 septic tanks of each and every
 household of the municipal council will be
 cleaned at least **ONCE** in every 3 years



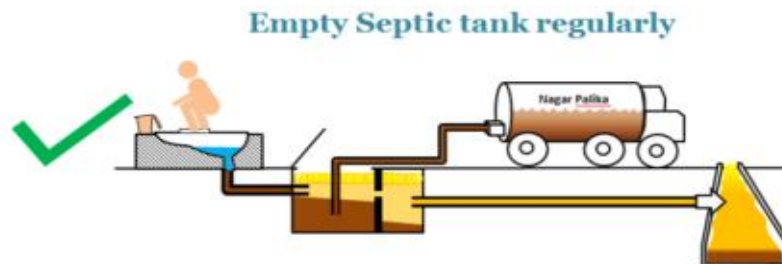
You clean your septic tanks only when it overflows...But are you aware of
 the side effects of not cleaning it periodically...



As per CPHEEO manual, septic tank needs to be cleaned
 once in every 2-3 years....

सातपुडा नगरपालिका स्वच्छता कर संयोजिका
नाम
ठेका
संस्थापक
पता
संस्थापक
संस्थापक
संस्थापक
संस्थापक
संस्थापक
संस्थापक
संस्थापक

And the good news is...
 To clean the septic tank, you do not have to pay
 while availing the service...
 All the expenditure will be done from
Sanitation Tax paid by you....



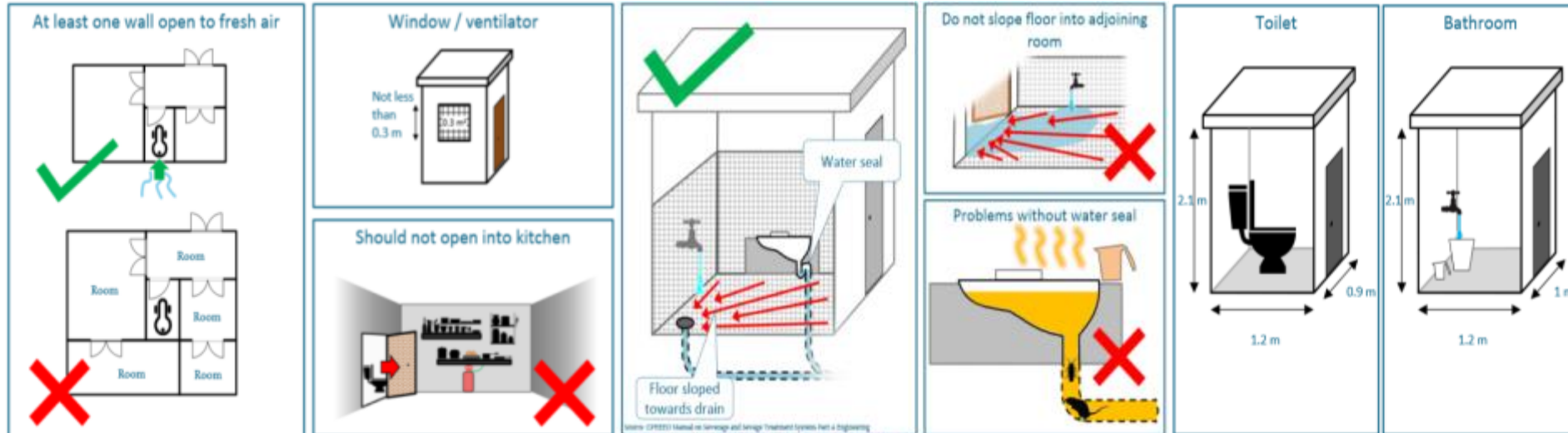
Septic tank should be emptied every 2-3 years
 Avail **Nagarpalika** services!
 Not emptying it regularly will result in-

Remember!

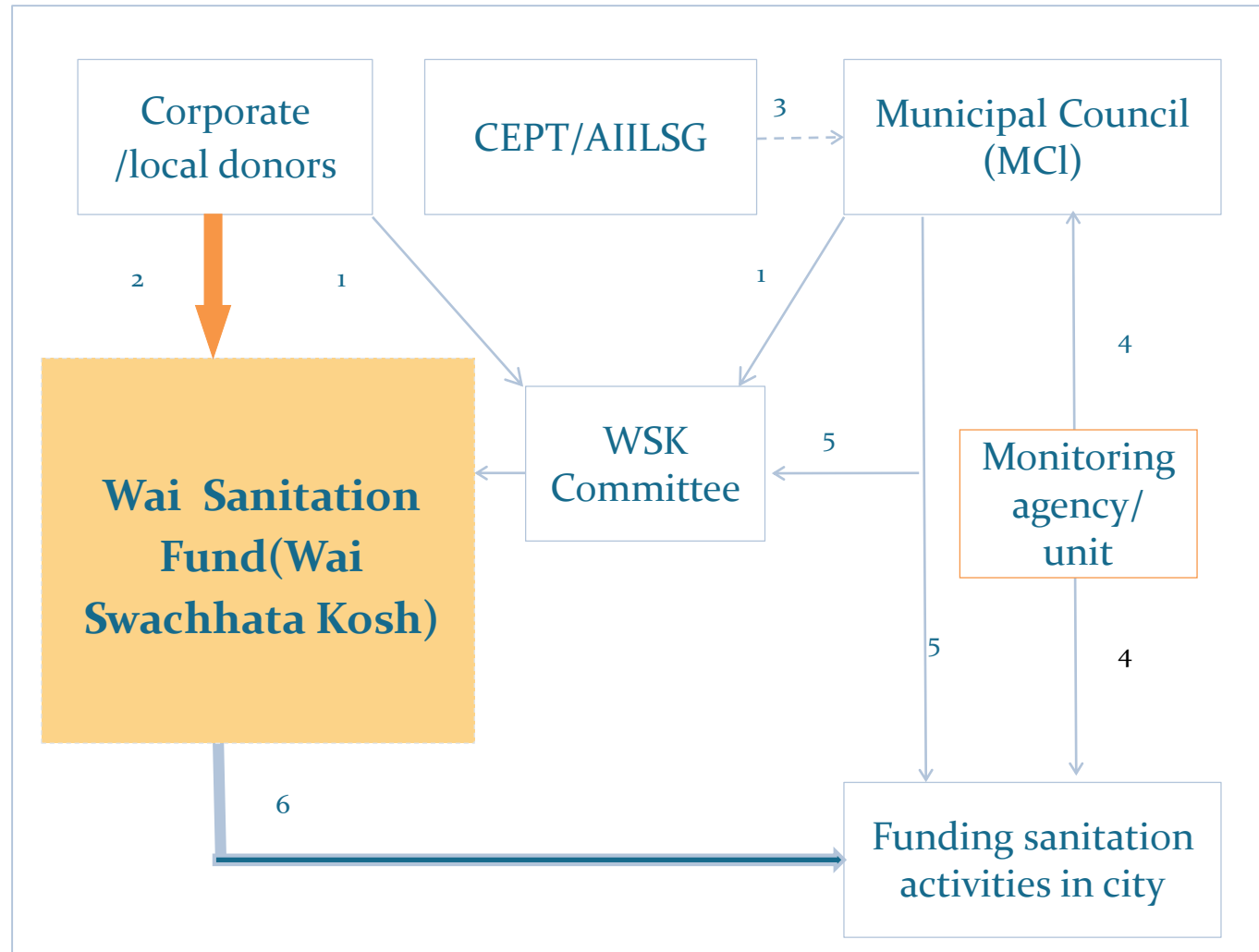
<p>Service is available to each household once every 3 years</p>	<p>Contractor will visit between 7 am and 5 pm. Be present at home and ready! Keep Septic tank cover open for visit</p>	<p>When constructing new septic tank, do not seal cover and give proper access</p>
<p>Contractor will call 2 days before scheduled visit</p>	<p>Cleaner should be wearing proper safety gear</p>	<p>No one should enter tank! Manual scavenging is prohibited by law</p>
		<p>2" sludge leave</p>

Training of local contractors. . .

For **PROPER** construction of **TOILETs** and **SEPTIC TANKs**

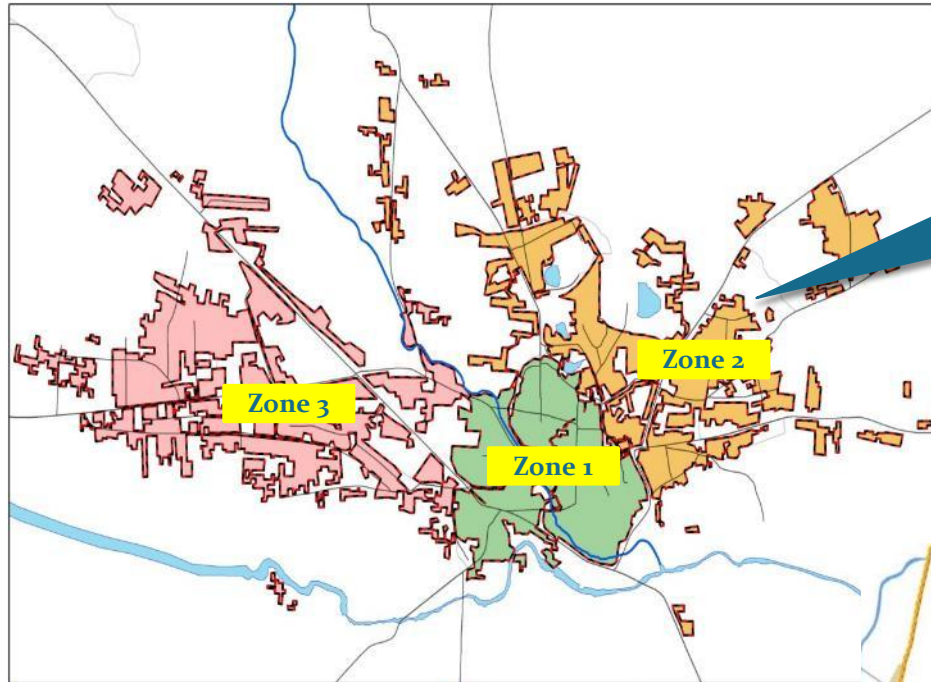


Setting up “Wai Sanitation Fund” . . .



Wai Swachhata Kosh mechanism enables local industrialists and other donors to effectively contribute to development of improved sanitation in the city

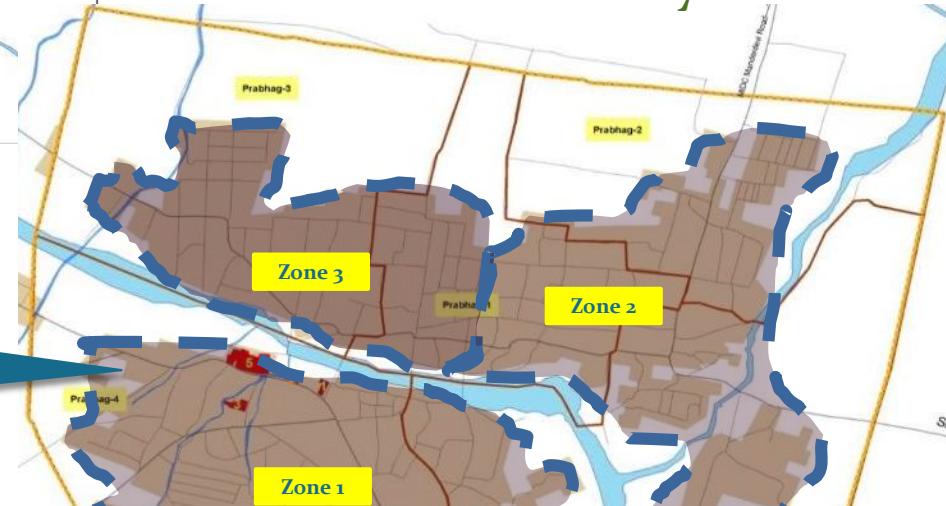
Scheduled desludging services in towns financed through differential taxation . . .



2-3 trucks to desludge
~ 4000 septic tanks
annually

Moving from a **consumer complaint system** to
regular service oriented system

2 trucks to desludge
~ 2000 septic tanks
annually



1st City in INDIA
to implement scheduled emptying. . .

PSP in Emptying services

Wai Municipal Council, Wai

TENDER DOCUMENT

Name of Work

“Service contract for scheduled emptying of septic tanks, Wai”

E.M.D. : Rs.10,000/-



Office of the

**Chief Officer,
WaiMunicipal Council, Wai**

Mr. Gosavi
Sanitary Inspector

Mr. Prasad Katkar
Chief Officer

**Septic tank cleaning
Tender document**

CONTENTS

I. Short Tender Notice.....	3
II. Detailed Tender Schedule.....	3
Notes	4
List of documents to be submitted along with tender	5
III. Detailed Tender Notice – General Conditions.....	6
IV. Detailed Tender Notice – Special Conditions.....	14
V. Form Formats.....	22
Details of suction emptier trucks available with the tenderer for the use of this work	22
Details of work of similar type and magnitude carried out by the tenderer	23
Details of technical personnel with the tenderer	24
Year wise statement showing cost of completed works	25
Financial Statement	26
Organization Profile	27
VI. Opening of Tender.....	28
VII. Acceptance of Tender.....	28
VIII. Declaration of the Contractor.....	28

E-Tender on state web site



**Service provider selected following a
competitive bidding process**



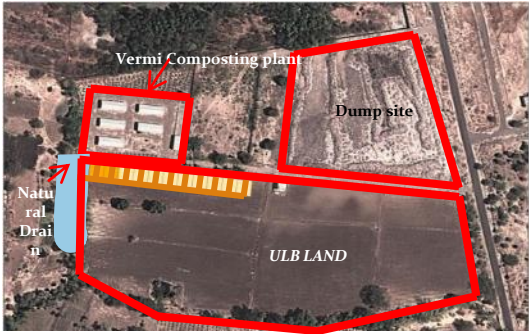
Work has been awarded.

**Services to begin after the treatment
plant becomes operational**

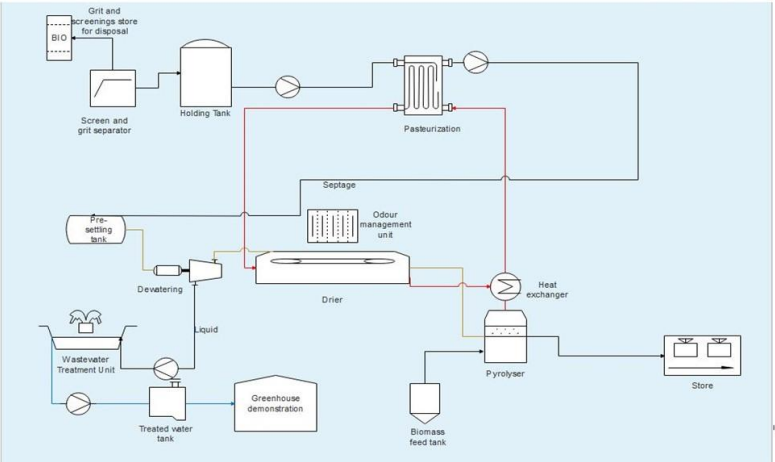
Fecal Sludge treatment facility . . .

Wai

- Tide technocrats setting up a **70cum/day capacity plant**
- FSTP site near solid waste compost facility
- Civil works under progress
- Plant to become **operational by November 2017**

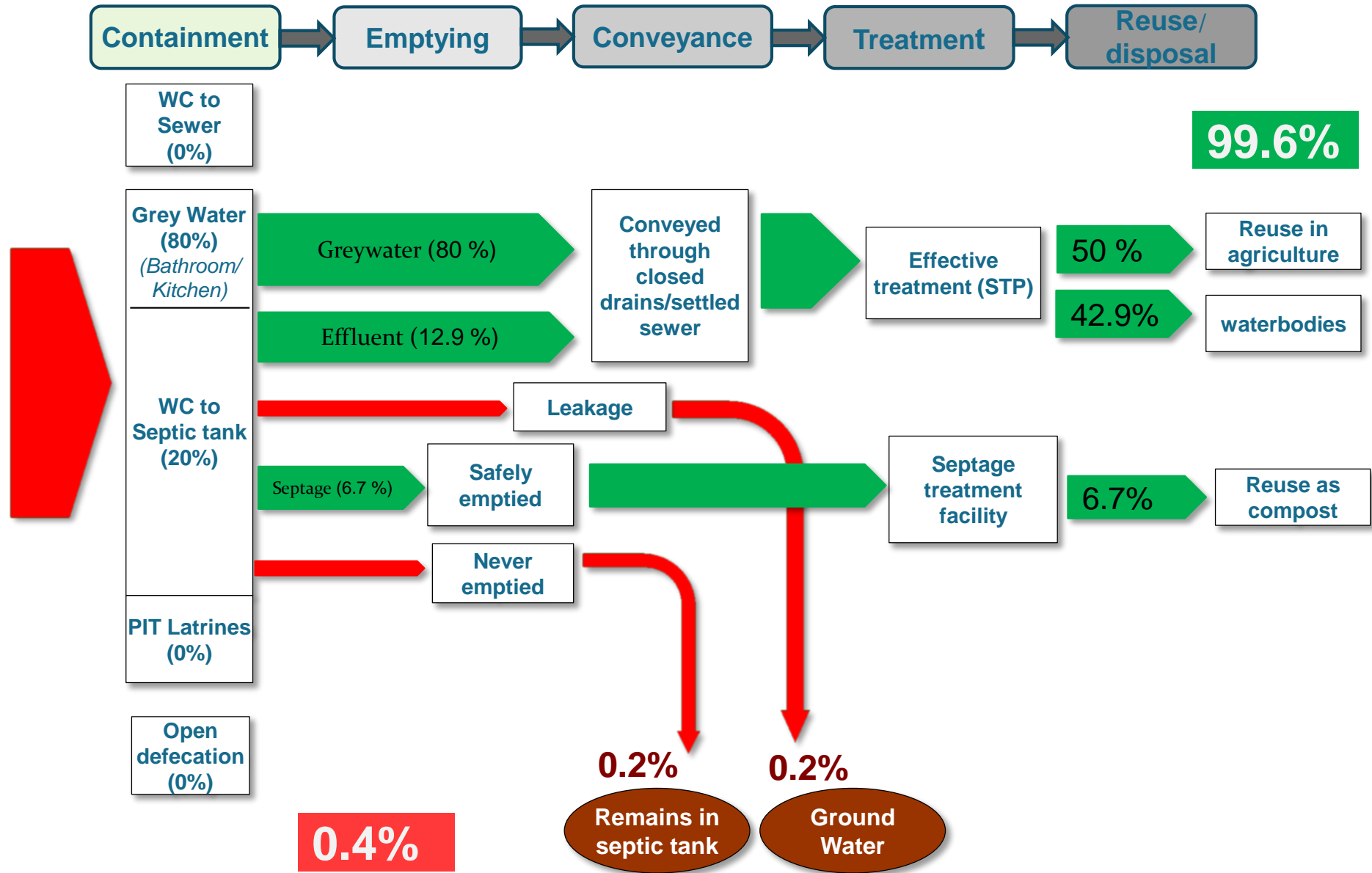


Hydraulic Flow Diagram



Wai in Future: Moving from ODF+ to ODF++

Proposed Situation

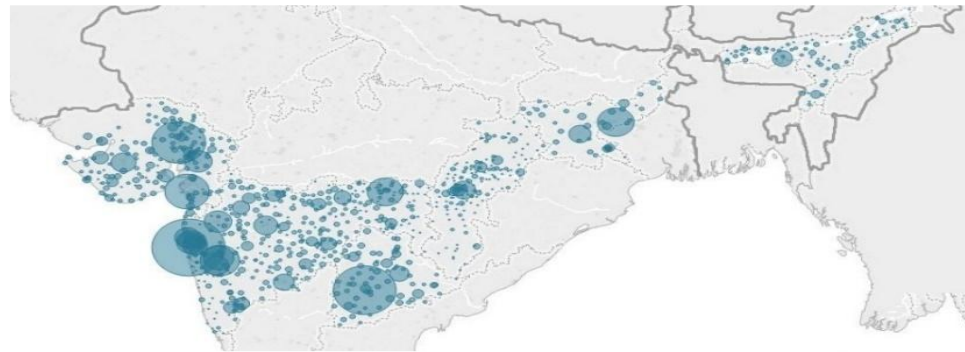


Wai a Model City in India?

- First city in India to attempt Scheduled desludging- every tank emptied at least once in 3 years
- Fecal Sludge treatment Plant with new technology
- Private sector participation for emptying services
- Escrow account to minimize payment risks for private operator
- Funding through Sanitation tax levied on all properties

PAS Project - Performance Assessment System for urban water supply and sanitation

Annual service delivery profile for **900+ cities** in India across **6 states**



Supporting Swachh Bharat Mission in Maharashtra state

Financing Water and Sanitation

Sanitation Planning tools

Onsite sanitation Action research

Equity in Municipal Services

City level support for citywide sustainable sanitation

Capacity Building activities

Urban Water Security



Support of BMGF for these activities is acknowledged

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pas@cept.ac.in



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