

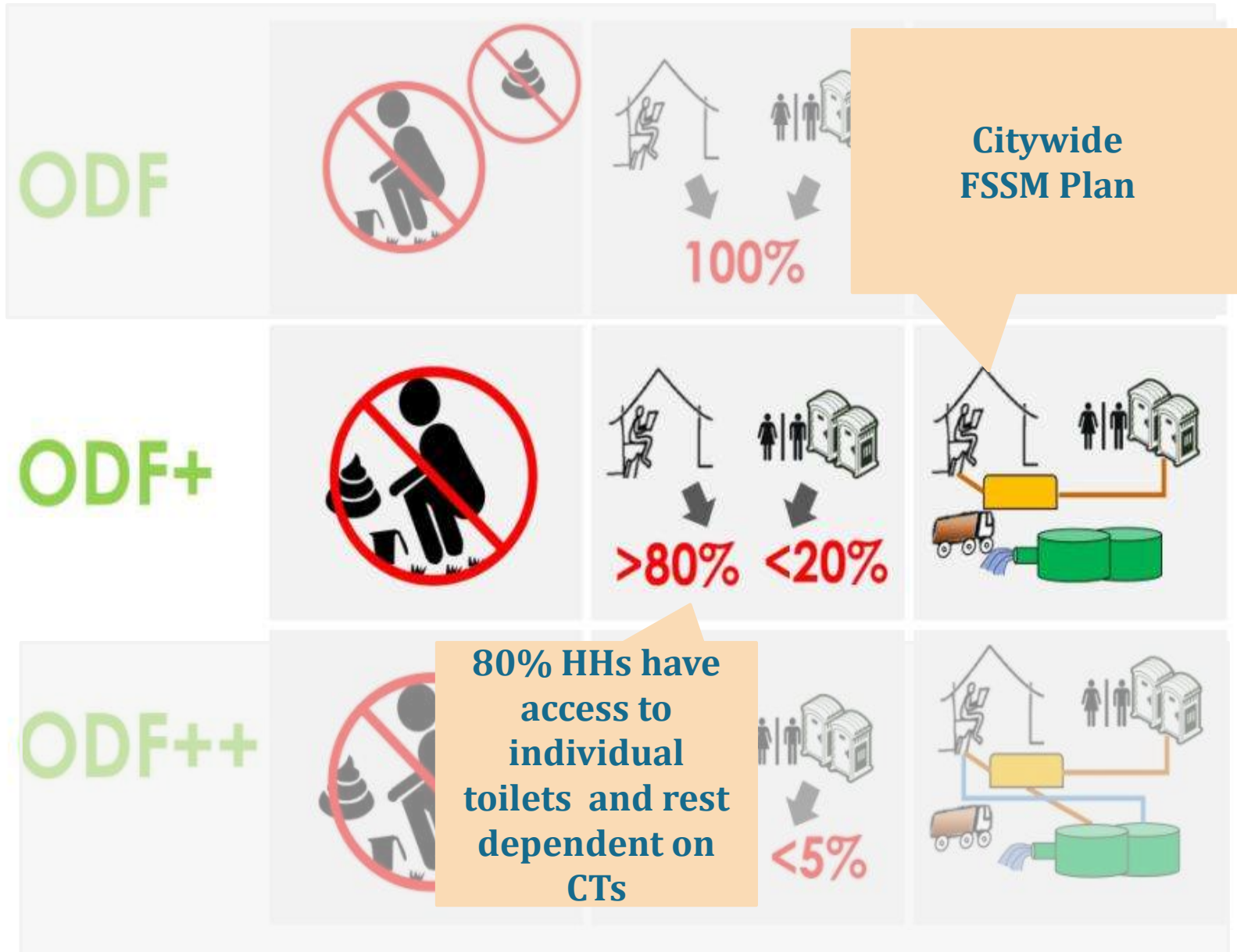
Moving UMRED towards ODF+ through FSSM

Prepared for
Umred Municipal Council
April 2018

Support Umred Municipal Council
for moving towards ODF+
through Faecal Sludge and Septage
Management (FSSM) Plans

Timeline of support – August 2017 to December 2018

Concept of ODF, ODF+, ODF++ by GoM

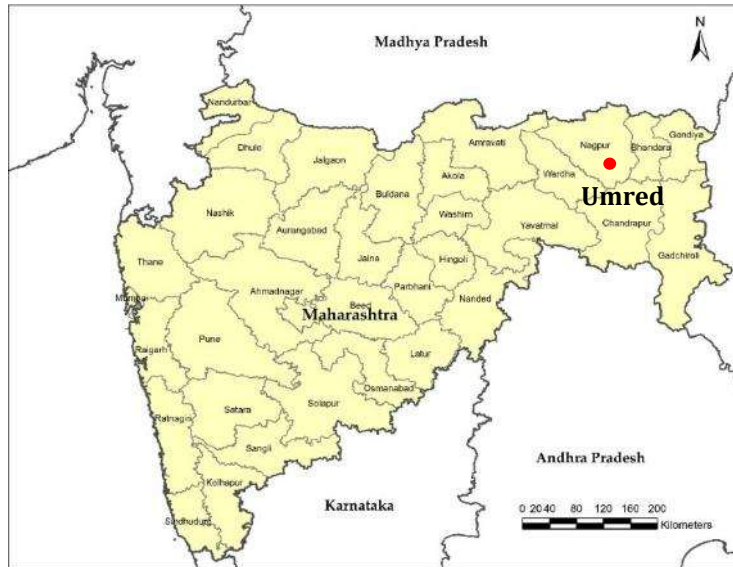


Content

- 1. Introduction**
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 - d. Treatment / Disposal
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- 5. Proposed Projects**
- 6. Financial Assessment**
- 7. Summary of Challenges**
- 8. Proposals**

1. Introduction

Introduction



- Umred is class 'B' council located 45 km south-east of the district headquarter i.e. Nagpur. Umred is taluk headquarter.
- The population of the city is **58,225** spread over an area of **12.95 sq km**.
- It is situated on a latitude of the **20^o-50`** and **longitude of 79^o-19**
- The old municipal limit of Umred includes the Gaothan area of today. The municipal area was extended in the year 1989. (85% increase in area)



- Major highways passing through the city are: NH 353, MSH 9 and SHs 258, 261 and 262. Narrow Gauge Railway: Nagpur to Itwari- Naghbir. The nearest airport to Umred is in Nagpur.
- It is predominantly **agricultural**, with upcoming industrial area on the southern side.
- Umred is known for **coal mines** on North Western side and the **Karhandla Wildlife Sanctuary** on the Eastern Side
- Umred has been declared as **ODF** by QCI **in Sept. 2016**

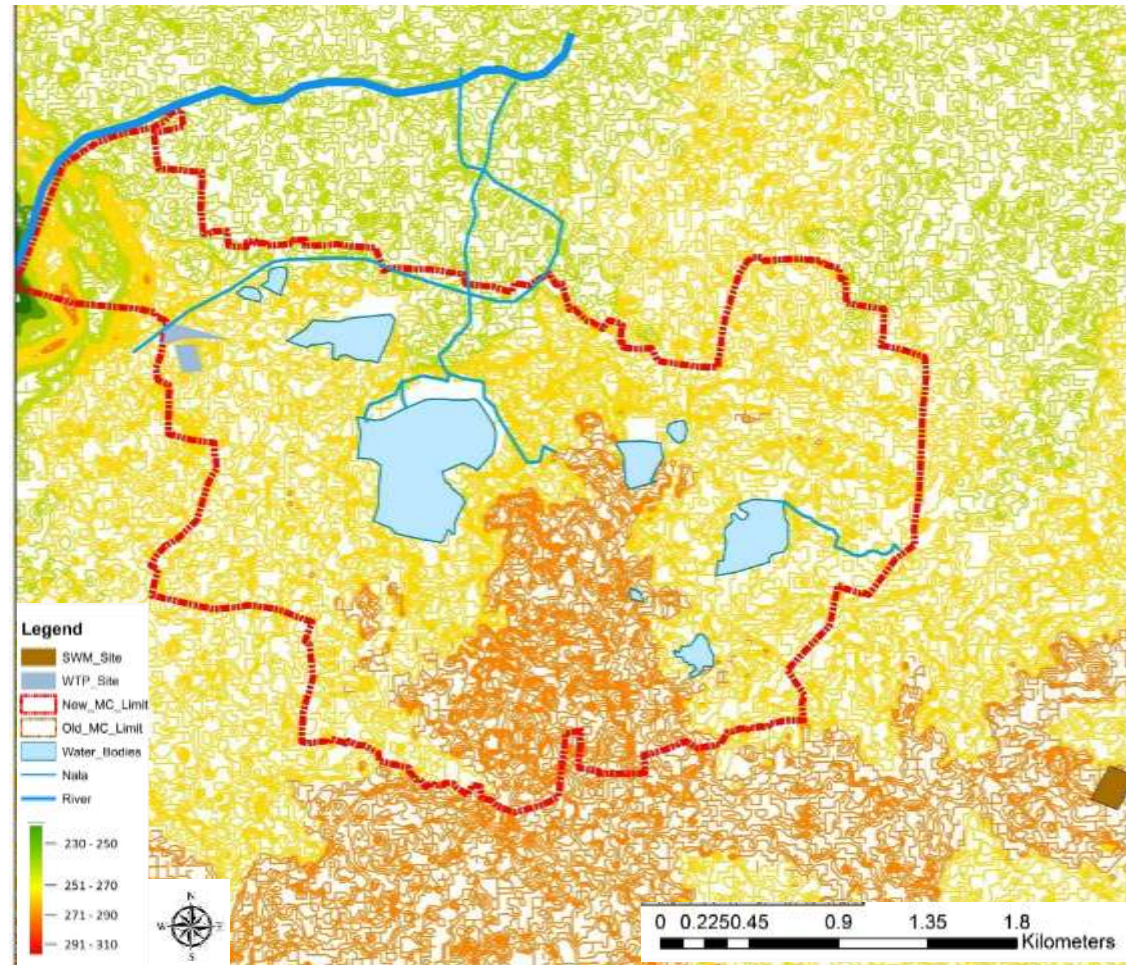
Introduction: Demographics & Topography

	2011	2017
Population	54,043	58,225
No. of HHs	11,880	13,450
Slum population (%)	9	12
Literacy (%)	75	-

Growth Rate	2001-11	2011-2017
	8.10	9.01

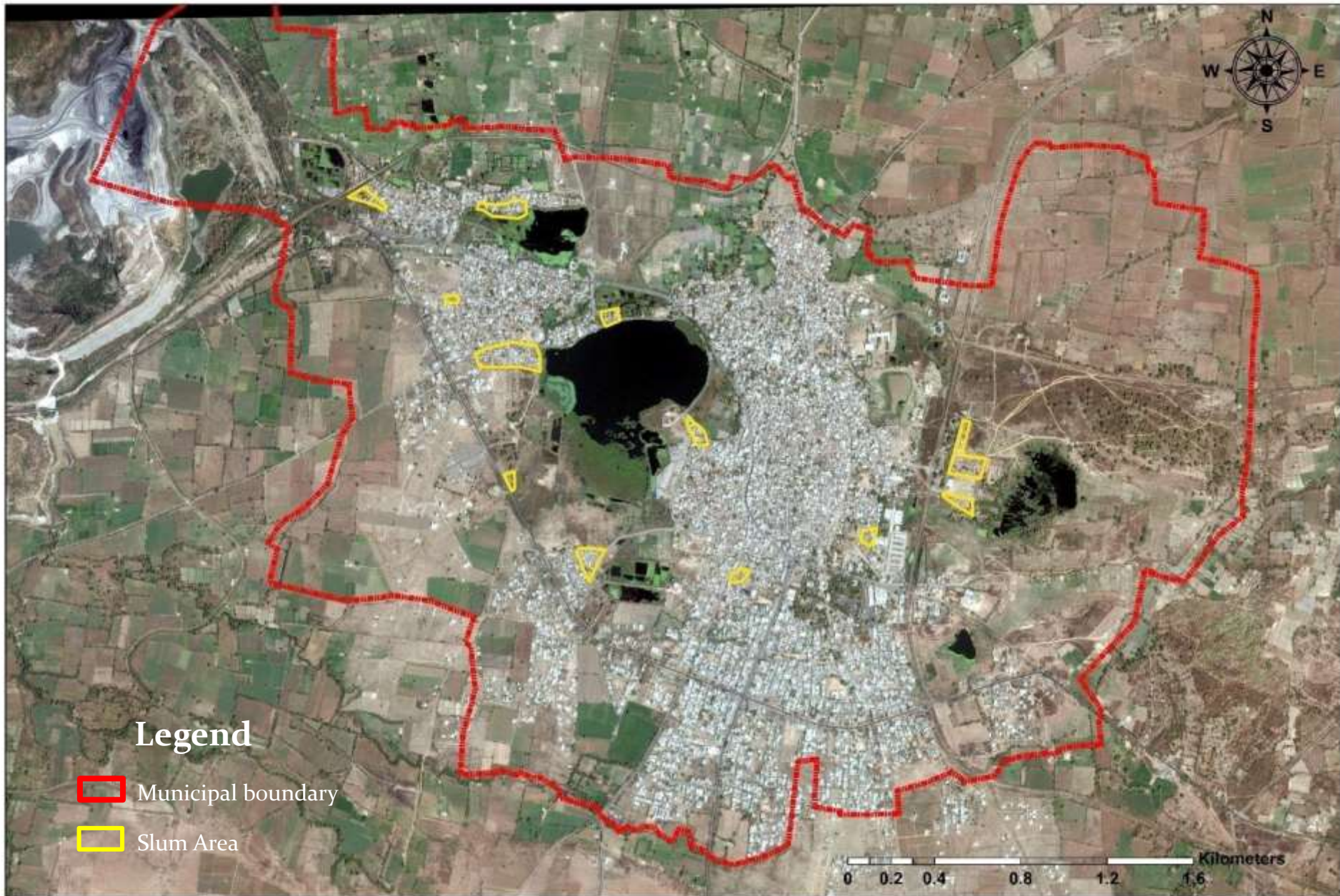
Topography

- The area has a gentle slope from south to north
- Soil type- Majra/Murum
- Average Ground water level : 120 ft
- There are **8 water bodies**. 2 major lakes out of them are Gandhisagar and Hirwatalav.

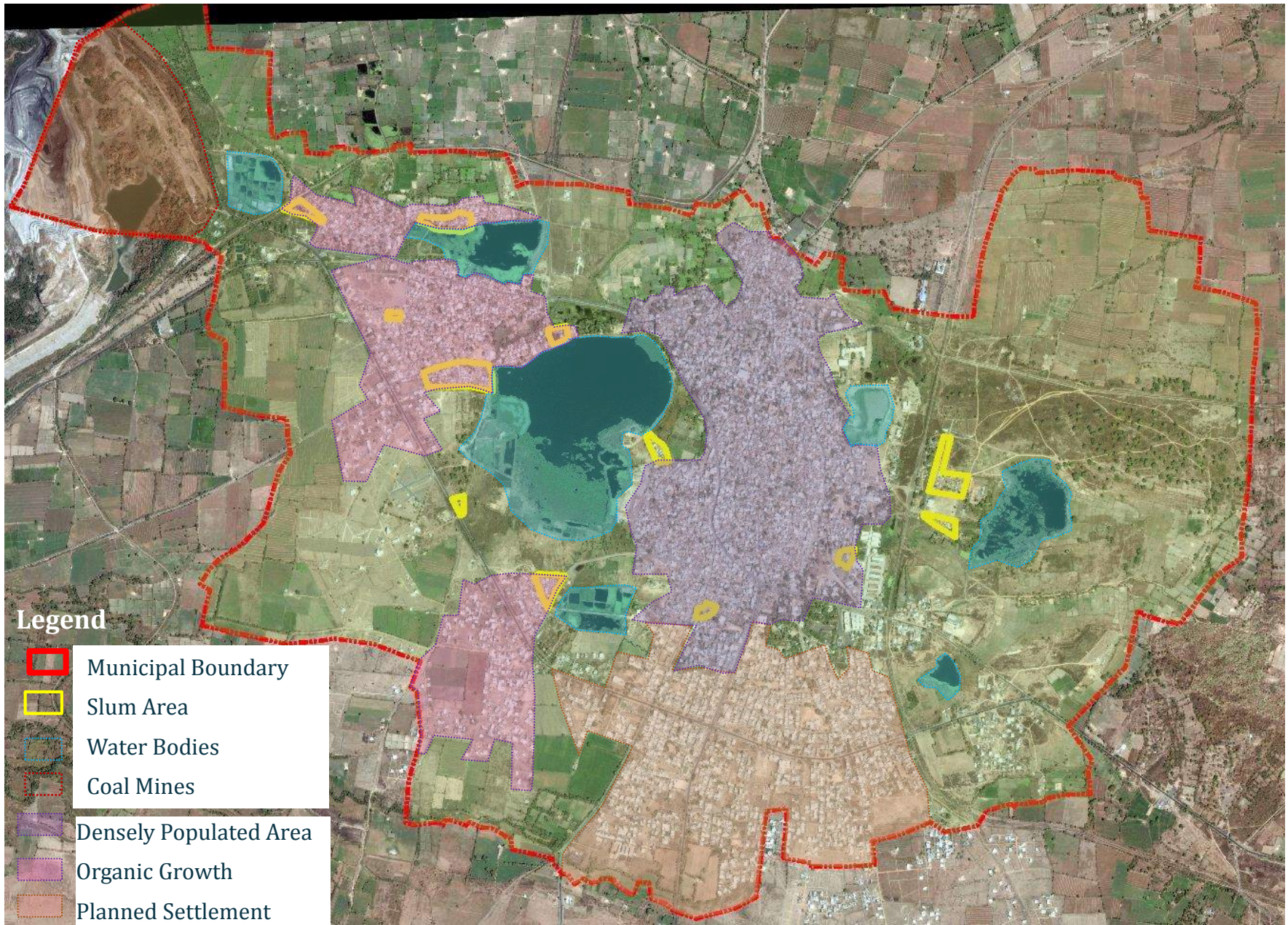


- There are 3 major Nalas in the city.
- Average rainfall is 1179 mm

Municipal Limits- Satellite Imagery



Settlement Pattern and Natural Features



Out Growth Areas



The distances mentioned are from the City Centre



MIDC Area and Kumbhari Village is 3.5 Km towards South



Dhurkheda settlement along Mangrud Rd. is 4.5 Km towards South

Out Growth Areas



WCL Colony and Waygoan is 6 Km towards North West



Bhandarkar layout is 1.5 Km towards South

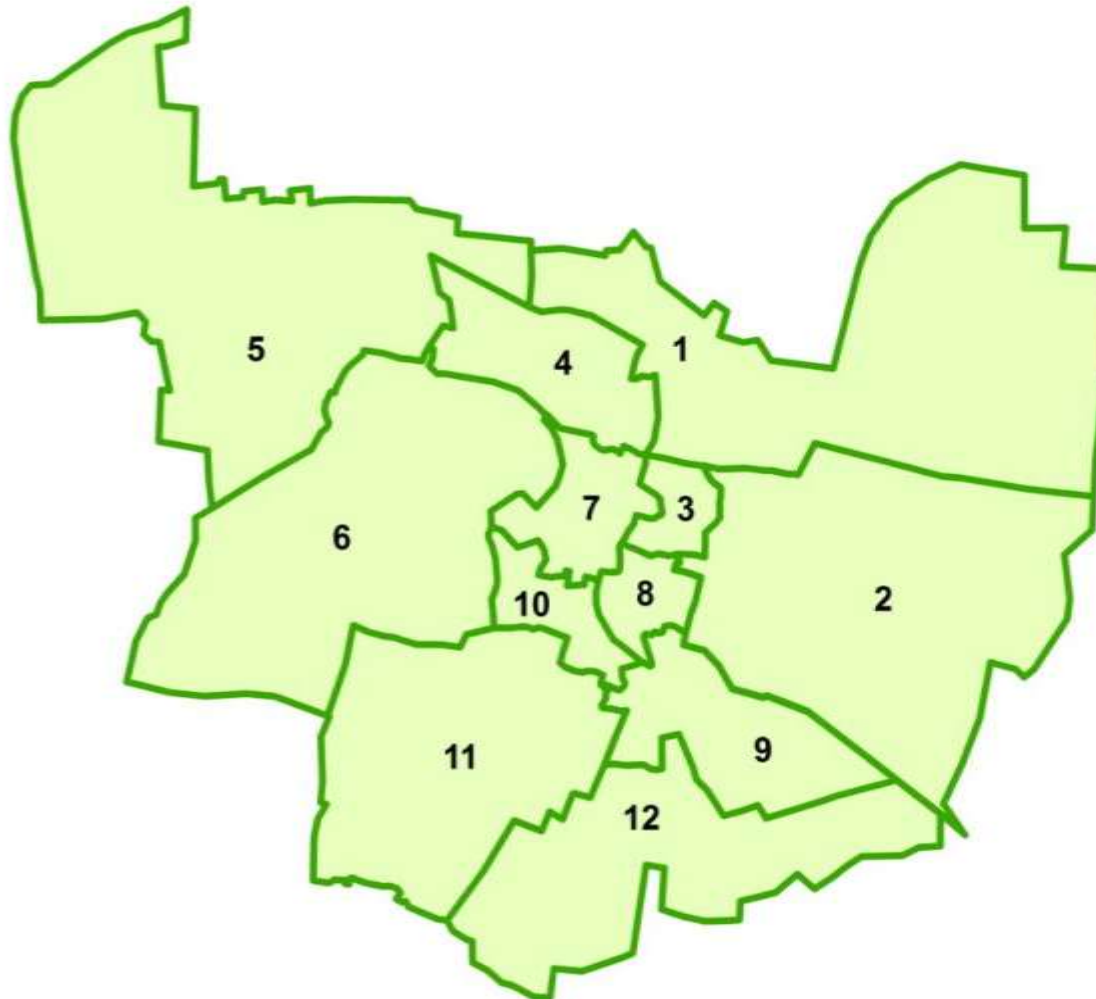


The distances mentioned are from the City Centre

Electoral Wards

Number of Electoral Wards	12
Number of Administrative Wards	24

PRABHAG MAP OF UMRED



Legend

 Prabhag_Map

Pra. No **Prabhag Name**

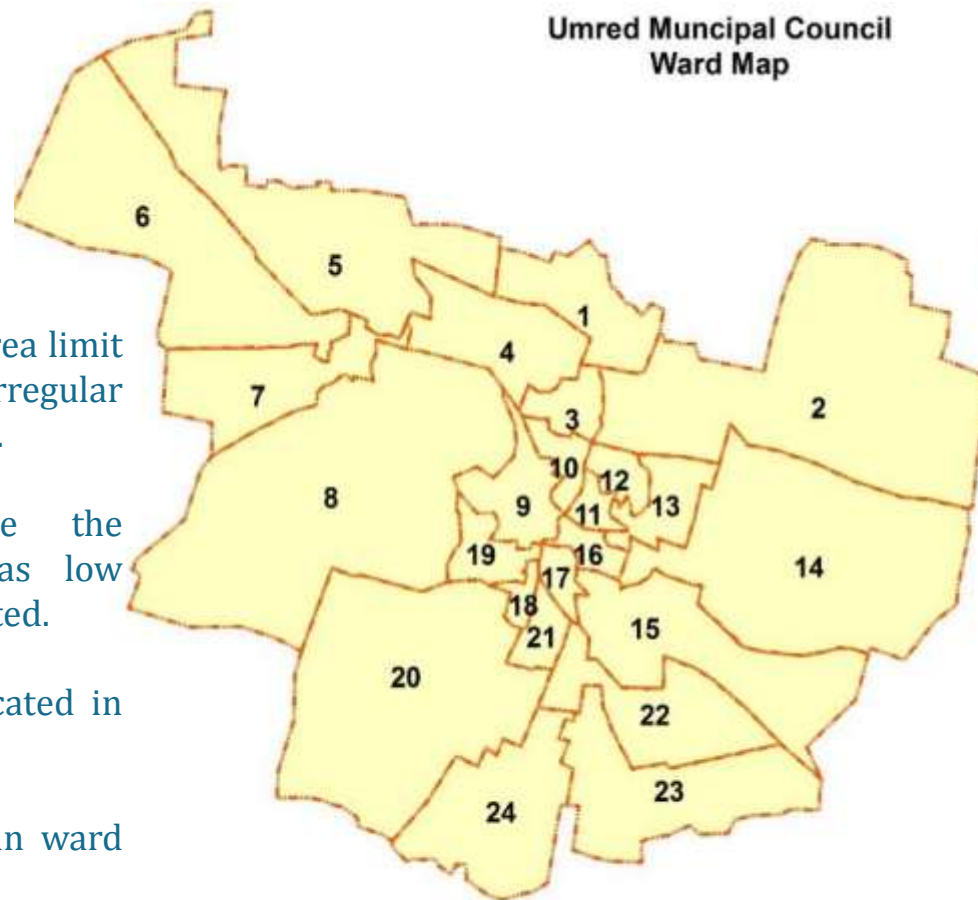
- 1 Mahatma Gandhi
- 2 Sardar Vallabhbhai Patel
- 3 Maharana Pratap
- 4 Mahatma Jotiba Phule
- 5 Siddharth Gautam
- 6 Savitribai Phule
- 7 Netaji Subhash Chandra Bose
- 8 Chhatrapati Shivaji Maharaj
- 9 Dr. Babasaheb Ambedkar
- 10 Lokmanya Tilak
- 11 Santaji Jagnade Maharaj
- 12 Sant Gadgebaba Maharaj

Administrative Wards

- Ward no. 3, 9, 10, 12, 13, 11, 16, 17, 19, 18, 21 comes under Gaothan area limit and small area covered by Ward no. 4,8, 22, 15 of Gaothan area.

Number of Electoral Wards	12
Number of Administrative Wards	24

- Wards within Gaothan area limit has high density and irregular development is observed.
- Those wards outside the Gaothan area limit has low density and are well plotted.
- Gandhi Sagar lake is located in ward no. 8.
- WCL Quarry is located in ward no. 6.
- The new spatial development is taking place along Mangrud Road towards South of Umred beyond ward no. 24, 23. of city.



Legend

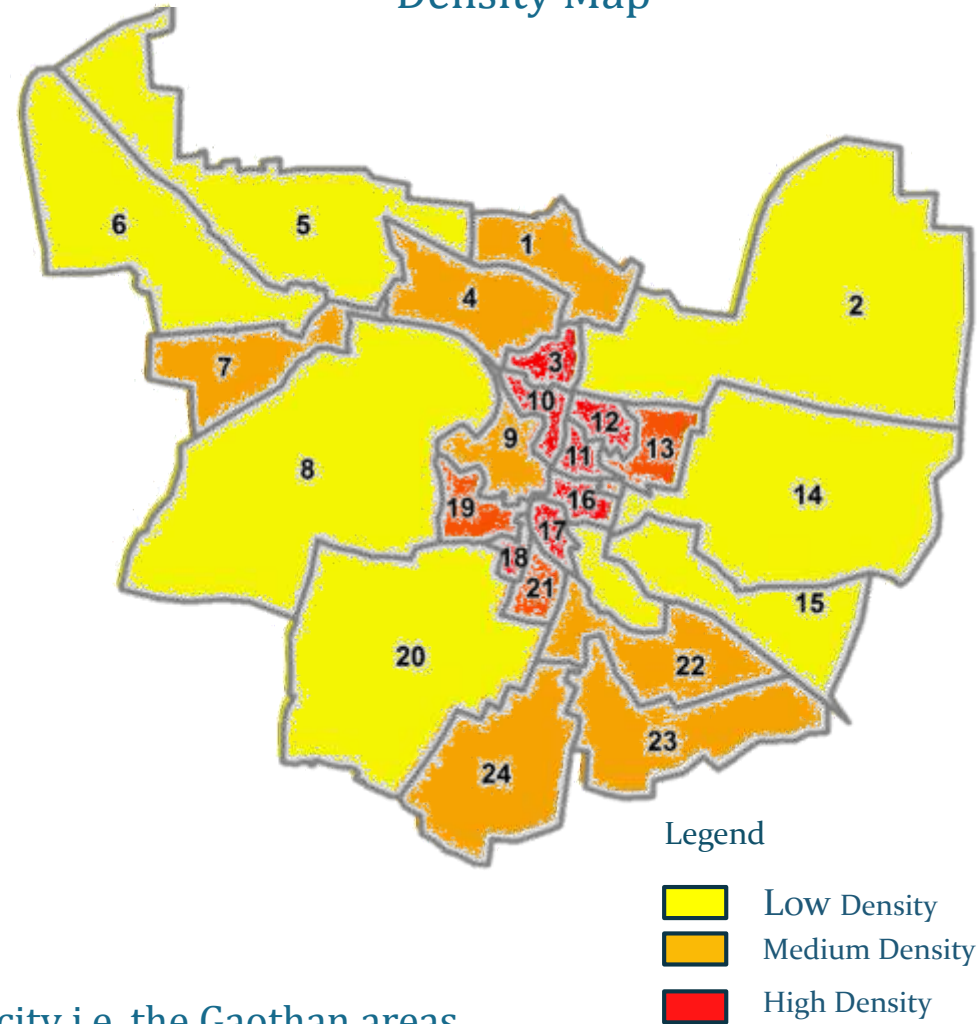
Wards

Ward No.	Ward Name
1	Mahatma Gandhi
2	Rashtrasant Tukdoji Maharaj
3	Naratan Dekate
4	Mahatma Jotiba Phule
5	Durga
6	Sidharath Gautam
7	Swami Vivekandh
8	Savitribai Phule
9	Anna Bhou Sathe
10	Netaji Subhash Chandra Bose
11	Malogiri Swami
12	Maharana Pratap
13	Sarhad Gandhi Badshahkhan
14	Shahid Bhagat Singh
15	Dr. Ambedkar
16	Kolbaswami
17	Ahilyabai Holkar
18	Lokmanya Tilak
19	Rajebaba
20	Rani Laxmibai
21	Santaji Jagnade Maharaj
22	Chhatrapati Shivaji Maharaj
23	Sant Gadgebaba Maharaj
24	Chhatrapati Shahu Maharaj

Administrative Wards

Ward No.	Population	Ward No.	Population
1	2102	13	1977
2	2264	14	1982
3	2144	15	2437
4	1972	16	2026
5	2150	17	1581
6	1779	18	1733
7	2326	19	1724
8	2777	20	3933
9	2040	21	1855
10	2184	22	2748
11	1887	23	3242
12	2105	24	3352

Density Map



- ❑ Maximum population lives in core areas of city i.e. the Gaothan areas
- ❑ New Development is taking place towards Southern, Northern and North-West of city.

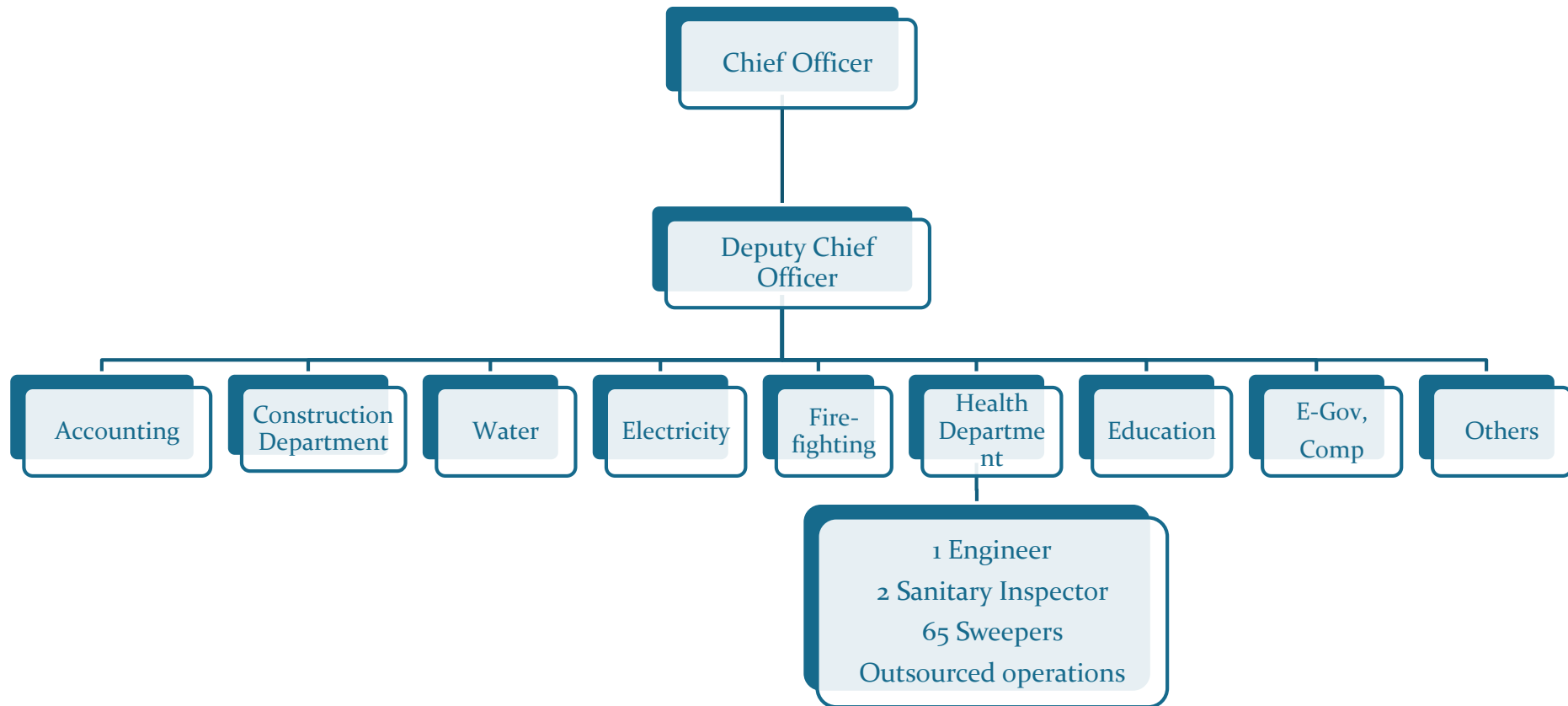
Organogram

Local government structure

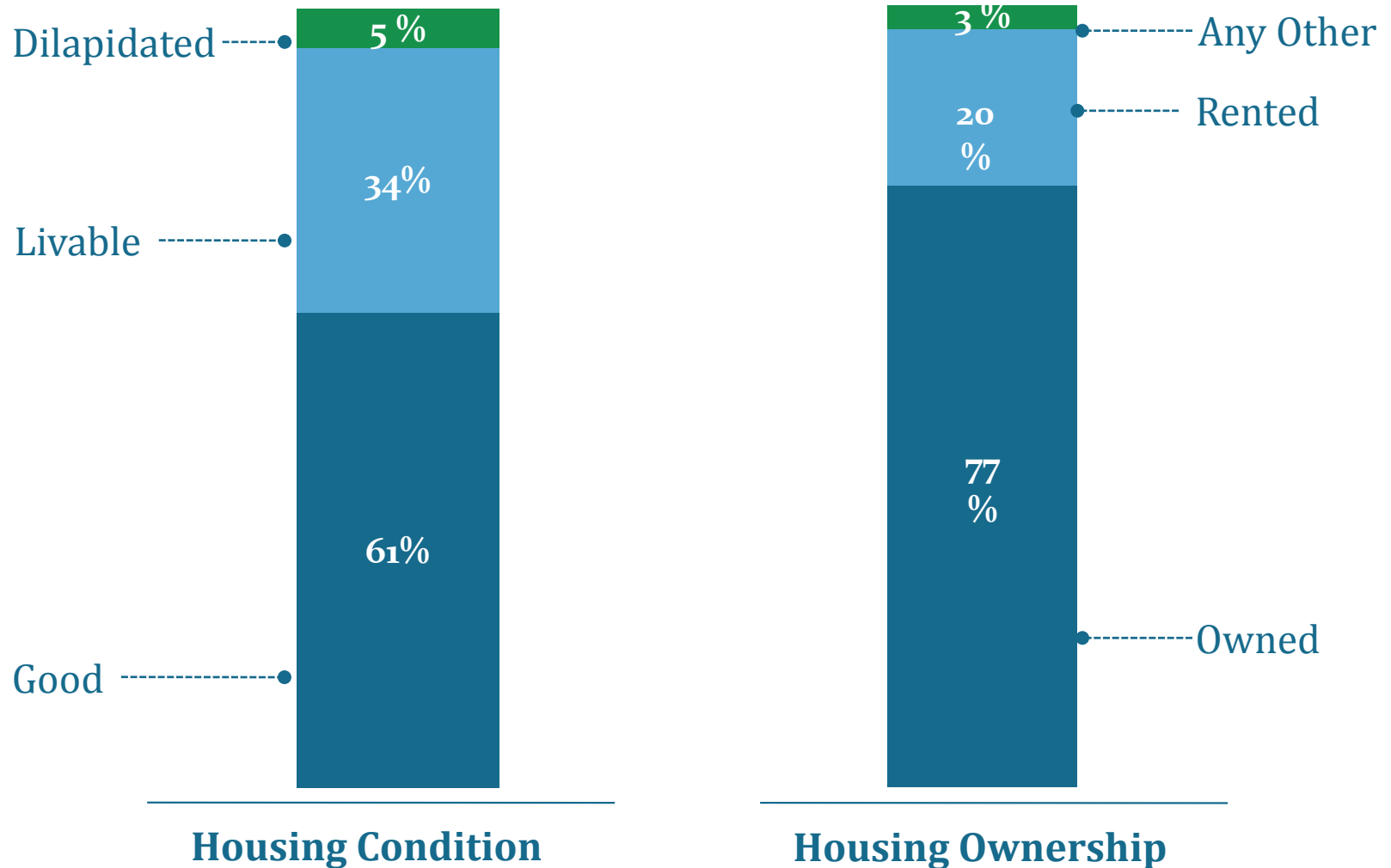
President	Smt. Bhadoria
Chief Officer	Mr. Ravindra Bhelave

Number of Electoral Wards	12
Number of Administrative Wards	24

Organogram of Administrative Wing of Council and Departments Concerned with Sanitation



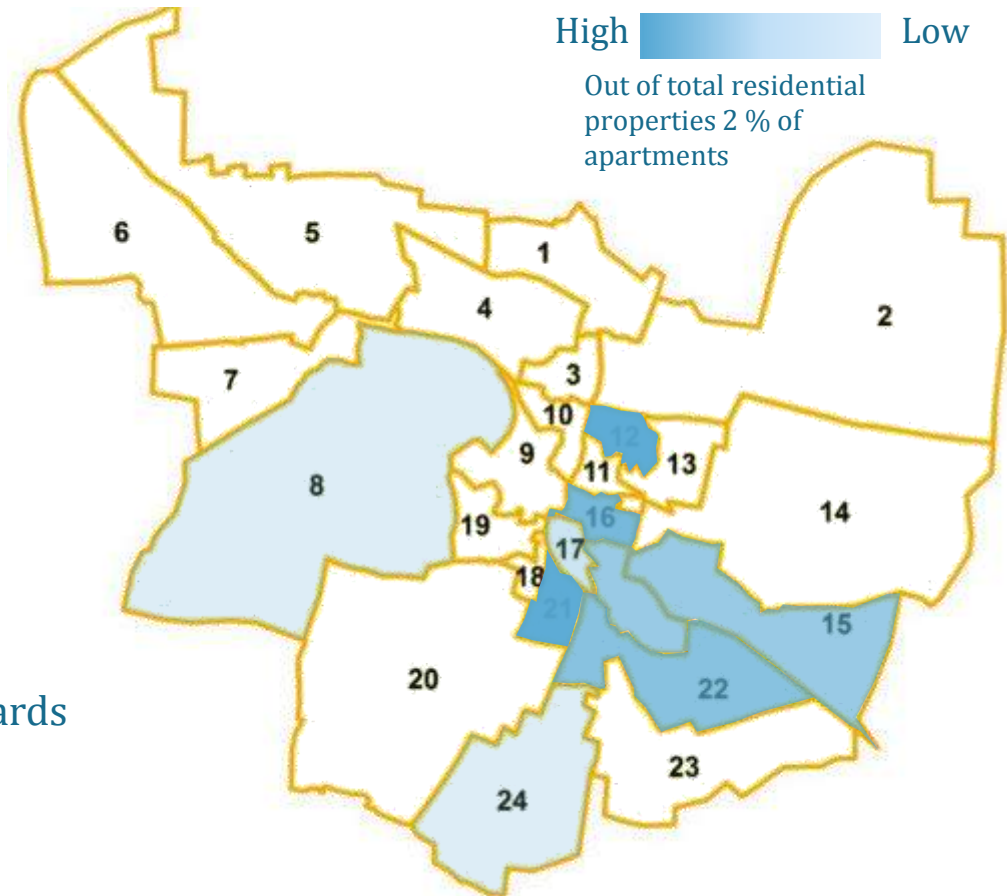
Housing Typology



- ❑ Good means those houses which do not require any repairs and are in good condition.
- ❑ Livable means those houses which requires minor repairs.
- ❑ Dilapidated means those houses which are showing sign of decay and require major repairs.

Apartments in the City

Ward No.	Apartments	Flats No.
8	1	10
12	5	51
15	2	82
16	2	15
17	1	4
21	4	24
22	3	19
24	1	13



- Most of the apartments are located towards South and South-West of the city.



Apartment in Adyalwale Layout

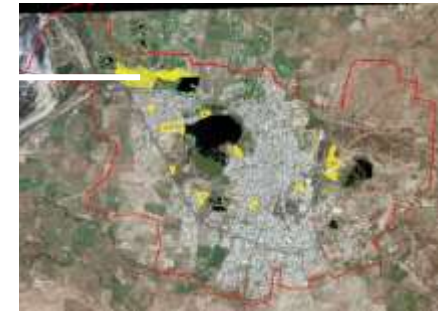
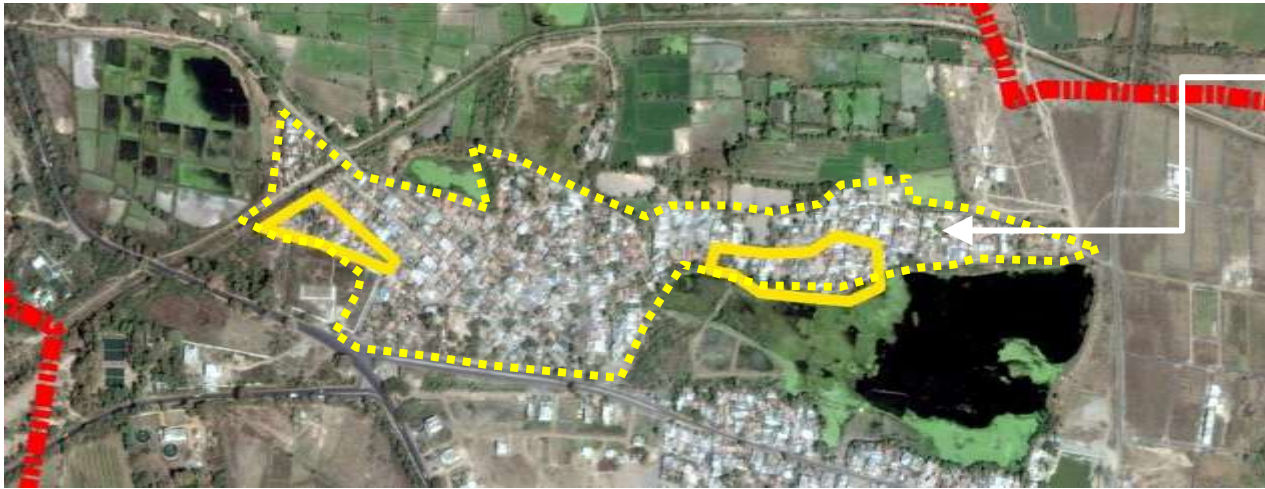


Apartment in Vikas Colony



Apartment in Budhwari Peth

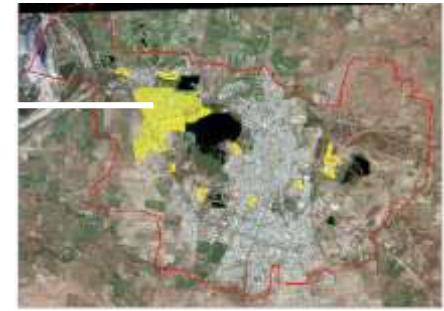
Housing Typology- Gangapur Area



- ❑ The housing typology is mixed in this area with Pucca and Semi-pucca type
- ❑ Mostly single storied structures with concrete/ tiles as a roof material
- ❑ Medium Density
- ❑ Access road width is 3.5 m in majority of the areas



Housing Typology- Kawara Peth Area



❑ The housing typology is mixed in this area with Pucca and Semi-pucca type

❑ Mostly single storied structures with concrete/ tiles as a roof material

❑ Medium Density
❑ Access road width is 3.5 m in majority of the areas

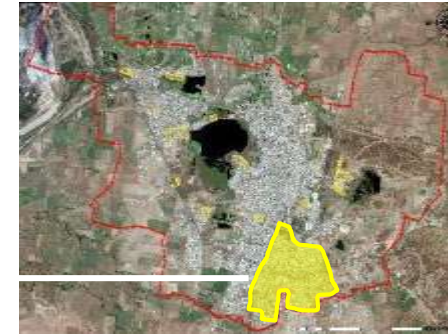
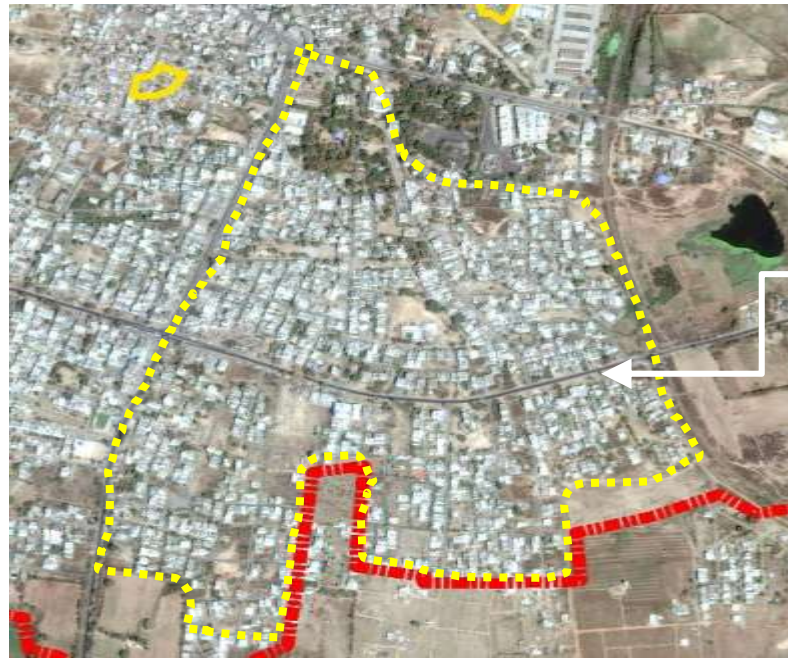
Housing Typology- Teacher's Colony



- ❑ Plotted Individual housing with pucca structures
- ❑ Roof material is concrete
- ❑ Singled or Doubled storied is observed
- ❑ Low Density
- ❑ Access road width is 5 m in majority of the areas



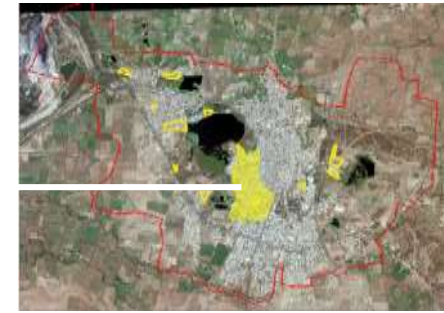
Housing Typology- Adyalwale Layout



- ❑ Plotted Individual housing with pucca structures
- ❑ Roof material is concrete
- ❑ Singled or Doubled storied is observed
- ❑ Low Density
- ❑ Access road width is 5 m in majority of the areas



Housing Typology- Itwari Peth Area



- ❑ The housing typology is mixed in this area with Pucca and Semi-pucca
- ❑ Mostly single storied structures with tiles as roof material is observed in interior parts
- ❑ High Density
- ❑ Access road in interior part is mainly 2.5m making some part inaccessible

Housing Typology- Jogithana Peth Area



- ❑ High Density
- ❑ The housing typology is mixed in this area with Pucca and Semi-pucca type
- ❑ Mostly single storied structures with tiles as roof material is observed in interior parts
- ❑ Access road in interior part is mainly 2.5m making some part inaccessible

Housing Typology- Mangalwari Peth Area



- ❑ The housing typology is mixed in this area with Pucca and Semi-pucca type
- ❑ Mostly single storied structures with tiles as roof material is observed in interior parts

- ❑ High Density
- ❑ Access road in interior part is mainly 2.5m making some part inaccessible

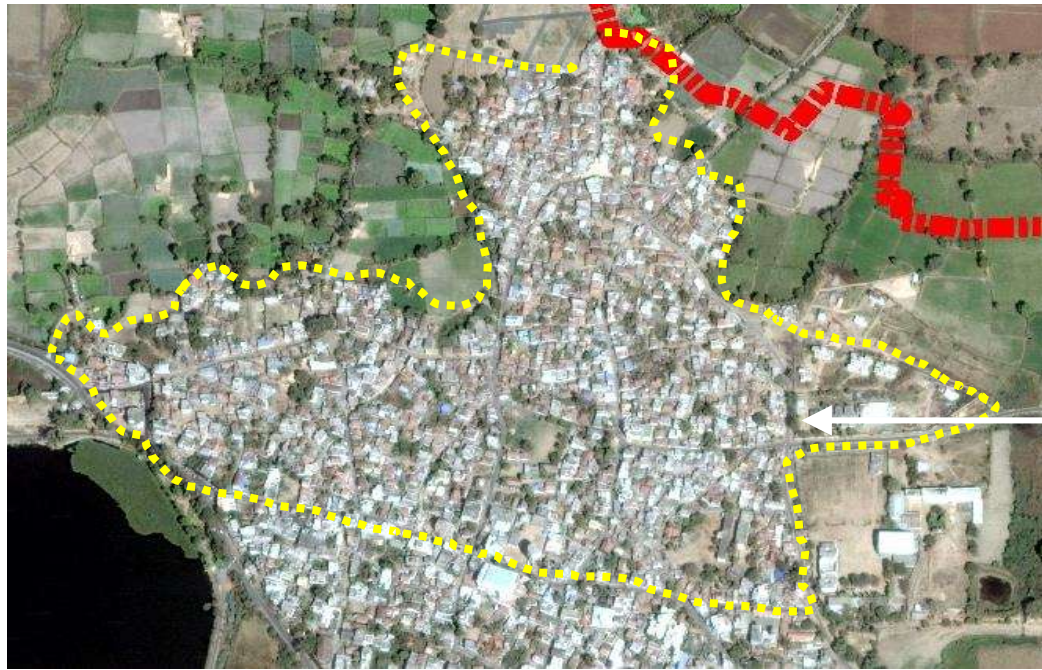


Housing Typology- Sindhi Colony

- ❑ The housing typology is mostly Pucca type
- ❑ Mostly G+1 structures with concrete as roof material is observed.
- ❑ Access road in interior part is mainly 3m.

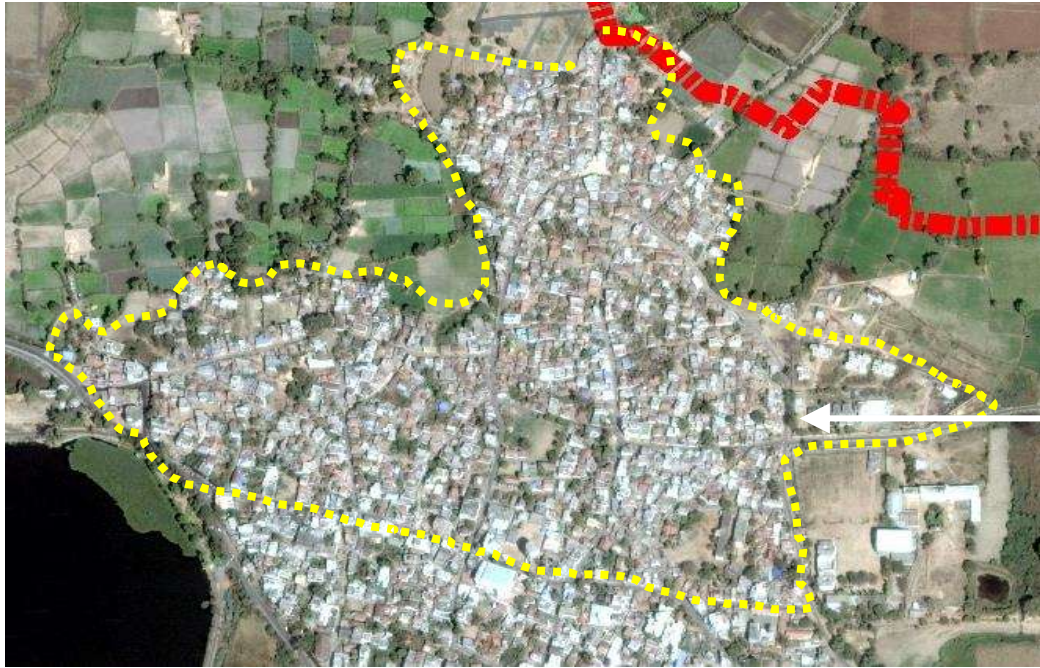


Housing Typology- Budhwari Peth Area



- ❑ High Density
- ❑ Access road in interior part is mainly 3m making some part inaccessible
- ❑ Housing typology is mainly Pucca and Semi-pucca type
- ❑ Mostly single storied structures with concrete as a roof material

Housing Typology- Outgrowth Area Wayagaon

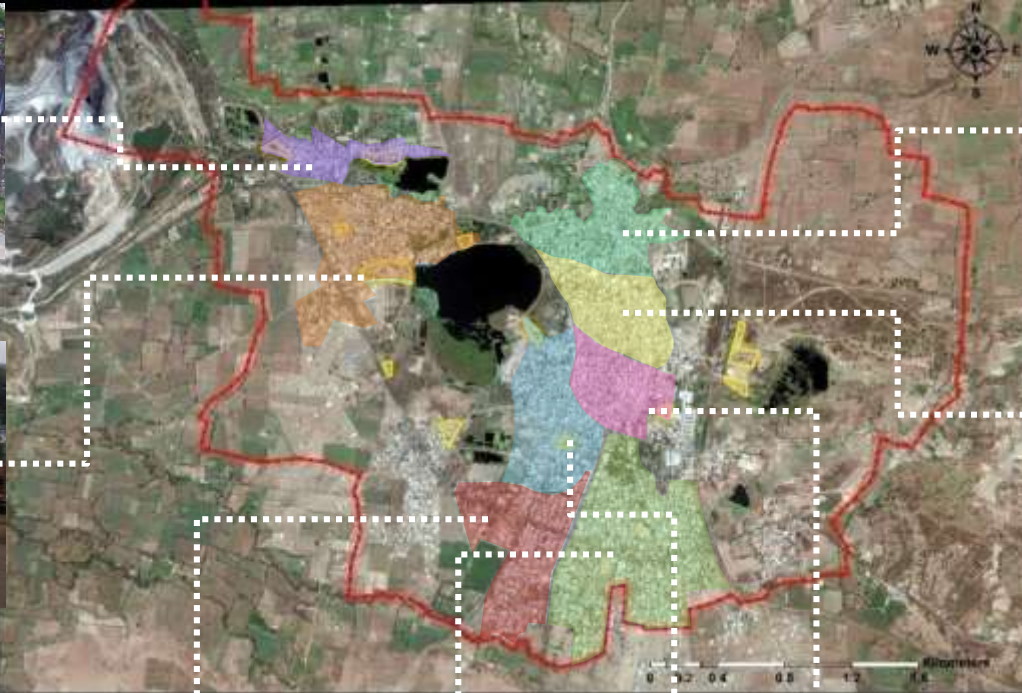


- ❑ High Density
- ❑ Access road in interior part is mainly 3m making some part inaccessible
- ❑ Housing typology is mainly Pucca and Semi-pucca type
- ❑ Mostly single storied structures with concrete as a roof material

Housing Typology



Gangapur Area



Budhwari Peth



Kawara Peth



Mangalwari Peth



Teacher's Colony



Adyalwale Layout



Itwari Peth

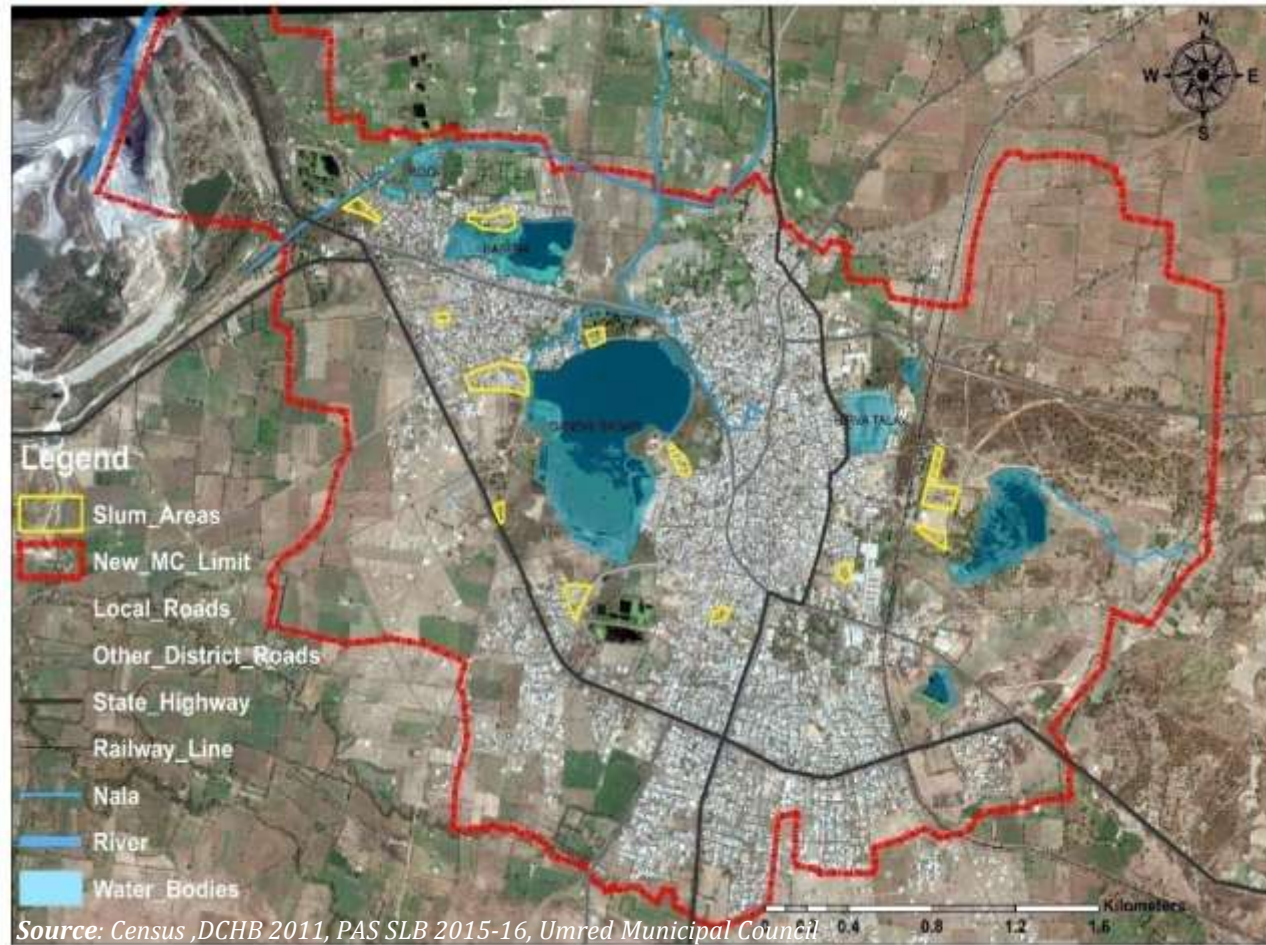


Jogithana Peth

Slum Details

	2011	2017
Slum Population %	9	12
Population in Slums	5216	6,930
No. of Slum HHs	1106	1,385
No. of Slums	10	12
Notified Slums	0	0

Sr. No.	Name of Slum	Ward No.
1	Gangapur Idgah Slum	6
2	Gangapur Thombara Road Slum	5
3	Kawrapeth Slum	7
4	Rajivnagar Slum	8
5	Bypass Road Slum	8
6	Amrai bypass	20
7	Sonezari Slum	21
8	Bail Bazar Slum	15
9	Belgaon	9
10	Shantinagar Slum	14
11	Railway Station Slum	14
12	Malak Nagar	22



Service Level Benchmarking Data for 2016-17

Coverage of water supply connections in slums	21.1%
Coverage of individual toilets in slums	39%
Household level coverage of solid waste management services in slums	99.3%

Ongoing and Implemented Programs in Slums

Schemes Implemented in the Past

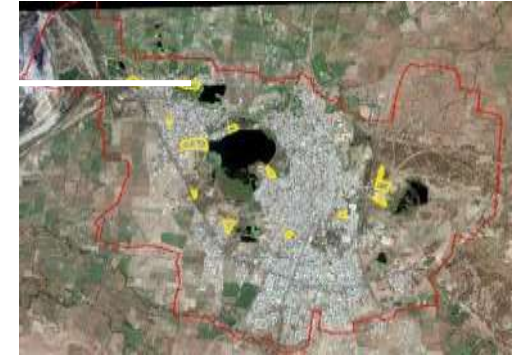
- **Integrated Housing and Slum Development Programme (IHSDP):** 276 HHs beneficiaries from 4 slums and 2 Vastis. Status: Implemented.

- **Ramai Awas Yojana:**
 - Launched in 2014
 - Eligibility: Beneficiary should be Below poverty line and belonging to Scheduled Caste
 - Subsidy Rs. 1.5 lakh
 - HH beneficiaries are 232, of which 40% houses have been built

Ongoing Schemes

- **Pradhan Mantri Awas Yojana:** The council has not started collecting applications under PMAY since they have not yet received Funds for the scheme implementation

Gangapur Idqa Slum Housing Typology



- ❑ Housing typology is Semi-pucca type with access road width is 3 m.
- ❑ Ground structures with tiles as a roof material.
- ❑ Presence of open drainage system.



Gangapur Giratkar Moholla Slum Housing Typology

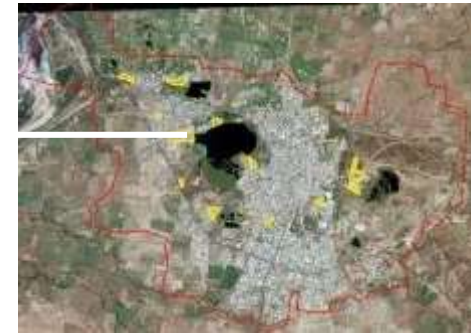


- ❑ Housing typology is Semi-pucca type with access road width is 3 m.
- ❑ Ground structures with tiles as a roof material.
- ❑ Presence of open drainage system.



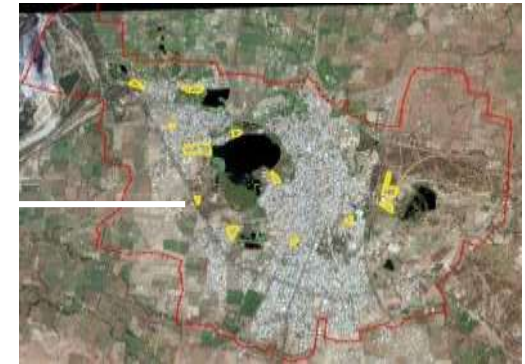
Kawarapeth Slum Housing Typology

- ❑ Housing typology is Semi-pucca & Kaccha type with access road width is < 2 to 3 m.
- ❑ Ground structures with tiles as a roof material.
- ❑ Presence of closed drainage system.

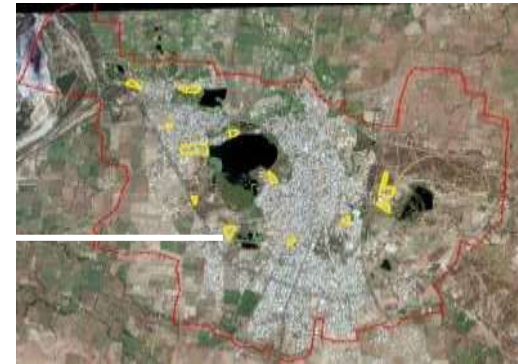


Amrai Bypass Slum Housing Typology

- ❑ Housing typology is Pucca type with access road width is 7 m.
- ❑ Ground structures with tiles as a roof material.
- ❑ Absence of drainage system.



Sonezari Slum Housing Typology

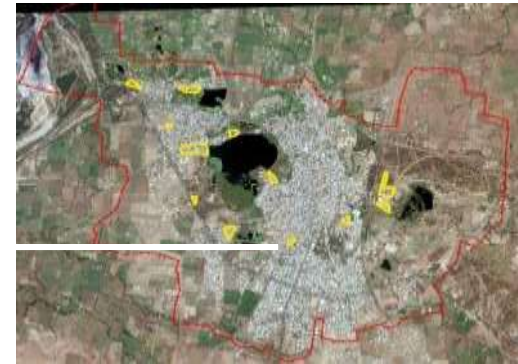


- ❑ Housing typology is Semi-pucca type with access road width is 3 m.
- ❑ Ground structures with partial concrete & tiles as a roof material.
- ❑ Presence of closed drains.

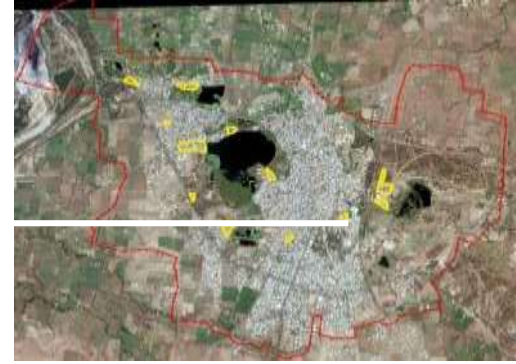


Belgaon Slum Housing Typology

- ❑ Housing typology is Semi-pucca & Pucca type with access road width is 2.5m.
- ❑ Mostly Ground structures with tiles as a roof material and presence of closed drains.



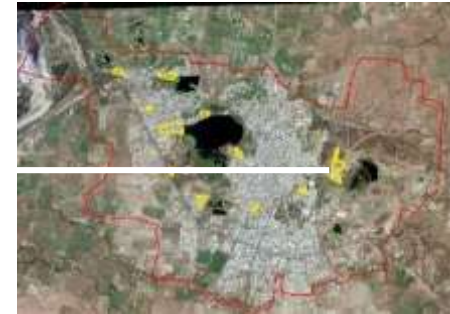
Shantinagar Slum Housing Typology



- ❑ Housing typology is Kaccha & Semi-pucca type with access road width is $< 2.5\text{m}$.
- ❑ Mostly Ground structures with tiles as a roof material and presence of open drains.



Malak Nagar Slum Housing Typology

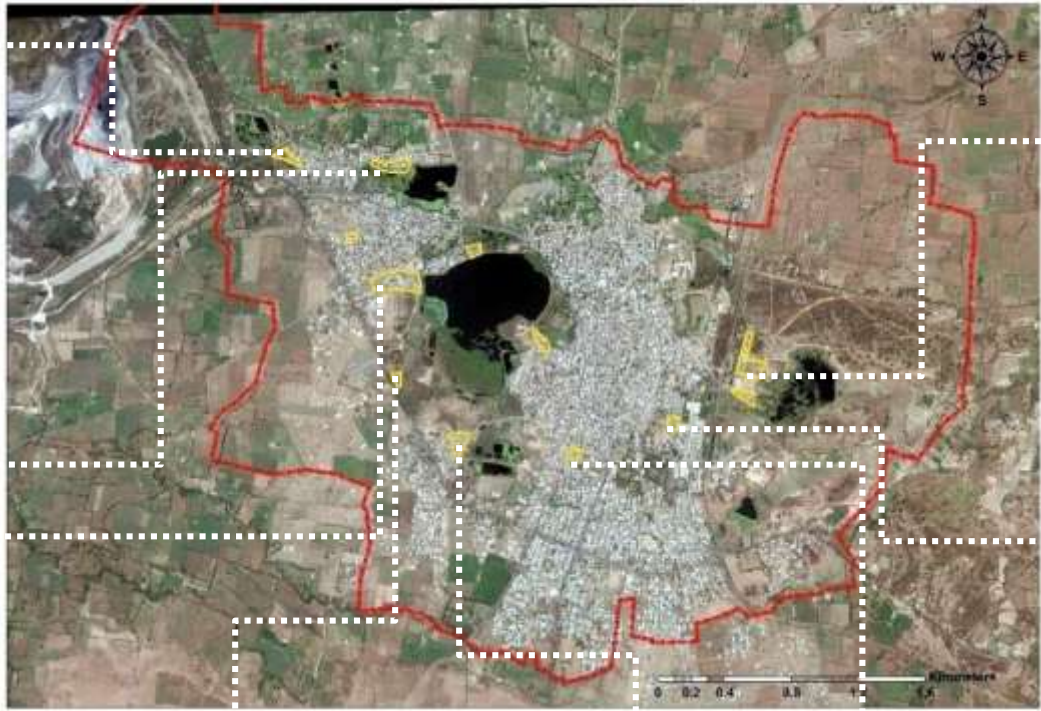


- ❑ Housing typology is Semi-pucca type & Access road is 2 m.
- ❑ Mostly single storied structures with tiles as a roof material.
- ❑ Absence of drainage system.

Slum Housing Typology



Gangapur Idqa Slum



Malaknagar Slum



Gangapur Giratkar Slum



Shantinagar Slum



Musalman Moholla Slum



Amrai Bypass Slum



Sonezari Slum



Belgaon Slum

Housing Typology- Outgrowth Area



The distances mentioned are from the City Centre



MIDC Area and Kumbhari Village towards South



Dhurkheda settlement along Mangrud Rd.



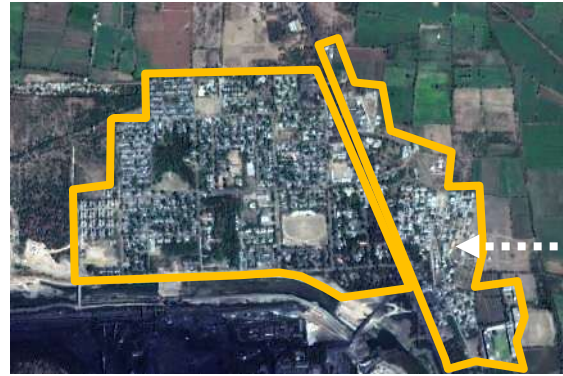
MIDC Area



Dhurkheda Village



Housing Typology: Outgrowth Area Wayagaon Gotori



WCL Colony and Wayagoan Gotori is 6 Km towards North West



The distances mentioned are from the City Centre



- ❑ Single or G+1 Pucca Individual housing structure with roof material concrete is observed.
- ❑ All parts of the area are accessible with > 3 m access road width.



Housing Typology- Outgrowth Area WCL Colony



WCL Colony and Wayagoan Gotori is 6 Km towards North West



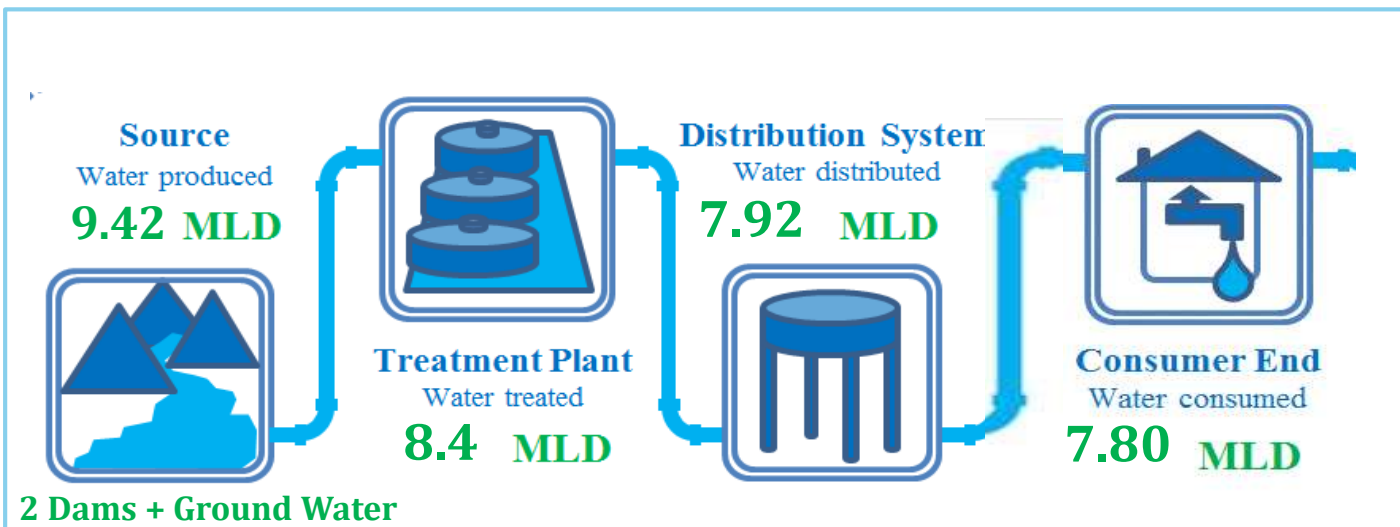
The distances mentioned are from the City Centre



- ❑ Single storied Pucca Individual bungalow type housing structure with tiles as roof material is observed.
- ❑ All parts of the area are accessible with > 3 m access road width.



Water Supply



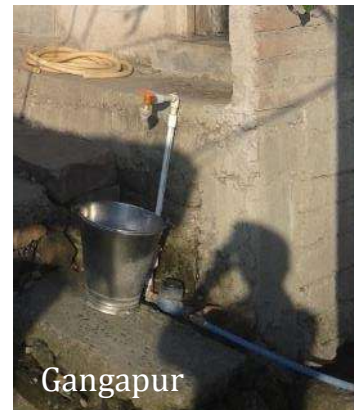
City Demand: 8 MLD

Current LPCD: 135 LPCD

- ❑ Umred falls under the jurisdiction of MJP
- ❑ Almost 100% metering in the city
- ❑ In total there are 22 water stand post in the city.
- ❑ Individual household bore well are observed in the city.



Mangalwari Peth



Gangapur



New WTP Umred

Service Level Benchmarking Data for 2016-17	
Coverage of water supply connections	86.5 %
Per capita supply of water	132 LPCD
NRW	17.20
Cost recovery in water supply services	74.3 %
Collection efficiency of water supply related charges	90.16 %

Metering in Umred

- Almost all properties covered under metered connections
- Installation of metering completed: September 2016
- Billing Process commenced: April 2017
- Volumetric Tariff for metering based on usage

0-60 units	Rs. 10 per unit
60-100 units	Rs. 12 per unit
Above 100 units	Rs. 15 per unit

- HHs which do not have meters are charged Rs. 1800 per year

Service Level Benchmarking Data for 2016-17

Extent of metering of water supply connections	NA
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Source: SLB 2016-17, Field data 2017

2. Current Sanitation Situation:

a. Access to Toilet

Access to Toilets



Cleaning & Maintenance



Collection & Storage



Treatment

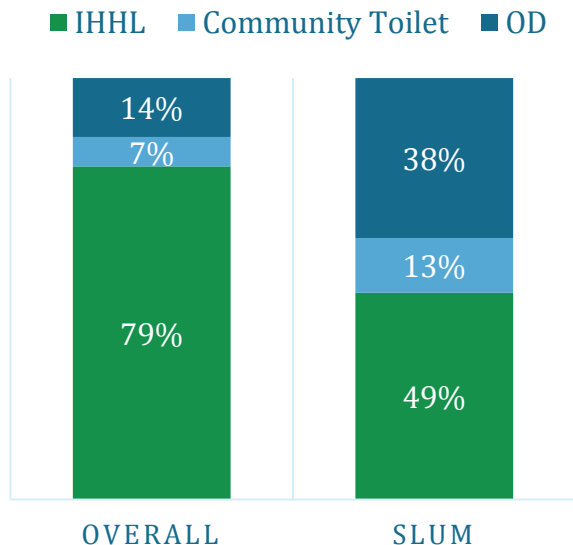


Disposal & Recovery

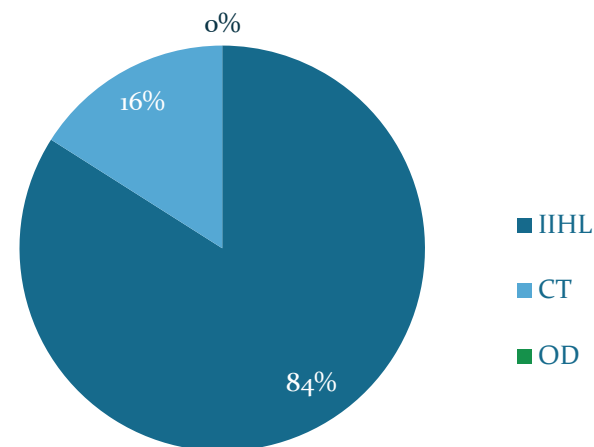


Access to Individual Toilets

Access to types of sanitation facility (2011)



Access to types of sanitation facility (2017)



Source- Field visit (2017)

	Total HH	HH with Individual toilet	HH depends on CT	OD
Overall	11880	9269	874	1737
Slum	1106	538	146	422

	Total HH	HH with Individual toilet	HH depend on CT	OD
Overall	13450	11303	2147	0

- **City already achieved ODF+ status** in terms of IHHL coverage

Service Level Benchmarking Data for 2016-17	
Coverage of toilets	100 %
Coverage of households with adequate sanitation system	89 %

Swachh Bharat Mission (SBM) Status

SBM Status for IHHL

Target - 1567

	Application received	Verified	Approved	Rejected	Constructed toilet	Commenced toilet
Offline	1808	1484	1484	304	1216	-
Online	1808	1484	1484	304	1169	39

- ❑ 82% applications of 1703 received applications have been approval for construction.
- ❑ Of the SBM target of 1567 IHHL construction, **78%** toilets have been constructed.
- ❑ Current IHHL toilet coverage: 11,303(**84%**) of 13450 HHs.
- ❑ SBM application receiving date has been freeze to **31st March 2018** by the GB.
- ❑ Tentative cost of construction is Rs. 30,000.

Central Govt -Rs. 4,000 +
State Govt. Rs- 8,000 +
Nagar Palika-Rs. 2,000
= **Rs. 14,000** Total Subsidy

Fund Utilization for SBM

Funds	Received (Rs. in Cr.)	Utilized in %	Utilized for	Available	Planning to use
14 Finance Commission	5.01	93 %	Solid Waste Management	7 %	Two DEWATS Sewage Treatment Plant Project and FSTP
SBM or SMM	4.10	75 %	IHHL construction	25 %	Construction of Toilets
Fines	0.02	0 %	-	100%	-
SBM Incentive Fund	3.00	0%	-	100 %	FSTP

Source: Umred Budget 2017-18,

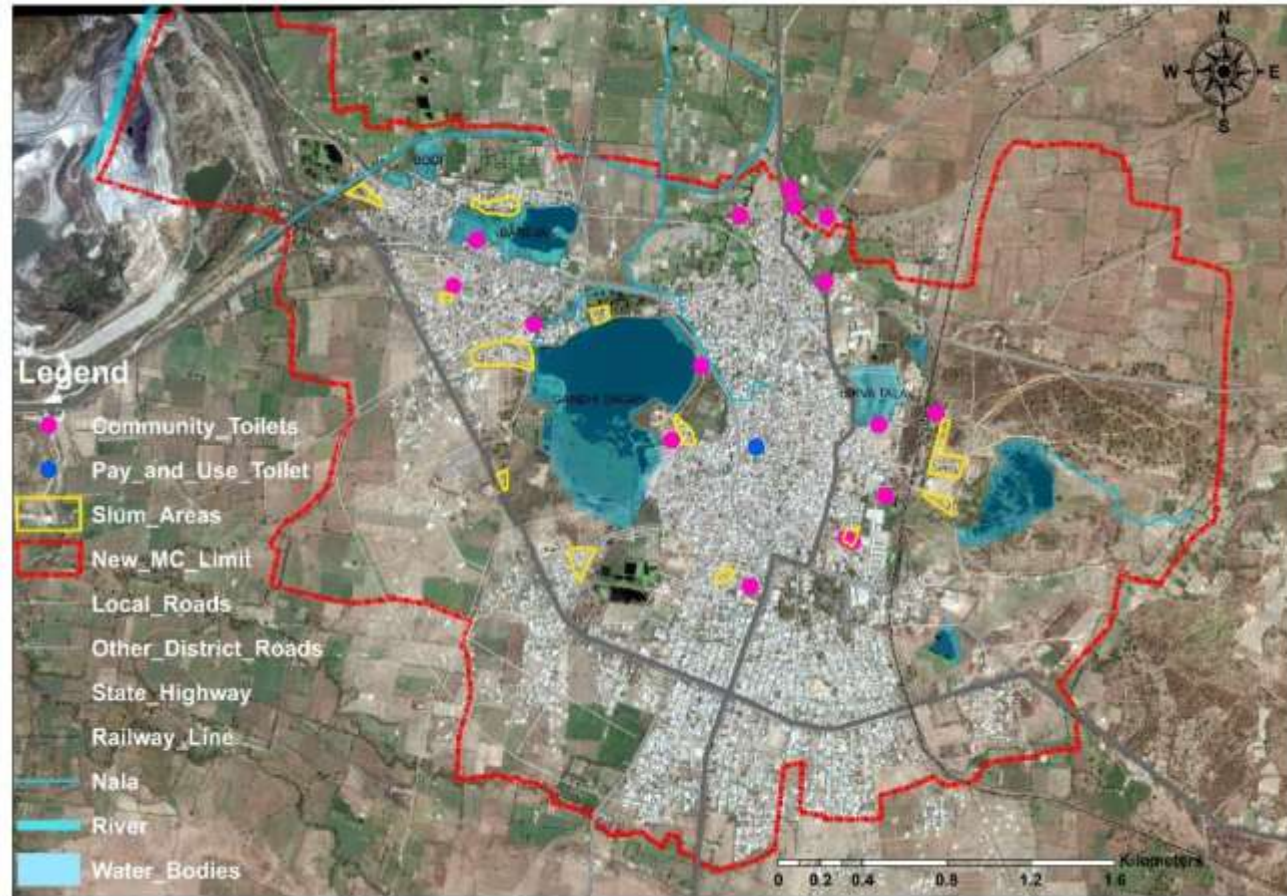
Community Toilets and Public Toilets

	CT	PT
Total number of blocks	16	1
Total number of seats	181	8
No. of Functional seats	181	8
O&M by ULB	-	-
O&M by Private Operator	16	1

HH per seat- 11

- No charges are levied for using the community toilets.
- Public toilet functions on the pay and use mechanism

Public Toilet



Seats

M- 6
F- 2

Community Toilets and Public Toilets

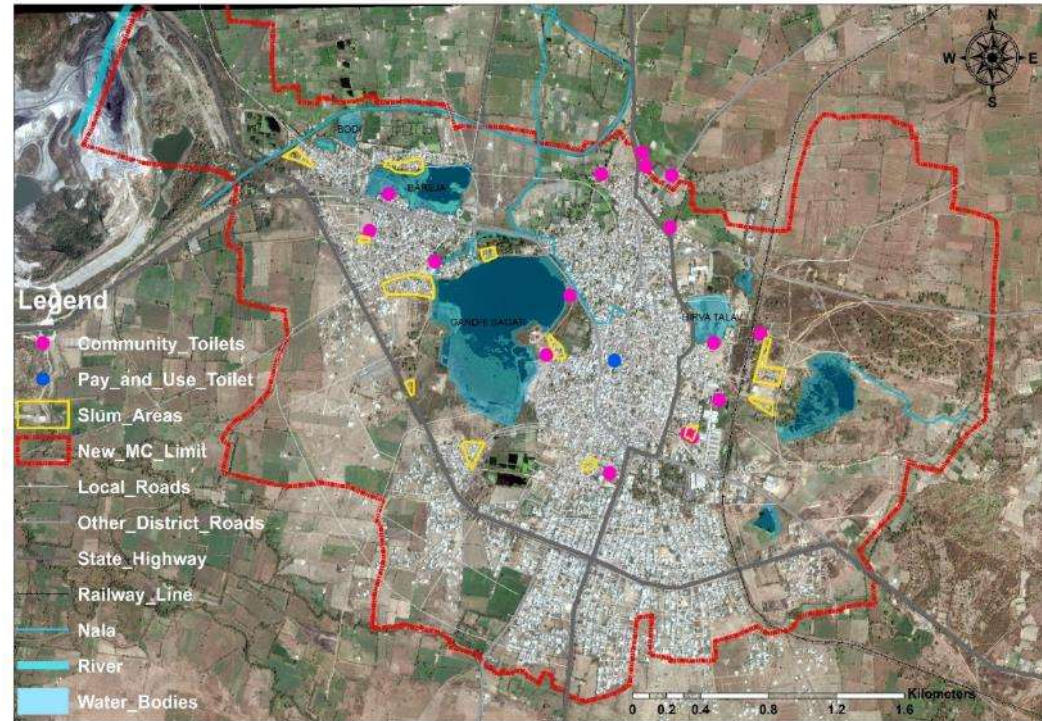
All the 16 CTs and 1 PT have been visited and assessed.

Functionality- Although most of the CTs are old, all the seats in these CTs are in functional condition

Opening Timings- All the CTs are open for 24 hours.

Water Supply- All toilets either have piped supply to water tanks located outside the toilet block by taps.

All the CTs had no water taps inside the toilets but all the blocks are provided with common water tanks outside

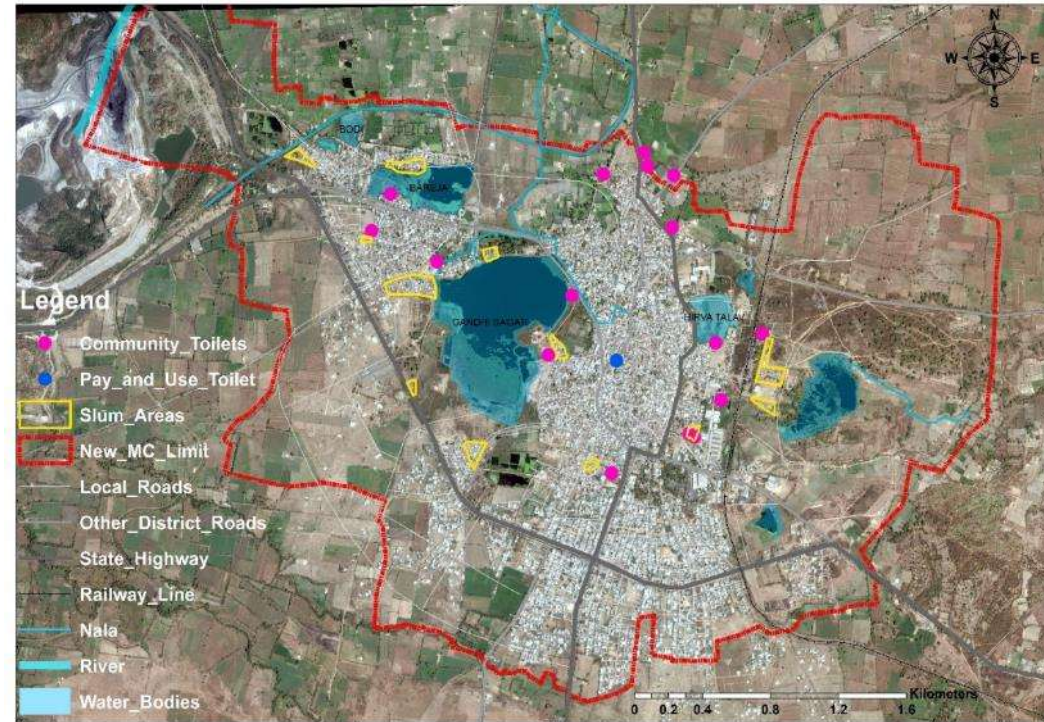


Availability of Light- All the toilets have lights outside the block. None of the toilets have lighting inside. The reasons the Council has given for some toilets not having lights is thievery of lights and the street lights nearby being sufficient at night time.

Community Toilets and Public Toilets

Clogging of toilet pans-
None of the toilet pans clog.

Frequency of Toilet Cleaning- Official and locals have stated that toilets are cleaned everyday once in the morning. Toilets were found to be clean.

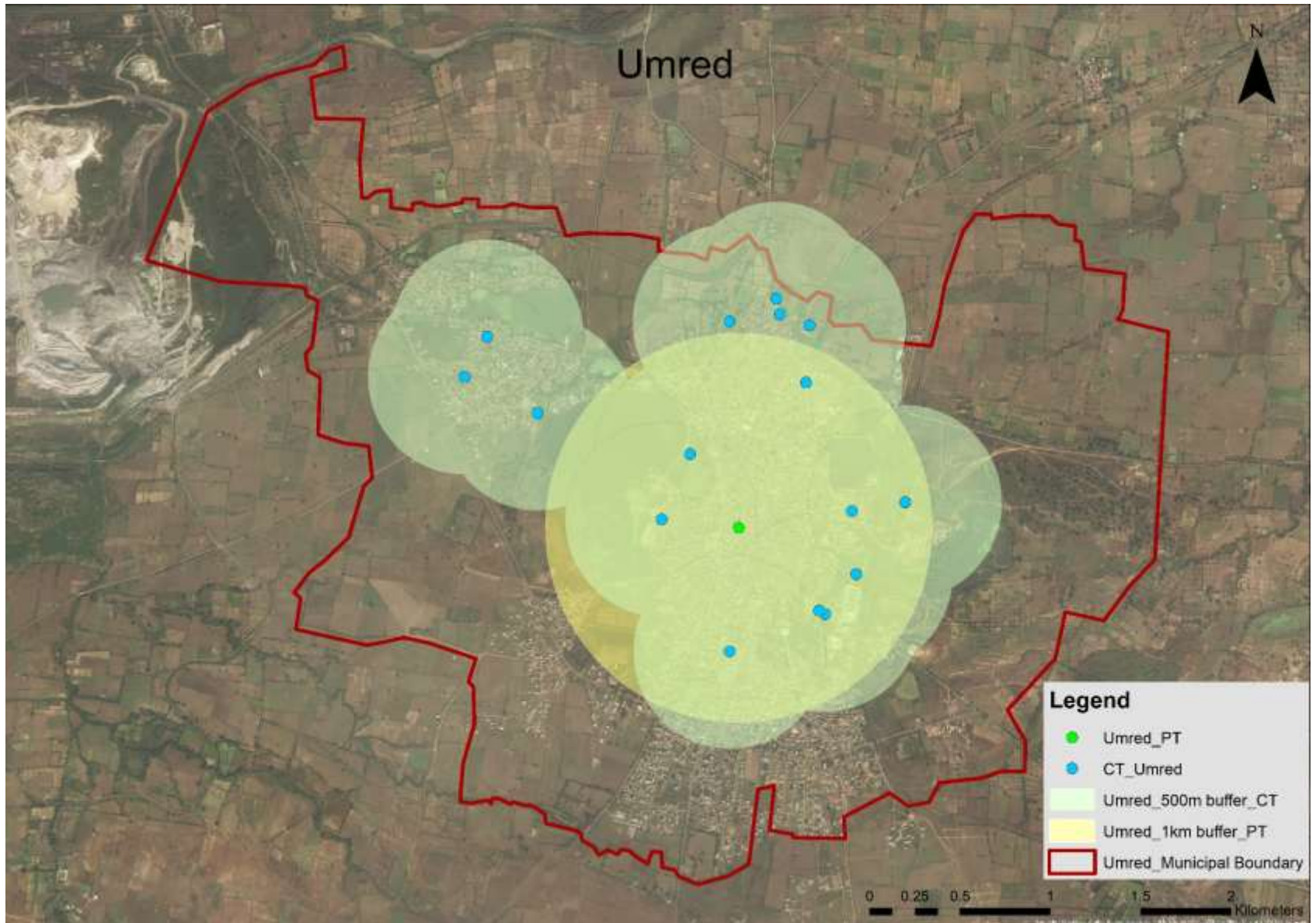


Wash Basins: None of the CTs have wash basins

Doors: Some of the CTs do not have appropriate doors.
Most of the ladies toilets have half height doors

Septic Tanks: All the CTs and PT are connected to Septic tanks. Septic tanks of one of the CT with 40 seats is cleaned once in a week while the others are cleaned once in a month

Community Toilets and Public Toilets



Community Toilets and Public Toilets



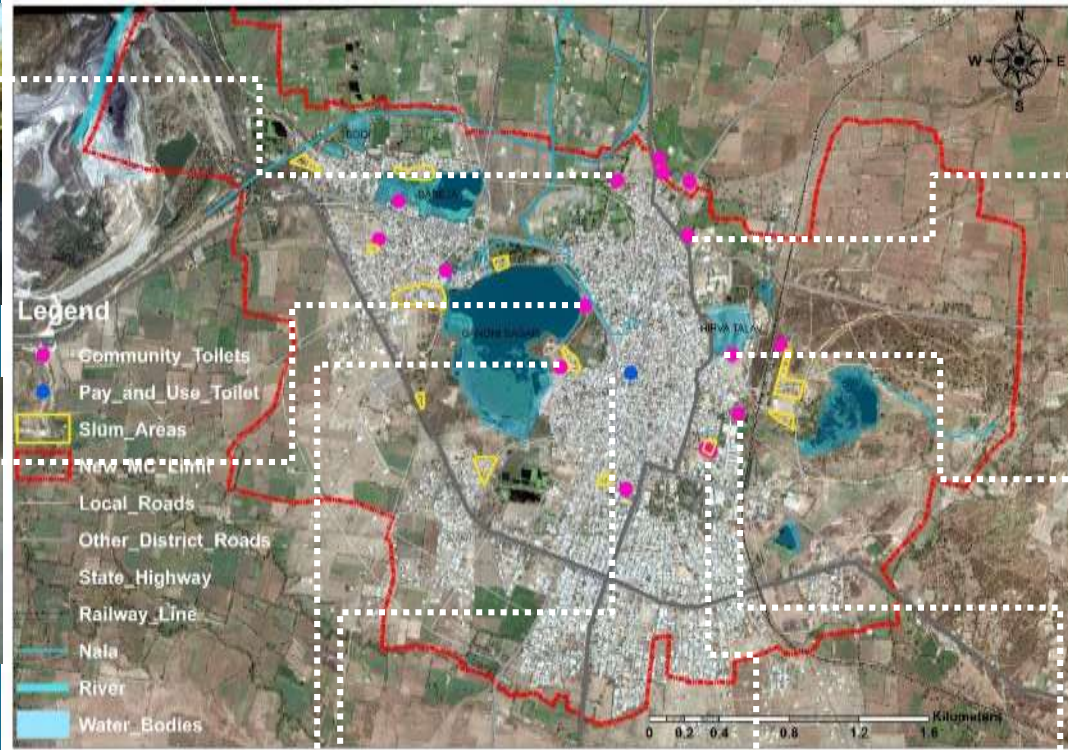
Pradhan Pura



Gandhisagar Talav



Ithwari Bailbazzar



Pay & Use



Naidu Bazzar



40 seats Gotekhani



Hirva Talav

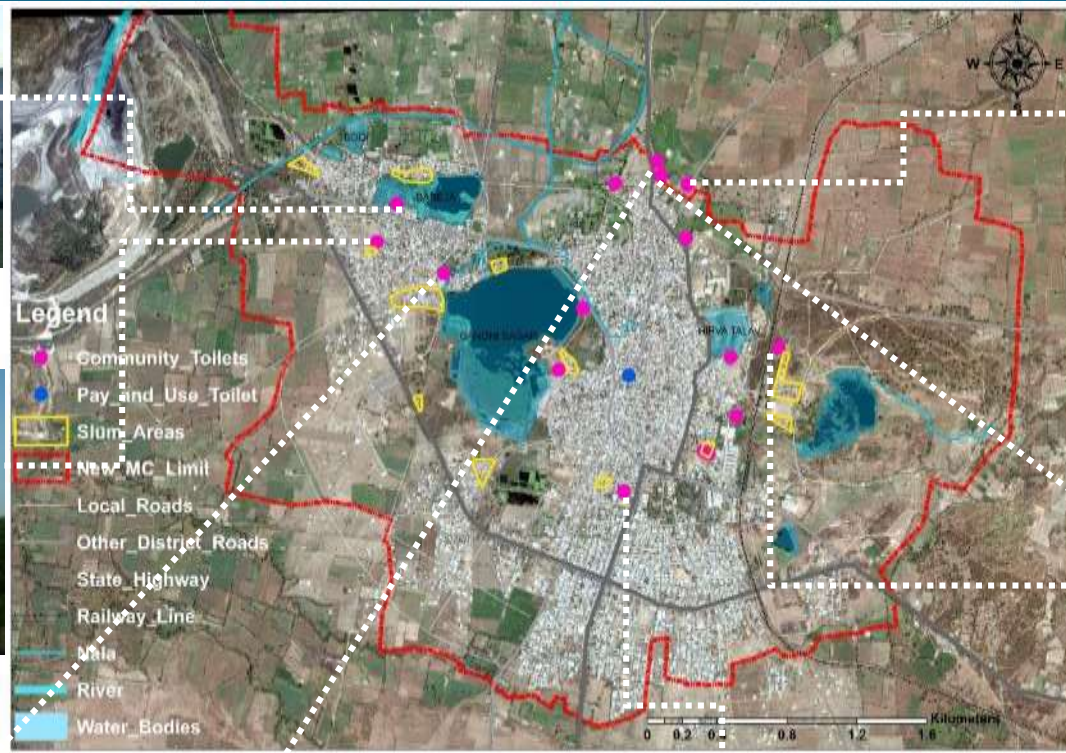


Mahila Samudayik

Community Toilets and Public Toilets



Kawarapeth Slum



Amboli Naka



Kawara Chambharpur



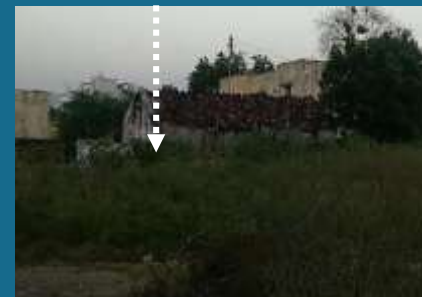
Budhwari



Kawarapeth Durgapur



Kotgaon Rd

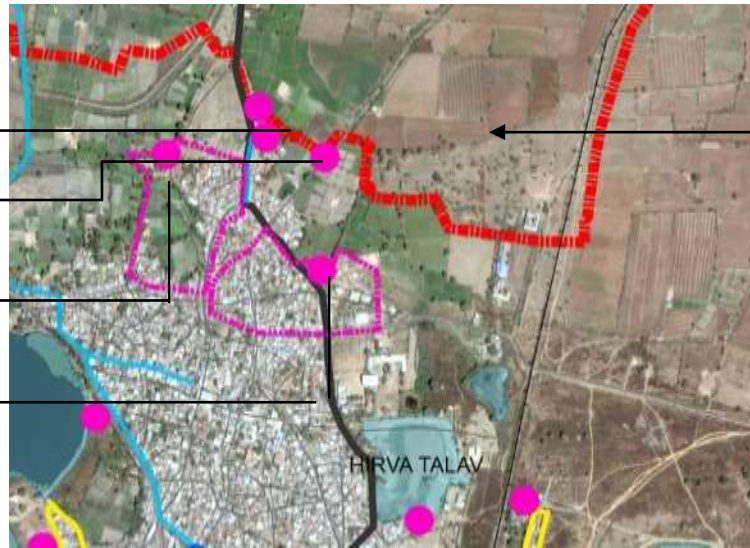


Ithwari Belgaon



Malaknagar Slum

Community Toilets and Public Toilets

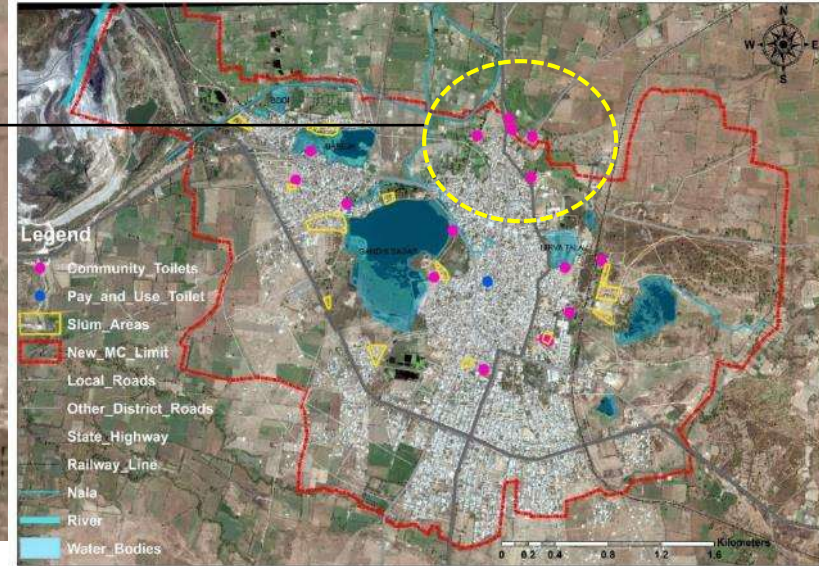


4 Seats

4 Seats

20 Seats

40 Seats



- The 20 seater Pradhanpura CT caters to approx. 25 HHs
- The area is moderately dense and has few space constraints to construct individual toilets.
- High numbers of application have received from this area i.e. 161 and rejected around 76 due to double applying, space constraint, family internal issue, and few are planning to construct under Ghar kul yojana.

- The 40 seater Gothekhani CT caters to the approx. 65 HHs.
- The area is moderately dense and has no space constraints to construct individual toilets.
- High no. of applications are received from this area also i.e. around 151 application and 63 rejected of them.



Community Toilets and Public Toilets



Budhwari area
near
Pradhanpura
CT (20 seater)



Budhwari area
near
Gothekhani
CT (40 seater)

Community Toilets



CT in Sindhi Colony



CT near Fish Market



40 seater CT



CT in Gangapur



CT in Kawara Peth



CT in

Although most of the CTs are old, all of them are **functional** and are **maintained in Good Condition** with water availability

OD Spots in the Past

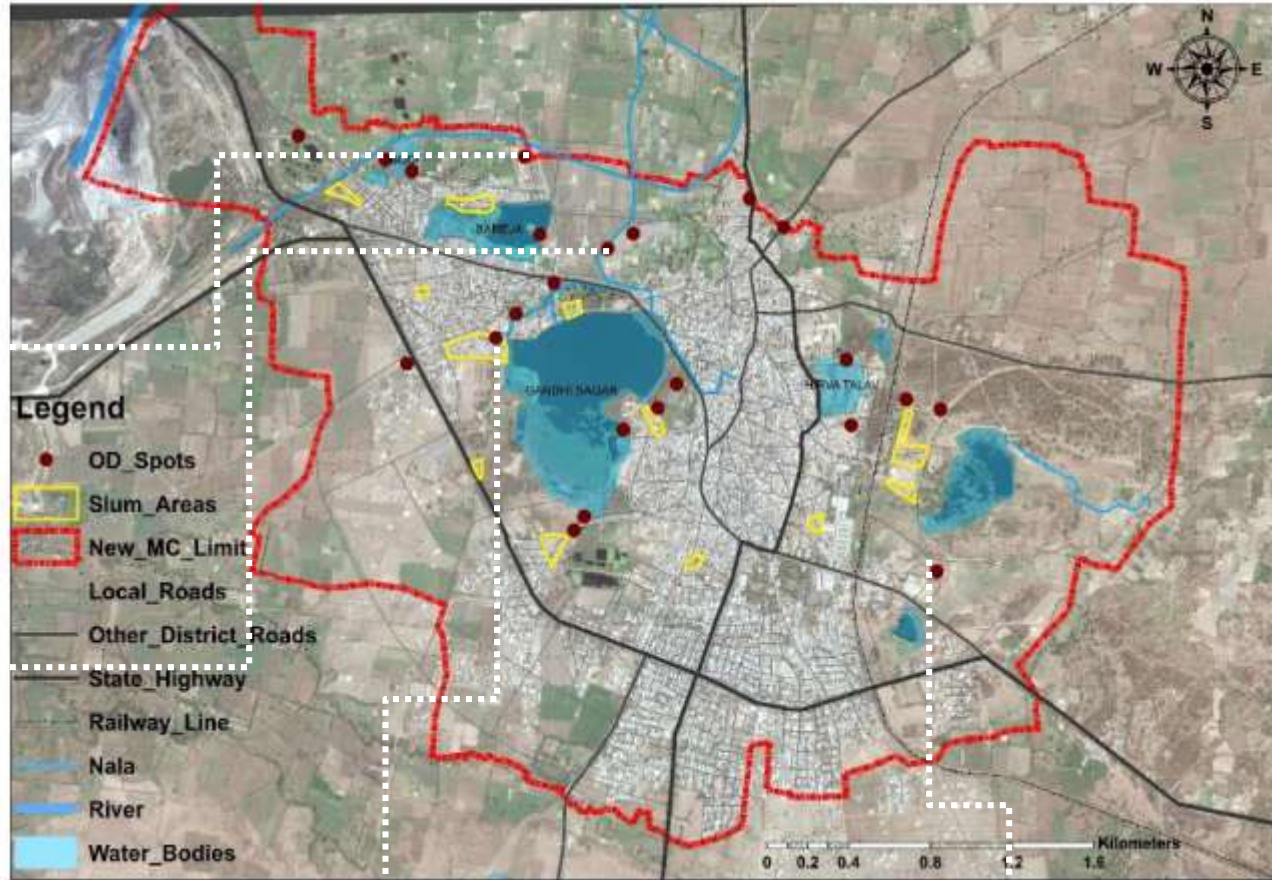
There were **23 OD spots** in the city. Most of the OD spots were found to be **near the Slums and along the water bodies** like lakes and nalas.



Gangapur chowk



Behind Budhwari peth



Vikas colony



Itnakar School



Railway station

OD Spots in the Past

There were **23 OD spots** in the city. Most of the OD spots were found to be **near the Slums and along the water bodies** like lakes and nalas.



Pradhanpura



Gav Talav Pal



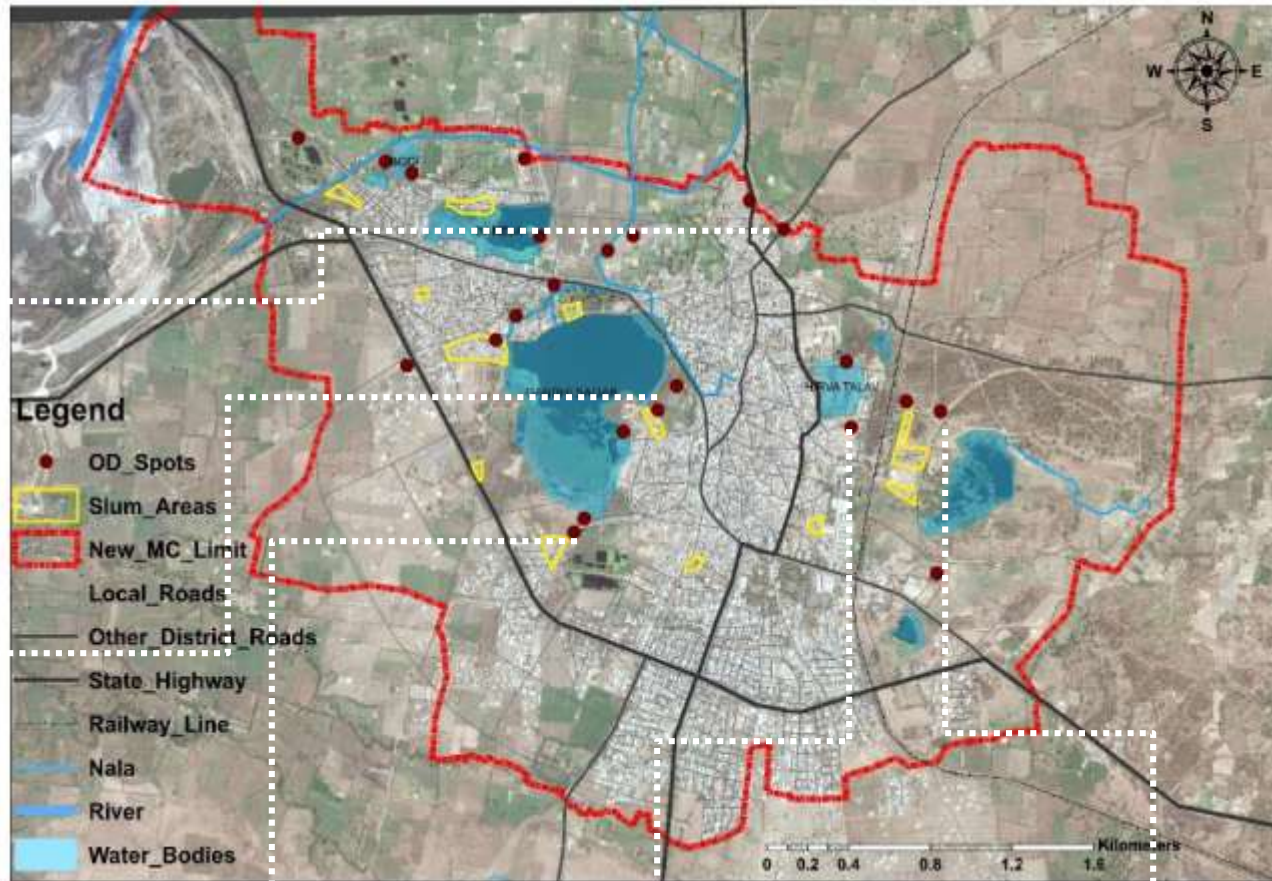
Sonezari



Hirva Talav



Malaknagar Slum



Efforts taken for ODF Sustainability



Conducting **Good Morning Pathak** daily and spreading awareness
Presently a team of 4 members conduct GMP from 5:00 to 7:30



Fine Collection- Fines of Rs. 500 is collected from a person, if found defecating open.
More than 2 Lakhs has already been collected



Beautification- Green Gym opposite the ULB Office, near Gandhisagar Lake



Development-
Fencing done around the OD spot
A meditation/ yoga hall constructed for women



Mobile toilets at 2 locations
Provided

Other initiatives taken to sustain the ODF status

- ❑ Installed Banners / Hoardings
- ❑ Campaign in local newspapers
- ❑ House to House campaign
- ❑ Announcing on loudspeaker

Efforts taken for ODF Sustainability: Updated banners

या दिवाळीला घाला खर्चाला आळा
घरी शौचालय बांधून उघडयावर जाणे टाळा.

महिलांनो जागृत व्हा. स्वरक्षणासाठी शौचालय बांधा.

मुख्याधिकारी तथा चार्ज अधिकारी
नगर परिषद उमरेड, जि. नागपूर

Bell your promise to Toll Free No.
1800 53 20 100

दिवाळी आली घरोघरी
शौचालय बांधा प्रत्येक घरी

केवळ महिलांच्या सुरक्षेसाठी शौचालय बांधा.

मुख्याधिकारी तथा चार्ज अधिकारी
नगर परिषद उमरेड, जि. नागपूर

Bell your promise to Toll Free No.
1800 53 20 100

आई, बावा सांगू कशी?
रात्री शौचास
जायपी वाटते भिती

शौचालय बांधा, सुरक्षित रहा.

Nagar Parishad Umred | Bell your promise to Toll Free No. **1800 53 20 100**

आई-बाबा, शौचालय बांधा.
वेचीबाहेर शौचास जायपी प्रथा थांबवा.

केवळ महिलांच्या सुरक्षेसाठी शौचालय बांधा.

मुख्याधिकारी तथा चार्ज अधिकारी
नगर परिषद उमरेड, जि. नागपूर

Bell your promise to Toll Free No.
1800 53 20 100

या दिवाळीला
नको फटाके नको मिठाई
शौचालय
बांधाना बाबा-आई.

शौचालय बांधा, सुरक्षित रहा.

मुख्याधिकारी तथा चार्ज अधिकारी
नगर परिषद उमरेड, जि. नागपूर

Bell your promise to Toll Free No.
1800 53 20 100

नको पैसा, नको दागिणे
आत्मसन्मानासाठी शौचालय बांधणे

शौचालय बांधा, व सुरक्षित रहा.

Nagar Parishad Umred | Bell your promise to Toll Free No. **1800 53 20 100**

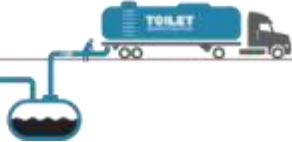
Posters for awareness generation among citizens for construction of IHHL

2. Current Sanitation Situation: b. Collection

Access to Toilets



Collection



Collection & Storage



Treatment



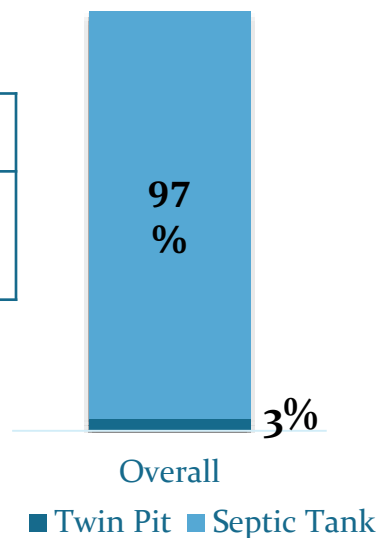
Disposal & Recovery



Collection of Septage

Collection Systems of Individual Toilets

Septic tank	10995
Other (Pit Latrines)	308



- Most individual toilets are connected to septic tanks. **10-12%** are connected to soak pits
- Most of Septic tanks have **2 chambers**
- Average size of septic tanks is **10' x 8' x 6'** or **8' x 7' x 6'**
- These septic tanks are cleaned once in 7-8 years



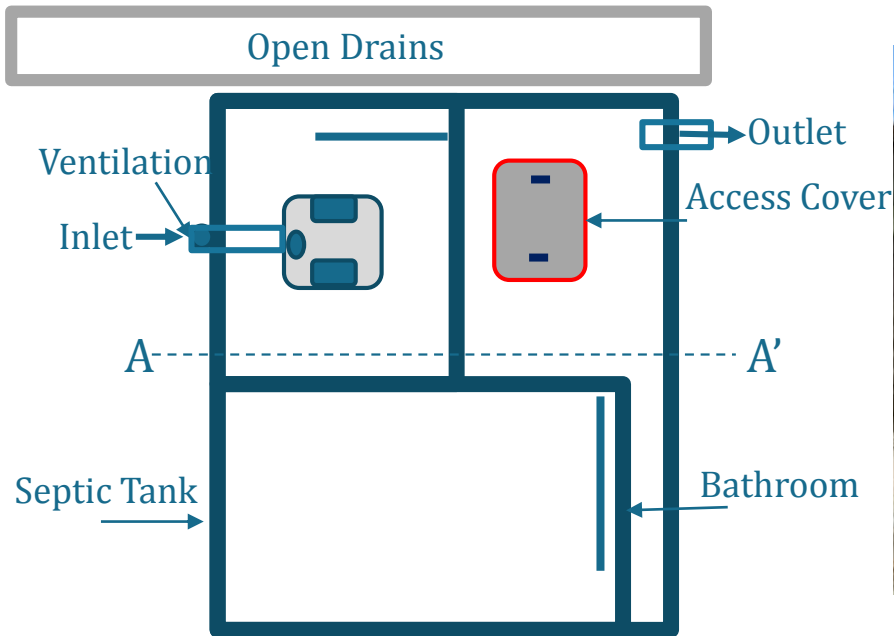
Septic tank connected to Compact STP at Hirva Talav



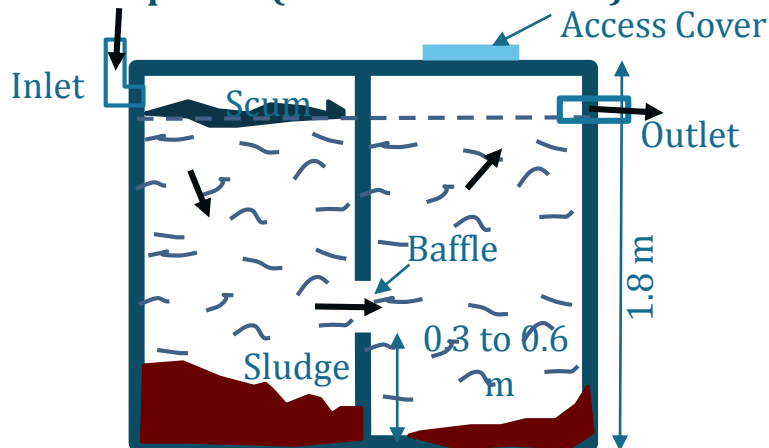
Septic tank and waste from fish market connected to DEWATS Plant at Gandhi Sagar Lake

- 2 CTs** are connected to Compact STP and DEWATS Plant.
- All CTs are connected to septic Tanks.

Individual Household Septic Tank



Top View (Dim: 2.4*2.1*1.8 m)



Section at AA'

All dimensions are in 'm'

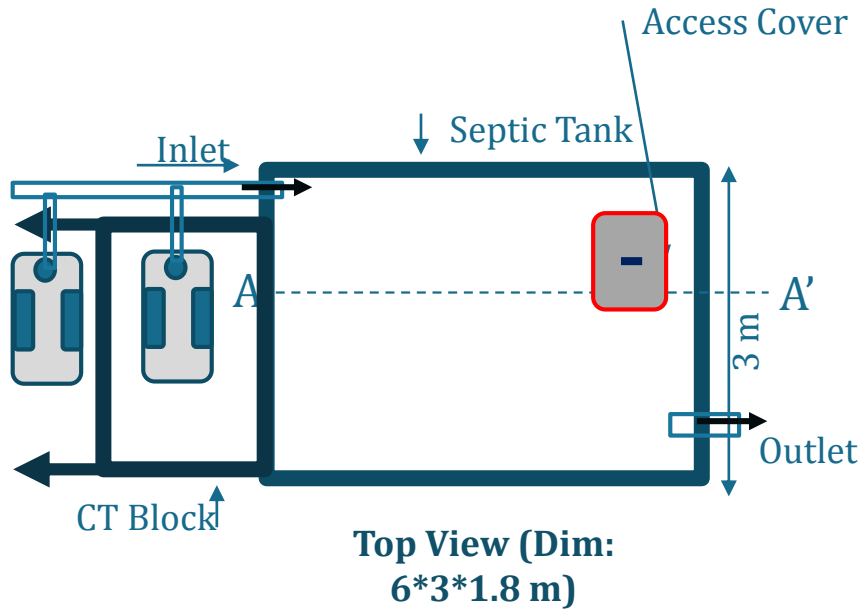


Septic Tanks

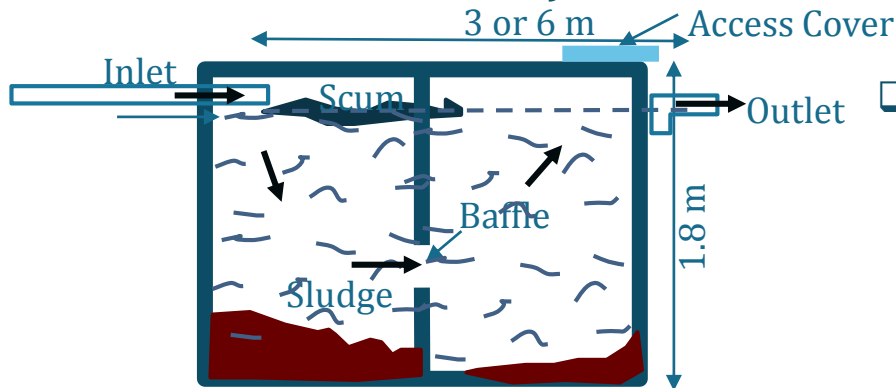
- Avg. septic tank size in this area is 2.4*2.1*1.8 m But different size of septic tank are also observed other than this size of septic tanks.

Community Septic Tank

All dimensions are in 'm'

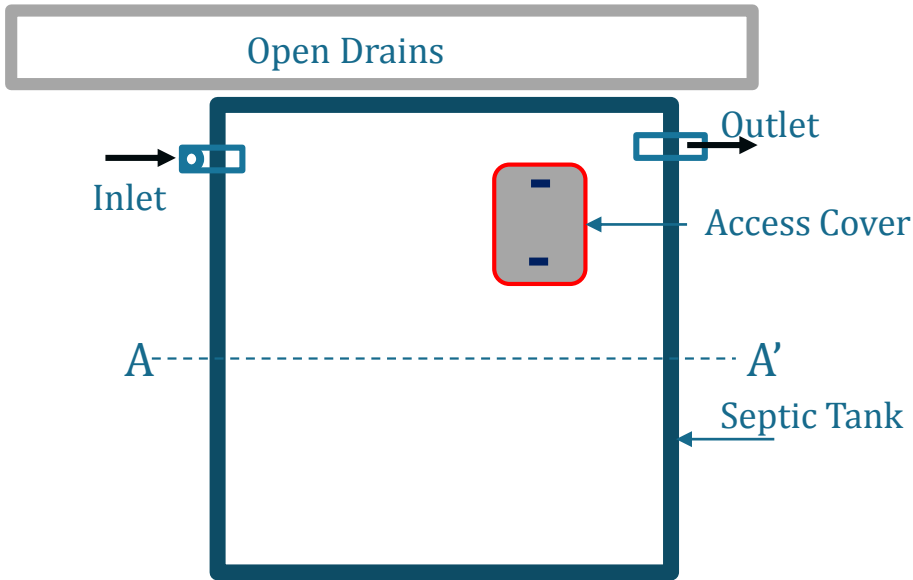


Septic Tanks

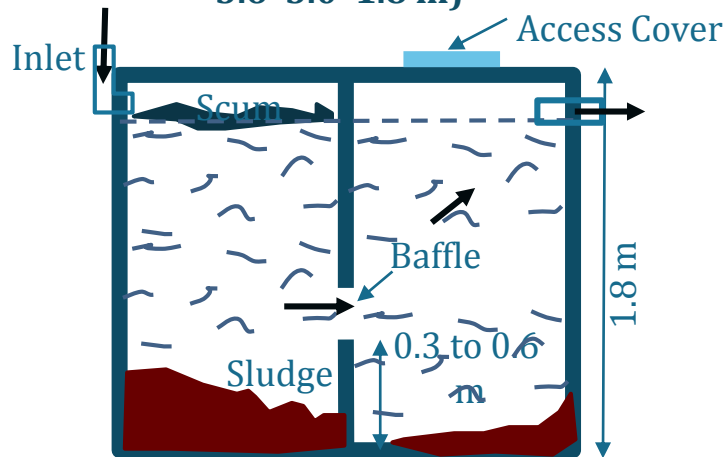


- Avg. septic tank size of community Toilets is 6*3*1.8 m and 3*2.4*1.8 m This two type of septic tank are observed in community toilets.

Apartment Septic Tank



Top View (Dim:
3.6*3.0*1.8 m)



Section at AA'

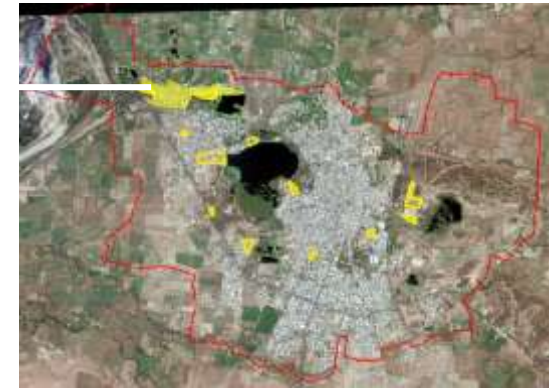
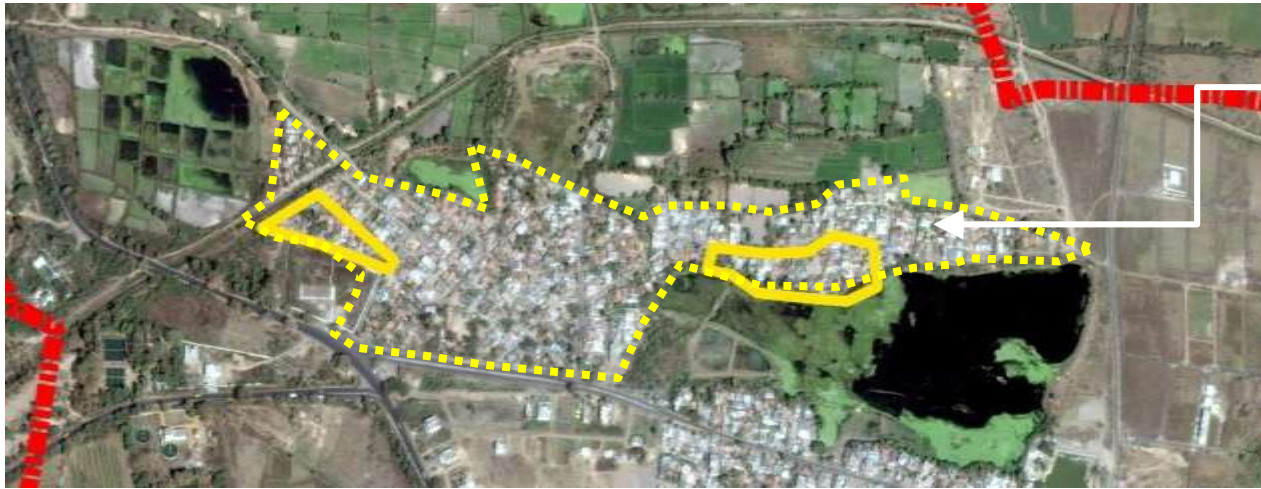
All dimensions are in 'm'

- ❑ Avg. septic tank size in Apartments is 3.6*3*1.8 m.
- ❑ The septic tank is located at the basement or backyard of the apartment.



Apartments

Septic Tank and Drain's Assessment- Gangapur Area



IHHL & Septic Tanks

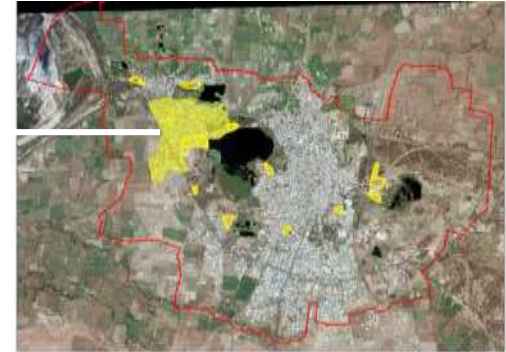
- ❑ Avg. septic tank size in this area is 8'*7'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to partial open and closed drains.

Drainage System

Septic Tank and Drain's Assessment- Kawara Peth Area



IHHL & Septic Tanks



Drainage System

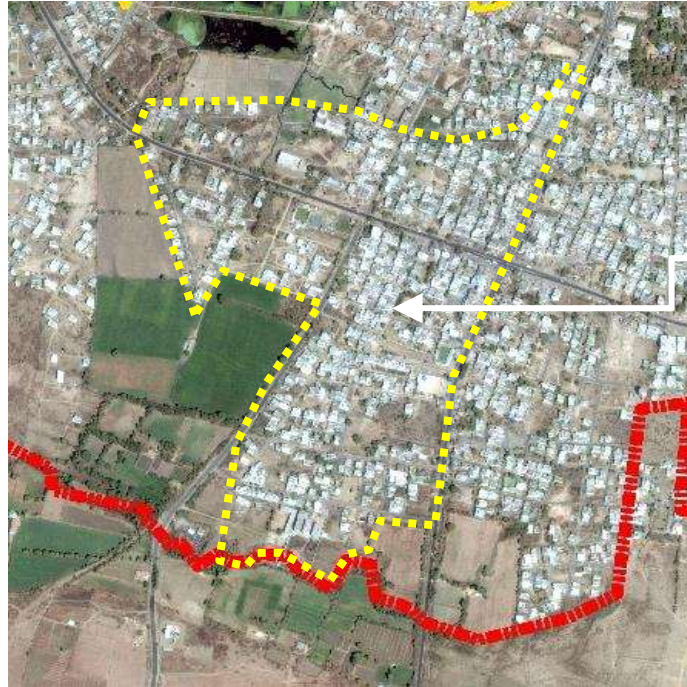


- ❑ Avg. septic tank size in this area is 8'*6'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to open drains in layout areas and closed drains in old areas.

Septic Tank and Drain's Assessment- Teacher's Colony



IHHL & Septic Tanks



Drainage System



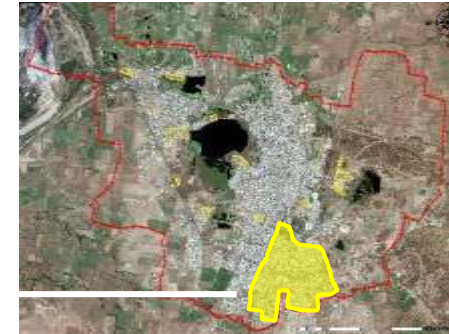
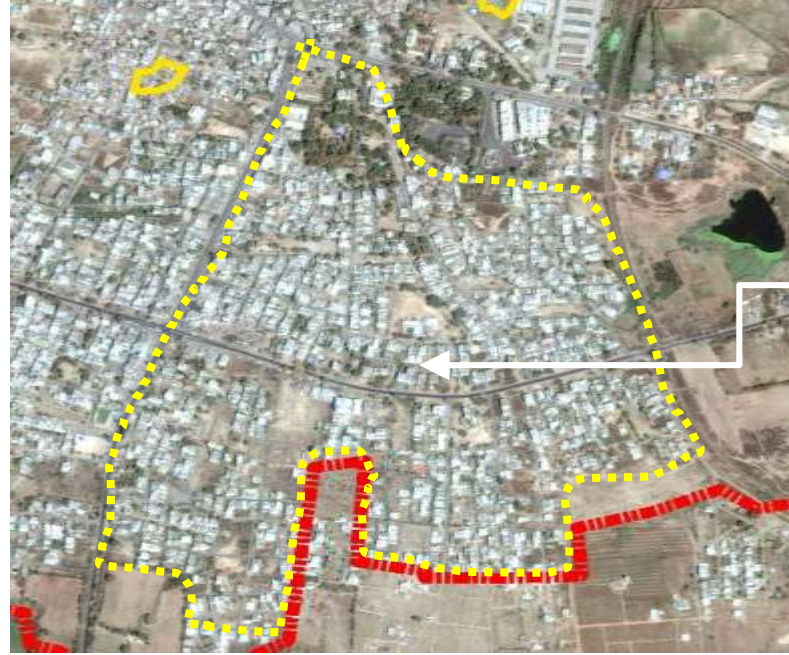
- Avg. septic tank size in this area is 8'*10'*6'.
- Access to clean the septic tank is provided.
- The septic tank over flow is connected to open drains in this areas.

Septic Tank and Drain's Assessment- Adyalwale Layout



IHHL & Septic Tanks

- ❑ Avg. septic tank size in this area is 8'10'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank overflow is connected to open drains in this areas.

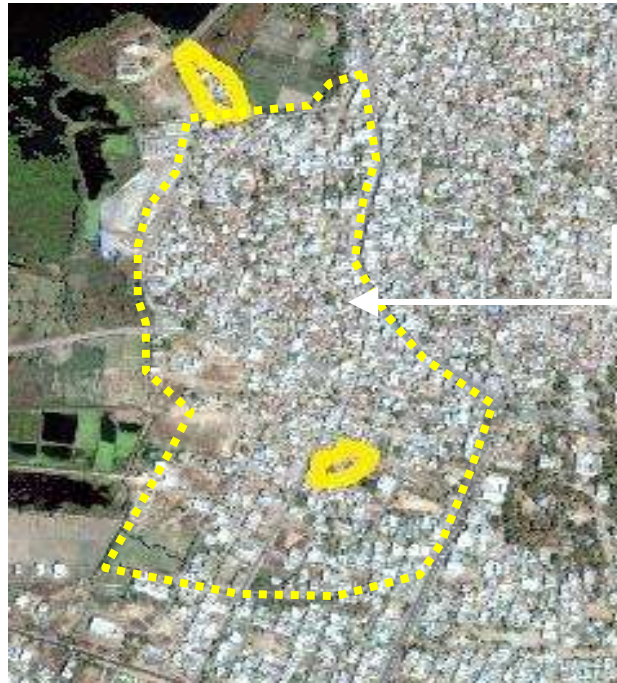


Location Map



Drainage System

Septic Tank and Drain's Assessment- Itwari Peth Area



Location Map



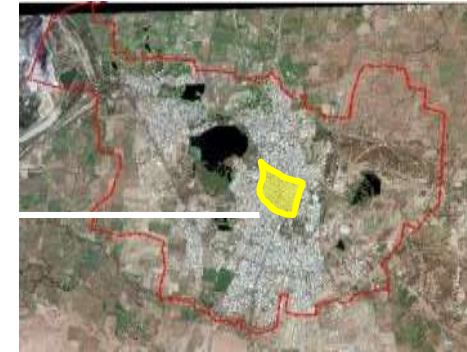
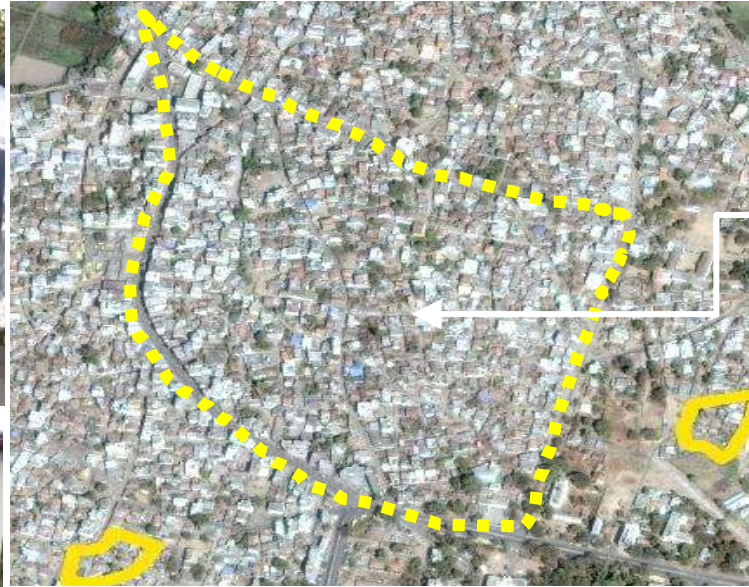
Drainage System



IHHL & Septic Tanks

- ❑ Avg. septic tank size in this area is 8'*7'*6'.
- ❑ Access to clean the septic tank is provided but the area is inaccessible due to narrow roads.
- ❑ The septic tank over flow is connected to closed drains in this areas.

Septic Tank and Drain's Assessment: Jogithana Peth Area



Location Map



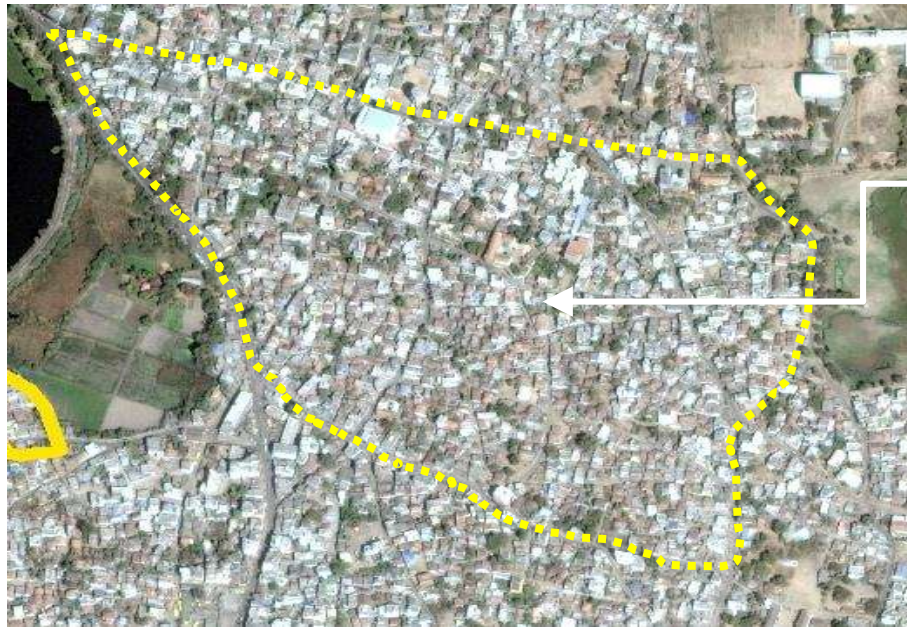
IHHL & Septic Tanks



Drainage System

- ❑ Avg. septic tank size in this area is 6'*6'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to closed drains in old areas.

Septic Tank and Drain's Assessment- Mangalwari Peth Area



Location Map



IHHL & Septic Tanks



Drainage System

- ❑ Avg. septic tank size in this area is 8'*6'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to closed drains in old areas.

Septic Tank and Drain's Assessment- Sindhi Colony



Location Map



IHHL & Septic Tanks

- ❑ Avg. septic tank size in this area is 8'7'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow are partially connected to open drains and closed drains.

Drainage System

Septic Tank and Drain's Assessment- Budhwari Peth Area



IHHL & Septic Tanks

- ❑ Avg. septic tank size in this area is 8'*6'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to closed drains in this areas.



Location Map

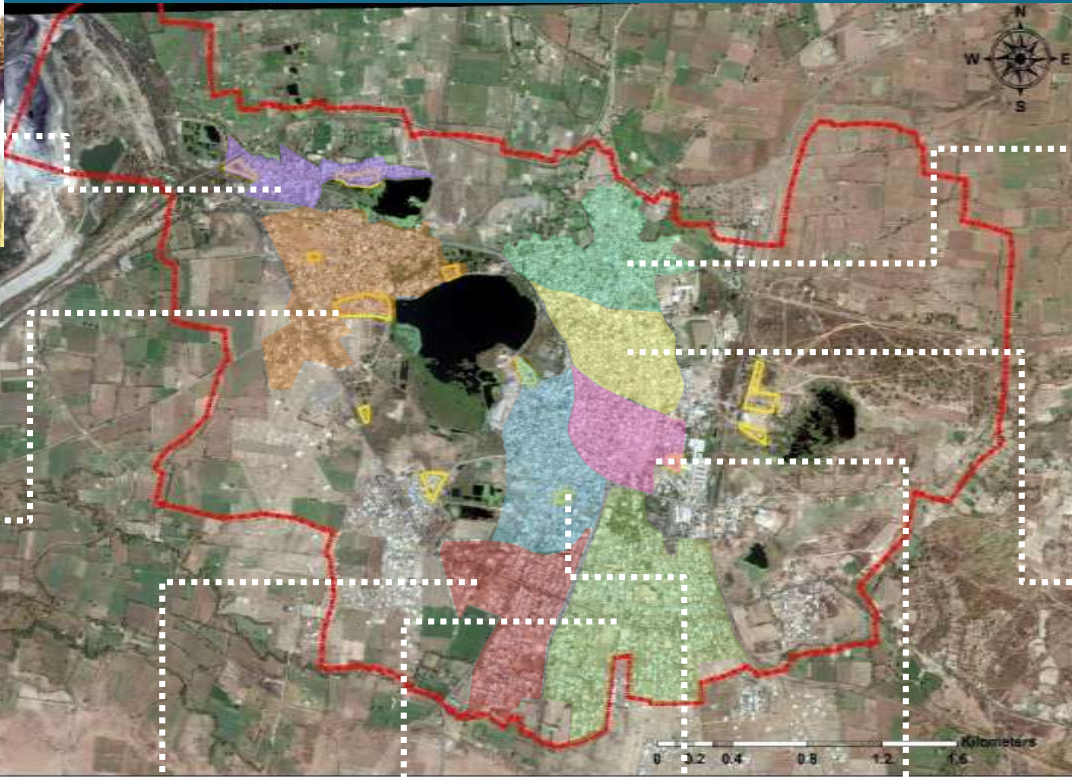


Drainage System

Septic Tank and Drain's Assessment



Gangapur Area



Kawara Peth



Budhwari Peth



Mangalwari Peth



Teacher's Colony



Adyalwale Layout



Itwari Peth



Jogithana Peth

Collection Of Septage



Toilets are partially constructed above septic tanks with access provided for emptying



At Household level, Collection of septage mostly take place into the 2 chambered septic tank

Collection Of Septage- Community Toilets



All the Community toilets and the Public toilet have Septic tanks for the collection of Septage



Septic Tank and Drain's Assessment WCL Colony



IHHL & Septic Tanks



WCL Colony and Wayagoan Gotori is 6 Km towards North West



The distances mentioned are from the City Centre

- ❑ Avg. septic tank size in this area is 8'*10'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to open drains in layout areas.



Drainage System

Septic Tank and Drain's Assessment Wayagaon Gotori



IHHL & Septic Tanks



WCL Colony and Wayagoan Gotori is 6 Km towards North West



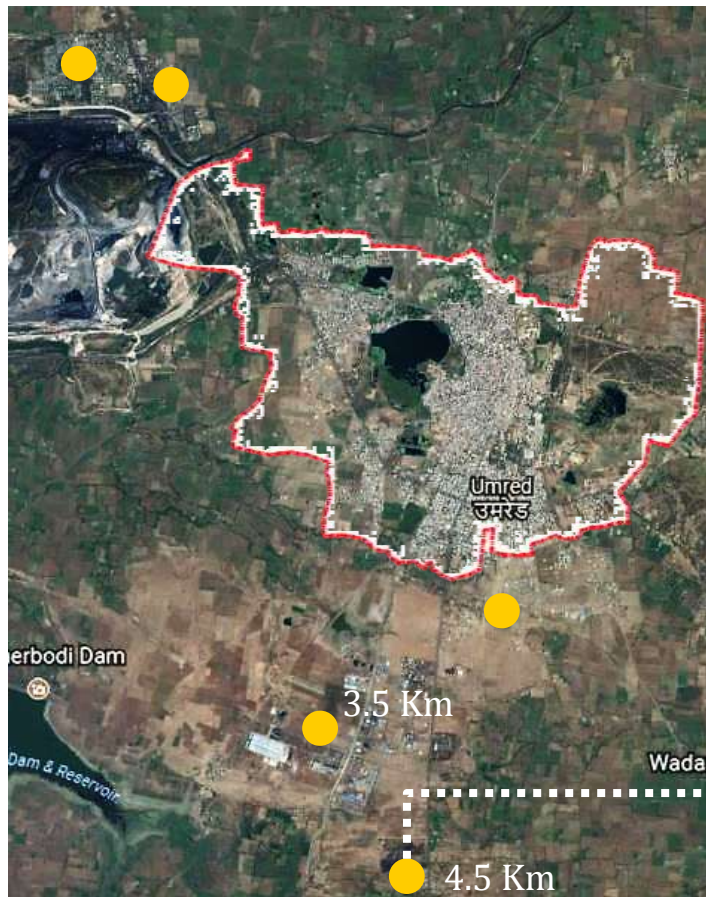
The distances mentioned are from the City Centre

- ❑ Avg. septic tank size in this area is 8'*10'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to open drains in layout areas.



Drainage System

Septic Tank and Drain's Assessment Dhurkheda



The distances mentioned are from the City Centre



IHHL & Septic Tanks



Dhurkheda settlement along Mangrud Rd. is 4.5 Km towards South



Drainage System

- ❑ Avg. septic tank size in this area is 8'*10'*6'.
- ❑ Access to clean the septic tank is provided.
- ❑ The septic tank over flow is connected to partially open drains and closed drains.

2. Current Sanitation Situation:

C. Conveyance

Access to Toilets

Cleaning & Maintenance

Conveyance

Treatment

Disposal & Recovery



Septage Conveyance

Septic tank desludging

- On an average 5-12 septic tanks cleaned in a week (demand- based);
- **5%** cleaned annually (Benchmark 33%)

Desludging Capacity

- **1** ULB owned vehicle: Capacity of **3000 L**
- **1** Private Vehicle: Capacity of **5000 L**
- 1 vehicle of 1000L capacity is defunct.
- Total septage generated in year 2016-17 is **10824 cu.m.** (*Source: SLB data 16-17*)

User Charges

- **Rs 400 per trip** by ULB
- **Rs 800 per trip** by Private Operator
- All CTs are cleaned by private operator free of cost
- The ULB owned vehicle is also outsourced to private operator.



Desludging of septic tank by Private Operator using ULB Owned **Tractor ??** in Umred



Desludging Trucks Owned by Private Operator in Umred

2. Current Sanitation Situation: d. Disposal

Access to Toilets

Cleaning & Maintenance

Conveyance

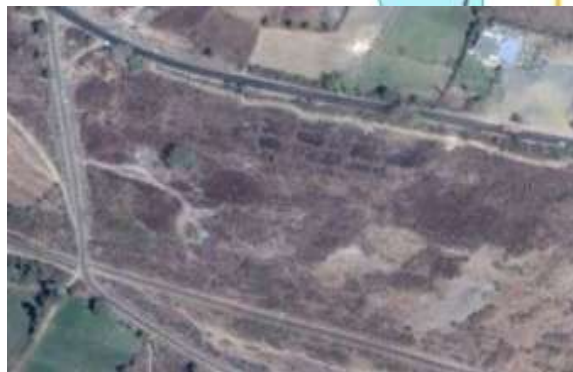
Treatment

Disposal & Recovery



Septage Disposal Site

- Untreated septage disposed at the temporary site on Shivapur Road
- Existing land belongs to Forest Department.
- Request for Co-treatment of septage at Nagpur sent to Nagpur corporation as per GR issued by the State Government.



Open land at Shivapur road where septage is disposed currently

3. Grey Water Management

Drainage in Umred



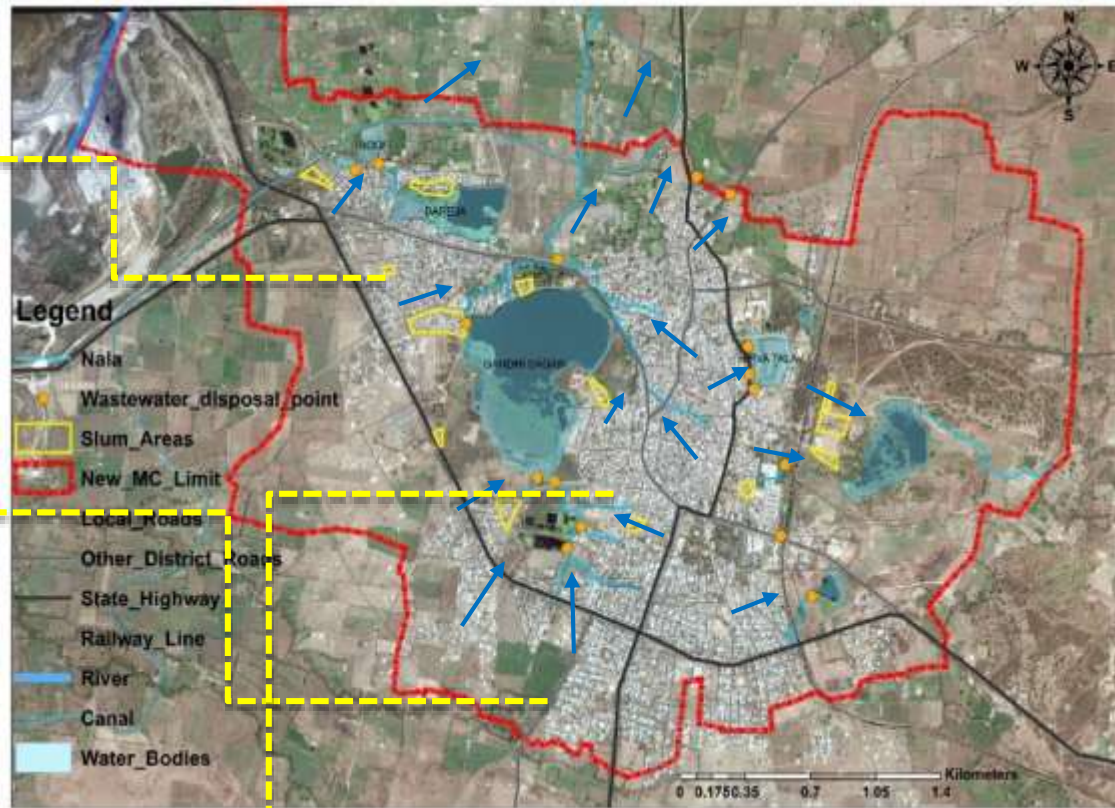
HHs waste water into open drains



Open and Closed drains



Gandhi Sagar Talav



- Grey water and black water from septic tanks are connected to roadside drains.
- 100% coverage in town
- These drains flow to nallahs, that flow into the Amb River and Gandhi Sagar Lake untreated.

Areas with presence of Open Or Closed Drains

- ❑ Open drains are observed along major roads of the city.
- ❑ Open drains are approximately 2.5 feet wide and 3 feet in depth
- ❑ The connector minors roads have closed drains
- ❑ Closed drains are approximately 2 feet wide and 4 feet in depth
- ❑ Currently the new drains which are being laid through precast pipes having diameter of 300mm and 450mm.



60-70% of closed drains

40-30 % of open drains

Approx. Figures

Length of covered drainage network (km)	41
Length of open drainage network (km)	27.2

Areas with presence of Closed Drains :New drainage system

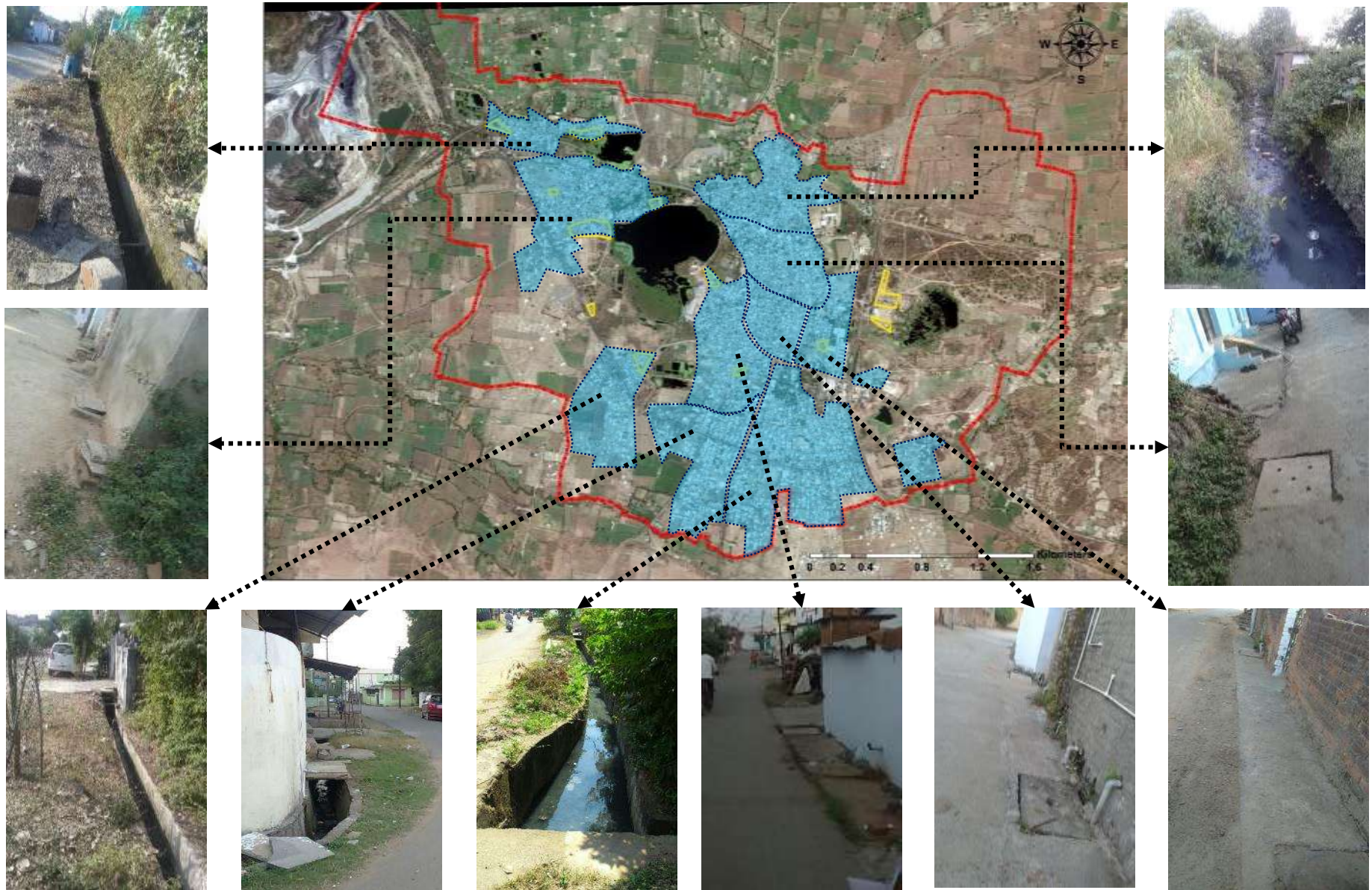


New drainage system is being laid in areas of Mangalwari Peth

New drainage pipeline have been laid for approx. 3.5 km

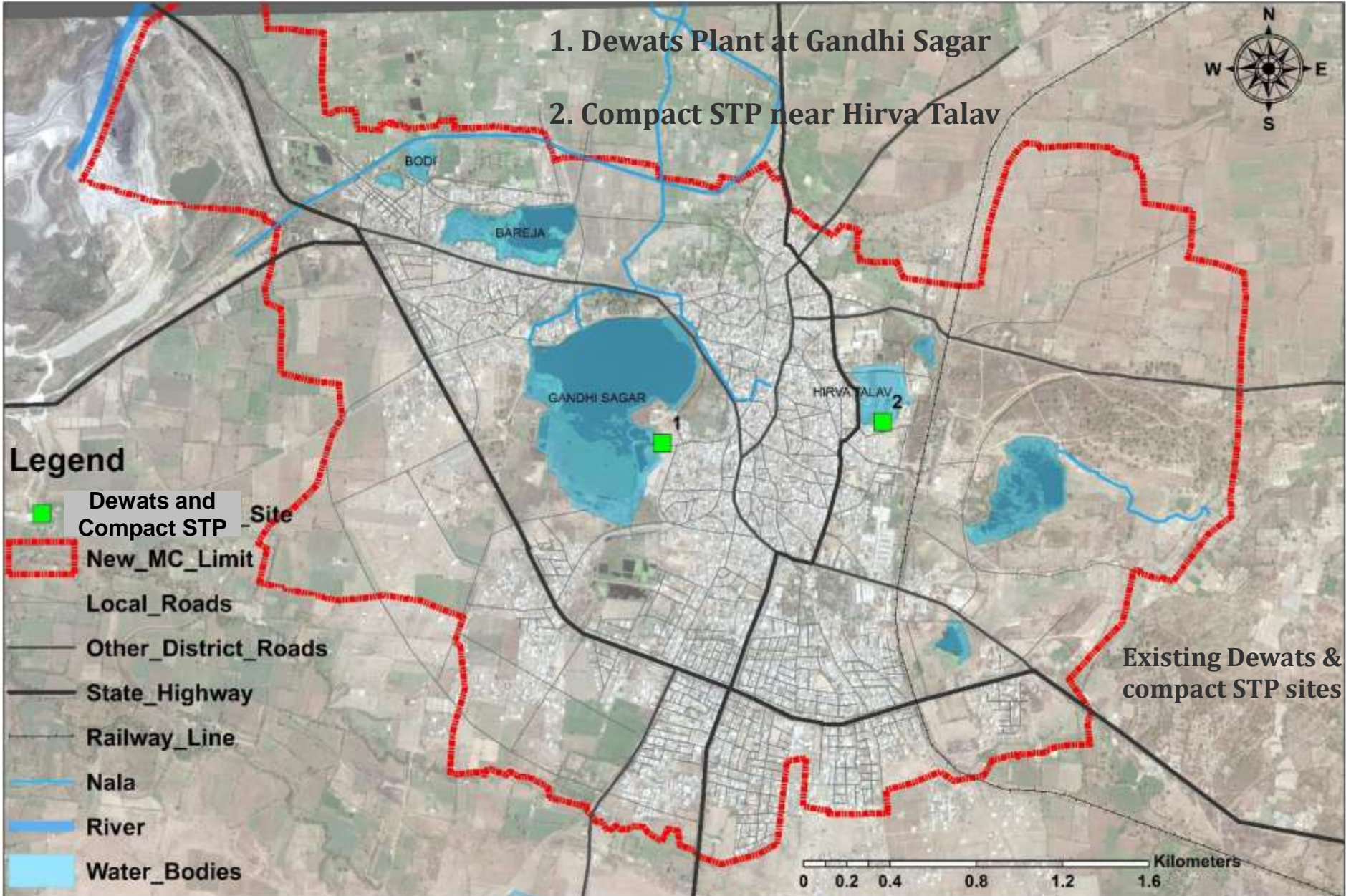


Areas with presence of Open Or Closed Drains



Partially opened and closed drains are observed.

Existing DEWATS & Compact STP



1. Existing DEWATS Plant at Gandhi Sagar

- Supported by CDD for a slaughter house, fish market and community toilet in 2012
- Funded through 12th Finance Commission and National Fisheries Development Board
- Plant installed to treat the waste from slaughter house, fish market, urinal and community toilet before discharging in the lake
- Total installed capacity 20m³/day
- O&M of plant is managed by the ULB
- Treated effluent discharged into Gandhi Sagar



Inflow point



Effluent Disposal point



Slaughter house



DEWATS plant



CT (12 seats) near DEWATS plant



Fish market near DEWATS Plant

1. Existing DEWATS Plant at Gandhi Sagar

The DEWATS plant contains:

- Biogas Settler (for waste from slaughter house)
- Settler (for waste from urinal and CT)
- Anaerobic Baffle Reactor (ABR)
- Anaerobic Filter
- Planted Gravel Filter (PGF)
- Collection Tank

Quality assessment at time of installation:

	Influent Quality	Effluent Quality
COD (mg/l)	4628	<60
BOD (mg/l)	2282	<20
TSS (mg/l)	<200	>20

According to the waste water quality report:

- Ammonical nitrogen exceeds the permissible limits
- The bio gas released from the plant is not being utilized and is released in the air.
- Treated effluent discharged into the Gandhi sagar without any reuse

Parameter	CPCB (disposal on to surface inland water)	PGF Outlet at peak hour
pH	5.5-9	7.41
TSS (mg/l)	100	10
BOD (mg/l)	30	19.2
COD	250	131.6
Suspended Solids	35.0	396.0
Oil and Grease	10	0.2
Phosphorous (mg/l)	5	6.95
Ammonical Nitrogen	50	145.9

2. Compact STP at Hirva Talav for Community Toilet

- ❑ Donated and installed by Japan based Daiki Axis Company in May 2016
- ❑ Capacity of **10 m³ /day** which costs Rs **6 Lakhs**
- ❑ Treats waste from **1 community toilet** of 10 seats
- ❑ Anaerobic biodegradation of organic waste
- ❑ Effluent BOD less than 20mg/l
- ❑ O&M of the plant is managed by the ULB
- ❑ Treated effluent discharged into Hirva Talav



Out flow of treated effluent into Hirva lake



Community toilet (10 seats) at Compact STP

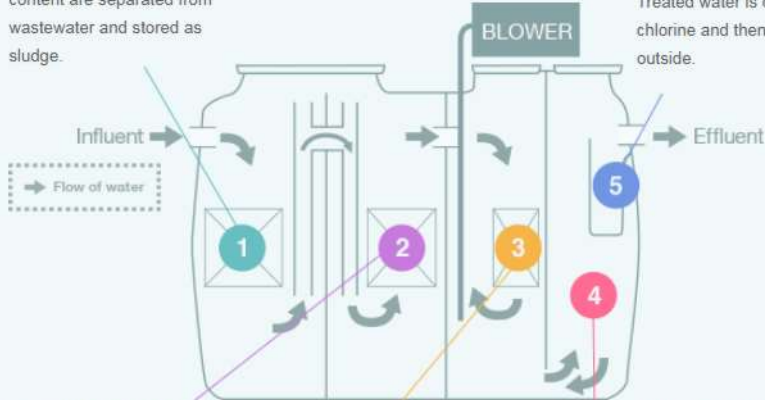


Compact STP by Daiki Axis

2. Compact STP at Hirva Talav for Community Toilet

1. Solid-liquid separation tank

Dirt, solid material, oil and fat content are separated from wastewater and stored as sludge.



5. Disinfection tank
Treated water is disinfected by chlorine and then discharged outside.

2. Anaerobic filter bed tank

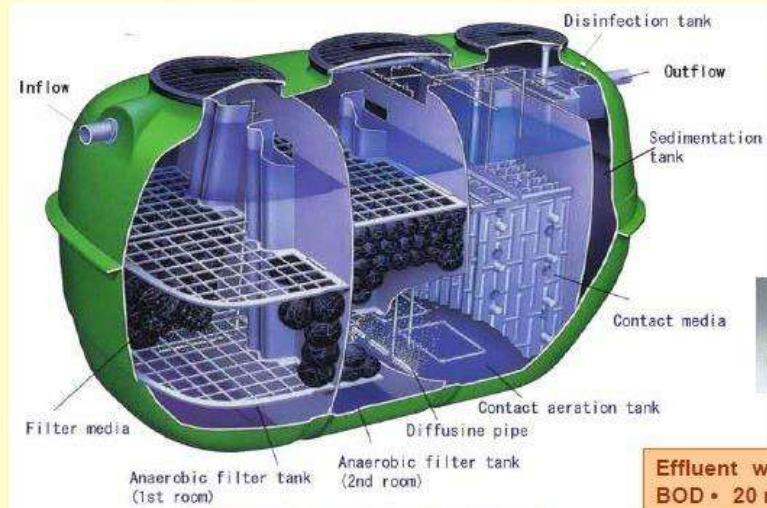
Anaerobic microorganisms cause decomposition of organic substances, leading to denitrification process.

3. Moving bed tank

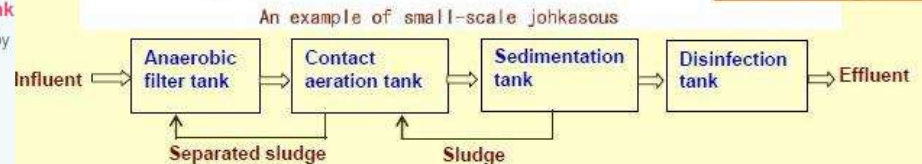
Aerobic microorganisms adsorbed in media inside the tank cause decomposition of organic substances, leading to nitrification process of ammoniacal nitrogen.

4. Carrier filter tank or Sedimentation tank

Suspended Solids in treated water are separated by the filter media or gravity.



Effluent water quality
BOD = 20 mg/l

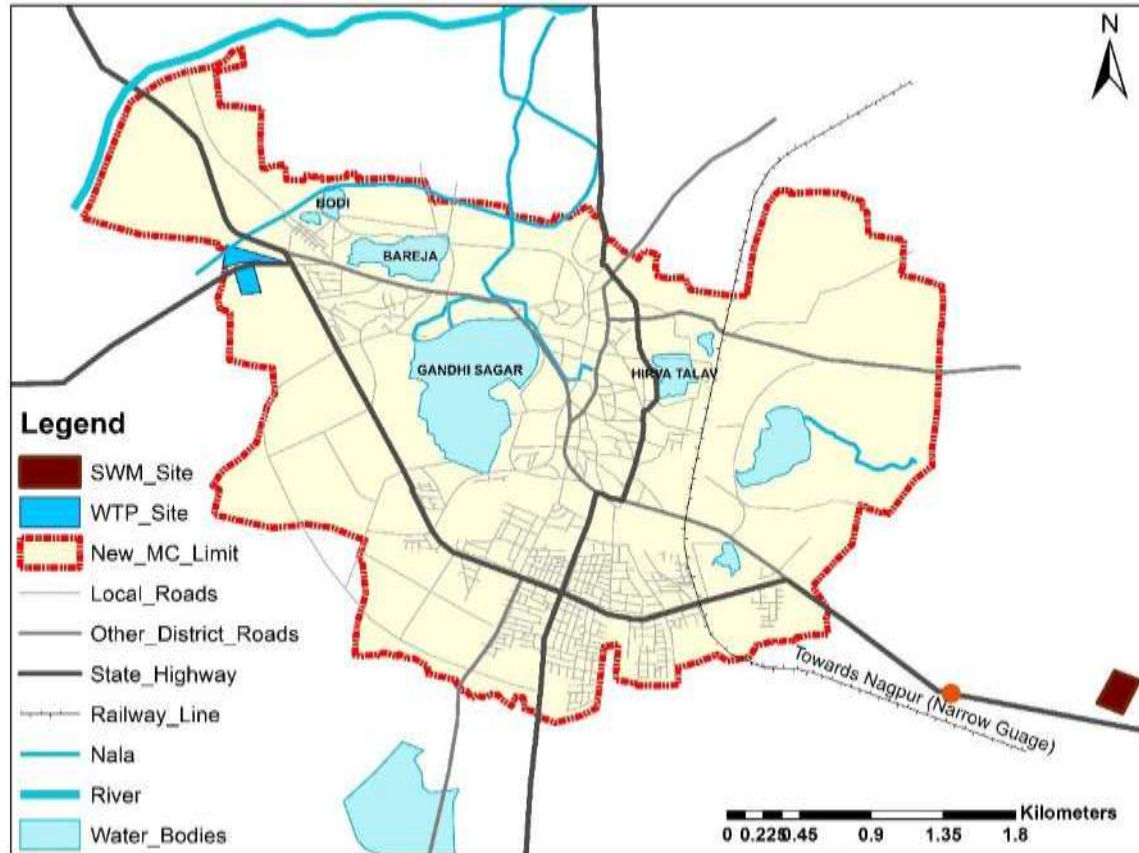
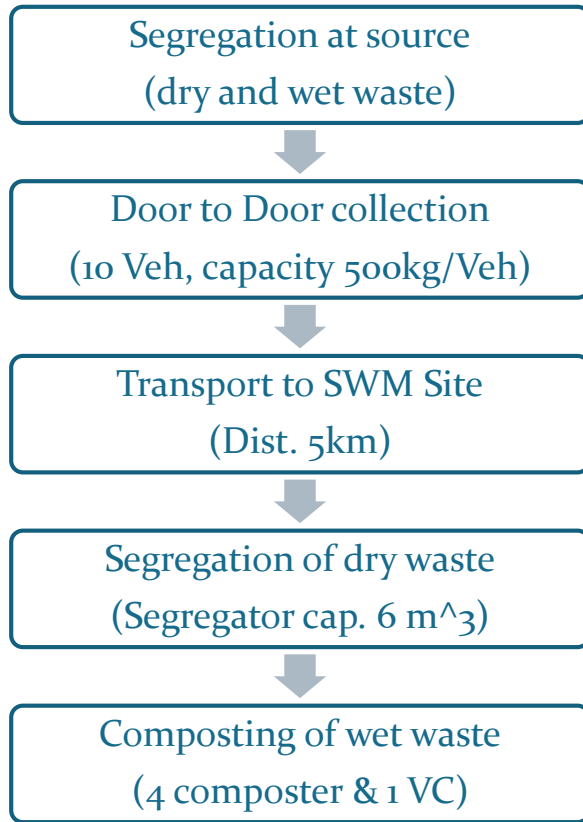


- ❑ The plant has a capacity ranging from 1 m³ to 50 m³ per day
- ❑ Decomposes fecal matter using a high-grade bacteria, converting it to methane and water
- ❑ It requires desludging at least once a year and regular maintenance of other systems of the plant e.g. blower, sludge transfer pipe, media level checks etc.
- ❑ Unit is made of fibre-reinforced plastic with a life span of 50 years.
- ❑ It needs uninterrupted power supply, and involves maintenance

4. Solid Waste Management

Solid Waste Management

SWM Process



- ❑ Collection of **door to door** waste is done by a **private service provider** while transportation, segregation and composting is done by the ULB
- ❑ Council has a **total staff of 11** (9 M, 2 F) for segregation of waste
- ❑ Total waste generated **13 MTD**.
- ❑ DPR of SWM is Available of year 2007.



SWM Site- Map

SWM Disposal Site



SWM Site



Weigh Bridge



Segregation Unit



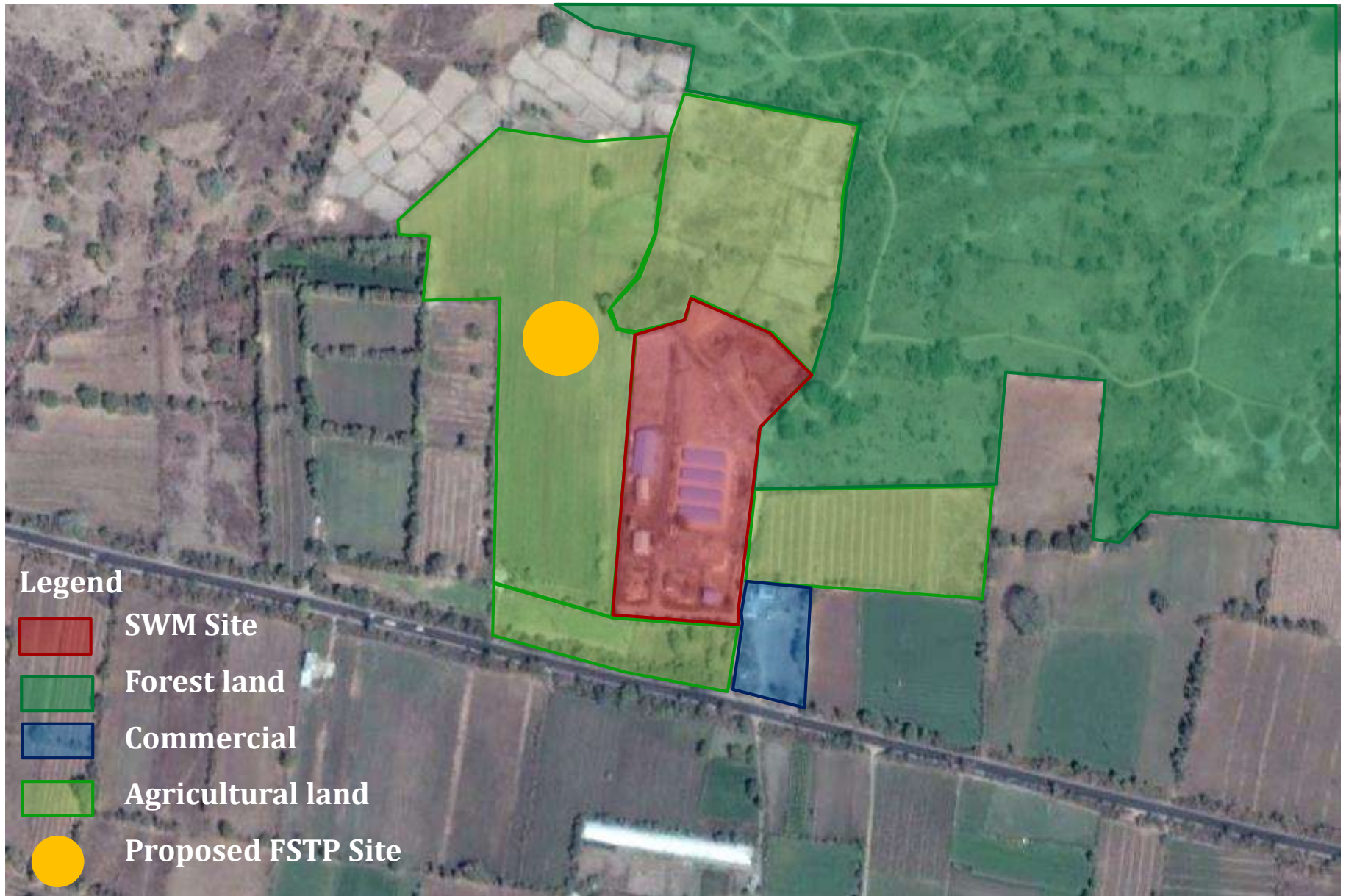
Vermi Composting Unit



Waste Composter



Landuse Around SWM Site



5. Proposed Projects

Proposals

S.N	Proposals	Funding	Status
1	DEWATS at Hirva lake	14th Finance Commission	Submitted for technical approval to MJP
2	DEWATS at Kotgaon Naka	14th Finance Commission	Submitted for technical approval to MJP

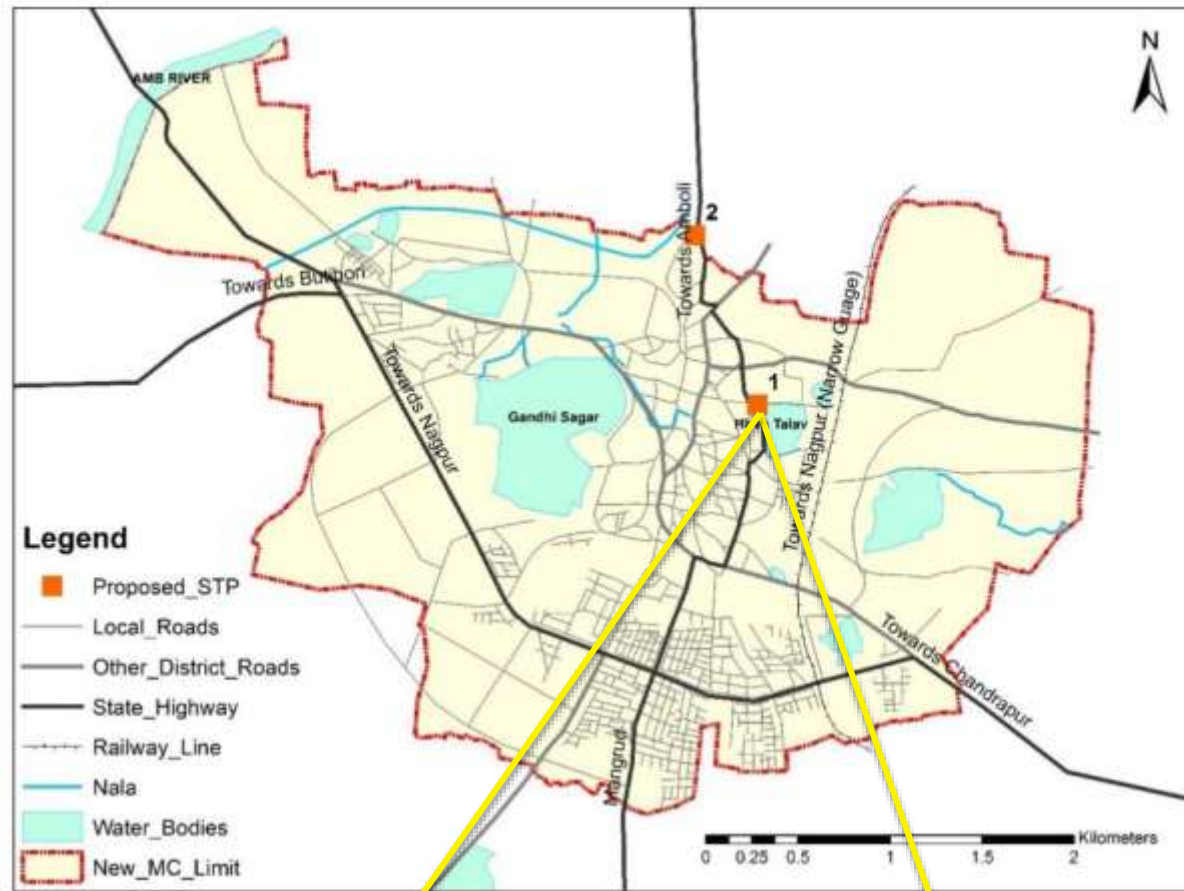
Proposed DEWATS Project

Objective: To conserve the lake in urban & semi urban areas.

1. DEWATS Project at Hirva Lake, Umred.

- Prepared by CDD.
- The project catchment area covers around 1080 HHs with a total residential population of 5400 people.
- Wastewater Treatment Plant Capacity : 400 m³/day.
- Cost of Project is Rs. 64,78,466.
- Funding from 14th FC.

Status of the Project:
Submitted for Technical Approval to MJP.



Map Showing Catchment Area of Hirva Talav.



Proposed DEWATS Project

2. DEWATS Project at Kotgaon Naka, Umred.

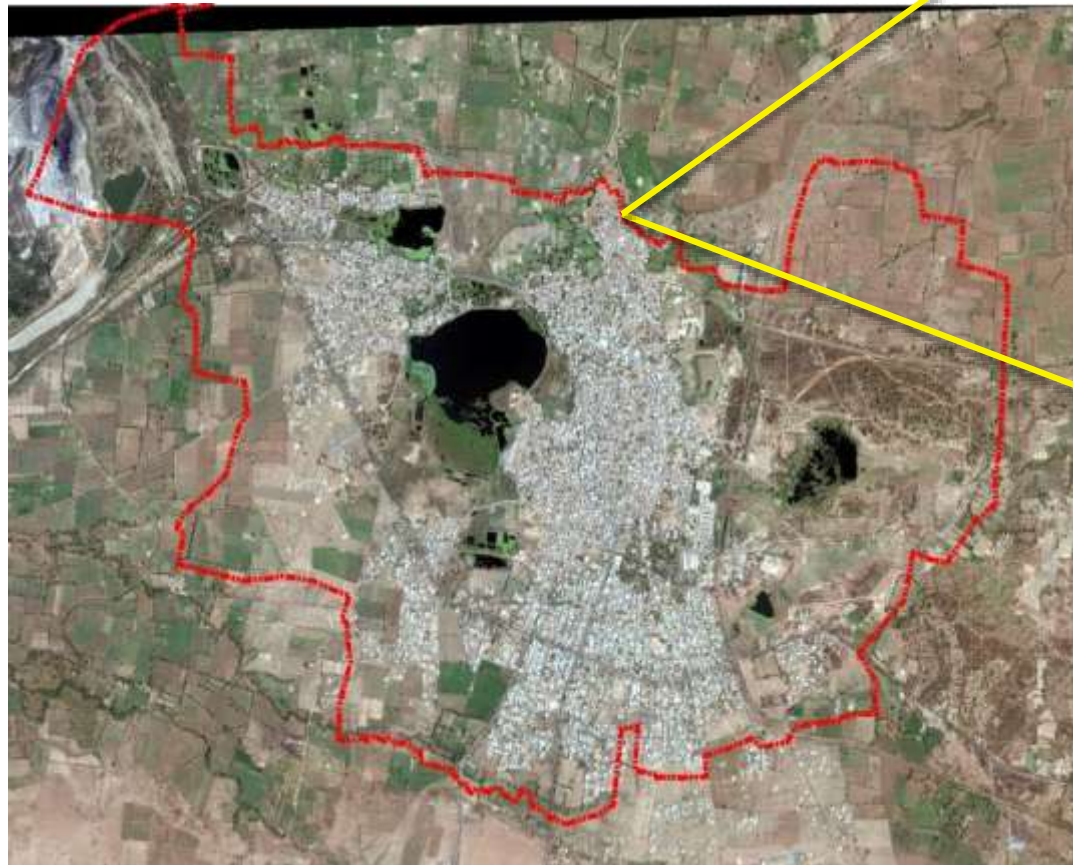
- Prepared by CDD.
- The project catchment area covers around 940 HHs with a total residential population of 4700 people.
- Wastewater Treatment Plant Capacity: 400 m³/day.
- Cost of Project is Rs. 75,56,284.
- Funding from 14th FC



Road side open drains at Kotgaon Naka.



Proposed DEWATS Site at Kotgaon Naka.



Map Showing location of STP Site at Kotgaon Naka.

Status of the Project:
Submitted for Technical Approval to MJP.

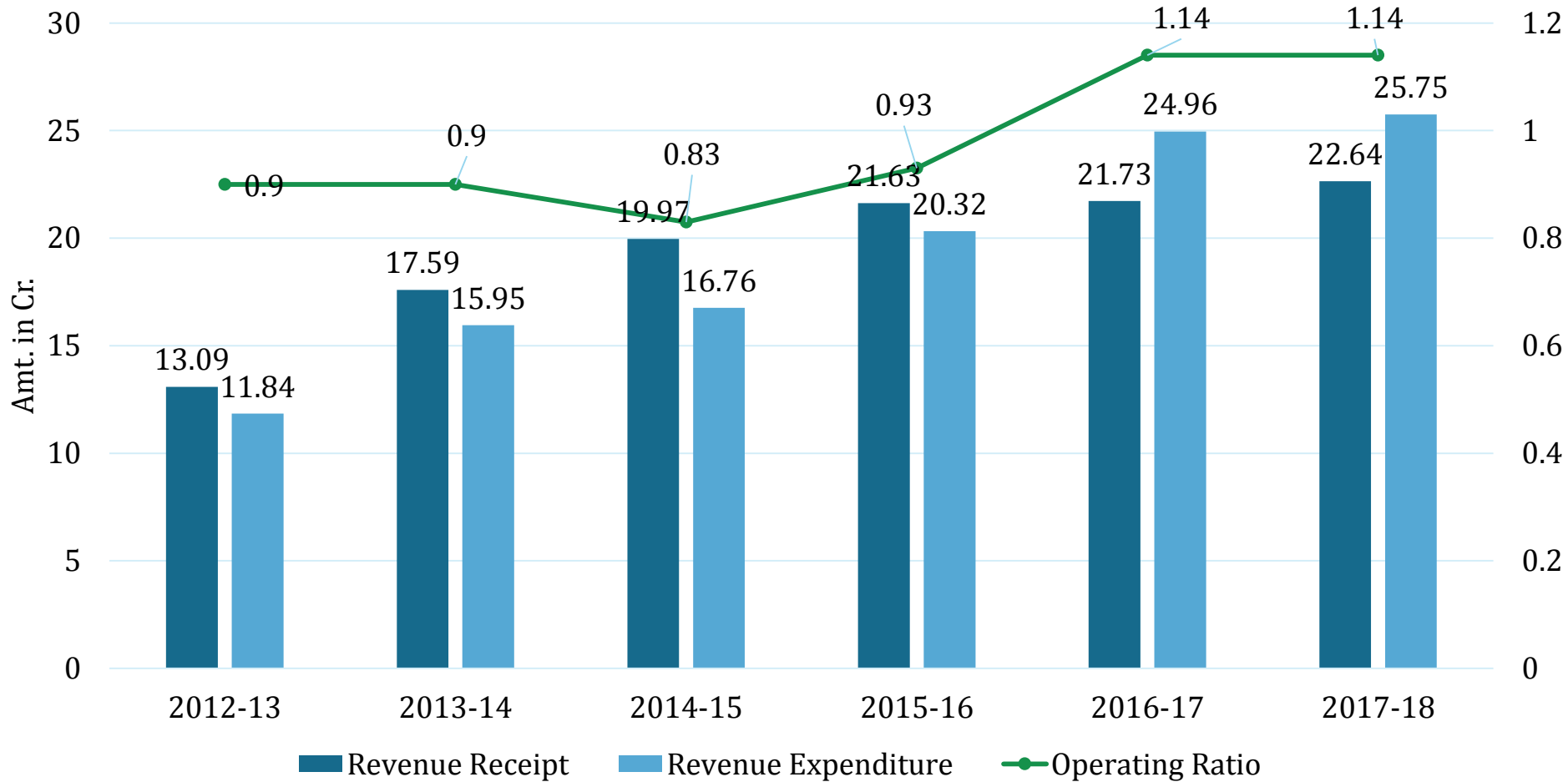
6. Financial Assessment

Umred Budget

Umred Budget							
Category	2011-12 Actual	2012-13 Actual	2013-14 (Actual)	2014-15 (Actual)	2015-16 (Actual)	2016-17 (RE)	2017-18 (BE)
	Amount (INR in Cr.)						
Opening Balance	5.61	7.92	14.68	23.1	23.95	20.26	15.75
Revenue Account							
Revenue Receipt	12.47	13.09	17.59	19.97	21.63	21.73	22.64
Revenue Expenditure	12.01	11.84	15.95	16.76	20.32	24.96	25.75
Capital Account							
Capital Receipt	8.28	24.53	20.25	15.43	17.93	40.95	28.29
Capital Expenditure	15.07	19.02	13.47	17.79	22.94	42.22	39.24
Summary							
Total Receipt	20.75	37.62	37.84	35.4	39.56	62.68	50.93
Total Expenditure	27.08	30.86	29.42	34.46	43.26	67.18	64.99
Closing Balance	7.92	14.68	23.10	23.95	20.26	15.75	16.90
Operating Ratio	0.96	0.90	0.90	0.83	0.93	1.14	1.14
Revenue surplus Cr.	0.46	1.25	1.64	3.21	1.31	-3.23	-3.11

Note: Ratio of revenue expenditures to revenue receipts, core measure of financial health for a ULB.

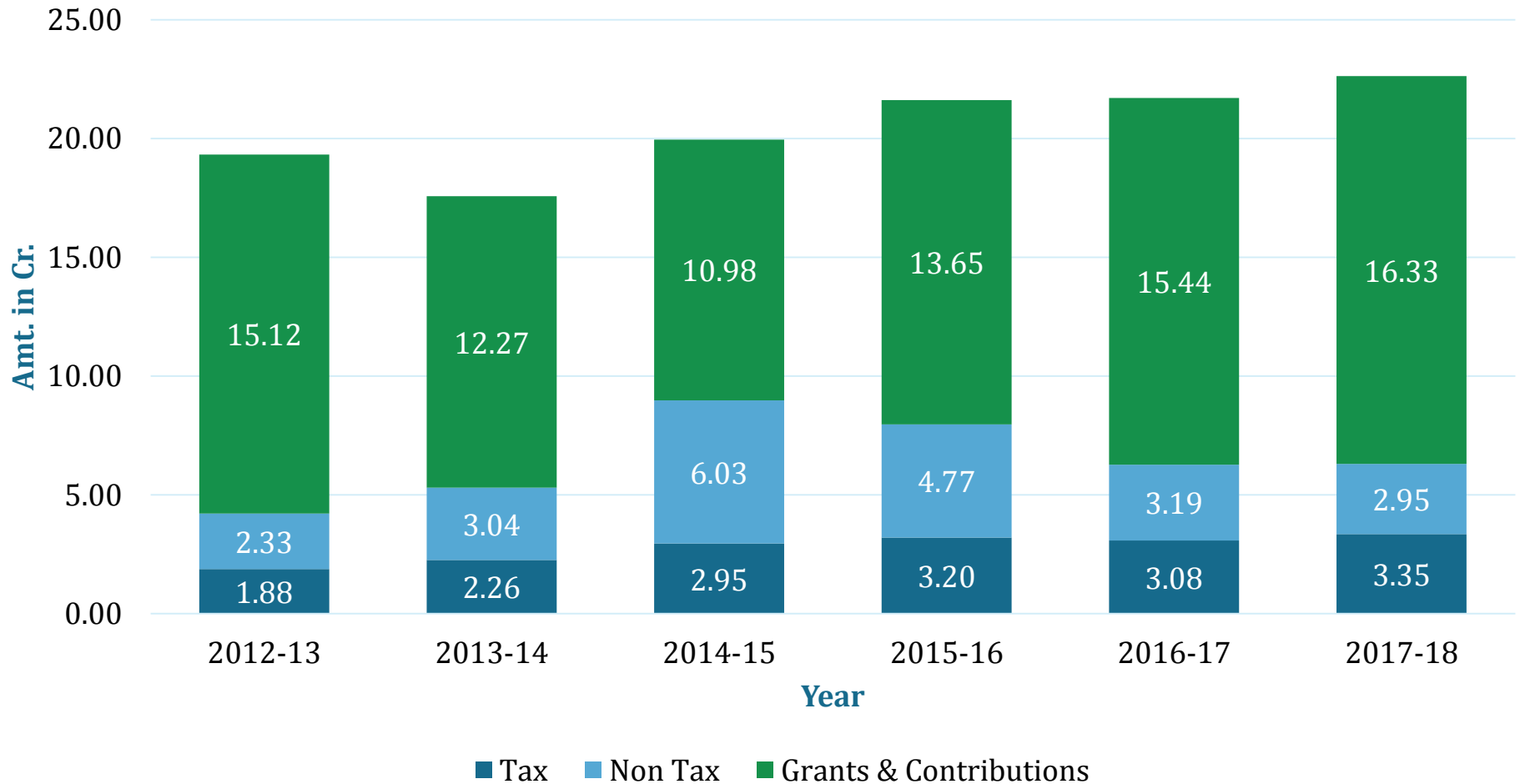
Revenue Receipt Vs Revenue Expenditures



Note: Ratio of revenue expenditures to revenue receipts, core measure of financial health for a ULB.

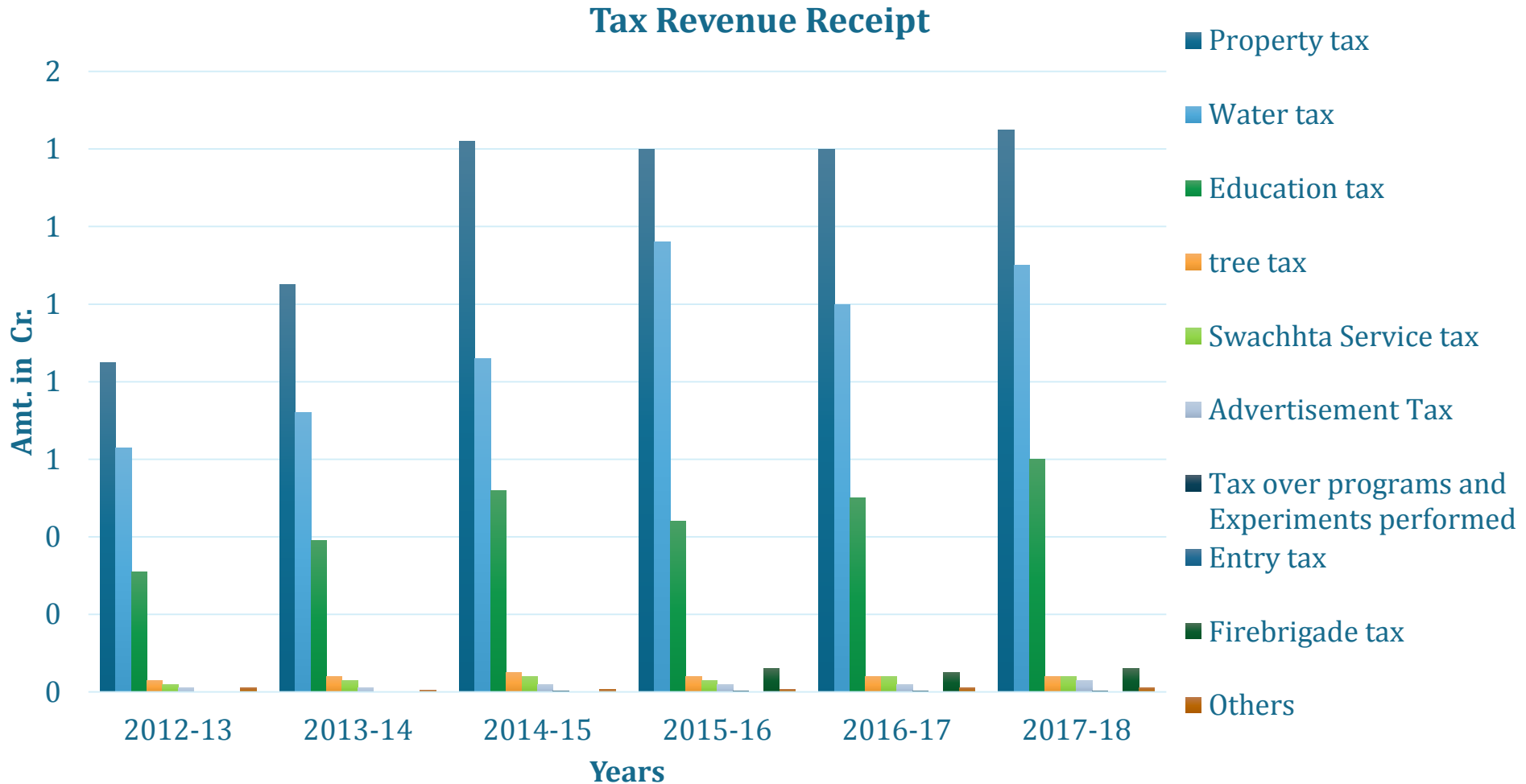
- The municipal council revenue receipt is increasing steadily over the years which indicate that the council has taken efforts to increase the collection efficiency of revenue.
- Revenue Expenditures are Less than Revenue Income at earlier years and drastically increase in next two years.

Revenue Receipt Share Umred



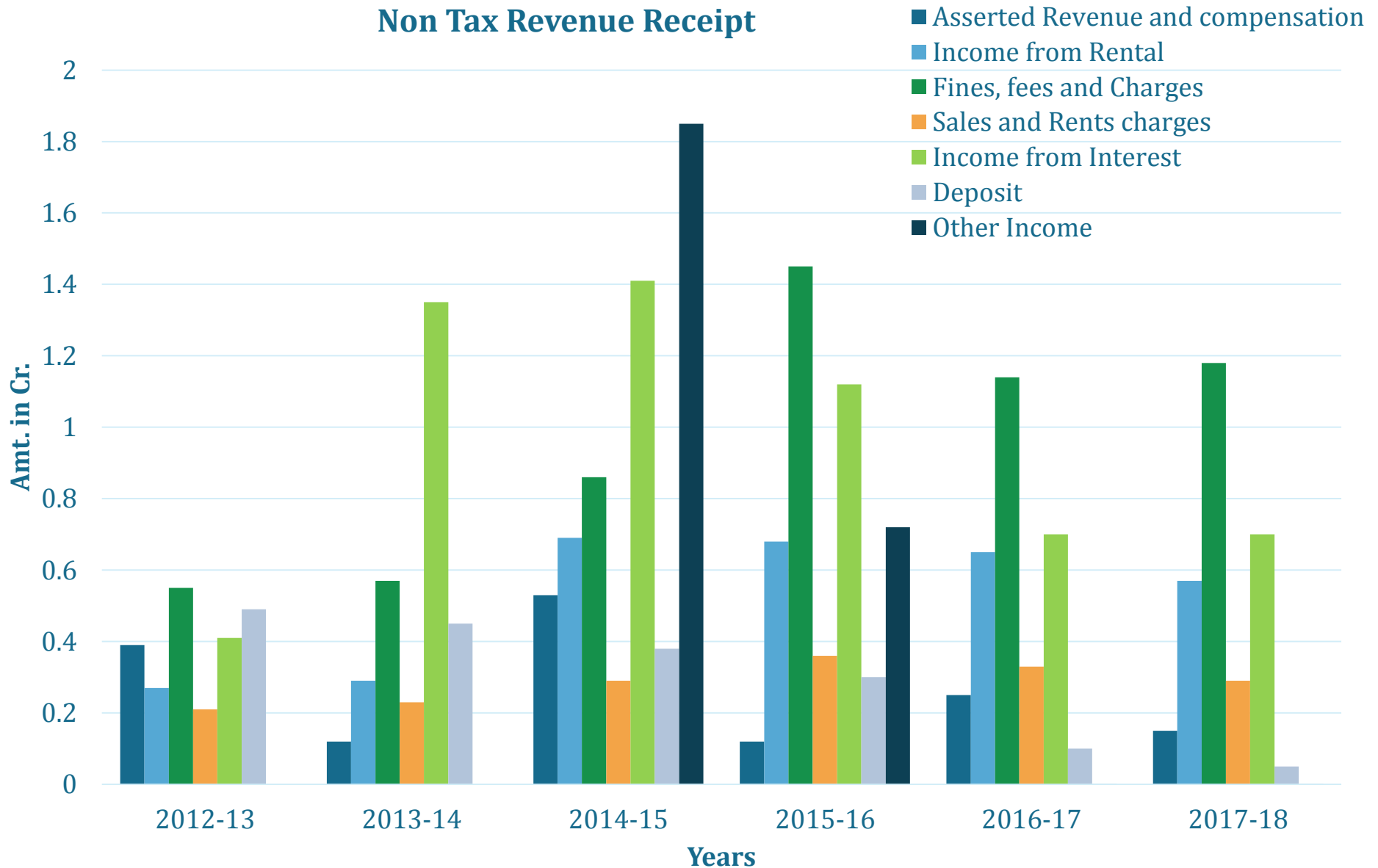
As per graph, Council received most of the revenue in the form of Grants and contributions followed by the non tax and tax revenue. As the year passes, it is observed that slightly increase in the property tax revenue and decreases non-tax revenue.

Tax Revenue Receipt Share Umred



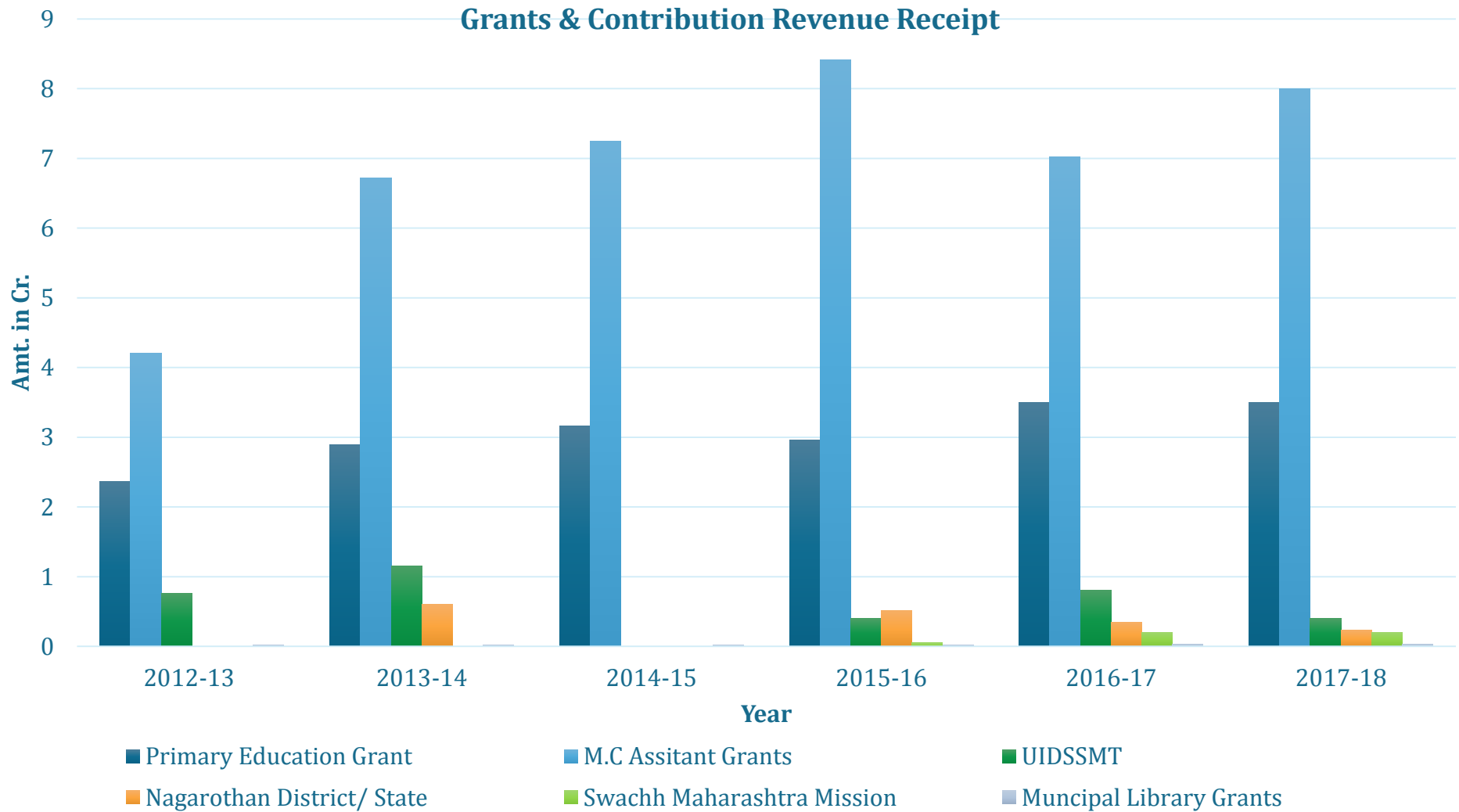
From the above bar graph it is observed that the property tax is the major tax revenue source following water tax, education, fire brigade, tree, Swachhta tax. While property tax and water tax collection efficiency is increasing every year.

Non Tax Revenue Receipt Share Umred



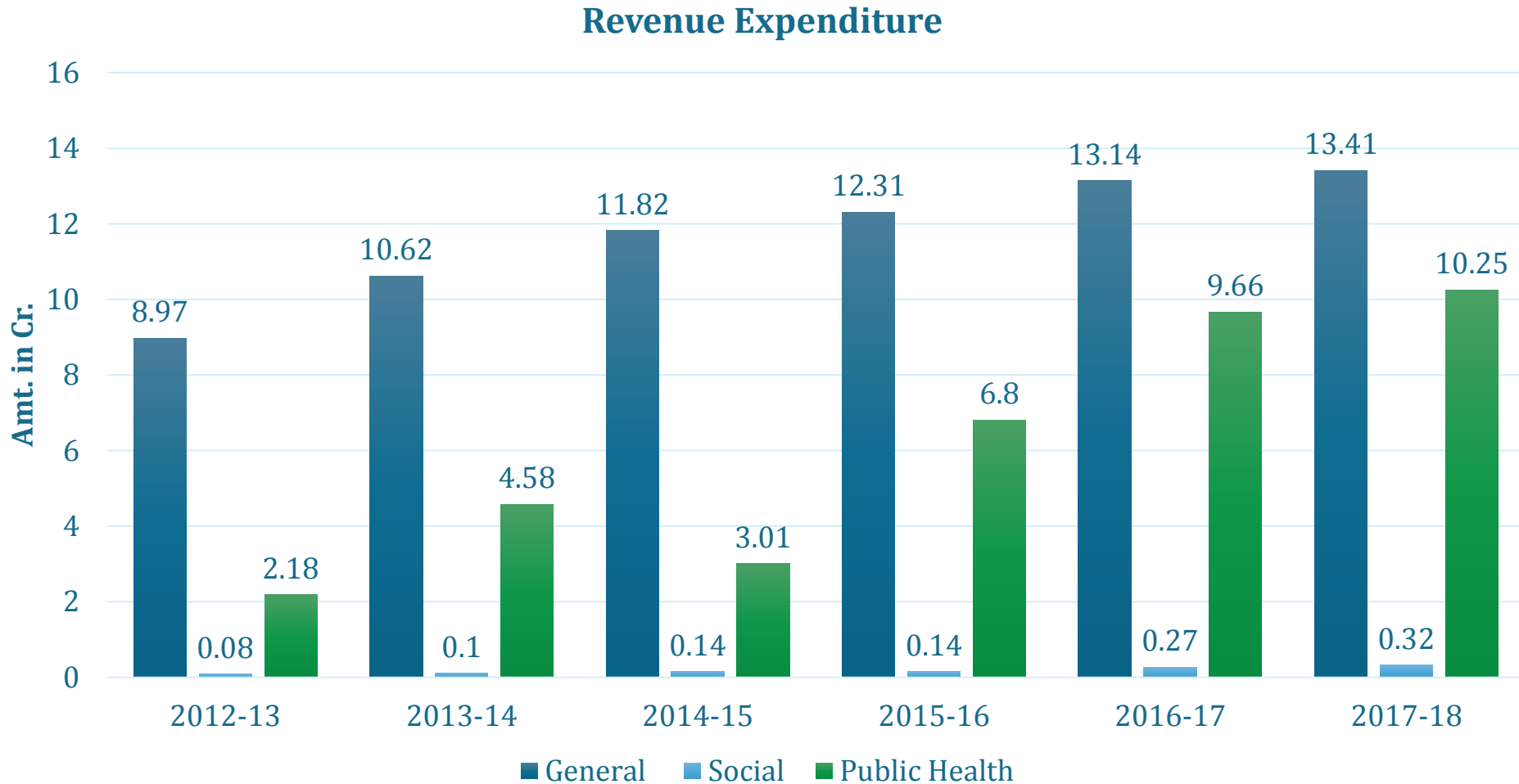
Source: Umred Budget 2017-18

Grants & Contribution Revenue Receipt Share Umred



From the graph it is observed that the more grants and contribution received in the form of MC assistant grants, primary education grants, UIDSSMT.

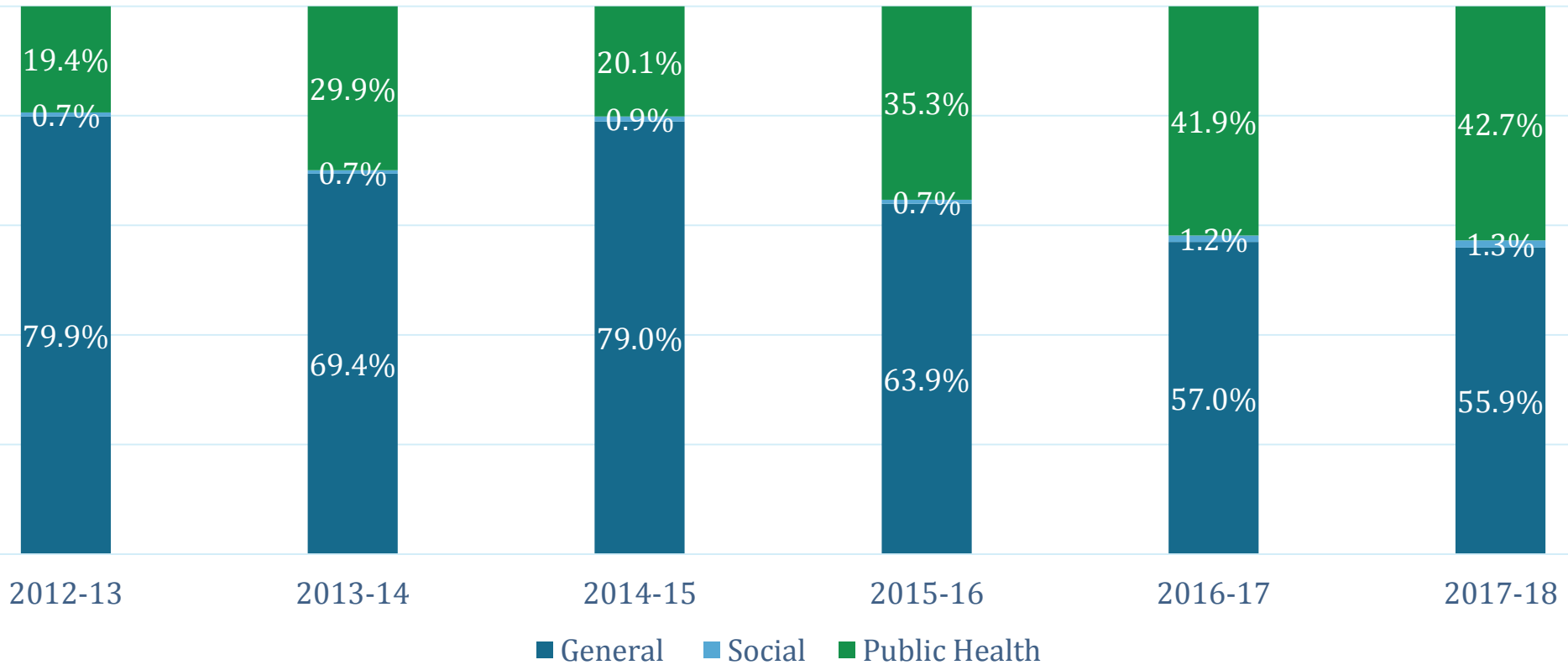
Revenue Expenditure Share Umred



- Above graph it is observed that the M.C spend more money on general administration and followed by public health expenditure and less money are spend on social security.
- From year 2014-15, expenditure on general administration is more or less constant and the expenditure on public health has increased.

Revenue Expenditure Share Umred

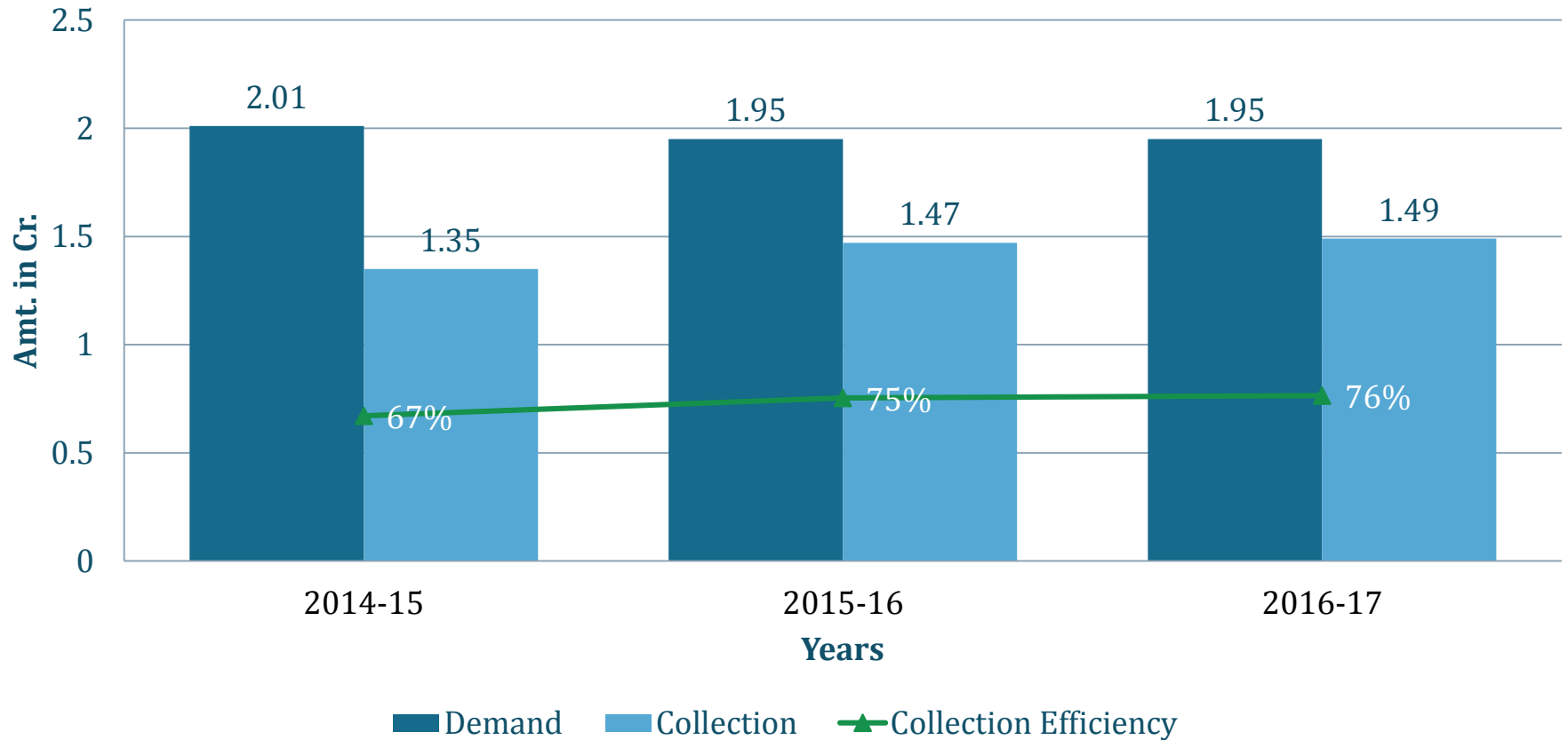
Revenue Expenditure



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- From year 2014-15, expenditure on general administration is more or less constant and the expenditure on public health has increased.

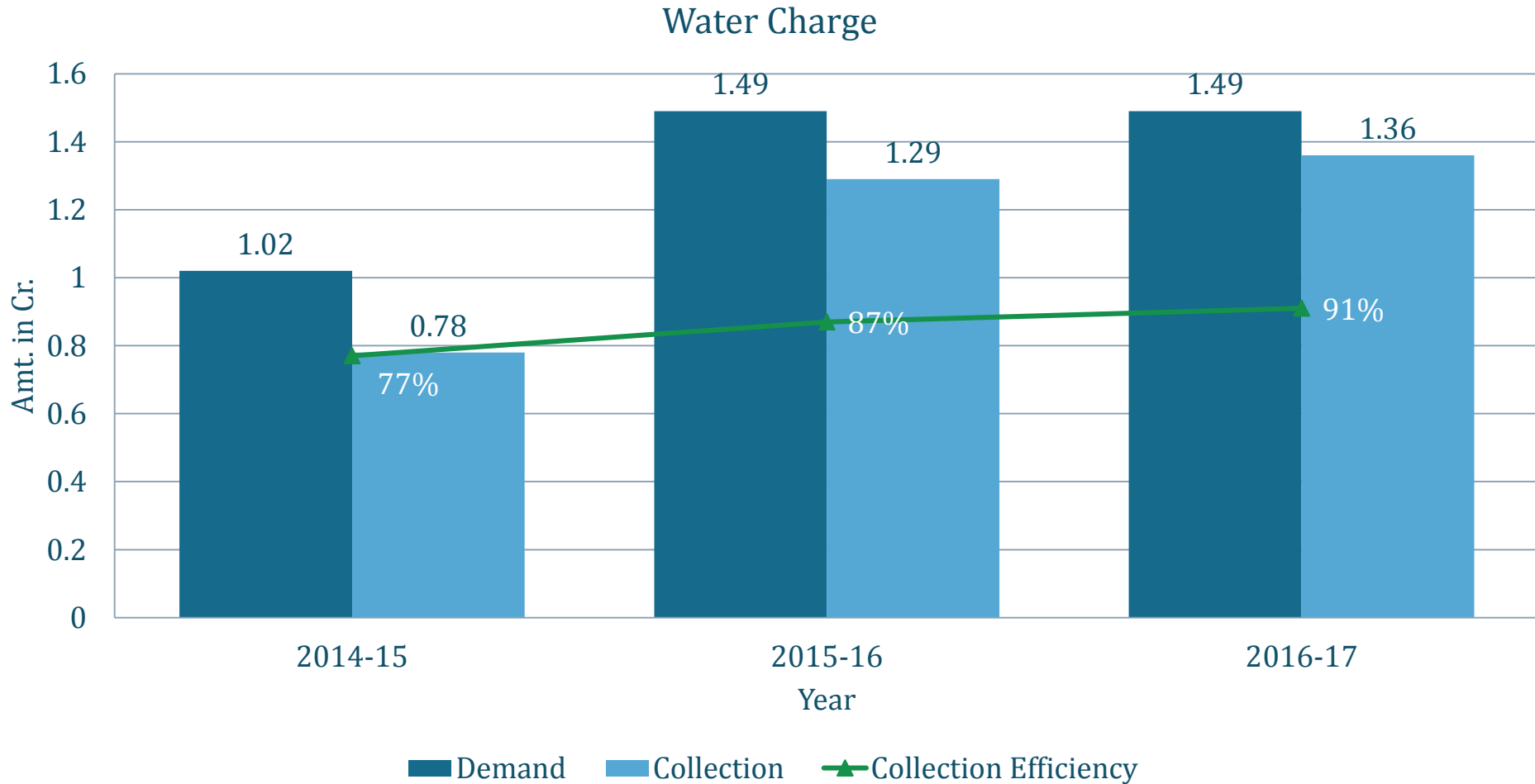
Demand & Collection of Property Tax

Property Tax Demand & Collection



The collection of property tax over the years is more or less same as 68 %. The council need to take measures to improve the collection efficiency of its property tax revenue. As it is the measure source of revenue for the council.

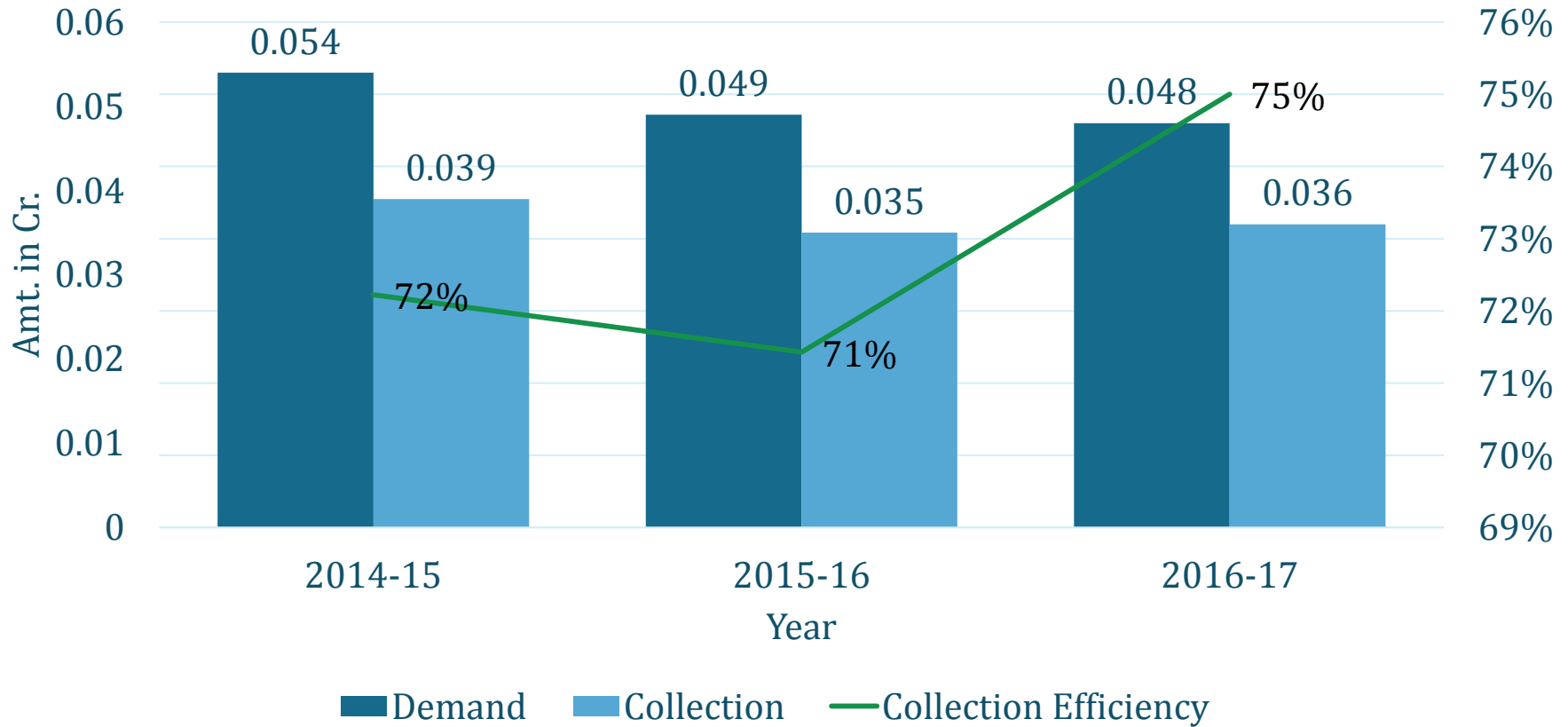
Demand & Collection of Water Charges



The demand for water is increasing and at the same time council is supplying quality water to consumers and consumers are willing to pay for the service provided by the council. The collection efficiency is also increasing steadily.

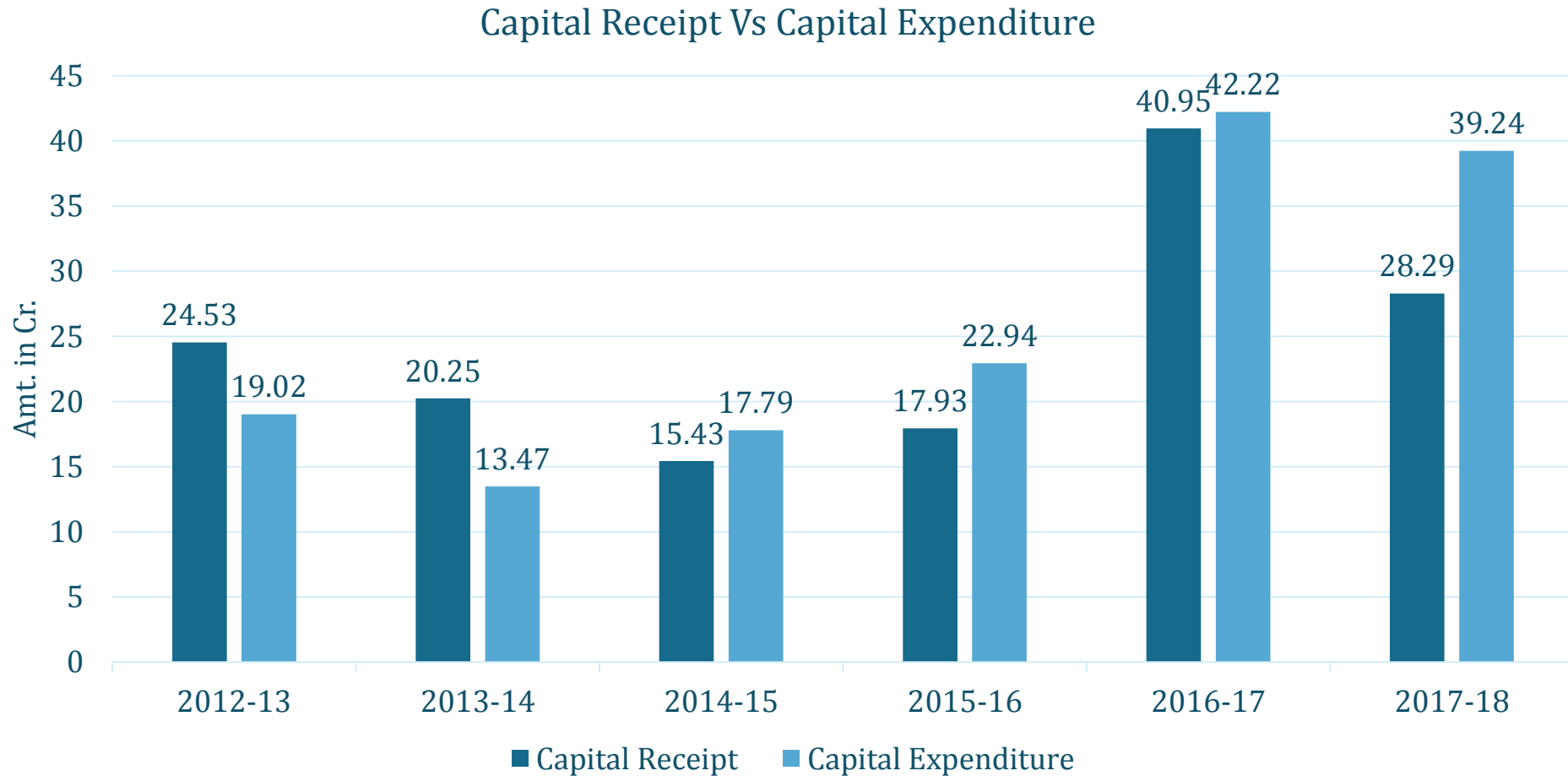
Demand & Collection of Swachhta Tax

Vishesh Swachhta Tax



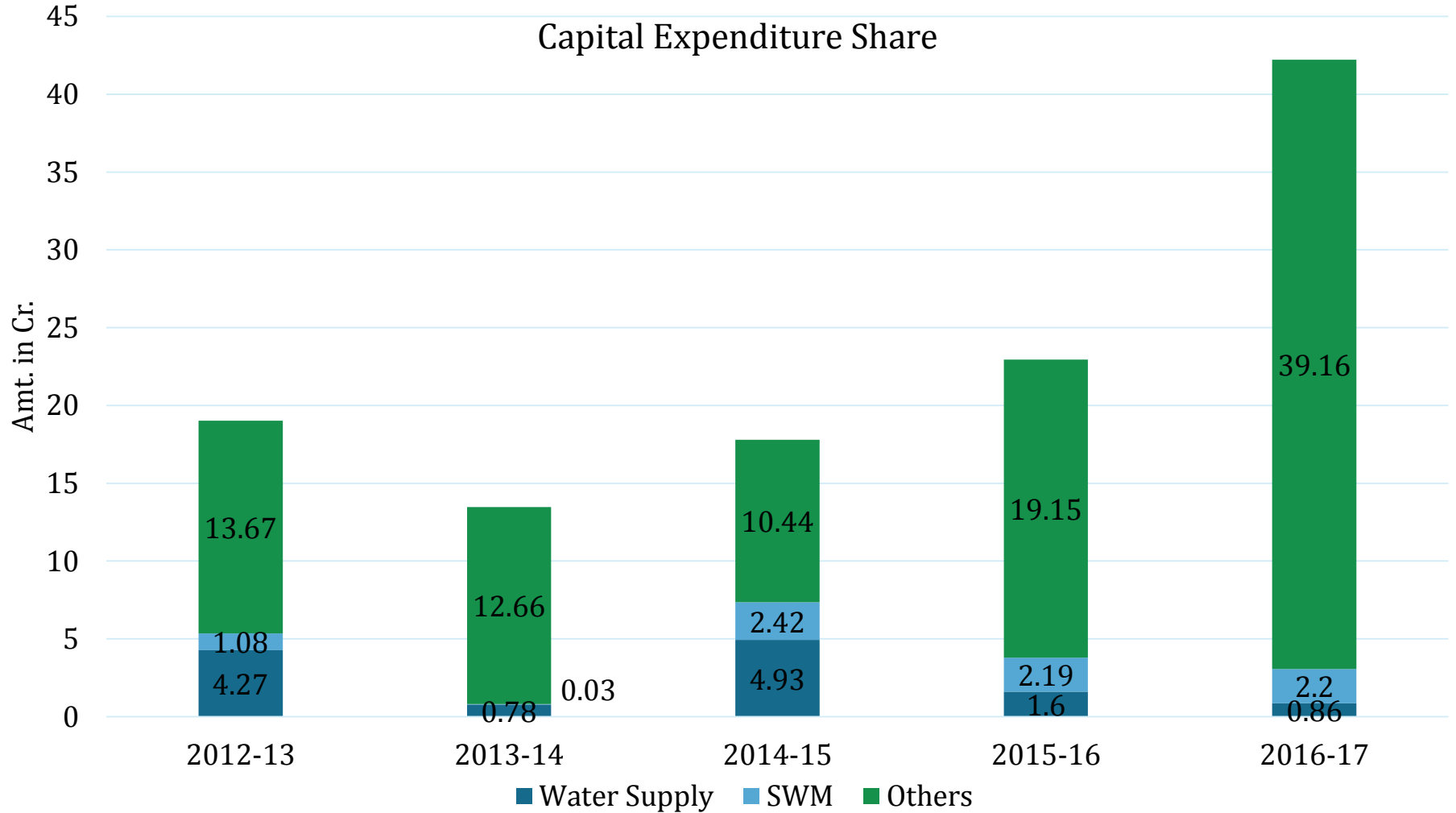
The Vishesh Swachhta tax, the base rate is one percent of the property tax i.e inclusive of property tax. The collection efficiency of the tax is on an average 75 % of the total demand.

Capital Receipts Vs Capital Expenditure



From the year 2014-15, the capital expenditure exceeds the capital receipts.

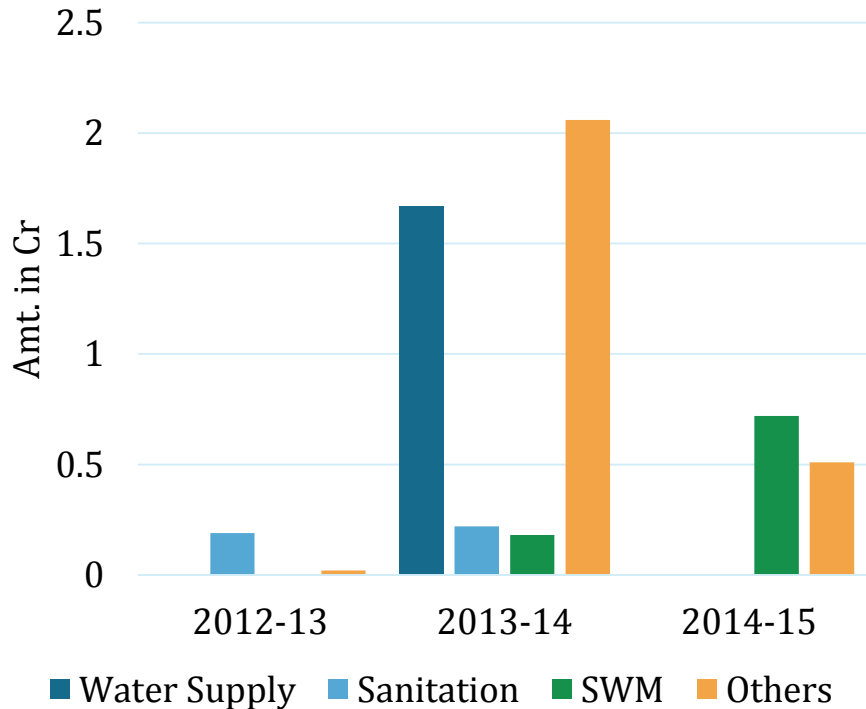
Capital expenditure Share



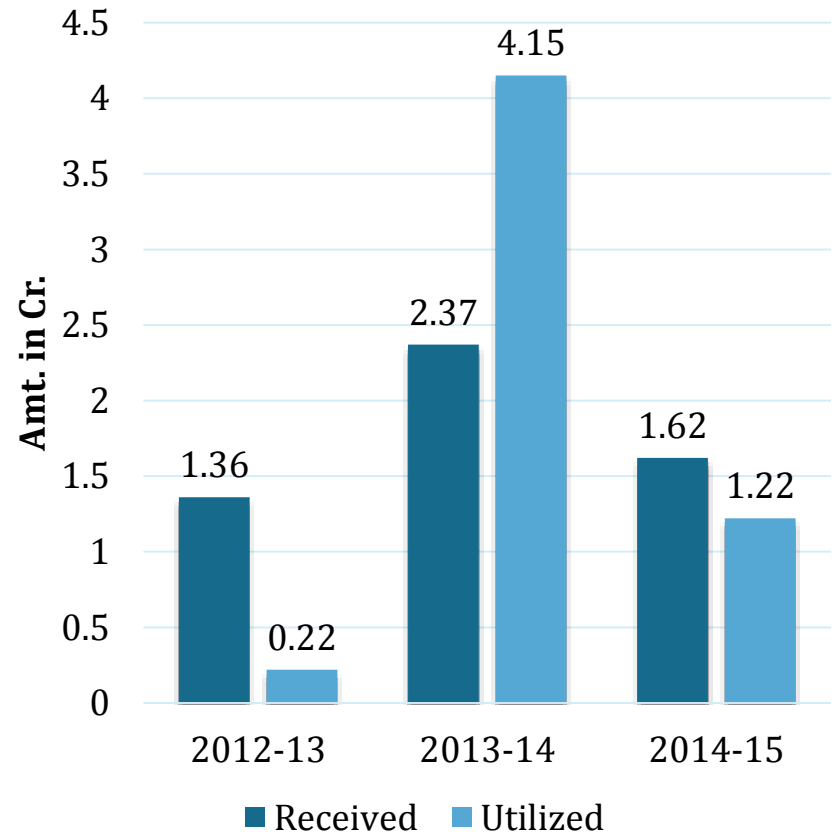
Major capital expenditure is spend on other sector projects (>70%). i.e. capital expenditure is on building new construction, road development, etc.

13th FC Funds Utilization

13th FC Fund Utilizaion



Receved Vs Utilized

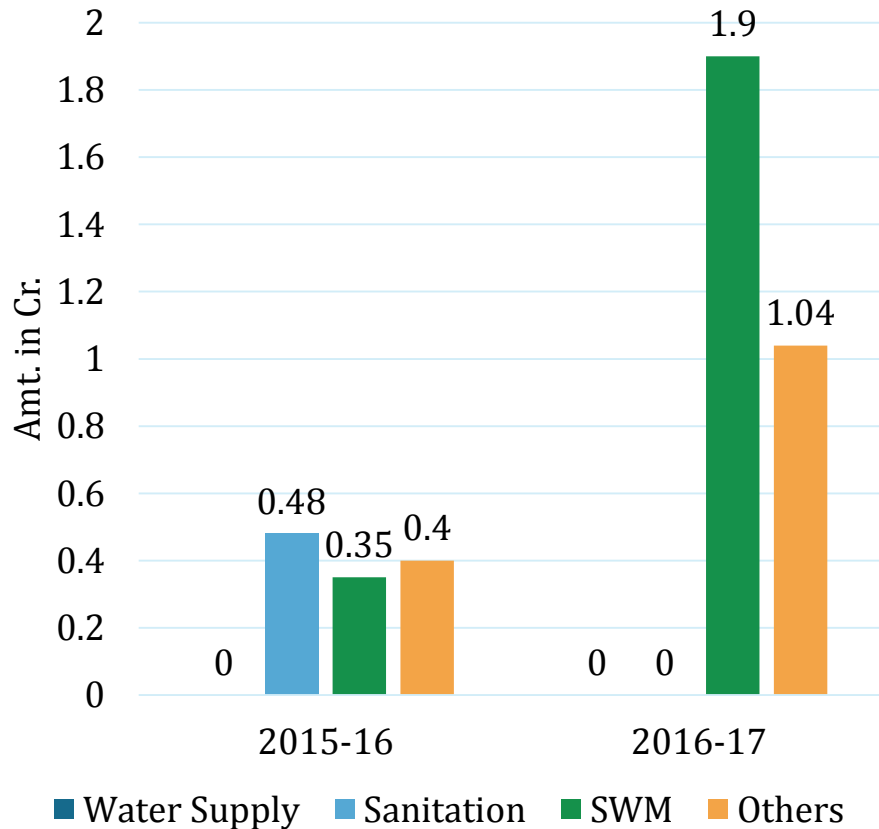


- The major capital used in the year 2013-14 is on water supply and other project works like fish market construction, Fire fighting building construction, employees outstanding amount payment.

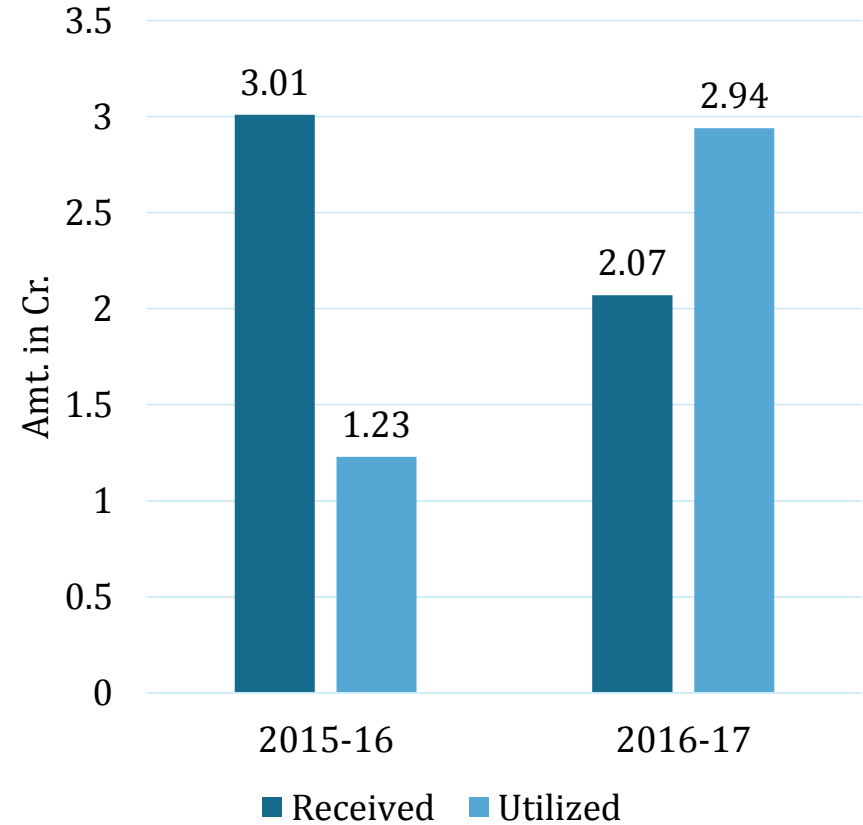
- Of the received fund in the year 2012-13 is utilized in the year 2013-14 for capital project.

14th FC Fund Utilization

14th FC Funds Utilization



Received Vs Utilized



- 14th FC funds in year 2015-16 is utilized for all sector uniformly except water supply. And for year 2016-17 more fund is utilized on SWM sector and on other sectors like road construction.

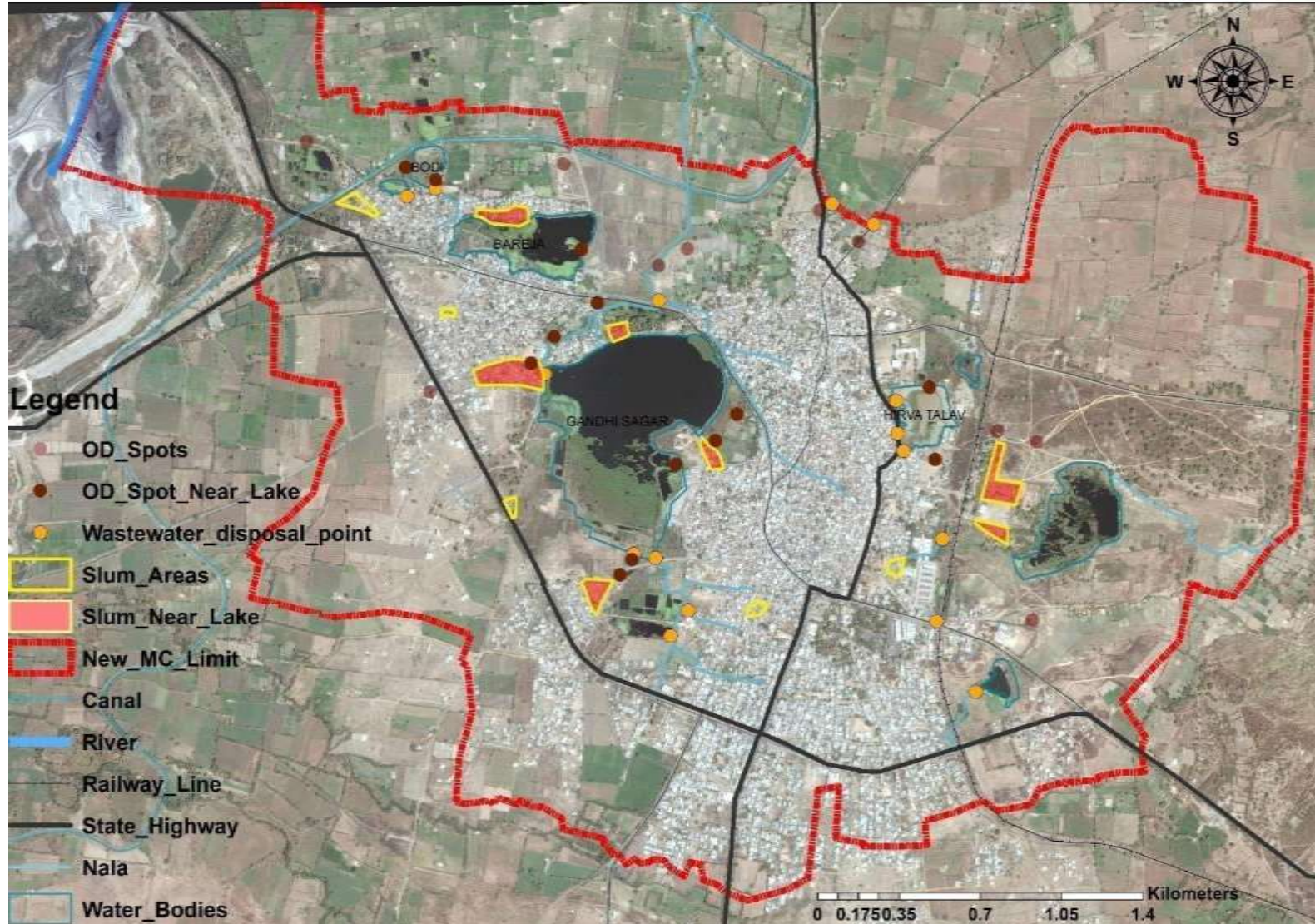
Municipal Finance

Demand-Collection Table for Various Taxes

Taxes	Rate (in Rs.)	Year	Demand (in Cr.)	Collection	
				Amount (in Cr.)	Efficiency in %
Property Tax	Charged per sq./ft. Based on the building typology and zone in which property is located	2016-17	1.96	1.49	76
		2015-16	1.96	1.47	75
		2014-15	2.06	1.35	65
Water Tax	1800 annually and for metered Rs.10/1000 litres for Residential)	2016-17	1.49	1.36	91
		2015-16	1.49	1.29	87
		2014-15	0.72	0.59	77
Swachhta Tax	1 % of Property Tax	2016-17	0.041	0.040	97
		2015-16	0.04	0.035	87
		2014-15	0.05	0.042	84

7. Summary of Challenges

Vulnerable areas in the city need special attention for safe access to sanitation



Slums located near lakes

- 7 slums
- Approx. 650 HHs
- 10 OD spots near the lakes.

Disposal of waste water into nallahs & lakes

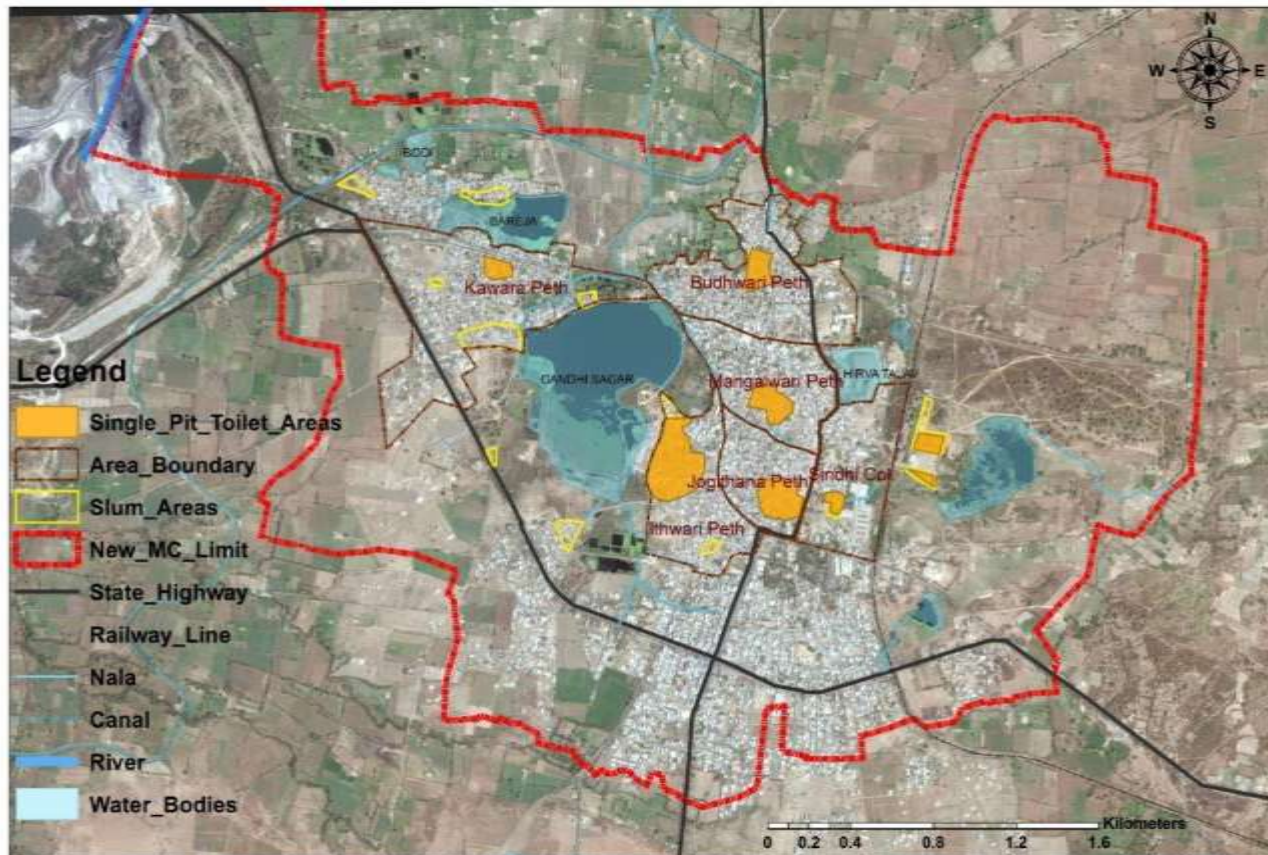
- Most of the waste water disposed in nallahs and lakes without any treatment

Summary of Challenges for Collection

Access → **Collection** → Conveyance → Treatment → Disposal / Reuse

Unimproved
Septic Tanks
& Single pit
Toilets

- 1 **Septic tanks not sealed at the bottom (filled with porous material to allow seepage)**
- 2 **Presence of Pit toilets of small sizes in peth areas**
- 3 **No information on location & number of such tanks**



- There are approx. 300 single pit toilets
- This single pit toilets are mainly located in the dense peth areas
- Some toilets mainly in Makalnagar slum have sealed the overflow pipe of the septic tank with porous material due to absence of drainage network.

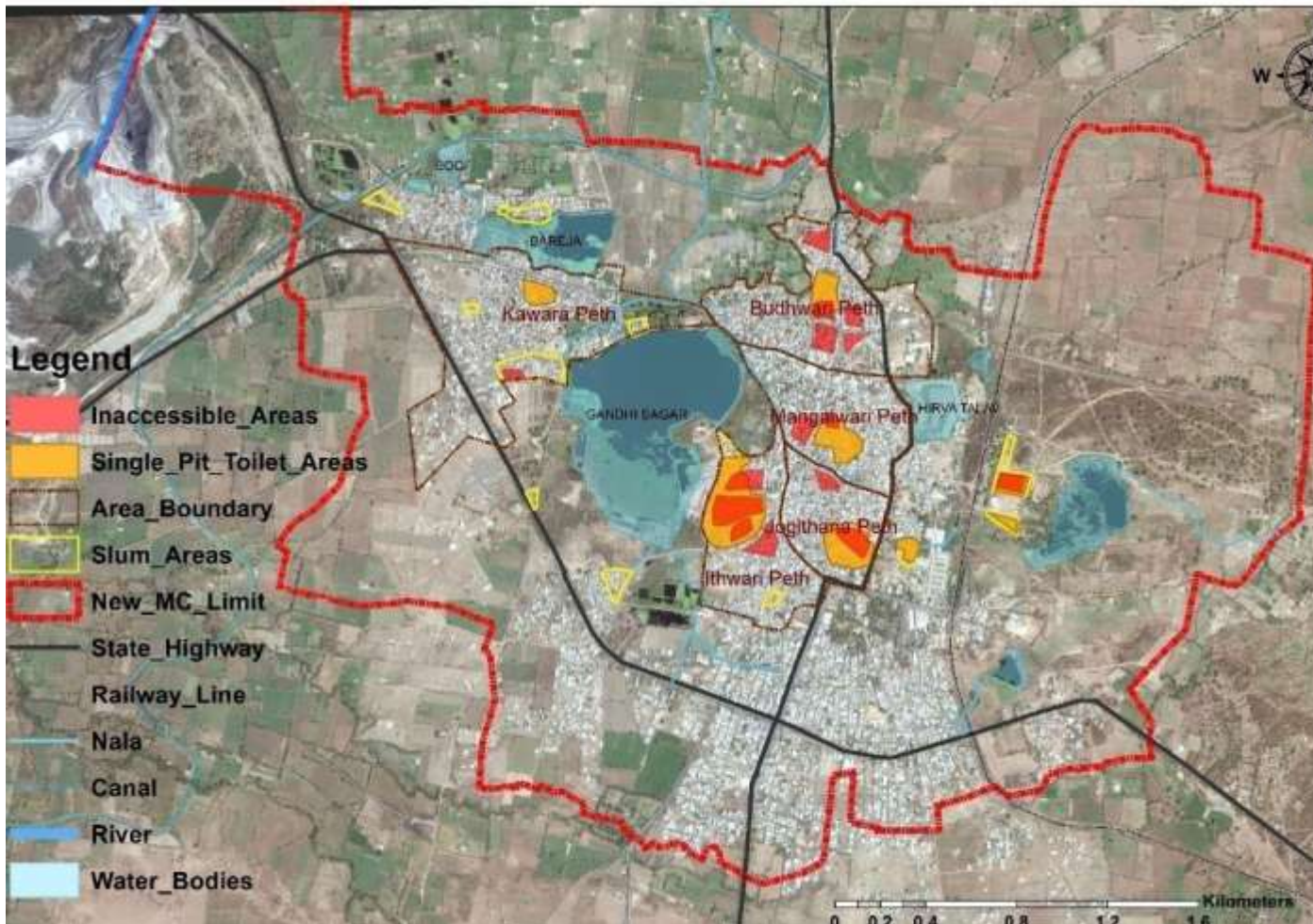
Summary of Challenges for Conveyance

Access → Collection → **Conveyance** → Treatment → Disposal / Reuse

Suction
Emptier
Trucks

① Only **5%** of septic tanks cleaned annually

② Some dense areas in the city face issue of accessibility for suction emptier trucks



- Cleaning cycle is approx. 5-8 years
- Emptying is only done when the tank is full
- There are approx. 1000 HHs that could have issue of inaccessibility
- Road width less than 2.5m have been considered as susceptible to inaccessibility

Summary of Challenges for Conveyance



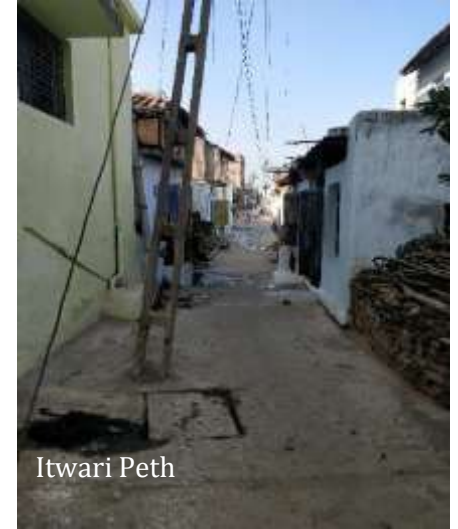
Kawara Peth



Budhwari Peth



Budhwari Peth



Itwari Peth



Jogithana Peth



Mangalwari



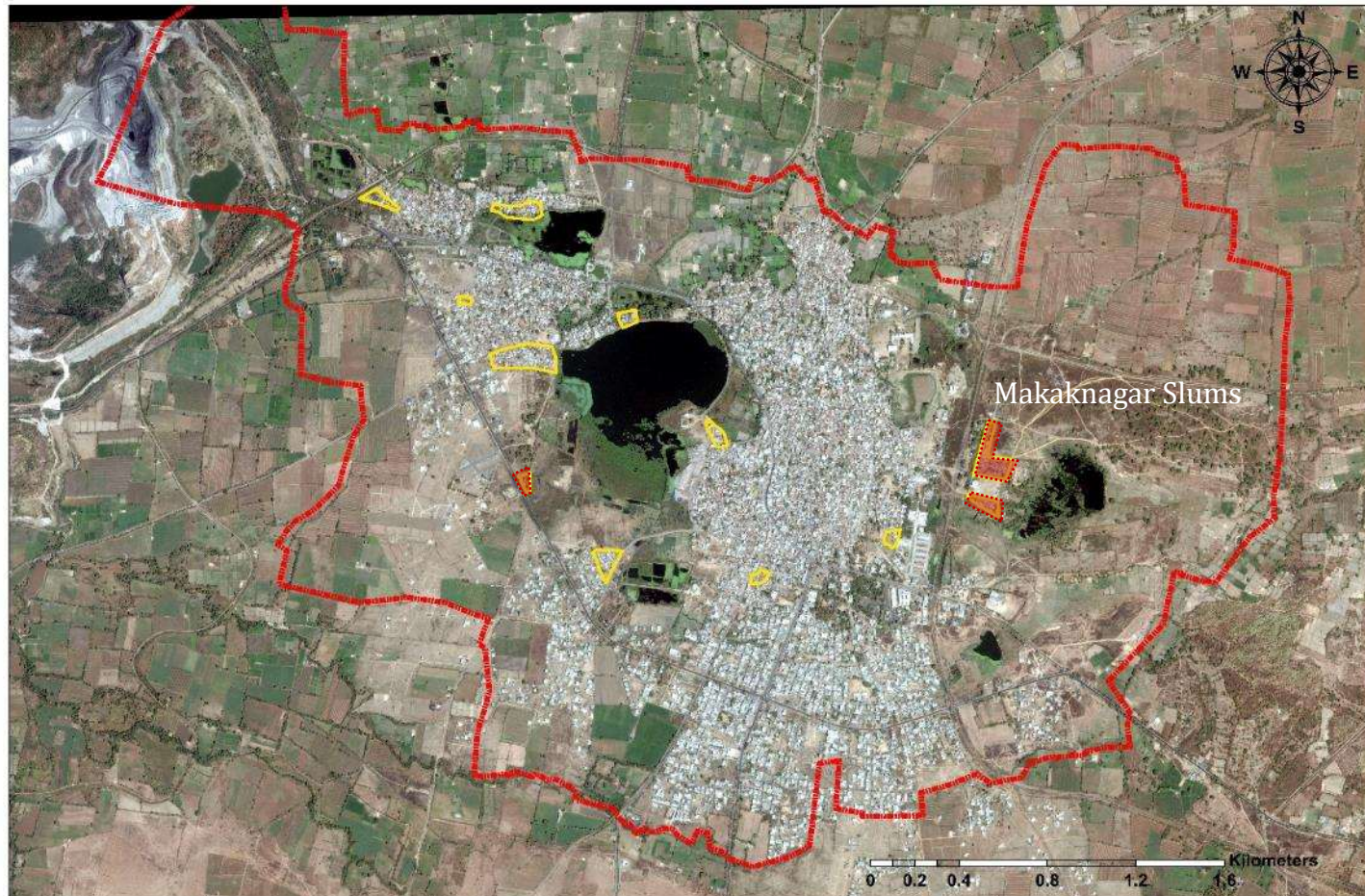
Mangalwari

Summary of Challenges for Conveyance

Access → Collection → **Conveyance** → Treatment → Disposal / Reuse

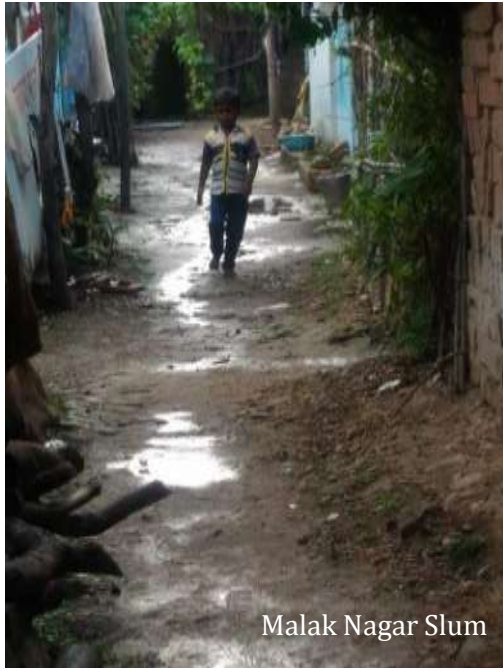
Absence of
Drains

① Some areas in the city to have access to drains



- Approx in total 160 HHs do not have access to drainage facility.
- Malaknagar and Amrai Bypass slum do have not drainage facility as this settlement is on private land or is encroachment.

Summary of Challenges for Conveyance



Malak Nagar Slum



Malak Nagar Slum



Malak Nagar Slum



Amboli Naka slum



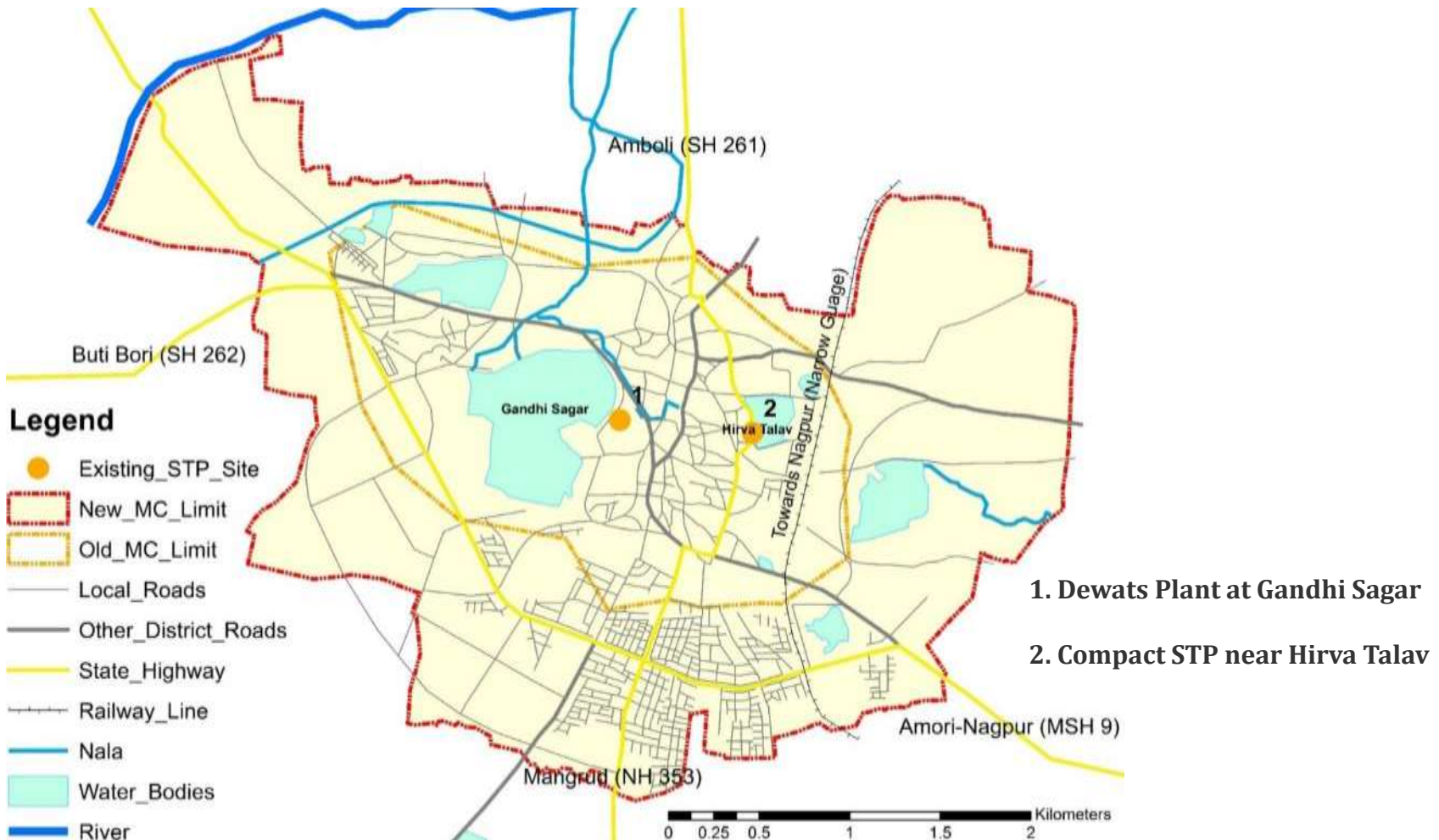
Malak Nagar Slum

Summary of Challenges for Treatment

Access → Collection → Conveyance → **Treatment** → Disposal / Reuse

No
treatment
facility

- 1 No facility for fecal sludge treatment for the whole city apart from 2 DEWATS plants



Summary of Challenges for Treatment

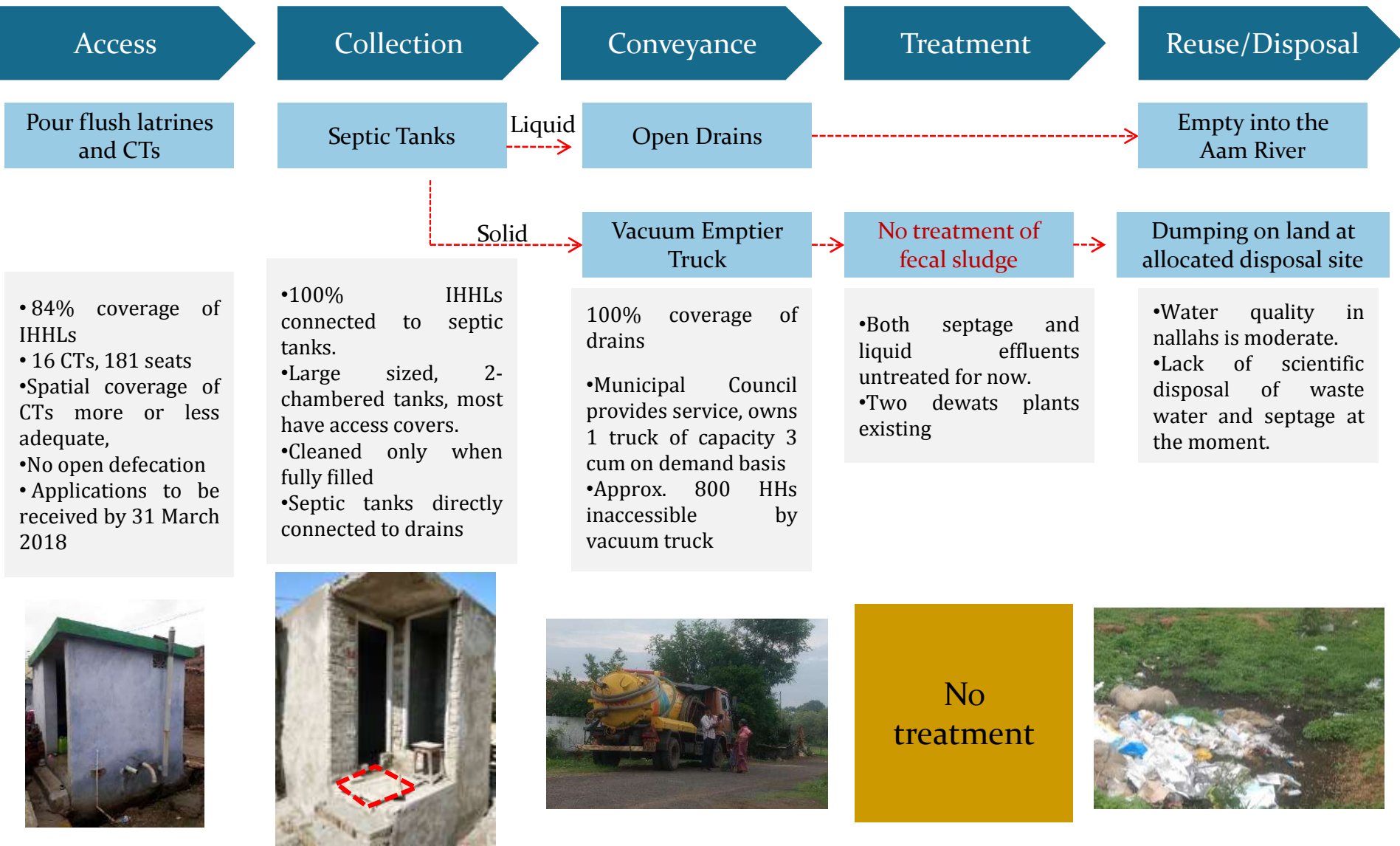
Access → Collection → Conveyance → Treatment → Disposal / Reuse

Disposed off on dumping site

1 Lack of scientific disposal of septage



Summary: Current Sanitation Service Chain in Umred



8. Proposal to move towards ODF+

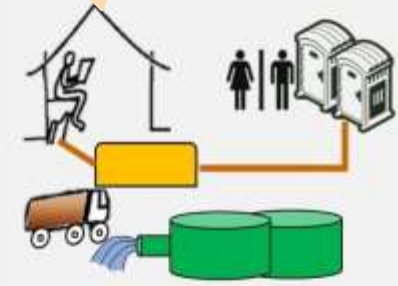
Concept of ODF, ODF+, ODF++ by GoM

Citywide
Septage Management
Plan

ODF



ODF+



ODF++



80% HHs have
access to
individual toilets
and rest
dependent on CTs



Why is Septage Management important !!!

**1 truck of Faecal Sludge and Septage
carelessly dumped
= 5,000 people shitting in the open!**

**1 Gram of Faeces may
contain:**

100 parasites eggs

1000 Protozoa

1,000,000 Bacteria

10,000,000 Virus

Recognition to Septage Management at National level . . .

- ❑ **National Policy** on **FSSM** by MoHUA, GoI
- ❑ **National declaration** on **Septage Management** by MoHUA, GoI
- ❑ One of the major **thrust areas** of **AMRUT**
- ❑ **Primer** on **septage Management** and **Rapid Assessment tool** for estimating **budget requirements** for **FSSM**
- ❑ **Septage Management Advisory** of Government of India provides references to CPHEEO guidelines, BIS standards, and other resources for preparing SMP / FSSM plan.



CEPT support for moving cities towards ODF+

Support for Onsite systems

- 1 For new toilets that are under construction: Ensuring suitable technology option

CEPT Support

- Dos and Don'ts Flyer
- Training to masons

Support in Planning & Technology selection for Emptying & Treatment

- 2 Regular desludging of septic tanks within the city limit and exploring possibility of desludging septic tanks outside city limit

CEPT Support

- Exploring scheduled v/s demand based desludging
- Deciding type & number of vacuum emptier
- Deciding the model of operation (ULB v/s Private)
- Support in development of contract for emptying (if required)
- Support in development of monitoring process / awareness programs

- 3 Suitable technology options for treatment of septage

CEPT Support

- Carrying out septage quality tests to assess quality of septage to be treated.
- Carrying out Ground /river water quality tests
- Identification of suitable treatment technology based on technical and financial assessment and requirement of the ULB
- Support in development of monitoring process
- Market assessment for byproducts /reuse

CEPT support for moving cities towards ODF+

Support for Onsite systems

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CEPT Support

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- Training to masons
- CT/PT Assessment

Support in Planning & Technology selection for Conveyance & Treatment

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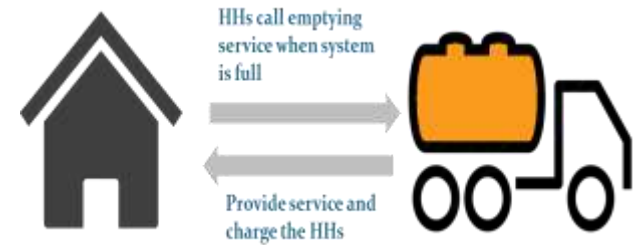
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- Market assessment for byproducts /reuse

Support for Conveyance Mechanism - Demand v/s Scheduled

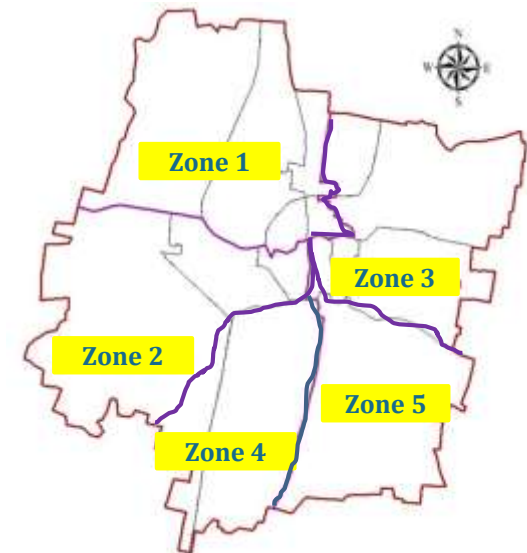
□ Current practice – Demand based emptying (Complaint redressal mode)

- Cleaning is done **on-call** by the **household** who **raises** a **complaint** regarding this with either the ULB or Private when the tank is full
- A **fee** is **charged** by the ULB or Private for provision of these services
- Leads to low toilet usage due to the fear of tanks filling up and high cost of emptying



□ Proposed practice – Scheduled based emptying (Regular service mode)

- Septic tanks are cleaned on a **pre-determined schedule**.
- Households / property owners pay a **local tax** and get this services on regular intervals
- Scheduled emptying is being used in **Wai, Sinnar, Malaysia, Vietnam and Indonesia**



From a **Consumer complaint system** to **Regular service** . . .

Benefits of Scheduled Emptying

- **Equitable services** - all households / properties are covered by services
- **Pricing** – Services are offered at lower prices, due to efficiency gains
- **Behavior change** - Contribution to ODF sustainability as toilet usage can increase
- **Eradicate Manual scavenging** - Removal of need for manual scavenging due to regular emptying
- **Infrastructure optimization** - More predictable loads for treatment facility and route optimization of trucks
- **Environmental benefits** - Likely reduction in BOD and coliform in septic tank effluent, as well as lower likelihood of septic tank overflows

Support in operationalizing emptying services . . .

City	Demand Desludging (Existing)		Scheduled Desludging (5 year cycle)	
	No. of tanks emptied at present	Number of trucks	No. of tanks to be emptied daily	Number of trucks required *
Umred	1-2 daily	1 – 3000 L 1 – 5000 L (Private)	7	2 trucks

Private sector is ready to invest for these trucks

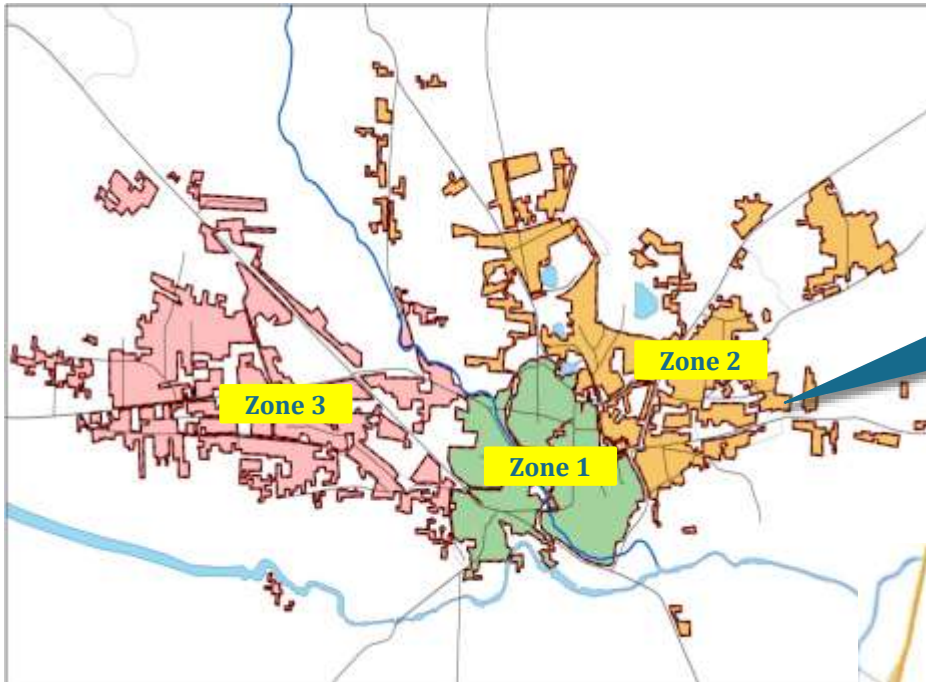
Support in

- Setting up **Monitoring mechanism** to monitor ULB / Private sector operations
- Support in **development of contract** for emptying (if required)
- **Awareness for regularly desludging** of septic tanks

Note : * - Truck sizes may range from 3000 – 5000 L based on road width and average size of septic tanks

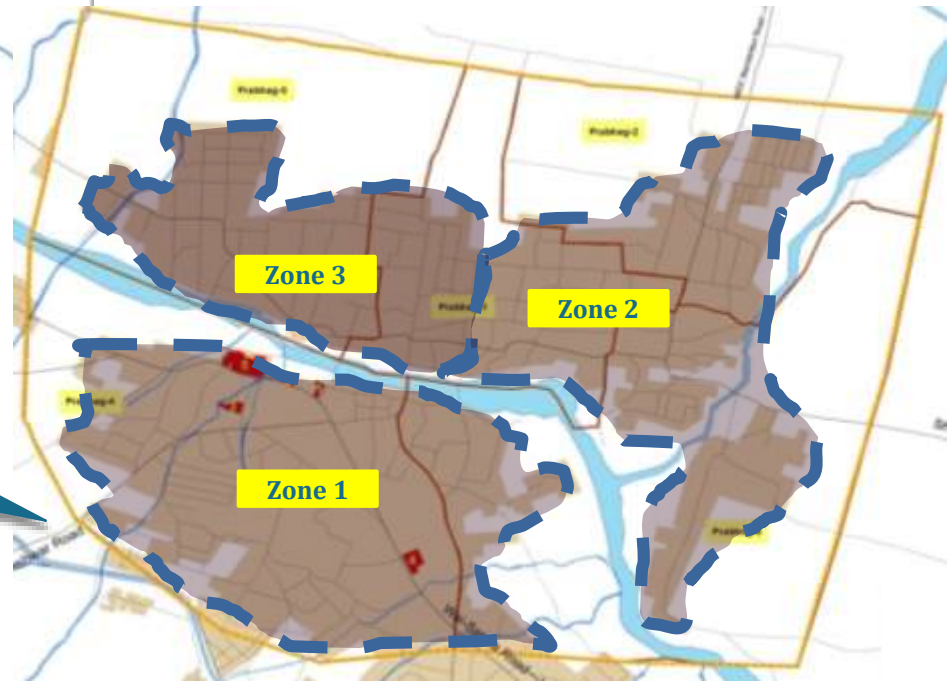
Example of Wai and Sinnar - Scheduled desludging services by involving private sector . . .

3 year cycle



3 trucks to desludge ~ 4000 septic tanks annually

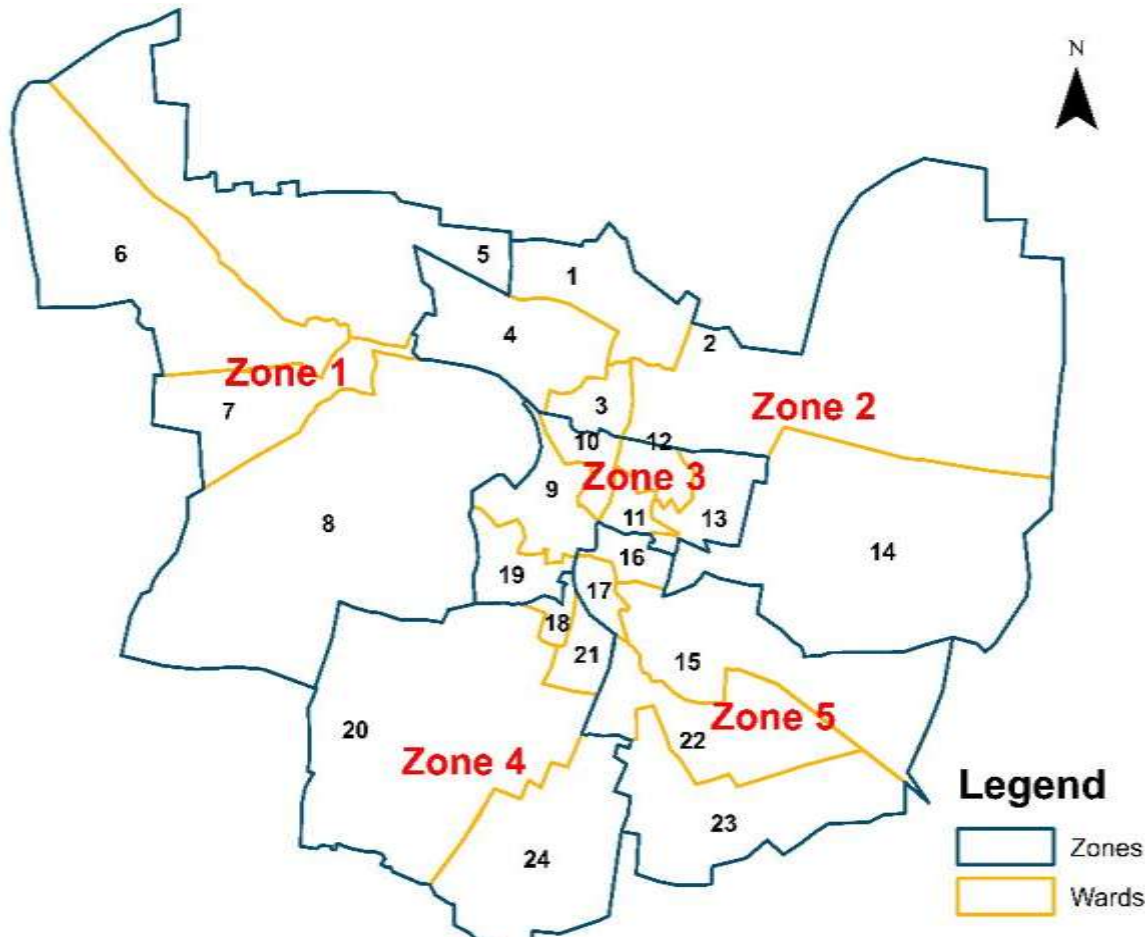
2 trucks to desludge ~ 2000 septic tanks annually



Emptying service – Scheduled emptying

Possible Zoning of the Town for Emptying of Septic Tanks

- ❑ The town could be divided into 5 zones for the septic tank desludging cycle. The septic tanks of each zone will be cleaned in turn every year during the **5 year cycle**.
- ❑ The zones have been divided based on the distribution of households. The zones have been approximately delineated.



Zones	Ward
I	5,6,7,8
II	1,2,3,4,14
III	9,10,11,12,13,19
IV	18,20,21,24
V	15,16,17,22,23

Approx. **2260 septic tanks of individual toilets** in the city needs to be cleaned annually.

CEPT support for moving cities towards ODF+

Support for Onsite systems

- 1 For new toilets that are under construction: Ensuring suitable technology option

CEPT Support

- Dos and Don'ts Flyer
- Training to masons
- CT/PT Assessment

Support in Planning & Technology selection for Emptying & Treatment

- 2 Regular desludging of septic tanks within the city limit and exploring possibility of desludging septic tanks outside city limit

CEPT Support

- Exploring scheduled v/s demand based desludging
- Deciding type & number of vacuum emptier
- Deciding the model of operation (ULB v/s Private)
- Support in development of contract for emptying (if required)
- Support in development of monitoring process / awareness programs

- 3 Suitable technology options for treatment of septage

CEPT Support

- Carrying out septage quality tests to assess quality of septage to be treated.
- Carrying out Ground /river water quality tests
- Identification of suitable treatment technology based on technical and financial assessment and requirement of the ULB
- Support in development of monitoring process
- Market assessment for byproducts /reuse

Support in selecting and operationalizing treatment systems ..

City	Demand Desludging	Scheduled Desludging
	Septage load cum/day	Septage load cum/day
Umred	16	70

Incremental Approach

Support in

- Identification of suitable septage treatment option
- Carrying out Wastewater quality tests
- Developing monitoring process
- Market assessment for by products /reuse

Need for **Incremental Approach** . . .

- Need to **start treating** the **existing septage** that is being dumped at dump site
 - ▣ Need to select **treatment technology** which is **modular** in approach



Incremental

- Need to move towards **scheduled desludging gradually**
 - ▣ Develop a **DPR**
 - ▣ Take **technical** and **administrative approvals**
 - ▣ Roll out **contracts** for **construction** and **O&M**

Septage Treatment

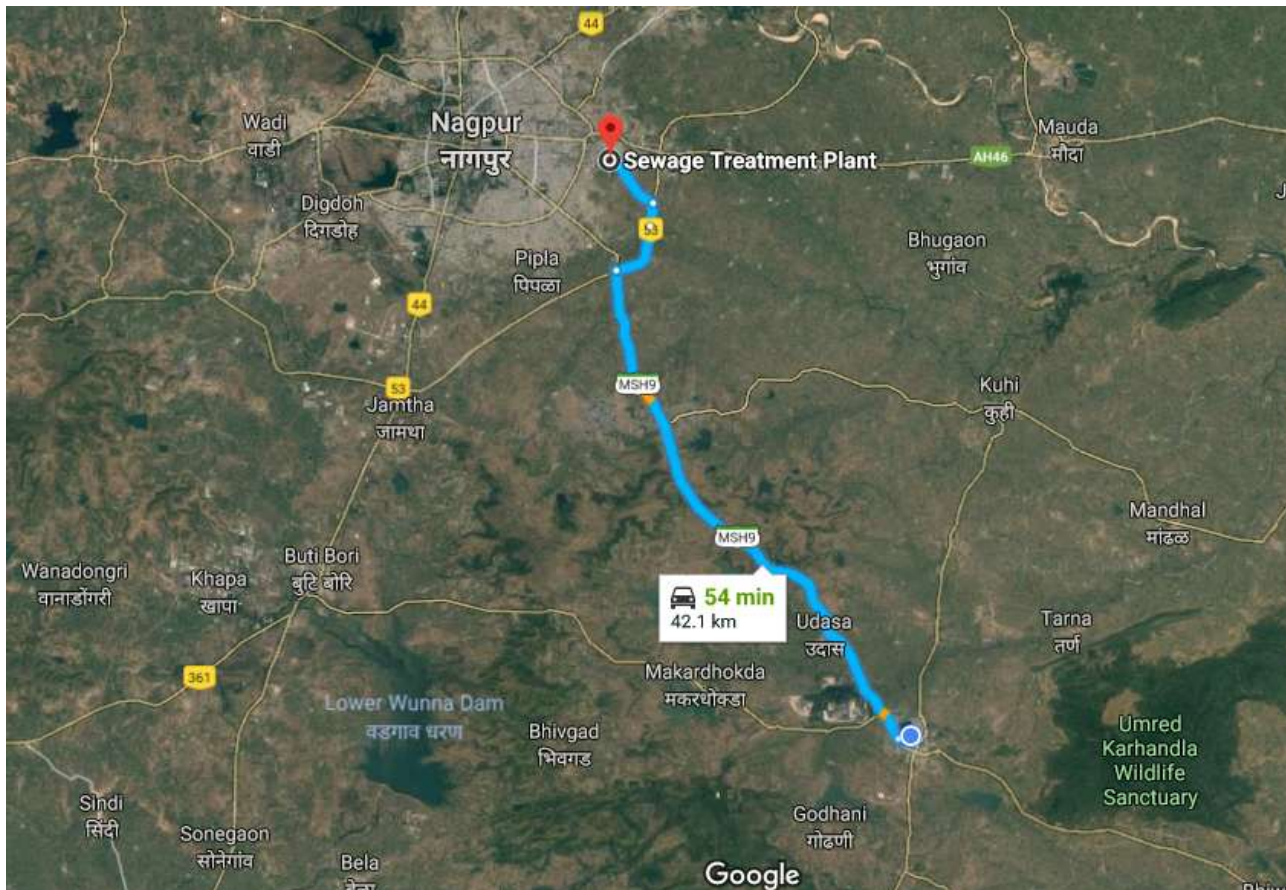
Options for cities without STP

- a. Co-treatment at nearby STP ✓
- b. Co-treatment with SWM treatment facility
- c. Cluster based FSTP
- d. Independent FSTP ✓

Options for Umred

Treatment Options for FSSM Services

Scenario 1: Co -Treatment at STP in Nagpur



Location of STP at Nagpur:
Approx 45 Km

Installed Capacity of the STP:
230 MLD

Volume of wastewater actually
treated : **110** MLD

Septage would be only
0.015%: If demand based
0.064 % : If Scheduled based
of total wastewater currently
received at Nagpur STP

This is within prescribed range
of 1-2%

(Described in Manas co-treatment note as "Some research shows that as long as septage is less than 1-2% of the total wastewater, it can be safely treated by the STP")

Technology Options for FSSM Services- Emptying & Treatment

Scenario 1: Co -Treatment at STP in Nagpur

Factors for consideration:

1. **Septage input into the STP:**

- Nearest manhole upstream of the STP for dilution of the septage.
- At the upstream of the screening and grit removal processes at the STP
- Septage addition to sludge digesters/sludge drying beds.

2. **Procurement of land** for construction of a **transfer station**

3. **Decision** on whether **Scheduled** emptying V/S **Demand** based emptying

4. **Cost Assessment** regarding feasibility in terms of **number of trucks** to be purchased, **number of trips** to the STP V/S **Independent FSTP**

5. **Agreement** with **Nagpur Corporation** regarding quantity of septage that could be discharged, location of input, upcoming STPs etc

6. Identifying **private operators** for **transferring septage** from Transfer station to STP

Cost Assessment of Co-Treatment and Independent FSTP

Scenario 1: Co -Treatment at STP in Nagpur

Scheduled emptying 70 cum/day	Scheduled Emptying (70 cum/day; 5 year cleaning cycle)		
	Capital cost	63,00,000	Rs.
O&M cost	15,00,000	Rs./year	
Total cost (Capex+Opex) (Considering 5 year lifecycle)		146	Rs. in lakhs

Demand emptying 16 cum/day	Demand Emptying (16 cum/day)		
	Capital cost	40,00,000	Rs.
O&M cost	10,00,000	Rs./year	
Total cost (Capex+Opex) (Considering 5 year lifecycle)		96	Rs. in lakhs

Scenario 2 : Independent FSTP - UASB/MBBR/SBR*

FSTP cost (70 cum/day; 5 year schedule cleaning)			
Capital Cost	1,60,00,000	Rs.	
O&M cost	8,00,000	Rs./year	
Total cost (Capex+Opex) (Considering 5 year lifecycle)		204	Rs. in lakhs

Note: Cost of FSTP is based on Sinnar quotation for 70 cum plant

FSTP cost (16 cum/day; 5 year demand based cleaning)			
Capital Cost*	48,00,000	Rs.	
O&M cost (assuming 5% of capex cost)	2,00,000	Rs./year	
Total cost (Capex+Opex) (Considering 5 year lifecycle)		59	Rs. in lakhs

Note: Assuming 0.03 cr per Cum cost of FSTP; based on the per cum cost of Sinnar FSTP

- **Co-treatment at STP** option seems to be an **economical option** for scheduled emptying for five years and may be viable till 10 years of operations.
- For co-treatment option at Nagpur STP, the city has to **initially invest in CapEx** for the **transfer station** and procure **bigger suction trucks** although role of private sector could be explored.

Note: Cost of FSTP is based on Sinnar quotation for 70 cum plant)

* Land cost is not considered

How do we finance FSSM Services??

Capital costs can be financed through . . .

GoM resolution on use of 50% of funds for SBM and sanitation activities

१४ व्या केंद्रीय वित्त आयोगाच्या शिफारशीनुसार राज्यातील नागरी स्थानिक स्वराज्य संस्थांना प्राप्त होणाऱ्या मुलभूत अनुदानातून स्वच्छ महाराष्ट्र अभियानावर करावयाच्या खर्चाच्या कार्यपध्दतीबाबत.

महाराष्ट्र शासन
नगर विकास विभाग
शासन परिपत्रक क्रमांक: स्वमाअ-२०१७/प्र.क्र. ४५/नवि-३४,
हुतात्मा राजगुरु चौक, मादान कामा मार्ग
४ था मजला, मंत्रालय, मुंबई
दिनांक : २९ एप्रिल, २०१७

वाचा :

- (१) शासन निर्णय , नगर विकास विभाग, क्रमांक स्वमाअ २०१५/ प्र.क्र.२३/नवि-३४, दिनांक १५ मे, २०१५.
- (२) शासन निर्णय , नगर विकास विभाग, क्रमांक टिएफसी-८०१५/ प्र.क्र.१०६/नवि-०४, दिनांक ३ ऑगस्ट, २०१५.

शासन परिपत्रक :

१४ व्या वित्त आयोगाच्या शिफारशीनुसार राज्यातील नागरी स्थानिक स्वराज्य संस्थांना प्राप्त होणाऱ्या मुलभूत अनुदानातून किमान ५० टक्के एवढा निधी स्वच्छ महाराष्ट्र अभियानातील बाबींवर खर्च करण्याचे संदर्भाय क्रमांक २ येथील दिनांक ३ ऑगस्ट, २०१५ च्या शासन निर्णयाच्या बंधनकारक करण्यात आले असून, सदर शासन निर्णयातील परिच्छेद १ (१) (१) मध्ये नमूद करण्यात आलेली कामे या निधीमधून करण्यास मुभा देण्यात आलेली आहे.

२. या संदर्भात शासनाच्या असे निदर्शनास आले आहे की, काही शहरांमध्ये घनकचऱ्याचे संकलन व वाहतूक करून त्यावर प्रक्रीया न करता तो डंपिंग ग्राऊंडवर डंप करण्याचे काम कंत्राटीपध्दतीने (Outsource) करण्यासाठी १४ व्या वित्त आयोगाचा निधीचा वापर करण्यात येत आहे. तसेच, काही शहरांमधील घनकचऱ्याचे संकलन व वाहतूक करण्यासाठी वाहने खरेदी करण्याकरीता हा निधी वापरण्यात येत आहे.

३. केंद्र शासनाच्या स्वच्छ भारत अभियानाच्या धर्तीवर राज्यामध्ये स्वच्छ महाराष्ट्र अभियानाची अंमलबजावणी सुरु आहे. या अभियानांतर्गत घनकचरा व्यवस्थापन नियम, २०१६ अंतर्गत कार्यवाही करून शहरे "स्वच्छ" करणे हा महत्वाचा घटक आहे. त्यानुसार, राज्यातील प्रत्येक नागरी स्थानिक स्वराज्य संस्थांनी त्यांच्या शहरात निर्माण होणारा १००% कचरा निर्मितीच्या जागीच वेगवेगळा (ओला कचरा, सुका कचरा व घरगुती घातक कचरा) करून घेवून स्वतंत्रपणे संकलित करणे, या संकलित केलेल्या (ओला कचरा, सुका कचरा व घरगुती घातक कचरा) १००% कचऱ्याची वाहतूक करणे, ओल्या कचऱ्यावर केंद्रीय अथवा विकेंद्रित पध्दतीने जागीच प्रक्रीया

GoM resolution asking city to move towards ODF+ and to utilize incentive grant and 14th FC funds for ODF+ activities

स्वच्छ महाराष्ट्र अभियान (नागरी) अंतर्गत शहरांनी हागणदारी मुक्तता दर्जा प्राप्त करून घ्यावा या दिशेने प्रोत्साहन देण्याबाबत.

महाराष्ट्र शासन
नगर विकास विभाग
शासन परिपत्रक क्रमांक: स्वमाअ-२०१७/प्र.क्र.२३/नवि-३४
शाहीद बंगलसिंग चौक, मादान कामा मार्ग,
मंत्रालय, मुंबई - ४०० ०३२.
दिनांक : १७ मार्च, २०१७

वाचा -

शासन निर्णय क्र. नगर विकास विभाग, स्वमाअ-२०१५/प्र.क्र.२३/नवि-३४, दि.१५ मे २०१५.

शासन जावेदना -

केंद्र शासनाच्या "स्वच्छ भारत अभियान (नागरी)" च्या धर्तीवर दिनांक १५ मे, २०१५ च्या शासन निर्णयान्वये राज्यामध्ये "स्वच्छ महाराष्ट्र अभियान (नागरी)" ची अंमलबजावणी सुरु झाली आहे. या अभियानांतर्गत शहरे "हागणदारी मुक्त" करणे व घनकचरा व्यवस्थापनांतर्गत "स्वच्छ" करणे या दोन प्रमुख बाबींचा समावेश आहे.

२. या अभियानांतर्गत शहरांमधील ज्या कुटुंबांकडे शौचालयाची सुविधा उपलब्ध नसल्याने जी कुटुंबे उपचक्रावर शौचास जातात, अशा कुटुंबांना वैयक्तिक घरगुती शौचालय (H-M-L) अथवा सामुदायीक शौचालयाची (C) सुविधा उपलब्ध करून देवून शहरे हागणदारी मुक्त करण्यात येत आहेत.

३. राज्यातील सार्वजनिक शौचालय वापरणाऱ्या कुटुंबांची संख्या (२५६) देशफाटकीवरील सार्वजनिक शौचालय वापरणाऱ्या कुटुंबांच्या संख्येच्या सरासरीपेक्षा जास्त आहे. या अभियानांतर्गत शहरे हागणदारी मुक्त झाल्यानंतर हागणदारी मुक्त शहराचा दर्जा प्राप्त करून घ्यावा या दिशेने प्रोत्साहन देण्यासाठी (ODF Sustainability) जास्त जास्त कुटुंबांना वैयक्तिक घरगुती शौचालयाची सुविधा उपलब्ध करून देणे आवश्यक आहे. तसेच शहरांमध्ये वाढत्या शौचालयांच्या सैद्धांतिक टॉक मधील मैला व्यवस्थापन करणे आवश्यक आहे.

४. हागणदारी मुक्त शहर (ODF) व ODF+ तसेच ODF++ शहरांचे निकष पुढील प्रमाणे आहेत :-

	निकष १	निकष २	निकष ३
ODF शहरे	शहराच्या कुठल्याही वेळेत शहराच्या कुठल्याच भागात एकाही व्यक्तीने उपचक्रावर शौचास बसल्याचे आढळून न येणे, तसेच शहराच्या कुठेही उपचक्रावर मानवी विषेधे पुरावे न दिसणे	प्रत्येक कुटुंबाचा, संस्थेचा व इतर सर्व प्रकारच्या मातृमतांना शौचालयांची उपलब्धता असावी. (स्वतःची अथवा गट शौचालये / सार्वजनिक शौचालये)	शहरातील सर्व शौचालये सुरक्षित मैला संकलन व विल्हेवाट प्रणालीस जोडलेली असावी.

Capital costs can be financed through . . .

GoM resolution on use of 50% of funds for SBM and sanitation activities

१४ व्या केंद्रीय वित्त आयोगाच्या शिफारशीनुसार राज्यातील नागरी स्थानिक स्वराज्य संस्थांना प्राप्त होणाऱ्या मुलभूत अनुदानातून स्वच्छ महाराष्ट्र अभियानावर करावयाच्या खर्चाच्या कार्यपध्दतीबाबत.

महाराष्ट्र शासन
नगर विकास विभाग
शासन परिपत्रक क्रमांक: स्वमाअ-२०१७/प्र.क्र. ४१/नवि-३४,
हुतात्मा राजगुरु चौक, मादान कामा मार्ग
४ था मजला, मंत्रालय, मुंबई
दिनांक : २९ एप्रिल, २०१७

वाचा :

- (१) शासन निर्णय , नगर विकास विभाग, क्रमांक स्वमाअ २०१५/ प्र.क्र.२३/नवि-३४, दिनांक १५ मे, २०१५.
- (२) शासन निर्णय , नगर विकास विभाग, क्रमांक टिएफसी-८०१५/ प्र.क्र.१०६/नवि-०४, दिनांक ३ ऑगस्ट, २०१५.

शासन परिपत्रक :

१४ व्या वित्त आयोगाच्या शिफारशीनुसार राज्यातील नागरी स्थानिक स्वराज्य संस्थांना प्राप्त होणाऱ्या मुलभूत अनुदानातून किमान ५० टक्के एवढा निधी स्वच्छ महाराष्ट्र अभियानातील बाबींवर खर्च करण्याचे संदर्भाय क्रमांक २ येथील दिनांक ३ ऑगस्ट, २०१५ च्या शासन निर्णयान्वये बंधनकारक करण्यात आले असून, सदर शासन निर्णयातील परिच्छेद १ (१) (१) मध्ये नमूद करण्यात आलेली कामे या निधीमधून करण्यास मुभा देण्यात आलेली आहे.

२. या संदर्भात शासनाच्या असे निदर्शनास आले आहे की, काही शहरांमध्ये घनकचऱ्याचे संकलन व वाहतूक करून त्यावर प्रक्रीया न करता तो डंपिंग ग्राऊंडवर डंप करण्याचे काम कंत्राटीपध्दतीने (Outsource) करण्यासाठी १४ व्या वित्त आयोगाचा निधीचा वापर करण्यात येत आहे. तसेच, काही शहरांमधील घनकचऱ्याचे संकलन व वाहतूक करण्यासाठी वाहने खरेदी करण्याकरीता हा निधी वापरण्यात येत आहे.

३. केंद्र शासनाच्या स्वच्छ भारत अभियानाच्या धर्तीवर राज्यामध्ये स्वच्छ महाराष्ट्र अभियानाची अंमलबजावणी सुरु आहे. या अभियानांतर्गत घनकचरा व्यवस्थापन नियम, २०१६ अंतर्गत कार्यवाही करून शहरे "स्वच्छ" करणे हा महत्वाचा घटक आहे. त्यानुसार, राज्यातील प्रत्येक नागरी स्थानिक स्वराज्य संस्थांनी त्यांच्या शहरात निर्माण होणारा १००% कचरा निर्मितीच्या जागीच वेगवेगळा (ओला कचरा, सुका कचरा व घरगुती घातक कचरा) करून घेवून स्वतंत्रपणे संकलित करणे, या संकलित केलेल्या (ओला कचरा, सुका कचरा व घरगुती घातक कचरा) १००% कचऱ्याची वाहतूक करणे, ओल्या कचऱ्यावर केंद्रीय अथवा विकेंद्रित पध्दतीने जागीच प्रक्रीया

GoM resolution asking city to move towards ODF+ and to utilize incentive grant and 14th FC funds for ODF+ activities

स्वच्छ महाराष्ट्र अभियान (नागरी) अंतर्गत शहरांनी हागणदारी मुक्तता दर्जा प्राप्त करून देण्याबाबत.

महाराष्ट्र शासन
नगर विकास विभाग
शासन परिपत्रक क्रमांक: स्वमाअ-२०१७/प्र.क्र.२३/नवि-३४
शाहीद बंगलसिंग चौक, मादान कामा मार्ग,
मंत्रालय, मुंबई - ४०० ०३२.
दिनांक : १७ मार्च, २०१७

वाचा -

शासन निर्णय क्र. नगर विकास विभाग, स्वमाअ-२०१५/प्र.क्र.२३/नवि-३४, दि.१५ मे २०१५.

शासन जादेश -

केंद्र शासनाच्या "स्वच्छ भारत अभियान (नागरी)" च्या धर्तीवर दिनांक १५ मे, २०१५ च्या शासन निर्णयान्वये राज्यामध्ये "स्वच्छ महाराष्ट्र अभियान (नागरी)" ची अंमलबजावणी सुरु झाली आहे. या अभियानांतर्गत शहरे "हागणदारी मुक्त" करणे व घनकचरा व्यवस्थापनांतर्गत "स्वच्छ" करणे या दोन प्रमुख बाबींचा समावेश आहे.

२. या अभियानांतर्गत शहरांमधील ज्या कुटुंबांकडे शौचालयाची सुविधा उपलब्ध नसल्याने जी कुटुंबे उपग्रहवापर शौचास जातात, अशा कुटुंबांना वैयक्तिक घरगुती शौचालय (H-M-L) अथवा सामुदायीक शौचालयाची (C) सुविधा उपलब्ध करून देवून शहरे हागणदारी मुक्त करण्यात येत आहेत.

३. राज्यातील सार्वजनिक शौचालय वापरणाऱ्या कुटुंबांची संख्या (२५६) देशफाटकीरील सार्वजनिक शौचालय वापरणाऱ्या कुटुंबांच्या संख्येच्या सरासरीपेक्षा जास्त आहे. या अभियानांतर्गत शहरे हागणदारी मुक्त झाल्यानंतर हागणदारी मुक्त शहराचा दर्जा प्राप्त करून देण्या टिकविण्यासाठी (ODF Sustainability) जास्त जास्त कुटुंबांना वैयक्तिक घरगुती शौचालयाची सुविधा उपलब्ध करून देणे आवश्यक आहे. तसेच शहरांमध्ये वाढत्या शौचालयांच्या सेटीक टँक मधील मैला व्यवस्थापन करणे आवश्यक आहे.

४. हागणदारी मुक्त शहर (ODF) व ODF+ तसेच ODF++ शहरांचे निकष पुढील प्रमाणे आहेत :-

	निकष १	निकष २	निकष ३
ODF शहरे	शहराच्या कुठल्याही वेळेत शहराच्या कुठल्याच भागात एकाही व्यक्तीने उपग्रहवापर शौचास बसल्याचे आढळून न येणे, तसेच शहरांमध्ये कुठेही उपग्रहवापर मानवी विषेधे पुरावे न दिसणे	प्रत्येक कुटुंबास, संस्थेस व इतर सर्व प्रकारच्या मातृमतांना शौचालयांची उपलब्धता असावी. (स्वतःची अथवा गट शौचालये / सार्वजनिक शौचालये)	शहरातील सर्व शौचालये सुरक्षित मैला संकलन व विल्हेवाट प्रणालीस जोडलेली असावी.

GoM resolution for incentive funds for ODF+ activities

स्वच्छ महाराष्ट्र अभियान (नागरी)
अंतर्गत हागणदारी मुक्त व स्वच्छ
होगान्या नागरी स्थानिक स्वराज्य
संस्थांना प्रोत्साहन अनुदान देण्याबाबत.

	ODF Cities (Rs.)	Swachh Cities (Rs.)	Linked to Sustainability
A Class	2 Cr.	2 Cr.	30% released on first validation by State, if positive
B Class	1.5 Cr.	1.5 Cr.	30% released on validation by MoUD, if positive
C Class	1 Cr.	1 Cr.	40% released on 2 nd validation after a six months, if positive

Utilisation of funds for Sustainability and moving towards ODF+ and ODF++

महाराष्ट्र शासन
नगर विकास विभाग
शासन निर्णय क्रमांक: स्वमअ २०१६/प्र.क्र.२३/नवि-३४
हुतात्मा राजगुरु चौक, मादाम कामा मार्ग
४ व्हा मजला, मंत्रालय, मुंबई
दिनांक : २८ मार्च, २०१६

बाबा:

- (१) शासन निर्णय, नगर विकास विभाग, क्रमांक स्वमअ २०१५/प्र.क्र.२३/नवि-३४, दिनांक १५ मे, २०१५.
- (२) राज्य अभियान संचालनालय, स्वच्छ महाराष्ट्र अभियान संचालनालय, यांचे परिपत्रक क्रमांक राअसं/कार्यान्वयन सूचना/४२/१५-१६ दिनांक २८ जुलै, २०१५
- (३) शासन निर्णय, नगर विकास विभाग, क्रमांक स्वमअ २०१५/सं.क्र.१५४९/नवि-३४, दिनांक २९ ऑक्टोबर, २०१५.

प्रस्तावना :

केंद्र शासनाच्या "स्वच्छ भारत अभियान (नागरी)" च्या घर्तीवर संदर्भीय दिनांक १५ मे, २०१५ च्या शासन निर्णयान्वये राज्यामध्ये "स्वच्छ महाराष्ट्र अभियान (नागरी)" ची अंमलबजावणी सुरु झाली आहे. या अभियानांतर्गत शहरांमधील ज्या कुटुंबांकडे शौचालयाची सुविधा उपलब्ध नसल्याने ती कुटुंबे उघड्यावर शौचास जातात, असा कुटुंबांना वैयक्तिक घरगुती शौचालय अथवा सामुदायिक शौचालयाची सुविधा उपलब्ध करून देऊन, शहरे "हागणदारी मुक्त" करणे व घनकचरा व्यवस्थापनांतर्गत शहरात निर्माण होणारा १००% कचरा निर्मितीच्या जागीच (ओला व सुका) वेगवेगळा करून स्वतंत्रपणे संकलित करणे, या संकलित केलेल्या (ओला व सुका) १००% कचऱ्याची वाहतूक करणे, ओल्या कचऱ्यावर केंद्रीय अथवा विकेंद्रित पध्दतीने जागीच प्रक्रिया करणे तर सुक्या कचऱ्याचे विलगीकरण करून त्यावर प्रक्रिया करणे व उर्वरित कचऱ्याची शास्त्रीय पध्दतीने विकसीत केलेल्या भराव भूमीवर विल्हेवाट लावून शहर "स्वच्छ" करणे या दोन प्रमुख बाबींचा समावेश आहे.

२. स्वच्छ महाराष्ट्र अभियानाच्या अंमलबजावणीस गती यावी व हागणदारी मुक्त झालेल्या तसेच स्वच्छ झालेल्या शहरांचा यथोचित सन्मान व्हावा म्हणून, राज्यातील हागणदारी मुक्त झालेल्या व स्वच्छ झालेल्या शहरांना प्रोत्साहन अनुदान देण्याची बाब शासनाच्या विचाराधीन होती.

शासन निर्णय :

प्रस्तावनेत नमूद केलेल्या बाबींचा विचार करून स्वच्छ महाराष्ट्र अभियानांतर्गत "हागणदारी मुक्त" झालेल्या व "स्वच्छ" झालेल्या नागरी स्थानिक स्वराज्य संस्थांना पुढील प्रमाणे प्रोत्साहन अनुदान देण्यास शासन मान्यता देत आहे:

Funds available with Umred for financing FSSM Capex

Funding Capex –

Fund utilization -- Availability						
City	Funds under scheme	Received (in Rs. Crore)	Utilized Fund		Available Fund	
			Amount (In crore)	Percent	Amount (In Crore)	Percent
Umred	13 th FC	5.36	3.39	63 %	1.97	37 %
	14 th FC	5.01	3.42	68 %	1.59	32 %
	SBM Incentive Fund	3.00	-	-	3.00	100%

Funds are available for ODF+ activities

Sinnar has financed the CaPEX and OpEX of FSTP through 14th FC funds

- ❑ **Sinnar Municipal Council has passed resolution to fund FSTP project cost through 14th FC funds.**
- ❑ **The project cost includes:**
 - ❑ **Capex**
 - ❑ **Opex for 3 years**

O & M can be financed through Charges or taxation . . .

Funding : Opex

Including tax ,user charges, fines and so on.

Sr No.	Amount	Sanitation Tax
Existing sanitation tax	Rs -40/-	2.14 % of existing property tax
Average Existing Property Tax	Rs-1866/-	-
For scheduled emptying sanitation tax	Rs -278/-	-
Property tax with scheduled emptying sanitation tax	Rs-2144/-	13 % of modified property tax

Only 14% increase in property tax will finance the scheduled desludging services

Taxation can be done as per the Maharashtra Municipal Councils, Nagar Panchayats and Industrial Townships Act, 1965, Chapter IX : Municipal taxation, Section 108 only if it is provided as a service

Also revenue from sale of septage compost under HARIT

Can partly finance O&M of services

Sinnar has levied differential tax on all properties for financing FSSM services

Differential taxation rates

Residential Properties **with / without toilets** –
Rs. 300 / annum

Non Residential Properties **with toilets** –
Rs. 300 / annum

Non-residential properties **without toilets** –
Rs. 100 / annum

City level resolution for taxation

सिन्नर नगरपरिषद, सिन्नर मे. विशेष सभा
ठराव क्रमांक ६१ दिनांक २४/०३/२०१७

विषय क्रमांक ५) सिन्नर नगरपरिषद तर्फे आकारण्यात येणारा स्वच्छता कर, घनकचरा व्यवस्थापन कर व मैला व्यवस्थापन कर यांची पुर्न:रचना करणेबाबत चर्चा करून निर्णय घेणे.

प्रस्तावाचा मजकुर - कार्यालयीन टिपणीचे समागृहात चर्चा होवुन सिन्नर नगरपरिषदे तर्फे सद्या आकारण्यात येणारे विशेष स्वच्छता कर, विशेष घनकचरा कर व मैला व्यवस्थापन कर यांची पुर्न:रचना करून यापुढे सन २०१७-१८ या आर्थिक वर्षापासुन खालील प्रमाणे मैला व्यवस्थापन कर व घनकचरा कर म्हणुन आकारण्यात यावेत व त्याप्रमाणे बिल तयार करून मालमत्ता धारकांना देण्यात यावेत.

वार्षिक कराचे दर (रुपये)

अ.क्र.	कराचे नांव	निवासी मालमत्ता		विगर निवासी मालमत्ता	
		शौचालय असलेले	शौचालय नसलेले	शौचालय असलेले	शौचालय नसलेले
१.	मैला व्यवस्थापन कर	३००/- (प्रति सिट)	३००/-	३००/- (प्रति सिट)	१००/-

वार्षिक कराचे दर (रुपये)

अ.क्र.	कराचे नांव	निवासी	विगर निवासी
१	घनकचरा व्यवस्थापन कर	१००/-	३००/-

वरीलप्रमाणे कर आकारणी करणेस सदरची सभा सर्वानुमते मान्यता देत आहेत. त्याप्रमाणे प्रशासकीय कार्यवाही करण्यात यावी.

सुचक :- श्री. लोखंडे गो.वि.
अनुमोदन :- श्री. चौथवे प्र.झुं.
ठराव सर्वानुमते मंजूर



अध्यक्ष,

सिन्नर नगरपरिषद, सिन्नर

Wai has levied tax on all properties for financing FSSM services

Incremental approach: Moving towards ODF++

- ❑ ULBs should take **incremental approach** for **liquid waste management**
- ❑ The city topographic profile suits for incremental approach for liquid waste treatment
- ❑ First step to **tap the liquid waste** from **existing discharge points** either **diverted** through **interceptor sewer** or **in-situ decentralized treatment system** as per availability of land
- ❑ Need to carry out **quick preliminary technical** and **financial feasibility** assessment for possible options

City	Waste Water generated (MLD)	Cost for interceptor sewer (Rs in Cr)	Treatment cost (Rs in Cr)
Umred	6.4	0.3 - 0.5	6 - 7

Stakeholder Engagement for FSM and ODF Sustainability

1. Achieving universal access to IHHL



Mobilizing applications, assessment of need of sanitation loans and mobilizing them

2. CTs/PTs assessment



Quantitative and qualitative assessment of the CTs/PTs and suggest ways to improve it



Assessing sanitation status of schools and suggesting ways to improve it

3. ODF Validation and OD Watch



Help the city with the MoUD validation process and OD watch

4. OD spots development



Identifying OD spots and suggesting ways of development, identify financing options

Stakeholder Engagement for FSM and ODF Sustainability

5. Self-Help Groups



315 Active SHG groups in Umred who can help in **Awareness generation and loan mobilization**

6. Elected and Administrative wing



PAS team briefed the elected and administrative wing of UMC about the ODF+ work. Their support will be required to **plan and implement the project.**

7. Industries



Umred MIDC. Assess their interest for CSR funding

8. Citizens



Citizens participation is solicited for effecting planning and implantation of scheme. Team will identify various platforms and events to involve them in the process.

9. Local Gov. of Outgrowth Areas



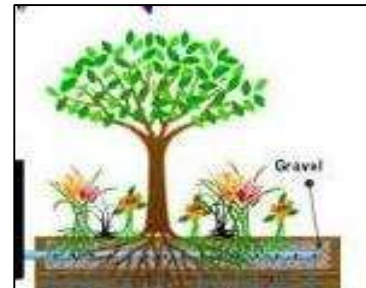
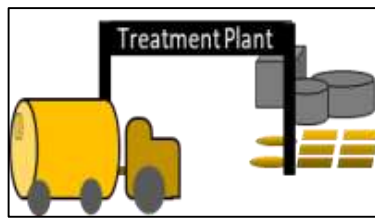
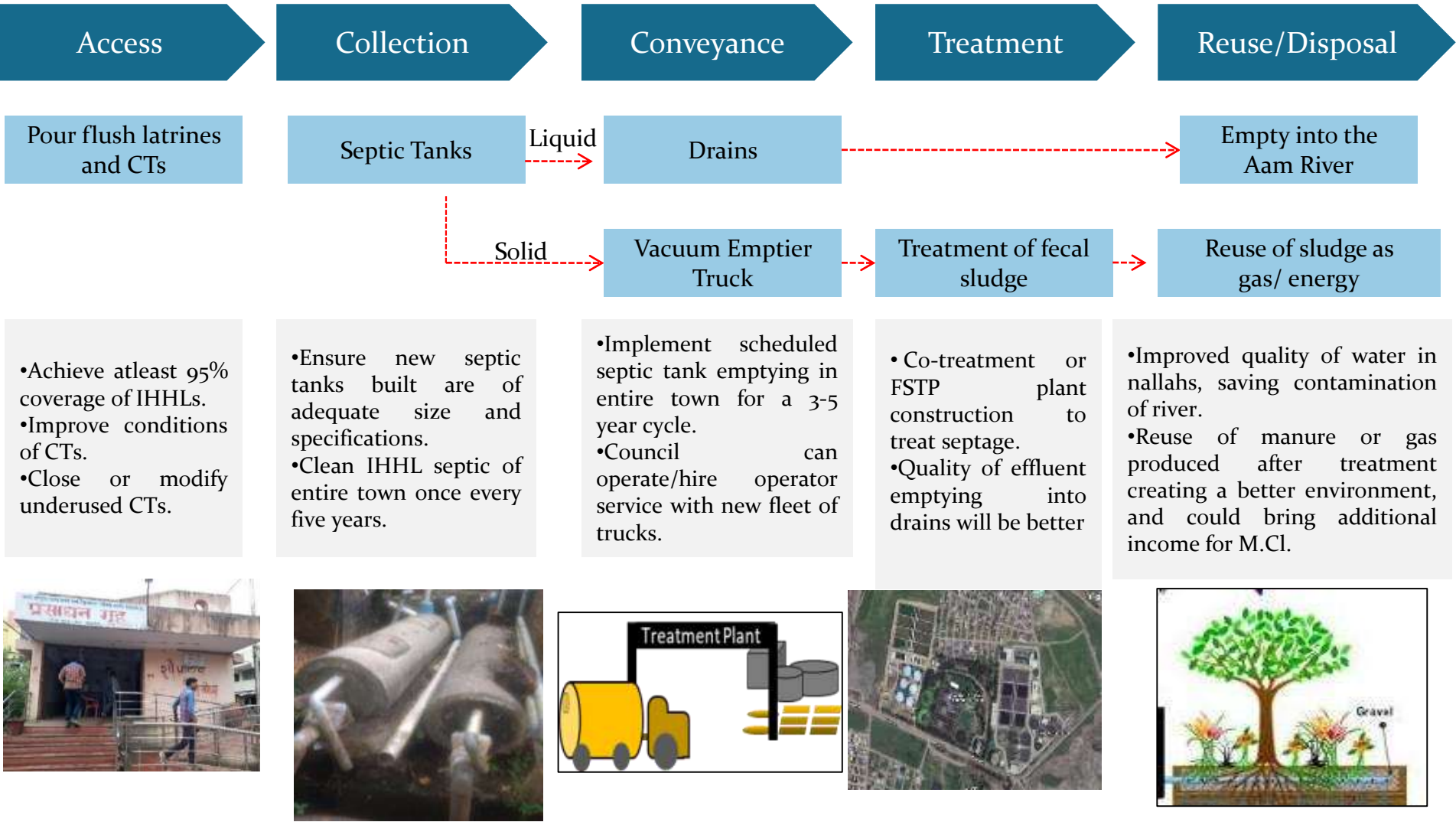
Villages near Umred(Dhukheda, Wayegaon) will be consulted while making the septage management plan.

10. Private Service Providers



Umred has a strong presence of private service providers mainly for CT cleaning.

Summary: Proposals Across Sanitation Service Chain



Discussion Points . . .

- What are the **next steps of action**
 - City Resolution of taking up this activity
 - Co-treatment at Nagpur STP or individual FSTP
 - Land Allocation
 - Private sector participation
 - Fund allocation for Capex
 - Taxes/Charges

- **Time frame** for initiating implementation of FSSM

Online Module for performance assessment

Performance Measurement Framework for developing countries

Capacity Building of Govt. Officials

SLB cell formation at city/state level

City Ranking

Performance Improvement Plans

Demand Based Scheme for making cities ODF

Target Setting tool

Performance Improvement Planning (PIP) tool : SaniPlan

City Sanitation Plans for small and medium town

Tariff setting tool

Integrated faecal sludge management plan for cities

National Roll-Out

Repository of 1800 city Benchmarks over 3 years

Information system improvement plan

Innovative Sanitation Financing

Integration with e-governance system

Annual Data for UWSS of 900+ cities

SAN Benchmarks citywide sanitation assessment framework

IFSM toolkit

SANI Tab App for Sanitation Survey



Support to Maharashtra State Government in implementing Swachh Maharashtra Mission

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C-WAS, CEPT University, Ahmedabad, India