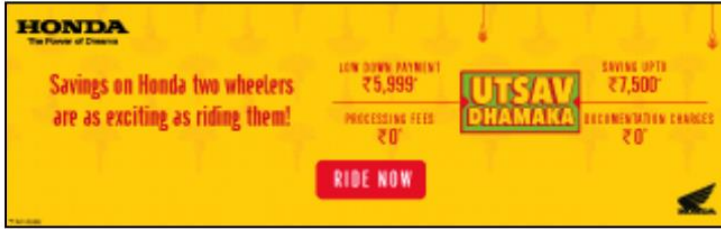


Shelter Associates

Pune

Challenges and Solutions of Planning for Urban Sanitation

18th November 2017



Maharashtra declared open-defecation free, but these Mumbai photos say otherwise

HT found scores of men defecating in the open in Mumbai on Sunday morning; activists now demand new toilets, audit of existing facilities



Here's what Mankhurd looked like at 7.43 am on Sunday.(Pratik

On account of 2nd October 2017-Gandhi Jayanti, Maharashtra state has been declared 'Open Defecation Free'

महाराष्ट्र टाइम्स

मुंबई

Marathi News » Maharashtra » Mumbai News » Is Mumbai Really Open Defecation Free

खरंच मुंबई हागणदारीमुक्त?

Maharashtra Times | Updated: Nov 13, 2017, 03:00AM IST



खरंच मुंबई हागणदारीमुक्त?

म. टा. खास प्रतिनिधी, मुंबई

केंद्र सरकारने तीन वर्षापूर्वी राबवलेल्या स्वच्छ भारत अभियानातर्गत देशातील प्रत्येक शहर हागणदारीमुक्त झाल्याचा दावा मुंबई महापालिका करत आहे. पण पालिकेचा हा दावा १९ नोव्हेंबरला, जागतिक शौचालय दिनाच्या दिवशी फोल ठरण्याची दाट शक्यता आहे. देवनार, कुर्ला, लोटस कॉलनी, बैगनवाडी, मानखुर्द या एम वॉर्डमधील बकाल भागामध्ये स्वच्छतेचे व

About Shelter Associates (SA)

Our VISION

An India where every citizen has access to basic infrastructure and secure tenure, leading to equal distribution of rights.

Our MISSION

To empower communities living in informal settlements to pursue their right to dignity and an elevated quality of life.

SA

Architects

Social Workers

Community Workers

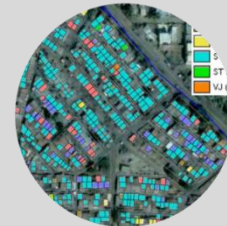
Geographic Information Systems (GIS) Analysts

Volunteers

CORE COMPETENCIES

POVERTY MAPPING

Surveyed 2,00,000 households



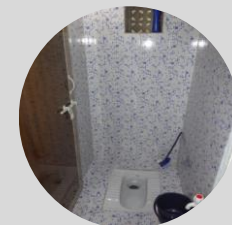
HOUSING

Impacted 9,000 persons

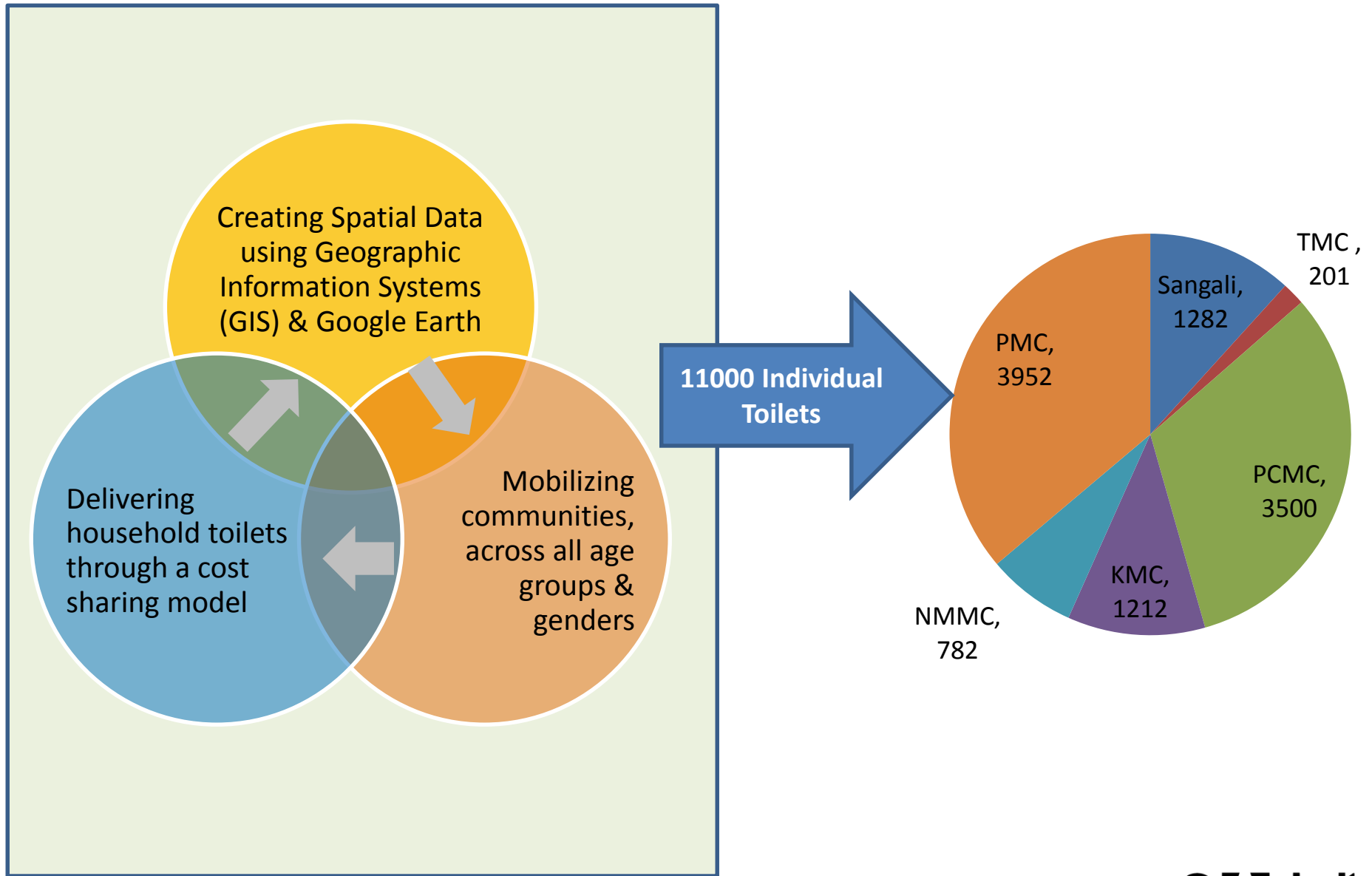


SANITATION

Impacted over 3,15,000 persons through a range of sanitation solutions



SA's sanitation model- 'One Home One Toilet'



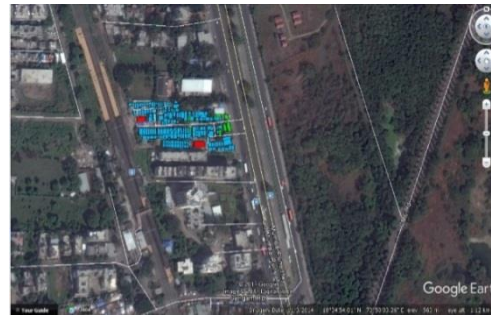


Collecting data with technology

On Field



Usage of Technology



Integrating data on Geographic Information Systems (GIS) platform

Use of Google Earth (GE) images as base maps

Use of KoBo Toolbox-Android based open source platform with Smartphone Technology

Spatial Data- uploaded on SA's website

The screenshot displays the SAshelter website interface. At the top left is the SAshelter associates logo. A navigation menu includes 'Slum Data', 'Sanitation', 'Housing', 'Research & Poverty Mapping', 'Home', and '>> PCMC'. A secondary menu on the right contains 'Slum Data', 'Sanitation', 'Housing', 'Research & Poverty Mapping', and 'Team'. Two map panels are shown. The left panel, titled 'Map Satellite', shows a satellite view of India with a red outline of the PCMC region and labels for 'Thane', 'Mumbai', 'PCMC Pune', 'Sangli', and 'Kolhapur'. The right panel, also titled 'Map Satellite', provides a detailed view of the PCMC region with a green outline and numerous red markers representing slum locations. Both maps include a 'Map Satellite' toggle and a 'Google' logo. The right map also features a person icon, zoom in (+) and zoom out (-) buttons, and a footer with 'Imagery ©2017 TerraMetrics', 'Terms of Use', and 'Report a map error'.



- General information
- Toilet information
- Waste management information
- Water information
- Road & access information
- Drainage information
- Gutter information



population of 7,090 residing in 1,418 structures.

[View Factsheet](#)



- General information
- Toilet information
 - [View Tabular Data](#)
 - Community toilet blocks (11)
 - Open defecation areas (1)
 - Own toilet (100)
 - Using Community toilet block prior to SBM (952)
 - Shared toilet (14)
 - Public toilet outside slum (116)
 - Household Toilet under SBM (609)
 - Interested in individual toilet prior to SBM (933)
- Waste management information
- Water information



Gap Analysis after SBM survey across all wards in PCMC

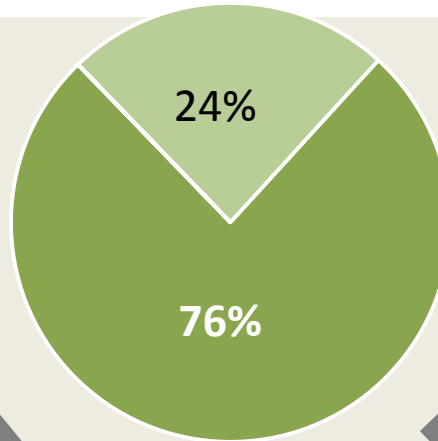
Number of slums – 76 ; Total occupied houses –32,765
Number of slums practicing OD- 24

PRE SBM IHHL- 2665 (8%)
[2014]



POST SBM IHHL- 9529
(29%) [Sept 2017]

- HH that can not be given toilet due to technical issues 7925 HH
- Coverage of IHHL with existing and proposed lines 24,840 HH



Need to be reached with drainage network

76%



SlIs need to concentrate on these slums

Prioritize slums for Laying Drainage

Efficient allocation of CTBs across all slums

After reaching out to 76% HH with IHHL, CTBs to be utilized effectively:

Toilet seat to family ratio

40
slums

1:0

Having provided IHHL with existing and proposed drainage lines, there will be Zero load on CTBs & these can then be converted into Area Resource Centres.

In 4 slums without CTB, all HH can be provided IHHL

16
slums

≤1:4

CTB seats can be distributed amongst remaining HH & these HH will be responsible for the maintenance of those seats.

20
slums

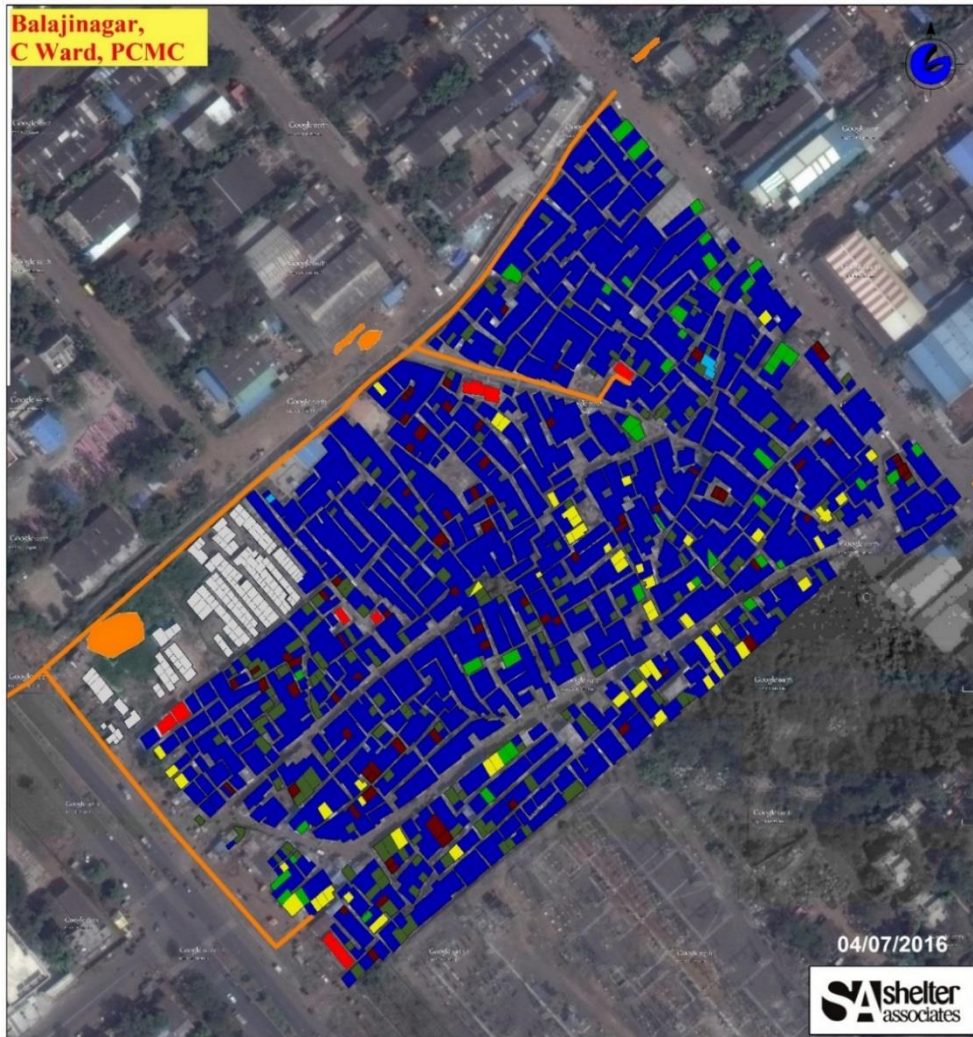
≥1:5

CTBs can be given to external agencies for regular maintenance

3 slums with no CTB need to provide CTB

Facilitation of over 1600 individual household toilets in the largest slum of Balaji Nagar in Pimpri-Chinchwad in a span of around 10 months

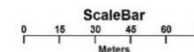
Pre Intervention- HH having Individual toilets- 2.2%



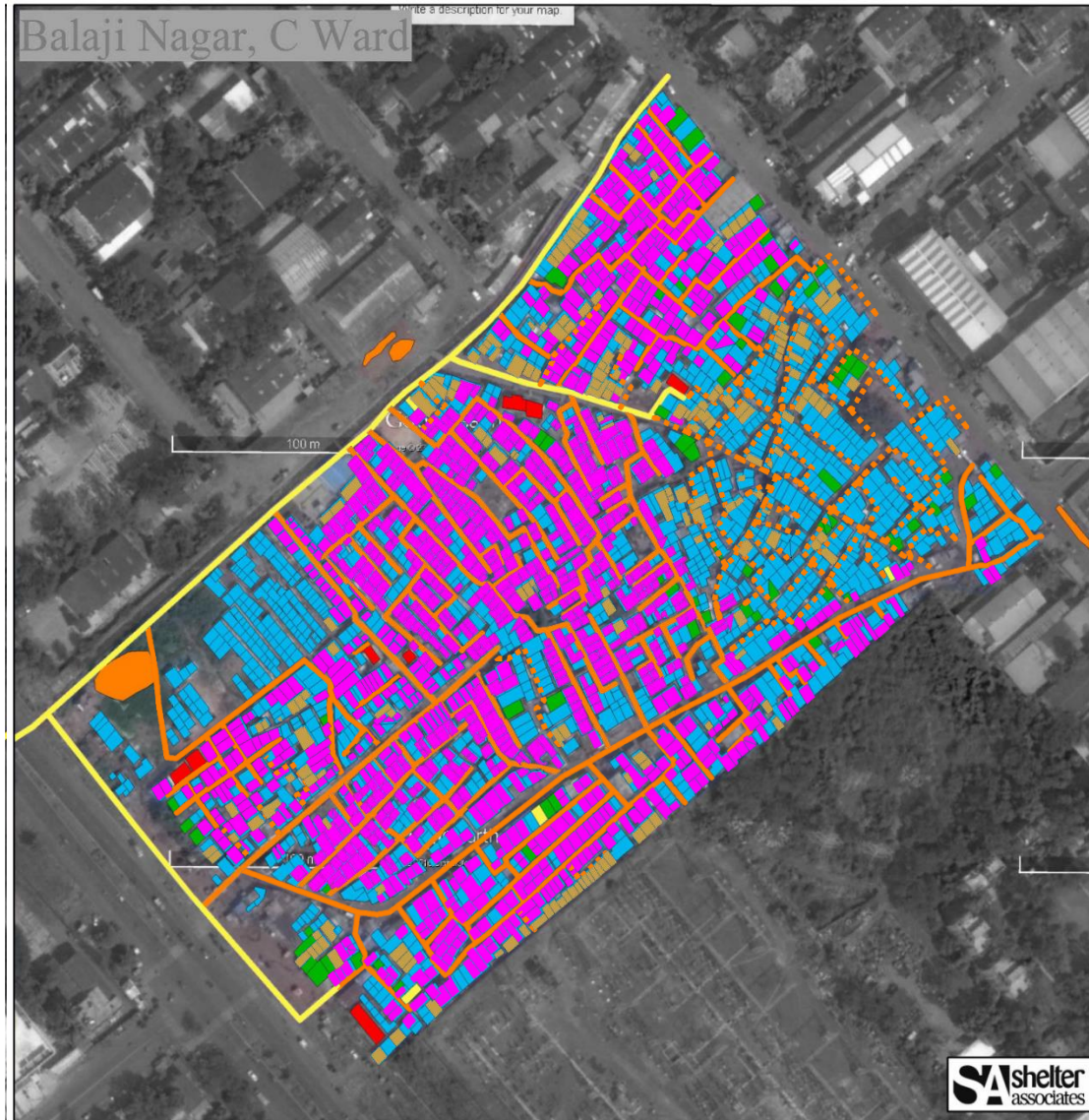
Household Toilet Status Before Intervention




- Existing Drainage Line
- Own Toilet (45)
- Use CTB (1902)
- SBM (own) toilet (57)
- Open defecation (3)
- Locked Houses (162)
- Unoccupied Houses (75)
- Reservation Houses (152)
- Community Toilet Block (8)
- Open Defecation Area
- Total Houses (2396)

Toilet seat to Person Ratio 1:100



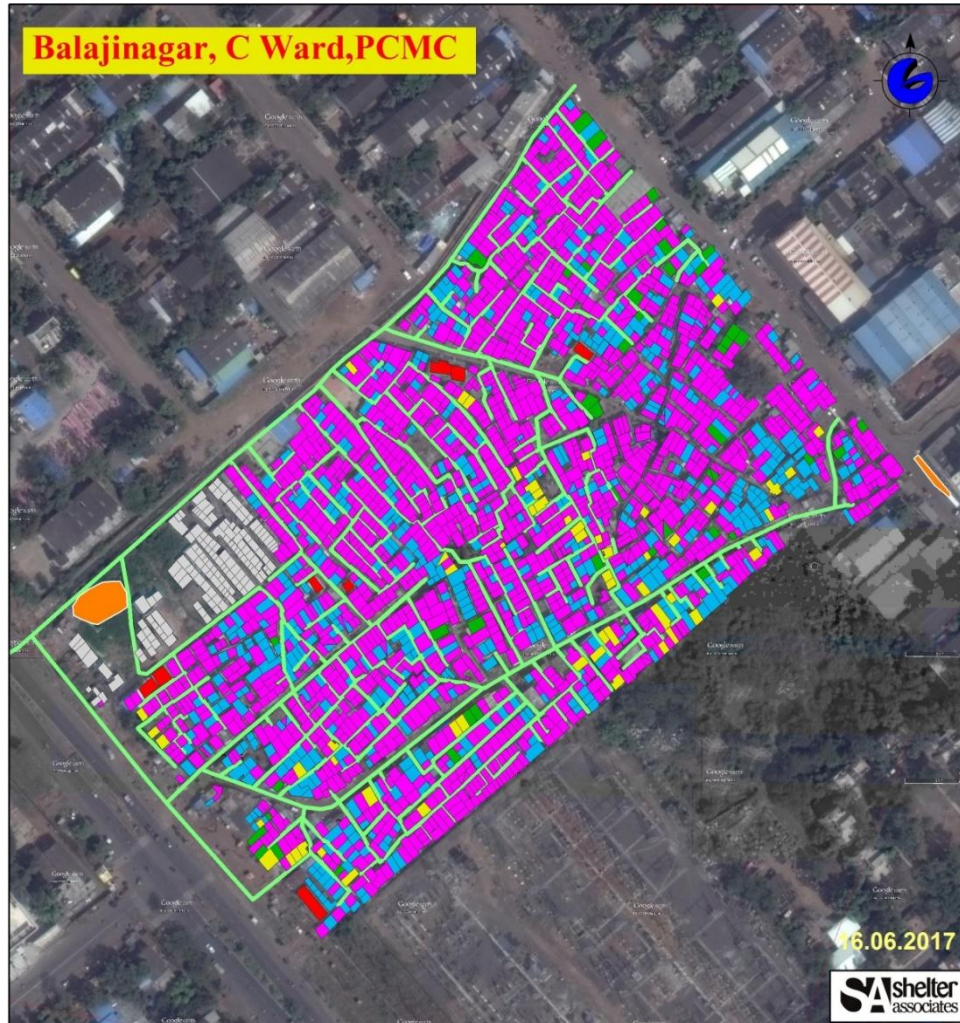
Evolution



-  Household toilets facilitated by SA
-  New drainage lines laid by PCMC
-  New drainage lines being laid by PCMC - work in progress as of today

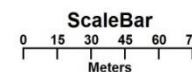
Post Intervention Impact

Post Intervention-HH having Individual toilets- 77%



Individual Toilet Status

- Toilet by SA (1611)
- Own Toilet (45)
- SBM (own) toilet (57)
- Reservation Houses (152)
- Remaining Houses (538)
- Existing Driange Line
- CommunityToiletBlock (8)
- OpenDefecationArea
- Total Houses (2403)



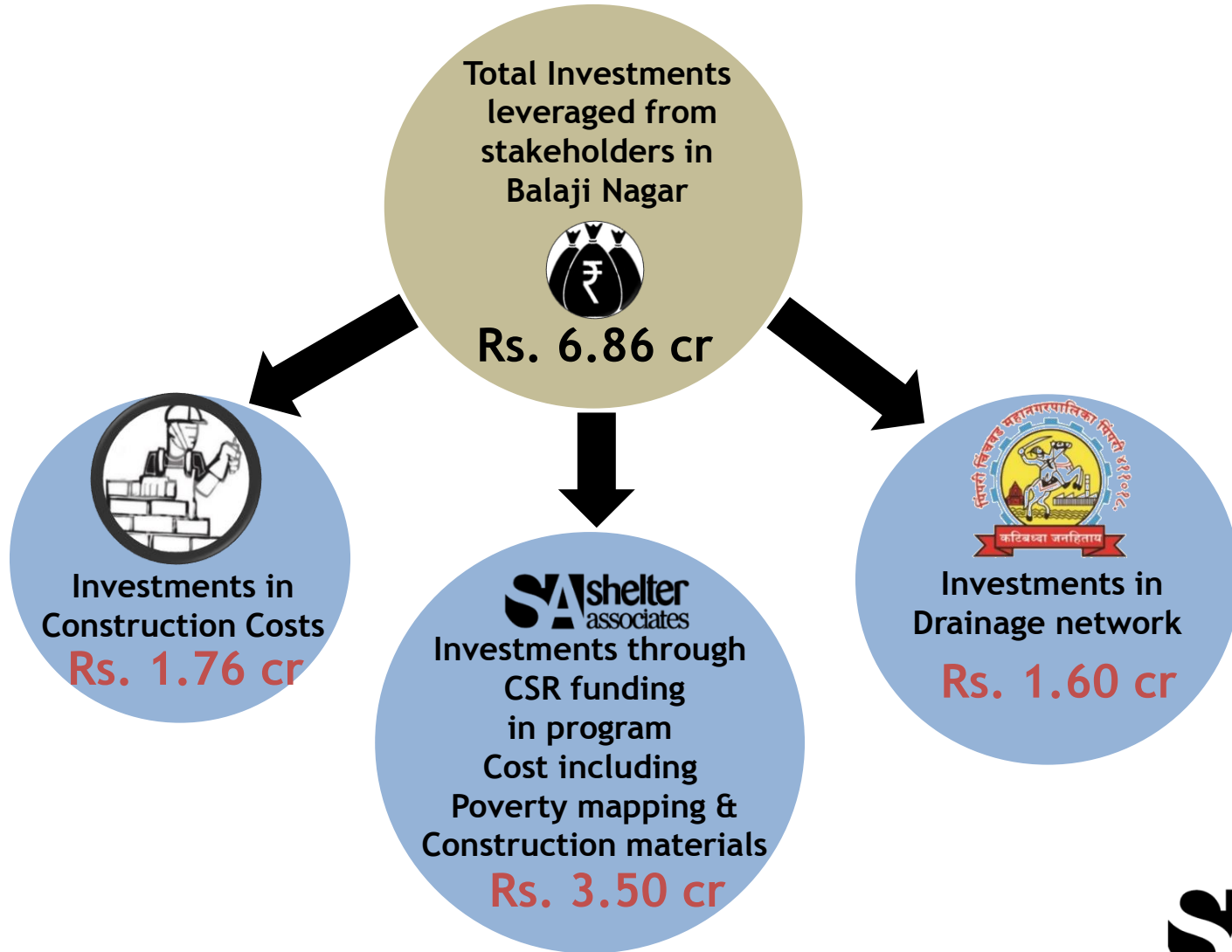
Community Toilet Block:

Toilet seat: person ratio has been brought down from
1: 100
to
1: 31

Minimal Investment of Rs. 10 lakhs in Data resulting in Optimal Output

Approx. investment for mapping- Rs. 10 lakhs for about 2400 households in Balaji Nagar leveraging about Rs. 6.86 crores.

Investment in data- 1.5%



Institutionalising Data within ULBs -Need of the hour

- To address the need of the hour of institutionalizing data within ULBs, SA is in the process of training PCMC officials on the usage and implementation of spatial data. SA conducted an **intensive hands-on training** for about 100 trainees who were Junior Engineers & Sanitary Inspectors from PCMC on the **use of spatial data & maps** on field.
- **Use of open source platforms** for the technology backed solution is keeping in mind it's easy and convenient access for ULBs without any additional investments.
- ULBs need to hold such granular data to not just deliver household sanitation but also be able to **deliver other infrastructural systems** in near future.



Introductory session

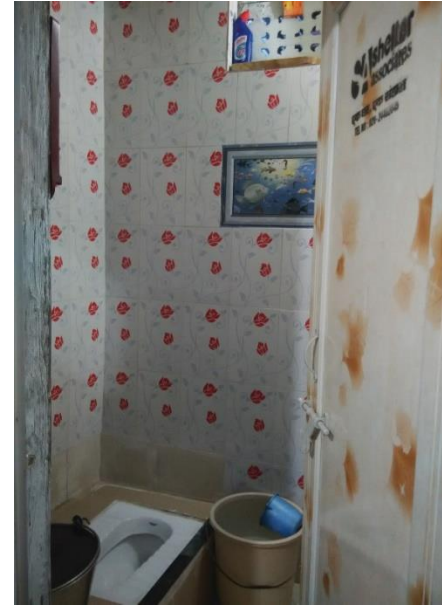
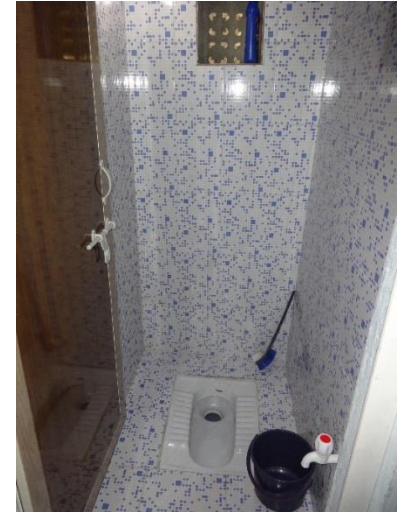


Practical training on field-use of maps



Reading maps- to identify & locate SBM beneficiaries

Investment in finishes of toilets by beneficiaries



Toilet Construction Incentivises House Upgradation



Facilitation of household toilets acts as a catalyst in partial/full upgradation of houses.

In Balaji Nagar,
Percentage of HH having undergone
Partial/Total upgradation- 68 %





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www.youtube.com/user/shelter3associates

 [/shelter3associates.com](https://www.facebook.com/shelter3associates.com)  [@ShelterAssts](https://twitter.com/ShelterAssts)

Address: Flat A/17, Sarasnagar, Siddhivinayak Society,
Opposite Nehru Stadium,
Behind Anand Mangal Karyalaya,
Shukrawar Peth, Pune – 411002,
Maharashtra, India.

