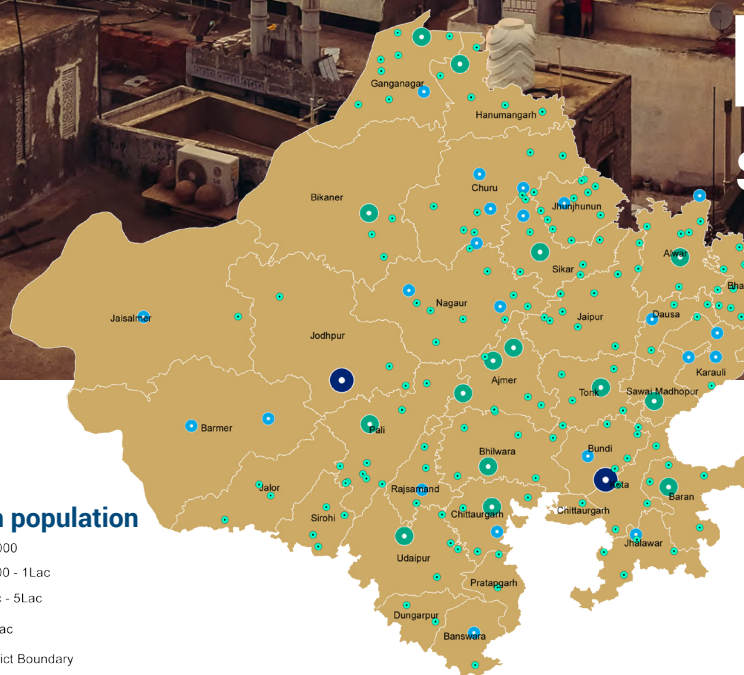


Urban Rajasthan

Status & opportunities in septage



Urban population

- <50000
- 50000 - 1Lac
- 1Lac - 5Lac
- > 5Lac
- District Boundary

Rajasthan has a target of constructing 5 lakh toilets by 2017 in urban areas. It is expected to eliminate open defecation and will address the first component of the sanitation value chain. However, the issue of proper collection, conveyance, treatment and disposal of the faecal sludge/septage needs attention.



Urban population

1.70 crore

(24.78% of total population of state)

Urban settlements

222

Urban local bodies

191



Municipal Corporations	7
Municipal Councils	34
Municipal Boards	150

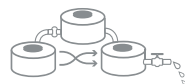


Households with individual latrine

82%

Households connected with piped sewerage network

25.63%



Urban population relying on onsite sanitation systems

53.48%

Septic tank

45.62%

Pit latrine

5.44%

Other systems

2.42%



Human waste generated daily from open defecation

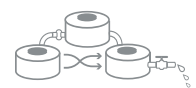
3.3 lakh litres

Faecal sludge generated from piped sewer system and service latrines

9 lakh litres

Septage produced daily from septic tanks, public latrines and pit latrines

38.7 lakh litres



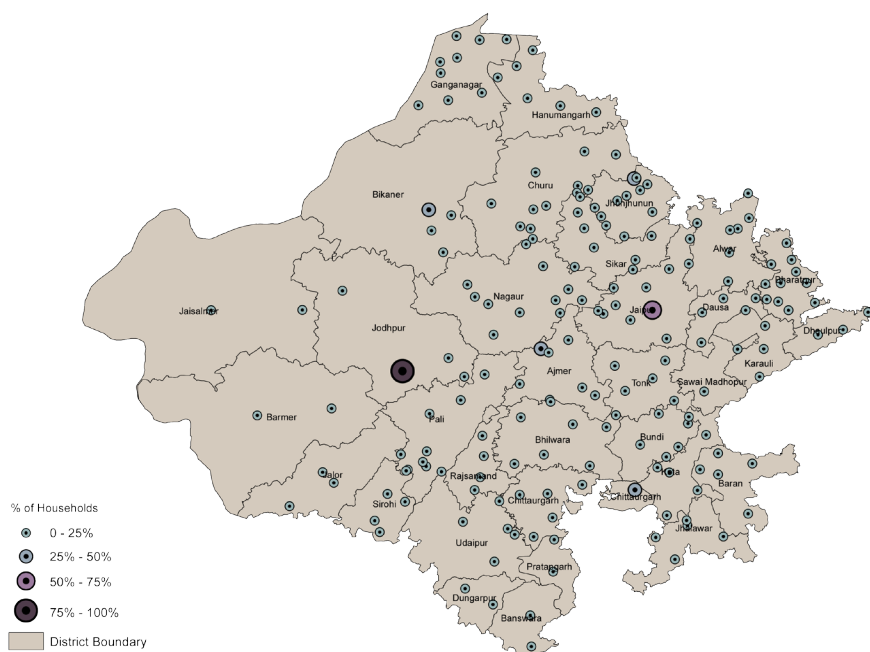
Sewage Treatment Plants (as of 2015)

43 out of 67 either under construction or proposed

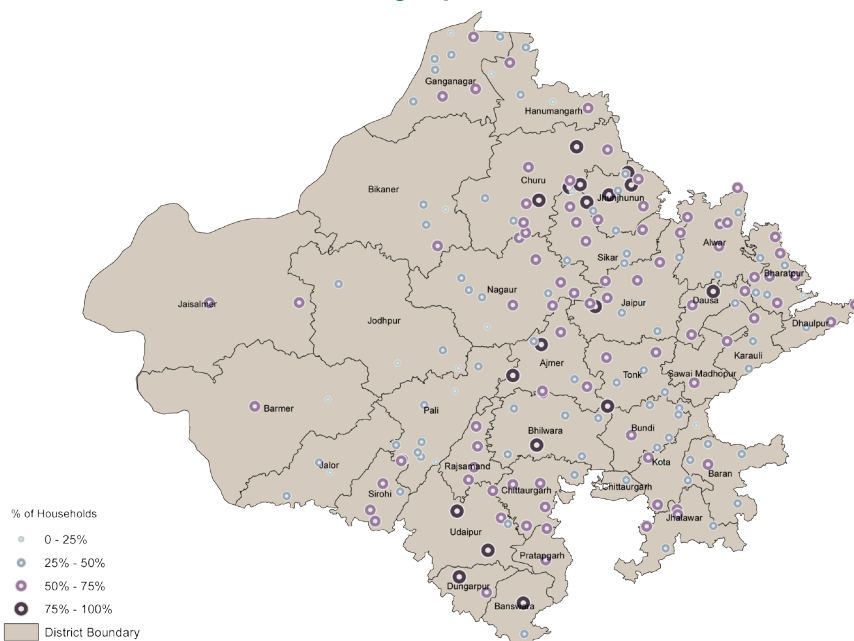
Some issues & challenges in septage management in urban Rajasthan

- Lack of awareness and capacities for FSSM in urban areas, especially among the residents, service providers and ULBs.
- Most stakeholders not up-to-date on modern technologies, standard construction techniques, operating procedures, safety & hygiene safeguards
- Desludging operators and service providers not properly trained and do not use safety equipment during operations
- Insufficient capacity for treatment of wastewater and faecal sludge/septage generated
- Absence of dedicated service level benchmarks for FSSM
- Limited availability of Standard Designs, Operating Procedures, Guidelines, Manuals, dedicated norms, etc for city-wide FSSM to aid ULBs
- Insufficient funds for creating and O&M of city-wide FSSM infrastructure
- ULBs not empowered to collect sanitation taxes, services charges, etc

Percentage of urban households in Rajasthan having access to piped sewer



Percentage of urban households in Rajasthan having septic tanks



Source: Census of India 2011, Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India

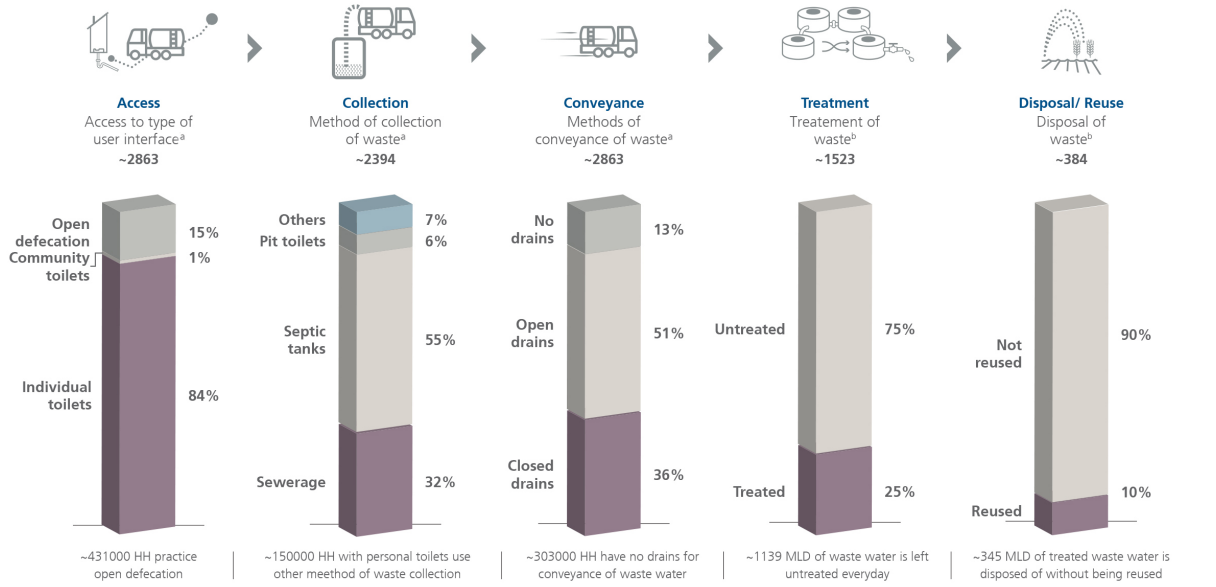
Distribution of settlements according to coverage of households by On-site Sanitation Facilities (OSSF)

% of HHs with OSS	No. of towns	% of total no. of towns	Total HHs in these towns	HHs with OSSF in these towns	OSSF as % of total HHs	Major towns in the category
>75	67	22.60	793,009	652,480	82	Ajmer, Udaipur, Bhilwara, Sri Ganganagar, Hanumangarh, Sikar
50-75	130	43.80	1,057,743	659,956	62	Kota, Jaisalmer, Alwar, Bharatpur, Tonk, Sawai Madhopur, Jhalawar
25-50	89	30	462,110	185,146	40	Pali, Bikaner
<25	11	3.70	778,078	155,497	20	Jodhpur, Jaipur

Note: A majority of the towns (66.4%) have coverage of more than 50% through OSSFs (such as septic tanks & pit latrines). More than 13 lakh households had some form of OSSF. Source: Draft Policy On Faecal Sludge and Septage Management (FSSM) 2017, Government of Rajasthan, available at <https://rajasthan.gov.in>, retrieved on August 25, 2017

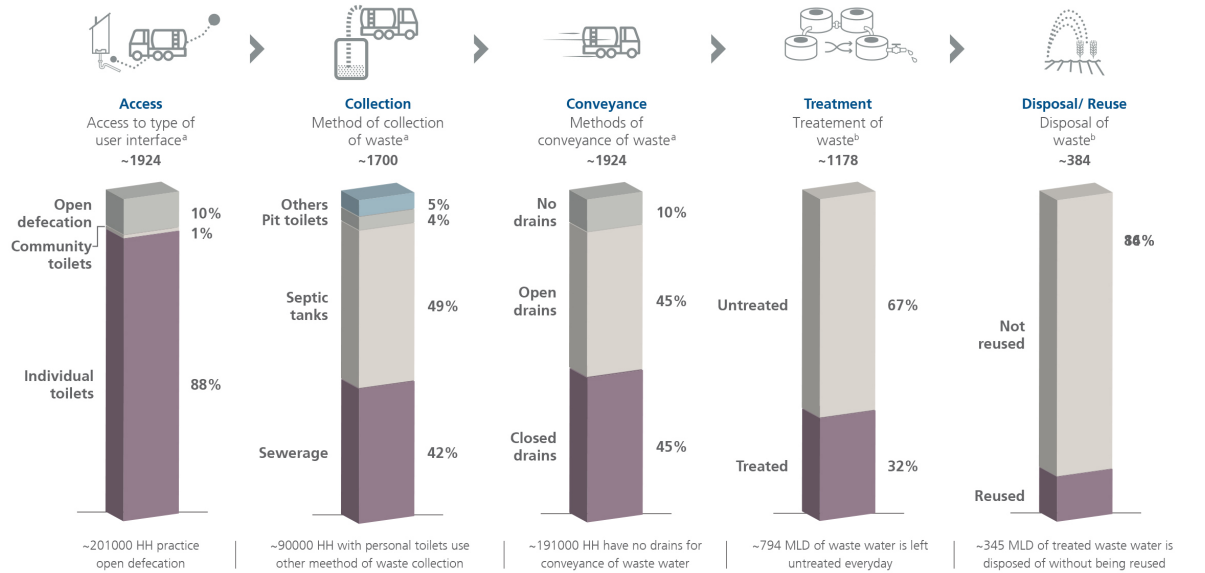
The sanitation value chain in urban Rajasthan

All Cities



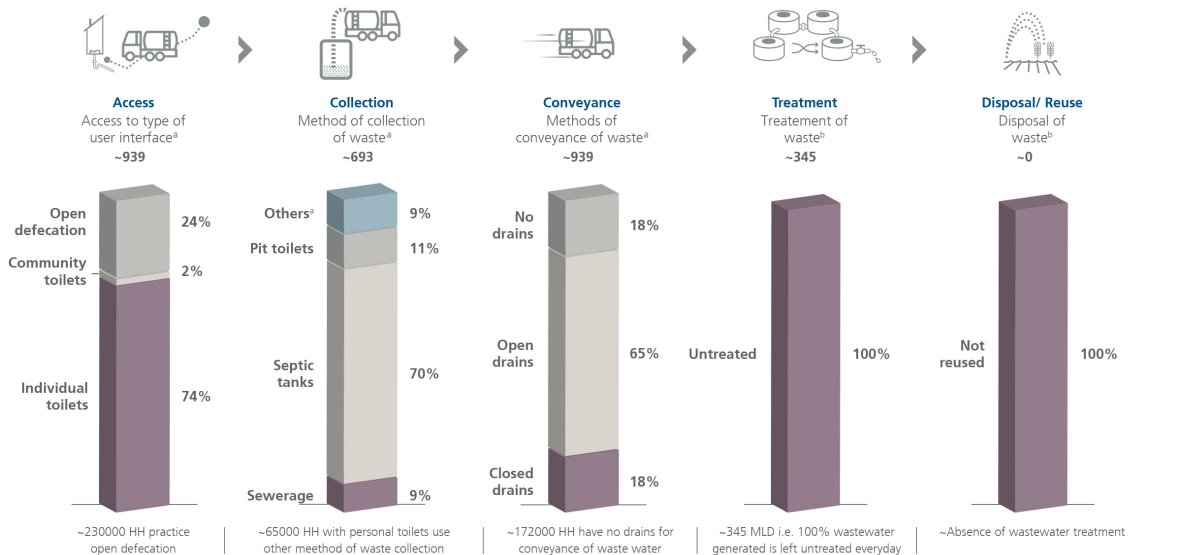
No. of ULBs: 185

AMRUT Cities



No. of ULBs: 29

Non AMRUT Cities



No. of ULBs: 165

Source: ^aCensus of India 2011, Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India, Tables on Households Amenities
^bCEPT University Analysis using information from (i) Draft Note on State Sewerage & Waste Water Policy 2015, Department of Local Self Government, Government of Rajasthan (http://www.ruifdco.rajasthan.gov.in/Content/Water_Policy_Draft_CMAR_06102015.pdf) (ii) Inventorization of sewage treatment plants, Central Pollution Control Board 2015 (http://www.cpcb.nic.in/upload/NewItems/Newitem_210_Inventorization_of_Sewage-Treatment_Plant.pdf)
⁽ⁱⁱⁱ⁾ Service Level Benchmarking Gazette Notification 2013-14, (<http://cmar-india.org/Downloads.aspx?id=13>)



Where is faecal sludge going ?

Agriculture Farms	55%
Water Bodies	25%
Open Land	20%

Rapid Assessment of Faecal Sludge and Septage Situation in 100 Towns of Rajasthan, 2017

Key Recommendations

- Sewage Treatment Plants (STPs) are not an ideal solution for a state where more than 59% of the small towns studied receive only 40-70 lpcd of water, which is insufficient for sewage system based solutions. Faecal Sludge Treatment Plants (FSTPs) need to be promoted as a state level policy. Any alternative technology option, including Small Bore Sewer Systems, needs to be assessed for its cost effectiveness and operation and maintenance (O&M) and compared with that of FSTPs.
- The state should promote the adoption of safe sanitation norms – lined, properly designed septic tanks as per CPHEEO standards that are viable containment and primary treatment systems. Unlined septic tanks, which are large storage pits, are polluting the ground water and are a major health hazard for the future.
- In Rajasthan, STPs are proposed for all AMRUT towns and towns that have population above 50,000. An assessment needs to be made of all left-out urban settlements of large Corporations and AMRUT towns. The priority should be to connect these areas with the sewage system. If not, co-treatment of septage by emptying with the help of vacuum trucks and emptiers and treating it in the plant should be done.
- Initiatives towards state-wide capacity building for FSSM need to be supported, including basic and advanced orientation for a majority of ULB officials, elected representatives and the private sector.
- Funding needs to be committed and city-wide incentives need to be developed for setting up FSTPs.
- A state-level FSSM monitoring dashboard would be useful for monitoring the implementation, city-level preparedness, incentives and use of FSSM gran

Source: Rapid Assessment of Faecal Sludge and Septage Situation in 100 Towns of Rajasthan, Consortium for DEWATS Dissemination Society, National Institute of Urban Affairs, Government of Rajasthan, 2017



Sanitation Capacity
Building Platform



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