



INDIAN INSTITUTE FOR
HUMAN SETTLEMENTS

Scoping Exercise to Support Sustainable Urban Sanitation in TamilNadu

PRIMARY STUDY REPORT

Volume-II

March 2016



List of Annexures

| | |
|---|----|
| Annexure 1 Instruments for Primary Study..... | 1 |
| Annexure 2 Note on Selection Criteria for Studies Towns | 49 |
| Annexure 3 Data Tables for Pammal | 50 |
| Annexure 4 Data Tables for Town Panchayats | 58 |



Annexure 1: Instruments for Primary Study

Questionnaire Form for Households

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu. We have chosen two localities for the study and are interviewing households and establishments in these areas. Participation in this survey as respondent will not result in terms of any benefit of being part of any government programmes or schemes. The survey is only for academic purposes. Your response and views to the survey is of utmost importance and would help in our study.

Participating in this survey is purely dependent on your willingness. We respect and value your time and decision of participating. In case you choose not to participate in the survey, you will not be asked to give an explanation.

The information collected through this survey will remain confidential, and only be made public after obtaining your approval. The survey is generic and would be collected across from various households in your town/city and does not include information of your household in particular. Your cooperation and support in answering the questions would be valuable to our institution.

Would you like to participate in this survey? Or would like to know any more information either regarding the institution or the survey in particular?

Respondent does not agree to be interviewed _____ (end the conversation)

| Section I: Basic Information | | |
|------------------------------|---|---|
| 1.1 | Name of the respondent? | |
| 1.2 | Household Size | M > 12 yrs <input type="checkbox"/> F <input type="checkbox"/> Children < 12 yrs <input type="checkbox"/> |
| 1.3 | Who are the earning members and what are their occupations? | |
| 1.4 | Earning members | Occupation |
| | | |
| | | |
| | | |
| | | |

| Section II: Housing | | | | |
|----------------------------|--|---------------|--|--|
| 2.1. | Do you own this house or is it rented? | Own | | |
| | | Rented/leased | | |
| | | Other | | |
| 2.2. | How old is the building (in years)? | | | |
| | | DKCS | | |
| 2.3. | Remarks | | | |

| Section III: Water Supply | | | | | |
|----------------------------------|--|-------------------------|---------------|------------------------|---------------|
| 3.1. | What are your major sources of water? (Mark all that are applicable) | | | | |
| | | Drinking and cooking | | Washing, Bathing, etc. | |
| | | Summer | Other seasons | Summer | Other seasons |
| | | Piped water supply | | | |
| | | Piped into dwelling | | | |
| | | Piped into yard/plot | | | |
| | | Public taps/stand pipes | | | |
| | | Tubewell or Borewell | | | |
| | | Dug well | | | |
| | | Protected | | | |
| | | Unprotected | | | |
| | | Water from Spring | | | |
| | | Protected | | | |
| | | Unprotected | | | |
| | | Rainwater | | | |
| | | Tanker/truck | | | |
| | | Cart with small tank | | | |
| 3.2. | Surface water (river/dam/lake/pond/canal/irrigation channel) | | | | |
| 3.3. | What is the distance to your primary source of water? | Within the house | | | |
| | | Inside the compound | | | |

| | | | | |
|------|--|---------------------------------------|--|---------|
| | | Outside the compound but within 200 m | | |
| | | Between 200 and 500 m | | |
| | | Between 500 m and 1 km | | |
| | | Others (with remarks) | | |
| 3.4. | What is the broad estimate of monthly expenditure on water and related expenses? | Piped water supply | | Remarks |
| | | Private water tankers | | |
| | | Informal water suppliers | | |
| | | Treated wastewater | | |
| | | Bottled water/cans | | |
| | | Others (Specify) | | |
| | | Total | | |

| Section IV: Individual Household Latrine | | | | |
|---|--|--|--|--|
| 4.1 | Where is your latrine/s located? | Inside the house | | |
| | | Inside the premises | | |
| | | Outside the premises | | |
| 4.2 | What is the type of the latrine/s? | Improved Pit latrine | | |
| | | Unimproved pit latrine | | |
| | | Flush/Pour flush latrine connected to sewer system | | |
| | | Pour flush latrine connected to septic tank | | |
| | | Other flush/pour flush latrine | | |
| | | DKCS | | |
| | | Others (specify) | | |
| 4.3 | When was the latrine constructed? | | | |
| 4.4 | Who was given the job of constructing the latrine? | Contractor | | |
| | | Mason | | |
| | | Self-made | | |
| | | Others specify) _____ | | |

| | | | | |
|-----|---|--------------------------|--|--|
| 4.5 | Who decided on the design, size and shape of the latrine? | Contractor | | |
| | | Mason | | |
| | | Self-made | | |
| | | Husband/Wife | | |
| | | Decided together | | |
| | | Influenced by neighbour | | |
| | | Influenced by relative | | |
| | | Others specify) _____ | | |
| 4.7 | What was the time taken for constructing Septic tank? | | | |
| 4.8 | What was the total expenditure in constructing the latrine? | | | |
| 4.9 | Where does the waste water from the latrine go? | Stays inside the system | | |
| | | On to the street outside | | |
| | | On to the drain outside | | |
| | | On to open areas outside | | |
| | | Others | | |
| | | Others (specify) | | |

***If the HH has a Pit Latrine, go to the following question.
If the HH has a Septic Tank, go to question 4.22***

| | | | | |
|------|---|------------------------|--|--|
| 4.17 | What are the dimensions of the pit latrine? | | | |
| 4.18 | Is it single pit or a double pit? | Single | | |
| | | Double | | |
| 4.19 | Have you ever cleaned the pit? | Yes | | |
| | | No | | |
| | | Not required as of now | | |
| 4.20 | When was the pit last cleaned? | | | |
| 4.21 | How was the pit cleaned? | Manually | | |

| | | | | |
|----------------------------|--|---------------------------|--|--|
| | | Mechanical (Vacuum truck) | | |
| | | Others _____ | | |
| 4.22 | Who owned the vacuum truck? | Corporation | | |
| | | Private Operator | | |
| | | Others | | |
| 4.23 | What was the expenditure for getting the tank cleaned? | | | |
| 4.24 | Where is the sludge disposed of? | Treatment plant | | |
| | | Open field for drying | | |
| | | Open areas | | |
| | | Drains | | |
| | | DKCS | | |
| 4.25 | How long does the pit take to fill up? [In months/years] | | | |
| | | DKCS | | |
| 4.27 | Remarks: if any other problems? | | | |
| HH with Septic Tank | | | | |
| 4.29 | What are the dimensions of the septic tank? | L B D | | |
| 4.30 | Have you ever cleaned the septic tank? | Yes | | |
| | | No | | |
| | | Not required as of now | | |
| 4.31 | When was the septic tank last cleaned? | | | |
| 4.32 | How was the septic tank cleaned? | Manually | | |
| | | Mechanical (Vacuum truck) | | |
| | | DKCS | | |
| | | Others | | |
| 4.33 | Who owned the vacuum truck? | Corporation | | |
| | | Private Operator | | |
| | | Others | | |
| 4.34 | What was the expenditure incurred for cleaning the tank? | | | |
| 4.35 | How long does the septic | | | |

| | | | | |
|------|------------------------------------|-----------------------|--|--|
| | tank take to fill up/overflow? | DKCS | | |
| 4.36 | Where is the septage disposed of? | Treatment plant | | |
| | | Open field for drying | | |
| | | Open land | | |
| | | Drains | | |
| | | DKCS | | |
| 4.38 | Why did you opt for a septic tank? | | | |

Section V: Disposal of Grey Water

| | | | | |
|-----|---|--|--|--|
| 5.1 | Where does waste water from kitchen, etc., (that is not from the toilet) go off to? | Flows and dries inside the premises | | |
| | | Flows off into fields or open areas outside premises | | |
| | | Flows off into the street outside | | |
| | | Flows off into the drain outside | | |
| | | Others | | |

Section VI: Observation schedule for Household latrine

| | | |
|---------------------|---|--|
| Location of toilet | Within the house | |
| | Outside the house | |
| Functional status | Working | |
| | Not in use | |
| | Used for storage | |
| | Working but leaks and breakages visible | |
| Type of toilet | Flush/pour flush latrine connected to sewer | |
| | Flush /pour flush latrine connected to septic tank | |
| | Flush/pour flush latrine connected to other systems | |
| | Pit latrine with slab/ventilated improved pit | |
| | Pit latrine without slab/open pit | |
| Type of toilet seat | Indian Pan | |
| | Western Commode | |
| | Platform with hole (Raised) | |
| | Platform with hole (on the floor) | |
| Type of flush | Cistern flush | |
| | Pour flush | |
| Pan Material | | |

| Section VII: Observation Schedule for Pits | | |
|---|------------------------|--|
| Location of the Pit | Within the compound | |
| | Adjacent to the toilet | |
| | Below the toilet | |
| | Within the house | |
| Design | Single pit (unlined) | |
| | Single pit (lined) | |
| | Twin pit (unlined) | |
| | Twin pit (lined) | |
| Size | Length | |
| | Width | |
| | Depth | |
| Material | Bricks | |
| | Cement Concrete | |
| | Concrete rings | |
| | Others (specify) | |
| Accessibility (by cesspool vehicle) | Yes | |
| | No | |

| Section VIII: Observation Schedule for Septic Tanks | | |
|--|---------------------------------------|--|
| Location of the Septic Tank | Within the compound | |
| | Adjacent to the toilet | |
| | Below the toilet | |
| | Within the house | |
| Design | Single chamber (sealed) | |
| | Single chamber (with open able cover) | |
| | Double chamber (sealed) | |
| | Double chamber (with open able cover) | |
| Size | Length | |
| | Width | |
| | Depth | |
| | Can't identify | |
| Outlet connected to: | Soak pit | |
| | Surface drain | |
| | Sewer line | |
| | Let out into open area | |
| | Can't identify | |

| Section IX: Observation Schedule for Housing | | | |
|--|--|--|--|
| Observe and make note (ask questions wherever necessary) | | | |
| Land use type | Mixed use | | |
| | Residential | | |
| | Others | | |
| Building Typology | Slum settlement | | |
| | Government quarters/housing | | |
| | Independent bungalows | | |
| | Multi-storeyed individual apartments (< 5 storeys) | | |
| | Multi-storeyed individual apartments (> 5 storeys) | | |
| | Gated community complexes | | |
| | Others | | |
| No. of storeys | Ground (G) | | |
| | G+1 | | |
| | G+2 | | |
| | b/w G+3 to G+6 | | |
| | G+6 and above | | |
| Total number of units/households in the building | 1 | | |
| | 1 to 3 | | |
| | 3 to 6 | | |
| | 6 to 12 | | |
| | 12 to 30 | | |
| | 30 and above | | |
| Materials used for construction of roof | Thatch | | |
| | Asbestos/Aluminium sheet | | |
| | Tiles | | |
| | Cement concrete | | |
| | Plastic/Polythene | | |
| | Others | | |
| Materials used for the construction of walls | Stone | | |
| | Brick: Load-bearing | | |
| | Brick: Framework | | |
| | Clay hollow blocks | | |
| | Cement concrete | | |
| | Plastic/Polythene | | |
| | Aluminium sheets | | |
| | Others | | |

Questionnaire Form for shared toilet Households

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu. We have chosen two localities for the study and are interviewing households and establishments in these areas. Participation in this survey as respondent will not result in terms of any benefit of being part of any government programmes or schemes. The survey is only for academic purposes. Your response and views to the survey is of utmost importance and would help in our study.

Participating in this survey is purely dependent on your willingness. We respect and value your time and decision of participating. In case you choose not to participate in the survey, you will not be asked to give an explanation.

The information collected through this survey will remain confidential, and only be made public after obtaining your approval. The survey is generic and would be collected across from various households in your town/city and does not include information of your household in particular. Your cooperation and support in answering the questions would be valuable to our institution.

Would you like to participate in this survey? Or would you like to know any more information either regarding the institution or the survey in particular?

| Section I: Basic Information | | |
|------------------------------|---|---|
| 1.1 | Name of the respondent? | |
| 1.2 | Household Size | M > 12 yrs <input type="checkbox"/> F <input type="checkbox"/> Children < 12 yrs <input type="checkbox"/> |
| 1.3 | Who are the earning members and what are their occupations? | |
| 1.4 | Earning members | Occupation |
| | | |
| | | |
| | | |
| | | |
| | | |

| Section II: Housing | | | | |
|----------------------------|--|------------------------|--|--|
| 2.4. | Do you own this house or is it rented? | Own | | |
| | | Rented/leased | | |
| | | Other _____ | | |
| 2.5. | If rented, what is the monthly rent? | | | |
| 2.6. | Who is the owner of the land? | Self | | |
| | | Husband/Wife | | |
| | | Parents/Parents-in-law | | |
| | | Other family members | | |
| | | Government | | |
| | | Landlord | | |
| | | DKCS | | |
| | | Others | | |
| | | Don't know | | |
| | Other (with remarks) | | | |
| 2.7. | How old is the building (in years)? | | | |
| | | Don't know/Can't say | | |

| Section III: Water Supply | | | | | |
|--|--------------------------|----------------------|---------------|------------------------|---------------|
| What are your major sources of water? (Mark all that are applicable) | | | | | |
| | | Drinking and cooking | | Washing, Bathing, etc. | |
| | | Summer | Other seasons | Summer | Other seasons |
| 3.5 | Piped water supply | | | | |
| | Piped into dwelling | | | | |
| | Piped into yard/plot | | | | |
| | Public taps/ stand pipes | | | | |
| | Tubewell or Borewell | | | | |
| | Dug well | | | | |
| | Protected | | | | |
| | Unprotected | | | | |
| | Water from Spring | | | | |
| | Protected | | | | |
| | Unprotected | | | | |
| | Rainwater | | | | |
| | Tanker/truck | | | | |
| | Cart with small tank | | | | |

| | | | | | |
|-----|--|---------------------------------------|--|--|---------|
| 3.6 | Surface water (river/dam/lake/pond/canal/irrigation channel) | | | | |
| 3.7 | What is the distance to your primary source of water? | Within the house | | | |
| | | Inside the compound | | | |
| | | Outside the compound but within 200 m | | | |
| | | Between 200 and 500 m | | | |
| | | Between 500 m and 1 km | | | |
| | | Others (with remarks) | | | |
| 3.8 | What is the broad estimate of monthly expenditure on water and related expenses? | Piped water supply | | | Remarks |
| | | Private water tankers | | | |
| | | Informal water suppliers | | | |
| | | Treated waste-water | | | |
| | | Bottled water/cans | | | |
| | | Others (Specify) | | | |
| | | Total | | | |

| Section IV: Shared latrine | | | | |
|---|--|--|--|--|
| 4.1 | How many other households use this latrine? Probe around loading of the Toilets | | | |
| 4.2 | Where is the latrine located? | Inside the plot | | |
| | | Outside the plot | | |
| 4.3 | How many seats are there? | Male <input type="text"/> | | |
| | | Female <input type="text"/> | | |
| | | Children <input type="text"/> | | |
| 4.3 | What is the distance to the latrine? | Less than 100m | | |
| | | Between 100–200m | | |
| | | Between 200–500m | | |
| | | Between 500m–1 km | | |
| | | More than 1 km | | |
| | | DKCS | | |
| 4.4 | What is the type of latrine? | Hole in the ground | | |
| | | Single pit | | |
| | | Double pit | | |
| | | Septic tank | | |
| | | Flush toilet connected to sewer system | | |
| | | Others | | |
| 4.5 | When was the latrine constructed? [Month, year] | | | |
| 4.10 | Time taken for construction? (In days/months) | | | |
| 4.11 | Total expenditure in constructing latrine? | | | |
| 4.12 | Where does the waste water from the latrine go? | Stays inside the system | | |
| | | On to the street outside | | |
| | | On to the drain outside | | |
| | | DKCS | | |
| | | Others | | |
| <i>If the shared toilet has a soakpit, go to the following question. If the toilet has a Septic Tank, go to question</i> | | | | |
| 4.15 | What is the depth of the pit? | | | |
| 4.16 | Have you ever cleaned the pit? | Yes | | |
| | | No | | |
| | | Not required as of now | | |

| | | | | |
|------|--|---------------------------|--|--|
| 4.17 | When was the pit last cleaned? | | | |
| 4.18 | How was the pit cleaned? | Manually | | |
| | | Mechanical (Vacuum truck) | | |
| | | Others _____ | | |
| 4.19 | Who owned the vacuum truck? | Municipality | | |
| | | Private Operator | | |
| | | Others | | |
| 4.20 | What was the expenditure? | | | |
| 4.21 | How long does the pit take to fill up? [In months/years] | | | |
| | | DKCS | | |
| 4.22 | Where is the septage disposed of? | Treatment plant | | |
| | | Open field for drying | | |
| | | Open areas | | |
| | | Drains | | |
| | | DKCS | | |
| 4.23 | Do you have any issues with your soakpit? | Yes | | |
| | | No | | |
| 4.24 | What are the issues? | | | |

| Shared Toilet with Septic Tank | | | | |
|---------------------------------------|--|---------------------------|--|--|
| 4.25 | Have you ever cleaned the septic tank? | Yes | | |
| | | No | | |
| | | Not required as of now | | |
| 4.26 | When was the septic tank last cleaned? | | | |
| 4.27 | How was the septic tank cleaned? | Manually | | |
| | | Mechanical (Vacuum truck) | | |
| | | Others _____ | | |
| 4.28 | Who owned the vacuum truck? | Municipality | | |
| | | Private Operator | | |
| | | Others _____ | | |
| 4.29 | What was the expenditure? | | | |

| | | | | |
|------|---|-----------------------|--|--|
| | | DKCS | | |
| 4.30 | How long does the septic tank take to fill up/overflow? | | | |
| | | DKCS | | |
| 4.31 | Where is the septage disposed of? | Treatment plant | | |
| | | Open field for drying | | |
| | | Open areas | | |
| | | Drains | | |
| | | DKCS | | |
| 4.32 | Do you have any issues with your septic tank? | Yes | | |
| | | No | | |
| 4.33 | What are the issues? | | | |

Section V: Disposal of Grey Water

| | | | | |
|-----|---|--|--|--|
| 5.1 | Where does waste water from kitchen, etc., (that is not from the toilet) go off to? | Flows and dries inside the premises | | |
| | | Flows off into fields or open areas outside premises | | |
| | | Flows off into the street outside | | |
| | | Flows off into the drain outside | | |
| | | Others | | |

Section VI: Observation schedule for shared latrine

| | | | |
|---------------------|-----------------------------------|--|--|
| Location of toilet | Within the house | | |
| | Outside the house | | |
| Functional status | Working | | |
| | Not in use | | |
| | Used for storage | | |
| Type of toilet | Water seal (sanitary) | | |
| | Pit | | |
| | VIP (Ventilated Improved Pit) | | |
| Type of toilet seat | Indian Pan | | |
| | Western Commode | | |
| | Platform with hole (Raised) | | |
| | Platform with hole (on the floor) | | |
| Water Supply | Water Tap (continuous) | | |
| | Water Tap (intermittent) | | |

| | | | |
|-------------------|-------------------------|--|--|
| | Storage Tank | | |
| Type of flush | Cistern flush | | |
| | Pour flush | | |
| Collection System | Pit | | |
| | Ventilated Improved Pit | | |
| | Twin pit | | |
| | Septic tank | | |
| | Sewer system | | |
| Structure | Permanent | | |
| | Temporary | | |

| Section VII: Observation Schedule for Septic Tanks | | | |
|---|--------------------------------|--|--|
| Location of the Septic Tank | Within the compound | | |
| | Adjacent to the toilet | | |
| | Below the toilet | | |
| | Within the house | | |
| Design | Single chamber (sealed) | | |
| | Single chamber (with open able | | |
| | Double chamber (sealed) | | |
| | Double chamber (with open able | | |
| Size | Length | | |
| | Width | | |
| | Depth | | |
| | Can't identify | | |
| Water tightness (plastered inside & out) | Yes | | |
| | No | | |
| | Can't identify | | |
| Distance from the nearest ground water source | Within 10 m | | |
| | Beyond 10 m | | |
| | Not Applicable | | |
| Accessibility (by cesspool vehicle) | Yes | | |
| | No | | |
| Level | Raised above the ground | | |
| | Flushed to the ground | | |
| | Below the ground | | |
| Ventilation (vent pipe) | Yes | | |
| | No | | |
| | Can't identify | | |
| Outlet connected to: | Soak pit | | |
| | Surface drain | | |
| | Sewer line | | |
| | Let out into open area | | |
| | Can't identify | | |

| Section VIII: Observation Schedule for Pits | | | |
|--|------------------------|--|--|
| Location of the Pit | Within the compound | | |
| | Adjacent to the toilet | | |
| | Below the toilet | | |
| | Within the house | | |
| Design | Single pit (unlined) | | |
| | Single pit (lined) | | |
| | Twin pit (unlined) | | |
| | Twin pit (lined) | | |
| Size | Length | | |
| | Width | | |
| | Depth | | |
| | Can't identify | | |
| Material | Bricks | | |
| | Cement Concrete | | |
| | Concrete rings | | |
| | Others (specify) | | |
| Accessibility (by cesspool vehicle) | Yes | | |
| | No | | |
| Distance from the nearest ground water source | Within 10 mts | | |
| | Beyond 10 mts | | |
| | Not Applicable | | |
| Ventilation (vent pipe) | Yes | | |
| | No | | |
| | Can't identify | | |

Questionnaire Form for OD Households

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu. We have chosen two localities for the study and are interviewing households and establishments in these areas. Participation in this survey as respondent will not result in terms of any benefit of being part of any government programmes or schemes. The survey is only for academic purposes. Your response and views to the survey is of utmost importance and would help in our study.

Participating in this survey is purely dependent on your willingness. We respect and value your time and decision of participating. In case you choose not to participate in the survey, you will not be asked to give an explanation.

The information collected through this survey will remain confidential, and only be made public after obtaining your approval. The survey is generic and would be collected across from various households in your town/city and does not include information of your household in particular. Your cooperation and support in answering the questions would be valuable to our institution.

Would you like to participate in this survey? Or would you like to know any more information either regarding the institution or the survey in particular?

| Section I: Basic Information | | |
|------------------------------|---|---|
| 1.1 | Name of the respondent? | |
| 1.2 | Household Size | M > 12 yrs <input type="checkbox"/> F <input type="checkbox"/> Children < 12 yrs <input type="checkbox"/> |
| 1.3 | Who are the earning members and what are their occupations? | |
| 1.4 | Earning members | Occupation |
| | | |
| | | |
| | | |
| | | |
| | | |

| Section II: Housing | | | | |
|----------------------------|--|------------------------|--|--|
| 2.8. | Do you own this house or is it rented? | Own | | |
| | | Rented/leased | | |
| | | Other _____ | | |
| 2.9. | If rented, what is the monthly rent? | | | |
| 2.10. | Who is the owner of the land? | Self | | |
| | | Husband/Wife | | |
| | | Parents/Parents-in-law | | |
| | | Other family members | | |
| | | Government | | |
| | | Landlord | | |
| | | DKCS | | |
| | | Others | | |
| | | Don't know | | |
| | | Other (with remarks) | | |
| 2.11. | How old is the building (in years)? | | | |
| | | DKCS | | |

| Section III: Water Supply | | | | | |
|----------------------------------|--|-------------------------|---------------|------------------------|---------------|
| 3.9. | What are your major sources of water? (Mark all that are applicable) | | | | |
| | | Drinking and cooking | | Washing, Bathing, etc. | |
| | | Summer | Other seasons | Summer | Other seasons |
| | | Piped water supply | | | |
| | | Piped into dwelling | | | |
| | | Piped into yard/plot | | | |
| | | Public taps/stand pipes | | | |
| | | Tubewell or Borewell | | | |
| | | Dug well | | | |
| | | Protected | | | |
| | | Unprotected | | | |
| | | Water from Spring | | | |
| | | Protected | | | |
| | | Unprotected | | | |
| | | Rainwater | | | |
| | | Tanker/truck | | | |
| | Cart with small tank | | | | |

| | | | | | |
|-------|--|--|--|--|---------|
| 3.10. | Surface water (river/dam/lake/pond/canal/ irrigation channel) | | | | |
| 3.11. | What is the distance to your primary source of water? | Within the house | | | |
| | | Inside the compound | | | |
| | | Outside the compound but within 200 m | | | |
| | | Between 200 and 500 m | | | |
| | | Between 500 m and 1 km | | | |
| | | Others (with remarks) | | | |
| 3.12. | What is the broad estimate of monthly expenditure on water and related expenses? | Piped water supply | | | Remarks |
| | | Private water tankers | | | |
| | | Informal water suppliers | | | |
| | | Treated waste-water | | | |
| | | Bottled water/cans | | | |
| | | Others (Specify) | | | |
| | | Total | | | |

| Section IV: Open Defecation | | | | | |
|------------------------------------|---|-----------------|--|--|--|
| 4.1 | Why does your family not have access to Toilet? | | | | |
| 4.2 | Where do household members go for defecation? (tick all applicable) | Next to drain | | | |
| | | On rail lines | | | |
| | | Open fields | | | |
| | | Field/Bushes | | | |
| | | Forested areas | | | |
| | | Others _____ | | | |
| 4.3 | Do all members defecate in open? | | | | |
| 4.4 | How much time does it take to reach there? (In minutes) | | | | |
| 4.5 | Have you and your family always defecated in the open? | Yes | | | |
| | | No | | | |
| 4.6 | Where did you go earlier? (Describe when, where) | | | | |
| 4.7 | What was the reason for the change? | | | | |

| | | | | |
|-----|--|-----|--|--|
| | | | | |
| 4.8 | Do you face any problem in defecating outside? | Yes | | |
| | | No | | |
| 4.9 | What kind of problems do you face in defecating outside? | | | |
| | | | | |
| | | | | |

Section V: Disposal of Grey Water

| | | | | |
|--|--|-------------------------------------|--|--|
| Section V: Disposal of Grey Water | | | | |
| 5.1 | Where does waste water from washing, cleaning and bathing go off to? | Flows and dries inside the house | | |
| | | Flows off into fields or open areas | | |
| | | Flows off into the street outside | | |
| | | Flows off into the drain outside | | |
| | | Others | | |

Section VI: Observation Schedule for building

Observe and make note (ask questions wherever necessary)

| | | | | |
|---|--|--|--|--|
| Section VI: Observation Schedule for building | | | | |
| <i>Observe and make note (ask questions wherever necessary)</i> | | | | |
| Land use type | Mixed use | | | |
| | Residential | | | |
| | Others | | | |
| Building Typology | Slum settlement | | | |
| | Government quarters/housing | | | |
| | Independent bungalows | | | |
| | Multi-storeyed individual apartments (< 5 storeys) | | | |
| | Multi-storeyed individual apartments (> 5 storeys) | | | |
| | Gated community complexes | | | |
| | Others | | | |
| No. of storeys | Ground (G) | | | |

| | | | |
|--|--------------------------|--|--|
| | G+1 | | |
| | G+2 | | |
| | b/w G+3 to G+6 | | |
| | G+6 and above | | |
| Total number of units/households in the building | 1 | | |
| | 1 to 3 | | |
| | 3 to 6 | | |
| | 6 to 12 | | |
| | 12 to 30 | | |
| | 30 and above | | |
| Materials used for construction of roof | Thatch | | |
| | Asbestos/Aluminium sheet | | |
| | Tiles | | |
| | Cement concrete | | |
| | Plastic/Polythene | | |
| | Others | | |
| Materials used for the construction of walls | Stone | | |
| | Brick: Load-bearing | | |
| | Brick: Framework | | |
| | Clay hollow blocks | | |
| | Cement concrete | | |
| | Plastic/Polythene | | |
| | Aluminium sheets | | |
| | Others | | |

Checklist for Masons

(In first few questions, determine whether the respondent is a toilet mason or not, and continue with the discussion only if they have experience in constructing toilets.)

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu in order to improve the full cycle of access to toilets, safe collection and disposal/proper treatment of human excreta. We have chosen your neighbourhood to understand the problems and issues in urban areas pertinent to sanitation, so that appropriate improvements can be proposed. Your identity and responses shall not be disclosed to anyone. Your cooperation and support in answering the questions would be valuable to our study.

1. What kind of buildings do you construct? (*Single houses, Group houses, Apartments, Shops, etc.*) and does toilet construction form a part of this work?
2. How many building have you constructed in the last year?
3. What are the localities/area you operate in?
4. How long have you been in the masonry business?
5. How did you come into this business?
6. How did you learn the trade?
7. Do you work alone or with some-one else? (*Probe for mode of operation*)
8. What kind of toilets do you construct (pits, septic tanks, others)?
9. On an average, how many toilets do you construct in a month? (*Probe for seasonal variations*) *In a year?*
10. How do clients get in touch with you?
11. What are the standard type designs for Septic tanks that are constructed? (*Probe for details, before introducing sketch, and systems costing sheet*)
12. How have the construction and design practices changed in the last ten years?
13. For the septic tanks, what is the most common arrangement for effluent outflow?
14. Generally, is there a soak away? If not, what is the most common arrangement? (*Probe for how these arrangements vary by different building typologies or across socio-economic classes?*)
15. Typically, how long does it take to make a septic tank? (*If there are variations, probe why there are variations?*)
16. Who decides the location of the septic tank vis-a-vis the building?
17. Who decides upon the design, size, etc.? (*Probe whether it is household, which members of the household, builders, etc.*)
18. Who supervises the construction process?
19. Do you undertake repair work also? If yes, ask for details about what kind of repair work is undertaken.
20. What are common problems faced by you as a mason? How can the above problems be addressed?
21. Anything you would like to ask us?

Your Contact no:

End by thanking the respondent, and also asking for another appointment if needed.

Checklist for Contractors

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu in order to improve the full cycle of access to toilets, safe collection and disposal/proper treatment of human excreta. We have chosen your neighbourhood to understand the problems and issues in urban areas pertinent to sanitation, so that appropriate improvements can be proposed. Your identity and responses shall not be disclosed to anyone. Your cooperation and support in answering the questions would be valuable to our study.

1. What are the different type of construction activities do you undertake? (Probe about *what kind of buildings, scale of buildings*)
2. Do you undertake construction job on a turn-key basis? (*Probe for mode of operation*)
3. What are the localities/area you operate in?
4. What kind of buildings do you construct? (Single houses, Group houses, Apartments, Shops, etc.)
5. How did you come into this business?
6. How many of them did you construct in the last year?
7. In the building you construct, do you undertake toilet construction with your own people or is this sub-contracted? (*Probe for details*)
8. Typically, what are different kind of sanitation systems are adopted in the town? (*Probe for differences according to housing type, Identify all types of systems*).

For each type, ask set of following questions:

9. What are the different types of designs? (Additionally, *for septic tank, get sketches*)
10. How much does each of the building systems cost? (*for septic tank, get detailed costing*)
11. What are the disposal arrangements? (*for effluent and sludge*)
12. How much time is required for construction?
13. Who decides on type (design, size, location) of the sanitation system?
14. Who supervises the construction of the septic tanks and toilets?
15. What are the common arrangements for operations and maintenance of these sanitation systems?
16. Tell us little bit about the problems facing your business? How can the above problems be addressed?

Please share your Contact no:

End by thanking the respondent, and also asking for another appointment if needed.

Checklist for Sanitary Workers

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu in order to improve the full cycle of access to toilets, safe collection and disposal/proper treatment of human excreta. We have chosen your neighbourhood to understand the problems and issues in urban areas pertinent to sanitation, so that appropriate improvements can be proposed. Your identity and responses shall not be disclosed to anyone. Your cooperation and support in answering the questions would be valuable to our study.

1. What kind of toilets do you clean? (*pit latrines, septic tanks, etc.*)
2. How many cleaning requests do you get in a month? (*probe for seasonal variations if any at all*)
3. How much do you get paid? Does this vary by type of client or type/size of installation?
4. Does the household provide any other benefits?
5. Approximately, how much do you earn in a month?
6. What are the different types of toilets prevalent in this area? (*probe which are the predominant ones*)
7. How have the construction and design practices changed over the last ten years or so? (*Probe for details*)
8. How long does it take to clean one pit latrine or septic tank?
9. Where do you dispose of the sludge? (*Gently probe for different methods of disposal*)
10. Do you wear any gloves, masks, dresses, etc., protective gear while cleaning? Do you take any other precaution before cleaning?
11. Do you have any health concerns due to this?
12. What can make your job of cleaning more efficient?

End by thanking the respondent, and also asking for another appointment if needed.

Checklist for Government Cesspool operators

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu in order to improve the full cycle of access to toilets, safe collection and disposal/proper treatment of human excreta. We have chosen your neighbourhood to understand the problems and issues in urban areas pertinent to sanitation, so that appropriate improvements can be proposed. Your identity and responses shall not be disclosed to anyone. Your cooperation and support in answering the questions would be valuable to our study.

1. How many honey suckers does the ULB own or hire?
2. What is the type and capacity of these vehicles? List number of vehicles by capacity, also note whether these are modified trucks or specially made or equipped vehicles).
3. For how long have these vehicles been operational? (add age to the above list)
4. What kind of buildings/clients do you service? (*Households, institutions, commercial, etc.*) *Is the rate different for each of the above customer categories? (ask for rate card)*
5. How do people get in touch with you?
6. On an average, how many cleaning requests do you get in a month? In a year?
7. How many trips do the vehicles make per month?
8. How are the routes decided?
9. In a normal trip, do you ensure the truck cleans the septic tank to its full capacity or do these have to carry partial loads?
10. How is the rate decided? When did the rates last change?
11. What costs do you incur—including labour costs, transportation costs and others?
12. Does the ULB have any condition for collecting septage from a particular household or building (such as property tax receipts)?
13. How is collected septage normally disposed?
14. If dumped, where is it disposed of?
15. Are there buyers of sewage? Eg: agriculturists?
16. Do you provide any gloves, caps, suits, etc., protective gear to your workers?
17. How many private operators are there in the town? How many vehicles do they operate?
18. How many of them are registered with the ULB?
19. Are there any rules and regulations that are enforced upon them?
20. What are your suggestions to improving septage collection, transportation and treatment?

End by thanking the respondent, and also asking for another appointment if needed.

Checklist for Private Cesspool vehicles

Vanakkam, I am _____, from the Indian Institute for Human Settlements in Bangalore. We are conducting a study on sanitation in Tamil Nadu in order to improve the full cycle of access to toilets, safe collection and disposal/proper treatment of human excreta. We have chosen your neighbourhood to understand the problems and issues in urban areas pertinent to sanitation, so that appropriate improvements can be proposed. Your identity and responses shall not be disclosed to anyone. Your cooperation and support in answering the questions would be valuable to our study.

1. How many honey suckers do you own?
2. What is the total capacity of these vehicles?
3. How long have you been in this business?
4. How did you enter this business?
5. What is the area (localities) of operation?
6. What kind of buildings/ clients do you service? (*households, institutions, commercial, etc.*)
7. How do people get in touch with you? (*Probe for differences households, institutions, etc.*)
8. On an average, how many cleaning requests do you get in a month?
9. What are the rates that you charge for cleaning? (*probe for differences*)
10. When did the rates last change? How is collected septage disposed of? Where? (Probe gently whether there are designated locations and whether the actual practice differs from the prescribed).
11. Do you provide any gloves, caps, suits, etc., protective gear to your workers?
12. How many other operators are there in the town or in the area? How many vehicles do they have?
13. Is there a process of registration or licensing that you have to do? What are the steps involved?
14. What are the other rules and regulations that you are expected to follow?
15. Are there buyers of sewage? Ex: agriculturists?
16. How many other private operators are there in the town? How many vehicles do they operate?
17. What are your suggestions to improving septage collection, transportation and treatment?
18. What has been your experience of interacting with officers of the ULB?
19. What are your major kinds of expenditure in a month? (personnel, labour, vehicle, etc)
20. What are the monthly costs that you incur – including labour costs, transportation costs and others?

End by thanking the respondent, and also asking for another appointment if needed.

Checklist for farmers

1. Do you regularly buy septage as manure/fertiliser in your farm?
2. What is the frequency at which you buy and put septage in your land? At what volume per acre?
3. What crops do you grow that specifically require input of septage?
4. How much do you pay for septage?
5. Are these private or public tankers? Is there a difference in their rates?
6. Do neighbouring farmers also use septage? (*Probe for differences in arrangements, prices, etc.*)
7. How is the septage applied on the field?
8. Do you feel that the septage provides any benefit to the crop?
9. Are there any problems in using septage?

Checklist for EO/Municipal Commissioner and Chairperson

1. What are the key problems that you face in keeping the town running?
(Conversation, quickly move on)
2. What is the economic base of the city? What are the main sources of employment?
Location of work and where do people live?
3. What are the roles and responsibilities of the ULB in providing water, sanitation, solid waste and drainage arrangements?
4. What are chief concerns regarding water supply in the city?
5. What are chief concerns regarding sanitation in the city?
6. What are chief concerns regarding solid waste management in the city?
7. What are the ongoing projects in the above sectors? How are they funded?
8. What is the role of private sector in provisioning these services?
9. What are the main sources of revenue for the ULB? What are the main areas of expenditure?
10. What is the planning framework? How is the process? Who are the key players? (If at state level, get names)
11. Slum overview? How many slums are there? How are they decided? Is there an area of concentration? What are the chief concerns?
12. What is the relationship of the city/district with nearby cities/district?

Checklist for Chief Engineer/Other Technical Staff

1. Can you please tell us a little bit about the town? What is its importance? A brief on its geography, administrative boundaries, connectivity, landmarks, etc.
2. What are the broad settlement patterns in the town? (High, medium and low income groups or high rise, low rise high density and slum pockets) (a broad distribution on the map)
3. What is the current water supply system in the town/city (source, collection, treatment, storage and distribution)? Is there a map showing these zones, current treatment, storage and distribution infrastructure? If no map is available, can we have a schematic of the current system (simple flow diagram).
4. How many municipal water connections are present in the town/city (household, commercial & bulk)? What is the cost of connection and monthly tariff? How is the user fee collected and at what frequency?
5. What is the estimated distribution losses and non-revenue water?
6. What is coverage of individual toilets in the city (per cent) and how many of them exist (numbers)? What are most common type of individual toilets (pits, pour flush or flush toilets)?
7. What is the general disposal pattern of toilets (individual & public) in the city (Pits, septic tanks or open drains)?
8. What is the general disposal pattern of sullage (greywater) in the town (left into open drains or open areas)?
9. Do you have an underground sewerage system? If yes, to what extent (per cent of physical areas covered)? Do you have sewer zones? Is there a map showing these zones, current network coverage, treatment and disposal infrastructure? If no map is available, can be have a schematic of the current system (simple flow diagram)
10. How many sewer connections are there in the town/city (household, commercial, industrial, etc.)? What is the cost of connection and monthly tariff? How is the user fee collected and at what frequency?
11. If there is no underground sewerage, is there a system of regularly cleaning septic tanks and treating septage in a designated facility?
(Probe for Details)
12. What are the roles and responsibilities of different departments?

13. What is the current staffing pattern (on pay roll & on contract) of the department against sanctioned structure?
14. How many public and community toilets are present in the town/city? What disposal system are they connected to? What is the current functional status? Who maintains them? What are the costs and receipts and how are these managed?
15. What is the current solid waste management system in the town/city (collection, transportation, treatment and disposal/reuse)? Do you have zones demarcated for SWM? Is there a map showing these zones, current treatment, storage locations and vehicle routing? If no map is available, can we have a schematic of the current system (simple flow diagram)
16. How many households and establishments are covered under SWM? What is the monthly tariff? How is the user fee collected and at what frequency? What is the general recovery rate?
17. Please give details on the natural storm water drainage system in the town/city (rivers, streams, etc.). What is the coverage of man-made storm drains? Is there a map showing both natural and man-made drains? If no map is available, can we have a schematic (simple flow diagram)
18. What are key concerns regarding environmental services in the town?
(Ask for each service)

Secondary Data Checklist (To collect from ULB)

| I. General Information: | |
|---|--|
| 1. Population | |
| 2. Area (in sq. km.) (Document recent changes in boundaries, if any) | |
| 3. Class (as per Census) | |
| 4. Grade (as per DTP) | |
| 5. Year of Establishment | |
| 6. No. of Wards (Document recent changes in boundaries, if any) | |
| 7. Groundwater levels (mts) | |
| 8. Soil type | |
| II. Demography: | |
| 1. Population (2011) | |
| 2. Decadal Population (2001, 1991, 1981, 1971 & 1961) | |
| 3. Ward-wise population (Printout or soft copy) | |
| 4. Floating population (regular and seasonal) | |

| II. Demography: | |
|---|--|
| 5. Urban poor (Population & No. of HHs) (Attach list of Slums with Ward no. and Population) | |

| III. Water Supply: | |
|---|---|
| 1. Main sources for municipal supply | |
| 2. Distance from the town (in km) | |
| 3. How is the water conveyed? (gravity or pumping) | |
| 4. Details of Treatment Infrastructure | a. Location: b. Capacity (MLD): c. Treatment Technology: d. Current utilisation level (%): |
| 5. Coverage of water supply network | a. Physical coverage (%): b: No. of Households covered: c: Details of un-served areas (If any): |
| 6. Quantity supplied (in MLD) | |

| III. Water Supply: | |
|--|---|
| 7. Frequency of supply (number of times in a day) | |
| 8. Duration of supply (hours per day) | |
| 9. Per capita supplied (lpcd) | |
| 10. Non-revenue water | <p>a. Total NRW (quantity and per cent)</p> <p>b. Physical losses:</p> <p>i) Leakage from transmission and distribution mains</p> <p>ii) Leakage and overflow from utility reservoirs and storage tanks</p> <p>iii) Leakage in service connections</p> <p>c. Commercial/Apparent losses:</p> <p>i) Unmetered or free connections</p> <p>ii) Meter inaccuracy</p> <p>iii) Unauthorised consumption</p> <p>iv) Meter reading errors</p> <p>v) Data handling and accounting errors</p> |

11. Water Supply: Connection Details:

| Sl. No. | Type of Connection | No. of Connections | Connection Charge | Monthly Tariff |
|---------|--------------------|--------------------|-------------------|----------------|
| A | Regular Household | | | |
| B | Slum Household | | | |
| C | Commercial | | | |
| D | Institutional | | | |
| E | Industrial | | | |
| F | Others (If any) | | | |

Note: Collect data at ward level for each type

Notes:

12. Projects implemented in the last 5 years:

| Sl. No. | Name of the Project | Capital Cost | Funding Source | Scheme details |
|---------|---------------------|--------------|----------------|----------------|
| A | | | | |
| B | | | | |
| C | | | | |
| D | | | | |

13. Projects proposed in the next 5 years:

| Sl. No. | Name of the Project | Capital Cost | Funding Source | Scheme details |
|---------|---------------------|--------------|----------------|----------------|
| A | | | | |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |

14. Service Level Benchmarks - Water Supply:

| Sl. No. | Indicator | Benchmark | Proposed. 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 |
|---------|--|-----------|-------------------|------|------|------|------|------|------|
| 1 | Coverage of Water Supply Connections | 100% | | | | | | | |
| 2 | Per Capita Supply of Water | 135 lpcd | | | | | | | |
| 3 | Extent of Metering of Water Connections | 100% | | | | | | | |
| 4 | Extent of Non-Revenue Water | 20% | | | | | | | |
| 5 | Continuity of Water Supply | 24 hrs | | | | | | | |
| 6 | Quality of Water Supplied | 100% | | | | | | | |
| 7 | Efficiency in Redressal of Customer Complaints | 80% | | | | | | | |
| 8 | Cost Recovery in Water Supply Services | 100% | | | | | | | |
| 9 | Efficiency in Collection of Water Supply-related Charges | 90% | | | | | | | |

IV. Details of Public Toilets:

| Sl. No. | Ward no. | Location of the Public Toilet | Water Supply | Toilet Seats | | | Urinal | | | O&M responsibility | User Fee (Y/N) If Y,? | Functional Status / Remarks |
|---------|----------|-------------------------------|--------------|--------------|--------|-------|--------|--------|-------|--------------------|-----------------------|-----------------------------|
| | | | | Male | Female | Child | Male | Female | Child | | | |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |

IV. Details of Community Toilets:

| Sl. No | Ward No. | Location of the Community Toilet | Water Supply | Water Closets | | | Urinal | | | Bath | | O&M respon. | User Fee (Y/N) If Y? | Functional Status/ Remarks |
|--------|----------|----------------------------------|--------------|---------------|--------|-------|--------|--------|-------|------|--------|-------------|----------------------|----------------------------|
| | | | | Male | Female | Child | Male | Female | Child | Male | Female | | | |
| 1 | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | |

| V. Wastewater Management: | |
|--|---|
| 1. Do you have a sewerage system (if yes, ask points 2 to 15 or skip to section VI) | |
| 2. How is sewage conveyed (gravity or pumping) | |
| Coverage of sewer network (Physical extent and no. of households) | a. Physical coverage (%): b. No. of Households covered: c. Details of un-served areas (If any): |
| 3. Details of Treatment Infrastructure (location, capacity & current utilisation levels) | a. Location: b. Capacity (MLD): c. Treatment Technology: d. Current utilisation level (%): |
| 4. Quantity of sewage collected (in MLD) | |

5. Connection charges-Sewerage:

| Sl. No. | Type of Connection | No. of Connections | Connection Charge | Monthly Tariff |
|---------|--------------------|--------------------|-------------------|----------------|
| a | Regular Household | | | |
| b | Slum Household | | | |
| c | Commercial | | | |

| Sl. No. | Type of Connection | No. of Connections | Connection Charge | Monthly Tariff |
|--|--------------------|--------------------|-------------------|----------------|
| d | Institutional | | | |
| e | Industrial | | | |
| f | Others (If any) | | | |
| Note: Collect a ward wise list for each type | | | | |
| Notes: | | | | |

15. Projects implement in the last 5 years:

| Sl. No. | Name of the Project | Capital Cost | Funding Source | Scheme details |
|---------|---------------------|--------------|----------------|----------------|
| a | | | | |
| b | | | | |
| c | | | | |
| d | | | | |
| e | | | | |

16. Projects proposed in the next 5 years:

| Sl. No. | Name of the Project | Capital Cost | Funding Source | Scheme details |
|---------|---------------------|--------------|----------------|----------------|
| a | | | | |
| b | | | | |
| c | | | | |
| d | | | | |
| e | | | | |

17. Service Level Benchmarks - Sewage Management:

| Sl. No. | Indicator | Bench mark | Proposed 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 |
|---------|--|------------|---------------|------|------|------|------|------|------|
| 1 | Coverage of Toilets | 100% | | | | | | | |
| 2 | Coverage of Sewage Network Services | 100% | | | | | | | |
| 3 | Collection Efficiency of the Sewage Network | 100% | | | | | | | |
| 4 | Adequacy of Sewage Treatment Capacity | 100% | | | | | | | |
| 5 | Quality of Sewage Treatment | 100% | | | | | | | |
| 6 | Extent of Reuse and Recycling of Sewage | 20% | | | | | | | |
| 7 | Efficiency in Redressal of Customer Complaints | 80% | | | | | | | |
| 8 | Extent of Cost Recovery in Sewage Management | 100% | | | | | | | |
| 9 | Efficiency in Collection of Sewage Charges | 90% | | | | | | | |

VI. Septage Management:

1. Do you have a septage management system operated by ULB (if yes, ask points 2 to 6 or skip to section VII?)

2. How many cesspool vehicles you have? (please fill details below)

| Sl. No. | Type of Vehicle | Capacity | Age | Trips per day |
|---------|-----------------|----------|-----|---------------|
| a | | | | |
| b | | | | |
| c | | | | |
| d | | | | |
| e | | | | |

| | |
|---|--|
| 3. Where is the septage disposed currently (location)? | |
| 4. User charge (Charged on trip basis or volume) (for different categories) | |
| 5. Other Details | |

| VII. Solid Waste Management: | |
|---|---|
| 1. Do you have a door to door collection system? (if yes, ask points 2 to 4 or skip to 5) | |
| 2. Coverage of SWM services | a. No. of Wards b. No. of Households |
| 3. Quantity of solid waste collected (in TPD) | |

4. How the solid waste collected (type of vehicles and instruments)?

| Sl. No. | Type of Vehicles/Tools | Capacity | Age | Trips per day |
|---------|------------------------|----------|-----|---------------|
| a | | | | |
| b | | | | |
| c | | | | |
| d | | | | |
| e | | | | |
| f | | | | |
| g | | | | |
| h | | | | |
| i | | | | |
| j | | | | |

| | |
|--|--|
| 5. How many community bins are there for collecting solid waste? | |
| 6. Where is the waste transported and disposed to? | |

| | |
|--|--|
| 7. Do you have a treatment plant?(If yes fill 8 & 9, If no, record the current practice) | |
| 8. Details of Treatment Infrastructure (location, capacity & current utilization levels) | <p>a. Location:</p> <p>b. Capacity (MLD):</p> <p>c. Treatment Technology:</p> <p>d. Current utilisation level (%):</p> |
| 9. Quantity of solid waste treated (in TPD) | |

10. User charges: Solid Waste Collection:

| Sl. No. | Type of Connection | Monthly User Charge |
|---------|--------------------|---------------------|
| A | Regular Household | |
| B | Slum Household | |
| C | Commercial | |
| D | Institutional | |
| E | Industrial | |
| f | Others (If any) | |

11. Service Level Benchmarks: Solid Waste Management:

| Sl. No. | Indicator | Bench mark | Proposed 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 |
|---------|--|------------|---------------|------|------|------|------|------|------|
| 1 | Household Level Coverage of SWM Services | 100% | | | | | | | |
| 2 | Efficiency of Collection of Municipal Solid Waste | 100% | | | | | | | |
| 3 | Extent of Segregation of Municipal Solid Waste | 100% | | | | | | | |
| 4 | Extent of Municipal Solid Waste Recovered | 80% | | | | | | | |
| 5 | Extent of Scientific Disposal of Municipal Solid Waste | 100% | | | | | | | |
| 6 | Efficiency in Redressal of Customer Complaints | 80% | | | | | | | |
| 7 | Extent of Cost Recovery in SWM services | 100% | | | | | | | |
| 8 | Efficiency in Collection of SWM Charges | 90% | | | | | | | |

| VIII: Storm water drainage: | |
|---|--|
| 1. Coverage of storm water drains in the city | |
| 2. Length of the drains constructed | |
| 3. Major water logging areas (if any) | |

List of documents to be collected from ULB and other agencies:

1. Demographic data:
 - a. Ward wise population
 - b. List of Slums
 - c. Slum population ward wise
2. Water Supply:
 - a. Ward wise list of HH connections
 - b. Council resolution on user charge
3. Sewerage system:
 - a. Ward wise list of HH connections
 - b. Council resolution on sewerage cess
4. Septage management
 - a. Movement record of cesspool vehicle
 - b. Council resolution on cost of emptying
5. SLB data for the last 3 years
6. Municipal Finance:
 - a. Annual Budgets for last 3 years
 - b. Property tax assessment for last 3 years
 - c. Collection efficiency for last 3 years
7. Institutional framework
 - a. Organogram
 - b. List of sanctioned positions verses filled positions (dept. wise)

List of Maps to be collected:

1. Administrative map,
2. Land use map
3. Topographic map,
4. Road and rail network map
5. Water Supply Map(s)
 - a. Location of source,
 - b. storage infrastructure and
 - c. distribution network
6. Sewerage System Map(s)
 - a. Catchment zones,
 - b. Distribution network
 - c. Location of treatment plant
7. Solid Waste Management Maps
 - a. Zones
 - b. collection route maps
 - c. location of treatment plant
8. Location of septage disposal (Designated by ULB and Illegal dumping places)
9. Major water logging areas (if any)
10. Storm water drainage maps (network map of constructed drains and natural drains)

Annexure 2 Note on Selection Criteria for Studies Towns

The purpose of selection is to assist in the systematic identification of the two urban areas that will be selected for assistance in planning and implementation of the full cycle of sanitation and septage management. It has been proposed that one of the towns will be a Municipality (less than 1 million population), and another will be cluster of town panchayats (less than 100,000 population). Municipal corporations, cantonment boards, and census towns are not being considered in the choice set.

A two-step selection criterion has been suggested:

- i. A preliminary analysis based on secondary data will be carried out to generate a short- list of cities. In discussions with GoTN, it was proposed that the selected cities would have high proportion of households covered by some sanitation facilities (or smaller proportion of households without individual toilets), and a high proportion of septic tanks so that early successes can be demonstrated.
- ii. After generating the lists from analysis of secondary data, it is proposed that the final selection will be done based on criteria including availability of land for new treatment facilities, demand from institutional and community stakeholders, assurance about financial allocations, etc.

This note is based on the initial secondary analysis (above).

Selection of Municipality:

Two options are presented for selection of municipalities.

Option 1:

1. Proportion of households without toilets within premises (going out in the open)—less than 20 per cent
2. Proportion of households with toilets with septic tanks—more than 60 per cent, and 12,000 or more (in number)

Option 2:

1. Proportion of Proportion of households without toilets within premises (going out in the open)—less than 20 per cent
2. Proportion of households with toilets with septic tanks—more than 60 per cent and 15,000 or more (in number)

Town Panchayats Cluster:

Selection criteria for the Town Panchayat clusters are as follows:

1. Proportion of Proportion of households without toilets within premises (going out in the open) –less than 20 per cent
2. Proportion of households with toilets with septic tanks –more than 50 per cent and 1,500 ore more (in number)
3. Clustering of TPs in the same Tehsil (as a proxy for distance)

Annexure 3 Data Tables for Pammal

| Ward-wise Water Supply Connections in Pammal | | | | |
|--|--------------|------------|------------|--------------|
| Ward. No. | Residential | Commercial | Industrial | Total |
| 1 | 651 | 4 | 0 | 655 |
| 2 | 508 | 0 | 0 | 508 |
| 3 | 806 | 0 | 0 | 806 |
| 4 | 411 | 4 | 0 | 415 |
| 5 | 478 | 0 | 0 | 478 |
| 6 | 492 | 0 | 0 | 492 |
| 7 | 523 | 0 | 1 | 524 |
| 8 | 730 | 0 | 0 | 730 |
| 9 | 594 | 0 | 0 | 594 |
| 10 | 367 | 0 | 0 | 367 |
| 11 | 540 | 1 | 1 | 542 |
| 12 | 435 | 0 | 0 | 435 |
| 13 | 377 | 0 | 0 | 377 |
| 14 | 605 | 0 | 0 | 605 |
| 15 | 140 | 0 | 1 | 141 |
| 16 | 499 | 1 | 1 | 501 |
| 17 | 435 | 1 | 0 | 436 |
| 18 | 261 | 2 | 4 | 267 |
| 19 | 193 | 0 | 1 | 194 |
| 20 | 534 | 0 | 0 | 534 |
| 21 | 610 | 2 | 10 | 622 |
| Totals | 10189 | 15 | 19 | 10223 |

Source: Pammal Municipality, June 2015

| Ward-wise Public Stand Posts (PSP) in Pammal | | | |
|--|----------------|------|--------------|
| Ward No. | No. of Streets | PSPs | PSPs with RO |
| 1 | 79 | 42 | 2 |
| 2 | 44 | 35 | 1 |
| 3 | 50 | 48 | 1 |
| 4 | 27 | 15 | 1 |
| 5 | 28 | 35 | 1 |
| 6 | 59 | 26 | 1 |
| 7 | 54 | 35 | 2 |

| Ward-wise Public Stand Posts (PSP) in Pammal | | | |
|---|-----------------------|-------------|---------------------|
| Ward No. | No. of Streets | PSPs | PSPs with RO |
| 8 | 42 | 26 | 1 |
| 9 | 42 | 32 | 1 |
| 10 | 19 | 23 | 1 |
| 11 | 48 | 28 | 1 |
| 12 | 34 | 26 | 1 |
| 13 | 23 | 27 | 1 |
| 14 | 35 | 26 | 1 |
| 15 | 27 | 26 | 1 |
| 16 | 24 | 20 | 1 |
| 17 | 31 | 25 | 1 |
| 18 | 35 | 26 | 2 |
| 19 | 29 | 35 | 1 |
| 20 | 45 | 28 | 1 |
| 21 | 102 | 35 | 2 |
| Total | 877 | 619 | 25 |

Source: Pammal Municipality (June 2015)

| SLB Indicators for Water Supply in Pammal Municipality | | | | | | |
|---|--|------------------|-------------|-------------|-------------|-------------|
| Sl. No. | Indicator | Benchmark | 2015 | 2014 | 2013 | 2012 |
| 1 | Coverage of Water Supply Connections | 100% | 55 | 51 | 48 | 43.17 |
| 2 | Per Capita Supply of Water | 135 lpcd | 54 | 52 | 35 | 30.71 |
| 3 | Extent of Metering of Water Connections | 100% | 0 | 0 | 0 | 0 |
| 4 | Extent of Non-Revenue Water | 20% | 20 | 21 | 23 | 25.50 |
| 5 | Continuity of Water Supply | 24 hrs | 2 | 2 | 2 | 2 |
| 6 | Quality of Water Supplied | 100% | 100 | 100 | 100 | 100 |
| 7 | Efficiency in Redressal of Customer Complaints | 80% | 85 | 80 | 80 | 66.66 |

| SLB Indicators for Water Supply in Pammal Municipality | | | | | | |
|---|--|------------------|-------------|-------------|-------------|-------------|
| Sl. No. | Indicator | Benchmark | 2015 | 2014 | 2013 | 2012 |
| 8 | Cost Recovery in Water Supply Services | 100% | 97 | 95 | 90 | 86.09 |
| 9 | Efficiency in Collection of Water Supply-related Charges | 90% | 82 | 80 | 75 | 71.67 |

Source: Pammal Municipality (June 2015)

| SLB Indicators for SWM in Pammal Municipality | | | | | | |
|--|--|------------------|-------------|-------------|-------------|-------------|
| Sl. No. | Indicator | Benchmark | 2015 | 2014 | 2013 | 2012 |
| 1 | Household Level Coverage of SWM Services | 100% | 85 | 84 | 82 | 80 |
| 2 | Efficiency of Collection of Municipal Solid Waste | 100% | 85 | 84 | 83 | 80 |
| 3 | Extent of Segregation of Municipal Solid Waste | 100% | 40 | 35 | 30 | 25 |
| 4 | Extent of Municipal Solid Waste Recovered | 80% | 70 | 65 | 60 | 53.57 |
| 5 | Extent of Scientific Disposal of Municipal Solid Waste | 100% | 0 | 0 | 0 | 0 |
| 6 | Efficiency in Redressal of Customer Complaints | 80% | 75 | 73 | 70 | 66.67 |
| 7 | Extent of Cost Recovery in SWM services | 100% | 2.5 | 2 | 2 | 1.8 |
| 8 | Efficiency in Collection of SWM Charges | 90% | 0 | 0 | 0 | 42.94 |

Source: Pammal Municipality (June 2015)

| List of Public Toilets in Pammal | | | | | | | | | | | | | |
|---|---|---------------------|----------------------|--------|-------|---------------|--------|-------|-------------|--------|------------------------|-----------------------------|-----------------------------------|
| Sl. No | Location of the Community Toilet | Water Supply | Water Closets | | | Urinal | | | Bath | | O&M respon. | User Fee (Y/N) If Y? | Functional Status/ Remarks |
| | | | Male | Female | Child | Male | Female | Child | Male | Female | | | |
| 1 | Bajanai Koil Street | Yes | 4 | 4 | - | - | - | - | - | - | ULB | Y | Functioning |
| 1 | Pasumpon Nagar | Yes | 4 | 4 | 1 | - | - | - | 1 | 1 | ULB | N | Functioning |
| 2 | Veeraswamy Nagar | Yes | 4 | 4 | 1 | - | - | - | 1 | 1 | ULB | N | Functioning |
| 3 | Kalyanipuram | Yes | 4 | 4 | 1 | - | - | - | 1 | 1 | ULB | N | Functioning |
| 4 | Thideer Nagar | Yes | 4 | 4 | 1 | - | - | - | 1 | 1 | ULB | N | Functioning |
| 5 | Adam Nagar – 1 | Yes | 4 | 4 | 1 | - | - | - | 1 | 1 | ULB | N | Functioning |
| 6 | Adam Nagar – 2 | Yes | 4 | 4 | 1 | - | - | - | 1 | 1 | ULB | N | Functioning |

Source: Pammal Municipality, June 2015

| Vehicle & Tools for SWM by Pammal Municipality | | | | |
|---|--|-----------------|----------------------|-------------------------|
| Sl. No. | Type of Vehicles/Tools | Capacity | Age | Trips per day |
| a | Tricycle (70 nos.) | 250 kg | 3 years | 2 trips within the ward |
| b | Mini Lorry (1) | 2 MT | 8 Years | 2 trips |
| c | Tipper Lorry (1) | 4 MT | 10 years | 2 trips |
| d | Tractor (2) | 1.5 MT | 8 Years | 2 trips |
| e | Refuse Collector (1) Picks community bins | 5 MT | 5 Years | 2 trips |
| f | Long Brooms (20) | - | As per ware and tare | - |
| g | Forks/Pickers (30 - 35) | - | As per ware and tare | - |
| h | Small Brooms (25 - 30) | - | As per ware and tare | - |

Source: Pammal Municipality (June 2015)

| Sanctioned and Vacant Posts Matrix of Pammal Municipality | | | | | |
|--|-------------------------------|---------------------|--------------------------|---------------|-------------------------------|
| Sl. No. | Name of the Post | No. of Posts | | | Date from which vacant |
| | | Sanctioned | Staff in Position | Vacant | |
| I | <u>General Service</u> | | | | |
| 1 | Commissioner | 1 | 0 | 1 | 01.08.2011 |
| 2 | Manager (Class IV) | 1 | 0 | 1 | 17.04.2015 |
| 3 | Assistant | 1 | 1 | 0 | |
| 4 | Junior Assistant | 3 | 3 | 0 | |
| 5 | Revenue Assistant | 3 | 3 | 0 | |
| 6 | Record Clerk | 1 | 1 | 0 | |
| 7 | Office Assistant | 1 | 1 | 0 | |
| 8 | Data Entry Operator | 1 | 1 | 0 | |
| 9 | Night Watchman | 1 | 1 | 0 | |
| 10 | Driver | 1 | 1 | 0 | |
| | Sub-Total | 14 | 12 | 2 | |

| | | | | | |
|--|-----------------------------------|------------|------------|----------|--|
| II | <u>Engineering Service</u> | | | | |
| 1 | <u>General</u> | | | | |
| a | Municipal Engineer | 1 | 1 | 0 | |
| b | Public Work Overseer | 2 | 2 | 0 | |
| c | Work Inspector | 1 | 1 | 0 | |
| d | Sub-Total | 4 | 4 | 0 | |
| 2 | <u>Water supply</u> | | | | |
| a | Electrician Grade II | 1 | 1 | 0 | |
| b | Driver | 3 | 3 | 0 | |
| c | Helper (water supply) | 1 | 1 | 0 | |
| d | Fitter Gr. II | 1 | 1 | 0 | |
| e | Hand pump maintainer | 1 | 1 | 0 | |
| f | Turn cock | 3 | 3 | 0 | |
| g | Overhead tank watch man | 1 | 1 | 0 | |
| h | Wireman & Helper | 2 | 2 | 0 | 02.10.2010 and 08.05.2015 |
| i | Sub-Total | 13 | 13 | 0 | |
| III | <u>Health Service</u> | | | | |
| a | Sanitary Inspector | 1 | 1 | 0 | |
| b | Sanitary Supervisor | 2 | 2 | 0 | |
| c | Public Health Driver | 5 | 5 | 0 | |
| d | Sanitary workers | 97 | 93 | 4 | 1 (05.05.2004), 1 (01.06.2007), 11 (1.04.2009), 1 (25.04.2009), 1 (12.01.2010), 1 (28.04.2010), 1 (01.02.2011) |
| e | Community Organiser | 1 | 1 | 0 | |
| | Sub-Total | 106 | 102 | 4 | |
| | Grand Total | 137 | 131 | 6 | |
| <i>Source: Pammal Municipality (June 2015)</i> | | | | | |

| Property Tax Assessments in Pammal | | | | | |
|--|-------------------|--------------------|-------------------|-------------------|--------------|
| Ward No. | Population | Residential | Industrial | Commercial | Total |
| 1 | 5537 | 1744 | 6 | 47 | 1797 |
| 2 | 3361 | 1112 | 0 | 81 | 1193 |
| 3 | 2271 | 1159 | 19 | 124 | 1302 |
| 4 | 2284 | 581 | 1 | 155 | 737 |
| 5 | 3100 | 970 | 8 | 74 | 1052 |
| 6 | 3866 | 980 | 6 | 144 | 1130 |
| 7 | 4067 | 902 | 4 | 5 | 911 |
| 8 | 4392 | 1102 | 9 | 30 | 1141 |
| 9 | 3716 | 950 | 5 | 96 | 1051 |
| 10 | 1851 | 715 | 9 | 144 | 868 |
| 11 | 2947 | 805 | 5 | 151 | 961 |
| 12 | 5699 | 804 | 1 | 1 | 806 |
| 13 | 3068 | 595 | 3 | 1 | 599 |
| 14 | 3363 | 847 | 6 | 9 | 862 |
| 15 | 1670 | 362 | 32 | 7 | 401 |
| 16 | 3826 | 848 | 8 | 23 | 879 |
| 17 | 3688 | 765 | 6 | 34 | 805 |
| 18 | 2569 | 617 | 67 | 45 | 729 |
| 19 | 3246 | 545 | 25 | 8 | 578 |
| 20 | 4779 | 964 | 19 | 10 | 993 |
| 21 | 4074 | 1460 | 380 | 69 | 1909 |
| Total | 73374 | 18827 | 619 | 1258 | 20704 |
| <i>Source: Pammal Municipality (June 2015)</i> | | | | | |

| Deviations in design of septic tanks during construction in Pammal | | | | | | | | | | | | | | |
|--|-------------|-------------------------|----------|----------|----------|-----------------|-----------------|------|----------|------------|---------------|-----------|----------|--------|
| Sl. No. | Shape | Size (cu. mt.) (people) | | | | No. of Chambers | Water Tightness | | | Free Board | Access Covers | Vent Pipe | Disposal | |
| | Rectangular | 1.2 (5) | 2.5 (10) | 3.6 (15) | 4.5 (20) | 2 | Walls | Base | Top Slab | | | | Soak Pit | Trench |
| From Household Interviews: | | | | | | | | | | | | | | |
| 1 | Y | N | N | N | N | Y | Y | N | Y | NA | Y | Y | Y | NA |
| 2 | Y | N | N | N | N | Y | Y | N | Y | NA | N | Y | N | NA |
| 3 | Y | NA | NA | NA | NA | NA | Y | NA | Y | NA | y | N | N | NA |
| 4 | Y | N | N | N | N | N | Y | N | Y | NA | Y | Y | N | NA |
| 5 | Y | N | N | N | N | N | Y | Y | Y | NA | Y | Y | Y | NA |
| 6 | Y | NA | NA | NA | NA | N | Y | Y | Y | NA | Y | N | N | NA |
| 7 | Y | N | N | N | N | Y | Y | Y | Y | NA | N | Y | N | NA |
| 8 | Y | N | N | N | N | Y | Y | Y | Y | NA | N | Y | N | NA |
| From Masons: | | | | | | | | | | | | | | |
| 1 | Y | N | N | N | N | Y | Y | N | Y | Y | Y | Y | Y | NA |
| 2 | Y | N | N | N | N | Y | Y | N | Y | Y | Y | Y | Y | NA |
| 3 | Y | N | N | N | N | N | Y | N | Y | Y | Y | Y | N | NA |
| From Builders: | | | | | | | | | | | | | | |
| 1 | Y | N | N | N | N | N | Y | Y | Y | Y | Y | Y | Y | Y |
| 2 | Y | N | N | N | N | Y | Y | Y | Y | Y | Y | Y | Y | NA |

Annexure 4 Data Tables for Town Panchayats

Ward-wise population of TPs

| Ward-wise population of Periyanaicken-palayam | | | | |
|---|---------------|------------------|--------------|--------------|
| Ward No | No. of Houses | Total Population | | |
| | | Total | Male | Female |
| 1 | 305 | 1326 | 670 | 656 |
| 2 | 340 | 866 | 435 | 431 |
| 3 | 480 | 2540 | 1279 | 1261 |
| 4 | 830 | 1529 | 766 | 763 |
| 5 | 342 | 1172 | 587 | 585 |
| 6 | 390 | 1301 | 674 | 627 |
| 7 | 482 | 1324 | 681 | 643 |
| 8 | 422 | 1006 | 491 | 515 |
| 9 | 420 | 1027 | 520 | 507 |
| 10 | 345 | 1807 | 877 | 930 |
| 11 | 365 | 989 | 483 | 506 |
| 12 | 420 | 1478 | 692 | 786 |
| 13 | 680 | 2052 | 1030 | 1022 |
| 14 | 345 | 1486 | 761 | 725 |
| 15 | 730 | 2346 | 1199 | 1147 |
| 16 | 530 | 2437 | 1241 | 1196 |
| 17 | 325 | 1201 | 596 | 605 |
| 18 | 386 | 1219 | 595 | 624 |
| | 8137 | 27106 | 13577 | 13529 |
| <i>Source: Periyanaicken-palayam Town Panchayat, 2015</i> | | | | |

Details of Slum Settlements in TPs

| Details of Slum Settlements in Periyanaicken-palayam | | |
|--|------------------|----------|
| Sl. No. | Name of the Slum | Ward No. |
| 1 | Kuppuchipalayam | 5 |
| 2 | Anna Nagar | 7 |
| 3 | Vivekanandapuram | 13 |
| Total Population is 1695 (973 males and 822 Females) | | |
| Source: Periyanaicken-palayam Town Panchayat, 2015 | | |

| Details of Slum Settlements in Narsimhanaicken-palayam | | | | | |
|--|---------------------|------------|------------|------------|------------|
| Sl. No. | Name of the Slum | No. of HHs | Population | Male | Female |
| 1 | MGR Nagar | 32 | 150 | 78 | 72 |
| 2 | Om Shakthi Nagar | 52 | 163 | 69 | 94 |
| 3 | Ambethkar Nagar | 23 | 86 | 32 | 56 |
| 4 | Arijana Colony | 71 | 162 | 79 | 82 |
| 5 | Chennamanaickenur | 75 | 145 | 81 | 63 |
| 6 | Balavinayagar Nagar | 60 - 80 | No Data | No Data | No Data |
| | Totals | 290 | 857 | 408 | 449 |
| Source: Periyanaicken-palayam Town Panchayat, 2015 | | | | | |

Ward-wise Water Supply Connections in TPs

| Ward-wise Water Supply Connections in Periyanaicken-palayam | | | | |
|---|----------|------------|------------|-------|
| Ward No. | Domestic | Commercial | Industries | Total |
| 1 | 457 | 9 | 2 | 468 |
| 2 | 188 | 1 | 0 | 189 |
| 3 | 453 | 12 | 7 | 472 |
| 4 | 304 | 0 | 0 | 304 |
| 5 | 360 | 3 | 7 | 370 |
| 6 | 426 | 25 | 5 | 456 |
| 7 | 226 | 6 | 2 | 234 |
| 8 | 206 | 6 | 1 | 213 |
| 9 | 154 | 11 | 5 | 170 |
| 10 | 314 | 0 | 0 | 314 |
| 11 | 89 | 0 | 0 | 89 |
| 12 | 203 | 2 | 1 | 206 |
| 13 | 292 | 6 | 3 | 301 |

| Ward-wise Water Supply Connections in Periyanaicken-palayam | | | | |
|--|-----------------|-------------------|-------------------|--------------|
| Ward No. | Domestic | Commercial | Industries | Total |
| 14 | 218 | 1 | 0 | 219 |
| 15 | 542 | 10 | 3 | 555 |
| 16 | 818 | 80 | 21 | 919 |
| 17 | 215 | 0 | 0 | 215 |
| 18 | 280 | 3 | 1 | 284 |
| Total | 5745 | 175 | 58 | 5978 |

Source: Periyanaicken-palayam Town Panchayat, 2015

Year-wise SLB Data of TPs:

SLB Data of Periyanaicken-palayam:

| SLB indicators for Water Supply in Periyanaicken-palayam | | | | | | |
|---|--|------------------|-------------|-------------|-------------|-------------|
| Sl. No. | Indicator | Benchmark | 2015 | 2014 | 2013 | 2012 |
| 1 | Coverage of Water Supply Connections | 100 % | NA | NA | NA | 100 |
| 2 | Per Capita Supply of Water | 135 lpcd | NA | NA | NA | 71 |
| 3 | Extent of Metering of Water Connections | 100 % | NA | NA | NA | 100 |
| 4 | Extent of Non-Revenue Water | 20 % | NA | NA | NA | 14.79 |
| 5 | Continuity of Water Supply | 24 hrs | NA | NA | NA | 1 |
| 6 | Quality of Water Supplied | 100 % | NA | NA | NA | 100 |
| 7 | Efficiency in Redressal of Customer Complaints | 80 % | NA | NA | NA | 87 |
| 8 | Cost Recovery in Water Supply Services | 100 % | NA | NA | NA | - |
| 9 | Efficiency in Collection of Water Supply-related Charges | 90 % | NA | NA | NA | 100 |

Source: Periyanaicken-palayam Town Panchayat

| SLB indicators for SWM in Periyanaicken-palayam | | | | | | |
|--|--|------------------|-------------|-------------|-------------|-------------|
| Sl. No. | Indicator | Benchmark | 2015 | 2014 | 2013 | 2012 |
| 1 | Household Level Coverage of SWM Services | 100 % | NA | NA | NA | 100 |
| 2 | Efficiency of Collection of Municipal Solid Waste | 100 % | NA | NA | NA | 100 |
| 3 | Extent of Segregation of Municipal Solid Waste | 100 % | NA | NA | NA | 50 |
| 4 | Extent of Municipal Solid Waste Recovered | 80 % | NA | NA | NA | - |
| 5 | Extent of Scientific Disposal of Municipal Solid Waste | 100 % | NA | NA | NA | 75 |
| 6 | Efficiency in Redressal of Customer Complaints | 80 % | NA | NA | NA | 80 |
| 7 | Extent of Cost Recovery in SWM services | 100 % | NA | NA | NA | - |
| 8 | Efficiency in Collection of SWM Charges | 90 % | NA | NA | NA | - |

Source: Periyanaicken-palayam Town Panchayat

| SLB indicators for Storm Water Drainage in Periyanaicken-palayam | | | | | | |
|---|--|------------------|-------------|-------------|-------------|-------------|
| Sl. No. | Indicator | Benchmark | 2015 | 2014 | 2013 | 2012 |
| 1 | Coverage of Storm water drainage network | 100 % | NA | NA | NA | 65.80 |
| 2 | Incidence of water logging / flooding | 0 % | NA | NA | NA | 0 |

Source: Periyanaicken-palayam Town Panchayat

List of Public Toilets in TPs

| Public Toilets in Periyanaicken-palayam | | | | | | | | | | | | |
|---|----------|-------------------------------|--------------|--------------|--------|-------|--------|--------|-------|--------------------|----------------------|-----------------------------|
| Sl. No. | Ward no. | Location of the Public Toilet | Water Supply | Toilet Seats | | | Urinal | | | O&M responsibility | User Fee (Y/N) If Y? | Functional Status / Remarks |
| | | | | Male | Female | Child | Male | Female | Child | | | |
| 1 | 3 | Irvin Road | Yes | 3 | 3 | - | - | - | - | TP | | |
| 2 | 7 | Anna Nagar | Yes | 4 | 6 | - | - | - | - | TP | | |
| 3 | 7 | Ooty Road | Yes | 3 | 3 | - | - | - | -- | TP | | |
| 4 | 10 | Union Bank Road | Yes | - | 6 | - | - | -- | - | TP | | |
| 5 | 11 | Kanduvar Street | Yes | 6 | 5 | - | - | -- | - | TP | | |
| 6 | 12 | K K Nagar | Yes | 6 | - | - | - | - | - | TP | | |
| 7 | 13 | Vivekanandapuram | Yes | 6 | 6 | - | - | - | - | TP | | |
| 8 | 18 | Jyothipuram Bus Stand | Yes | 8 | 9 | - | - | - | - | TP | | |
| 9 | 8 | Indra Nagar Shopping Complex | Yes | 4 | 4 | - | 4 | - | - | TP | | |

Source: Town Panchayat Office of Periyanaicken-palayam, 2015

| Community Toilets in Periyanaicken-palayam | | | | | | | | | | | | | | |
|---|----------|----------------------------------|--------------|---------------|--------|-------|--------|--------|-------|------|--------|-------------|----------------------|----------------------------|
| Sl. No | Ward No. | Location of the Community Toilet | Water Supply | Water Closets | | | Urinal | | | Bath | | O&M respon. | User Fee (Y/N) If Y? | Functional Status/ Remarks |
| | | | | Male | Female | Child | Male | Female | Child | Male | Female | | | |
| 1 | 4 | Kasturipalayam | Yes | 3 | 3 | - | - | - | - | - | 3 | TP | | |
| 2 | 4 | Sathya Nagar | Yes | 6 | 6 | - | - | - | - | - | 4 | TP | | |
| 3 | 5 | Kappichipalayam | Yes | - | 13 | - | - | - | - | - | 4 | TP | | |
| 4 | 15 | Sakthi Nagar | Yes | 8 | 9 | - | - | - | - | - | 3 | TP | | |

Source: Town Panchayat Office of Periyanaicken-palayam, 2015

| Public Toilets in Narasimhanaicken-palayam | | | | | | | | | | | | | |
|---|----------|-------------------------------|--------------|--------------|--------|-------|--------|--------|-------|--------------------|------------------------|-----------------------------|--|
| Sl. No. | Ward no. | Location of the Public Toilet | Water Supply | Toilet Seats | | | Urinal | | | O&M responsibility | User Fee (Y/N) If Y, ? | Functional Status / Remarks | |
| | | | | Male | Female | Child | Male | Female | Child | | | | |
| 1 | 2 | Pudhupalayam | Yes | 6 | | | - | - | - | Town Panchayat | No | In Use | |
| 2 | 2 | Pudhupalayam | Yes | | 8 | | - | - | - | | | In Use | |
| 3 | 3 | Balaji Nagar | Yes | 8 | 8 | | - | - | - | | | In Use | |

| Public Toilets in Narasimhanaicken-palayam | | | | | | | | | | | | |
|--|----------|-------------------------------|--------------|--------------|--------|-------|--------|--------|-------|--------------------|------------------------|-----------------------------|
| Sl. No. | Ward no. | Location of the Public Toilet | Water Supply | Toilet Seats | | | Urinal | | | O&M responsibility | User Fee (Y/N) If Y, ? | Functional Status / Remarks |
| | | | | Male | Female | Child | Male | Female | Child | | | |
| 4 | 3 | Bala vinayagar Nagar | Yes | 5 | 5 | | - | - | - | | | In Use |
| 5 | 6 | Rakkipalayam | Yes | 12 | 6 | | - | - | - | | | In Use |
| 6 | 7 | A.D. Colony | Yes | 5 | 5 | | - | - | - | | | In Use |
| 7 | 8 | Palaiyur | Yes | 5 | 5 | | - | - | - | | | In Use |
| 8 | 8 | Om Sakthi Nagar | Yes | 6 | 4 | | - | - | - | | | In Use |
| 9 | 12 | Om Sakthi Nagar | Yes | 6 | 5 | | - | - | - | | | In Use |
| 10 | 13 | Poochiyur | Yes | 5 | 5 | | - | - | - | | | In Use |
| 11 | 13 | Poochiyur | Yes | 1 | 1 | | - | - | - | | | In Use |
| 12 | 13 | Sennamanaickenur | Yes | 3 | 3 | | - | - | - | | | In Use |

Source: Town Panchayat Office of Narasimhanaicken-palayam, 2015

| Public and Community Toilets in Idigarai | | | | | | | | | | | | | | |
|--|----------|-----------------------------------|--------------|---------------|--------|-------|--------|--------|-------|------|--------|----------------|----------------------|----------------------------|
| Sl. No | Ward No. | Location of the Community Toilet | Water Supply | Water Closets | | | Urinal | | | Bath | | O&M respon. | User Fee (Y/N) If Y? | Functional Status/ Remarks |
| | | | | Male | Female | Child | Male | Female | Child | Male | Female | | | |
| 1 | 2 | Main Road, Govindhanaickenpalayam | | - | 4 | - | - | - | - | - | - | Town Panchayat | No | In Use |
| 2 | 2 | Main Road, Govindhanaickenpalayam | | 6 | - | - | - | - | - | - | - | Town Panchayat | | In Use |
| 3 | 2 | AD Colony, Govindhanaickenpalayam | | 4 | 4 | - | - | - | - | - | - | Town Panchayat | | In Use |
| 4 | 2 | Main Road (Disable Toilet) | | 2 | 2 | - | - | - | - | - | - | Town Panchayat | | In Use |
| 5 | 3 | Periyar Nagar | | 4 | 4 | - | - | - | - | 2 | 2 | Town Panchayat | | In Use |
| 6 | 4 | Krishnapuram | | 3 | 3 | - | - | - | - | - | - | Town Panchayat | | In Use |
| 7 | 4 | Chennamanaickenpalayam | | - | 8 | - | - | - | - | - | 2 | Town Panchayat | | In Use |
| 8 | 5 | Sengalipalayam | | 4 | 4 | - | - | - | - | - | - | Town Panchayat | | In Use |
| 9 | 6 | Sengalipalayam | | - | 8 | - | - | - | - | - | 2 | Town Panchayat | | In Use |
| 10 | 6 | Sengalipalayam | | 6 | - | - | - | - | - | - | - | Town Panchayat | | In Use |
| 11 | 7 | Maniyakaranpalayam | | 0 | 6 | - | - | - | - | - | - | Town Panchayat | | In Use |
| 12 | 8 | AD Colony | | 4 | 4 | - | - | - | - | - | - | Town Panchayat | | In Use |

| Public and Community Toilets in Idigarai | | | | | | | | | | | | | | |
|---|----------|----------------------------------|--------------|---------------|--------|-------|--------|--------|-------|------|--------|----------------|----------------------|----------------------------|
| Sl. No | Ward No. | Location of the Community Toilet | Water Supply | Water Closets | | | Urinal | | | Bath | | O&M respon. | User Fee (Y/N) If Y? | Functional Status/ Remarks |
| | | | | Male | Female | Child | Male | Female | Child | Male | Female | | | |
| 13 | 13 | Main Road, Idigarai | | 4 | 4 | - | - | - | - | 2 | 2 | Town Panchayat | | In Use |
| 14 | 14 | Nandhavana street, Idigarai | | 6 | 6 | - | - | - | - | - | - | Town Panchayat | | In Use |
| 15 | 15 | AD Colony, Idigarai | | 6 | 6 | - | - | - | - | - | - | Town Panchayat | | In Use |

Source: Town Panchayat Office of Idigarai, 2015

| Details of Households without toilets in PN-Playam | | | |
|---|-------------------------|---------------------------|-------------------------|
| Ward No. | Total No. of HHs | HHs without Toilet | Total Population |
| 1 | 305 | 5 | 1326 |
| 2 | 340 | 10 | 866 |
| 3 | 480 | 15 | 2540 |
| 4 | 830 | 177 | 1529 |
| 5 | 342 | 106 | 1172 |
| 6 | 390 | 10 | 1302 |
| 7 | 482 | 65 | 1324 |
| 8 | 422 | 50 | 1006 |
| 9 | 420 | 10 | 1027 |
| 10 | 345 | 35 | 1807 |
| 11 | 365 | 85 | 989 |
| 12 | 420 | 15 | 1478 |
| 13 | 680 | 450 | 2052 |
| 14 | 345 | 25 | 1486 |
| 15 | 730 | 15 | 2346 |
| 16 | 530 | 55 | 2437 |
| 17 | 325 | 15 | 1201 |
| 18 | 386 | 10 | 1219 |
| | 8137 | 1118 | 27106 |

Source: Town Panchayat office–Periyanaicken-palayam

Sanctioned and Vacant Posts Matrix of TPs

| Sanctioned and Vacant Posts Matrix of Periyanaicken-palayam | | | | |
|--|-------------------|---|--------------------------------------|------------------|
| Sl. No. | Post | Periyanaicken-palayam Town Panchayat Staff details | | |
| | | Total No. of sanctioned posts | Total no. of present strength | Vacancies |
| 1 | Executive officer | 1 | 1 | - |
| 2 | Head Clerk | 1 | 0 | 1 |

| Sanctioned and Vacant Posts Matrix of Periyanaicken-palayam | | | | |
|---|--------------------------------|---|--------------------------------------|------------------|
| Sl. No. | Post | Periyanaicken-palayam Town Panchayat Staff details | | |
| | | Total No. of sanctioned posts | Total no. of present strength | Vacancies |
| 3 | Junior Assistant | 3 | 3 | - |
| 4 | Bill Collector | 3 | 2 | 1 |
| 5 | Office Assistant | 1 | 1 | - |
| 6 | Sanitary Inspector | 1 | 1 | - |
| 7 | Sanitary Supervisor | 1 | 1 | - |
| 8 | Pump Mechanic | 1 | 1 | - |
| 9 | Sanitary Worker (Full-Time)# | 25 | 24 | 1 |
| 10 | Sanitary Worker (On-contract)* | - | 45 | - |
| | Total | 37 | 35 | 2 |
| <p># the monthly income ranges between ₹18,000 to ₹23,000 per month based on seniority. * Sanitation workers on contract are paid ₹180 per day (paid on monthly basis). Their timings of operation are 6 to 11 am and 2 to 5 pm.</p> | | | | |
| <p>Source: Periyanaicken-palayam Town Panchayat, 2015</p> | | | | |

Property Tax Assessments in Town Panchayats

| Property Tax Assessments in Periyanaicken-palayam | | | |
|---|-------------|---------------------------|---------------------------|
| Sl. No. | Year | Assessment Details | Amount(in ₹ lakhs) |
| 1 | 2012-2013 | 7922 | 65.84 |
| 2 | 2013-2014 | 7895 | 77.01 |
| 3 | 2014-2015 | 8661 | 80.82 |
| <p>Source: Periyanaicken-palayam Town Panchayat, 2015</p> | | | |

| Property Tax Details for the Year 2014–15 of Periyanaicken-palayam | | |
|---|---------------------------|------------------------------------|
| Ward No. | No. of Assessments | Total Income from P-Tax (₹) |
| 1 | 653 | 2,85,216 |
| 2 | 267 | 75,105 |
| 3 | 1036 | 3,48,551 |
| 4 | 463 | 1,10,188 |
| 5 | 377 | 79,040 |
| 6 | 511 | 1,05,783 |
| 7 | 503 | 2,22,553 |
| 8 | 322 | 83,190 |
| 9 | 331 | 1,04,514 |
| 10 | 257 | 48,719 |
| 11 | 224 | 44,705 |
| 12 | 312 | 72,212 |
| 13 | 600 | 1,53,460 |
| 14 | 404 | 90,126 |
| 15 | 898 | 3,33,812 |
| 16 | 1036 | 10,71,067 |
| 17 | 276 | 62,904 |
| 18 | 391 | 1,07,727 |
| | 8,861 | 33,98,872 |
| <i>Source: Periyanaicken-palayam Town Panchayat, 2015</i> | | |

iihs™

INDIAN INSTITUTE FOR
HUMAN SETTLEMENTS

Indian Institute for Human Settlements
Bangalore City Campus
No. 197/36, 2nd Main Road
Sadashiva Nagar
Bangalore 560 080, India
T +91 806760 6666
www.iihs.co.in