APPENDIX 1

Household’s response to Water supply scarcity in Chennai city
Madras Institute of Development Studies,
79, II Main Road, Gandhinagar, Adyar,
Chennai-600 020

Questionnaire for the Main Survey as a part of the Doctoral Programme

Address:

1. Basic demographic details:

<table>
<thead>
<tr>
<th>Name of the Head of the household</th>
<th>Sex</th>
<th>Age</th>
<th>SC/BC/OC</th>
<th>No of family members</th>
<th>Occupation of the Head of the Household</th>
<th>Educational Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
<td>C</td>
<td>M</td>
</tr>
</tbody>
</table>

2. Occupation of the household members and: their monthly average income

<table>
<thead>
<tr>
<th>No</th>
<th>Member</th>
<th>Occupation</th>
<th>Monthly average household income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. No of years living in this locality:
4. Different sources of Water supply for the Household:

<table>
<thead>
<tr>
<th>Purposes</th>
<th>Source</th>
<th>Quality</th>
<th>Quantity used (in litres)</th>
<th>Price paid (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washing Clothes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washing Premises</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gardening</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1) Code for the source: MCH for metrowater connection at home, PSP for public stand post, PUT for public tanker, PB for private borewell, HP for hand pump, PRT for private tanker and O for others.

2) Code for the quality: D for drinkable, S for saline, N.D for nondrinkable, Y for yellow in colour, BO for bad odour, L for lathering with soap, N.L for failure to lather with soap.

5. Details on water availability from Metro water Board

<table>
<thead>
<tr>
<th>Seasons</th>
<th>Daily/Alternate days</th>
<th>No of hours</th>
<th>Quantity in Litres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer season</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainy season</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winter</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. When does the water come?

Night/Day
7. Do you store water? If so give details of the storage facilities available?

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Number</th>
<th>Capacity (in litres)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sump</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overhead tank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drums</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buckets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pots/Kodams</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Quality of Metro water:

<table>
<thead>
<tr>
<th>Taste</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td></td>
</tr>
<tr>
<td>Smell</td>
<td></td>
</tr>
<tr>
<td>Lathering</td>
<td></td>
</tr>
<tr>
<td>Drinkable</td>
<td></td>
</tr>
<tr>
<td>Saline</td>
<td></td>
</tr>
</tbody>
</table>

9. Do you have your own borewell/well within your premises? Y/N

If yes, give the following details:

<table>
<thead>
<tr>
<th>Depth of the borewell</th>
<th>Depth of the well</th>
<th>Water quantity</th>
<th>Water Supply A/IA</th>
<th>Method of water extraction</th>
</tr>
</thead>
</table>

Note: 1) A for adequate and IA for inadequate
2) M for motor and P for pump

10. Do you boil water before using for drinking purpose?

11. How much do you spend on boiling water per month?

12. Have you installed water purifier?

13. If yes, when did you install (Year)?
14. If yes, the cost of installation:

15. Have members of your household suffered from water borne diseases?
   If yes, circle which one: diarrhea, dysentery, jaundice, typhoid, cholera, gastroenteritis, chikungunya, others…

16. Expenditure on health:

<table>
<thead>
<tr>
<th>Incidence of Waterborne diseases in the last one year in the family</th>
<th>Amount spend on the treatment of these diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>Adults</td>
</tr>
</tbody>
</table>

17. Where do you discharge your wastewater (tick)

   | Underground drainage | Open drains | Septic tanks | Outside | Rivers/Streams | Others |

18. Do you have toilet facilities?
   Private/public (tick)

19. Price paid for using public toilet per head:

   Date:

   Time taken for the survey:
APPENDIX 2

An analysis of the major factors accounting for the vulnerability of the slum dwellers in relation to the flat dwellers has been studied using the vulnerability index (drawn from the vulnerability Index used by S.Janakarajan for Tamil Nadu field sites).

1. **Family size:**

   More than 10 - VS 10
   8-10 - VS 8
   5-7 - VS 6
   3-4 - VS 4
   Two and less - VS 2

2. **Social Status: Caste**

   SC gets the highest VS of 10
   ST gets VS of -10
   Most backward communities get VS of: 8
   Backward communities get VS of: 6
   Other Communities get VS of: 4

3. **No of People above 60 years of age**

   Four and more members - VS 10
   Three members - VS 8
   Two members - VS 6
   One member - VS 4
   No member - VS -1
4. Children below 5 years
Four and more members – VS 10
Three members - VS 8
Two members - VS 6
One member - VS 4
No member - VS 1

5. Per capita domicile space for an average family size of 4 or 5:
<40 sqft- VS 10
40-99 sqft- VS 8
100-199 sqft-VS 6
200-399 sqft-VS 4
400 and above sqft-VS 2

6. Access to education:
No literate person in the HH: VS 10
At least one literate person in the HH who can read, write, communicate and transact: 8
At least one person in the HH who has completed school final: 6
At least one person in the HH who has an undergraduate degree: 4
At least one person in the HH who has a professional / Masters degree: 2
At least one person in the HH who has a professional / Masters degree: 1

7. Income:
(Those whose income is below 24,000 per annum is considered living below poverty line according to the Planning Commission’s estimates)
Less than Rs. 5000 per month: VS 10
Rs.5001 to Rs.10000 per month: VS 8
Rs.10001 to Rs20000 per month: VS 6
Rs.20001 to Rs.30000 per month: VS 4
Rs.30001 to Rs.40000: VS 2
More than Rs40001: VS 1

8. Access to housing facility:
Rented hut in the slum- VS 10
Own hut in the slum –VS 9
Tiled house in the slum – VS 8
Rent house in the apartment-VS 4
Own house in the apartment-VS-2
9. Access to Drinking Water:

No drinking water supply at one’s own source: VS 10
Water supply at one’s own source but brackish: VS 5
Street taps: VS 5
Piped water supply at one’s own home plus private bore: VS 4
Piped water supply at one’s own home plus private bore and mineral water-2
Piped water supply at one’s own home plus private bore and mineral water and water purifier-1

10. Access to sanitation:

No toilets at home: VS 10
Using community toilets: VS 5
Toilets at home: VS 1

11. Access to health care

Prone to water related diseases and no access to health care-VS 10
Prone to water related diseases and access to health care in GH-8
Prone to water related diseases and access to health care in private clinic-6
Less prone to water related diseases -4
Not prone to water related diseases and has access to health care-2

If the total VS for a household are more than 75, then the household may be said to be gravely vulnerable.
If the total VS for a household is between 51-75 – then the household may be said to be highly vulnerable.
If the total VS are 25 to 50 then the household may be said to be moderately vulnerable.
If total VS are less than 25 then the household may be said to be less vulnerable

Three levels of vulnerability indices could be made – one at individual HH level, two, caste or community level and three, at the locational level.