

(Panchayat wards in case of Kerala) in the rural sector and Urban Frame Survey (UFS) blocks in the urban sector. The ultimate stage units (USU) were households in both the sectors. In case of large FSUs, one intermediate stage of sampling was the selection of two hamlet-groups (hgs)/ sub-blocks (sbs) from each rural/ urban FSU. The survey covered the whole of the Indian Union however the present paper focused only the southern parts of India (AP, Karnataka, Kerala and Tamil Nadu). The total number of households covered in the southern states was 19,520.

RESULTS

Information on drinking water was collected from 19,520 households in southern states (AP: 5819; Karnataka: 4080; Kerala: 3837; and Tamil Nadu: 5784). Table 1 discloses the percentage distribution of households in each of southern states by background conditions. Karnataka state stood at top in respect of average number of members in a family (4.46), followed by Kerala with 4.10 and least by the Tamil Nadu (3.61). In each state almost equal number of households were covered from rural and urban sector. Irrespective of the study states, overwhelming majority of the households' head age was above 18 years. With regard to head of the household, more than one-fifth of the families in Kerala were headed by females (28.2percent) and it was lowest in Andhra Pradesh state (17.7percent). The religious compositions of household show that invariably in all the study states more than eighty percent of them Hindus (except Kerala:60.9percent). In Kerala, both Muslims (21.1percent) and Christians (17.8percent) were slightly dominated than the rest of the study states. Nearly one-fourth of the families belong to SC/ST in all the study states except in Kerala (14.9percent).

Table No. 1
Percentage distribution of Households in Southern States of India by
Background Conditions

| Background Conditions | AP | KAR | KER | TN | SOUTHERN |
|--|-------------|-------------|-------------|-------------|-----------------|
| Household Size*** 526.969 | | | | | |
| 1-3 members | 45.0 | 33.3 | 40.1 | 45.8 | 41.8 |
| 4 members | 28.0 | 24.8 | 25.0 | 28.1 | 26.8 |
| 5-6 members | 21.2 | 27.4 | 24.9 | 21.4 | 23.3 |
| Above 6 members | 5.7 | 14.5 | 10.1 | 4.7 | 8.1 |
| Average HH size | 3.69 | 4.46 | 4.10 | 3.61 | 3.91 |
| Place of Residence^{NS} | | | | | |
| Rural | 50.1 | 49.4 | 50.0 | 50.6 | 50.1 |
| Urban | 49.9 | 50.6 | 50.0 | 49.4 | 49.9 |
| Age of head of HH*** 70.927 | | | | | |
| Less than 18yrs | 3.1 | 1.7 | 1.1 | 1.1 | 1.9 |
| Above 18yrs | 96.9 | 98.3 | 98.9 | 98.8 | 98.1 |
| Gender of the household Head ***189.741 | | | | | |
| Male | 82.3 | 82.0 | 71.8 | 80.8 | 79.7 |
| Female | 17.7 | 18.0 | 28.2 | 19.2 | 20.3 |
| Religion ***2028.821 | | | | | |
| Hindu | 89.0 | 84.1 | 60.9 | 89.4 | 82.6 |
| Muslim | 8.5 | 13.8 | 21.1 | 5.4 | 11.2 |
| Christian | 2.3 | 1.7 | 17.8 | 5.2 | 6.1 |
| Others | 0.2 | 0.4 | 0.1 | 0.1 | 0.2 |
| Caste ***1371.567 | | | | | |
| ST/SC | 23.8 | 25.0 | 14.9 | 23.6 | 22.3 |
| OBC | 50.9 | 53.6 | 59.1 | 72.8 | 59.5 |
| Others | 25.3 | 21.4 | 26.0 | 3.6 | 18.2 |
| Education Male ***841.709 | | | | | |
| No Education | 17.5 | 9.4 | 1.7 | 8.5 | 10.0 |
| Below Primary | 6.3 | 5.4 | 3.4 | 5.2 | 5.2 |
| Primary | 8.5 | 8.7 | 8.9 | 12.1 | 9.7 |
| Secondary | 35.5 | 45.1 | 55.2 | 42.3 | 43.4 |
| High Sec/Diploma | 14.4 | 16.3 | 16.1 | 16.7 | 15.8 |
| Degree | 17.8 | 15.2 | 14.6 | 15.2 | 15.9 |
| Education Female ***1416.923 | | | | | |
| No Education | 30.3 | 18.9 | 2.9 | 19.7 | 19.4 |
| Below Primary | 7.3 | 5.7 | 2.9 | 5.9 | 5.7 |
| Primary | 9.7 | 9.6 | 7.0 | 11.3 | 9.6 |
| Secondary | 33.2 | 42.3 | 51.5 | 37.3 | 39.9 |
| High Sec/Diploma | 10.4 | 13.4 | 19.2 | 13.7 | 13.7 |
| Degree | 9.1 | 10.2 | 16.5 | 12.1 | 11.7 |
| Total | 5819 | 4080 | 3837 | 5784 | 19520 |
| Occupation | | | | | |
| Rural***690.181 | | | | | |
| Agri related | 56.0 | 66.3 | 27.5 | 45.3 | 49.3 |
| Non-agri related | 25.4 | 20.7 | 44.6 | 32.6 | 30.4 |
| Salary, regular wages | 10.7 | 8.7 | 15.7 | 14.3 | 12.4 |
| Others | 7.9 | 4.3 | 12.2 | 7.8 | 7.9 |
| Total | 2916 | 2016 | 1919 | 2928 | 9779 |
| Urban***225.303 | | | | | |
| Self employed | 32.2 | 30.7 | 23.8 | 28.4 | 29.1 |
| Salary, regular wages | 38.4 | 36.3 | 28.7 | 37.4 | 35.8 |
| Casual labourer | 14.7 | 21.5 | 28.0 | 22.1 | 20.9 |
| Others | 14.6 | 11.6 | 19.6 | 12.1 | 14.2 |
| Total | 2903 | 2064 | 1918 | 2856 | 9741 |

***Refers to significant at 1% level (chi-square results – SED and southern states)

Table No. 2
Percentage distribution of Households in Southern States of India by
Primary Sources of Drinking water

| Primary Source | AP | KAR | KER | TN | SOUTHERN |
|--|-------------|-------------|-------------|-------------|-----------------|
| Bottled water | 12.7 | 4.1 | 0.6 | 6.8 | 6.8 |
| Piped water into dwelling | 10.8 | 13.8 | 11.8 | 13.2 | 12.3 |
| Piped water to yard/plot | 28.4 | 27.2 | 7.9 | 18.1 | 21.1 |
| Public tap/standpipe | 25.2 | 35.5 | 8.4 | 48.5 | 31.0 |
| Tube well/borehole | 15.3 | 9.2 | 4.3 | 6.0 | 9.1 |
| Well : protected | 1.2 | 5.0 | 7.3 | 1.2 | 3.2 |
| Rainwater collection | - | - | 0.2 | - | - |
| Well : unprotected | 3.8 | 1.4 | 57.5 | 1.2 | 13.1 |
| Spring : unprotected | - | - | 0.5 | 0.2 | 0.2 |
| Surface water : tank/pond | 0.2 | 0.1 | 0.9 | 0.6 | 0.4 |
| Other surface water (river, dam, stream, canal, lake etc.) | 0.3 | 0.1 | 0.3 | - | 0.2 |
| Others (tanker-truck, cart with small tank or drum, etc) | 2.1 | 3.7 | 0.2 | 4.1 | 2.7 |
| Total | 5819 | 4080 | 3837 | 5784 | 19520 |

IMPROVED SOURCES OF DRINKING WATER

Table 3 shows percentage distribution of households by different classification of principal source of drinking water. Sources of drinking water has classified into two types, protected sources of drinking water (bottled water, piped water into dwelling, piped water to yard/plot, public tap/standpipe, tube well/borehole, protected well, protected spring, rainwater collection) and unprotected sources (unprotected well, unprotected spring, surface water: tank/pond, other surface water: river, dam, stream, canal, lake, etc., others: tanker-truck, cart with small tank or drum, etc). As per this classification, overwhelming majority of the families in each of the southern states received/supplied the drinking water from protected sources except Kerala households (40.6percent). This proportion did not show any difference by place of residence in all the study states (as mentioned above overwhelming majority received from protected sources), however, in Kerala only 30 percent of the rural households received from protected sources and this proportion for urban households was slightly better in urban sector (51.3percent).

Table No. 3
Percentage distribution of Households in Southern States of India by
Different classification of Primary Sources of Drinking water

| Source of drinking water | AP | KAR | KER | TN | SOUTHERN |
|--|------|------|------|------|----------|
| PROTECTED SOURCES | | | | | |
| Rural***4080.873 | | | | | |
| Protected | 92.2 | 94.8 | 29.9 | 94.0 | 81.1 |
| Unprotected | 7.8 | 5.2 | 70.1 | 6.0 | 18.9 |
| Urban*** 2384.610 | | | | | |
| Protected | 95.0 | 94.5 | 51.3 | 93.8 | 86.0 |
| Unprotected | 5.0 | 5.5 | 48.7 | 6.2 | 14.0 |
| Total***6395.578 | | | | | |
| Protected | 93.6 | 94.7 | 40.6 | 93.9 | 83.5 |
| Unprotected | 6.4 | 5.3 | 59.4 | 6.1 | 16.5 |
| IMPROVED SOURCES (THROUGH PIPE) | | | | | |
| Rural***2689.935 | | | | | |
| Piped water | 68.6 | 77.4 | 17.4 | 86.6 | 65.8 |
| Other than piped water | 31.4 | 22.6 | 82.6 | 13.4 | 34.2 |
| Urban*** 1791.217 | | | | | |
| Piped water | 85.8 | 83.6 | 40.0 | 86.8 | 76.6 |
| Other than piped water | 14.2 | 16.4 | 60.0 | 13.2 | 23.4 |
| Total***4327.010 | | | | | |
| Piped water | 77.2 | 80.5 | 28.7 | 86.7 | 71.2 |
| Other than piped water | 22.8 | 19.5 | 71.3 | 13.3 | 28.8 |

***Refers to significant at 1% level (chi-square results – source of drinking water and southern states)

Another classification of primary sources of drinking water is through pipe supply (bottled water, piped water into dwelling, piped water to yard/plot, public tap/standpipe) and other than pipe supply sources (tube well/borehole, protected and unprotected well, protected and unprotected spring, rainwater collection, surface water: tank/pond, other surface water: river, dam, stream, canal, lake, etc. others: tanker-truck, cart with small tank or drum, etc). According to this classification Tamil Nadu stood at top with 87 percent of the households supplied drinking water through pipe and Kerala with least proportion (28.7percent). A significant proportion of households in AP (22.8percent) and Karnataka (19.5percent) received drinking water through ‘other than pipe supply’ and this proportion was as high as in Kerala (71.3percent). While looking rural and urban differences, more than 80percent of the rural families in Kerala received drinking water from ‘other than pipe sources’ and this proportion was lowest in Tamil Nadu state (13.4percent). The supply of drinking water through pipe was better among urban households than the rural households in all the study states.

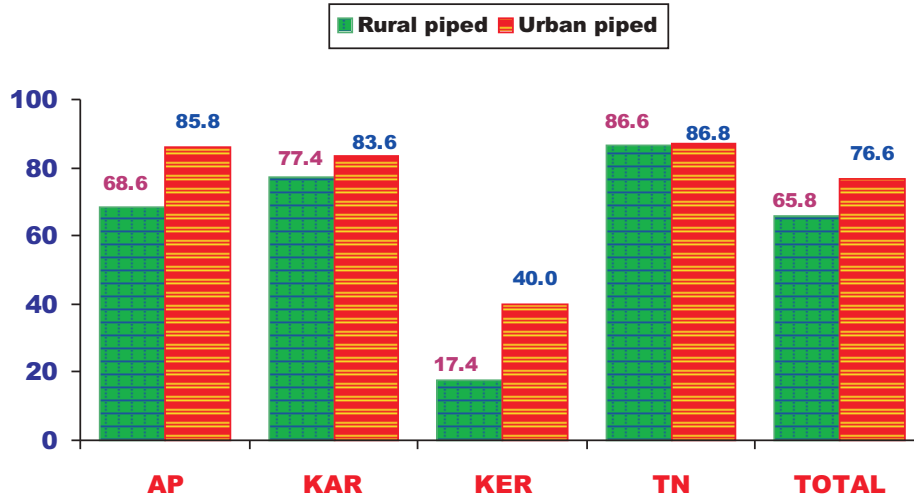
Table 4 present the information in respect of the household’s principal source of drinking water through pipe supply by background characteristics. In this analysis, the ‘improved source’ of drinking water includes ‘bottled water’, ‘piped water into dwelling’, ‘piped water to yard/plot’, and ‘public tap/standpipe’. The survey data depicts that in rural south India, 65.8 percent households had ‘improved source’ (supply through pipe) of drinking water while the figure was 76.6percent in urban south India. In rural area, only 17.4 percent of households of Kerala got drinking water from ‘pipe’, whereas the proportion was more than 80 percent in Tamil Nadu (86.6percent) and less than eighty percent among the rest of the study states (77.4 in Karnataka & 68.6 in AP). On the other hand, in the urban areas of most of the study states, more than 80 percent households got drinking water from ‘pipe’, again with the notable exception of Kerala (40.0percent).

Table No. 4
Percentage distribution of Households supplied with pipe drinking water by
Background conditions

| Water through Pipe | AP | KAR | KER | TN | SOUTHERN |
|----------------------------|-----------|------------|------------|-----------|-----------------|
| Household Size | | | | | |
| Up to 4 members | 77.0 | 81.5 | 29.2 | 87.1 | 72.1 |
| 5-6 members | 77.7 | 79.7 | 28.6 | 85.1 | 69.9 |
| Above 6 members | 78.1 | 78.3 | 25.6 | 88.2 | 67.1 |
| Religion*** | | | | | |
| Hindu 3090.856 | 76.1 | 80.7 | 28.5 | 87.5 | 73.8 |
| Muslim 770.730 | 88.9 | 80.4 | 23.7 | 79.5 | 61.0 |
| Christian 199.069 | 72.5 | 70.4 | 35.7 | 80.2 | 53.1 |
| Others 18.698 | 100.0 | 88.2 | - | 100.0 | 89.2 |
| Caste*** | | | | | |
| ST/SC 714.198 | 67.4 | 83.6 | 33.0 | 88.4 | 73.3 |
| OBC 2657.508 | 78.6 | 78.8 | 28.3 | 86.2 | 71.6 |
| Others 1015.674 | 83.5 | 81.4 | 27.7 | 85.8 | 67.4 |
| Male edn level*** | | | | | |
| No education | 68.4 | 75.0 | 29.5 | 87.0 | 73.1 |
| Below Primary | 71.8 | 79.0 | 28.0 | 86.3 | 72.0 |
| Primary | 73.6 | 80.0 | 27.8 | 87.0 | 71.5 |
| Secondary | 75.7 | 79.6 | 27.7 | 87.7 | 68.0 |
| Hr. Secondary | 84.3 | 81.3 | 25.9 | 85.4 | 73.3 |
| Degree | 87.8 | 86.5 | 36.9 | 86.9 | 78.1 |
| Occupation Rural*** | | | | | |
| Agri related activities | 65.5 | 77.8 | 18.4 | 86.3 | 69.5 |
| Non- agri | 71.0 | 76.8 | 18.5 | 86.5 | 61.6 |
| Salary/regular wage | 77.9 | 77.8 | 17.9 | 87.4 | 66.2 |
| Others | 70.3 | 72.1 | 10.7 | 87.8 | 57.7 |
| Occupation Urban*** | | | | | |
| Sel employed | 87.0 | 81.2 | 36.8 | 86.8 | 77.6 |
| Salary/regular wages | 88.1 | 88.1 | 44.0 | 88.8 | 81.3 |
| Casual labor | 81.7 | 81.3 | 43.8 | 88.4 | 73.7 |
| Others | 81.6 | 80.3 | 32.8 | 77.5 | 67.1 |
| UMPCE (Rs) Rural*** | | | | | |
| 1 (>800) | 61.1 | 76.6 | 17.6 | 89.7 | 71.9 |
| 2 (801-1000) | 68.1 | 78.5 | 12.1 | 89.3 | 71.6 |
| 3 (1001-1264) | 66.7 | 77.3 | 21.4 | 83.0 | 67.1 |
| 4 (1265-1667) | 69.4 | 77.1 | 19.4 | 84.9 | 64.8 |
| 5 (Above 1667) | 74.4 | 77.2 | 16.2 | 87.6 | 57.9 |
| UMPCE (Rs) Urban*** | | | | | |
| 1 (>1182) | 80.4 | 80.3 | 43.6 | 86.8 | 75.7 |
| 2 (1182-1600) | 85.2 | 81.9 | 42.5 | 90.2 | 77.5 |
| 3 (1601-2200) | 88.7 | 84.8 | 35.4 | 88.4 | 78.7 |
| 4 (2201-3200) | 87.7 | 87.2 | 30.0 | 87.7 | 75.3 |
| 5 (Above 3200) | 88.8 | 86.1 | 44.6 | 83.7 | 77.0 |

***Refers to significant at 1% level (chi-square results – pipe water and SED conditions)

It is observed that the proportion of households having access to improved sources varies slightly across their religion, irrespective of the study states, a significant proportion of the Muslim families got drinking water from ‘pipe source’ (AP: 89percent; Karnataka and TN: 80percent) except in Kerala. Among Christian it ranges from 80percent in Tamil Nadu to 36percent in Kerala state. It is also noticed that more than eighty percent of the SC/ST households in TN and Karnataka got drinking water from ‘pipe’, and this proportion for AP was 67percent and 33percent for Kerala.



Invariably in all the study states, a marked improvement on access of better drinking water sources (pipe) was noticed when their educational status raised. It ranges from 68.4percent (illiterate households) to 87.8percent (degree holder households) in AP state. A similar pattern was observed in Karnataka and Kerala states, however in Tamil Nadu irrespective of households’ educational status more than eighty percent of them got drinking water from ‘pipe source’. The households’ depend on Salary/regular wages were better position to access drinking water from pipe source both at rural and urban areas in all the study states.

Table 4 also presents the percentage of households having ‘improved source’ of drinking water (pipe) for each quintile class of MPCE. It is observed that proportion of households having access to improved sources varies slightly across the quintile classes. In AP, the data shows a significant increases in the proportion of households received drinking water from pipe with raise in their quintile class of MPCE (from 61.1 percent at 1st quintile class to 74.4percent at 5th quintile class among rural households and from 80.4 percent at 1st quintile class to 88.8percent at 5th quintile class among urban households). A similar pattern was noticed among Karnataka households on the other hand a negative association was established at Tamil Nadu state.

ADEQUACY OF DRINKING WATER

Another important point is that mere availability of facilities at a time-point at the household level is not enough for decent living of that household; some of these facilities need to be available sustainably. For example, mere availability of a drinking water source (pipe) to a household is not enough unless the source is operative (supply of water through pipe) for sufficient time in a day so as to ensure sufficiency of water. In this survey, the availability of drinking water from the principal source was taken as sufficient throughout the year if, in each of the calendar months of the year, availability of drinking water was sufficient. If in any particular month, the availability of drinking water was not sufficient for majority of the days, availability was considered as not sufficient in that month.

Table No. 5
Percentage distribution of Households by Adequacy and Nature of access of drinking water

| Adequacy and Nature of access of drinking water | AP | KAR | KER | TN | SOUTHERN |
|---|------|------|------|------|----------|
| Whether drinking water sufficient*** 602.913 | | | | | |
| Yes | 87.0 | 76.0 | 87.7 | 93.0 | 86.6 |
| No | 13.0 | 24.0 | 12.3 | 7.0 | 13.4 |
| Rural*** 302.340 | | | | | |
| Yes | 85.1 | 75.8 | 84.6 | 93.4 | 85.6 |
| Urban*** 336.020 | | | | | |
| Yes | 88.9 | 76.2 | 90.8 | 92.5 | 87.6 |
| Access to drinking water ***1036.903 | | | | | |
| Exclusive at HH | 44.5 | 48.3 | 69.9 | 37.2 | 48.1 |
| Common use | 55.5 | 51.7 | 30.1 | 62.8 | 51.9 |
| Rural*** 892.913 | | | | | |
| Exclusive at HH | 29.2 | 30.6 | 63.6 | 24.5 | 34.8 |
| Common use | 70.8 | 69.4 | 36.4 | 75.5 | 65.2 |
| Urban*** 349.572 | | | | | |
| Exclusive at HH | 59.8 | 65.7 | 76.2 | 50.1 | 61.4 |
| Common use | 40.2 | 34.3 | 23.8 | 49.9 | 38.6 |

***Refers to significant at 1% level

(Chi-square results – adequacy/nature of access of drinking water and southern states)

Data in table 5 reveals that Tamil Nadu state had the highest (93percent) and Karnataka state had the lowest (76.3percent) proportion of households having sufficient drinking water. Among rural areas of study states, again Tamil Nadu had the highest (93.4percent) and Karnataka the lowest (76.0percent) proportion of households having sufficient drinking water. Among urban areas of major states, more than 90percent of the households in Tamil Nadu and Kerala had sufficient drinking water and this proportion was lowest among Karnataka. it can be concluded that except Karnataka state all other states are extremely satisfied in respect to supply of (sufficient) drinking water.

NATURE OF ACCESS OF DRINKING WATER

Apart from protected sources and availability of sufficient water, another important aspect of drinking water facility is the nature of access of drinking water. Households having exclusive use of principal drinking water source are in a better position than those who have to resort to community use for the same purpose. Here access was defined in terms of the prevailing situation reported by the sample household in respect of the principal source of drinking water that was used and not the legal right to use the source of drinking water. Access to the principal source of drinking water data shows that the proportion of households who had the opportunity of ‘exclusive use’ of their principal source of drinking water (including common use of households in the building) was predominant in Kerala state (69.9percent) than the rest of the study states. Among rural areas in the study states, more than three-fifth of the Kerala households (63.6percent) having exclusive use of principle sources of drinking water source are in a better position and this proportion was lowest in Tamil Nadu (24.5percent). Similarly among study states in urban areas, Tamil Nadu had the lowest (50.1percent) and Kerala had the highest (76.2 percent) proportion of households having exclusive accesses. It can be observed that ‘community use’ of principal source of drinking water was predominant among households of Tamil Nadu (75.5percent) whereas ‘exclusive use’ was more prevalent among households in Kerala (63.6percent). It can be inferred that irrespective of states, the exclusive use of

principle drinking water sources are in a better position in urban area.

QUALITY OF DRINKING WATER

Information on households’ perception on the quality of drinking water they received from the principal source was collected during the 69th NSS round. It was ascertained whether the water was ‘bad in taste’, ‘bad in smell’, ‘bad in taste and smell’, ‘bad due to other reasons’ or had ‘no defect’. The proportion of households reporting ‘no defect’ of drinking water from respective principal source can be interpreted as the proportion of households that were satisfied with the quality of the drinking water they got.

Table No. 6

Percentage distribution of Households supplied with quality drinking water by Background conditions

| Quality of Drinking water | AP | KAR | KER | TN | SOUTHERN |
|------------------------------------|------|------|------|------|----------|
| Quality of water ***47.56 1 | | | | | |
| Defect water | 10.8 | 7.7 | 7.8 | 10.5 | 9.5 |
| No defect water | 89.2 | 92.3 | 92.2 | 89.5 | 90.5 |
| Place*** | | | | | |
| No defect water (Rural) | 87.1 | 93.5 | 94.1 | 89.5 | 90.5 |
| No defect water (Urban) | 91.2 | 91.1 | 90.4 | 89.4 | 90.5 |

***Refers to significant at 1% level

(Chi-square results – quality of drinking water and southern states)

Data in table 6 explains that about 90 percent households in rural south India and urban south India were satisfied with quality of drinking water. The table shows that in rural areas all the study states, more than 90 percent of households satisfied with quality of drinking water except in AP (87.1percent). Similarly in urban areas all the study states more than 90 percent of households got ‘good quality’ of drinking water.

TREATMENT OF DRINKING WATER

The treatment of drinking water is an important determinant of quality of drinking water and hygienic living, as many households treat water by one or more methods before drinking. Treatment of water can be done through boiling, filtering, by using chemicals, by using electronic purifier or by any other method. The information of practice of treating drinking water before use by background conditions of households is presented in table 7.

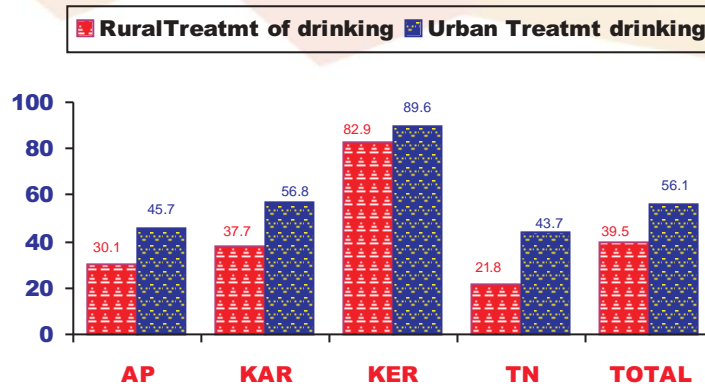
Overall, less than half of the households in south India (47.8percent) had treated water by any one method. And this proportion was as high as in Kerala state (86.2percent) and lowest in Tamil Nadu (32.6percent). Data shows that the treatment of drinking water by any one method was comparatively high among urban households than rural households in the study states (56.1 and 39.5 percent respectively). Around 90percent of the urban households in Kerala treated the drinking water by any one method and this proportion was lowest at TN (43.7percent) and AP (45.7percent). Next to Kerala state, a significant proportion of Karnataka state rural households treated the drinking water by any one method (37.7percent).

Table No. 7
Percentage distribution of Households by practice of treating drinking water by Background conditions

| Treatment of Drinking Water | AP | KAR | KER | TN | SOUTHERN |
|--|------|------|-------|------|----------|
| Method of treating drinking water ***3032.913 | | | | | |
| Treated water any one method | 37.9 | 47.4 | 86.2 | 32.6 | 47.8 |
| Not treated | 62.1 | 52.6 | 13.8 | 67.4 | 52.2 |
| Place*** | | | | | |
| Rural | 30.1 | 37.7 | 82.9 | 21.8 | 39.5 |
| Urban | 45.7 | 56.8 | 89.6 | 43.7 | 56.1 |
| Religion*** | | | | | |
| Hindu | 36.4 | 46.7 | 87.5 | 30.7 | 44.2 |
| Muslim | 52.6 | 48.1 | 81.1 | 51.0 | 61.9 |
| Christian | 41.2 | 66.2 | 87.7 | 45.6 | 70.7 |
| Others | 38.5 | 88.2 | 100.0 | 20.0 | 62.2 |
| Caste*** | | | | | |
| ST/SC | 31.3 | 39.3 | 79.8 | 23.8 | 37.2 |
| OBC | 37.2 | 44.2 | 86.6 | 34.2 | 47.1 |
| Others | 45.6 | 64.7 | 89.0 | 57.3 | 63.1 |
| Male edn level*** | | | | | |
| No education | 27.9 | 30.9 | 75.4 | 22.1 | 28.7 |
| Below Primary | 27.6 | 34.6 | 77.1 | 20.7 | 33.5 |
| Primary | 26.6 | 39.0 | 82.4 | 24.4 | 38.3 |
| Secondary | 38.8 | 44.6 | 85.6 | 29.9 | 49.3 |
| Hr. Secondary | 44.0 | 52.2 | 89.0 | 38.9 | 53.2 |
| Degree | 54.6 | 70.3 | 92.4 | 50.6 | 63.5 |
| Occupation Rural*** | | | | | |
| Agri related activities | 28.8 | 34.5 | 79.1 | 16.9 | 32.6 |
| Non- agri | 32.9 | 41.4 | 82.6 | 22.2 | 45.0 |
| Salary/regular wage | 33.0 | 50.6 | 89.4 | 36.4 | 50.8 |
| Others | 26.6 | 44.2 | 83.8 | 21.1 | 44.1 |
| Occupation Urban*** | | | | | |
| Self employed | 45.3 | 58.9 | 92.3 | 50.5 | 57.4 |
| Salary/regular wages | 50.7 | 62.9 | 88.5 | 44.5 | 57.4 |
| Casual labor | 35.1 | 40.4 | 87.7 | 26.8 | 47.5 |
| Others | 44.3 | 62.3 | 90.4 | 56.1 | 62.9 |
| UMPCE (Rs) Rural*** | | | | | |
| Less than 800 | 26.0 | 31.4 | 80.4 | 16.5 | 28.7 |
| 801 – 1000 | 30.9 | 39.8 | 89.4 | 15.8 | 35.1 |
| 1001 – 1264 | 27.9 | 38.1 | 81.9 | 18.0 | 35.5 |
| 1265 – 1667 | 32.6 | 38.3 | 82.8 | 22.7 | 41.2 |
| above 1667 | 31.7 | 47.5 | 82.0 | 31.9 | 50.7 |
| UMPCE (Rs) Urban*** | | | | | |
| Less than 800 | 34.9 | 44.6 | 90.2 | 30.0 | 45.6 |
| 801 – 1000 | 39.7 | 50.1 | 86.3 | 35.4 | 50.4 |
| 1001 – 1264 | 44.8 | 63.7 | 85.0 | 46.7 | 56.9 |
| 1265 – 1667 | 48.9 | 60.2 | 90.5 | 50.1 | 59.9 |
| above 1667 | 57.0 | 69.6 | 91.4 | 53.1 | 65.9 |

***Refers to significant at 1% level

(Chi-square results – treatment of drinking water and SED conditions)



A significant proportion of Muslim families in AP (52.6percent) and TN (51.0percent) had treated the drinking water by any one method. More than 80percent of all families in Kerala treated the water before use, irrespective of their religion. Treating of water before use was less common among the SC/ST category in all the study states. The practice of treating of water by any one method was high among the highly educated households than the counterparts in all the southern states of India. The families who engaged in Salary/regular wage category had the practice of treating the drinking water than the rest of occupation categories in the study states. When the level of quintile classes’ increases, the practice of treating the drinking water was also increased, specifically this increase was quite among urban quintile classes in the study states.

CONCLUSION

It may be concluded from the above analysis that all the southern states (except Kerala) is on track to meet the target on reducing the proportion of people without sustainable access to safe drinking water. It is also interested to note that a considerable proportion of households in Kerala states mentioned unprotected well as their principal source of drinking water and at the same time among the southern states Kerala stood at top in the practice of treating drinking water before use.

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