8.0 SURVEY ON DRINKING AND DOMESTIC WATER STATUS AMONG HOUSEHOLDS

I. Number of Family members, adult, children

From the sample survey it was estimated that the average family strength was 4.2 in the panchayat. Out of total population, 46% were males, and 54% females. The percentage of children (age below 18 years) was 42% and the adults (above 18 years) was 58%.

II. 1. Type of water sources used for drinking and cooking

The survey revealed that out of 360 households 84% of the households possessed wells. But only 58% used well water for drinking and cooking; 15% used pipe water; 26% used well and pipe water for drinking and cooking and 1% used tube well for drinking and cooking.
2. Type of water sources used for bathing and washing

It was found that 48% of the households used well water for bathing and cooking purposes, 36% of people used both well and pipe; 15% of households used ponds and 1% used tube well for bathing and washing purposes.

3. Amount of water consumption (litres/day)

It was noted that 63% of the households used 500 litres per day, 18% of households used 250 litres per day, 13% of people used 750 litres per day and 6% people used more than 750 litres per day.
The average per capita per day consumption was 101 litres. From the data, the amount of water consumption by females, males and children were calculated separately. It showed that the average amount of water consumption of female was 64.7 litres per day; average amount of water consumption of male was 35.3 litres per day; average amount of water consumption of children was 45.8 litres per day and average amounts of water consumption of adults was 74.1 litres per day. It indicated that females and adults consumed more water than others.

4. a. Depth of your well

The survey indicated that 59% of the wells consisted of a depth of <25; 20% of the wells had a depth of 25 feet; 19% of the wells had a depth of 15 feet, and 2% of the wells had a depth of 50 feet.

4.b. Is your well constructed with rings?

It was understood that 72% of the wells were constructed with concrete rings to give protection from erosion and 28% of the wells were without rings.
4. c. Is your well protected?

As per the survey result, 62% of the wells were with half wall, 18% of the wells with platform, 15% of the well covered with nets, and 5% of the wells were protected by means of cover (Cover refers to metal sheets, metal nets, wooden panel, palm leaves etc.).
5. What do you feel about the quality of water in your well?

According to 62% of the people water was good; according to 29% of the people water was moderately good and according to 9% water was bad in quality.

6. a. Do you experience water scarcity at any season?

According to the survey, 80% of the people faced water scarcity during summer season with a peak during March and April and 20% of the people experienced no water scarcity.

6. b. Water table going down or not?

As per survey result, in 95% of the wells the water level decreased during summer season, in 5% of the wells water level showed no fluctuation.

7. How do you meet your water requirements at the time of water scarcity?

During water scarcity people depended on wells of neighbouring houses or distant wells for their needs. 90% of the people in the coastal wards used boats (inland water ways) to fetch water from far away places. From the survey it was also noted that there was no tanker lorry used for water supply. In public tap,
water availability was on alternate day, and it necessitated habitual storing of water.

8. If depending on tanker lorry are you paying any charges for water supplied.

There was no tanker lorry used for the water supply in the panchayat.

9. What do you feel about the quality of water supplied (pipe water) to you?

The response from 74% of the households was that it was moderately good; according to 14% water was good; according to 6% water was bad in quality. The rest 6% had no comments.

10. Does panchayat take any measures for solving water scarcity?

According to 91% of the households, panchayat was not taking any measures for solving the water scarcity problems in spite of the fact that in coastal wards people were facing water scarcity throughout the year. Since the water supply through the pipes was on alternate days or sometimes irregular, people had to travel long way for collecting water. However 9% of the people informed that,
panchayat had been taking measures for solving water scarcity, as for example, panchayat assisted them by digging tube well, and extending more pipe connections.

III. 11. What is the toilet facility you have?

Survey indicated that 69% of people used pit latrine for defecation, 27% of people used septic latrine and 4% people defecated in open ground.

![Pie chart showing toilet facilities]

12. What is the distance between water source and latrine?

From the survey it was understood that 55% of wells (water source) were 10-20 feet away from latrine, 30% of wells were <10 feet away from latrine, 9% of wells were 20-30 feet away from latrine and 6% of the well were >30 feet away from latrine
13. Does your latrine leak during rainy season?

According to results of survey, 89% of the latrines had no problems, but 11% of the latrine were reported leaking during rainy season.

14. Is there water logging around your house?

Through the questionnaire 67% of the people replied that water logging was there in the surroundings, but according to 33% of people there was no water logging problems.
15. Is there any mosquito menace?

Based on the survey 92% of the house holds faced mosquito menace whereas 8% had no mosquito menace.

16. What is the mode of disposal of domestic solid waste followed by you?

As per survey results 68% of the people disposed the waste by way of burning, 28% of the people merely dumped wastes in premises and 4% of the people composted their wastes.

17. a Do you have cattle and cattle shed?

The survey showed that 76% of the people had no cattle and cattle shed, but 24% of the people possessed cattle and cattle shed.

17. b What is the distance of cattle shed from your well?

The questionnaire revealed that 48% of the cattle shed were located at a distance of 10m away from well, 34% of cattle shed located at a distance of >10;
11% of the cattle shed at a distance of 20 feet away from well and 7% of the cattle shed at about 30 feet away from well.

18. Do you think that your drinking water source (well) is safe?

According to 91% of the people of panchayat, the well water was reported safe but 9% reported that water was not safe for drinking purpose.

19. Do you boil water before use?

From the survey it was learnt that 73% of the people used boiled water, 27% used raw water without boiling for drinking purpose.

20. Are you adding any Thirst quenching herbal product (TQHP) to boiled drinking water. If Yes what?

The survey revealed that 25% of people used karingali (Acacia catecheu) along with boiled water. Karingali and Pathimukham (Prunus cerasoidies) were used up by 25% of the people, Pathimukham was used by 22% of the people. 14% of people used all the above TQHP. Ramacham (Vetiveria zizanioides) and Pathimukham were used by 4% people, 5% people used
geerakam (Cuminum cyminum) and 3% of people used pera leaves (Psidium guajava) along with boiled water. About 3% of people did not use any TQHP along boiled the drinking water.

21. Do you use any water filtration apparatus like water purifier?

None of the house holds covered in the survey have been using water filtration unit for water purification and consumption. Even those who had owned the apparatus complained that these were not working satisfactorily and so was not using.

22. Have you tested drinking water quality in any lab at any time.

Survey revealed that people did not test water before consumption.

23. What are the common water borne diseases noticed in and around your family.

No major diseases were noticed among 34.17% of people; 28.89% of people suffered from diarrhoeal diseases, 23.33% of people suffered from typhoid, 11.39% of people affected by dysentery, 1.11% of people suffered from polio, 0.6 of people suffered from cholera and 0.56% of people affected by infectious hepatitis.
24. When you are sick what is the method of treatment followed by you?

Based on survey it was understood that 74% of the households followed treatment of allopathy; 9% allopathy, homeo and ayurveda, 5% homeo treatment, 5% ayurveda, 5% both ayurveda and allopathy, and 2% homeo.

25. Where do you approach for treatment in case of illness?

52% of the people depended on both private and government hospital, 27% on government hospital and 19% on private hospital for treatment. But 2.2% of people chose to have their own treatment (self treatment).

26. What are your suggestions to improve water availability and quality in your area?

The consumers had put forwarded various suggestions for the improvement of drinking water supplies in the panchayat both in terms of quality and quantity. About 69% suggested that proper treatment should be done to improve the quality of piped water supplies: some people suggested that replacement of old pipe line could improve the present condition, 15% suggested scientific application of chlorine and regular monitoring of water quality, 16%
pointed out the need for awareness programme on well water disinfection to improve water quality and others suggested laying of additional pipelines to solve water scarcity.

The summary of the findings from the survey is given below:

In the Chirayinkeezhu Grama Panchayat, the population consisted of larger number of females than males. The survey revealed that most (84%) of the people used well water for drinking, cooking, and bathing purposes. The majority of the wells in the panchayat were less than 25 feet in depth and constructed with rings and half wall. But only some wells were protected with net or cover. Another observation was that 63% of households consumed 500 litres per day and the consumption of water by female was greater than males. The per capita per day consumption was 101 litres.

Although most people (62%) who participated in the survey reported that their well water was good, about 80% of people faced water scarcity during summer season because of the lowering of water table in their wells. During water scarcity they depended on neighbouring wells or distant wells and piped water supply. Since the tap water supply was on alternate days they were in the habit of storing water for future use. About 88% of the people reported that the water supplied to them (pipe water) was safe although they did not test the water for quality. However, 73% of the people used only boiled water for drinking. Except for 3% all used TQHP along with boiled water.

Most people (about 69%) in the area used pit latrine for defecation. Most latrines were located about 10-20 feet from well. Similarly 48% of the cattle shed were located at a distance of just 10 feet from well, indicating chances of well water contamination. In addition it was observed that 92% of people suffered from mosquitoes menace, mainly because of water logging in their surroundings. Water borne diseases, especially diarrhoea were thus reported from majority of the households.