

Summary of Results of Source Water Quality Monitoring by Dhan Vayalagam Tank Foundation

DHAN Vayalagam Tank Foundation (DV(T)F), water thematic programme of DHAN foundation is functioning more than two decades in south India. The programme rigorously carries forward the conservation and development of traditional water systems such as tanks and ponds that are created, using ancient water harvesting methods and management practices. As a part of this programme DVTF is also involved in implementation of affordable safe drinking water projects at household level.

As a part of celebrating world water monitoring day DVTF received test kit to test the water in 50 sources from Neer Foundation. Tests for PH (acidity), Turbidity (clarity), Dissolved oxygen (DO), and Temperature were conducted in drinking water ponds, hand pumps and bore well water supplied through the public taps in 46 water sources from 30 villages in six blocks in two districts of Tamilnadu. Most of these sources are used for domestic purposes and few of them for bathing and washing clothes. We did the monitoring tests during the period from 10.11.2011 to 30.11.2011, involving members' of farmers association, women Self help groups, youth and children. We tested four parameters namely pH, turbidity, dissolved oxygen and temperature, as an indicator of water health. We carried out the tests with leaders, youth and community workers in the village and they were explained about present status of their water source.

From the tests we found that almost in all the water bodies, the DO is less than 4ppm even during day light. PH ranges from 6.5 to 8. We were able to verify the people's results with people in some villages the people stated that rice cooked with the water turns yellow in color and gets spoiled within a few hours. People were sensitized about the pollution of water bodies due to drainage from the villages and polluted catchments. The test results of these water sources were shared in the respective village meetings to sensitize the issue among other villagers and to take protective measures. We also emphasized the importance of safe drinking water. This event created an impact among the participated people to treat the water before use.

Test Results of Source Water in Water Bodies of Tamilnadu State

S. No	Name of the Water Body	Nature of the Water Body	Location				Date of Performing the test	Test Results					
			Village	Block	District	Latitude		Longitude	pH	Turbidity in NTU	DO in PPM	Water Temp in °C	Air Temp in °C
1	Kalloukatti Oorani	Pond	Kambur	Kottampatti	Madurai	N 10°.09.331'	E 78°.19.426'	10.11.2011	8	25	4	28°C	above 40°C
2	Kamiya Kaundan Oorani	Pond	Alanganpatti	Kottampatti	Madurai	N 10°.10.578'	E 078°.19.018'	10.11.2011	8	25	4	32°C	39°C
3	Vadakkura Selvi Amman Oorani	Pond	Ottakoilpatti	Kottampatti	Madurai	N 10°.10.939'	E 078°.20.857'	10.11.2011	8	10 - 25	4	30°C	39°C
4	Tap water	Bore Well	Ayvathanpatti	Kottampatti	Madurai	N 10°.08.708'	E 078°.08.037'	15.11.2011	7	< 5	4	30°C	32°C
5	Drinking Water Oorani	Pond	Ayvathanpatti	Kottampatti	Madurai	N 10°.08.810'	E 078°.20.184'	15.11.2011	8	5 - 10	4	28°C	32°C
6	Bore Well	Bore Well	Ayvathanpatti	Kottampatti	Madurai	N 10°.10.578'	E 078°.19.018'	15.11.2011	8	< 5	4	28°C	32°C
7	Thenur Oorani	Pond	Thenur	Kottampatti	Madurai	N 10°.10.233'	E 078°.19.872'	15.11.2011	8	10 - 20	4	28°C	32°C
8	Bore Well through Public Stand	Bore Well	Chinna Kanpurampatti perumakki pudur	Kottampatti	Madurai	N 10°.08.946'	E 078°.18.701'	15.11.2011	8	< 5	4	28°C	36°C
9	Sengai Oorani	Pond	Chinna Kanpurampatti perumakki pudur	Kottampatti	Madurai	N 10°.08.949'	E 078°.26.280	15.11.2011	8	< 5	0	32°C	36°C
10	Setti Oorani	Pond	Chinna Kanpurampatti	Kottampatti	Madurai	N 10°.09.205'	E 078°.18.503' Evaluation 661+	15.11.2011	8	5 - 10	0	32°C	36°C
11	Stand Post Near Overhead Tank	Bore Well	Chinna Kanpurampatti	Kottampatti	Madurai	N 10°.09.205'	E 078°.18.597' Evaluation 657+	15.11.2011	8	< 5	4	28°C	38°C
12	Stand Post near Potti Oorani	Bore Well	Vellinipatti	Kottampatti	Madurai	N 10°.12.982'	E 10°.19.821' Evaluation 648+	15.11.2011	8	< 5	4	30°C	34°C
13	Pottai Oorani	Pond	Vellinipatti	Kottampatti	Madurai	N 10°.12.998'	E 78°.19.822'	15.11.2011	8.5	< 5	4	32°C	39°C
14	Mandhai Kulam	Pond	Peria Karpurampatti	Kottampatti	Madurai	N 10°.10.578'	E 078°.19.018'	15.11.2011	8	< 5	4	28°C	28°C
15	Tapwater near OHT	Bore Well	Peria Karpurampatti	Kottampatti	Madurai	N 10°.09.592'	E 078°.18.787'	15.11.2011	8	< 5	4	28°C	28°C

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			Village	Block	District	Latitude	Longitude		pH	Turbidity in NTU	DO in PPM	Water Temp in °C	Air Temp in °C
16	Chettivoi Oorani	Pond	Kasamaptti	Kottampatti	Madurai	N 10°.08.934'	E 078°.17.740'	15.11.2011	7.5	< 5	0-4	28°C	26°C
17	Tapwater - Sintex Tank near mandhai	Hand Pump	Kasamaptti	Kottampatti	Madurai	N 10°.09.033'	E 078°.17.832'	15.11.2011	7.5	< 5	4	28°C	26°C
18	Public Tap near Kesam patti Bus stop	Bore Well Water Supplied Through OHT	Kasamaptti	Kottampatti	Madurai	N 10°.09.150'	E 078°.17.934'	15.11.2011	7.5	< 5	4	28°C	26°C
19	Bore Well near Panchayat Office	Bore Well	Tirumal	Tirumangalam	Madurai	N 09°.43.367'	E 078°.3.109' + 334	16.11.2011	8	< 5	4	30°C	36°C
20	Hand pump near Bus stop East	Bore Well	Tirumal	Tirumangalam	Madurai	N 09°.43.140'	E 078°.3.140' + 354	16.11.2011	7.5	< 5	0	32°C	36°C
21	Bore Well supplied through OHT near Bus stop	Bore Well	Tirumal	Tirumangalam	Madurai	N 09°.42.991'	E 078°.08.402' +352	16.11.2011	8	< 5	0	30°C	36°C
22	Borewell water supplied through OHT near Venkadasamutharam kanmoi	Bore Well	Masavanatham	kallikudi	Madurai	N 09°.40.660'	E 078°.01.574' +352	16.11.2011	8	< 5	4	30°C	32°C
23	Bore Well	Bore Well	Pullothu	Thiruparakundram	Madurai	N09° 57 307'	E 078°.02.104'	28.11.2011	8	< 5	4	28°C	32°C
24	Drinking water Oorani	Pond	Managathan	Manamadurai	Sivagangai	N 09°.37.687'	E 078°.25.284'	26.11.2011	8-9	100-75	0	28°C	35°C
25	Drinking water Oorani	Pond	Pulikulam	Manamadurai	Sivagangai	N 09°.37.218'	E 078°.25.420'	26.11.2011	8-9	20-30	4	28°C	31°C
26	Drinking water Oorani	Pond	Chinnakannanur	Manamadurai	Sivagangai	N 09°.37.393'	E 078°.24.206'	26.11.2011	8	30-40	4	28°C	32°C
27	Hand Pump	Hand Pump	Chinnakannanur	Manamadurai	Sivagangai	N 09°.37.228'	E 078°.25.045'	26.11.2011	8	0-5	4	32°C	30°C
28	Oorani	Pond	Mangulam	Manamadurai	Sivagangai	N 09°.41.819'	E 078°.28.107'	26.11.2011	8	40-50	4	26°C	28°C

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			Village	Block	District	Latitude	Longitude		pH	Turbidity in NTU	DO in PPM	Water Temp in °C	Air Temp in °C
29	Oorani	Pond	Kulayanur	Manamadurai	Sivagangai	N 09° .43.291'	E 078° .29.797'	26.11.2011	8-9	30-40	0	26°c	28°c
30	Hand Pump	Hand Pump	Melakuilkudi	Thirumangalam	Madurai	N 09° .54.911'	E 078° .01.617'	29.11.2011	7 to 8	< 5	4	34°c	31°c
31	Hand Pump	Hand Pump	Tharmathupatti	Thirumangalam	Madurai	N 09°50.691'	E 078° .00.230'	29.11.2011	7 to 8	< 5	0	30°c	29°c
32	Palkundu Oorani	Pond	Vengaipatti	Singampunari	Sivagangai	N 10° .12.621'	E 078° .26.280'	30.11.2011	8	20-30	4	26°c	35°c
33	Puthu Oorani	Pond	Inuthupatti	Singampunari	Sivagangai	N 10° .12.402'	E 078° .26.711'	30.11.2011	8 to 9	42-50	4	28°c	30°c
34	Hand Pump	Hand Pump	Inoothupatti	Singampunari	Sivagangai	N 10°12.442'	E 078° .26.886'	30.11.2011	7 to 8	< 5	0-4	30°c	38°c
35	Hand Pump	Hand pump	Kumari patti	Singampunari	Sivagangai	N 10° .11.862'	E 078° .27.061'	30.11.2011	7 to 8	< 5	0-4	30°c	38°c
36	Hand Pump	Hand Pump	Sivapuripatti	Singampunari	Sivagangai	N 10° .11.275'	E 078° .26.748'	30.11.2011	7 to 8	5-10	4	26°c	35°c
37	Hand Pump	Hand Pump	Sivapuripatti	Singampunari	Sivagangai	N 10° .11.038'	E 078° .26.430'	30.11.2011	8	< 5	4	30°c	28°c
38	Amman Oorani	Pond	A.kalapur	Singampunari	Sivagangai	N 10° .10.421'	E 078° .27.516'	30.11.2011	9	10 to 20	0-4	30°c	34°c
39	Hand Pump	Hand Pump	A.kalapur	Singampunari	Sivagangai	N 10° .10.430'	E 078° .27.513'	30.11.2011	7 to 8	< 5	0-4	28°c	35°c
40	Hand Pump	Hand Pump	Kannamangalapatti	Singampunari	Sivagangai	N 10° .09.784'	E 078° .25.357'	3011.2011	8	< 5	0-4	30°c	31°c

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41	Hand Pump	Hand Pump	Anaikaraipatti	Singampunari	Sivagangai	N 10°.12.553'	E 078°.25.045'	30.11.2011	8	< 5	0-4	29°C	30°C
42	Saathan Oorani	Pond	Anaikaraipatti	Singampunari	Sivagangai	N 10°.12.619'	E 078°.25.279'	30.11.2011	8	50 to 75	4	26°C	32°C
43	Pollakulam Oorani	Pond	Kirungakottai	Singampunari	Sivagangai	N 10°.13.600'	E 078°.25.096'	30.11.2011	8 to 9	50 to 75	4	26°C	29°C
44	Vadaku Oorani	Pond	Kirungakottai	Singampunari	Sivagangai	N 10°.13.781'	E 078°.25.106'	30.11.2011	8 to 9	10-20	4	26°C	28°C
45	Chinnakulam Oorani	Pond	Oduvanpatti	Singampunari	Sivagangai	N 10°.14.478'	E 078°.25.367'	30.11.2011	8	75	0-4	24°C	28°C
46	Hand Pump	Hand Pump	Oduvanpatti	Singampunari	Sivagangai	N 10°.14.511'	E 078°.25.377'	30.11.2011	7 to 8	0-5	4	28°C	29°C

Voices of Community

1. Pulavar Lakshmi khandhan , Chinna Karpurampatti village, Kottampatti Block

Vayalaga Movement Leader: I was involved in water quality monitoring held in three villages, Perumakki Pudur, Chinnakarpurampatti and Peria Karpurampatti. We tested pond water and bore well water supplied through taps. At my home, we are using water from Sengai oorani in Perumakki pudur for drinking and cooking because of its good taste. We are using this source for generations and we are thinking that our water is very safe. Only today I realized the problems with our water and I understood that we need to take necessary steps to keep clean our catchments and water body and that I should treat this water before I use it for drinking and cooking. I will also take this message with all my community members to keep the source clean and protect themselves from water borne diseases.



Water testing at sengai oorani



Children were explained about Water testing at Periakarpuram patti

2. Sethurajan, Vellinipatti village, Kottampatti block

I am living in my village Vellinipatti in Kottampatti Block of Madurai District. Agriculture is my main livelihood. All my villagers used to bathe in the Pottai oorani which is located in north side of my village. Every year we used to rear fish in the Oorani. We found many fishes dead and floating in the pond. We didn't know the reason for the death of the fish. Today we have tested the water and found that the Dissolved Oxygen level is not sufficient for fish rearing. I have planned to convey the result to my villagers and we will collectively take efforts to solve this problem.

3. Chinnalagan, Kesampatti village , Kottampatti block

I am the Secretary of the Kottampatti Vattara Vayalagam, Kottampatti. I reside in Kesampatti village of Kottampatti Block. Chettivoi Oorani is located in South east side of my village which is used for drinking and cooking over several decades. Some of our villagers are also using bore well situated near village *mandhai*(Village meeting place) and a stand post near the school. Today we tested all these three sources. We came to know that our Oorani water is not suitable for drinking. We need to treat it before use. It was a big shock to me and I have decided to take immediate steps to discuss this matter with our village grama sabha and take necessary steps to solve the pollution problem of our water



**Water quality monitoring at chettivai oorani
in Kesampatti village.**



Mr. Chinnalagan looking at collection of sample from public stand post in Kesampatti village.

4. R.Natarajan, Manakathan village , Manamadurai block

I am R. Natarajan, living in Managathan Village. I am the Secretary of Managathen Oorani Vayalagam This village comes under Manamadurai block of Sivagangai district of Tamil Nadu. I participated in World Water Monitoring Day activities on 26.11.2011 held at Manamadurai block. We tested the water quality of six water bodies in five villages. These sources are used for our drinking and cooking needs. Only after these tests, I realized that how poor maintenance of catchment and water body affects the quality of water .

5. Poorna Devi of Vengaipatti village in Singampunari Block

I am Poorna Devi. I am living in Vengaipatti village, for the past 45 years. I am a member of the Karuppar Cascade Vayalagam. Today (30.11.11) we tested Palkundu oorani water. I have been taking drinking water from this oorani only. But I am not aware about that water quality. Our water is a little turbid but tastes good. After the test I understand that I need to purify my water before use



Turbidity matters