

Government of Kerala

## Report on S Status of Drinking Water Schemes Chemes In Kerala

**Survey Design Division** 

**Directorate of Economics & Statistics** 

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### Preface

The Department of Economics and Statistics is conducting surveys and studies on subjects of importance for planning and development purposes. Drinking water is water safe enough to be consumed by humans or used with low risk of immediate or long term harm.

Availability of safe and clean water for drinking and other domestic uses is an essential basic requirement for household and communities to their individual welfare and community development. The first and foremost consequence of lack of safe water for community consumption is infectious diseases. The 54th round of NSS survey report on drinking water and sanitation shows that the population covered by piped water supply is merely 11.5 % and about 85 % households in the State depend on the traditional open wells for their household water needs. Blessed with abundance of rainfall and 44 monsoon fed rivers, many parts of the State are facing acute water shortage in summer months. To address this issue thousands of water supply schemes were implemented under the three-tier Panchayat system during the past couple of decades. But no reliable data is available about the number of water supply schemes commissioned and the number of schemes not functional at present.

In this context, the Department of Economics and Statistics decided to conduct a survey on Drinking Water Schemes in Kerala. The schedule for data collection was prepared by the Survey Design Division of the Department.

This report is prepared by Survey Design Division of the Directorate of Economics & Statistics. At district level, the survey was supervised by the Deputy Directors and Research Officers of the district offices and at Taluk level, Taluk Statistical Officers and Statistical Inspectors. The data collection was carried out by Statistical Investigators working in the various Taluk Statistical Offices. I acknowledge the work done by all of them to make the survey a success. Admirable cooperation extended by the officers of Panchayat/municipal/corporation offices is also acknowledged.

I hope that this report will be useful to the planners, policy makers, academicians and researchers. Suggestions for improvement of the content of the report will be highly appreciated.

Hammahadran

30.12.2015

V. Ramachandran Director General

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## Chapter 1 Introduction

#### **1.1 Introduction**

Kerala is blessed with abundance of rivers, lakes, streams and ponds. But many of our mid lands and high land regions are dried up during summer months. This phenomenon was mainly due to weather anomalies and developmental pressures resulting from the changes in land use and life style of the people. The six months monsoon period between June and November is confined 95 percent of the annual rainfall in the State leaving the remaining six months as practically dry. Water scarcity in summer is mainly due to lowering of water tables resulted from dry rivers which adversely affect drinking water availability.

#### 1.2 Water availability and sources in Kerala

The average annual rainfall in the State is about 3000mm and nearly 70 percent of rainfall is received during the South-West monsoon which sets in by June and extends up to September. The State also gets rain from the North-East monsoon during October to December. The total annual yield of 44 rivers in the State together is 78.041 Million Cubic Meters (MCM) of which 70,323 MCM is in Kerala. Groundwater has been the mainstay for meeting the domestic needs of more than 80% of rural and 50% of the urban population. Though the State is having 44 rivers the water requirement of the people is not adequately met during the summer months. The conventional method of water sourcing, extraction and supply is not enough to satisfy the domestic water needs. The urban water supply schemes are generally implemented through Kerala Water Authority and rural water supply schemes implemented through

Local bodies. Water supply schemes are generally based on the sources like rain water harvesting, river, pond, bore well and well.

#### 1.3 Survey on 'Status of Drinking Water Schemes in Kerala- 2012-13'.

1.3.1 State Government and Local Self Government Institutions are implementing a number of drinking water schemes in the State in addition to the water supply schemes run by the Kerala Water Authority (KWA), with State Plan funds and funds received from Central Government/other agencies under different schemes. But no reliable data regarding the number of completed projects and its present working status.

1.3.2 Though State Government and Local Self Government Institution are earmarking a good chunk of Plan fund to Drinking water projects to many areas, especially in rural areas still facing water scarcity particularly during summer season. Malfunction or improper functioning of many drinking water schemes which do not serve the expected outcome. This survey is proposed to study about the status of all water supply schemes and projects funded by LSGIs and other Departments in the State except the schemes under KWA.

#### **1.4 Objectives**

The Objectives of the survey is to ascertain

- 1) Number of drinking water projects constructed after 2001.
- 2) Number of drinking water schemes with distribution.
- 3) The current status of drinking water supply schemes.
- 4) The number of beneficiaries from drinking water supply schemes.

- 5) To ascertain from the field, the status of schemes completed, under construction and reason for non completion etc.
- 6) The proposed outlay, expenditure, and reason for non completion of the schemes which are not commissioned.

#### 1.5 Methodology

1.5.1 The list of all drinking water supply schemes from each local body was prepared by collecting the details from concerned offices (from Grama Panchayat, Block Panchayat, District Panchayat, Municipality and Corporations). Details of the current status of the scheme were physically verified by visiting the scheme/project and by local enquiry by the investigators of the Department.

1.5.2 The survey, conducted during the financial year 2012-13. The fieldwork of the survey started in the month of January 2013 and completed by the end of March 2013

1.5.3 Taluk Statistical Officers and Statistical Inspectors were the primary supervisors of the survey. The responsibility of conducting the survey in each district was vested with the Deputy Directors in the respective districts.

## Chapter 2 General Conclusions

The survey aimed to study the status of all water supply schemes and projects implemented in the State except the schemes under KWA. The projects were classified into two viz., schemes with distribution and schemes without distribution. Under schemes without distribution, all projects constructed after 2001 and schemes with distribution, all projects irrespective of the year of starting were surveyed.

#### **SYNOPSYS**

- As per the survey results, there are 32,568 drinking water schemes are implemented in the State out of which 44.5% schemes are having water distribution. Palakkad has the highest number of schemes, which is 16% of the total schemes implemented in the State.
- ♣ 12,109 projects with distribution and 11,457 projects without distribution were found functioning during the survey. Which constitute 84% of projects with distribution and 63% of projects without distribution.
- 60% of the scheme's source of water is well and out of which 41% (or 8,044) schemes are having distribution.
- Lack of proper maintenance is the reason for 57% of the projects which are not functioning.

- 4 23,566 projects were found functioning during the field visit. Beneficiary committees and others are implementing 57% of total schemes and 43% of the schemes are implemented by Local Self Government Institutions.
- **4** 11,794 schemes were exclusively used only for drinking purposes.
- 16.6% of the projects are facing shortage of sufficient water at source.
- 4 11,080 projects were found to have pump-sets during field visits.
- 4 10,476 projects were found to have storage tanks at the time of field visit.
- Concrete tanks are mostly used storage tank types followed by fibre tanks.
- 4 Out of total tank storage capacity of 1,45,275 kilo-litters in which 45% is covered by the Districts Malappuram, Kozhikode and Idukki having no considerable variation.
- Water treatment system was proposed for 3,212 projects during plan and 3,002 projects were found to have a water treatment system during field visit. Only 24.79% functioning schemes are having treatment system.
- Among 6,99,829 beneficiary units, 94% of units use water for domestic purposes only.
- 4 94% of the beneficiary units are households and 5% public tap.

- During field visits, it is observed that 27.7% of the projects are having 24 hours distribution of water, whereas for 47.3% of the projects water distribution is available for only a few hours in a day.
- Average daily usage of water and monthly consumption of electricity is high in Ernakulam district and average daily use of water is less in Alappuzha district compared to other districts in the State.
- Functioning of the project is found good for 49.8% of the projects and average for 48.6% of the projects.

#### **LIMITATIONS**

The list of the drinking water supply schemes were collected from the offices of Grama Panchayat, Block Panchayat, District Panchayat, Municipality and Corporations for this survey. The details of some of the old projects were found missing or not in proper order. The year of starting the project work, year of completion, details of project cost, both proposed as well as actual were not available in many local bodies. Hence year of starting, year of completion and cost of the project in some of the cases are not able to collect during the survey.

# ANNEXURE – I DETAILED TABLES

		Project type					
S1 No	District	Schemes-with distribution	Schemes- without distribution	Total			
1	Kasaragod	799	3,895	4,694			
2	Kannur	759	790	1,549			
3	Wayanad	960	4,221	5,181			
4	Kozhikode	2,077	486	2,563			
5	Malappuram	2,236	1,903	4,139			
6	Palakkad	2,905	2,286	5,191			
7	Thrissur	1,316	439	1,755			
8	Ernakulam	172	237	409			
9	Idukki	1,672	706	2,378			
10	Kottayam	635	779	1,414			
11	Alappuzha	329	520	849			
12	Pathanamthitta	120	65	185			
13	Kollam	132	1,466	1,598			
14	Thiruvananthapuram	366	297	663			
	Total	14,478	18,090	32,568			

Table 1: District wise number of drinking water schemes in Kerala

		Source of water						
Sl No	District	Well	Bore well	Pond	River	Rain harvest	Other Sources	Total
1	Kasaragod	1,901	2,657	50	7	77	2	4,694
2	Kannur	1,056	316	166	3	4	4	1,549
3	Wayanad	4,862	139	133	9	0	38	5,181
4	Kozhikode	2,346	102	71	29	0	15	2,563
5	Malappuram	2,975	1,092	33	26	8	5	4,139
6	Palakkad	2,105	3,005	18	38	3	22	5,191
7	Thrissur	763	919	38	11	10	14	1,755
8	Ernakulam	280	39	75	9	0	6	409
9	Idukki	363	467	1,174	51	10	313	2,378
10	Kottayam	549	534	305	8	12	6	1,414
11	Alappuzha	620	107	56	3	23	40	849
12	Pathanamthitta	92	72	15	3	0	3	185
13	Kollam	1,161	384	24	0	1	28	1,598
14	Thiruvananthapuram	469	166	25	1	0	2	663
	Total	19,542	9,999	2,183	198	148	498	32,568

Table 2: District wise number of Drinking Water Schemes by source of water

Project type Schemes-S1 No. District Schemes-with without Total distribution distribution Kasaragod 407 1,494 1,901 1 2 511 1,056 Kannur 545 886 3,976 4,862 3 Wayanad 4 Kozhikode 1,926 420 2,346 1,883 1,092 2,975 5 Malappuram 6 Palakkad 768 1,337 2,105  $\overline{7}$ Thrissur 500 263 763 Ernakulam 194 280 8 86 9 Idukki 206 157 363 10 282 267 549 Kottayam 11 Alappuzha 238 382 620 12Pathanamthitta 75 1792 1,105 1,161 13 56 Kollam 14 Thiruvananthapuram 220 249 469 8,044 11,498 19,542 Total

 Table 3a: District wise number of Drinking Water Schemes by project type

 (Source of water=well)

Table 3b: District wise number of Drinking Water Schemes by project type

(Source of water=bore well)

		Project type			
Sl No.	District	Schemes-with distribution	Schemes- without distribution	Total	
1	Kasaragod	373	2,284	2,657	
2	Kannur	95	221	316	
3	Wayanad	29	110	139	
4	Kozhikode	37	65	102	
5	Malappuram	296	796	1,092	
6	Palakkad	2,094	911	3,005	
7	Thrissur	762	157	919	
8	Ernakulam	21	18	39	
9	Idukki	315	152	467	
10	Kottayam	69	465	534	
11	Alappuzha	80	27	107	
12	Pathanamthitta	24	48	72	
13	Kollam	65	319	384	
14	Thiruvananthapuram	131	35	166	
	Total	4,391	5,608	9,999	

			•	51 Hatter 1 611a)	
		Project type			
Sl No.	District	Schemes-with distribution	Schemes- without distribution	Total	
1	Kasaragod	12	38	50	
2	Kannur	145	21	166	
3	Wayanad	27	106	133	
4	Kozhikode	71	0	71	
5	Malappuram	22	11	33	
6	Palakkad	5	13	18	
7	Thrissur	31	7	38	
8	Ernakulam	58	17	75	
9	Idukki	910	264	1,174	
10	Kottayam	272	33	305	
11	Alappuzha	2	54	56	
12	Pathanamthitta	15	0	15	
13	Kollam	4	20	24	
14	Thiruvananthapuram	12	13	25	
	Total	1,586	597	2,183	

Table 3c: District wise number of Drinking Water Schemes by project type(Source of water=Pond)

Table 3d: District wise number of Drinking Water Schemes by project type

(Source of water=River)

			,	,	
		Project type			
Sl No.	District		Schemes-		
51 110.	District	Schemes-with	without		
		distribution	distribution	Total	
1	Kasaragod	4	3	7	
2	Kannur	3	0	3	
3	Wayanad	6	3	9	
4	Kozhikode	28	1	29	
5	Malappuram	26	0	26	
6	Palakkad	18	20	38	
7	Thrissur	7	4	11	
8	Ernakulam	3	6	9	
9	Idukki	40	11	51	
10	Kottayam	8	0	8	
11	Alappuzha	2	1	3	
12	Pathanamthitta	3	0	3	
13	Kollam	0	0	0	
14	Thiruvananthapuram	1	0	1	
	Total	149	49	198	

			(5001200 01	
			Project type	
Sl No.	District	Schemes-with distribution	Schemes- without distribution	Total
1	Kasaragod	3	74	77
2	Kannur	1	3	4
3	Malappuram	5	3	8
4	Palakkad	3	0	3
5	Thrissur	4	6	10
6	Idukki	5	5	10
7	Kottayam	1	11	12
8	Alappuzha	0	23	23
9	Kollam	0	1	1
	Total	22	126	148

Table 3e: District wise number of Drinking Water Schemes by project type(Source of water= Rain harvest)

Table 3f: District wise number of Drinking Water Schemes by project type

(Source of water= other sources)

		Project Type			
	District		Shemes-		
	District	Shemes-with	without		
Sl No		distribution	distribution	Total	
1	Kasaragod	0	2	2	
2	Kannur	4	0	4	
3	Wayanad	12	26	38	
4	Kozhikode	15	0	15	
5	Malappuram	4	1	5	
6	Palakkad	17	5	22	
7	Thrissur	12	2	14	
8	Ernakulam	4	2	6	
9	Idukki	196	117	313	
10	Kottayam	3	3	6	
11	Alappuzha	7	33	40	
12	Pathanamthitta	3	0	3	
13	Kollam	7	21	28	
14	Thiruvananthapuram	2	0	2	
	Total	286	212	498	

Table 4a: District wise number of Drinking Water Schemes by source of water

Source of water District Rain Other S1 No Well Bore well Pond River harvest Sources Total Kasaragod Kannur Wayanad Kozhikode 1,926 2,077 Malappuram 1,883 2,236 Palakkad 2,094 2,905 Thrissur 1,316 Ernakulam Idukki 1,672 Kottayam Alappuzha Pathanamthitta Kollam Thiruvananthapuram 1,586 Total 8,044 4,391 14,478

(Project type = Schemes-with distribution)

Table 4b: District wise number of Drinking Water Schemes by source of water.

(Project type = Schemes-without distribution)

		Source of water						
S1 No	District	Well	Bore well	Pond	River	Rain harvest	Other Sources	Total
1	Kasaragod	1,494	2,284	38	3	74	2	3,895
2	Kannur	545	221	21	0	3	0	790
3	Wayanad	3,976	110	106	3	0	26	4,221
4	Kozhikode	420	65	0	1	0	0	486
5	Malappuram	1,092	796	11	0	3	1	1,903
6	Palakkad	1,337	911	13	20	0	5	2,286
7	Thrissur	263	157	7	4	6	2	439
8	Ernakulam	194	18	17	6	0	2	237
9	Idukki	157	152	264	11	5	117	706
10	Kottayam	267	465	33	0	11	3	779
11	Alappuzha	382	27	54	1	23	33	520
12	Pathanamthitta	17	48	0	0	0	0	65
13	Kollam	1,105	319	20	0	1	21	1,466
14	Thiruvananthapuram	249	35	13	0	0	0	297
	Total	11,498	5,608	597	49	126	212	18,090

Sl No.	District	Project cost available	Project cost not available	Total cost of the project
1	Kasaragod	3,906	788	55,66,04,230
2	Kannur	1,046	503	30,53,12,211
3	Wayanad	1,786	3,395	22,38,98,342
4	Kozhikode	936	1,627	50,58,88,234
5	Malappuram	3,897	242	169,51,57,703
6	Palakkad	3,220	1,971	124,75,08,527
7	Thrissur	1,506	249	109,14,79,639
8	Ernakulam	391	18	25,25,93,898
9	Idukki	2,335	43	64,75,60,840
10	Kottayam	1,414	0	68,07,13,543
11	Alappuzha	849	0	3,73,41,018
12	Pathanamthitta	185	0	13,18,56,251
13	Kollam	1,595	3	19,10,32,234
14	Thiruvananthapuram	658	5	18,65,67,189
	Total	23,724	8,844	775,35,13,859

Table 5: Project cost details of Drinking Water Schemes - District wise

		Project Type				
Sl No	Source of water	Schemes-with distribution	Schemes-without distribution	Total		
1	Well	8,044	11,498	19,542		
2	Bore well	4,391	5,608	9,999		
3	Pond	1,586	597	2,183		
4	River	149	49	198		
5	Rain harvest	22	126	148		
6	Other Sources	286	212	498		
	Total	14,478	18,090	32,568		

Table 6: Drinking Water Schemes by source of water and Project type

Table 7: Drinking Water Schemes by source of water and present status

		Present Status of the project				
Sl No	Source of water	Working	Not Working	Not commissioned	Total	
1	Well	14,446	4,315	781	19,542	
2	Bore well	7,051	2,539	409	9,999	
3	Pond	1,516	509	158	2,183	
4	River	151	41	6	198	
5	Rain harvest	97	45	б	148	
6	Other Sources	305	158	35	498	
	Total	23,566	7,607	1,395	32,568	

<b></b>									
		Present Status of the project							
Sl No	Project Type	Working	Not Working	Not commissioned	Total				
1	Schemes-with distribution	12,109	1,636	733	14,478				
2	Schemes-without distribution	11,457	5,971	662	18,090				
	Total	23,566	7,607	1,395	32,568				

Table 8: Drinking Water Schemes by Project type and present status

Table 9: District wise number of Drinking Water Schemes by present status

			Present Status o	f the project	
Sl No.	District	Working	Not Working	Not commissioned	Total
1	Kasaragod	3,499	1,149	46	4,694
2	Kannur	1,224	208	117	1,549
3	Wayanad	4,211	846	124	5,181
4	Kozhikode	1,932	424	207	2,563
5	Malappuram	2,820	1,148	171	4,139
6	Palakkad	3,721	1,233	237	5,191
7	Thrissur	1,502	139	114	1,755
8	Ernakulam	181	209	19	409
9	Idukki	1,718	456	204	2,378
10	Kottayam	760	580	74	1,414
11	Alappuzha	348	493	8	849
12	Pathanamthitta	131	14	40	185
13	Kollam	1,052	543	3	1,598
14	Thiruvananthapuram	467	165	31	663
	Total	23,566	7,607	1,395	32,568

		8		Reason for	r non-functio	ning		
Sl No	District	Work not completed	Work not started	Maintenance needed	Non- availability of water	Lack of Electricity connection	Other reasons	Total
1	Kasaragod	43	3	726	346	8	69	1,195
2	Kannur	59	20	156	28	8	54	325
3	Wayanad	78	14	394	368	9	107	970
4	Kozhikode	152	18	339	31	14	77	631
5	Malappuram	110	11	1,036	66	34	62	1,319
6	Palakkad	103	29	313	638	9	378	1,470
7	Thrissur	67	5	88	60	9	24	253
8	Ernakulam	10	1	158	21	3	35	228
9	Idukki	127	6	283	134	22	88	660
10	Kottayam	31	0	557	11	2	53	654
11	Alappuzha	4	1	460	7	1	28	501
12	Pathanamthitta	38	0	13	0	2	1	54
13	Kollam	0	1	507	32	0	6	546
14	Thiruvananthapuram	18	0	98	59	12	9	196
	Total	840	109	5,128	1,801	133	991	9,002

Table 10: District wise number of Drinking Water Schemes by reason for non-functioning

			Project Type	
Sl No	Reason for non-functioning	Schemes-with distribution	Schemes-without distribution	Total
1	Work not completed	515	325	840
2	Work not started	49	60	109
3	Maintenance needed	1,234	3,894	5,128
4	Non-availability of water	213	1,588	1,801
5	Lack of Electricity connection	90	43	133
6	Other reasons	268	723	991
	Total	2,369	6,633	9,002

Table 11: Drinking Water	Schemes by Reason	for non-functioning	and Project type

				Sou	irce of water			
Sl No	Reason for non-functioning	Well	Bore well	Pond	River	Rain harvest	Other Sources	Total
1	Work not completed	531	170	118	7	3	11	840
2	Work not started	51	51	3	0	2	2	109
3	Maintenance needed	2,917	1,667	375	27	41	101	5,128
4	Non-availability of water	926	738	76	2	1	58	1,801
5	Lack of Electricity connection	75	38	18	0	0	2	133
6	Other reasons	596	284	77	11	4	19	991
	Total	5,096	2,948	667	47	51	193	9,002

Table 12: Drinking Water Schemes by Reason for non-functioning and Source of water

				Reaso	n for incompl	etion		
Sl No.	District	Lack of sufficient fund	Work stopped by contractor/ convener	Public protest	Non availability of water	Project abandoned by Govt	Others	Total
1	Kasaragod	17	13	0	7	1	5	43
2	Kannur	17	7	0	3	9	23	59
3	Wayanad	37	10	2	6	4	19	78
4	Kozhikode	62	8	4	9	1	68	152
5	Malappuram	37	4	1	9	1	58	110
6	Palakkad	21	4	2	5	0	71	103
7	Thrissur	15	1	1	4	0	46	67
8	Ernakulam	2	3	0	0	0	5	10
9	Idukki	69	5	1	26	1	25	127
10	Kottayam	14	0	0	0	1	16	31
11	Alappuzha	0	1	0	1	0	2	4
12	Pathanamthitta	4	1	0	0	0	33	38
13	Kollam	0	0	0	0	0	0	0
14	Thiruvananthapuram	4	1	0	4	0	9	18
	Total	299	58	11	74	18	380	840

Table 13: District wise number of Drinking Water Schemes by reason for incompletion

			Project type	
Sl No.	Reason for incompletion	Schemes-with distribution	Schemes-without distribution	Total
1	Lack of sufficient fund	154	145	299
2	Work stopped by contractor/convener	33	25	58
3	Public protest	8	3	11
4	Non availability of water	22	52	74
5	Project abandoned by Govt	10	8	18
6	Others	288	92	380
	Total	515	325	840

Table 14: Drinking Water Schemes by Reason for non-completion according to Project type

Table 15: Drinking Water Schemes by Reason for non-completion according to Source of water

		Source of water								
Sl No	Reason for incompletion	Well	Bore well	Pond	River	Rain harvest	Other Sources	Total		
1	Lack of sufficient fund	187	41	63	3	1	4	299		
2	Work stopped by contractor/convener	35	11	9	2	0	1	58		
3	Public protest	10	1	0	0	0	0	11		
4	Non availability of water	40	19	14	0	0	1	74		
5	Project abandoned by Govt	10	3	5	0	0	0	18		
6	Others	249	95	27	2	2	5	380		
	Total	531	170	118	7	3	11	840		

			Implementing agency					
Sl No	District		Beneficiary Committees &					
		Local Body	Others	Total				
1	Kasaragod	2,224	1,275	3,499				
2	Kannur	723	501	1,224				
3	Wayanad	1,957	2,254	4,211				
4	Kozhikode	320	1,612	1,932				
5	Malappuram	654	2,166	2,820				
6	Palakkad	1,472	2,249	3,721				
7	Thrissur	489	1,013	1,502				
8	Ernakulam	96	85	181				
9	Idukki	265	1,453	1,718				
10	Kottayam	308	452	760				
11	Alappuzha	300	48	348				
12	Pathanamthitta	83	48	131				
13	Kollam	960	92	1,052				
14	Thiruvananthapuram	310	157	467				
	Total	10,161	13,405	23,566				

Table 16: District wise number of presently functioning Drinking Water Schemes by implementing agency

		, 0 0	Project type	1
Sl No.	District	Schemes-with distribution	Schemes-without distribution	Total
1	Kasaragod	701	2,798	3,499
2	Kannur	606	618	1,224
3	Wayanad	818	3,393	4,211
4	Kozhikode	1,584	348	1,932
5	Malappuram	1,863	957	2,820
6	Palakkad	2,593	1,128	3,721
7	Thrissur	1,177	325	1,502
8	Ernakulam	112	69	181
9	Idukki	1,612	106	1,718
10	Kottayam	345	415	760
11	Alappuzha	216	132	348
12	Pathanamthitta	73	58	131
13	Kollam	116	936	1,052
14	Thiruvananthapuram	293	174	467
	Total	12,109	11,457	23,566

Table 17: District wise number of presently functioning Drinking Water Schemes by Project type

				Sou	arce of water			
Sl No	District	Well	Bore well	Pond	River	Rain harvest	Other Sources	Total
1	Kasaragod	1,437	1,951	31	5	74	1	3,499
2	Kannur	848	245	124	3	2	2	1,224
3	Wayanad	4,007	78	91	9	0	26	4,211
4	Kozhikode	1,779	72	53	16	0	12	1,932
5	Malappuram	2,164	607	24	18	4	3	2,820
6	Palakkad	1,462	2,204	6	35	1	13	3,721
7	Thrissur	664	783	35	9	6	5	1,502
8	Ernakulam	107	30	36	5	0	3	181
9	Idukki	264	322	885	40	7	200	1,718
10	Kottayam	289	276	182	6	2	5	760
11	Alappuzha	307	35	2	2	0	2	348
12	Pathanamthitta	50	62	14	2	0	3	131
13	Kollam	740	265	18	0	1	28	1,052
14	Thiruvananthapuram	328	121	15	1	0	2	467
	Total	14,446	7,051	1,516	151	97	305	23,566

Table18: District wise number of presently functioning Drinking Water Schemes by Source of water

	Implementing agency	Project Type				
S1 No		Schemes-with distribution	Schemes-without distribution	Total		
1	Local Body	2,465	7,696	10,161		
2	Beneficiary Committees & Others	9,644	3,761	13,405		
	Total	12,109	11,457	23,566		

Table 19: Drinking Water Schemes by implementing agency and Project type

Table 20: Drinking Water Schemes by Implementing agency and Source of water

		Source of water						
Sl No	Implementing agency					Rain	Other	
		Well	Bore well	Pond	River	harvest	Sources	Total
1	Local Body	6,565	3,150	262	70	13	101	10,161
2	Beneficiary Committees & Others	7,881	3,901	1,254	81	84	204	13,405
	Total	14,446	7,051	1,516	151	97	305	23,566

## PART-II

## **Drinking Water Schemes with**

## distribution and working

	District	Project-As per field visit			
Sl No.		Only for	Drinking as		
		drinking	well as other		
		purpose	purposes	Total	
1	Kasaragod	690	11	701	
2	Kannur	580	26	606	
3	Wayanad	805	13	818	
4	Kozhikode	1,533	51	1,584	
5	Malappuram	1,810	53	1,863	
6	Palakkad	2,568	25	2,593	
7	Thrissur	1,158	19	1,177	
8	Ernakulam	110	2	112	
9	Idukki	1,526	86	1,612	
10	Kottayam	333	12	345	
11	Alappuzha	205	11	216	
12	Pathanamthitta	70	3	73	
13	Kollam	114	2	116	
14	Thiruvananthapuram	292	1	293	
	Total	11,794	315	12,109	

Table 21: District wise number of Drinking Water Schemes by purpose

District	Availability of operator-As per field visit					
	Permanent	Temporary				
	operator	operator	No			
	available	available	operator	Total		
Kasaragod	310	234	157	701		
Kannur	197	258	151	606		
Wayanad	225	429	164	818		
Kozhikode	793	685	106	1,584		
Malappuram	655	869	339	1,863		
Palakkad	910	1,483	200	2,593		
Thrissur	559	486	132	1,177		
Ernakulam	19	65	28	112		
Idukki	356	588	668	1,612		
Kottayam	188	134	23	345		
Alappuzha	4	13	199	216		
Pathanamthitta	35	20	18	73		
Kollam	28	50	38	116		
Thiruvananthapuram	80	158	55	293		
Total	4,359	5,472	2,278	12,109		
	Kasaragod Kannur Wayanad Kozhikode Malappuram Palakkad Thrissur Ernakulam Idukki Kottayam Alappuzha Pathanamthitta Kollam Thiruvananthapuram	DistrictPermanent operator availableKasaragod310Kannur197Wayanad225Kozhikode793Malappuram655Palakkad910Thrissur559Ernakulam19Idukki356Kottayam188Alappuzha4Pathanamthitta35Kollam28Thiruvananthapuram80	DistrictPermanent operator availableTemporary operator availableKasaragod310234Kannur197258Wayanad225429Kozhikode793685Malappuram655869Palakkad9101,483Thrissur559486Ernakulam1965Idukki356588Kottayam188134Alappuzha413Pathanamthitta3520Kollam2850Thiruvananthapuram80158	DistrictPermanent operator availableTemporary operator availableNo operatorKasaragod310234157Kannur197258151Wayanad225429164Kozhikode793685106Malappuram655869339Palakkad9101,483200Thrissur559486132Ernakulam196528Idukki356588668Kottayam18813423Alappuzha413199Pathanamthitta352018Kollam285038		

		Availability of water at source -As per field			
Sl No.	District	visit			
51 110.	District	Sufficiently			
		available	Not available	Total	
1	Kasaragod	623	78	701	
2	Kannur	530	76	606	
3	Wayanad	669	149	818	
4	Kozhikode	1,233	351	1,584	
5	Malappuram	1,635	228	1,863	
6	Palakkad	2,173	420	2,593	
7	Thrissur	1,040	137	1,177	
8	Ernakulam	86	26	112	
9	Idukki	1,332	280	1,612	
10	Kottayam	215	130	345	
11	Alappuzha	156	60	216	
12	Pathanamthitta	67	6	73	
13	Kollam	98	18	116	
14	Thiruvananthapuram	244	49	293	
	Total	10,101	2,008	12,109	

Table 23: District wise number of Drinking Water Schemes by availability of water at source

Table 24: District wise number of Drinking Water Schemes by Status of pump set - As per plan

Sl No.	District	Status of pump set - As per plan			
51 110.	District	Available	Not available	Total	
1	Kasaragod	679	22	701	
2	Kannur	569	37	606	
3	Wayanad	693	125	818	
4	Kozhikode	1,204	380	1,584	
5	Malappuram	1,706	157	1,863	
6	Palakkad	2,408	185	2,593	
7	Thrissur	960	217	1,177	
8	Ernakulam	52	60	112	
9	Idukki	915	697	1,612	
10	Kottayam	302	43	345	
11	Alappuzha	11	205	216	
12	Pathanamthitta	45	28	73	
13	Kollam	80	36	116	
14	Thiruvananthapuram	248	45	293	
	Total	9,872	2,237	12,109	

Sl No.	District	Status of pump set - As per field visit			
51 110.	District	Available	Not available	Total	
1	Kasaragod	681	20	701	
2	Kannur	566	40	606	
3	Wayanad	756	62	818	
4	Kozhikode	1,496	88	1,584	
5	Malappuram	1,812	51	1,863	
6	Palakkad	2,543	50	2,593	
7	Thrissur	1,147	30	1,177	
8	Ernakulam	100	12	112	
9	Idukki	1,179	433	1,612	
10	Kottayam	330	15	345	
11	Alappuzha	37	179	216	
12	Pathanamthitta	59	14	73	
13	Kollam	103	13	116	
14	Thiruvananthapuram	271	22	293	
	Total	11,080	1,029	12,109	

Table 25: District wise number of Drinking Water Schemes by Status of pump set - As per field visit

Table 26: Drinking Water Schemes by Source of water and Status of pump set - As per plan

Sl No.	Source of water	Status of pump set - As per plan			
51 110.	Source of water	Available	Not available	Total	
1	Well	5,428	1,120	6,548	
2	Bore well	3,325	509	3,834	
3	Pond	1,010	327	1,337	
4	River	68	53	121	
5	Rain harvest	6	7	13	
6	Others	35	221	256	
	Total	9,872	2,237	12,109	

Table 27: Drinking Water Schemes by Source of water and Status of pump set - As per field visit

Sl No.	Source of water	Status of pump set - As per field visit			
51 NO.	Source of water	Available	Not available	Total	
1	Well	6,097	451	6,548	
2	Bore well	3,640	194	3,834	
3	Pond	1,201	136	1,337	
4	River	87	34	121	
5	Rain harvest	7	6	13	
6	Others	48	208	256	
	Total	11,080	1,029	12,109	

Sl No.	District	No of projects having Pump set	No of pump sets - As per plan		
511101	1	(As per plan)	electric	non-electric	
1	Kasaragod	679	693	13	
2	Kannur	569	618	8	
3	Wayanad	693	626	87	
4	Kozhikode	1,204	1,227	19	
5	Malappuram	1,706	1,782	56	
6	Palakkad	2,408	2,433	5	
7	Thrissur	960	992	9	
8	Ernakulam	52	51	2	
9	Idukki	915	818	228	
10	Kottayam	302	339	11	
11	Alappuzha	11	11	0	
12	Pathanamthitta	45	49	1	
13	Kollam	80	93	1	
14	Thiruvananthapuram	248	281	6	
	Total	9,872	10,013	446	

Table 28: Number of pump sets proposed - As per plan (District wise)

## Table 29: Number of pump sets proposed - As per plan (by Source of water)

Sl No.	Source of water	No of projects having Pump set	No of pump sets - As per plan		
51 NO.	Source of water	(As per plan)	electric	non-electric	
1	Well	5,428	5,540	188	
2	Bore well	3,325	3,406	39	
3	Pond	1,010	944	209	
4	River	68	81	5	
5	Rain harvest	6	8	0	
6	Others	35	34	5	
	Total	9,872	10,013	446	

Sl No.	District	District No of projects having Pump set		- As per field visit
51 NO.	(As per field visit)		electric	non-electric
1	Kasaragod	681	697	12
2	Kannur	566	612	8
3	Wayanad	756	694	97
4	Kozhikode	1,496	1,551	28
5	Malappuram	1,812	1,890	67
6	Palakkad	2,543	2,580	4
7	Thrissur	1,147	1,192	17
8	Ernakulam	100	106	2
9	Idukki	1,179	983	227
10	Kottayam	330	395	8
11	Alappuzha	37	38	0
12	Pathanamthitta	59	62	1
13	Kollam	103	125	1
14	Thiruvananthapuram	271	294	6
	Total	11,080	11,219	478

Table 30: Number of pump sets observed - As per field visit (District wise)

Table 31: Number of pump sets observed - As per field visit (by Source of water)

		No of projects having Pump set	No of pump sets - As per field visit		
Sl No.	Source of water	(As per field visit)	electric	non-electric	
1	Well	6,097	6,256	223	
2	Bore well	3,640	3,741	38	
3	Pond	1,201	1,064	207	
4	River	87	107	5	
5	Rain harvest	7	7	0	
6	Others	48	44	5	
	Total	11,080	11,219	478	

		No of projects	No of tanks - As per plan			
S1 No.	District	having storage tank (As per plan)	Fiber	Concrete tanks	Other tanks	
1	Kasaragod	646	74	610	1	
2	Kannur	568	173	473	14	
3	Wayanad	724	87	700	1	
4	Kozhikode	1,224	71	1,187	10	
5	Malappuram	1,701	971	935	45	
6	Palakkad	1,744	1,342	690	2	
7	Thrissur	896	261	731	7	
8	Ernakulam	59	20	47	3	
9	Idukki	1,354	493	1,077	5	
10	Kottayam	326	133	262	19	
11	Alappuzha	34	26	7	4	
12	Pathanamthitta	61	21	53	0	
13	Kollam	91	12	80	10	
14	Thiruvananthapuram	283	202	153	5	
	Total	9,711	3,886	7,005	126	

Table 32: Number of storage tanks proposed - As per plan (District wise)

Table 33: Number of storage tanks proposed - As per plan (by Source of water)

Sl No. Source of water		No of projects	No of tanks - As per plan		
	having storage tank (As per plan)	Fiber	Concrete tanks	Other tanks	
1	Well	5,467	1,885	4,152	38
2	Bore well	2,722	1,557	1,503	26
3	Pond	1,210	381	1,014	21
4	River	86	22	123	0
5	Rain harvest	10	0	16	0
6	Others	217	41	197	41
	Total	9,712	3,886	7,005	126

		No of projects	No of tanks - As per field visit			
Sl No.	District	having storage tank (As per field visit)	Fiber	Concrete tanks	Other tanks	
1	Kasaragod	649	73	615	1	
2	Kannur	569	173	475	14	
3	Wayanad	777	121	727	2	
4	Kozhikode	1,529	100	1,491	10	
5	Malappuram	1,817	1,066	990	40	
6	Palakkad	1,791	1,388	700	2	
7	Thrissur	1,046	293	858	57	
8	Ernakulam	99	33	81	3	
9	Idukki	1,379	497	1,100	5	
10	Kottayam	332	138	279	19	
11	Alappuzha	37	29	8	4	
12	Pathanamthitta	63	20	55	0	
13	Kollam	104	21	90	10	
14	Thiruvananthapuram	284	205	154	5	
	Total	10,476	4,157	7,623	172	

Table 34: Number of storage tanks observed - As per field visit (District wise)

Table 35: Number of storage	tanks observed - As pe	er field visit (by Source	of water)
0	1		,

Sl No.		No of projects	No of tanks - As per field visit			
51 100.	Source of water	having storage tank (As per field visit)	Fiber	Concrete tanks	Other tanks	
1	Well	6,056	2,079	4,642	89	
2	Bore well	2,841	1,629	1,568	25	
3	Pond	1,234	384	1,044	21	
4	River	108	23	146	0	
5	Rain harvest	11	0	16	0	
6	Others	226	42	207	37	
	Total	10,476	4,157	7,623	172	

S1 No	District	As per plan	As per field visit
1	Kasaragod	6,103	6,119
2	Kannur	7,795	7,773
3	Wayanad	10,407	11,377
4	Kozhikode	21,938	30,184
5	Malappuram	22,030	23,134
6	Palakkad	14,178	14,946
7	Thrissur	11,817	14,444
8	Ernakulam	1,194	1,779
9	Idukki	21,488	21,743
10	Kottayam	9,080	9,596
11	Alappuzha	169	182
12	Pathanamthitta	686	719
13	Kollam	1,149	1,210
14	Thiruvananthapuram	2,063	2,069
	Total	1,30,093	1,45,275

Table 36: Storage tank capacity in kilo-litres (by District)

Table 37: Storage tank capacity in kilo-litres (by Source of water)

S1 No	Source of water	As per plan	As per field visit
1	Well	74,241	86,707
2	Bore well	26,678	28,265
3	Pond	21,747	22,657
4	River	3,148	3,191
5	Rain harvest	150	157
б	Other Sources	4,131	4,299
	Total	1,30,093	1,45,275

		Existence of water treatment system - As			
C1 No	District		per plan		
Sl No.	District				
		Available	Not available	Total	
1	Kasaragod	201	500	701	
2	Kannur	167	439	606	
3	Wayanad	223	595	818	
4	Kozhikode	413	1,171	1,584	
5	Malappuram	262	1,601	1,863	
6	Palakkad	245	2,348	2,593	
7	Thrissur	367	810	1,177	
8	Ernakulam	31	81	112	
9	Idukki	898	714	1,612	
10	Kottayam	154	191	345	
11	Alappuzha	35	181	216	
12	Pathanamthitta	35	38	73	
13	Kollam	66	50	116	
14	Thiruvananthapuram	115	178	293	
	Total	3,212	8,897	12,109	

Table 38: District wise number of Drinking Water Schemes by existence of water treatment system - As per plan

Table 39: Drinking Water Schemes by Source of water and existence of water treatment system - As per plan

Sl No.	Source of water	Existence of water treatment system - As per plan			
		Available	Not available	Total	
1	Well	1,620	4,928	6,548	
2	Bore well	740	3,094	3,834	
3	Pond	751	586	1,337	
4	River	41	82	123	
5	Rain harvest	2	9	11	
6	Others	58	198	256	
	Total	3,212	8,897	12,109	

Table 40: District wise number of Drinking Water Schemes by existence of water treatment system - As per field visit

Sl No.	District	Existence of water treatment system - As per field visit			
		Available	Not available	Total	
1	Kasaragod	194	507	701	
2	Kannur	146	460	606	
3	Wayanad	188	630	818	
4	Kozhikode	339	1,245	1,584	
5	Malappuram	257	1,606	1,863	
6	Palakkad	235	2,358	2,593	
7	Thrissur	365	812	1,177	
8	Ernakulam	25	87	112	
9	Idukki	858	754	1,612	
10	Kottayam	152	193	345	
11	Alappuzha	34	182	216	
12	Pathanamthitta	35	38	73	
13	Kollam	64	52	116	
14	Thiruvananthapuram	110	183	293	
	Total	3,002	9,107	12,109	

Table 41: Drinking Water Schemes by Source of water and existence of water treatment system - As per field visit

Sl No.	Source of water	Existence of water treatment system - As per field visit			
		Available	Not available	Total	
1	Well	1,486	5,062	6,548	
2	Bore well	703	3,131	3,834	
3	Pond	714	623	1,337	
4	River	40	83	123	
5	Rain harvest	2	9	11	
6	Others	57	199	256	
	Total	3,002	9,107	12,109	

Table 42: Total and average length of Pipe line (Main and Sub) as	s per plan (by District)
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		Length of main pipeline (in KMs)-As per plan			Length of sub pipeline (in KMs) - As per plan		
Sl No.	District	Total	No of schemes	Average length per scheme	Total	No of schemes	Average length per scheme
1	Kasaragod	1,295	614	2.109	3,700	526	7.034
2	Kannur	425	485	0.876	402	369	1.088
3	Wayanad	674	745	0.905	812	658	1.234
4	Kozhikode	799	1,021	0.782	1,446	822	1.759
5	Malappuram	1,216	1,545	0.787	2,939	1,373	2.140
6	Palakkad	2,631	2,204	1.194	1,409	1,760	0.801
7	Thrissur	906	859	1.055	1,060	708	1.496
8	Ernakulam	149	59	2.526	76	41	1.852
9	Idukki	1,573	1,157	1.360	1,400	1,016	1.378
10	Kottayam	464	326	1.423	792	298	2.658
11	Alappuzha	15	25	0.605	19	17	1.092
12	Pathanamthitta	45	47	0.954	69	39	1.781
13	Kollam	119	86	1.386	96	69	1.387
14	Thiruvananthapuram	385	258	1.491	598	200	2.991
	Total	10,696	9,431	1.134	14,816	7,896	1.876

	Length of main pipeline (in KMs)-As per plan		Length of sub pipeline (in KMs) - As per plan				
Sl No.	District	Total	No of schemes	Average length per scheme	Total	No of schemes	Average length per scheme
1	Well	5,149	4,968	1.037	10,073	4,151	2.427
2	Bore well	3,629	3,106	1.169	2,722	2,572	1.058
3	Pond	1,358	1,038	1.308	1,451	892	1.626
4	River	142	86	1.649	182	73	2.495
5	Rain harvest	15	9	1.681	13	9	1.440
6	Other Sources	402	224	1.797	376	199	1.888
	Total	10,696	9,431	1.134	14,816	7,896	1.876

Table 43: Total and average length of Pipe line (Main and Sub) observed as per plan (by Source of water)

		No of beneficiary units of the scheme - as per plan					
Sl No.	District	Domestic	Govt. institutions	Private institutions	Public tap	Others	
1	Kasaragod	24,371	95	218	1,447	30	
2	Kannur	79,236	77	59	3,055	39	
3	Wayanad	28,641	186	93	685	183	
4	Kozhikode	98,122	132	150	1,522	8	
5	Malappuram	85,818	359	421	4,880	33	
6	Palakkad	1,32,092	665	373	12,475	108	
7	Thrissur	62,158	1,107	170	4,636	93	
8	Ernakulam	8,119	42	18	205	0	
9	Idukki	71,714	204	855	2,107	579	
10	Kottayam	38,322	148	68	3,726	50	
11	Alappuzha	7,875	225	31	642	0	
12	Pathanamthitta	4,326	1	5	117	0	
13	Kollam	5,504	8	4	378	35	
14	Thiruvananthapuram	9,239	21	104	1,260	160	
	Total	6,55,537	3,270	2,569	37,135	1,318	

Table 44: District wise number of beneficiary units of the Scheme As per plan

			Aver	age No of benefic:	iary units per sch	ieme – as per p	lan
Sl No.	District	Statistics	Domestic	Govt institutions	Private institutions	Public tap	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Total	24,371	95	218	1,447	30
1	Kasargod	P.H.B *	643	40	33	193	15
		Average	38	2	7	7	2
		Total	79,236	77	59	3,055	39
2	Kannur	P.H.B	544	59	19	175	4
		Average	146	1	3	17	10
		Total	28,641	186	93	685	183
3	Wayand	P.H.B	749	48	32	103	9
		Average	38	4	3	7	20
		Total	98,122	132	150	1,522	8
4	Kozhikode	P.H.B	1,107	61	30	126	5
		Average	89	2	5	12	2
		Total	85,818	359	421	4,880	33
5	Malappuram	P.H.B	1,623	185	87	356	6
		Average	53	2	5	14	6
		Total	1,32,092	665	373	12,475	108
6	Palakkad	P.H.B	2,231	275	118	785	23
		Average	59	2	3	16	5
		Total	62,158	1,107	170	4,636	93
7	Thrissur	P.H.B	879	157	40	289	8
		Average	71	7	4	16	12

Table 45: District wise average number of beneficiary units of the Scheme As per plan.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Total	8,119	42	18	205	0
8	Ernakulam	P.H.B	63	22	6	14	0
		Average	129	2	3	15	0
		Total	71,714	204	855	2,107	579
9	Idukki	P.H.B	1,539	114	154	329	83
		Average	47	2	б	6	7
		Total	38,322	148	68	3,726	50
10	Kottayam	P.H.B	328	31	18	68	12
		Average	117	5	4	55	4
		Total	7,875	225	31	642	0
11	Alappuzha	P.H.B	173	14	3	15	0
		Average	46	16	10	43	0
		Total	4,326	1	5	117	0
12	Pathanamthitta	P.H.B	60	1	4	21	0
		Average	72	1	1	6	0
		Total	5,504	8	4	378	35
13	Kollam	P.H.B	99	5	3	15	5
		Average	56	2	1	25	7
		Total	9,239	21	104	1,260	160
14	Thiruvananthapuram	P.H.B	248	17	17	118	13
		Average	37	1	6	11	12
		Total	6,55,537	3,270	2,569	37,135	1,318
	Total	P.H.B	10,286	1,029	564	2,607	183
		Average	64	3	5	14	7

\*P.H.B=Projects having beneficiary units.

			Ave	rage No of benefi	ciary units per se	cheme – as per pl	lan
Sl No.	District			Govt	Private		
		Statistics	Domestic	institutions	institutions	Public tap	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Total	3,61,721	2,030	898	14,771	374
1	Well	P.H.B *	5,423	525	238	1,165	52
		Average	67	4	4	13	7
		Total	1,85,093	912	921	16,785	392
2	Bore well	P.H.B *	3,258	383	184	1,124	49
		Average	57	2	5	15	8
		Total	73,818	232	242	3,719	127
3	Pond	P.H.B *	1,265	83	67	207	20
		Average	58	3	4	18	6
		Total	13,488	41	40	1,102	0
4	River	P.H.B *	92	15	10	34	0
		Average	147	3	4	32	0
		Total	305	6	1	6	0
5	Rain harvest	P.H.B *	8	3	1	2	0
		Average	38	2	1	3	0
		Total	21,113	49	467	752	425
6	Other Sources	P.H.B *	240	20	64	75	62
		Average	88	2	7	10	7
		Total	6,55,537	3,270	2,569	37,135	1,318
	Total	P.H.B *	10,286	1,029	564	2,607	183
		Average	64	3	5	14	7

Table 46: Average number of beneficiary units of the Scheme As per plan (by Source of water).

\*P.H.B=Projects having beneficiary units.

S1 No	District	Average daily usage of water (in litre)	Average monthly consumption of electricity
1	Kasaragod	11,104	1,131
2	Kannur	11,995	855
3	Wayanad	12,936	711
4	Kozhikode	18,278	1,329
5	Malappuram	18,753	1,308
6	Palakkad	20,448	1,324
7	Thrissur	21,895	1,201
8	Ernakulam	48,517	3,214
9	Idukki	16,388	1,214
10	Kottayam	31,590	2,649
11	Alappuzha	2,349	1,558
12	Pathanamthitta	10,443	1,813
13	Kollam	12,991	1,415
14	Thiruvananthapuram	8,947	844
	Total	17,941	1,275

Table 47: District wise average daily usage of water (in litre) and average monthly consumption of electricity (in Rupees) observed during field visit

Table 48: Average daily usage of water (in litre) and average monthly consumption of electricity (in Rupees) observed during field visit (by source of water)

Sl No	Source of water	Average daily usage of water (in litre)	Average monthly consumption of electricity
1	Well	16,238	1,192
2	Bore well	18,731	1,306
3	Pond	17,759	1,492
4	River	85,867	2,318
5	Rain harvest	17,730	1,307
6	Others	25,193	3,145
	Total	17,941	1,275

			Metho	od of distribu	tion of water	- As per fiel	d visit	_
Sl No.	District	Available 24 hours	Only a few hours	Only alternate days	One or two days in a week	Others	No accurate timing	Total
1	Kasaragod	177	408	62	12	7	35	701
2	Kannur	248	205	79	5	8	61	606
3	Wayanad	270	284	170	52	13	29	818
4	Kozhikode	354	783	317	43	44	43	1,584
5	Malappuram	467	903	291	21	46	135	1,863
6	Palakkad	451	1,869	156	19	70	28	2,593
7	Thrissur	372	592	88	18	10	97	1,177
8	Ernakulam	40	55	9	0	1	7	112
9	Idukki	508	325	547	54	39	139	1,612
10	Kottayam	90	133	97	20	2	3	345
11	Alappuzha	203	9	1	0	1	2	216
12	Pathanamthitta	35	13	15	7	1	2	73
13	Kollam	42	38	14	7	0	15	116
14	Thiruvananthapuram	101	115	34	9	3	31	293
	Total	3,358	5,732	1,880	267	245	627	12,109

Table 49: District wise number of Drinking Water Schemes by Method of distribution of water observed during field visit

			Meth	od of distribu	ition of water	- As per field	l visit	
Sl No.	Source of water			Only	One or two		No	
		Available	Only a few	alternate	days in a		accurate	
		24 hours	hours	days	week	Others	timing	Total
1	Well	2,025	2,938	979	158	124	324	6,548
2	Bore well	803	2,322	402	46	88	173	3,834
3	Pond	297	390	470	59	21	100	1,337
4	River	57	42	12	1	4	7	123
5	Rain harvest	3	4	0	0	1	3	11
6	Others	173	36	17	3	7	20	256
	Total	3,358	5,732	1,880	267	245	627	12,109

Table 50: Drinking Water Schemes by source of water and Method of distribution of water observed during field visit

	District	Availabili	ty of water Marc	ch to May
Sl No.		Adequate	Inadequate	Total
1	Kasaragod	389	312	701
2	Kannur	265	341	606
3	Wayanad	357	461	818
4	Kozhikode	763	821	1,584
5	Malappuram	718	1,145	1,863
6	Palakkad	1,332	1,261	2,593
7	Thrissur	727	450	1,177
8	Ernakulam	58	54	112
9	Idukki	744	868	1,612
10	Kottayam	145	200	345
11	Alappuzha	139	77	216
12	Pathanamthitta	43	30	73
13	Kollam	42	74	116
14	Thiruvananthapuram	133	160	293
	Total	5,855	6,254	12,109

Table 51: District wise number of Drinking Water Schemes by Availability of water March to May

Table 52: District wise number of Drinking Water Schemes by Availability of water June to August

	<b>D</b>	Availabilit	y of water June	to August
Sl No.	District	Adequate	Inadequate	Total
1	Kasaragod	688	13	701
2	Kannur	570	36	606
3	Wayanad	804	14	818
4	Kozhikode	1,571	13	1,584
5	Malappuram	1,858	5	1,863
6	Palakkad	2,573	20	2,593
7	Thrissur	1,164	13	1,177
8	Ernakulam	110	2	112
9	Idukki	1,606	6	1,612
10	Kottayam	336	9	345
11	Alappuzha	215	1	216
12	Pathanamthitta	73	0	73
13	Kollam	111	5	116
14	Thiruvananthapuram	290	3	293
	Total	11,969	140	12,109

Sl No.	District	Availability of water - September to November		
51 110.	District	Adequate	Inadequate	Total
1	Kasaragod	670	31	701
2	Kannur	569	37	606
3	Wayanad	789	29	818
4	Kozhikode	1,558	26	1,584
5	Malappuram	1,856	7	1,863
6	Palakkad	2,556	37	2,593
7	Thrissur	1,158	19	1,177
8	Ernakulam	110	2	112
9	Idukki	1,600	12	1,612
10	Kottayam	338	7	345
11	Alappuzha	214	2	216
12	Pathanamthitta	73	0	73
13	Kollam	111	5	116
14	Thiruvananthapuram	288	5	293
	Total	11,890	219	12,109

Table 53: District wise number of Drinking Water Schemes by Availability of water September to November

Table 54: District wise number of Drinking Water Schemes by Availability of water December to February

		Availability of	water - Decemb	er to February
Sl No.	District	Adequate	Inadequate	Total
1	Kasaragod	603	98	701
2	Kannur	539	67	606
3	Wayanad	664	154	818
4	Kozhikode	1,438	146	1,584
5	Malappuram	1,740	123	1,863
6	Palakkad	2,329	264	2,593
7	Thrissur	1,100	77	1,177
8	Ernakulam	94	18	112
9	Idukki	1,350	262	1,612
10	Kottayam	274	71	345
11	Alappuzha	194	22	216
12	Pathanamthitta	70	3	73
13	Kollam	83	33	116
14	Thiruvananthapuram	197	96	293
	Total	10,675	1,434	12,109

		Availability of water - March to May		
Sl No.	Source of water	Adequate	Inadequate	Total
1	Well	2,875	3,673	6,548
2	Bore well	2,182	1,652	3,834
3	Pond	593	744	1,337
4	River	77	46	123
5	Rain harvest	2	9	11
6	Others	126	130	256
	Total	5,855	6,254	12,109

Table 55: Drinking Water Schemes by source of water and Availability of water March to May

Table 56: Drinking Water Schemes by source of water and Availability of water June to August

Sl No.	Source of water	Availability of water - June to August				
		Adequate	Inadequate	Total		
1	Well	6,460	88	6,548		
2	Bore well	3,795	39	3,834		
3	Pond	1,331	6	1,337		
4	River	120	3	123		
5	Rain harvest	10	1	11		
6	Others	253	3	256		
	Total	11,969	140	12,109		

Table 57: Drinking Water Schemes by source of water and Availability of water September to November

Sl No.	Source of water	Availability of water September to November			
		Adequate	Inadequate	Total	
1	Well	6,427	121	6,548	
2	Bore well	3,762	72	3,834	
3	Pond	1,323	14	1,337	
4	River	119	4	123	
5	Rain harvest	11	0	11	
6	Others	248	8	256	
	Total	11,890	219	12,109	

Table 58: Drinking Water Schemes by source of water and Availability of water December to February

Sl No.	Source of water	Availability of water December to February				
		Adequate	Inadequate	Total		
1	Well	5,752	796	6,548		
2	Bore well	3,459	375	3,834		
3	Pond	1,161	176	1,337		
4	River	105	18	123		
5	Rain harvest	7	4	11		
6	Others	191	65	256		
	Total	10,675	1,434	12,109		

Table 59: District wise number of Drinking Water Schemes by Quality of drinking water

S1 No.	District	Response of beneficiaries on the Quality of drinking water				
01110.		Good	Average	Bad	Total	
1	Kasaragod	304	389	8	701	
2	Kannur	357	238	11	606	
3	Wayanad	387	426	5	818	
4	Kozhikode	1,017	508	59	1,584	
5	Malappuram	1,043	799	21	1,863	
6	Palakkad	1,410	1,124	59	2,593	
7	Thrissur	515	644	18	1,177	
8	Ernakulam	46	66	0	112	
9	Idukki	920	685	7	1,612	
10	Kottayam	194	145	6	345	
11	Alappuzha	96	111	9	216	
12	Pathanamthitta	41	26	6	73	
13	Kollam	67	48	1	116	
14	Thiruvananthapuram	158	132	3	293	
	Total	6,555	5,341	213	12,109	

Sl No.	District	Response of beneficiaries on the Functioning of the project				
01110.		Good	Average	Bad	Total	
1	Kasaragod	278	412	11	701	
2	Kannur	353	241	12	606	
3	Wayanad	355	438	25	818	
4	Kozhi kode	910	647	27	1,584	
5	Malappuram	888	960	15	1,863	
6	Palakkad	1,398	1,171	24	2,593	
7	Thrissur	550	608	19	1,177	
8	Ernakulam	45	64	3	112	
9	Idukki	732	839	41	1,612	
10	Kottayam	218	125	2	345	
11	Alappuzha	85	128	3	216	
12	Pathanamthitta	39	32	2	73	
13	Kollam	42	70	4	116	
14	Thiruvananthapuram	142	147	4	293	
	Total	6,035	5,882	192	12,109	

Table 60: District wise number of Drinking Water Schemes by Functioning of the project

		Response of beneficiaries on the Quality of				
Sl No.	Source of water	drinking water				
		Good	Average	Bad	Total	
1	Well	3,726	2,703	119	6,548	
2	Bore well	1,922	1,836	76	3,834	
3	Pond	778	548	11	1,337	
4	River	35	85	3	123	
5	Rain harvest	7	4	0	11	
6	Others	87	165	4	256	
	Total	6,555	5,341	213	12,109	

Table 61: Drinking Water Schemes by source of water and Quality of drinking water

Table 62: Drinking Water Schemes by source of water and Functioning of the project

				-		
		Response of beneficiaries on the Functioning of the				
Sl No.	Source of water	project				
		Good	Average	Bad	Total	
1	Well	3,371	3,070	107	6,548	
2	Bore well	1,891	1,890	53	3,834	
3	Pond	671	643	23	1,337	
4	River	39	82	2	123	
5	Rain harvest	4	7	0	11	
6	Others	59	190	7	256	
	Total	6,035	5,882	192	12,109	