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RESEARCH ARTICLE

DISTRICTWISE DISTRIBUTION OF HOUSEHOLDS BY SOURCE OF DRINKING WATER IN KARNATAKA – A DECADAL CHANGES (2001- 2011)

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ABSTRACT

Water is one of the most precious natural resources and a key element in the socio-economic development of a country. The total quantity of water available on the globe is the same as it was two thousand years ago. At the time of independence, the per capita availability of water in India was 6008 cubic meters a year. It came down to 5,177 cubic meters in 1951 to 1,820 cubic meters a year in 2001. Drinking water, in adequate quantity and quality is a basic requirement for life and a determinant of standard of life. Of all the other major problems rural water supply is one the major challenges that has been addressed by the government and attempts made towards tackling the crisis in providing safe and adequate quantity of water to the rural people. However the problem has become still more intense, as India is huge and growing population is putting a severe strain on all of the country's natural resources. India (Including Karnataka State) have made progress in the supply of adequate and safe drinking water to its people, but gross disparity is exists in coverage of all the districts of the State. This paper is mainly spread on the light about the district wise decadal (2001-2011) changes of drinking water supply system in rural areas of the Karnataka State.

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INTRODUCTION

Water is the basic necessity of human life. But as a matter of fact only an insignificant portion (2 percent) of the entire water mass available in the hydrosphere is potable. This being one of the basic necessities of life. Government has come out with various programmes of supply of drinking water to rural areas of the study area. However besides government efforts and ground water determine the level of drinking water available to people. The supply and demand factors increase with the natural and human factors like increase of population and decrease of sources of available of drinking water. Decline in groundwater table and availability of surface water, has put large number of people in risk for drinking water particularly in rural areas in summer season. The National Water Policy 2002 reflects the significance attached to drinking water by stating that, "adequate safe drinking water facilities should be provided to the entire population of the society". Through the implementation of number of programmes and plans like Mini water supply scheme (MWSS), Jal-Nirmal Project, Piped Water Supply (PWS), Tube well with Hand pump (TWHP) ect, the supply of safe drinking water has increased from 2001 to 2011, but with the increasing of population and decreasing of ground water level, Central and State governments are not

succeed with 100 percent to supply of adequate amount of safe drinking water to all the people of the study area.

STUDY AREA

The Karnataka State is the eight largest States in the Country and is located in the Deccan Plateau. According to 2011 censuses the total population of the state is 6, 11, 30, 704 accounts 5.5% of the total population of the country and ranks 9th place in the country. It extends between North latitude 11^o 31¹ to 18^o 45¹ and East longitude 74^o 12¹ to 78^o 40¹, as shown in the (Fig. 1), the length of the State from north to south 750Kms and width from east to west 400Kms.

The total Geographical area of the State is 1, 90,498sq.km accounting for 5.8% of the total area of the Country. The general elevation in the state varies between 450 to 900 mts. above mean sea level. The climate of Karnataka State varies from humid rainy monsoonal climate in the West Coast, the Ghats and malnad areas to semiarid warm dry climate on the east. There is a large variation in the rainfall with higher amounts in the Western Ghats and reducing towards the eastern plains. Along the coastal Dakshina Kannada District, the normal rainfall is about 4000mm and in the drought prone district of Bijapur, Raichur, Bellary, etc., the rainfall is of the order of 500mm to 600mm.

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Table 1. Sources of rural water supply

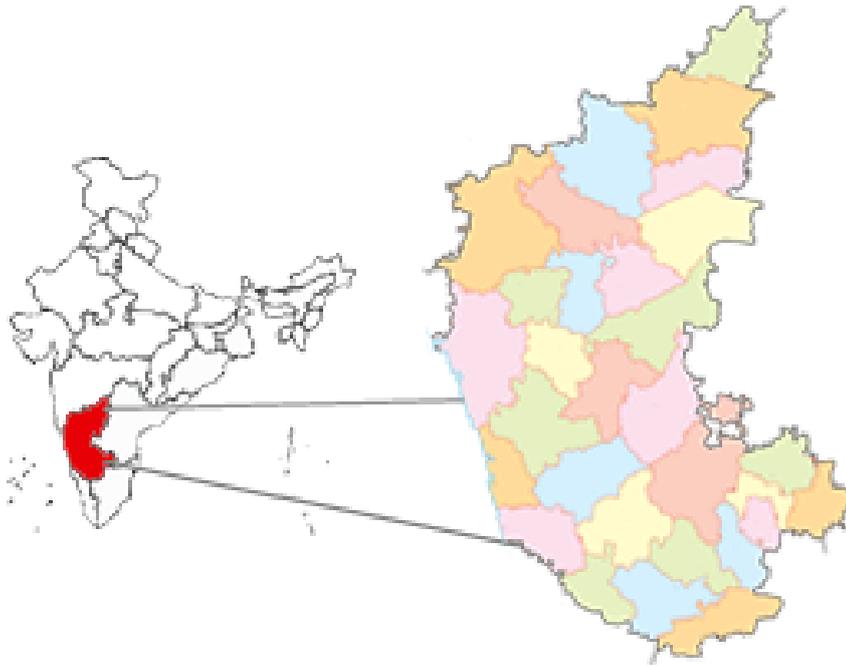
Sources	Taps (%)	Tube Wells (%)	Hand Pumps (%)	Wells (%)
2001	58.89	8.56	17.11	12.4
2011	66.06	15.95	5.54	8.98

Source: - Karnataka at a Glance 2008-09 and 2014-15

Table 2. Decadal changes of sources of drinking water supply in rural areas: Distribution of Households by sources of Drinking Water 2001 - 2011 (%)

No Sl.	Districts	Total No. Households	2001 Sources of Drinking Water (%)								Total No. Households	2011 Sources of Drinking Water (%)							
			Tap	Hand pump	Tube well	Well	Tank, Pond, Lake	Rivers Canal	Spring	Any Other		Tap	Hand pump	Tube well	Well	Tank, Pond, Lake	Rivers Canal	Spring	Any Other
			1	Bangalore	1418289	77.75	5.39	13.05	2.92	0.17		0.02	0.05	0.66	2377056	79.1	0.47	16.4	0.81
2	Bangalore(Rural)	383592	69.89	17.15	10.36	1.87	0.18	0.06	0.07	0.41	484539	72.53	2.69	22.02	0.66	0.025	0.02	0.045	2.01
3	Chitradurga	294724	58.78	28.06	11.42	1.31	0.05	0.16	0.03	0.19	354143	65.55	6.64	25.11	1.44	0.35	0.15	0.09	0.67
4	Davanagere	333888	67.37	18.11	10.55	2.56	0.21	0.49	0.06	0.66	404840	69.16	4.7	22.77	1.47	0.13	1.1	0.08	0.59
5	Kolar	499535	70.97	12.8	13.41	2.08	0.14	0.02	0.06	0.54	330990	63.13	0.81	27.95	1.6	1.3	0.02	0.02	5.17
6	Chikkaballapura		In 2001 it was with Kolar District								282311	71.48	1.08	23.94	1.37	0.14	0.04	0.17	1.78
7	Shimoga	330832	57.88	9.64	5.06	23.13	1.59	1.32	0.83	0.55	402139	65.28	1.7	9.1	20.85	0.93	0.54	0.88	0.72
8	Tumkur	545493	55.25	29.86	11.83	2.54	0.09	0.05	0.06	0.31	636394	66.84	6.32	23.89	1.71	0.08	0.06	0.05	1.05
9	Chikmagalur	239728	55.3	19.17	7.34	11.41	2.19	2.68	0.98	0.93	272173	68.34	3.92	13.22	8.99	1.33	1.84	1.63	0.73
10	DakshinaKannada	349695	31.02	2.3	5.23	57.15	2.52	0.61	0.41	0.76	425291	43.68	0.73	8.2	43.13	2.01	0.47	0.53	1.25
11	Udupi	206222	12.62	3.05	3.84	77.45	0.93	1.1	0.18	0.84	246313	18.57	1.18	4.06	73.51	0.82	0.44	0.18	1.24
12	Hassan	360089	54.6	29.12	9.27	5.42	0.56	0.53	0.18	0.31	429292	63.42	8.64	24.03	2.87	0.2	0.27	0.15	0.42
13	Kodagu	124089	34.11	8.85	10.16	37.49	3.08	3.32	1.67	1.33	138303	48.24	2.49	9.79	33.29	1.77	2.13	1.58	0.71
14	Mandya	368794	66.08	21.56	5.56	6.05	0.1	0.5	0.05	0.09	426578	77.55	6.11	13.64	1.94	0.03	0.16	0.08	0.49
15	Mysore	535927	71.31	17.91	5.96	3.26	0.2	0.84	0.08	0.42	688422	82.43	6.62	8.27	1.33	0.13	0.53	0.09	0.6
16	Chamarajanagar	202913	46.74	40.39	6.02	5.81	0.38	0.33	0.11	0.22	244198	63.68	12.46	18.17	4.15	0.07	0.41	0.15	0.91
17	Belgaum	761914	49.49	17.04	8.48	20.58	0.65	2.87	0.3	0.59	963825	54.01	7.86	19.36	14.4	0.42	2.49	0.42	1.04
18	Bijapur	323275	37.67	36.11	6.46	17.3	0.25	1.67	0.08	0.48	405076	48.22	22.75	12.5	13.18	0.31	1.58	0.24	1.22
19	Bagalkot	293347	54.02	22.16	9.87	9.98	0.25	2.74	0.07	0.92	355377	63.42	7.41	20.65	4.2	0.3	2.76	0.14	1.12
20	Dharwad	289789	73.43	7.58	5.58	2.48	9.32	0.82	0.02	0.75	372054	80.68	1.82	9.12	0.93	6	0.69	0.04	0.72
21	Gadag	180351	70.98	12.1	4.19	5.46	4.82	1.5	0.26	0.69	215602	72.67	5.22	8.4	2.57	9.09	0.89	0.2	0.96
22	Haveri	255761	69.95	16.17	11.33	0.71	0.13	0.88	0.04	0.78	325456	75.17	2.68	19.01	1	0.23	0.75	0.03	1.13
23	Uttara Kannada	266481	24.69	6.52	2.27	60.71	2.93	1.21	1.05	0.63	319912	27.44	3	4.35	60.42	1.49	0.88	1.42	1
24	Bellary	368360	76.35	11.88	5.5	2.56	0.82	1.79	0.67	0.43	481704	80.64	3.54	11.13	1.3	0.9	1.21	0.5	0.78
25	Bidar	247350	51.65	21.19	6.75	17.94	0.84	0.21	0.11	1.31	313521	50.69	12.83	17.01	16.71	0.28	0.19	0.6	1.69
26	Gulbarga	542937	45.65	28.59	6.62	15.85	0.61	1.88	0.28	0.53	465245	56.82	15.05	14.69	10.69	0.12	1.45	0.33	0.85
27	Yadgiri		In 2001 it was with Gulbarga District								200424	47.07	24.99	12.17	11.93	0.71	1.69	0.43	1.01
28	Raichur	298100	51.8	18.06	6.72	10.61	4.78	4.96	2.5	0.56	359337	61.1	9.53	11.8	5.29	6.14	3.14	1.86	1.14
29	Koppal	210649	60.86	25.37	6.39	4.05	1.54	1.26	0.13	0.4	259396	72.05	6.71	15.38	2.58	1.74	0.79	0.09	0.66
	STATE	10232133	58.89	17.11	8.56	12.4	1.08	1.09	0.3	0.57	13179911	66.06	5.54	15.95	8.98	0.95	0.82	0.32	1.4

Source: Karnataka at a Glance 2008-09 and 2014-15



Graph 1. Karnataka Location Map

Objectives

Following are the main objectives of this paper

- To know the sources of rural water supply
- To find out the decadal changes of rural drinking water supply in the study area.

Data base and methodology

The present study is based on Secondary data collected from Ground Water Statistics, Government of Karnataka Water Resources Department, Karnataka at a Glance and internet. Data has been analyzed with the help of statistical diagrams.

Sources of rural water supply

In Karnataka, the proportion of rural households covered by the public water supply sources such as taps (Under Mini Water Supply-MWS) and Tube Wells increased from 67.45 percent in 2001 to 82.01 percent in 2011. Due to decreasing of underground water level; the State government is given more importance to provide safe drinking water by taps and Tube wells to rural people of the study area. The supply of drinking water from Hand Pumps and Wells has decreased from 29.51 percent in 2001 to 14.52 percent in 2011. (Table 1 and Graph 1). Table 2 reveals the distribution of households by sources of drinking water in 2001 and 2011 of the study area. The supply of Tap Water has increased from 58.9 percent in 2001 to 66.1 percent in 2011. Among all the districts 15 districts are covered by Tap water supply of more than 55 lpcd (Drinking water supply norms for rural areas), and it was increased to 21 districts in 2011. In 2001 Bangalore (77.8%), Bellary (76.4%), and Dharwad (73.4%) districts are ranks top three positions by Tap Water supply, in the same year Dakshina Kannada (31%), Uttara Kannada (24.7%), and Udupi (12.6%) districts are stands at last three places. Trend has been changed in 2011, Mysore district has occupied 1st position with 82.4%, Bellary

and Dharwad districts are retain with same positions I.e. 2nd and 3rd place in 2001 by Tap water supply. Where as in 2011 also Dakshina Kannada (43.7 %), Uttara Kannada (27.4%), and Udupi (18.6%) districts are stands at last three places. In view of drinking water supply by Tube well, Kolar district occupied the 1st Place with 13.4 percent and 28 percent in 2001 and 2011. Bangalore and Tumkur districts are ranks 2nd and 3rd place in 2001, but 2011 Chitradurga district occupied 2nd place with 25.1 percent and Hassan district placed in 3rd position with 24 percent. Coastal districts, like Dakshina kannada, Uttara Kannada and Udupi are ranks last three places in 2001 and 2011 also by tube well water supply.

FINDINGS AND CONCLUSION

This study is revealed the following findings.

- Both in 2001 and 2011 the households of the study areas are mainly covered by Tap Water supply.
- Tap Water supply is increased by 58.9 % to 66.1 % from 2001 to 2011.
- The coastal districts like, Udupi, Uttara Kannada and Dakshina Kannada are mainly depends on well for drinking water.
- Dry areas like Kolar, Thumkur and Chitradurga districts are getting water from tube well for drinking purpose.
- In the study area the households are getting very least percentage of drinking water from Tank, Pond, Lake, Canals and springs.

REFERENCES

- Economic Survey of Karnataka – 2015-16.
 Gorishankar Ghosh:- Water Supply in Rural India, Policy and Programme.
 Karnataka At a Glance:- 2008-09 and 2014-15.
 Rajsekhar, D. Growing Rural- Urban Disparity in Karnataka – National Institute of Rural Development.
 Rural Development and Panchayat Raj Department Government of Karnataka.