



ACCESSIBILITY OF DRINKING WATER AMONG THE RESETTLED PEOPLE IN THE ERAVUR PATTU DIVISIONAL SECRETARIAT AREA OF BATTICALOA DISTRICT, SRI LANKA

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ABSTRACT

A study was carried out to assess the availability and accessibility of drinking water among the resettled population in the Eravur Pattu Divisional Secretariat area of Batticaloa district. A cross sectional study was carried out with a random sample of 1290 households in the nine (09) villages of Eravur Pattu DS division of Batticaloa district. The data collection was through the use of a structured questionnaire, which was pre-tested before used for the household survey. Secondary data necessary for the study were obtained from the relevant sources. Data collected were analyzed by using SPSS 16.0. The findings revealed that majority (76%) of the dwellings had access to public water sources and have to travel more than 100 m to fetch the drinking water. Analysis based on the standard water source distance (250 m) indicated that 72.9% of the households had water source distance lesser than 250 m and rest of the households have to travel more than 250 m to get their drinking water. Chi-square analysis indicated that ownership of the water source was significantly influenced by the family income. Also, significant difference was observed between household income and water source distance. These information need to be considered by the Government of Sri Lanka and other Non Governmental Organizations to plan long-term water aid programs for returnees.

Keywords: Drinking water, Resettled population, Water sources, Distance

INTRODUCTION

Water is one of the most important natural resources and is the essence of life on earth. The availability of safe water and adequate sanitation is critical not merely for health reasons, but also for economic development (WHO and UNICEF, 2006). Water has always been an important life-sustaining drink to humans and is essential to the survival of all known organisms. The World Health Organization defined the drinking water as the water used for domestic purposes, drinking, cooking and personal hygiene (U.S EPA, 2000).

In mid-2006 military offensives initiated in the Eastern Province displaced more than 60,000 families. The Government of Sri Lanka with support from the International Community supported the Internally Displaced Persons (IDP) in temporary camps and welfare centers as well as those living with host families (Anonymous, 2010).

Eravur Pattu Divisional Secretariat (DS) division is situated in the central part of Batticaloa district (between the Kiran and Vavunathivu DS divisions). The Eravur Pattu division occupies 634.16 Sq.km; 24.08% of the land area of the Batticaloa district which is 2633.1 Sq.km. The boundaries are Koralai Pattu South (Kiran) DS Division in the North, Manmunai West (Vavunathivu) DS Division in the South, Ampara District in the West and in the entire East, the Bay of Bengal. This division is divided into 39 GNs divisions consisting of 162 villages (Statistical Hand Book, 2006).

Consequent of resettlement process in Batticaloa district after the ethnic conflict, 12,239 persons from 3,448 families were resettled in Koduvamadu, Pankudavelly, Karadiyanaru, Veppavadduvan, Kithulwewa, Marappalam, Kopavelly, Rugam, Periyapullumalai, Mylaveddavan of Eravurpattu DS division. Displacement followed by resettlement is likely to have an impact on health status of people on short-run as well as their work capacity and hence their contribution to national development in the long-term (MRI, 2011).

Increasing the provision of safe water for poverty eradication is a priority policy for the Government of Sri Lanka and international agencies working in the country (WFP, 2007). The increasing number of IDPs and other vulnerable populations has strained the already weak water and sanitation services in Sri Lanka. As of 2007, about one third of households did not have access to sanitation facilities and about one quarter did not have access to safe drinking water, according to UNICEF.

At a time of completion of resettlement process, it was considered relevant to make an assessment of the accessibility of drinking water among the resettled population of Eravur Pattu DS area in order to collect information to develop long-term water aid programs. Therefore, a study was undertaken to find out the accessibility of drinking water among the resettled population of Eravur Pattu DS division of the Batticaloa district.

METHODOLOGY

A cross sectional study was carried out with a random sample of 1290 households in the nine (09) villages of Eravur Pattu DS division of Batticaloa district. The data collection was through the use of a structured questionnaire, which was pre-tested before used for the household survey. Secondary data necessary for the study were obtained from the relevant sources. Data collected were analyzed by using SPSS 16.0. The study was based largely on descriptive statistics; t-test was employed for mean comparison and chi-square for testing association.

RESULTS AND DISCUSSION

Demographic characteristics of the resettled population

Table 1 explains the demographic characteristic of the resettled population in the Eravur Pattu DS division. Majority (72.5 %) of the resettled population were in the age range of 6 – 20 years, expressed that most of them fall under the category of economically inactive population. Almost equal percent of the households pose the family size of 1 – 3 (40%) and 4 – 6 (44.3%). Large percentage (67.3%) of the resettled population had the educational level up to primary level and 16% of the population has no formal education at all. Majority (48%) of the resettled population in the Eravur Pattu DS division received their income from farm labour followed by agricultural activities (24.6%). Samuradhi is a financial assistance provided by the government of Sri Lanka to its citizens who earn lesser the Rs 3500 as their monthly income. Among the

resettled population in the Eravur Pattu DS division, 53.9% of the population were Samurdhi beneficiaries.

Table-1: Demographic characteristics of the resettled population

	Percentage
Age (Years)	
< 5	19.4
6 – 20	72.5
21 – 40	3.8
> 40	4.3
Family size (%)	
1 – 3	40.7
4 – 6	44.3
> 6	15.0
Educational level (%)	
No schooling	15.9
Can read & write	5.5
Primary	67.3
Secondary	11.0
Diploma /A level	0.3
Major source of income (%)	
Agriculture	24.6
Fishing	5.3
Farm Labour	48.0
Business	2.9
Self-employment	10.9
Mason	0.3
Samurdhi beneficiary (%)	53.1

Accessibility to water sources, ownership, location and distance

Table 2 reveals that resettled households obtained drinking water from a number of sources. Semi protected well was the main source used by nearly 40% of the households, followed by protected well (32.6%). Pipe water, tube well and bowsering water were collectively used by 15.9% of the households. Meanwhile water from river, ponds or lakes was used by only 2.8% of the households. Approximately 9% of the household obtained their drinking water from unprotected wells.

Ownership of the water source reflects whether the household obtained drinking water from a private water source or a public water source. Only 24% of the households owned private water sources and rest of the households obtained their drinking water from public sources.

Majority of the resettled households (83.3%) had access to water from outside of their household compound. The remaining 16.7% of the household had access to water inside their yard, reflects that 1/4th of the resettled population only having access to drinking water within their household premises.

About 41. 2% of the population has to walk more than 100 m to fetch water for their usage. This indicates the need for people to travel quite long distances to fetch water for domestic purposes.

This is also evidenced by the statement of Fact Finding Mission, Eravur Pattu (2008), stated that drinking water is scarce and people have to walk long distances, at least half a kilometer to fetch water.

Table-2: Accessibility to water sources, ownership, location and distance

	Percentage
Source of water (% HHs)	
Unprotected well	9.2
Semi protected well	39.5
Protected well	32.6
Tube well/water pump	11.4
Lagoon/Lake/Pond/River	2.8
Pipe water	1.9
Bowsering	2.6
Ownership of water source (%HHs)	
Private	24.1
Public	75.9
Location of water source (% HHs)	
Inside the compound	16.7
Outside the compound	83.3
Distance of water source (m)	
1 – 25	34.2
26 – 50	13.0
51 – 75	5.6
76 – 100	6.0
> 100	41.2

Access to water sources

Analysis based on the standard water distance (250 m) indicated that 72.9% of the households had water source distance lesser than 250 m and rest of the households have to travel more than 250 m to get their drinking water (Table 3).

Relationship between household income and distance to water source

Table 3 show that there is a significant difference between the households who had water access > 250m and < 250m and their household income. People who receive high family income had water access lesser than 250m, mostly from private wells. Low income families have to walk long distances to fetch their drinking water could mean that a lot of valuable time that would be spent on other activities is wasted in collecting water.

A study in New Delhi found out that low income families suffer more to collect their drinking water by travelling long distances and they have less possibility to store water in their homes (Howard and Bartram, 2003). Also, Amori *et al.*, (2012) stated that access of public water supply is greatly hindered by large distance to water points. Lawrence *et al.*, (2002) argued that socio-economic status especially income received by the household is a significant determinant of household access to water and he also stated that people may be “water poor” not because there is no safe water in their area, but because they are “income poor”.

Table-3: Relationship between household income and distance to water source

Water source distance	Mean Income (Rs/Year)	Std. Deviation	T value	Sig
< 250 m (72.9%)	75031.58	55867.85968	2.553	0.011*
> 250 m (27.1%)	61694.58	43871.47626		

*Significant at 0.05 as $p < 0.05$

Association between household income and water source ownership

Table 4 and table 5 indicate that there is a significant association between monthly income received by the households and the water source ownership. Among the resettled population who receive lesser than Rs. 3, 500/- as their family income, only 21% owned private water sources, rest of the population need to collect water for domestic purposes from public water sources. Among the households which receive more than Rs. 3, 500/- as their monthly income, 26.2% had access to private water sources. Thus, the amount of monthly income significantly influenced the ownership of water source.

Table-4: Household income and water source ownership

Income range (Rs/Month)	Water source ownership	
	Private	Public
< 3, 500/-	108 (21.0%)	406 (79.0%)
> 3, 500/-	203 (26.2%)	573 (73.8%)

Table-5: Association between household income and water source ownership

	Mean Income (Rs/Year)	Sig
Pearson Chi-Square	4.479	0.034
Fisher's Exact Test		0.02
Linear-by-Linear Association	4.475	0.034

(N = 1290)

Quality of available water to the resettled people

Table 6 shows the information on quality of drinking water available to the resettled households in the Eravur Pattu DS division. Majority of the households (73.7%) viewed that the water available is clean and good for drinking. 21% of the household expressed that the water available is clean and can use for washing and bathing but, it is not good for drinking (was based on a subjective judgement by people by observing the colour and inert materials present). Another 5.3% of the population told that the water available is bad and not good for usage. These findings also supported by the Fact Finding Mission (2008) where they indicated that the water available in some resettled areas of the Eravur Pattu DS division is not good for drinking, it has a murky colour and smell.

Table-6: Quality of available water to the resettled people

Water quality	Percentage
Clean and good for drinking	73.7
Clean, not good for drinking	21.0
Bad, not good for use	5.3

Water usage pattern among the resettled population

Water use pattern of the resettled population is shown in Table 7, where majority of the households use the available water for all purposes (washing, bathing, cooking and drinking). 14% of the households use the available water for both drinking and cooking purposes. But, it was also reported by the households that they used the water available irrespective of the quality for all purposes due to urgency and accessibility.

Table-7: Pattern of water usage among the resettled population

Water usage	Percentage
Drinking and cooking only	14.0
Bathing only	16.6
Washing only	4.4
All purposes	78.0

CONCLUSIONS

A better access to drinking water sources can positively contribute towards a healthy family. Findings from the study area demonstrate that availability of water needs to be integrated with socio economic conditions of the dwellings in the area to have a better access to drinking water. Low income households have to be supported to get access to water sources.

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