

Lesotho's Rural Households' Demographic Aspects and their Clean Water Supply Problems and Possible Solutions: The 2015 Overview

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Abstract

The aim of this research study is to provide an analytic view of some demographic aspects of rural households in need of clean water in Lesotho, their lack of clean water problems and possible solutions to their non-functioning Rural Water Supply Systems/RWSSs. This is part of the findings of a continuous research study based on interviews, observations and secondary data analysis. The study is based on the 41 randomly sampled respondents. Rural households and water committees of the following rural villages served as randomly sampled respondents: Makotoko, Nazareth and Machache in the district of Maseru. The research study provides the demographic aspects of Lesotho's rural households and their clean water supply problems and possible solutions as an analytic overview.

Index terms— 1. lesotho, 2. rural households' demographic aspects, 3. clean water supply problems, 4. clean water supply possible solutions, 5. rural water supply

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1 I. General Introduction

his research study focuses on unpacking demographic information contained in the random sample that the researcher explored for this specific on-going clean water availability study in Lesotho's rural areas. Such an approach has focused and reflected on the sex group, age group, number of family members, level of household income and uses of water performed the most. Therefore, the aim of this research study is to provide an analytic view of some demographic aspects of rural households in need of clean water in Lesotho, their lack of clean water problems and possible solutions to their non-functioning Rural Water Supply Systems/RWSSs. The research study forms part of the findings of a continuous research study based on interviews, observations and secondary data analysis. Rural households and water committees of the rural villages that served as respondents included

Makotoko village, Nazareth and Machache in the district of Maseru. The research study, as thus, provides the demographic aspects of Lesotho's rural households and their clean water supply problems and possible solutions as an analytic overview.

2 II. Conceptualization of Key Concepts

Community: Administrative, spatial or social dimensions are usually attached to the term 'community'. For this reason, Hall (1995:6) refers to it as "an identifiable physical unit distinguished from others regardless of the legal authorities concerned". A focus may be on the social dimension where we define a community in terms of social interactions existing among people who live in a specific area. This study, however, resolves to subscribe to a definition of a community that leans more on the context of rural water supply as a group of households served or sharing a particular water supply system in an area spatially mapped as rural (Koryang, 2011:8 and Musonda, 2004:11). Water: (Aumann (2000:9) corroborates that typologies of water vary. Water may refer to any of the following categories: lakes, dams, rivers, oceans, irrigation water and household/domestic water. In this study, the category of water referred to is water used for domestic purposes. The meaning of domestic use is adopted from the Southern African Development Community Regional Water Policy (2005:24), as "water for drinking, washing, cooking, bathing and stock watering purposes". This domestic water is firstly in its natural form of ground water. It is drilled from beneath the layers of the natural ground using such technologies as handpumps and diesel engines. This ground water surfaces through public stand-posts in the form of potable water or water for domestic use. For MacDonald (n.d), "over much of Africa, ground water is the realistic water supply option for meeting dispersed rural demand. Alternative water resources can be unreliable and difficult or expensive to develop". Further, apart from the fact that they arouse demand responsive and participatory approaches of management, ground water does not require prior treatment to qualify it as safe and clean (MacDonald, n.d). The Department of Rural Water supply (1998:4), in its technical guidelines for design and construction standards, confirm that the upward flow of ground water to public stand-posts subjects this water to continuous filtering, thus removing bacterium and any other suspended particles. Water Supply system: This refers to constructed systems (e.g. diesel engine pumped water systems and electricity pumped water systems) that fetch water from underground for delivery into storage tanks and ultimately drawn by the public at the tap. These water taps/public stand-posts/public water points are said to have a standardized distance from the rural community that they serve of between 150-300 meters (Department of Rural Water Supply, 1998:42, Bloem, 1997:13 and Hall, 1995: ii).

Rural Water Supply (RWS): For this study, rural water supply refers to provision of clean and safe potable water to rural communities through the construction of basic water supply systems such as gravity-fed systems and solar-energy pumped systems (Musonda, 2004 and Hall, 1995: ii). The systems referred to herein are essentially attributed to community based management or governance, drawing from the set and agreed modes of operation (Peltz, 2008:14). Rural refers to areas within a country whose geographic location is outside the city or town (Wegener, 2014:32).

Operation and Maintenance (O&M): O&M as everyday activities that pertain to the running and handling of the water supply system. These activities are essential for keeping the system in an up-to-standard working condition, ranging from regular system inspection and servicing and corrective maintenance (Department of Rural Water Supply, 2011:17 and Davis and Brikké, 1995:5). Brikké (2000: v), points out that O&M with its elements that work towards achieving sustainability of rural water systems also improves efficiency and effectiveness.

3 III. The Demographic Aspects of Rural

Households in need of Clean Water in Lesotho

Table 1 below illustrates the number of men and women interviewed in this study. Evidently, more women than men were interviewees. However, this was not by default as the researcher came mostly across female respondents in the sampled households. I did this dichotomy of sexes to explore perceptions across a mixed group on aspects related to rural water supply (see table 1 below). In order to strike a balance on exploring perceptions and knowledge on rural water supply/RWS, the researcher sought to represent opinions from all age groups, especially of people regarded to be adults, 18 years and above. The younger generation, 18 to 25 years, form the least percentage of 4.8 on interviewees since more young people may have migrated from their rural homes in pursuit of life sustaining activities such as employment and education. The elderly people, 50 years and above, formed 58.5% that makes up the highest percentage of interviews as illustrated in figure 1 above. per capita per day. This implies that the more family members there are, the more litres of water utilized on a daily basis; hence the need for reliable water supply. As illustrated on table 2 above, households with 10 or more members make up the least percentage of 9.8, while those with 1 to 3 and 7 to 9 members make up 17% and 19.5% respectively. The most number of interviewees represents households between four and six members.

Pre-construction and post-construction phases of the RWS project cycle require households to make financial contributions. These contributions usually level the ground for internalized and perceived ownership of water supply systems. The monthly income also serves as a basis for an ability to make such contributions in the project cycle.

Figure 2 below demonstrates the level of household income in the three villages. This variable is important for exploring the ability for households to contribute towards the maintenance fund. The table depicts that, 0% of households earn under M200 per month (M=Maloti for local currency, currently its exchange rate to one USD/US\$ is M11). Those whose monthly income ranges between M200 and M600 compose 9.8%; those with income between M601 and M1001 make up 36.5%. Rural households with income between M1002 and M1402 comprise 31.7% and those with M1403 make up a fair 22% of the sampled respondents. Obviously, these rural household earning fall far below the minimum monthly income required amount to survive which now needs to be at least M3, 000 per month, considering the consumer price index and others. In order to determine the dire need for safe and clean water by households, this study sought domestic chores performed the most with water.

4 Uses of Domestic Water Performed the Most.

Field Interviews, November, 2014.

Consumption and washing activities are here least reported as those that are solely carried out with water from the RWS infrastructure, since none reported on consumption only a marginal 2.4% of the responses remains the primary activity performed by water. Some 12.3% and 14.6% comprise respondents who claimed to use water mainly for cooking and for hygiene. Respondents constituting 68.3% indicated that they not only need but also use water for all household activities listed as variable options: washing, cooking, domestic and personal hygiene as well as consumption, as on figure 3 above.

5 IV. Clean Water Supply Problems and Possible Solutions

Revelation for further evidence by a countrywide tour by the Department of Rural Water Supply/DRWS, in an effort to solicit information from the communities and DRWS district personnel who gave some reasons to the non-functioning of RWSS is also demonstrated here below on table 3. ? Inability of communities to pay for O&M costs.

? Some water systems fail to be maintained because they were constructed under the influence of politics, hence repairs are extremely costly. ? Type of water supply system imposed on communities hence lack of ownership.

6 V. The Summary

This research study is an analytic overview of some demographic aspects of rural households in need of clean water in Lesotho, their lack of clean water problems and possible solutions to their non-functioning RWSSs. Suggested solutions encompass the ideas that VWCs need to be trained and be certified. That is they should be adequately trained on technical issues. That needs to also include refresher courses for water minders. There is also a recommendation that Community Councils (CCs) need to assume full responsibility of water systems. There is also a need to introduce VWCs to CCs to give them legal some standing. This ought to include changing the mind-set of CCs towards the water systems. Creation of awareness on ownership of water supply systems to empower the rural dwellers is also essential.

CCs need to also assume full responsibility of water systems and introduce VWCs to CCs to give them legal standing. Furthermore, aftercare training and monitoring of the systems needs to be maintained while VWCs are to be legally established under CCs. CCs are expected to seek technical and administrative expertise from rural water supply/RWS offices on proper management and maintenance of the systems. CCs need to be acknowledged as owners of the systems. Some districts recommended that there is need to replace deceased water minders and continue training the incumbent water minders as well as the VWCs in general and that there should be public participation in policymaking. There was an emphasis that VWCs should be legalized. Refresher courses for VWCs and water minders need to be done through employment of experts to conduct training on the operation of hand-pumps. Suggestions included availing maintenance manuals to water minders, refresher courses for supervisors on operation and maintenance/O&M and improvement on the availability of resources like transport. There is need for balance between new constructions and maintenance of old systems and intensive technical training for VWCs on the repair of breakdowns.

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Figure 1: Figure 1 :

Characteristic Variable		Frequency Percentage	
			(%)
Sex	Men	11	27
	Women	30	73
	Total	41	100
Field interviews, November, 2014.			

Figure 2: Table 1 :

Figure 1: Age Group.			
4.8%	19.5%	18 -25	
		26 -33	
		34 -41	
	9.8%	42-49	
	7.3%	50+	
58.5%			

Figure 3: Table 2

2

Characteristic	Variable	Frequency	Percentage (%)
Number of family members per household	1 -3	7	17.0
	4 -6	22	53.7
	7 -9	8	19.5
	10+	4	9.8
Total		41	100

Field Interviews, November, 2014.

Figure 4: Table 2 :

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Figure 5: Table 3 :

Butha

Department of Rural Water Supply/DRWS, 2012:4-5, report on sensitization workshops for DRWS district committees

on the
aftercare.

Hoek &

21 st August
2012 Thaba-
Tseka

? More focus is on construction of
water systems

than on maintenance for sustainabil-
ity.

? Lack of break-down reports from
communities
to DRWS district offices.

? Unclear reporting lines between
communities
and DRWS district offices.

? Lack of community capacity build-
ing on
operation and maintenance (O&M).

? Lack of resources results in rushed
decision-
making regarding the reliability of
sources.

? Dependence on influen-
tial/prominent people's
suggestions that may not necessarily
be
effective.

? Long procedures to be followed until
a system
can be maintained.

23 rd August
2012 Mokhot-
long

? Lack of funding for O&M.

? Villagers are not keen to attend
maintenance

? Aftercare training and
monitoring of
the systems.

? VWCs to be legally estab-
lished under
CCs.

? CCs should seek technical
and
administrative expertise
from RWS

offices on proper manage-
ment and
maintenance of the systems.

? CCs should be acknowl-
edged as
owners of the systems.

? Replace deceased water
minders and

continue training the incum-
bent water

minders as well as the VWCs
in
general.

? Public participation in pol-
icy making.

? VWC should be legalized.

? Refresher courses for
VWCs and

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Figure 7:

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