

Rural Water Supply Assessment



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Executive Summary

SWALIM conducted a desk study assessment to determine the water supply situation in rural Somalia. The assessment was done in three regions: Puntland, Somaliland and South-Central Somalia. The Somalia Water Sources Information Management System (SWIMS) national database was the main source of data for the study. Reports from previous studies and interviews with key partners in the water sector in Somalia were also very fruitful during the assessment.

The assessment involved review and analysis of available data and literature on existing water supplies. Interviews were conducted in Nairobi, Puntland and Somaliland with key players in the Somali water sector. Field visits to some water points were also made by two consultants, one in Puntland and another in Somaliland, to see the condition of the water sources and to interview operators and water users.

The findings of the assessment were similar in many aspects for the three regions, with only slight differences between them.

In Puntland, the assessment concluded that:

1. Shortages in water supply are not only a function of limited water sources, but also as a result of frequent breakdown of the sources.
2. Rural communities in Puntland try to cope with water shortages by minimizing the amount of water usage per day. In many cases this compromises hygiene standards, creating some health risks.
3. The combined use of water sources by livestock and humans poses evident hygiene risks. Well-head protection is not common for many of the surface water sources and shallow wells. Surface water containing animal faeces runs into open sources, thereby contaminating water.
4. The Puntland authority is unable to support the much-preferred community-based water supply projects, making people more reliant on external donors. Such donors are seen as providers rather than facilitators, a perception which ought to be changed if water supply projects are to be sustained.
5. Community water supply projects are generally more poorly managed than private projects. People are more willing to invest in their own private water supply, but there is mistrust when it comes to communal water sources. Most of the community-owned *berkads* and *wars* are unfinished and lack maintenance. A more commercial approach, such as the Public Privatization Partnership (PPP) utilities for managing rural water supply systems ought to be given a chance to evaluate their success.
6. Women are sidelined in the management of water sources. In the WATSAN committees where women are represented, such women are seldom involved in decision-making.

Conclusions for Somaliland were as follows:

1. More boreholes need to be established in Somaliland as a way of solving frequent water shortages during the dry season. There is however little information available on hydrogeology to identify the best locations for establishment of boreholes. A mechanism should be devised to make boreholes sustainable. Suggested options include the use of wind and solar energy for water pumping to minimize running costs.

The use of mono pumps was also considered viable, as they consume less fuel. Where there are multiple boreholes in the same area, power supply should be centralized to reduce running costs.

2. Shallow well aquifers in rural Somaliland are not well developed. Many of the shallow wells dry up in the *Jilaal* and *Hagaa* seasons.
3. There are many sources with water unsuitable for human consumption, but locals use them either out of ignorance or because they do not have an alternative. More awareness needs to be created regarding water quality.
4. The rate of *berkad* failure is alarming, with over 50% of *berkads* constructed breaking down within five years. The high failure rate is attributed to poor construction and maintenance routines. There is a need for development of standard construction guidelines to be used across the country.
5. Construction of sand storage dams, sub-surface storage dams or weirs, should be encouraged as ways of conserving water for long periods. With sand dams, water loss due to evaporation, which accounts for substantial amounts in open water bodies, is minimised.
6. There is a water policy for Somaliland, but the government lacks the capacity to impose it. Water regulations need to be approved by parliament, and the Ministry of Water and Mineral Resources capacitated for effective management of the water sector.
7. Water sources in rural Somaliland are managed either by committees, or individuals in the case of private sources. For sources administered by the Ministry, communities select the operators and the Ministry trains them and sets the water price. Due to weak governance in the public water sources by the Ministry, cost recovery moneys are always missing.
8. Hygiene facilities in rural Somaliland are limited; people live in poor sanitary conditions. Water availability is explained in terms of quantity, not quality. Much still needs to be done to promote improved hygiene and sanitation practices.
9. There is no proper coordination of public and private water sources in Somaliland. When establishing private water sources, many people do not conduct an Environmental Impact Assessment (EIA) to determine the effects of establishing the source on the environment.

The conclusions for South–Central Somalia include:

1. South-Central Somalia is much advantaged in terms of surface water resources compared to other regions of the country. The two major rivers, the Juba and Shabelle, if well–utilised, can provide most, if not all, water requirements.
2. Underground water reservoirs in South-Central Somalia are not fully exploited. Even though local people prefer surface water for domestic consumption, water from underground sources can be used for livestock and agriculture.
3. Use of water resources for economic development is inefficient due to lack of a water policy. There is a need for the Somali government to regulate water use by developing and imposing a water policy on all stakeholders in the sector.
4. Water quality is a major issue in South-Central Somalia. To the Somali community, due to high scarcity quantity of water available is more important than quality. This has contributed to a large extent to frequent outbreaks of cholera and other waterborne diseases in the region.

- A thorough survey of water sources in South-Central Somalia is necessary in order to determine the exact situation on the ground. The desk study for this region was not all-inclusive, as there was no data available for some regions.

The findings of the assessment were presented to the WASH committee of the Somali Support Secretariat (SSS) for review. Comments raised were incorporated in a comprehensive report of the assessment. The report is intended to be used by donors and development agencies in rural Somalia to make decisions regarding intervention activities on water sources.

Glossary of Somali terms

<i>Berkad</i>	Underground reservoir, lined or un-lined, excavated to store surface runoff
<i>Ceel</i>	Hand dug wells
<i>Deyr</i>	Rainy season between October-December
<i>Gu</i>	Rainy season between April-June
<i>Hagaa</i>	July to September dry and cool season
<i>Jilaal</i>	Dry season from January to April
<i>Mugciid</i>	Underground reservoir storage well with an average depth of 15 meters
<i>Togga</i>	Seasonal river
<i>War</i>	Unlined dug-out (dam), usually 2-3 m deep

List of abbreviations and acronyms

ADRA	Adventist Development and Relief Agency
BWR	Basic Water Requirement
CBO	Community-based Organization
COOPI	Cooperazione Internazionale
E.coli	<i>Escherichia coli</i>
EC	Electrical Conductivity
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization of the United Nations
GAA	German Agro Action
GRC	German Red Cross
GTZ	German Technical Cooperation
GUMCO	Golden Utilities Management Company
ICRC	International Committee of the Red Cross
IDP	Internally Displaced Person
INGO	International Non-Governmental Organization
ITCZ	Inter-Tropical Convergence Zone
JNA	Joint Needs Assessment
LNGO	Local Non-Governmental Organization
MCH	Mother and Child Health Centres
MDGs	Millennium Development Goals
MPWTCA	Ministry of Public Works, Transportation and Civil Aviation
MWMR	Ministry of Water and Mineral Resources
NCA	Norwegian Church Aid
NGO	Non Governmental Organization
NW	North West Region
NWC	National Water Centre
PET	Potential Evapotranspiration
PHAST	Participatory Hygiene and Sanitation Transformation
PPP	Public Private Partnership
PSAWEN	Puntland State Agency for Water, Energy and Natural Resources
PVC	Polyvinyl Chloride
SRCS	Somali Red Crescent Society
SSS	Somali Support Secretariat
SWALIM	Somalia Water and Land Information Management
SWIMS	Somalia Water Sources Information Management System
SWL	Static Water Level
TDS	Total Dissolved Solids
UN	United Nations
UNDOS	United Nations Development Office for Somalia
UNDP	United Nations Development Programme
UN-HABITAT	United Nations Human Settlement Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UN-OCHA	United Nation Office for the Coordination of Humanitarian Affairs
USD	United States Dollar
WASH	Water, Sanitation and Hygiene committee
WATSAN	Water and Sanitation
WDA	Water Development Agency
WHO	World Health Organisation

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