BASELINE INFORMATION ON WATER SOURCES, USES, AND LIVELIHOOD ACTIVITIES IN MUS INTERVENTION AREAS IN BURKINA FASO

EXECUTIVE SUMMARY

The primary goal of the USAID West Africa Water Supply, Sanitation, and Hygiene (USAID WA-WASH) Program is to increase sustainable access to safe water and sanitation, and improve hygiene in West Africa. The Program implements the multiple-use services (MUS) activities in Burkina Faso, Ghana, and Niger. Multiple-use services (MUS) is a consumer oriented and alternative model for water service provision in developing countries that involves planning, financing, and managing integrated water services for domestic and productive uses (drinking, sanitation, health, agriculture, and livelihoods). The MUS approach requires an assessment of the water situation in the target communities to evaluate the water needs, existing water sources, and gap analysis. This summary presents this information in the form of baseline data on water uses, sources, livelihood activities, and hygiene practices in nine villages in Burkina Faso: Koudiéré and Ouèglega in the municipality of Tanghin-Dassouri, Vipalgo in the municipality of Komki-Ipala, Thiogho-Mossi in the municipality of Koudougou, Koukouldi in the municipality of Ténado, Oullo in the municipality of Oury, Nana in the municipality of Kona and Yaro and Moko in the municipality of Bagassi.

The Program conducted the water accounting baseline assessment to inform the implementation of MUS, decision-making, and to develop a water resources plan for each community. Water accounting refers to the estimation of the water needs of people against the existing water sources. The assessment determines also the gaps between the projected needs and the existing resources. The water needs are divided into domestic, productive, and public space water needs. The domestic water needs includes household needs for drinking, cooking, hygiene, and sanitation. The productive water uses include needs for activities such as irrigation, livestock, small-businesses (e.g. brick making, etc.). With regard to water sources, there are improved water sources and unimproved water sources for the purposes of this study. The improved water sources are protected against external contamination. These sources include protected wells, boreholes (hand pumps), and taps. The unimproved water sources include unprotected (hand dug wells) and surface water from rivers, ponds, lakes, and swamps.

The specific objectives of the assessment included: (1) to assess the existing domestic and productive water needs among the target households and in public places such as markets, schools, and hospitals in the target communities; (2) to survey existing water sources for both domestic and productive activities; (3) to analyze the gap between the water needs and the available sources for both domestic and productive activities; and (4) to gather information on livelihood activities and hygiene practices in the communities. The study used both quantitative and qualitative methods through a survey, semi structured interviews, focus group discussions and in-depth interviews. Productive water uses such as livestock production and gardening were taken into account. The survey on domestic water uses covered all the households (3,629) in the nine villages while the survey on productive uses only covered 15 % of the households. For ease of data collection, the study team divided each village into spatial units. A spatial unit is a group of 10 to 15 households within a radius of 50 to 75 meters. In addition, one focus group discussion (FGD) was held in each of the villages with key stakeholders to find out the available water resources, their reliability, the water uses, and the general WASH situation in the intervention communities.

For the purposes of the water accounting assessment, four parameters were considered in the calculation of existing water needs and sources. The four parameters are: (1) the quantity of water in liters or cubic meters; (2) the quality of potable water and non-potable water; (3) the reliability (yield) of the water point; and (4) the estimated distance in kilometers from the household to the water point or the time (minutes) it takes to collect water from the water point to the household.

To quantify the daily water needs and productivity of sources, the values were estimated using the standards from the MUS training manual. The water needs were estimated as follows: (1) 20 liters per day per person within a household; (2) 20 liters of water per day per head of large livestock; (3) 5 liters of water per day per head of small livestock; (5) 25 liters per day per head of a dairy cow; (6) 8 liters per day per square meter of land(for irrigation); and (7) 2 liters per day for every user in public spaces such as schools, churches, mosques, and health centers. The estimated value for a protected well is 3,000 liters per-day, boreholes and taps estimated production is 7,200 liters per day. However, these estimates vary from one village to another. The study did not estimate the productivity of the unimproved water sources such as rivers, swamps, springs, lakes, and ponds.

The findings in the nine villages show that there are at least two sources of water, one for potable water, and one for productive uses. The major sources of water in the villages include boreholes, traditional (hand dug) wells, protected wells, ponds, and swamps. The boreholes equipped with hand pumps were primarily used as potable water sources. In five out of the nine villages, the potable water sources were adequate to meet domestic water needs while in four villages the improved sources were not adequate to meet the domestic water needs. However, there was poor spatial distribution of the water points such that even in the villages that showed surplus water resources, there were some spatial units that did not have a potable water point within a radius of one kilometer. Water from traditional wells is used for productive activities and for drinking water in case potable water sources are not adequate. There were a total of 1,514 traditional wells in the nine villages. Despite the high number of wells, not all the villages met the productive water needs primarily because 91.2 % of the wells (1,381) were seasonal and therefore, did not supply water during the dry season; a period when water is particularly needed for gardening.

In terms of sanitation in the nine villages, there were a total of 347 latrines in 3,629 households. All the villages had latrines but their number varied from one village to another. The villages of Oueglega and Oullo had the highest number of latrines, 113 and 102 latrines, respectively. The villages of Vipalgo and Nana had the lowest number of latrines of 5 and 12, respectively. The lack of latrines indicates the practice of open defecation bythe majority (90%) of the households in the survey area. As a result, the major risk of contamination of the water sources is from the human waste that may infiltrate into the water. Further, in the village of Vipalgo, there was a risk of contamination as some water points were close to public toilets, a cemetery, and quarries.

There are a total of 67 member based organizations in the intervention villages mainly involved in agricultural activities such as the production of cotton, horticulture, cereals, rice, sesame, green beans, ground nuts, livestock, and processing of *shea* butter. In addition, all the villages had water users associations for the management of the water points. However, none of the water users association were functional. The water points in schools were managed by the parents-teachers associations. All the villages had a village development committee that was in charge of the development issues in the village.

The full report is available (in English and French) upon request via our website. For more details about our program activities and other reports please visit http://wawash.fiu.edu/.

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