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BURKINA FASO WASH CONTEXT

West Africa Water Supply, Sanitation, and Hygiene Program (USAID WA-WASH)

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August 2017

WASH LANDSCAPE ANALYSIS

BURKINA FASO

Photo 1. Women from the village of Koukouldi in Burkina Faso fetching water from the rope pump provided by USAID WA-WASH.
Source: USAID WA-WASH

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ACRONYMS AND ABBREVIATIONS

ACCEDES	Alliance Chrétienne pour la Coopération Économique et le Développement Sociale
AMB	Action Micro-Barrages
BNDT	Base Nationale Des Territoires
CCEAPA	Coordination Group for Water Supply and Sanitation
CRU	Climatic Research Unit
DFID	Department of International Development
DGAEUE	Direction Générale de l'Assainissement des Eaux usées et Excréta
DGESS	Direction Générale des Etudes et des Statistiques
DGRE	Direction Générale des Ressources en Eaux
DPs	Development Partners
DRAHRH	Regional Directorate for Agriculture, Water and Fisheries
GoBF	Government of Burkina Faso
IDRC	International Development Research center
IGB	Institut Géographique du Burkina Faso
INSD	Institut National de Statistique et de Démographie
JMP	Joint Monitoring Programme
MAHRH	Ministère de l'Agriculture, de l'Hydraulique, et des Ressources Halieutiques
MARHASA	Ministry for Agriculture, Hydraulic Resources, sanitation and food Security
MDG	Millennium Development Goal
MECV	Ministry of Environment and Living Conditions
MEE	Ministry of Water and the Environment
MUS	Multiple Use of Water
NGO	Non-Governmental Organization
OCADES	Organisation catholique pour le développement et la solidarité
ODA	Office Development Assistant
ONE	Office National de l'Eau
ONEA	Office National de l'Eau et de l'Assainissement
PEM	Point d'Eau Modern
PN-AEPA	Programme National d'Approvisionnement en Eau Potable et d'Assainissement
PRSP	Poverty Reduction Strategy Paper
PSAO	Plan Stratégique d'Assainissement de Ouagadougou
SDG	Sustainable Development Goals
SNE	Société Nationale des Eaux
UNICEF	United Nations Children's Fund
USAID	United State Agency for International Development
WASH	Water Supply Sanitation and Hygiene
WA-WASH	West Africa Water Supply, Sanitation and Hygiene Program
WHO	World Health Organization
WSA	Water and Sanitation for Africa

1. INTRODUCTION

Based on the WA-WASH, WASH analysis report in Burkina Faso (October 2016), access to potable water, adequate sanitation, and good hygiene behavior are indispensable for life. They are also key drivers of greener growth and ensure economic development.

The USAID WA-WASH Program is one of the stakeholders supporting the government in the development policy for drinking water, sanitation, and hygiene sector through its various activities and actions in Burkina Faso (Photo 2). Apart from its various planned activities, USAID WA-WASH has also been doing the analysis of the drinking water quality, improvement of sanitation and hygiene in Burkina Faso every six months since 2016. The relevance and usefulness of this analysis are justified in a context in which the current situation in the natural, political, economic, institutional, legal and environmental context is taken into consideration. In accordance with the SDGs requirements for the development of Africa, USAID WA-WASH is improving water sanitation and hygiene sector.

In order to develop the necessary baseline, and to get a better understanding of the WASH landscape (social, economic, legal, institutional, technical, and environmental) in Burkina Faso, the program deemed it necessary to commission this study.

Therefore, this study will proceed with an analysis of the WASH context in the targeted country. This will help formulate the problems in terms of the WASH sector's main strengths, weaknesses, opportunities, constraints and challenges (USAID WA-WASH, 2016).

Photo 2. USAID WA-WASH Regional Director (extreme right) and the Ministry of Water Resources on his right, visiting USAID WA-WASH stand at the 2nd national water forum in Burkina Faso.
Source: USAID WA-WASH

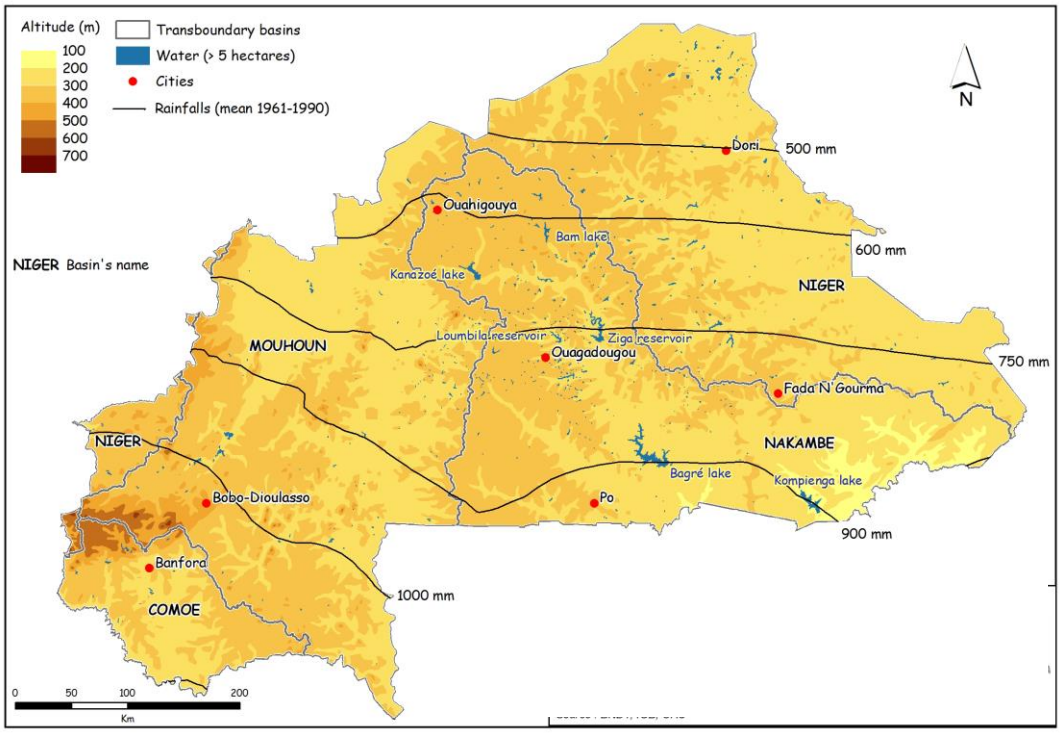
2. COUNTRY OVERVIEW

Formerly called the Republic of Upper Volta, the country was renamed "Burkina Faso" in 1984 and is a French speaking country. It is a landlocked country in West Africa with an area of 274,200 km^2 and surrounded by six countries: Mali to the North; Niger to the East; Benin to the Southeast; Togo and Ghana to the South; and Cote d'Ivoire to the South-West.

Burkina Faso is a low-income, landlocked Sub-Saharan country with limited natural resources. Its population, which is growing at an average annual rate of 3 percent, was estimated at about 18 million inhabitants in 2015. The economy is heavily reliant on agriculture, with close to 80 percent of the active population employed in the sector. Cotton is the country's most important cash crop, while gold exports have gained importance in recent years (The World Bank, 2017).

According to the same previous source, Burkina Faso remains vulnerable to shocks related to changes in rainfall patterns and to fluctuations in the prices of its export commodities on world markets. Its economic and social development will, to some extent, be contingent on political stability in the country and the sub-region, its openness to international trade, and export diversification.

According to the population, Burkina Faso is probably the West African country with the highest density of small reservoirs. As elsewhere, the demand for the creation of new reservoirs remains constant. Neither the actual distribution of small reservoirs nor the spatial dynamics associated with the construction of new devices are available. Basic information regarding the status of small reservoirs such as their locations and size need to be gathered and shared. As shown in Map 1, around 1,050 km^2 of water (0.4 % of the national territory, 274,200 km^2) were automatically identified by the IGB using a standardized procedure for the classification of 2002 remote sensed information (Cecchi, 2008).



Map 1. Lakes and reservoirs > 5 hectares in Burkina Faso.
Source: BNDT, IGB, CRU Faso MAB Project May 2008.

2.1 Current situation

This section provides a brief overview of the water, hygiene and sanitation current situation in Burkina Faso. Due to urbanization, the country has to develop new infrastructures, provide safe and reliable access to drinking water, as well as improved sanitation and hygiene, to meet the needs of its population.

2.1.1 Water

Water and Sanitation sector is identified as priority in the National Program for Economic and Social Development of the New Government (PNDES).). In the vision 2020 of the Burkina Faso President that aims to achieve the "Zero water chore" goal by 2020, the ESNDP anticipates the construction of 10, 376 new boreholes and the rehabilitation of 3020 broken hand-operated pumps (HOP).

On November 3, 2000, a reform of the management system of the hydraulic infrastructures for drinking water supply in rural and semi-urban areas aims at improving significantly their functioning by empowering the municipalities as owners of the hydraulic park.

To implement water and sanitation international commitments, the government, with support from the European Union, developed in June 2015, a governance program of the water and sanitation sector for the 2016-2030 period.

With a projection of 28, 671, 000 people in 2030, Burkina Faso's population growth will be one of the main challenges related to the mobilization and distribution of water resources (Photo 3) as well as the management of the various usage conflicts. In 15 years, the population of Burkina Faso will almost double, meaning that the needs in drinking water will also double, in a context where development aid will shrink as a result of the global economic and security crisis.

According to the May 2001 report on the "Situation of Water Resources in Burkina Faso and their Management Framework", Burkina Faso has 402 billion cubic meters of underground water resources, including 32.43 billion cubic meters of renewable sources.

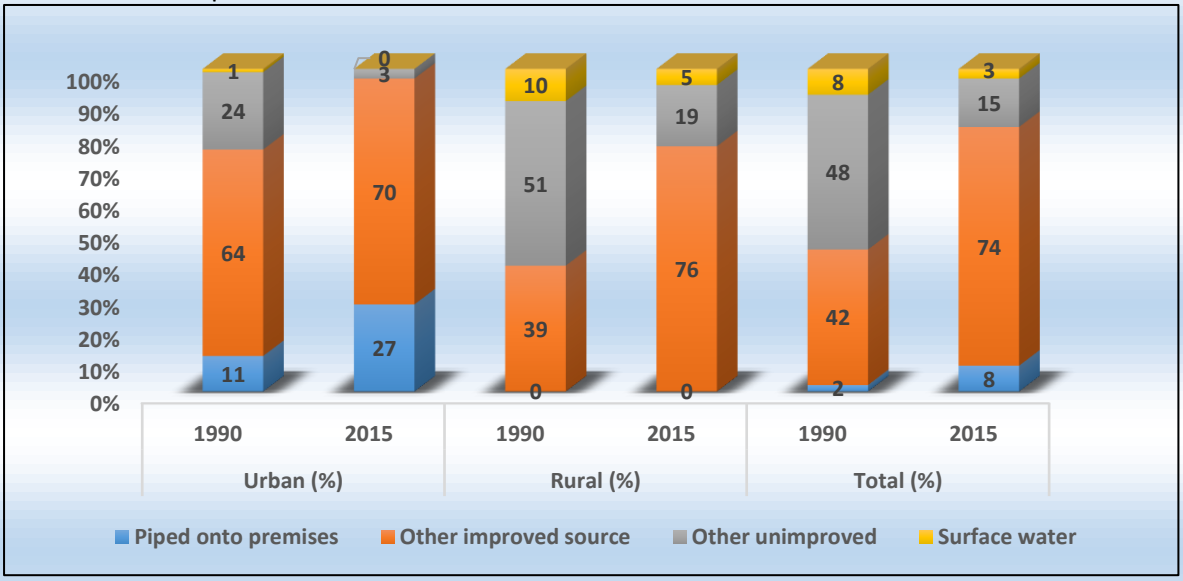
Photo 3: A rainwater harvesting tank in the village of Moussoua (RAIN, Burkina Faso, 2014)

When comparing these figures with the total water withdrawal estimated at 380 million cubic meters per year, this represents 0.095% of the underground water, and 1.17% of the renewable underground water resources.

Regarding drinking water services supply, it must be noted that access to water in rural areas is mainly ensured through modern wells and boreholes. In 2015, the functionality rate of the hand-operated pumps installed on boreholes was 88.7%. In urban areas, drinking water supply is ensured by ONEA through a private connection conveyance system or standpipes with projections of 57 liters per capita and per day. ONEA, through its services,

covers the drinking water needs of 57 urban and sub-urban centers in Burkina Faso.

In urban area 27% of the population have now access to water piped on their premises compared to 0% in rural areas in 2015. In both urban and rural areas of Burkina Faso, there is an increase of the population percentage having access to other improved source of drinking water (70% in urban and 76% in rural) in 2015. It is important to mention that the portion of population in rural area having access to other improve source of drinking water in 2015 (76%) is almost the double of that of 1990 (39%). Furthermore, the percentage of the population with access to other unimproved source of drinking water decreased in both urban (3%) and rural areas (19%); also access to surface water is nonexistent in urban area (0%) and was halfen in rural area (5%) in 2015 (Graph 1).



Graph 1. Evolution of drinking water coverage in Burkina Faso from 1990 to 2015.
Source: WHO/UNICEF, 2015

Despite the dismal situation of Burkina Faso drinking water supply in rural and semi-urban areas, many humanitarian organizations, as well as the national government, are making significant efforts to improve effective water supply (Box 1).

Throughout the years, quality of water is getting worse due to:

- *Natural factors*: Land washing and transportation in the bed of the streams increasingly silt up water points and water reserves. In the case of Lake Bam, the silting up caused about 80% decrease in the surface and depth of the lake.
- *Arsenic and cyanide pollution:* According to the information gathered at the AINA laboratory, which main activity is the analysis of the water quality, the arsenic pollution of the drinking water reserves (a natural phenomenon) was often encountered in the regions of Ouahigouya, Gorom-Gorom and Dori. Currently, with the development of the mining activity, of which a majority is gold washing, the phenomenon is spreading to almost everywhere in the country, where mining activity has increased. As for the cyanide, it is a very toxic substance used in traditional gold washing activity. Some mineral garbage dumps that are supposed to contain gold are processed in the open air with cyanide, and the wastes are abandoned in the nature; this is what pollutes the streams and the underground aquifers.
- *Mercury pollution*: Mercury is also used in the processing of gold, and particularly during gold washing. The same method is used as in the cyanide process, which

causes the pollution of the drinking water source.

- *Pollution due to pesticides and some unapproved fertilizers*: The intensive and uncontrolled use of these inputs for agricultural and market gardening production causes the pollution of groundwater and other water bodies through water runoff.
- *Drained excreta pollution*: Excreta drained in the septic tanks is discharged into the nature.
- *Public health problems caused by water pollution*: Examples are the contamination of the water meant for human consumption, vegetables that concentrate more than ten times of cyanide and mercury than the water body itself, the fish living in and harvested from contaminated water bodies.

Regarding Guinea worm occurrence, UNICEF, WHO and NGO Global 2000, helped improve the water quality in Burkina Faso. In 2005, these organizations were able to reduce guinea worm infection cases from 11,784 to only 30 within 13 years

For some time in Burkina Faso, the strategy used to ensure drinking water supply was mainly based on the infrastructure approach that was given preference to the detriment of the service approach. This approach had some limits such as the rate of damages in hydraulic equipment that reached 33% in some localities.

On the technological plan, the ministry only considers the HOPs and the protected wells as being the drinking water infrastructures which correspond to the national norms and it is only these types of works that are recorded in its database. Considering the high cost of these types of works (around CFA F 5 million per work), one can question the significance of these options. However, some types of works such as the Rope pump or other appropriate low-cost technologies can be alternatives to existing physical or financial constraints. Practical formulas such as the use of chlorinated tablets (developed by USAID WA-WASH in partnership with some of its partners) can also be other options for the communities which have no modern water pumps, or on the gold washing sites, agricultural hamlets, etc.

The water policy and the new programs of the WASH sector address the issue in its "service approach" which guarantees the universal access to drinking water and sanitation services

Box 1. MUS implementation monitoring in Burkina Faso

In Burkina Faso, USAID WA-WASH implemented the multiple use of water services (MUS) approach in a total of 28 villages spread across three regions (Centre, Centre-Ouest and Boucle du Mouhoun). This approach, includes direct implementation in 21 villages and in 7 additional villages through a partnership with two local NGOs. The selection process of all these communities was done in collaboration with the regional technical services and local authorities. This process comprises the identification of potential villages for MUS, the shortlisting of the villages identified in collaboration with the local authorities and technical services during a MUS workshop, and the final selection of the MUS intervention villages. As a result, nine initial villages were selected in year 1 for MUS implementation and 12 additional villages were selected in year 3 to extend MUS activities in Burkina Faso.

Source: USAID WA-WASH Final report Fiscal year 2011-2015

2.1.2 Sanitation

Similarly to the drinking water service, Burkina Faso government has transferred since 2002, the sanitation services to local communities as part of the water sector reform. Unfortunately, this was not paired with the transfer of the needed human and financial resources.

In 2005, the Government developed, the Framework of the National Program for Drinking Water Supply and Sanitation (NP-DWSS) which aimed at halving the number of people with no adequate access to drinking water and sanitation between 2005 and 2015. Even though the achievements under this program are conclusive, it is worth recognizing that the challenge of universal access to sanitation must be tackled.

Considering the results registered in the framework of the NP-DWSS and the international context characterized by the definition of the Sustainable Development Goals by 2030, the Government of Burkina Faso has decided to elaborate a National Program for Wastewater and Excreta Treatment (NP-WWET) for 2016-2030. Its objective is to ensure sustainable sanitation of wastewater and excreta mainly through sustainable funding of waste water and excreta management, and the promotion of research and stakeholders' capacity building.

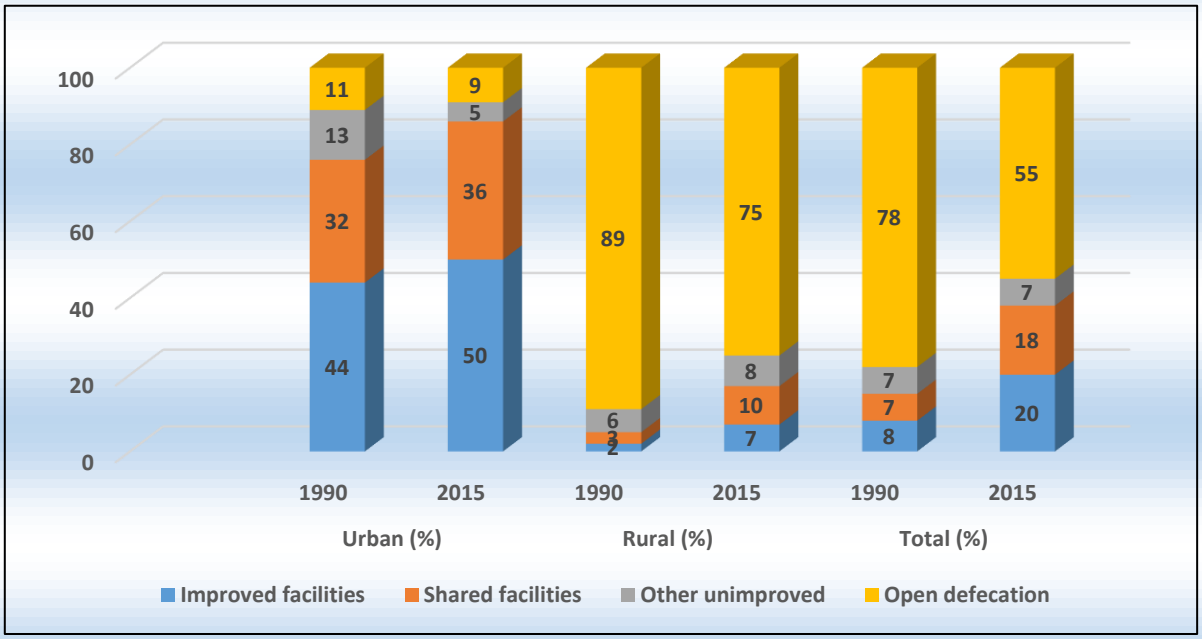
With 40.1% of the general population of the country living under the poverty line (estimated at CFA F 108, 454), the coverage of the basic needs (food, health, water …) constitute the daily priorities of the populations in the rural areas who see these as their survival means (World Development Indicators, 2017). The households resorting to open defecation are those who cannot afford building a latrine that costs approximately CFA F 75, 000 at least for the simplest formulas. In these conditions, sanitation and hygiene issues are overlooked, not knowing that this attitude can lead to health problem, the treatment of which will paradoxically absorb the households' budgets.

At the cultural level, many considerations hinder the adoption of good hygiene and sanitation practices. Many anecdotes usually listed during the situation analysis testify why some people, mostly in the rural area, are reluctant to use latrines.

- ''*Two holes cannot look at each other*'' (A head of household in Gaoua)
- *''Poo is meant to be thrown outside, we cannot bring it back in the compound to soil the house, even if it is in a hole that we drop it''* (a resident of Dori).

In 2012, only 7% of people living in rural areas and 50% of people in urban areas had access to improved sanitation services shown in Photo 4 (WHO/UNICEF, 2015). As shown in Graph 2, in urban area 50% of the population have access to improved facilities compared to 7% in rural area in 2015. In urban area there was 36% of the population using shared facilities against 10% in the rural side in 2015. Note for the other unimproved facilities, there was 8% for the urban side and 5% for the rural one in 2015. Furthermore, the total percentage of the population practicing open defecation decreased from 78% in 1990 to 55% in 2015 (WHO/UNICEF, 2015).

Photo 4. A latrine (with a hand washing station) constructed by USAID WA-WASH in the village of Yaoghin, Centre region of Burkina Faso.
Source: USAID WA-WASH



Graph 2. Evolution of sanitation coverage in Burkina Faso from 1990 to 2015.
Source: WHO/UNICEF JMP, 2015

As a result, the under-five mortality rate was 98 per 1000 in 2013 due to lack of access to the basic sanitation service (CME Info, 2017). The widespread lack of awareness on the importance of using toilets remains a big challenge.

The Ministry for Agriculture, Water Resources, Sanitation and Food Security (MARHASA) is responsible for water supply and sanitation in Burkina Faso. In rural and semi-urban areas, the General Directorate for Water Resources (DGRE in French) and the General Directorate for Sanitation (DGAEUE in French) are implementing the National Program for Drinking Water Supply and Sanitation until 2015. The National Office for Water and Sanitation (ONEA in French) is in charge of water supply and sanitation in urban areas while the General Directorate of Studies and Sectorial Statistics (DGESS in French) conducts the strategic and operational planning of development measures and the coordination of the national Information System.

During the decentralization process in 2009, competences were transferred to the municipalities, which were still lacking capacities and resources to effectively execute these new tasks. The challenge of providing access to sanitation has been recognized by the government. A national campaign financed by the government to promote household sanitation was launched with 1.5 million Euros per year from 2011 to 2015 (GIZ, 2015).

For a long time, in Burkina Faso, the "Latrine Approach" has been used. The types of latrines constructed were generally the Sanitation Platform (Sanplat) that costs about CFA F 75,000, the Ventilated Improved Pit (VIP) ranging between CFA F 75,000 CFA to 1.2 million depending on the number of cabins. Through this approach, a large number of households gained access to adequate sanitation service in their life environment. However, the open air defecation did not reduce significantly.

The Community Led Total Sanitation (CLTS) is an initiative developed in South-East Asia that has shown improvement in the access rate to sanitation services within the poor communities. In addition to being an approach based on the promotion of good practices in hygiene and sanitation through a social mediation strategy and a communication of proximity, it promotes low-cost latrine technologies which are adapted to the financial capacities of the communities (Photo 5). The Ministry in charge of sanitation has

elaborated a national policy to promote the CLTS, but there is the lack of clarity for the promotion due to failure to have a uniform implementation system. Certainly, while some stakeholders are promoting the CLTS, others are advocating the unsubsidized approach. Therefore a code of conduct that will a reference or baseline for all the stakeholders of the sector is needed.

Subsidized/unsubsidized Leader-Led Total Sanitation (LLTS) is an initiative developed by WaterAid to promote the sanitation sector. It is based on the development of a mobilization strategy through an advocacy with the dynamic forces and leaders of a locality (Diaspora, economic operators, civil servants) for them to support the construction of sanitation infrastructures or the mobilization of resources for the sector. If the LLTS is a good strategy for mobilizing endogenous resources, it should be noted that its implementation cannot be done without an advocacy campaign which is generally achieved through the support of an NGO of the sector as part of a project.

Ecological sanitation is a sanitation approach that has shown results in South-East Asia and which was promoted in Burkina Faso by WSA which stands now as a reference institution in ecological sanitation promotion at national level. Its contextualization in the community environment was implemented successfully by organizations such as the Koassanga Association in the Oubritenga province where some villages have ensured the full coverage of their needs in sanitation services through this approach. When undertaken in a community, this approach meets a strong adherence of the populations, because it combines many advantages amongst which the supply of sanitation services and the opportunity to use the by-products (urines and feces) as fertilizers to increase agricultural yields.

Photo 5. Right photo: Example of latrine for vulnerable households in Moko (FIU, Burkina Faso, 2015). Left photo: A completed household latrine in the municipality of Coalla (IRC, Burkina Faso, 2015)
Source: USAID WA-WASH, 2016

2.1.3 Hygiene

Hygiene promotion program requiring identification of local risk practices and awareness was applied in a diarrhea prevention program in Bobo-Dioulasso, Burkina Faso. Field workers observed and recorded events such as children defecation and met with mothers to develop feasible alternative practices. The key was to prevent feces from getting into the environment, either through better stool control or adequate hand washing after defecation, preferably with soap.

Following a quantitative and qualitative study of childhood diarrhoeal in the intervention area, a hygiene promotion programme was set up and implemented in Bobo-Dioulasso by the Ministry of Health of Burkina Faso and funded by UNICEF from 1994 to 1998. The program was designed to increase handwashing with soap after handling child stools and using a latrine, as well as to increase stool disposal in a latrine. This program was tested through a series of time by observing 37 319 mothers.
It aims to make a comparison between the status quo, and what would have happened to the targeted households in the case of no intervention. Issues of affordability and the cost implications of replication are also explored (Borghi et al., 2002).

In a socio-cultural context influenced by some opinions leaders (traditional leaders, religious leaders, political leaders, etc.), there is an intrinsic correlation between the prevalence of good hygiene and sanitation practices and the level of education (according to the outcomes of our surveys). Indeed, the most current cases of people who do not observe good hygiene and sanitation practices dwell among those who have less access to information on the link between the absence of hygiene and the prevalence of some diseases. Therefore, it is important to take this into consideration in the framework of future programs to design more appropriate and tailored initiatives for the specific contexts.

On the other hand, the hygiene section remains the one with the lowest investments in the national WASH sector interventions. Tightly linked to sanitation, the interventions by stakeholders in the sector mainly emphasize the construction of sanitation infrastructures. This is the reason why in some reference documents as the NP-DWSS, performance indicators exist for the sanitation sector (2015 target: 53% in rural areas and 57% in urban areas) but nothing is planned for the hygiene sector. This situation was addressed in the 2016-2030 NP-WWET.

Photo 6. Dr. Lakhdar Boukerrou, USAID WA-WASH Chief of Party, discussing with a community mobilizer the Sani-Est awareness tools, during a field visit in the eastern region of Burkina Faso from June 15 to 16, 2015.

On the list of the 11 planned priority actions under this program, two are specifically dedicated to the promotion of good practices in the hygiene field, namely:

1. Community awareness and outreach, emphasizing the adoption of good hygiene and sanitation practices by communities
2. Promotion of good hygiene and sanitation practices in schools and health centers to encourage the adoption of good hygiene and sanitation practices by the students, the teachers and the users of the health centers.

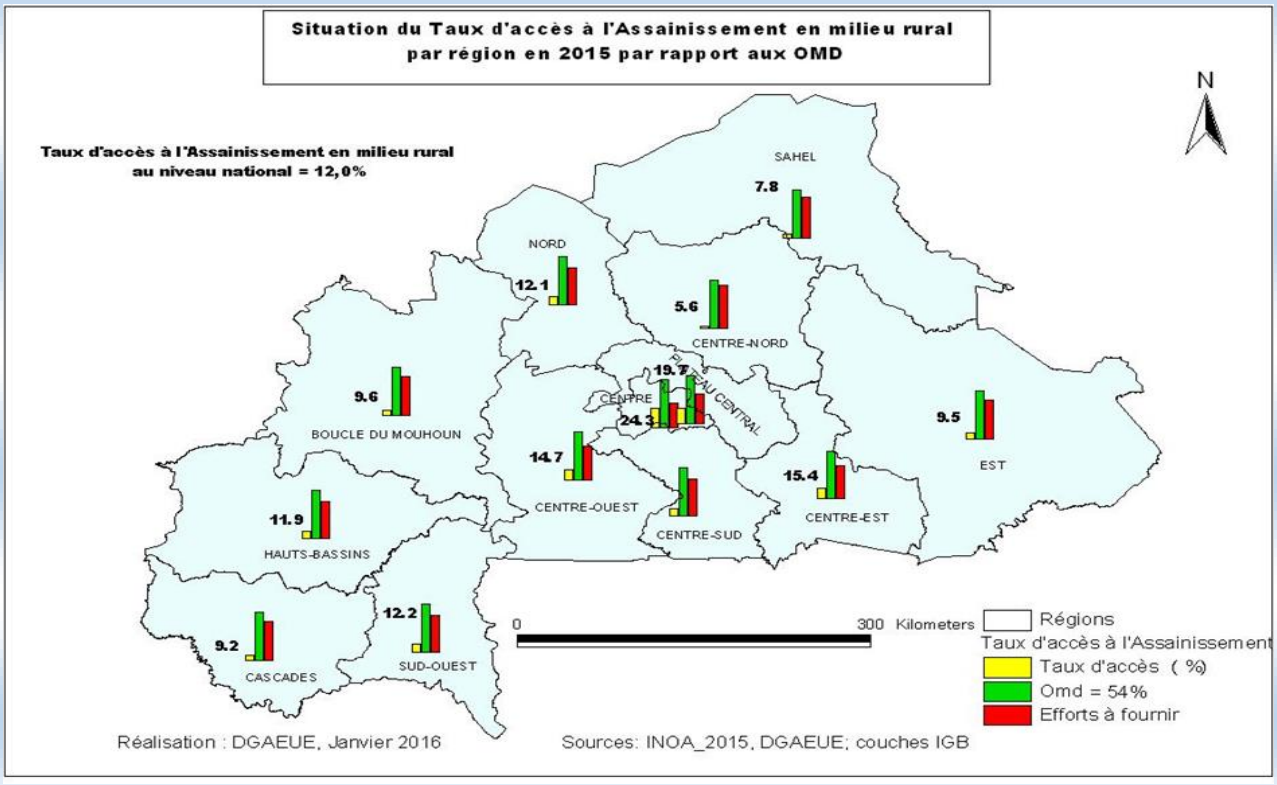
The comparative analysis of the MDG achievement level as illustrated in Map 2, shows that considerable efforts are still

needed in the regions, because none has reached the MDG target of 54%.

On the other hand, hygiene promotion component is not sufficiently taken into account in the WASH initiatives. The hygiene promotion activities are particularly implemented by the CSOs, mainly the NGOs and CBOs of the WASH sector (Photo 6). Plan International, WaterAid, Eau Vive, SOS Sahel, are leading NGOs that implement in the primary schools and in the community environment, hygiene promotion activities, using IEC as a communication method and tools that value the visual medium (Participatory Hygiene and Sanitation Transformation (PHAST), Promotion of Hygiene and Sanitation at School (PHSS)). Both at primary school and within the community, the used strategy is the peer-to-peer education. At primary school, the hygiene clubs benefited from the training and were given images boxes that are used for sensitizing their peers to adopt good hygiene practices. They benefit from the guidance of their teachers. In the villages, pairs comprised of a man and a woman perform the sensitization using image boxes based on a program negotiated with the households.

The issues that are addressed during these sensitizations are: hygiene of drinking water within the water chain since the drainage, the transportation till consumption, the cleanliness of hands, the hygiene of the life environment, the usage and maintenance of latrines.

In general, it must be recognized that governmental programs mainly lay emphasis on sanitation, with a focus on the construction of latrines, and fewer initiatives are developed in the field of hygiene. A sanitation policy that does not associate the promotion of good hygiene practices will not be efficient. For instance, for a household that has a latrine, if the users do not wash their hands after defecation, this can be a source of contamination.



Map 2: Comparison of access rates to sanitation in rural areas against the MDG target

2.2 Issues

This section provides a brief overview of water, hygiene and sanitation issues in Burkina Faso. Due to rapid urbanization the country faces problems with access to drinking water, improve sanitation and hygiene. To concentrate on that issues that potentially have the most impact a SWOT analysis of the WASH sector has been completed.

2.2.1 Water

The problems faced by many African countries nowadays and particularly Burkina Faso, is that drinking water and sanitation sectors are not only affected by the lack of infrastructures but mainly by poor governance.

During dry seasons, rural areas people often experience cultural clashes near water wells which leads to the shortage of water supply stations and wells:
The shortage of water supply stations and wells led to conflicts between ethnic groups in the country. In the Nakanbé region for example, field investigators witnessed a conflict between two different ethnic groups that arrived at the same watering hole for their livestock. The field investigators determined that "*cultural traditions were also at the root of some water supply problems. Where certain wells are considered sacred, the water can be restricted to uses such as preparing traditional medicines. All restrictions mean that potable water is not available for other uses, placing additional strain on the remaining sources*". The differences in cultural practices and beliefs of water usage between the two groups represent an internal cultural complexity in Burkina Faso. In addition, the lack of adequate pumps and wells further instigates social conflicts, as villagers are forced to wait in line for hours to fill their containers, or move to other sources of water, placing additional strain on those remaining. The International Development Research Centre, an organization supporting projects on improving local water management in Burkina Faso, explain that some of the tensions on water access are rooted within social class norms. Karidia Sanon, an economist with the IDRC cites a moment when she witnessed the wife of a village chief, "*who went to the head of the line while the other women — although resentful — said nothing*." While Burkina Faso is a nation that values hierarchy and respect, inadequate and unequal access to water sources will continue to promote social and cultural conflicts.

Photo 7. Dr. Rochelle Rainey, USAID Washington Water, Sanitation, and Hygiene Advisor and Dr. Lakhdar Boukerrou (left), USAID WA-WASH Chief of

Understanding and acknowledging culture's values and traditions is essential when attempting to alter or improve current practices. Vessela Monta of the International Rainwater Harvesting Alliance explained that although rainwater harvesting is not a new practice, the organization still taking special care in acknowledging and using the traditional practices and philosophies of rainwater harvesting from locals. Mrs. Monta emphasized the importance of creating a dialogue between participants, so that traditional and cultural experience can combine with modern day expertise and advice (Photo 7). In their book "Coping with

Water Scarcity," Luis Santo Pereira, Ian Cordery, and Iacovos Iacovides support Monta's claims: "*…professional, expert help can be enlisted to develop better water-use and capture methods but the local people need to be enlisted as the greatest source of ideas. It will usually only be possible to affect changes in such practices by first getting to understand the culture and traditions that surround them and then developing a sensitive, locally adapted program of water harvesting*" (Godfrey, 2012).

In developing a SWOT analysis of the water sector (USAID WA-WASH, 2016), a host of issues were examined. The weaknesses that are key constraints to sustainable development were be identified. They include:

- Unfavorable natural conditions for water mobilization
- Poor management of the existing hydraulic park in the rural area
- Important disparity in terms of access rate to services between urban areas and rural areas
- Critical level of degradation of water resources (pollution, invading water plants, silting up)
- Insufficient coordination of the valuation of the resource at the national, basin and regional levels
- Inappropriate transfer of human and financial resources to support the transfer of competence in the communes
- Poverty, weak financial resources of the populations and the governments (reliance on foreign aid)
- Poor inclusion of gender and equity in drinking water service delivery at municipal and regional levels
- Failure and lack of capacity (technical and financial) of some companies in the realization of the works
- Weak efficiency of the public expenses linked to investments in the domain (red tapes in the procurement process, leading to low budget consumption rates)
- Difficulties to enforce the legal and regulatory texts
- Corruption and governance problem in the WASH sector
- Poor coordination of the WASH sector and harmonization of the approaches
- Non contextualized approaches and poor quality of facilitation
- Technologies: low physical and financial accessibility, non-compliance with standards
- Weak planning of the monitoring-evaluation systems added to the lack of harmonized, reliable and accurate database
- Poor documentation and knowledge management in the WASH sector at national level, and insufficient national legislation/regulation
- Weaknesses in the implementation of sectoral policies and strategies where they exist
- Poor sustainability of the works and non-professional services and management of drinking water infrastructures in rural areas

Threats include a continuation of present trends and a deterioration of current conditions in the water sector. They consist of:

- The climate change with a significant decrease in rains has an impact on the sustainability of WASH services
- An increased risk of pollution due to the development of the mining activity
- Shocks caused by the unfavorable global economic environment
- Climate change and variability
- Pressure on natural resources due to strong demographic growth
- Non-sustainable exploitation of natural resources (forests, protected areas, fish stocks)
- Political Instability
- West Africa security context (conflicts, terrorism, natural disasters, epidemics)
- Corruption in the WASH sector
- Persisting reliance of the sector on development aid.

2.2.2 Sanitation

A national survey on household access to family sanitation facilities was conducted by the government in 2011. It shows that only 3.1% of Burkina Faso's population had access to improved sanitation and 62.8% practiced open defecation leading to a high risk of disease, particularly faecally-transmitted ones. To tackle this issue, in June 2010 the President launched a mass national campaign of civic advocacy and mobilization to speed up the provision of family latrines for the local population (Ministry of Agriculture and Water and Ministry of the Economy and Finances, 2012).

Very few sanitation projects had been previously implemented in Ouagadougou such as handwashing station (Photo 8). Less than 10 km of sewers had been constructed to connect some industrial and administrative sites equipped with wastewater treatment plants to the city water reservoirs. However, only one plant was still operational in 1992 and the discharge of raw wastewater in the environment was the norm.

Weaknesses that will keep the country from reaching its Sanitation Vision are:

- Weak capacity of the communes in fulfilling their role as works contractor of the sanitation services
- Lack of human resources in sanitation at local level
- Low mobilization of the contributive share of the households in rural areas for the realization of the subsidized latrines
- Slowness in the procurement process, leading to weak consumption of budgets/subsidies allocated to the sector
- Low efficiency of the strategies implemented for sanitation promotion
- Poor quality of the realizations that do not always guarantee the sustainability of the works and services
- Weak follow-up of the government's commitments in terms of sanitation.
- The fragmentation of WASH between different departments
- Weaknesses in the planning and monitoring-evaluation systems and lack of harmonized, accurate and reliable database
- Poor documentation and knowledge management in the WASH sector at national level and poor national legislation/regulation on sanitation
- Weaknesses in the implementation of sectoral sanitation policies and strategies.

A review of Sanitation and Hygiene sectors threats that would lead to the stagnation, decline or demise of the sectors has been completed and indicated:

- The global economic crisis and the security crisis will decrease the public (official) development aid.
- Political Instability.
- Persisting reliance of the sector on development aid.
- Corruption in the sanitation sector.

Photo 8. Utilization of handwashing station installed to avoid disease in some villages in Burkina Faso.
Source: USAID WA-WASH

2.2.3 Hygiene

Health promotion programs aim to induce behavioral changes to prevent diseases. For example, cleaning up the surrounding environment and its habitat is a good actions to promote hygiene (photo 9). Although health promotion is one of the principles of many health programs, doubts persist about its effectiveness. A review of more than 500 articles on health education in developing countries published in 1987 found that three of those countries had satisfactory evidence of a change in behavior or impact on health. It is therefore not surprising that policy-makers question the appropriate use of scarce resources for health promotion in developing countries. Designing health promotion programs on the basis of local practices and culture has long been advocated, but the absence of concrete examples demonstrating the feasibility and effectiveness of such approaches may have discouraged their use (WHO, 2001).

Identified weaknesses are as follow:

- The sanitation sub-sector remains the most neglected one in the WASH programs
- The failure to follow-up of Government's commitments regarding hygiene
- Lack of trained human capacities and poor communication on the hygiene sub-sector
- Difficulties to enforce the legal and regulatory texts.
- Institutional instability
- Low consumption rate of the funds allocated to the WASH sector by the government and the municipalities
- WASH fragmentation between different departments and corruption and bad governance in the WASH sector
- Poor coordination of the WASH sector and harmonization of the approaches
- Non contextualized approaches and poor quality of facilitation
- Technologies: low physical and financial accessibility; non-compliance with standards
- Weaknesses in the planning and monitoring-evaluation systems and lack of harmonized, accurate and reliable database

Photo 9. USAID WA-WASH members participating in a hygiene and behavioral change program in front of the Regional office.
Source: USAID WA-WASH

- Insufficient documentation and knowledge management in the WASH sector at the national level
- Poor national legislation/regulation on sanitation
- Weaknesses in the implementation of sectoral policies and strategies where they exist
- Poor civil commitment in the WASH sector.

The threats involved:

- The global economic crisis and the security crisis will lead to a reduction of public development aid for the WASH sector
- Political Instability.
- Persisting reliance of the sector on development aid.
- Corruption in the sanitation WASH sector.

2.3 WASH quality challenges

This section provides a brief overview of water, hygiene and sanitation challenges in Burkina Faso. The rapid urbanization pushes the country to overcome some challenges related to the access of drinking water, improved sanitation and hygiene.

2.3.1 Water

Burkina Faso water sector has encountered challenges highlighted as follows:

- Finance the implementation of the Human Resources Development Plan of the General Directorates for Water Resources (DGRE) and Wastewater, Sanitation and Human Excreta (DGAEUE), and the Regional Directorate for Agriculture, Water and Fisheries (DRAHRH)
- Develop and implement a plan to build on the communes' human, material and financial capacities to enable them to assume their new responsibilities for water supply and sanitation
- Continue to mobilize internal and external resources, particularly for household sanitation in rural areas
- Improve the process for monitoring and evaluating the use of finance by involving all stakeholders: central government (ministry in charge of water and sanitation, finance ministry) and regional departments, development partners (DPs), nongovernmental organizations, communes, and the private sector
- Improve and simplify public procurement procedures
- Ensure consistency in the standards and definitions used to calculate water supply and sanitation coverage by the DGRE/ DGAEUE, the state-owned company ONEA, and the National Institute of Statistics and Demography (INSD) in particular
- Conduct a household survey to establish reliable baseline data for access to improved sanitation
- Design and implement a standardized process for collecting, processing and communicating data related to the planning and monitoring of facilities, based on the Finance Law development timetable within the ministry in charge of water and sanitation
- Expand the management reform of rural water supply systems to all regions
- Increase the human, financial, and material resources made available to communes and regional departments to enable them to undertake the new responsibilities entrusted to them as part of the decentralization process
- Reinforce the competencies of water users' associations and the private sector
- Increase the quantity of water produced (collected, treated, and distributed) in the 14 secondary centers where there is a shortfall
- Improve the billing process by ensuring payments are collected from central administration and local authorities on time
- Continue to implement the recommendations from ONEA's 9001/2000 certification audit (AMCOW, 2015).

2.3.2 Sanitation and Hygiene

According to AMCOW (2015), the sector of sanitation and hygiene in Burkina Faso faces numerous challenges:

- Increase of the finance allocated to leveraging household sanitation improvements
- Conduct an analysis of the main factors underlying the success and failure of past interventions to find more effective ways of stimulating demand and of promoting sanitation to increase the construction rate of facilities and, ultimately, to create and disseminate process guidelines for sanitation and hygiene projects
- Initiate a hygiene and sanitation promotional campaign at household level (Photo 7), on a long-term national scale
- Develop pit emptying services and wastewater and excreta treatment capacities in urban centers
- Find realistic technical and financial solutions to accompany the development of sewerage systems in Ouagadougou and in Bobo-Dioulasso bearing in mind the (low) demand for such a service, the capacity of domestic and industrial users to pay, and the need to achieve sustainable financial stability in the subsector
- Mobilize the necessary funding to implement Strategic Sanitation Plans in the secondary centers and unplanned settlements of Ouagadougou and Bobo-Dioulasso (AMCOW, 2015).

Photo 10. Some beneficiaries proudly showing their well-kept latrines.
Source: USAID WA-WASH

2.4 Laws and regulations

Water sanitation and hygiene sectors are governed by laws that regulate the daily life of the population. Those laws ensure good health if people put them into practice.

2.4.1 Water

Burkina Faso government has chosen a set of normative criteria that typically goes beyond the JMP definitions and is more in line with how international practice on rights to WSS has evolved over the past ten years. At the launch of the PN-AEPA in 2005, the government had made precise definitions of what it considered to constitute access to water (Table 1) and sanitation. The definitions were differentiated among different groups depending on the type of settlement.

Under the JMP definition, water from a protected spring or water harvesting would also be considered as an improved source. Furthermore, considering only private toilets, serving a maximum of 10 people per toilet, implies a relatively strict interpretation of the availability criteria. These differences could probably explain most of the divergence between the JMP and Government data on water and sanitation coverage.

However, the actual quality of the potable water has not been subject to investigation. The 2010-2012 evaluation concluded that quality issues needs to be dealt with more in-depth and comprehensive manner. Especially in the Northern parts where arsenic in the ground water is known to be a common problem.

Table 1. The potable water quality in Burkina Faso.
Source: ONEA

Village	Major Rural centre (>3500)	Major urban centre
Quality Water: WHO standards Improved source / *Point d'Eau Moderne* (PEM): Borehole, protected well, simple piped system Improved latrines with cement slab	WHO standards Borehole, simple piped systems Improved latrines/WC	WHO standards Piped water systems Improved latrine /WC
Availability 20 liters water per capita/day (lpcd) 1 private latrine / 10 people (one household)	20 lpcd 1 private latrine or WC / 10 people 1 school latrine per class of pupils	20 lpcd (standpipe) 40-60 lpcd (private connection) 1 private latrine or WC/ 10 people
Accessibility Water point within 1 km 1 water point (PEM) per 300 people	public standpipe or collective water point within 500 m 1 standpipe per 500p 1 waterpoint per 100p 1 private connection per 10p	public standpipe or collective water point within 500 m 1 standpipe per 1000p 1 waterpoint per 100p 1 private connection per 10p

In the late 70s, Burkina Faso government created a water company that would take over responsibilities for urban water supply and sanitation in the country. With laws and regulations reforms upon safe water and sanitation and better hygiene, the water company becomes ONEA (Office National de l'Eau et de l'Assainissement) in 1985 (Table 2)

Table 2. Reforms in WASH sector in Burkina Faso from 1970 to 2008.
Source: AMCOW,2015

Year	Event
1970	Management of water and electricity is separated with the creation of the National Water Company (SNE: Société Nationale des Eaux), a semi-public company present in seven urban centers, while the state directly supervises rural water supply.
1976-1978	First Water Policy and nationalization of the SNE, transformed into the National Office for Water (ONE: Office National de l'Eau), present in 44 urban centers.
1985	Transformation of the ONE into the National Office for Water & Sanitation (ONEA: Office National de l'Eau et de l'Assainissement) and creation of a surcharge for sanitation included in the water bill.
1994	ONEA becomes a state-owned company. The sanitation surcharge is used to finance the Strategic Sanitation Plan of Ouagadougou (PSAO: Plan Stratégique d'Assainissement de Ouagadougou).
1998	The adopted National Water Policy introduces integrated management of water resources in Burkina Faso.
1996-2000	ONEA improves its technical and financial performance.
2001	Adoption of the Water Law.
2002	Creation of the Ministry of Agriculture, Water and Fisheries (MAHRH: Ministère de l'Agriculture, de l'Hydraulique, et des Ressources Halieutiques) that includes a General Directorate in charge of water and sanitation.
2006-2009	Adoption of the National Program for Water Supply and Sanitation (PN-AEPA: Programme National d'Approvisionnement en Eau Potable et d'Assainissement) and development of its application tools.
2008	Institutional separation of water and sanitation management in rural areas with the creation of the General Directorate of Wastewater Sanitation and Human Excreta (DGAEUE: Direction Générale de l'Assainissement des Eaux Usées et Excrétas) alongside the General Directorate of Water Resources (DGRE: Direction Générale des Ressources en Eau).

The objectives of ONEA are the creation, management and protection of catchment facilities, water supply, treatment and distribution of drinking water for urban and industrial needs; the creation, promotion and improvement and the management of public sanitation facilities, or individual self for the discharge of wastewater and excreta in urban and semi-urban. Currently, ONEA manages 56 centers with supply of drinking water systems. The overall number of staff as of 2014 is 948 officers including 772 men and 176 women that work hard every day to supply clean and safe drinking water and proper sanitation in the entire country of Burkina Faso (Table 3).

Table 3. ONEA pricing for water usage in Burkina Faso. (2014 – 2018)

Source: ONEA, 2017

ONEA pricing					
Household rate		**Public tap rate**		**Company rate**	
0-8 m³	188 FCFA/m³	20 L	5 FCFA	Single rate	1070 FCFA/m³
9-15 m³	430 FCFA/m³	40 L	10 FCFA	Subscribers service fee	1000 FCFA/Bill
16-25 m³	535 FCFA/m³	220 L	60 FCFA		
Over 25 m³	1070 FCFA/m³				

2.4.2 Sanitation and hygiene

Both legal frameworks and policy strategies are a necessary precondition for making strategic progress on sanitation and hygiene promotion. In Burkina Faso, the legal framework for sanitation continues to be governed by the Environmental Code of 1997, while the national sanitation strategy, which sets the policy framework, is currently under review by the CCEAPA. The legal and policy framework for hygiene promotion was reformed in 2004–2005. The sanitation sector is also governed by the wider poverty reduction framework for Burkina Faso and by the sectoral budgetary allocations accompanying the PRSP. This section sets out the main elements of the sector at national level. *The main legal text referring to sanitation is the Environmental Code of 1997 18 which, in its Article no. 5, paragraph 14,* defines sanitation as the management of:

- Solid, liquid or gas-like waste from households, public and private institutions, industries, small manufacturers and agriculture
- Rainwater
- Plant and animal waste.

According to the recent review of the sanitation sub-sector *by GoBF (2005)*, this makes sanitation a cross-cutting issue and explains why there is no specific "sanitation law" in Burkina Faso. Instead, there are a number of laws in different sectors, which make reference to sanitation. These laws are listed in Box 4.

Articles 5 and 58 of the Environmental Code set out that the ministry in charge of the environment are also in charge of developing a national sanitation strategy. However, since the code was published in 1997, ministerial responsibilities have been restructured in Burkina Faso with the above-mentioned consequence that water has been allocated to the agricultural ministry. The draft revised sanitation strategy takes account these changes by giving each line ministry the lead in developing the legislative framework and national policy for the particular aspects that fall within their sector. This means, for example, that MAHRH is responsible for all aspects of wastewater and excreta management, MECV is in charge of issues relating to solid, liquid and gas-like waste management, and MS takes care of hygiene and bio-medical waste. The only aspect of sanitation without a clear institutional home is the management of rainwater (GoBF, 2006). Overall, MAHRH is responsible for taking the initiative in developing further a legislative and strategic framework for sanitation. The MECV has more of a regulatory function i.e. safeguarding evolving norms (according to an interview with DGRE).

The first policy document on sanitation is the National Sanitation Strategy of 1996 (MEE 1996). As stated above, this strategy was developed during the restructuring of the urban sanitation sector in Burkina Faso and

therefore focused primarily on urban wastewater and excreta management. As such, the sanitation strategy of 1996 had a number of important shortfalls. It did not take into account all aspects of sanitation i.e. aspects of environmental protection and it did not make an explicit connection with hygiene promotion. Furthermore, no guidance was given for improving sanitation in rural areas and new developments under decentralization over the last few years were not taken into account (MEE 1996).

Since the setting-up of the national sector coordination group CCEAPA in 2005, MAHRH has commissioned the preparation of a new national sanitation strategy. This strategy is accompanied by various sub-programs, setting out the objectives, strategies and investment needed to reach the MDGs for Burkina Faso by 2015 (MAHRH 2006a; MAHRH 2006b). The draft national sanitation strategy was reviewed by the sector coordination group, the Technical Water Committee and the National Water Council between February and August 2006. In October 2006, it was about to be approved by the Council of Ministers (according to an interview with DGRE). The reviewed strategy identifies juridical gaps that need to be plugged and sets out the institutional framework for implementing sanitation and hygiene promotion. The socio-economic principles for sanitation envisage a demand-based approach, realized through encouraging behaviour change and participatory approaches that take into account the needs of women, children and handicapped persons. The draft strategy sets out a priority list of appropriate technologies to be adopted for rural and urban areas that are to be verified by feasibility studies. For the implementation of the strategy, the government relies heavily on the support of NGOs and the private sector, as well as declaring its intention to strengthen inter-ministerial cooperation and to intensify capacity-building of local governments and line ministries (GoBF 2006; Interview with DGRE). So far, it remains uncertain whether latrine construction will be subsidized in rural areas. MAHRH is currently in discussion with potential donor organizations about piloting the implementation of the revised strategy. While the ministry is in favor of providing subsidies, some donors are strictly opposed to this idea. The outcome of this debate was still uncertain in October 2006 (Tearfund, 2007).

Box 4. Additional laws with reference to sanitation and hygiene promotion

- The **Public Health Code of 1994** provides an overall framework for wastewater and excreta management and also specifies the type of household sanitation that is obligatory in urban and rural areas.
- The **Agrarian and Landed *(foncier)* Reorganization of 1996** sets guidelines for the protection of drinking water and divides responsibility for different aspects of its implementation between the ministries in charge of the environment, water, habitat, territorial administration and health.
- The **Orientation for Water Management Law of 2001** elaborates on the environmental code for wastewater and excreta management by covering the drainage of wastewater, as well as water treatment and purification. A decree in 2005 (decree no. 2005-187) further specifies different types of works to be undertaken to guarantee adequate water management.
- The **Local Government Code of 2004** devolves the majority of responsibilities relating to sanitation to local governments. This includes all responsibilities with regard to rainwater, wastewater and excreta management, health and hygiene promotion.
- The **Public Hygiene Code of 2005** in many ways reinforces other existing laws on sanitation. It focuses on the regulation of hygiene in public spaces i.e. streets and swimming pools and in public, industrial, food-processing and school buildings

Source: GoBF, 2005

3. RECOMMENDATIONS

To improve the population's life with regards to the issues and, challenges encountered by the water, sanitation and hygiene sector we recommend:

- Involving and training of community workers ensure enhanced behavior change at community level (long term approach).
- Obtaining the best possible results, actions must be coordinated with nutrition actors.
- Involving of health care personnel in choosing technical options to enhance appropriation.
- Making sure authorities in charge of nutrition are more involved in the implementation of WASH-in-Nutrition activities.
- Using structures and community based health workers contracted by health districts to ensure sustainability.
- Developing strategy of the sector must be defined in reference to the universal right to access water and sanitation, taking into account the human right-based approach. It must particularly consider the gender dimension and the concerns of the most vulnerable populations with regards to poverty levels in the country in general and particularly in rural areas.
- Developing the perspective of the sector will be designed starting from improved knowledge of the sector and better management of the country's water resources. Priority will be given to sub-regional cooperation (settling the issue in the dynamics of water catchment areas). In the context of climate change, urbanization, population growth, pollution, man-made resource decay, a better knowledge of water resources will ensure proper planning to allow better adaptation to changing contexts.
- Challenging of the WASH sector development in view of the Sustainable Development Goals (SDG), can be faced only if policies and programs are framed in an environment of good governance, through which transparency, participation and accountability are key values that will guarantee an efficient management of the mobilized resources. This also requires the development of policies to strengthen the capacities of the human resources of the sector and local communities.
- Funding of the sector will remain the main challenge to the development of the sector for the years ahead. In an international context where traditional partners from the industrialized world, funding the WASH sector, are facing many problems (unemployment, economic crisis, security, and climate change problems), the Official Development Assistance (ODA) will significantly decrease, thus the need to develop strategies to mobilize endogenous resources to fund the sector. This new strategy must give a primary place to the Public-Private Partnership, through which the private sector will play a catalytic role (USAID WA-WASH, 2016).

4. CONCLUSION

Water sanitation and Hygiene sector in Burkina Faso encounter many issues. The shortage of water supply stations and wells lead to conflicts between the ethnic groups in the country. Very few sanitation and Hygiene projects have been previously implemented in Ouagadougou.

Nevertheless those projects, succeeded to improve access to Water and Sanitation and to raise awareness on Hygiene.

Besides the issues and the related achievements more have to be done. Therefore, ours recommendations are (1) to get the communities' members involved in the planning, Implementation and sustainability of the projects, (2) to build the capacity of local people (Photo 8), (3) to allocate more funds in the WASH sector.

Following those recommendations, it is sure that Burkina Faso will be able to achieve the SDGs goals for Water Sanitation and Hygiene.

Photo 11. Rural population involved in the installation of a rope pump in their community.
Source: USAID WA-WASH

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