

Briefing note Burkina Faso

- Burkina Faso's rate of access to drinking water supply and sanitation are among the lowest in the world
 - The rate of access to drinking water was estimated at 57% in rural areas and 75% in urban areas and sanitation services were 1% in rural areas and 14% in urban areas.
 - Financial investment in Burkina Faso's human resources and in the water supply and sanitation services is limited.
- The human resources (HR) demand is directly linked to the geographical spread of the population and this is directly linked to two aspects, namely geography of dispersed rural communities and the high urbanisation rate.
- The public sector employs 81% of the existing human resources that work in the water supply and sanitation sectors, with non-governmental organisations (NGOs) and community-based organisations (CBOs) 11% and the private sector 8%. Most of public staff fulfil positions within the management and finance discipline, including large numbers of supporting staff (administrative, and secretary functions).
- Burkina Faso has a severe human resources deficit in all aspects of water supply and sanitation:
 - The need for social development personnel in dispersed rural areas to achieve full coverage of water supply and sanitation is very high, with approximately 10,000 staff needed in the water supply sector and 7,600 staff needed in the sanitation sector.
 - In addition to the human resources capacity gaps, there are acute difficulties with general organisational capacity.
 - The lack in both the numbers as well as the quality of the human resources working in the water supply and sanitation sectors is directly linked to the very low financial capacity of organisations to recruit and retain staff.
 - Human resources needs arise most acutely in rural areas where the population is larger, with a concomitant effect on the lack of organisational capacity in the water supply and sanitation sectors

All references are listed in the full case study report.

Background

This Briefing Note summarises the findings from a study in Burkina Faso, made possible through the support of the United States Agency for International Development (USAID) under the auspices of their Capacity Building of Local/National WASH NGOs/CBOs in Africa (Cap-WASH) Program. It sets out to assess the human resources needs to provide water supply and sanitation services in three countries: Mozambique, Burkina Faso, and Tanzania.

Main objective

The methodological framework, defines the following steps to assess the human resources requirements in the sector, in terms of numbers (shortages), skills and competencies (gaps).

1. Estimates the 2015 population to incorporate growth.
2. Determines the current water supply and sanitation coverage and calculates the increases needed to achieve a) the Millennium Development Goals (MDGs) and b) full service coverage.
3. Estimates a proxy of HR demand per type of service delivery per 10,000 people.
4. Determines the existing HR capacity in the country in terms of numbers and skill sets.
5. Assesses the HR supply in the years up to 2015 in terms of graduates as well as vocational training.
6. Calculates the HR shortages and assess the HR gaps.
7. Provides recommendations for the way in which training institutions can address the shortages and gaps, as well as provides recommendations for alternative ways to meet the said shortages and gaps.

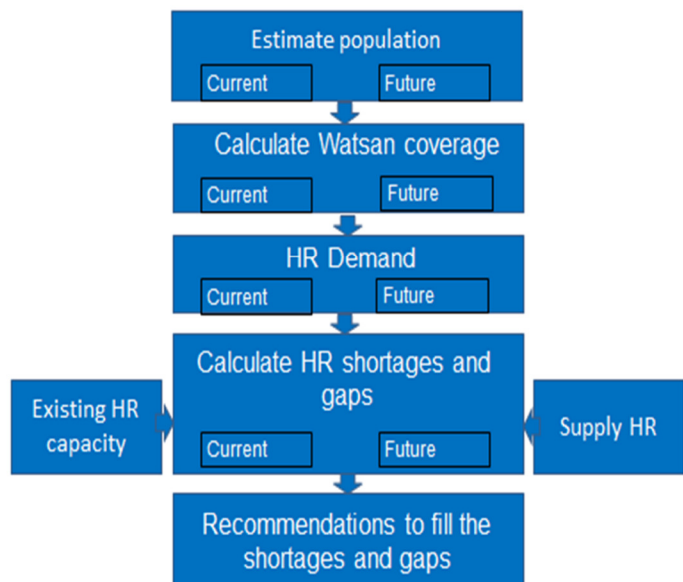


Figure 1: Methodological framework to assess human resource shortages and gaps

Focus

The study was done considering data obtained mainly from the water supply and sanitation sector in Burkina Faso. The bulk of HR information came from NGOs/CBOs and private sector organisations, but the researchers did manage to obtain data from the public sector to complete their research. It is clear that the study started a process and identified areas of work that with adequate follow-up, have the potential to lead to the development of a solid basis to conduct more concise HR assessments in the water supply and sanitation sectors. The public sector, whilst engaged at later stage, has indicated interest to continue these assessment efforts.

Disciplines to map human resources capacity

The study used the following disciplines to map human resources capacity in the water supply and sanitation sectors:

- **Technical specialisation specific to water and sanitation services:** a person who is professionally engaged in a technical field specifically related to the provision of water and sanitation facilities or infrastructure (for instance civil/environmental engineers).
- **Technical specialisation, not specific to the provision of water and sanitation services:** a person who is professionally engaged in another technical field that is required in the planning, design or operation of water and sanitation facilities or infrastructure (such as hydro-geologists, mechanical/electrical engineers), but is not water and sanitation sector specific.
- **Management and finance:** a person who is professionally engaged in management (for instance finance, human resources or strategic managers and office managers fulfilling administrative functions) as well as persons who procure goods and services or cost planners.
- **Social development:** a person who is professionally engaged in hygiene promotion or other relevant water, sanitation and health professions in the social sciences (for instance health promotion specialist, sociologist, community development worker).

Work types

It investigated the capacity of these four disciplines, whilst distinguishing the human resource requirements for three different types of work noted below. Whilst this study reflects data from the water supply and sanitation sectors, the research considered hygiene practices as defined by the water supply, sanitation and hygiene (WASH) sector.

- Design and construction;
- Operation and maintenance;
- Community mobilisation/sanitation and hygiene promotion.

Assumptions and research scope

The methodological framework was developed and tested over a two-year period, and hinged on a number of assumptions:

- Existing coverage data is sufficiently accurate;
- The methodology uses Joint Monitoring Programme (JMP)¹ coverage definition, which is 'improved' levels of water and sanitation;
- Different agglomeration sizes are typically served in each country by the same water and sanitation service delivery mechanism. In Burkina Faso the different agglomeration sizes, do not coincide with the agglomeration sizes as designed by the methodology because they have a different categorisation of geographical sectors, being rural, dispersed rural, urban, etc. In an attempt to follow the methodology, the researchers used the assigned categories for rural, dispersed rural, urban, etc. but in Burkina Faso the categories are both labelled differently, and divided differently. This impacted on the differentiation in the statistics; and
- The methodology assesses professionals, hence does not include household and community involvement.

This study aimed to capitalise on information of quantitative and qualitative nature, targeting WASH actors in the public sector, private sector, NGOs and CBOs, and who were identified as part of a representative sample of the whole of Burkina Faso. Criteria included: the area of intervention, the diversity of geographical areas, profile and size of organisations, gender, the nature of the services provided.

The investigations were undertaken in seven regions of Burkina Faso, being the Central East Region (Eastern zone of Burkina Faso, in the provinces and Boulgou Koulpelogo), Central Region (Central Zone of Burkina Faso, in the province of Kadiogo), the Central West Region (West Central area of Burkina, province Bouleimché),

¹ <http://www.wssinfo.org/>

Institutional framework for service delivery

Burkina Faso's policy on water supply and sanitation falls under the Ministry of Agriculture and Water (MAH), through two branches, the Directorate General of Water Resources (DGRE) and the General Directorate of Sanitation Wastewater and excreta (DGAEUE). The MAH is also responsible for facilitating the interface between different actors (public sector, private sector, NGOs, CBOs and donors) and to mobilise resources to implement the National Programme of Water Supply and Sanitation (PN-AEPA).

The National Office for Water and Sanitation (ONEA) is both the regulatory institution and the water and sanitation service provider of urban and sub-urban areas and delegates this responsibility for service provision to the municipalities. The implementation of this delegation of power and authority is still on-going.

In Burkina Faso there are:

- 461 public sector structures involved in the field of drinking water and sanitation
- 153 private structures involved in the field of drinking water and sanitation (112 companies and 41 offices)
- 101 NGOs and CBOs involved in the field of drinking water and sanitation

NGOs contribute to PN-AEPA through capacity building, social project management, policy influencing and resource mobilisation, mostly at municipal level. The private sector is mobilised for the implementation of the PN-AEPA, as they have traditionally played the role of service provider. In Burkina Faso, water-user associations play a large role in rural service provision, as they manage technologies and equipment, and ensure financial contributions by water end-users.

Population, existing coverage, and MDGs and full coverage deficits

In 2015, the population of Burkina Faso will have grown to approximately 18.6 million inhabitants, of which the great majority (67.7%) will continue to live in the dispersed rural communities. The rural population is still growing (2.2%), even if this growth rate is far below the urban population growth rate of 7.1%. The issue of access to drinking water services and sanitation is acute.

Settlements	Population (2015)	MDG deficit Water	MDG deficit Sanitation	Full service coverage water	Full service coverage deficit sanitation
Rural dispersed	12 675 065	3 195 178	6 730 852	6 237 194	12 561 382
Rural village	1 518 250	382 726	806 238	747 106	1 504 633
Small town	705 245	238 198	330 921	329 880	634 176
Large town	159 552	53 889	74 866	74 631	143 473
City	3 555 633	1 200 923	1 668 402	1 663 155	3 197 324
Total	18 613 745	507 0914	961 1279	9 051 966	18 040 988

Table 1: MDG and full service coverage deficit (absolute population numbers)

Household access to sanitation facilities and the rate of sanitation access in Burkina Faso is 4.7% with disparities between rural areas (1%) and urban (14.2%). The rural deficit numbers indicate the need for attention. The few households with access to sanitation in these areas are served by public, institutional latrines or the gutter, the latter which cannot be considered an improved service. Only some cities (>500.000 population) have limited sewerage systems in place.

The table shows that the deficit to achieve MDG or full service coverage for water supply is approximately half that is required to achieve the sanitation targets. According to government statistics, in 2010, the rate of access to drinking water was estimated at 56.63% in rural areas and 75% in urban areas. However, still a significant number of people require access to drinking water, especially in the cities and rural dispersed areas.

In the rural areas, water is supplied via boreholes, modern wells (sometimes with hand pumps), private wells, and simplified drinking water supply systems (AEPS). The smaller towns depend on classic water towers, with pipeline supply and distribution of water (private / collective service through standpipes), and in cities water supply is primarily provided through classic water towers with pipeline network supply, through taps or standpipes.

Reasons for coverage deficits and some remedial actions

- With a current estimated population of over 16 million people, Burkina Faso is a Sahelian country where water resources are highly dependent on weather conditions. The rate of population's access to drinking water supply and sanitation are among the lowest in the world.
- A severe lack of investment in water supply and sanitation services is at the heart of the coverage deficits in both rural and urban areas, and water supply and sanitation infrastructure.
- The human resources needs arise most acutely in rural areas where the population is larger, with a concomitant effect on the lack of organisational capacity in the water supply and sanitation sectors.
- The lack of quality as well as the low numbers of human resources working in the water supply and sanitation sectors is intrinsically linked to the low financial capacity of organisations to meet the demands in the sector.
- The rural/urban divide in both infrastructure and the lack of specialised or quality staff (particularly water engineers and other technical fields) contribute to the low coverage throughout the country. Qualified human resources tend to live in the cities and not in the rural areas where their services are needed the most.
- Volunteers usually work in the sector for CBOs and community associations as these types of organisations do not normally have the financial means to recruit and pay professionally qualified employees.
- Male employees constitute more than 70% of the workforce in the water supply and sanitation sectors.

Human resources demands

On the basis of the described technologies used in the various agglomeration sizes, key informant interviews supported the estimation of human resources demand to serve those currently covered and meet the MDGs/full service coverage. In this stance, 'demand' refers to what is considered 'ideal' to serve the population under the current coverage figures and hence is different from what is currently in place, which, as explained, includes a number of sections of the population whose coverage is below recommended standards.

The human resources demands for achieving the MDGs and full coverage, was calculated based on the existing water supply and sanitation coverage in both rural and urban setup in terms of design, construction, operation and maintenance and community mobilisation. The analysis was based on interviews, particularly on what could be the ideal number of human resources to deliver the services. In the computation process, an assumption was made on the distribution of the human resources in the different categories in both water supply and sanitation.

Table 2 highlights the total human resources demand for achieving the MDG for water, categorised in different geographical sectors.

Future HR DEMAND for water if achieving the MDGs	WATSAN technical field	Other technical	Management and finance	Social development
Water delivery: dispersed rural communities	3853	2889	7706	7706
Water delivery: rural villages	461	346	923	923
Water delivery: small towns	429	429	613	490
Water delivery: large towns	83	97	111	111
Water delivery: city	1546	1546	2165	2165
Total future HR DEMAND for water if achieving the MDGs	6374	5309	11519	11396

Table 2: Total HR demands for water if achieving MDGs (Note: Refer to Assumptions and research scope for clarification of the statistics)

While the water supply sector's human resources demand represents 65% of the total human resources demand, the human resources demand is also visible in the sanitation sector. Table 3 highlights the total human resources demand for achieving the MDGs for sanitation, categorised in different geographical sectors.

Future HR DEMAND for water if achieving MDGs	WATSAN TECHNICAL FIELD	OTHER TECHNICAL FIELD	MANAGEMENT & FINANCE	SOCIAL DEVELOPMENT	TOTAL
Sanitation delivery: dispersed rural communities	2 053	2 053	6160	4 107	14373
Sanitation delivery : rural villages	246	246	573	492	1557
Sanitation delivery : small towns	121	121	241	241	723
Sanitation delivery : large towns	27	27	54	55	163
Sanitation delivery : city	608	608	1418	1 216	3850
Total future HR DEMAND for sanitation if achieving MDGs	3 055	3 055	8448	6 110	20669

Table 3: HR demand for sanitation sector to achieve MDGs (Note: Refer to Assumptions and research scope for clarification of the statistics)

The following tables highlights the total human resources demand for achieving full coverage for both water and sanitation, categorised in different geographical sectors.

Future HR DEMAND for water if achieving full service coverage	WATSAN technical field	Other technical	Management and finance	Social development
Water delivery: dispersed rural community	5070	3802	10140	10140
Water delivery: rural village	607	455	1214	1214
Water delivery: small towns	493	493	705	564
Water delivery: large towns	95	111	127	127
Water delivery: city	1777	1777	2488	2488
TOTAL FUTURE HR DEMAND FOR WATER IF ACHIEVING FULL SERVICE COVERAGE	8044	6641	14676	14535

Table 4: HR demand for water if achieving full coverage (Note: Refer to Assumptions and research scope for clarification of the statistics)

Future HR DEMAND for sanitation if achieving full service coverage	WATSAN technical field	Other technical	Management and finance	Social development
Sanitation delivery: dispersed rural communities	3802	3802	11407	7605
Sanitation delivery rural villages	455	455	1062	910
Sanitation delivery: small towns	211	211	423	423
sanitation delivery: large towns	47	47	95	95
Sanitation delivery: city	1066	1066	2488	2133
Total future HR DEMAND for sanitation if achieving full service coverage	5584	5584	15478	11168

Table 5: HR demand for sanitation if achieving full coverage (Note: Refer to Assumptions and research scope for clarification of the statistics)

From the above statistics it is clear that the high demand for services in cities are linked to the high level of urbanisation. However, demand is also very high in dispersed rural areas, where there is a high demand on human and other resources to cover the geographically-spread population. The services most needed are personnel for community mobilisation (awareness, training, monitoring and support), design, implementation, feasibility studies, environmental impact assessments, etc.

To provide the infrastructure and continued support to ensure sustainable water supply and sanitation services, requires a high level of support, especially in remote areas where professional and qualified services are not readily available. This requires intervention from all levels of the public, private and NOG/CBO sectors.

The need for social development personnel in dispersed rural areas to achieve full coverage of water supply and sanitation is very high, with approximately 10,000 staff needed in the water supply sector and 7,600 staff needed in the sanitation sector. The same scenario prevails for all other services, in both water supply and sanitation, in all geographical areas of Burkina Faso.

While there is a shortage of all personnel, and particularly of technical competencies, professional as well as intermediate, and considering the difficulties to attract qualified staff to work in the rural and dispersed rural communities, municipalities and CBOs may find it easier to attract intermediate staff as they are more affordable and accessible.

The evaluation of the urban figures highlights the service deficits and the need for qualified staff to deliver services while at the same time one needs to consider that these services are delivered in situations significantly more complex to implement than rural water and sanitation supply. It is estimated that approximately 7,400 and 3,800 staff will be needed for city implementation if the MDGs for sanitation and water respectively are to be achieved.

Existing human resource capacity

The research investigated what human resources capacity current exists that can already offset some the human resources demands.

	WATSAN technical field	Other technical	Management and finance	Social development	Total
NGO					
Existing HR capacity in NGO in water	131	161	323	464	1080
Existing HR capacity in NGO in sanitation	121	151	313	525	1111
Private sector					
Existing HR capacity in private sector organisations in water	69	75	260	273	678
Existing HR capacity in private sector organisations in sanitation	50	74	309	404	838
Public sector					
Existing HR capacity in public sector organisations in water	1307	947	5340	981	8576
Existing HR capacity in public sector organisations in sanitation	735	923	5210	599	7468
Total numbers working in Water	1507	1183	5923	1718	10334
Total numbers working in sanitation	905	1148	5832	1528	9417

Table 6: Existing human resource capacity

Table 6 is a compilation of the existing human resources compliment in the water and sanitation sector and illustrates a relatively equal distribution of staff in the water and sanitation sector. Notwithstanding this equal distribution and the fact that it is most likely as a result of action being taken to increase the prevailing low sanitation coverage, the general absorption of qualified human resources remains very low.

There is, however, an enormous difference in the availability of staff within the various types of organisations. Currently, the public sector employs 81% of the existing human resources, NGOs/CBOs 11% and the private sector 7.6%. Most of public staff fulfil positions within the management and finance discipline, including large

numbers of supporting staff (administrative, and secretary functions). Of the total staff working in the public sector, 79% work exclusively in urban areas which in light of the decentralisation of responsibilities to municipalities could already indicate a major shortage at rural level.

Human resources capacity in NGOs and CBOs

- In NGOs and CBOs most of the staff (45%) is qualified to work in the social development field, working on raising awareness, community mobilisation and capacity building.
- Most NGOs focus on projects that implement community-managed systems, in rural and urban areas, which explain why a large number of staff is focused to perform this work.
- 93% of NGOs operate rurally, while 67% of their qualified staff lives in the urban areas, indicating that qualified human resources are still mainly found in urban areas.
- 38% of the NGOs and CBO interviewed indicated to rely on volunteers, usually students at the end of training, graduates unemployed, unqualified people and unemployed looking to gain experience in the water supply and sanitation sector. Very often these volunteers fill the lack of human resources in these structures.
- In comparison to both the public and private sectors, NGOs tend to attract the least personnel with the no diplomas.

Human resources capacity in the public and private sectors

- Only 37% and 35% of public and private sector staff have only obtained secondary education.
- The public sector has a large number with PhD level working at central level.
- In all organisations, the technical disciplines are under-represented and the qualitative analysis illustrated that organisations face a barrier in hiring high level engineers, since the organisations do not have the financial capacity to do so. Organisations tend to hire technicians instead which effectively means under-qualified personnel and hence a gap.

Other observations

- The human resources needs arise most acutely in rural areas where the population is larger (the rural population of Burkina Faso is 78% of the total population) with a concomitant effect on the lack of organisational capacity in the water supply and sanitation sectors.
- The lack of quality as well as the low numbers of human resources working in the water supply and sanitation sector is directly linked to the low financial capacity of organisations to meet the demands for water and sanitation facilities.
- More than 50% of councillors are illiterate.
- The rural/urban divide in both infrastructure and specialised or quality staff (particularly water engineers and other technical fields) contributes to the low coverage throughout the country.
- NGOs face less problem of availability of human resources in quantity and quality compared to CBOs and other rural associations.
- The qualified human resources tend to live in the cities rather than in the rural areas where most NGOs/CBOs operate.
- Volunteers usually work on behalf of CBOs and associations because these organisations generally do not have the financial resources to recruit and appoint qualified staff.

Gender inequality and remedial action

The general picture of water supply and sanitation throughout Burkina Faso is not one of prosperity and the proportion of men working in the sector is due to unequal number of graduate women and men. Thus women are poorly represented in the different structures: 34% level NGOs and CBOs, 36% in the private sector and 36% among the public.

Staff working in the water supply and sanitation sector is mainly made up of men (more than 70% of the workforce) because of the history of this area that was traditionally male and the nature of some components need physical strength. Burkina Faso has a legacy of excluding women from the education sector and

concomitantly from the workforce. In addition, the prevalence of certain discriminatory perceptions, suggesting that a man is more productive than a woman, favours the recruitment of men. Some physical aspects in the water supply and sanitation sectors such as digging septic tanks, construction, etc. attracts men to the sector.

For many years, socio-cultural and economic factors predisposed families to enrol boys in school rather than girls. Effectively, in rural areas the low financial capacity of households determines whom they will spend their money on and families prefer to invest in boy rather than girl education after primary education.

Gender equality policies are in a process of change and female education, recruitment of women and scholarships for women are being promoted. Some remedial actions are:

- The current education policy encourages girls' education and includes the provision of scholarships. This will work towards eradicating discriminatory gender practices.
- The new labour law and labour code create an environment conducive to employing women.
- New initiatives such as scholarships and labour legislation will change the perception that women cannot do the work previously reserved for men.

The education sector's response to the water supply and sanitation sectors

Universities and technical Institutions

In Burkina Faso, only seven of the 50 country-level structures (universities, institutes, colleges, schools, vocational training centres) provide training of qualified human resources capable of working in the drinking water and sanitation sectors. The numbers of graduates from these universities are relatively limited. The Institute of Rural Development, for example, brings only 17 geologists and ten hydro-geologists onto the market each year.

Statistics have shown that of these 50 institutions, only seven are managers and technicians who at the end of their training are equipped to enter the water supply and sanitation sector immediately, as trained employees.

Training centres

In addition to diploma-level education, some training centres exist, such as Centre of Water Businesses of ONEA (CMEau) that provide short courses to people in the sector: project management for communal water supply and sanitation, utility management, simplified water supply systems, production and distribution of drinking water, sanitation (sewage and excreta). This institute trains about 500 people at municipal level each year.

All universities and training institutions focus mainly on theoretical training and less on the practical aspects, with the result that at the end of their degree or diploma studies, students are not equipped with the skills needed to plan, implement, monitor and evaluate a water supply and/or a sanitation project. In addition, there is a mismatch between what the water supply and sanitation sectors need and what the training provides.

General education and impacts

Statistics have shown that there is a significant shortage in the social development disciplines (approximately 14,000 qualified staff needed to work in the sector to achieve MDGs and approximately 22,000 for full service coverage), with a particular need for social development, specialists in community mobilisation, health workers, and communication specialists. These high numbers are mainly as a result of the high population numbers in areas where the demand for community-based systems are high, being rural and rural dispersed areas.

The low numbers of human resources that enter the technical and other professionals fields, is especially low in rural areas where very few engineers and technicians – water or sanitary engineers, hydro-geologists, geophysicists and hydrologists – work, mainly due to low remuneration packages, and organisations' incapacity to pay the salary these people could earn in other sectors. Also urbanisation is causing a high demand for technical professionals to work in the cities.

Although the human resources shortages are significant, it is also a fact that a relatively high number of graduates enter the workforce. The low absorption level within the water supply and sanitation sectors is directly related to the fact that graduates do not enter the sector; that not enough water and sanitation professionals are trained; and there is a mismatch between graduates and what the water supply and sanitation sectors need.

Education levels

There are country-level structures (universities, institutes, colleges, schools, vocational training centres) to ensure that qualified human resources who are able to work in the field of drinking water and sanitation, are trained. However, the number of people being trained each year for absorption into the labour market, especially water supply and sanitation, such as engineers, is not enough to fill the gap. To compound this shortage, is the fact that there is a mismatch between the training provided and the needs in the field. It is imperative that this imbalance is remedied and the trend reversed. The clearest way to do this is for the education institutions to engage with the water supply and sanitation sectors to find out what human resources are needed.

Human resources shortages

There is a general human resources deficit in the water supply and sanitation sectors in Burkina Faso, which is obviously problematic and impacts negatively on a wide range of health and wellbeing issues. This general deficit is compounded by the fact that many workers who already work in the sector are not adequately and appropriately educated to work in the sector and the existing, vast infrastructure and human resources deficits.

Human resources shortages for various type of work

The results of the study show that the demand for human resources in general is very high and concerns the following profiles:

- Technical field (water): hydro-geologists, geophysicists, hydrologists, civil engineers;
- Technical field (other): agronomists, architects, mechanical engineers;
- Administration and finance: managers, accountants, secretaries, administrative staff;
- Social development specialists: sociologists, community mobilisation and IEC, lawyers, communication specialists, health workers (health education).

The human resources shortages in NGOs/CBOs have reached critical levels and the reasons for this are numerous. To obtain sufficient data from these organisations in order to pinpoint all the reasons for the shortages and concomitant challenges is often difficult as these organisations are dispersed and as a result of their diminished administrative and management capacity little formal statistics is available.

The general reasons include all the issues common to organisations working in poor, dispersed and uneducated environments, being gender inequalities, lack of financing for infrastructure and education, lack of access to institutions to acquire skills and education, large economic, financial, educational and social backlogs to overcome. The recommendations in this Briefing Note deal with remedial actions to help overcome these deficits.

The issue of human resources in the water supply and sanitation sector in Burkina Faso has not been adequately documented and is usually addressed in policy documents, strategies, programmes and projects without clearly stating concrete and effective action to remedy shortcomings. Thus, achieving the MDGs of full water supply and sanitation coverage remains a concern for everyone. It is clear that while actions are planned to achieve them through infrastructure provision, adequate human resources which should enable their implementation are neglected and poorly managed.

Education levels and human resources deficits in different types of organisations

Notwithstanding the fact that NGOs/CBOs suffer severe social, financial and capacity deficits, it is clear that these organisations have fulfilled a major task in providing water supply and sanitation services in rural villages and dispersed rural areas.

However, NGOs have a general lack of technical staff as their low financial capacity is a limiting factor in hiring qualified hydraulic technicians, engineers, sanitary technician, senior managers with knowledge of water and sanitation issues, and monitoring and evaluation specialists. Despite the fact that the NGO sector pays relatively high salaries, they do not attract qualified people to the rural areas where they operate.

Private sector organisations appear to play a relatively large role in rural settings, where most municipalities contract them to implement water supply or sanitation services. ONEA is expanding its services into rural settings, and both of these will require more staff. Municipalities will also require a huge number of knowledgeable staff to perform the job.

Overall, the organisations indicated that analytical skills were mostly absent and the job absorption levels of academic staff is low due to financial constraints. One over-arching challenge is that the general lack of experience or knowledge of the sector. Organisations tend to hire personnel that are lower educated in order to fill the engineering jobs, because of lack of financial capacity to pay for them. Graduates entering the sector often require intense mentoring before they are able to fulfil the position.

The low overall capacity of organisations in the water supply and sanitation sectors to retain or attract staff is adding to its own difficulties which have resulted in qualified persons migrating to other sectors, less plagued by problems.

Quantifying the HR shortages	WATSAN technical field	Other technical	Management and finance	Social development	TOTAL
WATER SECTOR					
HR shortage for achieving MDG	4 778	3 899	3 346	9 391	21 415
HR shortage for achieving full service coverage	6 448	5 231	6 503	12 529	30 713
SANITATION SECTOR					
HR shortage for achieving MDGs	2 061	1 680	365	4 295	8 402
HR shortage for achieving full service coverage	4 590	4 209	7 395	9 352	25 548
Total HR shortage for achieving MDGs	6 840	5 579	3 712	13 686	29 818
Total HR shortage for achieving full service coverage	11 039	9 440	13 898	21 882	56 261

Table 7: HR shortages to achieve the MDGs / full service coverage

Conclusions and recommendations to meet human resource needs

Capacity building in general and training a professional cadre of human resources for absorption into the water supply and sanitation sectors remain the poor relation of investment-and policy makers.

Short term recommendations

The following short-term recommendations will be a start in addressing the human resources capacity gap in the water supply and sanitation sectors in Burkina Faso:

- General advocacy to strengthen water and sanitation knowledge in municipalities through targeted sessions on reform of the water sector, water governance, local planning, marketing AEPA, the monitoring and evaluation of water supply and sanitation projects. In organising these sessions, the illiteracy rate needs to be considered as more than 50% of councillors (on Commons level) cannot read or write making technical advocacy difficult.
- The creation of a national directory and a monitoring system of human resources by National Observatory of Employment and Training (Observatoire National de l'Emploi et de la Formation professionnelle - ONEF) to give greater visibility to the issue and enable the various actors to refine their policies and strategies to achieve the MDGs.
- More professional development courses should be offered at intermediate skills level to ensure trained staff exists for absorption into the sector. An example of such a course is those provided by the CMEau.
- Each municipality should employ at least one water and sanitation specialist. This can temporarily be done through volunteering organisations that offer specialists for periods of a year (for instance JICA, UNV, France Volunteer, etc.).
- Strengthen the capacity of CBOs through financial support for the implementation of activities likely to generate local resources, to become sustainable and have enough financial capacity to hire full-time staff.
- Develop organisational retention strategies, besides salaries.
- Improve DGRE focal points on PN-AEPA and use these to provide local technical services.

Long term recommendations

- National inventory and monitoring system of human resources and training in the water supply and sanitation sectors, such as by ONEF will provide greater visibility and enable the various actors to refine their policies and strategies in order to achieve the MDGs in Burkina Faso. This should also enable a synergy between the education and WASH sector to plan for capacity building on the long term.
- Developing and implementing a development and capacity building strategy to stakeholders.
- Create an enabling environment by
 1. Making the vocational training environment a part of the WASH sector financing, as it is an important component to ensure good governance, maintain service quality and sustainability of achievements
 2. Strengthening the institutional and operational capacity of the Directorate General of Sanitation Wastewater and Excreta in the same proportions as the DGRE, to allow optimal management and efficient human resources currently existing in the various ministries involved in the management of this issue at national level.
 3. Separating the water supply and sanitation budget in municipalities, as it currently falls under environment committee and local development councils.
 4. Developing inter-municipality cooperation to overcome the lack of human resources at municipal level. This is an alternative to each municipality employing qualified and professional water supply and sanitation specialists.
- Advocate with the ministries in charge of water supply and sanitation for the redeployment of technicians (engineers and technicians) from the central government to provincial and community levels.