



NEPAD African Network of Centres of Excellence on Water Sciences and Technology (II Phase)



FINAL TECHNICAL REPORT



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LIST OF ACRONYMS

ZiE	:	International Institute for Water and Environment Engineering
AMCOW	:	African Ministers' Council on Water
ANBO	:	Africa Network of Basin Organizations
AU	:	African Union
AUC	:	African Union Commission
BMZ	:	Germany Federal Ministry for Economic Cooperation and Development
CCRE	:	Centre de Coordination des Ressources en Eau
CIRAD	:	Centre de coopération internationale en recherche agronomique pour le développement
CNRST:	:	Centre National de la Recherche Scientifique et Technique
CoE	:	Centre of Excellence
CREAF	:	Ecological and Forestry Applications Research Centre, Spain
EC	:	European Commission
ECOWAS	:	Economic Community of West African States
EU	:	European Union
GIZ	:	Deutsche Gesellschaft für Internationale Zusammenarbeit
GMES	:	Global Monitoring for Environment and Security
HCD	:	Human Capacity Development
IHP	:	International Hydrological Programme
INERA	:	Institut National de l'Environnement et Recherches Agricoles
IRSTEA	:	Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture, France
IWEGA	:	International Centre for Water Economics and Governance in Africa
JRC	:	Joint Research Centre of the European Commission
KNUST	:	Kwame Nkrumah University of Sciences and Technology
KNUST	:	Kwame Nkrumah University for Sciences and Technology
KoM	:	Kick off Meeting
MDG	:	Millennium Development Goal
MEA	:	Ministère de l'Eau et de l'Assainissement (Burkina Faso)
MESA	:	Monitoring for Environment and Security in Africa
NBA	:	Niger Basin Authority
NEPAD	:	New Partnership for Africa's Development
NWRI	:	National Water Resources Institute of Kaduna (Nigeria)
PSE	:	Senegal Emerging Plan
RWESCK	:	Regional Water and Sanitation Centre, Kumasi
UCAD	:	Cheikh Anta Diop University of Dakar
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UNIBEN	:	University of Benin, Benin City (Nigeria)
USAID	:	United States Agency for International Development
WANWATCE	:	NEPAD West African Network of Water Centres of Excellence

Executive Summary

The Phase 2 of AUC-NEPAD African Network of Centres of Excellence on Water Sciences and Technology (ACEWATER2), have been officially launch in May 2016 during the Cape Town Meeting. According to the AMCOW Declaration, the aim of this Human Capacity Development Component is to develop national “Human Capacity Development Program for junior professional and technician level capacity challenges in the water sector” at the NEPAD’s networks level.

This report summarizes all activities carried out under the HCD Component of the ACEWATER2 Project between December 2016 and August 2018 with technical and financial support of UNESCO-IHP.

The first regional workshop organized in 2iE Ouagadougou in May 2017 permit the design of a common and consensual agenda for implementing the ACE2 Project. The second regional meeting held at Saly Portudal (Senegal) in February 2018 was organized to share draft strategies on HCD in Ghana, Nigeria and Senegal and commence discussions on selection of the Pilot country and projects. During the Saly Portudal meeting, three national HCD frameworks (Ghana, Nigeria and Senegal) have been presented and discussed.

After updating data on human resources in Ghana, Nigeria and Senegal, three draft National frameworks were designated and shared with national institutions. The national priorities in terms of formation and human capacity development for the water sector are now defined. The next step is to implement and disseminate the strategy and to implement pilot projects inside the network.

To implement the studies of Burkina Faso's water sector, a specific contract was signed between UCAD and INERA, under the responsibility of Dr Moussa SANON. The big issue were to complete data for Burkina Faso and get the country involved in the ACEWATER2 Project. The first results were produced in the second half of 2018.

1. INTRODUCTION

1.1. Project Background

The Western African Network of Centres of Excellence on Water Sciences and Technologies (WANWATCE) created in 2010 with five (05) members: Cheikh Anta Diop University (UCAD) of Dakar (Senegal); International Institute for Water and Environment Engineering (2iE) Ouagadougou (Burkina Faso); Regional Water and Sanitation Centre, Kumasi / Kwame Nkrumah University of Sciences and Technology (RWESCK/KNUST), Kumasi (Ghana); University of Benin, Benin City (Nigeria) and, National Water Resources Institute (NWRI) of Kaduna (Nigeria). Cheikh Anta Diop University coordinates the network and hosts the Secretariat in the Campus 3 of UCAD.

Under the terms of the contract signed in December 2016 between UCAD and UNESCO, this ACE2 project aim to support the implementation of the African Water Ministers' declaration urging AUC and NEPAD Centres of Excellence to develop a "Human Capacity Development Program for junior professional and technician level capacity challenges in the water sector".

The WANWATCE Secretariat is also responsible for coordinating activities in the different centers and countries (Burkina Faso, Ghana, Nigeria and Senegal). The secretariat of WANWATCE is responsible for the implementation of the contract binding the CoEs to UNESCO via UCAD. The Secretariat performs tasks related to the implementation of the action plan defined and validated in agreement with UNESCO. All other CoEs are linked to the WANWATCE secretariat through a sub-contract allowing the execution of the tasks assigned to each of the centers. The secretariat is also in charge of providing and executing the budget allocated to CoEs, providing support in the preparation and implementation of activities, and orientation in the reporting activities. In addition, the secretariat organizes and coordinates the workshops and international meetings in the West African region.

In these different tasks, the network coordinator Professor Alioune KANE is assisted by ass. Prof. Awa NIANF FALL and Ing. Samba BA and other collaborators (Dr Coura KANE, Miss Mbayang THIAM). A group of students composed of four PhD students and one Master Student were involved in the implementation of the project, notably in the task of documentation and data collection via surveys and questioners.

The secretariat also provides administrative and financial follow-up, through the support of the International Cooperation Directorate of Cheikh Anta Diop University. This Directorate of UCAD is responsible for accompanying the international strategy of UCAD and for contributing to the

implementation of the guidelines defined by the university. It works closely with various components and provide many services to students, researchers and partner organizations; Develop and monitor of cooperation agreements with partner institutions and financial management of research projects related to cooperation, mobility and management of grants allocated under the institution's partnerships. In this ACE2 project, the Cooperation Department is responsible for the financial implementation and administrative follow-up of the project in accordance with a mandate received from the University's Rectorate, which is a signatory of the project with UNESCO.

1.2. Overview of regional and country activities

The main activities carried out under this ACE2 Human Capacity Development component consisted of:

1. Contracting procedures between UNESCO and UCAD and between UCAD and others Centers of Excellence;
2. Finalization of surveys and exchange with institutions in the water sector in Ghana, Nigeria and Senegal;
3. Identification and validation of national priorities for Human Capacity Development in the water sector of Ghana, Nigeria and Senegal;
4. Design of Draft versions of National Frameworks for capacity building in the water sector in three countries in (Ghana, Nigeria and Senegal);
5. Finalization and Validation process of National HCD Frameworks in the three countries (Ghana, Nigeria and Senegal);
6. Organization of a regional workshop in Saly Portudal in February 2018, with participation of all CoEs of West Africa, Murray Wayne BIEDLER from UNESCO-IHP and Janvier BAZOUM from CCRE/ECOWAS;
7. Participation of WANWATCE secretariat to the 8th World Water Forum in Brazilia (Brazil) in March 2018;
8. Participation to the EU Development Days in Brussels in June 2018 and presentation of the current project activities and first outcomes;
9. Identification of a partner (INERA/CNRST) and organization of a meeting in Ouagadougou in July 2018, in order to implement a strategy for carrying out studies in Burkina Faso
10. Administrative and financial management of UCAD-UNESCO contract under the umbrella of the Directorate of International Cooperation.

The table below describes the main timelines of the project’s implementation from the contracting process between UCAD and UNESCO to the delivering of National frameworks. The first agenda was approved during the Ouagadougou meeting in May 2017 by all Centres. But some delays occurred in the execution of activities for all CoEs, apart the particular case of 2iE which has been discussed and addressed. Delays are often linked to problems in adjusting national agendas, dysfunctions in financial mechanisms, institutional delays, communication problems, and so on.

Table 1: Overview of project implementation

Activity	Timelines	Observation
Contracting	End of March 2017	Contracting finalised end August 2017. Delay due to contract drafting finalisation as well as CoE host institution bureaucracy in signing off
Scoping study (identification of needs)	June 2017	Scoping study reports received between end June and end August 2017
National dialogues (definition of priorities)	July 2017	Delayed August to mid-September 2017 due to availability of key stakeholders
Draft national HCD framework	September 2017	Finalized January to April 2018 Reason: knock on effect of the delayed start of the country processes coupled with busyness of CoEs personnel working on the project (academic commitments and end of year slow down)
National validation workshop	January - April 2018	All
Final national HCD framework	Final national HCD framework by August 2018	

The Table 2 indicate the exact situation of the four countries and the agenda for the finalization of activities before the international meeting of the ACE2WATER Project planned in Nairobi (Kenya) in mid-November 2017. The national consultation meetings in WANWATCE took place between May 2017 and February 2018 for Ghana, Nigeria and Senegal. In Burkina Faso, the dialogue process is expected to be conducted from August to December 2018, as an ongoing process, which started under IPA 1 and continues under the second IPA, as shown in Table 3.

Table 2: Situation of planned activities in the four countries

Country	Senegal	Ghana RWESCK- KNUST	Nigeria		Burkina Faso
			NWRI	UNIBEN	
Desk study	✓	✓	✓	✓	✓
Consultation Workshop	✓	✓	✓	✓	✓
Field study (Questionnaire survey)	✓	✓	✓	✓	✓
Report draft	✓	✓	✓	✓	✓
National Validation Workshop	✓	✓	✓	✓	-

Table 3: Agenda of National Consultation Meetings

Country	Dialogue dates	Validation workshop dates
Ghana	12 th September 2017	15 th February 2018
Nigeria - NWRI	14 to 15 th August 2017	31 st October 2017
Nigeria - UNIBEN	27 th September 2017 29 th September 2017	12 th October 2017
Senegal	16 th May 2017	16 th February 2018
Burkina Faso	August to December 2018	-

1.3. Implementing team and organization

The WANWATCE (West African Network of Centres of Excellence on Water Sciences and Technology of NEPAD) is constituted by five teams in four countries (Burkina Faso, Ghana, Nigeria and Senegal). The table below shows briefly the Centres of Excellence involving in the project and their contact person.

Table 4: List and contacts of CoEs and WANWATCE Secretariat

Country	CoE Name & Address	Contact person
Ghana	RWESCK-KNUST	Prof. Sampson ODURO-KWARTENG +233 244598999

	<i>Regional Water and Sanitation Centre, Kumasi</i>	sokwarteng@gmail.com
<i>Nigeria</i>	NWRI National Water Resources Institute, Kaduna, Nigeria	<i>Dr Martin O. EDUVIE</i> +234 8036400061 martineduvie@gmail.com
	UNIBEN University of Benin, Benin City, Nigeria P.M.B. 1154, Benin City, Edo State Postcode: 300283	Osadolor Christopher IZINYON +234 803 503 8239 izinyon2006@yahoo.com Prof. Jacob EHIOBOBO +234 802 337 3844 jacobehiorobo@gmail.com
<i>Senegal</i>	UCAD Cheikh Anta Diop University Campus UCAD 3, Allée des Eucalyptus, Villa n°88 BP 5005 Dakar-Fann, Senegal	<i>Prof. Alioune KANE</i> +221 77 6486718 alioune.kane@ucad.edu.sn Prof. Awa NIANG FALL +221 77 636 93 56 awa10.fall@ucad.edu.sn
<i>Burkina Faso</i>	2iE The International Institute for Water and Environmental Engineering (2iE)	Prof. Harouna KARAMBIRI Dr Babacar LEYE babacar.leye@2ie-edu.org
<i>WANWATCE Secretariat: Prof. Awa NIANG FALL</i> Tel. +221 33 826 41 49 / Email: awa10.fall@ucad.edu.sn / coe.nepad@ucad.edu.sn		

INERA (Institut International d'Ingénierie de l'Eau et de l'Environnement), an institute affiliated to CNRST (Centre National de la Recherche Scientifique et Technique), is the sub-contractor in charge of desk studies and water sector analysis in Burkina Faso.

INERA / CNRST 04 BP 8645 Boulevard des Tensoba Wam Gobi -Secteur 9, Ouagadougou Burkina Faso	<i>Dr Moussa SANON</i> +226 70 75 96 22 moussasanon@hotmail.com
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2. COUNTRY AND REGIONAL PROCESSES AND OUTCOMES

2.1. Key findings

The WASH sector present different configuration in the three countries where surveys were made. The common findings in the three countries are:

- Insufficient human resources to implement water policies and programmes at the national and sub-regional levels;

- Staff qualification levels that are not in line with the real needs of the sector;
- A significant shortage of skilled technicians and workers, particularly for tasks and operations related to monitoring (hydrometry) and mobilization (gate operation) of water resources and the management and definition of sustainable sanitation plans, particularly in rural areas;
- A sector that is not sufficiently attractive in terms of salaries, so that recruitment and replacement of staff are not always guaranteed, leading to the retention of retirees for several years;
- Staff capacity building initiatives, but generally leading to losses in human resources (strengthened staff generally change position or permanently leave the water and sanitation sector for other sectors that are more attractive in terms of salary treatment);
- The existence of many general training institutions, from which graduates with limited employability in the water and sanitation sector emerge;
- A lack of control over the management of water projects;
- Many problems of financing and/or renewing infrastructure and upgrading salaries, in order to attract more qualified staff;
- The need to set up vocational training courses specifically dedicated to the water and sanitation sector and enabling graduates to take charge of the sector's development.

Generally, the structures working in the water and sanitation sector face enormous problems in the execution of their tasks, largely related to a lack of qualified human resources, insufficient equipment's and financial resources. To these problems are added constraints related to:

- The difficulty of accessing data and quality information,
- Lack of enforcement agents and failure to comply with donor implementation manuals,
- Problems of coordination between national institutions,
- Organizational problems of State structures (change of project coordinators in the full exercise of their mission),
- Lack of production infrastructure,
- The inadequacy of the legal and institutional framework to meet the needs of the water and sanitation sector.

This results in almost insurmountable challenges for the water sector in all countries concerned by the study. Generally, countries send their agents in capacity building programs, short-term internships or in-service training in foreign countries.

2.2. Common gaps

The water sector in West Africa is characterized by the weakness of their human resources. This is due to the lack of attractiveness of the sector where salaries generally remain very low, excepted in the top management.

According to the results of the surveys conducted in Ghana (KNUST), Nigeria (NWRI & UNIBEN) and Senegal (UCAD), the gaps are very numerous and different from one country to another. The common observation is the need to renew human resources, particularly in the public sector, which is not very attractive due to low salaries. There are many critical gaps identified in the three countries according to the results of surveys carried out in the water sector. These gaps correspond to urgent needs in terms of technical and administrative staff to achieve the sector's objectives in these countries. The main thematic areas concerned are:

- Sanitation and health;
- Water treatment;
- Groundwater management;
- Water uses management (agriculture, environment, etc.);
- Project management and negotiation processes;
- Integrated water resources management...

2.3. Needs and priorities in human capacity development

At national level, the training needs and priorities for the water sector personals depend largely on the policies and guidelines defined and on the major projects under development. The 2013 study had shown the significant shortage of technicians, senior technicians and skilled workers. This observation is still valid today and has emerged from all the reports in the four countries.

2.3.1. Ghana

In Ghana, needs and priorities at national level are linked to training of technicians and artisans with non-tertiary certificates. The needs include for example, practical water quality laboratory

skills, construction of WASH facilities, GIS training, ICT skills in specialized software; Project Management, monitoring and evaluation, etc.

According to the main actors of the water sector, the priorities are:

- Sanitary engineering,
- Sediment/costal engineering,
- Eco-toxicology, Environmental law,
- Water resources modelling (surface and sub-surface),
- Ecological assessment and modelling expert etc).

2.3.2. Nigeria

In Nigeria, two CoEs were in charge of conducting studies to reflect the reality of human resources in the Nigerian WASH sector. The northern part of the country was covered by the National Water Resources Institute (NWRI) in Kaduna. The southern part of the country was covered by UNIBEN (University of Benin City). The particularity of Nigeria is that it is a federal state with important disparities from the north to the south but also quite important differences in legislation and organization at administrative and technical level.

The two Nigerian institutions (NWRI and UNIBEN) involving in this project mentioned many areas of trainings identified as being needed in the sector (*see Annexes 4.2.1 & 4.2.2.*). But as a prerequisite for meeting these training needs, there are some urgent actions to be carried out in the sector. Factors militating against the development of the Nigerian Water sector that need to be addressed include:

- Lack of enforceable legislation for water practitioners in the country;
- Lack of awareness on the importance of hydrological data in the planning and management of the nation's water resources;
- Lack of adequately trained manpower in the sector;
- Inadequate collaboration among all stakeholders in the water sector;
- Inadequate funding of the water sector.

It's also admitted that there is no proper coordination in research and monitoring of water related activities in various institutions, both at the Federal, States, and local governments and even at non-governmental organizations (NGOs) levels.

The table below describes the needs and priorities given by the two institutions, according to surveys and actor's workshops.

<p style="text-align: center;">National Water Resources Institute (NWRI)</p>	<p style="text-align: center;">University of Benin City (UNIBEN)</p>
<ul style="list-style-type: none"> ● Plant/maintenance & operation, ● Field Assistant / Drivers ● Mechanical Engineering ● Animal Science / Livestock ● Water Resources Engineering ● Microbiology ● Agronomy ● Computer / System Analyst ● Hydraulic Engineers ● Office Assistant / Clerical ● Artisans and technicians (e.g. boiler makers, welders, plumbers, drillers) – Water Analyst – Administrative Officers – Mining Engineering – Agriculture/Agricultural Engineering – Geography – Policy – Environmental Health / Sanitation 	<ul style="list-style-type: none"> – Water Treatment, – Research and Development, – Construction Project Managers, – Environmental Health – Chemical Engineering – Water Conservation – Agriculture and Agricultural Engineering – Coastal Engineering – Waste Disposal – Financial Management – Waste Handling – Climatology – Occupational Health and Safety Skills – Sanitation – Conflict Resolution/Mediation – Institutional Management – Plant Maintenance and Operation – Rainwater Harvesting Technologies – Freshwater Systems – Marketing and Communications – Cultural and Social Science – Environmental Law – Hydrochemistry – Geochemistry – Industrial Ecology

2.3.3. Senegal

In Senegal, the situation is slightly different with a unified water sector with central coordination, legislation and clearly defined policies in line with the African and global agenda. Access to water and sanitation has been one of the national priorities defined by the various governments for several decades. However, since 2012 the situation seems to be more complex with the implementation of the Senegal Emerging Plan (PSE), which aims to achieve self-sufficiency and food security in the country by 2035.

According to the development of hydraulics infrastructures linked to PSE and the new drinking water supply schemes (KMS 3 and Dakar Seawater Desalination Plant) planned in the country, there are new staff needs, particularly in the following areas:

- Water and waste water treatment;
- Groundwater management;
- Water for agriculture;
- Water technology and innovations.

In general, the following areas of expertise are recorded as prior needs in the country:

- Wastewater treatment
- Management of sludge
- Knowledge of ERs
- Modern drilling techniques
- Groundwater quality
- Groundwater protection and pollution management
- Modeling Project Management
- Negotiations and financing of the water sector
- Water security and sustainability of AEP systems
- Standardization and application of charters
- Modern irrigation techniques
- Water saving and protection of resources
- Drainage water management
- Management of pollutants and pollution of agricultural origin
- Technological innovations

- Modeling
- Geomatics applied to the management of water resources

2.3.4. Burkina Faso

After noting the unavailability of 2iE to carry out activities related to Human Capacity Development in the water sector in Burkina Faso, the WANWATCE network secretariat, in consultation with the European Commission Joint Research Centre (JRC) and the coordination of the project at UNESCO-IHP, took the decision to contract with INERA (Institute for Environment and Agronomic Research). INERA is a specialized public structure officially mandated to ensure the formulation, execution and coordination of environmental and agricultural research in Burkina Faso. Under the umbrella of the Director of INERA Dr Hamidou TRAORE, Dr Moussa SANON is responsible of the implementation of HCD activities in Burkina Faso's water sector.

The literature review indicates that the MEA has very recently conducted a broad review of the capacity building needs for its human resources. Unfortunately, this study only concerned the administrative services, including the Water Agencies. The results were capitalized by the INERA team, which decided not to include the administration as a target for its field survey. This project therefore focused on the other departments in charge of water and sanitation that were not included in the MEA studies.

The surveys were carried out in the areas of jurisdiction of the three river basins: the Mouhoun, the Cascades and the Nakambe. A total of 138 organizations in 14 municipalities were touched by the survey. The Mouhoun had more respondents because of the size of its competence area. The types of organizations surveyed are mainly in the field of water management (27.5%), NGOs (17.4%) and private sector (15,2%); the rest of the target group consists of civil society organizations, regional and municipal administrations, private companies, etc.

Regarding the typology of jobs and skills in the water and sanitation sector in Burkina Faso, the surveys identified twenty-five types of activities, the main ones being: water resources management; water service provision; decision-making; education and training; operations and public service management; agriculture or market gardening; planning and finance. Only 3% of the surveyed actors have sanitation and wastewater collection as main activity.

Several jobs are generated by the provision of water and sanitation services in Burkina Faso, in accordance with the qualifications required by the companies or structures in charge of water and sanitation. These jobs include technical positions specific to the water and sanitation sector, administrative and financial positions, as well as administrative and financial support or administrative (management) support positions.

Existing skills in water sector organizations are classified into five levels. They reveal the need to train resource persons in several areas of expertise in order to ensure the proper functioning of organizations working in the water and sanitation sector.

Concerning first-rate skills, they are mainly composed of craftsmen and boilermakers, plumbers, drillers (30.28%), agricultural engineers (13.76%), agronomists (6.42%), communicators (4.59%) and financial management managers (4.59%), etc.

Support for the skills development approach at structures and organizations level is problematic. Indeed, very little importance is given to develop the skills needed to promote water and sanitation activities in Burkina Faso. The non-existence or infrequency of meetings and training was mentioned by most of the interviewees. However, the question of training needs merits to be refined and taken up in another form because it is generally misunderstood by respondents.

However, the first results of the study show that there is a real need to update human resources capacities in the water and sanitation sector in Burkina Faso.

3. CONCLUSION

3.1. Main findings (regional context, gaps, etc.)

The various country documents provide a good mapping of human resources in the water and sanitation sector at regional scale focusing on the four countries (Ghana, Nigeria, Senegal and Burkina Faso). This mapping is based on an update of ACEWATER1 data and the surveys carried out in 2018.

The results of 2013 remain still relevant today, despite significant progress made in some countries, particularly in the field of diploma and professional training. In Senegal, the development of technical vocational training and the extension of the university map will make it possible in the coming years to raise the training level of staffs in water and sanitation services.

At the regional level, gaps remain significant, particularly in operational work areas such as hydrometric measurements, gate operation at dams or drinking water treatment plants, implementation of sustainable sanitation solutions in rural areas, etc. The significant human resource deficit, especially at the level of skilled technicians and workers, is a common problem to all three countries where the national capacity development strategy has already been outlined. Studies in Burkina Faso are not yet sufficiently advanced to reach the same conclusions. However, according to initial information, the situation seems similar, although this has yet to be validated, in particular by analysing the results of surveys from institutions, actors and staff of water and sanitation services in Burkina Faso.

There was also a significant need for training in advanced technical and technological fields to pursue the new missions of drinking water and sanitation services. It's true that the water sector in the sub-region has been greatly impacted by the difficulties of 2iE, a sub-regional school that has trained the majority of water and sanitation service managers. New alternatives are emerging in Senegal and Ghana. In Nigeria, the configuration of the training sector makes it difficult to align needs with training provided in mainly private institutions.

At the policy level, it will be a question of working on the development of incentives to make the sector more attractive. As soon as salaries are upgraded, high-quality recruitment can be carried

out, thereby eliminating staff shortages and retaining managers in the institutions in charge of the water sector.

The lack of a common water policy at the sub-regional level makes it difficult to harmonize capacity building strategies. In this perspective, the Water Resources Coordination Centre (CCRE) of ECOWAS is called upon to play a leading role, firstly through its collaboration in this project and then as part of its own activities to monitor the evolution of the management of the water resources sector.

3.2. Perspectives and way forward

The development of national pilots, a total of three (03) or four (04) sub-regional projects, will make it possible to test, in real-life situations, courses designed to build the capacity of water sector personnel in the countries concerned. Ideally, these projects should be part of existing training structures and/or curricula in the countries concerned. The pilot projects will be in line with one of the four or five priorities defined at the national level.

In the coming months, the aim is also to consolidate the national HCD frameworks and move towards the definition of a harmonized regional framework, based on the real needs expressed by the national water and sanitation services.

The very urging topic is also to define a Regional HCD Framework for water and sanitation sector, based on the results of studies carried out in the four countries. The table below describe briefly the proposed structure for a Regional Report HCD Framework for water and sanitation sector.

Table 5: Proposed structure of a Regional HCD Framework

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5.4. Burkina Faso study

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