Partnership action for water security and climate resilience of populations and ecosystems in West Africa
Citation

The designation of geographical entities in this, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of GWP West Africa concerning the legal status of any country, territory, or area, or its authorities, or concerning the delimitation of its frontiers or boundaries.

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Global Water Partnership in West Africa (GWP-WA) acts towards achieving the mission and the vision of Global Water Partnership (GWP), that aim respectively to advance the governance and management of water resources for sustainable and equitable development; and to build a water secure World. To this end, since its inception, the network has been working to extend its action in the region in supporting efforts of States to improve the well-being of populations. It is against this background that several initiatives have been undertaken to contribute to ensure the sustainable development of natural resources.

The implementation of projects and programs at different levels in the countries with regional and national development actors contributes to the provision of appropriate responses to the basic needs and aspirations of the populations.

Since the early 2000s, GWP-WA has emphasized the achievement of the MDGs and the SDGs as the priority focus of its support to countries and communities in different countries of West Africa.

This document presents the results and lessons learned from eleven initiatives among many others that have been prepared and implemented. I would like to take this opportunity to thank all the actors with whom GWP-WA and the CWPs have worked for the realization of these development related initiatives and for the important results obtained.

Abdoulaye SENE
Chair of GWP-WA

A word from the Executive Secretary

The case studies presented in the document represent an experience in their own right and have, among other activities, enabled GWP to further contribute to the achievement of the strategic objectives that the West African States have set for themselves through the mandate given to ECOWAS.

It is with a strong will and a sense of useful action that GWP works with different actors and at different levels. This is the trademark of GWP as recalled in its Strategy 2020-2025.

Indeed, GWP mobilizes and drives action on the water crisis by relying on social capital, shared values, credibility within the water community, following a methodical approach and drawing on the expertise of its network. In its approach, GWP seeks to find targeted responses to water issues by integrating local, national, regional and global development priorities into its approach. This approach led GWP-WA to commit to being and remaining a neutral platform of expertise and advocacy whose credibility inspires respect and trust especially when the focus is on inclusiveness and sustainability.

I would also like to reiterate our gratitude to all our partners for their multifaceted support and acknowledge the invaluable support of the GWPO Global Secretariat as well as the Country Water Partnerships in the region.

Thank you for your support always.

K. Armand HOUANYE
Executive Secretary of GWP-WA
Acknowledgments

We take this opportunity to sincerely thank all the partners from the water sector in Benin, Burkina Faso, Ghana, Senegal and the Volta, Niger and Mono River Basin Authorities for their availability and their warm collaboration, which made it possible to carry out the various case studies. Our thanks to the team of consultants and the various Country Water Partnerships for their efforts.

The drafting process was placed under the general coordination of the GWP-WA Executive Secretary, Mr. Armand HOUANYE and Communication and Knowledge Management Officer, Mr. Sidi COULIBALY.

The first drafts of the case studies were prepared by:
- Mr. Hilaire ILBOUDO for the Burkina Faso case study;
- Dr. Adrien COLY for the Senegal case study;
- Mr. Arnauld ADJAGODO, for the three case studies of Benin;
- Mr. Maxwell BOATENG-GYMAH for the three case studies of Ghana;
- Mr. Dam MOGBANTE for the three regional case studies and coordinated the work of the collaborators in each country.

We would like to thank Ms. Julienne Roux, Mr. Ralph Philip, Mr. Laurent-Charles Tremblay-Lévesque and Ms. Joanna O’Flynn from the GWPO Global Secretariat for their proofreading and reformulations which helped to enrich the various case studies, as well as the consultant Ms. Elise Cannuel.

We reiterate our sincere thanks to the Global Secretariat of GWPO for the technical support that allowed us to improve the content of the case studies and the financial support that allowed the realization of this work.

We would like to express our gratitude to all those who have not been mentioned here.
Acronyms

AMCOW  African Minister’s Council on Water
APFM  Associated Programme on Flood and Drought
ASUFOR  Association d’Usagers de Forages/Boreholes Users Association
ATPC  Community Led Total Sanitation
BOAD  West African Development Bank
CAGC  Council of Actors for Concerted Management
CANEA  Consultation Framework of Non-State Actors in the Water and Sanitation Sector
CaSSE  Strategic Framework for Water Security
CCA  Climate Change Adaptation
CIE  Interministerial Water Commission
CIED  Intercommunal Eco-Development Council
COP  Conference of Parties
CSO  Civil Society Organization
CWP  Country Water Partnership
CWP-BF  Country Water Partnership of Burkina Faso
DAs  District Assemblies
DCCI  International Conventions Coordination Department
DGau  Directorate General of Water
DGPRE  Directorate for Water Resources Management and Planning
DPPDRE  Director of Programming, Forecasting, Development and External Relations
DWS  Drinking Water Supply
EAIE  Annotated Water Integrity Assessment
ECOWAS  Economic Community of West African States
EPCI  Public Establishment of Intercommunity Cooperation
FAO  Food and Agriculture Organization of the United Nations
FIE  Environmental Response Fund
FoNIEAu  National Forum on Integrity in the Water and Sanitation Sector
GCF  Green Climate Fund
GEP  Global Environment Fund
GIZ  German Agency for International Cooperation
GWP  Global Water Partnership
GWP-WA  Global Water Partnership in West Africa
IM  Integrated Drought Management
IDMP-WA  Integrated Drought Management Project in West Africa
INE  National Water Institute
INERA  Institut de l’Environnement et de Recherches Agricoles
ISW  International Secretariat for Water
IUCN  International Union for the Conservation of Nature
IWRM  Integrated Water Resources Management
JCI  Junior Chamber International
JRC/EU  European Union Joint Research Centre
LWP  Local Water Committee
MAEP  Ministry of Agriculture, Livestock and Fisheries
MBA  Mono Basin Authority
MDG  Millenium Development Goal
MMDA  Municipal and Metropolitan District Assembly
MTD  Medium Term Development
MTDP  Medium Term Development Plan
NAP  National Adaptation Plan
NAPA  National Adaptation Program of Action
NBA  Niger Basin Authority
NCCP  National Climate Change Policy
NDC  Nationally Contribution Determined
NDPC  National Development Planning Commission
NGO  Non-Governmental Organization
OLE  Local Water Committee
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP-GIRE</td>
<td>Action Program for Integrated Water Resources Management</td>
</tr>
<tr>
<td>PAREM</td>
<td>Project to support the Restoration of Ecosystems in the headwaters of the Mekrou river basin</td>
</tr>
<tr>
<td>PAWD</td>
<td>Programme for Africa’s Water Development</td>
</tr>
<tr>
<td>PIF</td>
<td>Project Identification Form</td>
</tr>
<tr>
<td>PLE</td>
<td>Local Water Partnership</td>
</tr>
<tr>
<td>PMPI</td>
<td>Programme of Measures and Investment Plan</td>
</tr>
<tr>
<td>PMT</td>
<td>Project Management Team</td>
</tr>
<tr>
<td>PNDES</td>
<td>National Program for Economic and Social Development</td>
</tr>
<tr>
<td>PPEA</td>
<td>Multi-Year Support Program for the Water and Sanitation Sector</td>
</tr>
<tr>
<td>PROSEHA</td>
<td>Water, Sanitation and Hygiene Sector Program</td>
</tr>
<tr>
<td>PRSGP</td>
<td>Poverty Reduction Strategy and Growth Paper</td>
</tr>
<tr>
<td>PTF</td>
<td>Technical and Financial Partners</td>
</tr>
<tr>
<td>REWarD</td>
<td>Reversing Ecosystem and Water Degradation Trends in the Volta Basin Project</td>
</tr>
<tr>
<td>SAP</td>
<td>Strategic Action Program</td>
</tr>
<tr>
<td>SC</td>
<td>Steering Committee</td>
</tr>
<tr>
<td>SDAGE</td>
<td>Master Plan for Water Development and Management</td>
</tr>
<tr>
<td>SDAP</td>
<td>Sustainable Development Action Plan</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
</tr>
<tr>
<td>SEA</td>
<td>Strategic Environmental Assessment</td>
</tr>
<tr>
<td>SNAP</td>
<td>Stocktaking for National Adaptation Planning</td>
</tr>
<tr>
<td>SONEB</td>
<td>National Water Utility of Benin</td>
</tr>
<tr>
<td>SP/CNDD ex</td>
<td>Permanent Secretariat of the National Council for Sustainable Development</td>
</tr>
<tr>
<td>SSDDP</td>
<td>Sector Strategic Development Plan</td>
</tr>
<tr>
<td>TDA</td>
<td>Transboundary Diagnosis Analysis</td>
</tr>
<tr>
<td>TDOS</td>
<td>Development Territory of Ouémé Supérieur</td>
</tr>
<tr>
<td>TFTC</td>
<td>#TonFuturTonClimat/YourFutureYourClimate</td>
</tr>
<tr>
<td>TWG</td>
<td>Technical Working Group</td>
</tr>
<tr>
<td>UAM</td>
<td>University Abdou Moumin of Niamey</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
</tr>
<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
</tr>
<tr>
<td>UNITAR</td>
<td>United Nations Institute for Training and Research</td>
</tr>
<tr>
<td>UWRCC</td>
<td>Upper West Regional Coordinating Council</td>
</tr>
<tr>
<td>VBA</td>
<td>Volta Basin Authority</td>
</tr>
<tr>
<td>VFDM</td>
<td>Integrating flood and drought management and early warning for climate change adaptation in the Volta Basin</td>
</tr>
<tr>
<td>VGO</td>
<td>Omidelta Governance Component</td>
</tr>
<tr>
<td>VSIP</td>
<td>Volta Basin Strategic Program Implementation Project</td>
</tr>
<tr>
<td>WACDEP</td>
<td>Water Climate and Development Programme</td>
</tr>
<tr>
<td>WIN</td>
<td>Water Integrity Network</td>
</tr>
<tr>
<td>WMO</td>
<td>World Meteorological Organization</td>
</tr>
<tr>
<td>WRC</td>
<td>Water Resources Commission</td>
</tr>
<tr>
<td>WSC/SDR</td>
<td>Water and soil conservation/Soil defence and restoration</td>
</tr>
<tr>
<td>WVBB</td>
<td>White Volta Basin Board</td>
</tr>
</tbody>
</table>
1.1 Background

The document capitalizing eleven initiatives implemented in West Africa prepared as part of the celebration of the 25th anniversary of the Global Water Partnership (GWP) set up in 1996 in Stockholm (Sweden). It is based on the work accomplished under several initiatives undertaken in different countries, notably in Benin, Burkina Faso, Ghana, Mali, Niger, Senegal and Togo, and at the regional level in the Volta and Mekrou basins in West Africa. This capitalization action aims to highlight the efforts deployed by GWP in West Africa with different partners to contribute to the improvement of the living conditions of the populations of the areas concerned by these initiatives.

The document compiles eleven case studies from West African region, on various themes and issues in a work that summarises the key issues of water resources management, investment, water integrity, transboundary waters cooperation and climate change adaptation.

Although the structuring of the case studies is not the same, the data collection was done according to a single template by all the editors. The cases were developed and finalised according to the data available. This has the advantage of bringing out the specificities of each case with appropriate content.

These initiatives have been identified for capitalisation because of the contribution of each of them in understanding and/or contributing to the solution of one or more issues related to water resources management, mobilising investment for water, integrity in the sector, transboundary waters cooperation and climate change adaptation at different levels.

1.2 How to use the document

This document is intended for use by practitioners involved in the management and development of water resources and climate change adaptation, including the wider range of stakeholders interested in the issues related to water resources management, investment in water infrastructure, water integrity, transboundary waters cooperation and climate change adaptation in West Africa. Each case study is structured around an introduction, a summary, the issue at hand, the actions taken to address the issue, the results achieved, lessons learned and a conclusion.

The case studies are independent of each other. Each case can be isolated from the others and presented on its own.
<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA</th>
<th>START AND END DATE</th>
<th>PROJECT AMOUNT</th>
<th>DONOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project - Integrating Flood and Drought Management and Early Warning for Climate Adaptation in the Volta Basin (VFDM Project)</td>
<td>1.3. Brief presentation of the different projects implemented and the existing elements of capitalisation</td>
<td>Volta Basin</td>
<td>June 2019 - June 2023</td>
<td>7,920,000 USD</td>
<td>Adaptation Fund</td>
</tr>
<tr>
<td>MEKROU PROJECT “Water for Growth and Poverty Alleviation in the Mekrou Transboundary Basin”</td>
<td>Main objective: Support green economic growth and poverty reduction through water management in developing areas of beneficiary countries</td>
<td>Mekrou River Basin, Benin, Burkina Faso, Côte d’Ivoire, Ghana, Mali and Togo</td>
<td>From 1 January 2014 to 31 December 2017</td>
<td>Total: 5,000,000 EUR</td>
<td>EU Commission</td>
</tr>
<tr>
<td>IDMP-WA - Integrated Drought Management Project in West Africa</td>
<td>Main objective: Support stakeholders at all levels by providing practical and strategic guidance on integrated drought management</td>
<td>Burkina Faso, Mali, Niger (Pilot Area) and Benin</td>
<td>Phase 1: 2015 - 2017</td>
<td>EUR 58,531</td>
<td>Phase 1: 2015 - 2017</td>
</tr>
<tr>
<td># Tonkolili flood risk and adaptive landuse management</td>
<td>Main objective: To help young people (18-35 years old from rural and peri-urban areas) to become actors of change and promoters of innovative ideas to respond to the challenges of climate change through the implementation of 3 adaptation projects previously identified in the agricultural and forestry sectors.</td>
<td></td>
<td>Phase 2: 2018-2019</td>
<td>USD CAND 450,000</td>
<td>Phase 2: 2018-2019</td>
</tr>
</tbody>
</table>

**Water security and climate resilient development**

**Transboundary water governance and sub-regional initiatives**

**Implementing partner:** World Meteorological Organization (WMO)  
**Executing Partners:** WMO, Volta Basin Authority (VBA) and GWP-WA  
**EU Commission**
**Specific objectives:**
- To support the development and implementation of sustainable youth-led model projects that help people to better adapt to climate change in the agricultural and forestry sectors.
- To help young people in rural and peri-urban areas who are motivated by a desire to commit to their own future and the future of their country to acquire the necessary project management and entrepreneurial development skills in relation to climate change adaptation in the agricultural and forestry sectors and the reduction of people's vulnerability.
- Demonstrate locally and nationally the added value of involving future young leaders from rural and peri-urban areas in the implementation of climate change adaptation solutions in order to encourage investment by countries.
- Establish a mechanism for coordination and monitoring and evaluation of actions.

**Goal:** promote water as a key element of sustainable regional and national development and contribute to climate change adaptation for economic growth and human security.

**General objective:** Support countries to integrate water security and climate change resilience into development planning and decision-making processes through technical and institutional capacity building and predictable financing and investment in water security and climate change adaptation at national, transboundary and regional levels in Africa.

The West African component involved Burkina Faso, Ghana and the Volta Basin (VBA) in the first phase.

WACDEP 2017-2019 focuses on supporting national planning processes for climate change adaptation, Nationally Determined Contributions (NDCs) and other climate-related national policies and strategies.

**Development Programme - (WACDEP)**

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>PROJECT DESCRIPTION</th>
<th>AREA</th>
<th>START AND END DATE</th>
<th>PROJECT AMOUNT</th>
<th>DONOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sécurité en eau et développement résilient au climatique au changement climatique</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Phase 1: 2013-2016**
- Euro 2,000,000 for GWP-WA (Region and countries)

**Phase 2: 2017-2019**
- Euro 1,000,000 (Region and countries)

Austria Development Corporation
DANIDA
GWP Core financial Partners
CDKN- SouthSouth-North Projects Infrastructure Consortium for Africa (ICA)
The Volta Basin is located in West Africa, between latitudes 9°N to 15°N and longitudes 6°W to 3°E. It is the 9th largest river basin in sub-Saharan Africa. The six riparian countries (Benin, Burkina Faso, Côte d’Ivoire, Ghana, Mali and Togo) share the resources of the basin, which is home to a set of ecosystems, several of which are of global importance due to their high biological diversity. These countries are confronted with the effects of climate change: for example, in September 2020, the 13 regions of Burkina Faso were affected by floods and violent winds, causing numerous deaths and significant material damage in communities that were already very vulnerable. These extreme climatic phenomena are now recurrent, affecting the resilience and adaptation capacity of the population and ecosystems. The population of the basin, which is expected to increase to 34 million in 2025, remains highly dependent on its natural resources.

In order to ensure better management and harmonious development of the basin, the Volta Basin Authority (VBA) was created by the six countries in 2007 and was endowed in 2014 with a Strategic Action Program (SAP). One of its specific objectives is to identify and plan projects and investments that should be jointly implemented to maximize results, particularly for better adaptation and increased resilience to the current impacts of climate change and variability. The TDA, conducted under the VBA in 2012 to produce the SAP, identified five key challenges: variations in water quantity and seasonal flows, ecosystem degradation, water quality impairments, water resources governance, and climate change. The TDA has clearly identified the latter challenge as one of the root causes of the region’s environmental problems.

Given its relative youth and limited staff, the VBA Executive Directorate was soon faced with a need to strengthen its technical, institutional, financial and human resource capacities. There was a need to establish strategic partnerships to achieve the mandate of the institution and provide riparian countries with appropriate legal and institutional arrangements for the sustainable management of the basin’s natural resources.

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**Case 1**

**Building Climate Resilience of People and Ecosystems in the Volta Basin**

**Introduction**

*With an estimated population of 24 million and a surface area of 400,000 km², the Volta Basin is confronted, according to the Transboundary Diagnostic Analysis (TDA), with climatic risks including recurrent floods and pockets of drought. It is important to ensure sustainable development in this West African basin by taking into account these extreme climatic phenomena which are becoming more severe over the years. Against this background, GWP-WA has been supporting the Volta Basin Authority (VBA) and its partners since 2010 in strengthening the resilience of the basin’s populations and ecosystems to climate risks through multiple actions designed for the long term.*

**Background and issues**

The Volta Basin is located in West Africa, between latitudes 9°N to 15°N and longitudes 6°W to 3°E. It is the 9th largest river basin in sub-Saharan Africa. The six riparian countries (Benin, Burkina Faso, Côte d’Ivoire, Ghana, Mali and Togo) share the resources of the basin, which is home to a set of ecosystems, several of which are of global importance due to their high biological diversity. These countries are confronted with the effects of climate change: for example, in September 2020, the 13 regions of Burkina Faso were affected by floods and violent winds, causing numerous deaths and significant material damage in communities that were already very vulnerable.

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The Volta Basin has been identified as a priority action area for the Water, Climate and Development in Africa Program (WACDEP), an initiative of the African Ministers' Council on Water (AMCOW) developed and implemented by GWP-WA with other partners from 2011 to 2019 and continuing with the WACDEP - Gender Equality. The riparian countries have developed and implemented, under the coordination of the VBA Executive Directorate, various initiatives supported by several partners including GWP-WA. The World Bank and the Global Environment Facility (GEF) have, for example, supported the development of the Volta Basin Strategic Action Program Implementation Project (VSIP7), an offshoot of the VBA Strategic Plan 2015-2019.

The GWP-WA is one of the first organizations to have signed, as early as 2010, a memorandum of understanding with the Executive Management of the VBA. The aim was to promote coordination and harmonization of their respective actions, to achieve common goals and to contribute to the implementation of IWRM at the transboundary scale. As a result of this agreement, many initiatives, some of which are described below, have been developed and implemented jointly, contributing to the development of the adaptation and resilience capacities of communities and ecosystems to the impacts of climate change in the basin.

Within the framework of the Associated Programme on Flood Management (APFM), the World Meteorological Organization (WMO) and GWP-WA have committed to building the capacity of riparian countries to ensure integrated flood management in the basin. This action has supported the VBA in the development of the project «Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin» (VFDM8). This project is funded by the Adaptation Fund.

In addition, GWP-WA has contributed to the process of elaboration and validation of the Basin Water Charter, at regional and country levels.

Similarly, the support of IUCN, UNEP and GWP-WA, on the basis of the TDA and SAP report, has made it possible to support the efforts of VBA to elaborate and submit for funding to GEF the project Identification Form on «Reversing the Ecosystem and Water Degradation trends in the Volta Basin» (REWarD). The detailed project document was submitted in December 2019 and is, as of June 2021, in the official GEF approval loop.

GWP-WA further supported VBA in 2019 through a specific partnership agreement to design and implement capacity building activities for a group of basin stakeholders under VSIP component 3. This involved conducting training workshops on ecosystem management for climate change adaptation for the benefit of CSOs, youth associations and local authorities in the basin countries. These workshops also supported the development of an action plan on ecosystem management.

As VBA has the mandate to carry out actions in the basin on behalf of the countries, it carries out various projects, some of which have been supported by GWP-WA.

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**Case study 1**

**Building Climate Resilience of People and Ecosystems in the Volta Basin**

**Approach and actions of GWP-WA**

The Volta Basin has been identified as a priority action area for the Water, Climate and Development in Africa Program (WACDEP), an initiative of the African Ministers’ Council on Water (AMCOW) developed and implemented by GWP-WA with other partners from 2011 to 2019 and continuing with the WACDEP - Gender Equality. The riparian countries have developed and implemented, under the coordination of the VBA Executive Directorate, various initiatives supported by several partners including GWP-WA. The World Bank and the Global Environment Facility (GEF) have, for example, supported the development of the Volta Basin Strategic Action Program Implementation Project (VSIP7), an offshoot of the VBA Strategic Plan 2015-2019.

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7 The VSIP is co-financed by the World Bank through its program for International Water Cooperation in Africa-CIWA ($3.5 million), the Global Environment Facility-GEF ($7.2 million) and VBA ($240,000), for a total budget of $10.94 million.
8 Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin - Adaptation Fund (adaptation-fund.org)
The VFDM project

GWP-WA has contributed to the development of the VFDM project and the mobilization of funding for its implementation. It facilitated the preparation and stakeholder consultation and capacity building workshops, including hydrological and meteorological services involved in flood and drought management at regional and country levels. The process was carried out in close collaboration with the VBA and WMO. It includes an analysis of capacity building needs in integrated flood and drought management in the six countries and the basin in 2015 and 2016, a regional training workshop in 2017 on integrated flood and drought management (IFM), the preparation and funding of projects on IFM in the six countries and the basin and finally the preparation and submission of the concept note and the detailed document of the VFDM project for funding to the Adaptation Fund in 2017 and 2018 respectively. Project funding for nearly $8 million was approved in 2018. The project, implemented through 2023 by WMO, is executed by VBA, GWP-WA, and WMO.

The REWarD project

The development of the REWarD project is led, under the guidance of the VBA, by UNEP and IUCN with the participation of GWP-WA. A regional workshop held in 2016 allowed the development of the concept note of a regional program taking into account actions focused on the conservation and restoration of a functional ecosystem of the Volta Basin. This workshop has largely contributed to the development of the Project Identification Form (PIF). As the VBA chose GEF funding from the outset, UNEP and IUCN took the lead as implementing agencies to accompany the development and submission of the PIF and the detailed project document. Bringing its expertise, GWP-WA participated in the development of the technical content of the project based, among others, on the results of the studies previously carried out within the framework of the WACDEP and the Integrated Drought Management Project in West Africa (IDMP-WA) as well as in the mobilization of the basin stakeholders and counterpart funds for the project.

Main results

The actions undertaken by the GWP-WA have enabled the VBA Executive Directorate to develop and strengthen strong partnerships with various institutions to carry out numerous actions aimed at achieving its mandate, to mobilize significant resources and to develop its technical and institutional capacities for the benefit of the populations and ecosystems of the Volta Basin.

The VFDM project, which started in June 2019, contributes in particular to providing the basin with an early warning system for floods and drought. A capacity building needs assessment of national and regional institutions in flood and drought management was conducted in 2019. Its results were validated by stakeholders during national workshops in 2020 and 2021. The development of a flood and drought risk maps and early warning system was underway in June 2021.

WACDEP outputs in relation to the Volta Basin include the completion of the inventory of water management and climate change in the context of the development of the observatory of water resources and related ecosystems, the development of an outline of principles and guidelines for the sustainable development of the basin, and the drafting of a concept note for the establishment of an early warning system for drought, floods, and pollution-related risks.

In addition, within the framework of the elaboration and validation of the Basin Water Charter, GWP-WA has contributed at the regional and country levels at each step, including the valorization of the results of the studies carried out through the implementation of the WACDEP, the participation in the consultative processes of the stakeholders through the staff of the Regional Secretariat as well as the members of the Country Water Partnerships (CWP), Mobilization of media actors in the six countries and at the regional level with information and awareness raising activities on the charter and the role of the populations in its implementation as well as advocacy carried out by the CWPs and the media actors of the GWP-WA network towards the political decision makers on the need to ratify it quickly. The charter was approved on May 10,
2019, by the VBA Council of Ministers. In June 2021, its ratification process was underway at the country level under the guidance of the VBA Executive Directorate.

Several training sessions organized and/or facilitated by GWP-WA, both under VSIP and WACDEP, have contributed not only to capacity building but also to the implementation, on the ground, of policies, strategies and actions for the sustainable development and management of the basin’s natural resources.

A series of capacity building sessions on the issue and tools for sustainable management of natural resources was organized for the benefit of about thirty journalists and communicators from the six countries. These journalists and communicators were organized in 2017 into a VBA Journalists and Communicators Network and have since been involved in informing and mobilizing stakeholders on issues related to the sustainable management and development of natural resources in the Volta Basin.

Through six national stakeholder training workshops on ecosystem management for climate change adaptation in the Volta Basin under the VSIP, GWP-WA contributed in 2019 to:

- the development of a training manual on ecosystem management for adaptation to climate change in the basin, accessible to stakeholders10;
- a better knowledge of the VBA, in particular its mission, mandates, achievements and prospects for the sustainable management and development of natural resources by 200 stakeholders, 26% of whom are women representing youth organizations, CSOs, local authorities, decentralized State structures and donors;
- capacity building of target actors on topics such as restoration and protection of ecosystems for climate change adaptation, maintenance and protection of riverbanks, protection of wetlands and IWRM processes;
- the awareness of the target stakeholders of the very rapid degradation of natural resources in the basin as well as the responses implemented to reverse this trend;
- the development of action plans for the management of specific ecosystems in the basin. On the basis of the actions proposed by the workshop participants, five transboundary intervention axes were proposed in synergy with the VSIP component 3 restoration of the banks of the Black Volta rivers (Burkina, Ivory Coast and Ghana), restoration of those of the Oti (Benin and Togo), development and restoration of the ecosystems of the headwaters of the Oti (Benin, Burkina Faso and Togo) integrated water resource management of water bodies and dams to fight against pollution in the basin and support for sustainable management of water resources in protected ecosystems and preservation of biodiversity.

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10 https://www.gwp.org/contentassets/a25172f641a947f18dc44f006ff9ae96/manuel-de-formation.pdf
versity (Benin, Burkina Faso, Ivory Coast, Ghana and Togo).

In total, a little over 500 people, 26% of whom are women, have been trained at different levels (regional, national, local) through the VBA capacity building initiatives.

In terms of funding, nearly $8 million has been raised by the VBA for the VFDM project in 2018 with the support of WMO and GWP-WA, with a view to, among other things, strengthening its technical and institutional capacities in the management of extreme water and climate-related events in the basin. Another important opportunity to mobilize financial resources for the VBA is the REWarD project developed with the support of UNEP, IUCN and GWP-WA for an amount of about seven million dollars.

These different actions have targeted the stakeholders of the basin, the sectoral ministries at the central level, the executives and managers at the level of the municipalities, the NGOs and associations of women and youth within the communities as well as at the regional level with the executives of the Executive Directorate of the VBA.

Lessons learned and replicability

One of the lessons learned from the VBA support actions is the importance of basing collaboration between institutions on predefined common objectives, taking into account their respective mandates and attributions and their comparative advantages, resources that can be pooled and actions that can be carried out in synergy. The memorandum of understanding between the VBA and GWP-WA, a relevant general framework for joint actions, has made it possible to lay these foundations. In this case, in the framework of the collaboration with IUCN, UNEP and WMO, each one has been, in its field of competence, of a certain contribution to the achievement of part of the results of the VBA presented above.

Based on the experience of the collaboration between GWP-WA and VBA, the Executive Directorate of the Mono Basin Authority (MBA), established in 2019 by Benin and Togo, signed a collaboration and partnership agreement with GWP-WA in 2020 in order to benefit from the expertise and experiences of its network.

Conclusion

This case study highlights the value of inter-institutional collaboration. Achieving the desired outcomes and the common goal requires that the different parties work together using their respective resources. However, if the frank collaboration between the institutions has made it possible to make progress, it remains important for the VBA to have its own human and financial resources and sufficient to assume its role of leadership, guidance and coordination so as to maintain the course of the strategic directions received from the countries and to be able to respond to the concerns of the basin stakeholders. The complementarity of the contribution of the various actors and the coherence of their objectives, both upstream for the development of projects and their implementation, is essential. GWP-WA, by making available its network including the CWPs in each of the VBA member countries, its expertise in IWRM, its ambition to work on the integration of waters security and the strengthening of transboundary water cooperation as well as its resources drawn from various projects, has contributed to the achievements in planning, capacity building and resource mobilization by the VBA. For its part, the VBA has used the full weight of its institutional mandate and its own projects to this effect.

Quotes from key stakeholders

Razaki Sanoussi Director of IWRM Planning within the VBA11: «GWP-WA is a privileged partner, a proximity partner of the VBA. The partnership between the two institutions has allowed the development of a functional and useful technical and professional relationship for the realization of several missions related to the Strategic Action Program 2015-2019 and the strategic objectives of the SAP.»

11 Razaki Sanoussi is, in June 2021, the Deputy Executive Director of the new Mono River Basin Authority shared between Benin and Togo.
## Contact of key people involved

<table>
<thead>
<tr>
<th>NAME</th>
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## People interviewed

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## References cited

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<td>VBA/GEF/UNEP/UNOPS</td>
<td>February 2014</td>
<td>Volta Basin Strategic Action Program</td>
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Case study 1

Building Climate Resilience of People and Ecosystems in the Volta Basin
Given its socio-economic and environmental context, West Africa is one of the least favoured regions in the world. Its populations are very vulnerable to the negative impacts of climate change. The States have difficulties in addressing these challenges due to the weakness and/or inadequacy of their action and organisational capacities, the weakness of the governance framework for managing climate variability and change, as well as difficulties in raising the required financial resources.

States generally have strategy documents, policies or plans for managing water resources and for managing the impacts of climate change. However, their implementation is often problematic due to, among other things, the gap in forward-looking development planning between the national and local levels. Communities also need support adapted to their realities. In response to this problem, GWP, as part of its climate portfolio, developed and implemented a series of initiatives during the 2010 decade. These include the Water, Climate and Development Programme in Africa (WACDEP), Integrated Drought Management Project in West Africa (IDMP-WA) and the #YourFutureYourClimate project (#TFTC).

These initiatives, which include community support components, were implemented in Benin, Burkina Faso, Ghana, Mali, Niger and Togo. They have focused on finding endogenous responses to the lack of community capacity for water security and climate resilience, the low level of access to and use of drought adaptation technologies, and the lack of organisational capacity at different levels to set up and successfully implement climate-sensitive projects, particularly those led by youth and women.

Based on the knowledge of climate and the needs of population to adapt to disaster risks, including those related to drought, particularly in Sahelian countries, the aim was to support optimised water and land management and to develop actions that provide appropriate solutions to stakeholders’ concerns.

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**Case 2**

Supporting youth and women actors for climate change resilient development in rural and semi-urban communities in West Africa

**Introduction**

From 2010 to 2020, Global Water Partnership West Africa (GWP-WA) has developed several initiatives that have contributed to making rural and semi-urban communities in countries of the region, particularly youth and women’s associations, actors for climate resilient development. Emphasis has been placed on the development of training tools and modules, delivering of training and awareness-raising sessions, advisory support and assistance in implementing pilot actions in response to climate change related threats.

**Background and issues**

Given its socio-economic and environmental context, West Africa is one of the least favoured regions in the world. Its populations are very vulnerable to the negative impacts of climate change. The States have difficulties in addressing these challenges due to the weakness and/or inadequacy of their action and organisational capacities, the weakness of the governance framework for managing climate variability and change, as well as difficulties in raising the required financial resources.

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Based on the knowledge of climate and the needs of population to adapt to disaster risks, including those related to drought, particularly in Sahelian countries, the aim was to support optimised water and land management and to develop actions that provide appropriate solutions to stakeholders’ concerns.
GWP-WA’s approach has been to facilitate stakeholders consultations on the issue of climate change and its impacts on water resources and their use for socio-economic development, to assess capacity building needs, to develop innovative approaches and tools for action, and to design and implement pilot projects for the benefit of communities and youth and women’s associations. It also aimed to increase awareness and understanding of climate change and its impacts on communities’ livelihoods and incomes as well as on the environment. The organisation of capacity building and awareness raising sessions for communities and associations for the development of climate initiatives has therefore been an important focus.

A series of initiatives have focused on supporting stakeholders through practical, technological and strategic guidance, making scientific information available and presenting best practices in integrated drought management and, more broadly, in adaptation and resilience to climate change, while fostering these actors to capitalise on and enhance endogenous knowledge and know-how.

The involvement and collaboration of administrative, municipal, local and traditional authorities in each country has enabled a better impact on the target audiences. Similarly, the choice to influence ways of doing and thinking at the local level gave these initiatives a very local dimension and made it possible to have a real impact on the living conditions of the communities.

**Actions undertaken in the framework of WACDEP, IDMP-WA and #TFTC**

The WACDEP, developed in response to the Sharm El Sheikh Declaration on Water and Sanitation adopted by the African Union in 2008, was taken to the highest level by the African Ministers’ Council on Water (AMCOW). Its objectives were to assist countries to integrate water security and climate resilience into development planning and decision-making processes with a view to build climate resilience, particularly through increased investment in water security; to develop partnerships and capacities of institutions and stakeholders to build climate resilience through improved water management; and to support the development of investment strategies and project documents to access funding for water security and climate resilience. In particular, better water resources management to increase climate resilience and improve living conditions of communities was expected.

An important part of the WACDEP activities has been the establishment of a framework to facilitate adaptation to climate change, including development planning and stakeholder engagement at local, national and regional levels. WACDEP developed the technical background document, the Strategic Framework for Water Security and Climate Resilient Development. The choice was also made to support the implementation of pilot actions to demonstrate innovative techniques with tangible impacts that contribute to...
ensuring water security and climate resilience and improving the living conditions of communities.

Similarly, actions have been implemented within the framework of the joint Integrated Drought Management Programme (IDMP) of the World Meteorological Organisation (WMO) and GWP launched in 2013 via the regional component of the Integrated Drought Management Project in West Africa (IDMP-WA). This project, developed according to the approach of the Strategic Framework for Water Security and Climate Resilient Development, has, since 2015, helped building the capacity of key stakeholders in the field of Integrated Drought Management (IDM). Conceived as an offshoot of WACDEP, it has also set up pilot actions to support communities and accompany youth and women’s associations in their organisation. Activities have been carried out in Burkina Faso, Niger and Mali. GWP-WA also contributed to the implementation and/or support of some activities carried out by the National Youth Parliaments for Water in Benin, Burkina Faso and Togo.

The experiences capitalised in the framework of WACDEP and IDMP-WA have been used by GWP-WA in partnership with the International Water Secretariat (ISW) to develop a programme aiming at integrating young people in the decision-making process and the implementation of adaptation and resilience actions to climate change in Benin, Burkina Faso and Togo. This is the #YourFutureYourClimate (#TFTC) initiative funded under the International Climate Cooperation Programme by the Government of Quebec and GWP. The project aims to support rural and semi-urban youth to become agents of change for climate action and entrepreneurs who contribute to improving the livelihoods of their communities in the three countries.

### Capacity Building for Integrated Drought Management and Climate Change Adaptation

GWP-WA, with the technical support of WMO and through the Country Water Partnerships (CWP) responsible for the implementation of activities at the local level, has facilitated stakeholders consultations and several dozen training and awareness sessions. Publications were also produced and widely disseminated. In terms of products and results delivered, we can note the development and dissemination of:
- a technical guide on IDM;
- a training manual on IDM adapted to the West African context;
- a practical guide to the creation and development of associations at the rural or semi-urban level for young people;
- a technical guide to managing a farm to adapt to climate change based on the experience of Loumbila in Burkina Faso;
- a capitalisation document on the contribution of young people to the restoration of the ecosystem of the headwaters of the Mékrou River in Kouandé, Benin.

### Relevance of pilot projects on the valorisation of drought adaptation technologies developed and implemented through the GWP-WA network

The valorisation of drought adaptation initiatives in Burkina Faso, Mali and Niger consisted of targeted actions responding to the needs of stakeholders, notably youth and women, with the capacity to produce significant impacts at the community level, in particular on climate change adaptation practices.

### Implementation of a drip irrigation system using solar energy for pumping water in the rural municipality of Loumbila in Burkina Faso

The institutional actors and members of the Sidwaya group in Ramintenga, in the municipality of Loumbila, considered this project to be innovative because this type of irrigation system allows for the optimal use of water resources, the use of clean energy and a better agricultural yield. Each year, it allows for three vegetable and cereal (maize) production campaigns, two in the dry season and one in the wet season. The wet season is marked by the use of supplementary irriga-
Promotion of innovative drought resilient practices through the establishment of a multifunctional agroforestry park in the municipality of Komki-Ipala in Burkina Faso

The action involved the establishment of a multifunctional agroforestry covering 2 ha plot of land that had been abandoned for more than 20 years, in the rural municipality of Komki-Ipala, in the province of Kadiogo. With the support of the local authorities, the village association, young people and women have used assisted natural soil regeneration techniques as an alternative to the traditional reforestation model, which has shown its limitations. The park allows for agricultural production, fodder production, firewood production and the creation of a microclimate with CO2 sequestration. After only one rainy season, the vegetation cover was reconstituted, going from 25% to 90% recolonisation of the herbaceous layer.

Development of CES/DRS actions for agricultural, forestry and pastoral purposes and communication for climate action in the municipality of Gouendo in Mali

In particular, the action enabled the restoration of 8 ha of encrusted land using the zaï and half-moon technique: 30 farmers were trained in CES/DRS techniques and 30 others in cultivation and composting techniques, with the production of 41 t of compost. The action also included an awareness-raising component, with the holding of 16 sessions on the fight against the effects of climate change and the provision of information to more than one million people through the broadcasting of reports and micro-programmes on national television.

Development of the irrigated crop site for women of Kankantouti in Niger

CWP-Niger provided local support, with the support of the public technical services of the department of Maradi, for the acquisition of seeds and their distribution to women of the village of Kankantouti, the creation of nurseries and the preparation of plots of land, as well as training and supervision for production and agri-

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14 Water and soil conservation/Soil defence and restoration
food processing. Altogether, more than 70 women have benefited directly from this action. They were able to increase their production by 25 to 200%.

Building community resilience in the Bawku Municipality, Binduri and Bongo districts of Ghana

WACDEP’s intervention in Ghana supported communities in the Bawku Municipality and the Binduri and Bongo Districts in the restoration of ecosystems along the White Volta River Basin in the north of the country. The degraded environment and ecosystems have been restored, with about 5 ha of land reforested along the river and about 20,000 seedlings of local varieties planted. Capacity building of communities in nursery development should ensure the sustainability of the project beyond the intervention. Another important result was the direct support of 300 farmers through income-generating activities. A final outcome was the strengthening of institutional coordination, with the signing of a memorandum of understanding between the Ghana Water Resources Commission and the implementing partners in charge of community capacity development. The indirect beneficiaries of the project, all types of actions combined, are estimated at 3,500.

These few pilot actions in the field highlight the direct effect of GWP-WA action on the income and well-being of the beneficiary population who have adopted and scaled up the methods and approaches. Although it is too early to measure the long-term impacts, these pilot projects are inspiring dynamics in other areas of the countries.

Young actors of change serving their communities through concrete interventions for climate action with the #TFTC project

One of the demonstration actions of innovative techniques implemented in Benin, Burkina Faso and Togo is linked to GWP-WA’s action for the benefit of youth. The #TFTC was built on the experience of the above-mentioned projects and programmes, with the particularity of taking into account one of GWP’s objectives: to increase the interest of young people in the water and climate sector in order to increase their awareness of these issues and benefit from their capacity for action. With a budget of 450,000 Canadian dollars, implemented from 2017 to 2020 for the first phase, #TFTC aims to develop sustainable, economically viable and replicable pilot projects with a tangible impact. These are innovative projects, designed, planned and implemented by young leaders from rural and semi-urban areas, with the support of local partner organisations.

In Benin, the project focused on supporting the restoration of degraded ecosystems in the headwaters of the Mékrou River with three youth associations as partners: the Youth Network for the Green Economy of Natitingou, Junior Chamber International and the Birni Youth Advisory Body. It had three components: capacity building, promotion of the use of improved stoves, and environmental education and reforestation. In particular, the initiative has helped to reduce pressure on forestry formations, to encourage eco-citizen behaviour among pupils and schoolchildren and in the communities, to promote alternative activities that do not destroy the environment, and to restore the degraded ecosystem through reforestation activities. CWP-Benin initiated this action as a continuation of the Mékrou 1 pilot project, implemented by young people as agents of change.

Following the installation of a solar-powered drip system in Loumbila within the framework of WACDEP, #TFTC chose to pursue action in Burkina Faso to increase the resilience of rural youth to climate change. Two actions have been implemented: the use of water-saving and clean energy technologies for agricultural production and the improvement of the employability of young people who have become development actors in their communities.

In Togo, #TFTC contributes to sustainable development through the improvement of living conditions of young people, particularly livestock and market gardeners, and integrated soil, water and environmental protection activities led by young people in Danyi-Apéyémé-Todomé. It was implemented by Eau Vive Togo, in collaboration with the Association of Young Volunteers for Education and Health. The project included the training of 40 members of associations on associative life and 30 community leaders on the Community Led

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17 Cf. Case study on «Promoting successful cooperation and investment for sustainable natural resource management and poverty reduction in the Mékrou transboundary sub-basin in West Africa».
It is very important to consider a coherent follow-up to the actions developed through their lessons for future actions. The experiences of the WACDEP and IDMP projects have provided a basis on which the #TFTC project has built, with interesting results.

The leadership of administrative and traditional authorities and their involvement in any initiative to restore degraded ecosystems is a key factor for successful interventions. It allows the mobilisation of communities in an environment of mutual trust.

The involvement of technical services, resource persons and other organisations working in climate risk management is an important factor for the success of initiatives to demonstrate innovative techniques related to water security and climate resilience.

Small-scale and highly targeted actions that take into account the needs of stakeholders including youth and women can have significant impacts at the community level.

Lessons learned and replicability

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Strengthening the technical and institutional capacities of actors involved in implementing water security and climate resilience actions and integrated water resources management, including mobilising financial resources, is key to ensuring the sustainability of results and their scaling up.

The empowerment of youth, leaders, women and communities as a whole is an asset for the ownership of sustainable natural resource management practices at the grassroots level.

Land tenure issues are very sensitive and the establishment of land transfer documents to the communities concerned by the implementation of the projects, with the signature of the rightful owners, is a prerequisite for the development and implementation of community actions related to improving water security and climate resilience on the ground.

Pilot actions build and motivate people to adopt better practices, behaviours and attitudes when their interest is taken into account.

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18 The associations involved are: ESPOIR, APCR (Association des producteurs de cultures maraîchères), GMD (Groupement des maraîchers de Danyi Fowui), ENTRAIDE des Jeunes d’Apéyémé, Association des femmes de Medewunui.

19 Communal order n’ 63-1/022/M-KDE/SG/SADE of 06 November 2017 on securing the head of the Mékrou river basin.
To help build community resilience, GWP-WA has intensified its efforts since 2012, working with States and regional institutions to establish an institutional, regulatory and organisational framework conducive to the implementation of IWRM. It has also initiated concrete and targeted pilot projects that impact on people’s livelihoods. GWP-WA has ensured that these projects take into account the directions from local and national authorities.

People are fully aware of the situation they are facing and the barriers to action they face. The success of these actions depends largely on the level of ownership and commitment of the various actors through the identification of the projects to be carried out, the design of the actions to be implemented and their execution by the beneficiaries themselves.

The capacity building of the actors according to a learning-by-doing approach, with the support of decentralised services and the action of local authorities through administrative acts and budgetary commitments, has contributed to lasting changes in practices and behaviour.

The idea of proposing to young people organised in associations to become actors of change for a climate change resilient development in their environment has aroused the attention and enthusiasm of the population as well as the authorities. The strengthening of young people's knowledge of the rules of associative life, the acquisition of new capacities and the participatory design of the tools necessary for the development and implementation of climate-sensitive initiatives have laid the foundations for large-scale actions.

Finally, it is important to note that a series of actions has been designed and built on results and experiences capitalised in the region so as to enhance their effectiveness and contribute to other development processes.

**Quotation from key stakeholders**

Abassi Moussa, Mayor of the municipality of Kouandé (Benin): «Since the launch of the initiative, the town hall has been closely involved in all phases of the project. All actors at the level of the town hall have internalised the approaches and successes of the project. The results of the TFTC project are visible and cannot be discussed. The involvement of young people in its implementation is an innovation, unlike other initiatives that focused their attention on adults. We need to mobilise and strengthen the capacities of younger people so that the actions are sustainable.»

Sibidou Sodre, member of the Sidwaya association (municipality of Loumbila, Burkina Faso): «We, the women of the association, are very happy to be beneficiaries of the project. I can already see an improvement in our living conditions through the achievements. The techniques acquired and put into practice allow us to have a better production yield. The installation of the solar pumping system is a godsend for us and allows us women to grow off-season crops, as we are not involved in income-generating activities in the dry season. These installations, which compensate for the lack of water, therefore help us to improve our daily lives.»

**Conclusion**

To help build community resilience, GWP-WA has intensified its efforts since 2012, working with States and regional institutions to establish an institutional, regulatory and organisational framework conducive to the implementation of IWRM. It has also initiated concrete and targeted pilot projects that impact on people’s livelihoods. GWP-WA has ensured that these projects take into account the directions from local and national authorities.

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## References

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<th>AUTHOR</th>
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**KEYWORDS**: Resilience - Innovative practices - Adaptation to climate change - Youth associations

### Further references

Burkina Faso is a Sahelian country with a fragile economy that increases the vulnerability of its people to the adverse effects of climate change. Aware of these serious threats to economic growth and sustainable development, the government of Burkina Faso signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1993 and the Kyoto Protocol in 2005. In the same year, it engaged the country in the process of formulating and implementing the National Adaptation Programme of Action (NAPA) to climate variability and change in order to address the urgent need for Adaptation to Climate Change (ACC).

Subsequently, the government decided to equip the country with a new programming framework called the National Adaptation Plan (NAP) to reduce vulnerability to the impacts of climate change by building adaptive and resilience capacities and to facilitate the integration of ACC in a coherent manner into new and existing policies, programmes or activities, into specific development planning processes as well as into strategies within the relevant sectors at different levels. The NAP development process was conducted from November 2012 to May 2015 according to the UNFCCC guidelines. It took into account the results of the analysis of the vulnerability to climate change of the priority sectors identified (agriculture, livestock, environment and natural resources, health, energy, infrastructure and housing, etc.), the climate change scenarios for the 2025-2050 horizons and the achievements of the NAPA implementation.

In order to place water, the main vector for through which the effects of climate change (drought, floods) are felt, at the centre of adaptation strategies, the GWP-WA has worked to ensure that water security is taken into account in Burkina Faso’s NAP. This integration was achieved through the implementation of the WACDEP, a programme designed in response to the request of the African Ministers’ Council on Water (AMCOW) in 2009 inviting GWP to support the implementation of the Sharm El Sheikh Declaration on Water and Sanitation, adopted in 2008 by the African Union. The initiation of WACDEP in Burkina Faso came in 2012 when the NAP formulation process had already started: the Country Water Partnerships of Burkina Faso (CWP-BF) had assessed the level of integration of water in the development process at the national level by commissioning a study on water security and climate resilience. GWP-WA therefore identified the NAP development process already underway as one of the entry points to achieve this.

The CWP-BF then initiated close collaboration with the Ministry of Water and engaged in exchanges with the coordination of the NAP development process, anchored within the Ministry of the Environment through the Permanent Secretariat of the National Council for Sustainable Development (SP/CNDD). These exchanges revealed the need to mobilise additional expertise and financial resources to carry out the baseline study on integrating the water issue and to lead the consultations for a quality contribution from the stakeholders concerned.

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GWP-WA, through CWP-BF and in close collaboration with governmental actors and all stakeholders, worked on the integration of water security related aspects into the NAP, in accordance with UNFCCC guidelines, by providing technical and financial support. It was carried out in the following stages:

- the drafting and signing of a collaboration agreement between the General Secretariat of the Ministry of the Environment and the CWP-BF concerning GWP-WA’s support for the NAP development process;
- the sending of a letter from the SP/CONEDD to the Ministry of Water, inviting it to include water security as a priority in the NAP currently being developed;
- mobilising the expertise of a consultant to analyse the draft document and identify priority actions to be proposed to strengthen the consideration of water security in the planning and implementation process of the ACC in Burkina Faso;
- holding a series of multi-stakeholder meetings to review and refine both the sectoral NAPs and the draft NAP in the light of the consultant’s proposals and the stakeholders’ contributions;
- the organisation of a technical working meeting of representatives of water and climate stakeholders by the Ministry of Water through the Directorate General of Studies and Sector Statistics (DGESS) in collaboration with the CWP-BF to examine in greater depth how the priorities of the water and sanitation sector are taken into account in the draft NAP and to validate the comments and proposals of the various structures of the Ministry of Water.

At the end of the consultations, the stakeholders proposed an action plan to help the SP/CONEDD taking water security into account in the NAP. They insisted on a list of priority actions, including the strengthening of investments for the mobilisation, development and protection of water resources, the improvement of knowledge and monitoring of these resources in the context of climate change and the strengthening of access to sanitation.

The implementation of this action plan was marked by a letter of encouragement sent by the Secretary General of the Ministry of Water to the CWP-BF in November 2013. He welcomed the synergy of action for the integration of water security in the NAP.

Main results

The NAP was adopted by the government of Burkina Faso in October 2015 after a participatory process involving stakeholders in the water and climate sectors. The NAP is an annex of the PNDES, the national reference framework for development actions in Burkina Faso for the period 2016-2020.

A communication document on the NAP development process and its importance was published by the SP/CONEDD with the technical and financial support of the CWP-BF. It highlights the contribution from partners, including GWP-WA.

The final NAP document integrated water as a key element of sustainable development at regional and national levels as well as short-, medium- and long-term measures for economic growth and human security in Burkina Faso.

The adoption of the NAP has also allowed the issue of climate change and investments related to water security to be given greater prominence in the 2016-2020 PNDES, which requires an integrated and sustainable management approach.

The approach adopted by the CWP-BF for the integration of water security into the NAP has enabled all categories of stakeholders to play their role more effectively. The quality of this collaboration was subsequently confirmed with:

- the accompaniment by GWP-WA of the accreditation process of the Environmental Response Fund (FIE) by the Green Climate Fund;
- the involvement of the WACDEP Burkina Faso Programme Officer among the members of the Burkina delegation at the Bonn Conference on Climate Change in 2017 (COP23).

In addition to the technical and financial partners, the process involved the main national actors, including the Ministry of the Environment (the General Secretariat, the SP/CNDD, the NAPA Project Coordination Unit, the National Coordination of the NAPA project), the Ministries of Water, Energy, Agriculture, Health, Livestock, Economy, Infrastructure, the National Assembly and CSOs.

The collaboration agreement focused on technical support and financial support amounting to €53,357 provided by GWP-WA. The funds were used to support the organisation of seven of the eight sectoral consultation workshops. The agreement also provided for a team of national experts to take charge of the further development of the NAP.

https://www.adaptation-undp.org/sites/default/files/uploaded-images/burkina_faso_pna_0.pdf

Accueil (fie-burkina.org)
Activities included in the NAP and implemented are capitalised in a global report\(^{27}\) of October 2017. However, this report notes that implementation is rather slow and inefficient due to difficulties related to organisational issues, among others:
- insufficient synergy between the various actors and structures with the same interests;
- insufficient monitoring and evaluation of sectoral NAPs and the NAP;
- the lack of a framework for coordinating and guiding NAP actions;
- the difficulty of collecting data relating to the implementation of the NAP.

A 2019 assessment by NAP stakeholders using the Stocktaking for National Adaptation Planning (SNAP) tool, which has seven criteria for assessing the success of ACC planning, shows that monitoring and evaluation and stakeholder participation capacities are weak, with values below 2 on a scale of 0-4. The criteria relating to climate information, human capacity, integration and the long-term vision and mandate for the NAP process were assessed at a medium level (below 3).

There is a need to significantly improve the level of each of these factors as a strategic objective. The assessment also highlighted actions and lessons learned that can guide the operationalisation of the NAP process at national and sectoral levels\(^{28}\).

Respecting the IWRM principles advocated by GWP makes it possible, upstream of any planning, to ensure the effective participation and contributions of all relevant stakeholders. The exchanges allowed the concern of water stakeholders regarding the integration of water security to be taken into account. They were thus the starting point of the process that led to a real consideration of the water issue in the Burkina Faso NAP.

Despite the integration efforts, the sectoral approach remains entrenched. The consultation process has highlighted the fact that Burkina Faso’s climate actors do not yet systematically include water as a central element of climate change adaptation. The process of developing the NAP has confirmed that the integrated approach should always be favoured.

Integrating water security into national development planning requires a good understanding of current and future development processes and the selection of relevant entry points to achieve this. GWP-WA has been able to target the development of the NAP to provide the impetus for mainstreaming water security in the implementation of the WACDEP. This approach has strengthened the collaboration between water and climate actors. The formalisation of the collaboration between the CWSP and the Ministry of the Environment has also facilitated and legitimised the collaboration of the GWP-WA with the other actors in the process. The CWP-BF has positioned itself as a platform for initiating a synergy of action between the national authorities in charge of water, the environment and climate.

Limitations and challenges

Lessons learned and replicability

\(^{27}\) PAS-PNA, Analyse organisationnelle du processus PNA au Burkina Faso, Rapport provisoire, July 2018, P3

Conclusion

Water is certainly a central element of climate change adaptation strategies and actions. However, it is clear that water issues are not systematically integrated into development planning processes at all levels by actors in related sectors. Any investment in the protection, knowledge or developing water resources must be understood as a lever for the success of other objectives. By supporting the government of Burkina Faso in taking water security into account in the NAP, GWP-WA has initiated a process to bring together water and climate actors. This action has made it possible to start gradually taking water into account in climate change adaptation initiatives in Burkina Faso.

Quotation from key stakeholders

Kouka Ouédraogo, SP/CNDD, DCCI, focal Point NAP-BF: «The existence of an adopted NAP is already a negotiation tool, a tool for raising funds from donors. [...] The success of the NAP process depends on the existence of climate information and, above all, financial resources.»

Contact

<table>
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<tr>
<th>Resource persons</th>
<th>People interviewed</th>
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<tr>
<td>Omar Komi, Adviser in studies and options analysis, Planning Economist, Director of Prospective and Operational Planning (DPPO), General Directorate of Studies and Sector Statistics (DGESS), Ministry of Water and Sanitation (MEA), Burkina Faso, Ouagadougou, <a href="mailto:komi.omar@yahoo.fr">komi.omar@yahoo.fr</a>, Phone: (00226) 70 46 16 53/78 87 59 36</td>
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<td>Do Étienne Traoré, SP/CNDD, DCCI ; CDN Focal Point, Burkina Faso, Ouagadougou, <a href="mailto:doetiennetraore@yahoo.fr">doetiennetraore@yahoo.fr</a>, Phone: (00226) 70 08 67 04</td>
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Key words: Burkina Faso - NAP - GWP - Climate Change - Water security

Additional references

- François Lucien Zougmoré, Damiba Sarah D’haen and Sizdabda Djibril Dayamba. PAS PNA, State of scientific knowledge on water resources in Burkina Faso and the impact of climate change on these resources, September 2019 on water-ressources-stocktaking-bf-pas-pna_1.pdf(climateanalytics.org)
In Ghana, climate change impacts are visible and particularly detrimental as a result of the country’s resilience in climate sensitive sectors such as agriculture, water resources, energy, and health.

Various climate variability and change assessment shows that the northern parts of the country are more vulnerable to becoming climate change hot-spots. An analysis of national data spanning four decades (1960 - 2000) suggests a mean temperature rise of 0.21 °C over a decade in Northern Ghana to the overall national average. Also, the Northern regions are projected to experience more erratic rainfall patterns with prolong dry spells whereas the general rainfall pattern over the four decades tend to decrease from South to North. The White Volta River Basin in the Upper East region experiences perennial flooding. This condition often leads to loss of life and property (crops) in communities along the river course in Bawku Municipal, Binduri and Bongo districts. The region’s economy is agrarian in nature (about 70% of the economy), producing mainly crops and livestock. Crops grown include maize, sorghum, millet, guinea-corn, onion and tomatoes. Agriculture is largely rain fed and vegetable farming is irrigation driven. Livestock and poultry raised by individuals and households include cattle, goat and guinea-fowl. However, climate change is impacting the availability and accessibility of water for domestic and productive uses, and for ecosystem services that communities depend on.

Also, access to market and financial services remain critical for local communities’ resilience as well as investments in climate-resilient technologies, to ensure the preservation of the ecosystem services and improve their livelihoods.

**Case 4**

Promoting innovative technologies and alternative livelihoods for climate-resilient local development in Ghana

**Introduction**

*Global Water Partnership, under the Water Climate and Development Programme in Africa (WAC-DEP) implemented from 2015 to 2016, river banks restoration interventions as well as alternative livelihoods in communities along the White Volta Basin and some catchment areas in Upper East region, Ghana. The initiative contributed to strengthening climate resilience at community level.*

**Background and issues**

In Ghana, climate change impacts are visible and particularly detrimental as a result of the country’s resilience in climate sensitive sectors such as agriculture, water resources, energy, and health.

Various climate variability and change assessment shows that the northern parts of the country are more vulnerable to becoming climate change hot-spots. An analysis of national data spanning four decades (1960 - 2000) suggests a mean temperature rise of 0.21 °C over a decade in Northern Ghana to the overall national average. Also, the Northern regions are projected to experience more erratic rainfall patterns with prolong dry spells whereas the general rainfall pattern over the four decades tend to decrease from South to North. The White Volta River Basin in the Upper East region experiences perennial flooding. This condition often leads to loss of life and property (crops) in communities along the river course in Bawku Municipal, Binduri and Bongo districts. The region’s economy is agrarian in nature (about 70% of the economy), producing mainly crops and livestock. Crops grown include maize, sorghum, millet, guinea-corn, onion and tomatoes. Agriculture is largely rain fed and vegetable farming is irrigation driven. Livestock and poultry raised by individuals and households include cattle, goat and guinea-fowl. However, climate change is impacting the availability and accessibility of water for domestic and productive uses, and for ecosystem services that communities depend on.

Also, access to market and financial services remain critical for local communities’ resilience as well as investments in climate-resilient technologies, to ensure the preservation of the ecosystem services and improve their livelihoods.

29 National Climate Change Policy, 2012.
In the face of these climatic challenges, GWP-WA and CWP-Ghana developed an initiative aiming to promote water security and climate resilience in vulnerable communities, under the WACDEP Programme. The initiative was implemented in three districts in the Upper East region: Bawku Municipal, Binduri, and Bongo Districts, and focused on demonstrating water security and climate resilient interventions.

The demonstration project sought to improve livelihoods of households through pro-poor, gender sensitive “green” solutions whilst improving the ecosystems along the White Volta Basin and catchment areas. Results from the field demonstration contributed to meeting the water security mainstreaming requirements of the District Medium Term Development Plan Guidelines. The intervention was implemented based on the GWP Water Security and Climate Resilient Development Framework (Figure 1).

**Understanding the problem**

A baseline study (“Impacts and Vulnerability assessment of Climate Change in the Upper East Region of Ghana: Pathways to Creating Green Solutions and Integrating Climate-Smart Interventions into development Planning and promoting climate-smart interventions for building community resilience”) was carried out. The baseline study brought to the fore, the hazards related to climate variability and change including floods, droughts, high temperature and windstorms. These hazards often lead or contribute to risks of crop failure, uncertainty in the cropping calendar, land degradation, food and livelihood insecurity, loss of lives and property, migration and consequently social stress (CWP-Ghana, 2014). Also, gender considerations revealed that women, children and the aged were more vulnerable to the climate variability and change impacts. As a result, communities affected by extreme weather events and related impacts need livelihood support to build resilience. This required climate-smart interventions without which climate change may continue to threaten livelihoods in sensitive communities where water and other natural resources are survival lifelines (CWP-Ghana, 2014). CWP Ghana organized a series of stakeholder workshops to solicit inputs and provide update to members in progress of field intervention. An additional study, “Socioeconomic and Environmental Analysis and Logical framework development of field Interventions for no/low regret investments in the White Volta River Basin” was carried out. This study sought to develop interventions with the view to promoting climate-smart actions for building community resilience was further undertaken. The study aimed to provide insight into the interventions for implementation, recognizing economic, social and environment benefits to accrue towards strengthening household resilience through income generation options. Further, a value chain analysis of the interventions was carried out in order to provide appropriate mechanisms for harnessing the benefits. Furthermore, the study provided implementing agencies expected deliverables and the necessary

**Figure 1 Framework for Water Security and Climate Resilient Development. Source: GWP, 2014.**
steps towards their achievement. These studies involved extensive stakeholder engagement which helped to contextualize the prevailing conditions, assess the extent of climate variability and change impacts and garner stakeholders buy-in to foster project ownership. A good understanding of the challenges and prevailing conditions in communities was prerequisite to the development of appropriate tailor-made solutions.

Identify and appraise the options

The baseline evaluated the climate change situation and livelihood options in the study areas and noted twelve actions at no/low investments\(^{30}\). This included (i) ecosystem restoration through buffer zone protection; (ii) Formation of committees for sustainable management of water resources; (iii) soil and water conservation practices; (iv) developing models to predict on-set of rainy season; (v) water quality control; (vi) construction of water harvesting schemes; (vii) water harvesting for irrigation; (viii) flood water harvesting and storage; (ix) livestock rearing; (x) dry season farming; (xi) improved agricultural technologies; and (xii) improved seed variety (CWP-Ghana, 2014). Further, a gender-based participatory appraisal in the socioeconomic and environmental analysis allowed for understanding of the gender based needs of community’s livelihoods. Also, the interventions identified for implementation were screened to maximize economic, social and environmental benefits for water security and climate resilience in the communities.

One criterion for socioeconomic and environmental analysis and selection of options for implementation is the availability of the livelihood resources categorized as physical, natural, social, human and financial. Thus screening of the actions focused on availability of livelihood resources in communities towards maximizing the potential for economic, social and environmental gains. The livelihood resources needed to implement each action were ranked with respect to the actions and analyzed. If resources are locally and readily available in good quantity and quality, adaptation options could be implemented easily by a community. Otherwise, the community would have to rely on external sources and may prove challenging to effectively implement the option(s).

Based on the perceived viability of the livelihood resources, options were ranked from the most to least easily applicable as follows: (1) water harvesting and irrigation; (2) watershed committee formation and/or activation for sustainable water management; (3) dry seasoning farming; (4) improved agricultural technologies, including improved seed varieties; and (5) soil and water conservation.

GWP contributions to building community resilience

GWP provided funds for the field demonstrations project. These included cost of consultancies, training of implementing partners and undertaking implementation activities in the communities. The project also benefited from in kind contributions from state actors such as use of conference rooms for meetings and includes the District Department of Agriculture, Bawku and White Volta basin Secretariat, Bolgatanga.

The implementation of the WACDEP demo project hinged on the financial, advisory and technical support provided by GWP, and GWP-WA, CWP Ghana and its network.

GWP formulated the Terms of Reference to engage consultants for all studies conducted. Also, the WACDEP Project Management Unit offered technical and logistical support to the consultants recruited for both the baseline and socioeconomic and environmental analysis studies. In the field, GWP facilitated joint planning with implementing partners to formalize their engagement with WRC.

GWP also played an instrumental role in establishing engagement platforms to facilitate dialogue across stakeholder institutions. The formation of the 9-member committees allowed for consultations in managing the project at community level. The periodic joint meetings of technical structures implementing the activities enhanced understanding of project objectives and learning across communities.

As a result of the field demonstration intervention being implemented in Ghana, GWP assisted to recruit and nurture a young water professional to develop his career in water security and climate resilient development.

In addition, GWP communication were guided by stakeholder mapping to ensure that key institutions were engaged in the process of implementation. The project team was able to sustain interests without compromising the expectations of grassroots beneficiaries. As a result, a clear and unambiguous discourse and interaction were upheld to maintain the confidence gained from communities. This allowed for constructive engagements in furtherance to the project activities delivery.

\(^{30}\) No regrets investments will be unaffected by climate change and will deliver benefits under the full range of potential future climate change scenarios. Low regrets investments are those which may be negatively impacted by climate change to some degree but will still deliver acceptable net benefits under the full range of potential future climate change scenarios.
Results achieved and impact

Deliver solutions

The solutions for communities resilience building were aligned to the following five aspects of livelihood resources: (i) development of human resources with specific training and practices; (ii) increase of physical resources through the provision of appropriate equipment for water security and farming, (iii) increase of natural resources with trees growing and watershed protection, (iv) increase of financial resources through the development of value chain and linking to micro-finances, and (v) increase the quality of social resources through the establishment and capacity development of community-based committees for watershed management, and for accessing agricultural inputs and outputs.

A logical framework was developed for the field demonstration project, followed by preparation of annual work plans for implementing partners. This produced a field demonstration plan that provided the actions under the selected options with budget and clearly defined timelines for implementation.

Further, delivering solutions hinged on a capacitated technical services of state agencies for activities implementation. Training in monitoring and evaluation was key to appreciate the demands of the demonstration project as well as documentation of the gains and lessons learned.

CWP Ghana consulted with stakeholders, including the set-up of technical teams and other local NGO’s to identify experts required to implement activities. The NGOs were largely involved in mobilizing and sensitizing communities. The WRC, technical team and NGOs signed a Memorandum of Understanding to ensure accountability. The WRC White Volta Basin Secretariat, based in Bolgatanga was responsible for coordinating the field activities.

Monitor and move forward

The project activities were monitored closely by the implementation team and partner institutions through quarterly, annual and technical reporting. Further, a Young Water Professional, brought onboard through a GWP mentorship Programme, was assigned the role of monitoring the field intervention and reporting. Thus he relocated to the demonstration project area at Bolgatanga and worked with the White Volta basin Secretariat of WRC, augmenting the coordination role of the Office.

Results achieved

After successful implementation of field intervention, the results derived can be categorized under three broad themes namely: environment and eco-system restoration, livelihood adaptation and strengthening of institutional coordination.

During the 2014-2017 District Medium Term Development Plan preparation period, water security and climate change were identified as cross-cutting themes in the National Development Planning Commission (NDPC) Guidelines issued to District Assemblies to guide the process. Thus development and implementation of the demonstration project and related interventions in the selected communities were a direct contribution to the attainment of the Medium term Development Plans in the districts involved.

In terms of the environment and eco-system restoration, approximately 5ha of land were planted with seedlings including those to stabilize the river banks from land degradation, fruit and medicinal species and woodlot for energy for households along the White Volta River. In addition, other small water catchment areas with an area of about 1ha were also planted. The project assisted to raise 20,000 seedlings nursed using indigenous capacity and grown for catchment protection in selected communities. Community members’ capacities were built to raising the nursery as a means to guarantee the sustainability of the project beyond WACDEP intervention.

It’s worth noticing that the choice of the tree species were made in consultation with community members and landowners; and it was decided to use dichro, acacia, etc. (for stabilizing river banks), mango, mahogany, cashew etc. (for economic purposes). These trees contribute to both the restoration of the ecosystems of the riverbanks and provide fruits that contribute to improving livelihood of farmers and reducing poverty.

The project provided direct alternative livelihood support for 300 farmers across the three beneficiary communities. These included support for both dry season farming technology such as water pumping machines, improved vegetable seeds and small ruminants (goats) to specific women groups. The indirect project beneficiaries from the initiative was estimated at 3,500 people of which about 52% are women. The estimate was based on analysis of the livelihood support value chain provided to the immediate households, their extended families and the communities in which they reside.

One critical outcome from the CWP-Ghana project implementation is ensuring stakeholders work in a holistic manner to working in silos. For instance, the WACDEP project implementation led to the establishment of a 9-member technical project management coordinating team. Participants mutually agreed to appoint two women into the 9 members team to ensure interventions are gender inclusive at all levels of the project implementation. The institutional coordination was further strengthened with the signing of the MoU between WRC and implementing partners and the capacity building through training provided to stakeholders throughout the project implementation processes.

After the project implementation, some communities continue to raise seedlings and plant same along the buffer strip of the White Volta River Basin.

**Stakeholders**

Some key actors who supported the implementation of the WACDEP project include:
- Forest Services Division, Bawku Municipality;
- Forest Services Division, Bolgatanga;
- WRC-White Volta Basin Secretariat/River Basin Officers;
- District Department of Agriculture, Bawku;
- District Department of Agriculture, Binduri;
- District Department of Agriculture, Bongo.

**Conclusion and lessons learned**

The WACDEP field demonstration project clearly demonstrated that providing alternative livelihood support to farmers incentivize them to contribute to greening the river banks. As climate change was and is a cross-cutting issue in the national development agenda, WACDEP implementation contributed to the design of approaches to achieve community resilience also, it fostered planning and institutional coordination on water security and climate resilient development across scales.

Key lessons learnt from the implementation of WACDEP field interventions are highlighted below:

- the WACDEP success is based on its ability to maintain stakeholder dialogue along the entire project implementation cycle. The implementation team organized periodic meetings to solicit stakeholders feedbacks while providing updates on the project activities. This help secure stakeholders buy-in and ownership;

- ensuring women participation and inclusion has to be deliberate by raising open discussion involving all stakeholders. The discussion helped to reduce biases and male dominance;

- the training of community members on nursery and small ruminant (goat) rearing led to the establishment of a nursery and small ruminant sub-committees in some project communities. The development of community members’ skills served as means of alternative livelihoods. For instance, the nursery sub-committee members, upon raising seedlings sell some and also make donation in order to continue with greening the buffer zone. Communities are willing to participate in natural resource governance when the overall benefit is directly linked to their livelihoods;

- WACDEP’s intervention has improved understanding of project stakeholders including community members regarding water resource management and protection employing local measures for ecosystem restoration;

- The joint stakeholder forum held for implementing partners and beneficiaries allowed for learning and sharing of best practices across communities.
Quotation from Main Stakeholders

“The WACDEP project though ended, has entered the sustainable management phase based on the implementation strategy adopted. Nurseries are raised and planted at Tampezua and neighbouring each year, while successive project beneficiaries transfer the small ruminants gained from the project to yet-to-benefit women in the parent community” – Mr. Charles Akwotiga (Retired), Municipal Director - MOFA, Bawku.

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Keywords: Livelihoods, Water security; community; resilience; planning;

Supporting information/references already published
Setting the national context

Since 1994, Ghana has made strides in its development efforts through integrated social and economic policies and programmes that have been developed under comprehensive planning cycle frameworks to boost growth and sustainable development. These policies and programmes have been targeted at reducing poverty, increasing access to basic needs including water supply and sanitation services, enhancing the quality of life, improving socio-cultural assets, minimizing environmental degradation and promoting good governance. The achievement of these goals has largely hinged on the development and management of water resources that is defined within the context of the National Water Vision, the West African Water Vision, the African Water Vision, the New Partnership for African Development, and the Sustainable Development Goals.

The National Development Planning Commission (NDPC) prepares Guidelines for Metropolitan Municipal and District Assemblies (MMDAs) to develop Medium Term Development Plans (MTDP) for a period of 4 years. In the past, water resources management received little attention in the national development planning space, probably due to a ‘myth’ of abundance of freshwater in the country, but which in reality remains vulnerable and critical to the socio-economic development. Furthermore, MMDAs at the local level focused on water supply services delivery with little/no consideration for water resources management and water security in their development plans for funding. Yet, the National water vision (2007) emphasized that advancing water resources management by all for all provided an avenue for contributing to the country’s economic development.

GWP/CWP engagement with NDPC resulted in inclusion of water security as a cross-cutting theme in the Guidelines to Ministries, Departments and Agencies (MDAs) and MMDAs during the 2014-2017 planning cycle. The effort to sensitize the citizenry and analyze action towards minimizing the threat to water resources was a welcome endeavour, The Water Climate and Development Programme (WACDEP) in Africa is an initiative arising from the 2008 Sharm El Sheikh Declaration by African Heads of State that calls among others, to mainstream water security and climate resilient development into national development planning processes and ensure predictable financing.

Why promote and facilitate water security mainstreaming into development planning processes and implementation?

The promotion and facilitation of water security mainstreaming into development planning processes and implementation was initially realized from the need to transform policies, resource allocations and practices to promote desired national and local developmental outcomes with regard to the water sector and water related sectors and support integrated solutions.

Water in its various occurrences, management and uses are essential components and has always played a central role in human societies. Sustaining that role requires that the pursuit of water security, which, is defined as «the capacity of a population to safeguard sustainable access to adequate quantities of and acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability» (UN-
Water, 2013), features more prominently in the country’s long term development agenda. The existing water security issues and the competition between the economic sectors are related mainly to the levels of development and management of water resources to meet all uses.

Accordingly, CWP used a blend of planning tools to respond to the water security issues relating to the different water uses and economic sectors. For instance, a water security issue is dealing with industrial and agro practices that are damaging water resources and ecosystems and creating ecological processes that are not easily reversible. An example is the hitherto unregulated activities of small-scale miners, which is largely concentrated in the southwestern river system. Water quality analysis carried out in 2016 revealed that 61% of the main rivers were of poor ambient water quality of which 15% were in critical condition. This has been largely responsible for the deterioration in the quality of some rivers and water bodies, thereby affecting the provision of clean and safe water for the population and for agriculture production; and loss of habitat for aquatic life, among others. However, the institution of targeted planning regulation and enforcement tools contributed to improve the condition of water bodies. By the end of 2018, the poor ambient quality status of rivers had dropped by 14%, suggesting that 53% of rivers had good ambient water quality. The “fight” against illegal mining in rivers and streams is critical and remains a key measure that has contributed to the gains made.

The pursuit and sustenance of water security is now seen as central to the country’s development agenda and therefore the recognition that it should be given a well-deserved space in the national development agenda and practice.

### Water security, integral to national and international commitments

The National Climate Change Policy (NCCP) and Strategy provides the blueprint for Ghana’s response to the adverse effects of climate change. It is acknowledged that water is a key medium through which climate change manifests and impacts lives. At the same time, water offers pathways by which climate change impacts could be minimized and improve human well-being.

Ghana is a State Party to the Paris Agreement and therefore enjoined to prepare Ghana Nationally Determined Contributions (Gh-NDC). The Gh-NDC, which is under the auspices of Ministry of Environment, Science Technology and Innovation (MESTI), defines mitigation and adaptation measures to greenhouse-gas-emissions in order to combat climate variability and change. It provides a consolidated framework and programme of action on water that prioritizes Integrated Water Resources Management (IWRM), outlining five strategic objectives including:

1. Strengthening the regulatory framework for managing and protecting water resources for water security and enhanced resilience to climate change;
2. Improving access to water resources knowledge base to facilitate water resources planning and decision making;
3. Improving institutional and human resource capacities for IWRM implementation at all levels;
4. Enhancing public awareness and education in water resources management issues; and
5. Enhancing trans-boundary and international cooperation in the management of shared water resources.

The objectives reinforce the need to strengthen water security related efforts for enhanced participation of decentralized administrative authorities, sustainably finance projects to improve water resources availability for the wellbeing of the population.

Sustainable water resource management by all for all requires participatory approaches and a critical focus on the resource to ensure its preservation for the present generation and posterity. The MMDAs have a key role, recognizing their centrality to development at the local level. The MMDAs provide the setting for projects admission and implementation. As a result, the MTDP should be coherent and mutually reinforcing with national water resources frameworks for the promotion and implementation in their jurisdiction. Fur-
ther, the MMDAs have the authority to rally technical expertise for coherent planning and mobilization of financial resources for implementation of actions towards safeguarding the environment, particularly water resources.

### Actions Taken and GWP’s Contribution

**Outline the process of water security mainstreaming**

The Water, Climate and Development Program in Africa (WACDEP) was initiated by the African Ministers’ Council on Water (AMCOW) from the 2008 Sharm El Sheikh Declaration by African Heads of State that called for among others, to mainstream water security and climate-resilient development into national development planning processes and ensure predictable financing. As a result, WACDEP was developed and implemented by Global Water Partnership (GWP) in collaboration with other partners. The process of mainstreaming water security started at WACDEP project preparation stage in 2013 through 2014. Firstly, the CWP-Ghana Steering Committee (SC) was expanded to include NDPC, and the Ministries of Sanitation and Water Resources (then MWRWH) and Local Government and Rural Development (MLGRD). The expanded SC was referred to as WACDEP Technical Working Group (TWG) to oversee WACDEP implementation. This step provided a platform for institutional engagement, building bridges for common understanding, and enabled definition of the entry points for water security mainstreaming into national development planning framework.

Next, the WACDEP TWG undertook a study, “Review of National Policies, Strategies and Programmes in the context of Water Security and Climate Resilience” to provide the project partners insight into strategic frameworks for water security implementation in the water, food, energy and environment sectors.

The study was intended to specifically; (i) ascertain the extent and limitations of national policies, strategies and programmes of the NDPC and the Sector Strategic Development Programmes (SSDPs) in the context of water security and climate resilience; (ii) ascertain the Sector Policies and SSDPs (long and medium term) including the water and water related projects/plans are screened and accepted as fundable investments to guarantee no/low regrets.

While the study sought to appreciate the alignment of national frameworks in the context of water security and climate resilience, the TWG was mindful that the eventual screening tool or procedures, would be simple and user-friendly. The study revealed the inadequacies of mainstreaming water security, particularly IWRM into the system of national development planning, especially at DAs level.

The NDPC hosted the study report validation workshop, which was co-chaired by the Director General and Executive Secretary of NDPC and Water Resources Commission (WRC) respectively. Both chairmen underscored the fact that water security needed prominence in the planning and implementation space of national development, considering the worrying trend at which water resources were deteriorating in the country. This mutual remark increased the need for a nationwide engagement with planning and budget officers of MMDAs towards mainstreaming water security into their MTDPs.

Following the study, the NDPC, WRC and CWP-Ghana jointly harnessed information in the report, among others to produce the document, “Screening for water security in national development planning”. This document sought to enrich engagement with MMDAs, providing pathways to mainstream water security into the MTDP, and to screen interventions for implementation. It highlights the guiding principles and measures that promote water security interventions for which MMDAs were enjoined to incorporate in their MTDP plans. The screening tool on the other hand, provides a checklist for project structuring and identification of risks to water resources and related ecosystems at the stage of implementation.

The next stage was to engage planning and budgeting officers at Regional and District Coordinating and Planning Units at the regional level across the country on the “Screening for water security in national development planning” document. The then ten (10) regions were grouped into two (2) zones, A and B. Zone A comprised of Northern, Upper East, Upper West, Brong Ahafo and Ashanti Regions. Zone B encompassed of Eastern, Volta, Central, Western and Greater Accra Regions. This arrangement with concurrent implementation required two sets of facilitators, necessitating WRC and CWP-Ghana to collaborate to make up for the teams. CWP-Ghana, WRC Basin Officers (Ankobra and White Volta basins) and NDPC jointly carried out a nationwide technical backstopping campaign to assist
216 MMDAs and 10 Regional Coordinating Councils mainstream water security into the MTDP of the DAs while ensuring their resilience to climate variability and change. Ten (10) regional workshops were organized for District Development Planning and Budget Officers to provide technical backstopping to the Plan preparation process while introducing the water security measures and screening tool. An interactive session allowed for discussion of gaps identified in relation to water security and the screening tool. The screening tool, in electronic format was disseminated during the workshops.

**GWP contributions to the mainstreaming process**

The contribution of GWP in the process in Ghana revolves around the following areas: Technical and Advisory, Legal and Institutional strengthening, Communication and Financial.

The NDPC delivered the Keynote address during the launch of WACDEP in Ghana. The discussions that ensued favoured incorporation of "water security" as a cross-cutting issue in the National Development Planning Guidelines (2014-2017) to the sectors and MMDAs. GWP was involved at every stage of the mainstreaming process from conception of the study through validation, facilitating decision making of the WACDEP TWG and implementation of the guidelines. The initiation stage was marked by the project formulation in which the Steering Committee largely engaged the relevant stakeholders to provide support to the project. GWP was instrumental in the establishment of platforms for stakeholder engagement by facilitating dialogue across stakeholder institutions.

Following submission of revised MMDA MTDPs, CWP-Ghana participated in the vetting session of the Plans by NDPC to assure the incorporation of cross-cutting themes including water security and climate resilience. The NDPC opined MTD Plans responded fairly to water resources related and security issues which hitherto, was not the case.

Through WACDEP, the NDPC designated a “focal person” to be responsible for GWP collaboration and engagements. As a result, the focal person participated in the WACDEP capacity building programme implemented during 18 month in collaboration with the United Nations Institute for Training and Research (UNITAR), leading to improvement in knowledge on "Economics of Adaptation, Water Security and Climate Resilient Development" thematic areas.

The nationwide tour to promote Guidelines for water security tool furthered interaction between NDPC/WRC-Basin Offices/CWP-Ghana with Planning and Budget Officers of District Assemblies across Ghana. The meeting provided technical backstopping to water security mainstreaming in the planning cycle. GWP provided funds to carry out the study on water security, organize validation workshop and partly supported financially NDPC to embark on the nationwide tour to engage the Development Planning and Budget Officers of District Assemblies and Regional Coordinating Councils.

### Results and Outcomes

The initiative resulted in mainstreaming of water security into national development planning processes. As a result, WACDEP laid the foundation for engagement with the relevant stakeholders and enabled mainstreaming of related measures into District MTDP at the local government level.

The mainstreaming process achieved the following:

- strengthening capacity of a key NDPC staff dedicated to water security related issues;
- NDPC endowed with the screening tool (Guidelines) to adequately analyse water security issues and mainstream for development planning;
- the “Screening for water security” document, adopted for water security and climate resilient mainstreaming at the lowest appropriate level;
- water secure and climate resilient measures promoted towards protecting water resources and limiting the potentially negative impacts on the resource;
- the process adopted by WACDEP to identify gaps for integrating water security in Ghana’s development planning landscape at the lowest appropriate level while contributing to tools proposed for same, gained high acceptability and support from NDPC and WRC.

Despite the favourable interactions that enabled water security mainstreaming, logistics did not allow for full scale engagement with the DAs. The related “Screening for water security” document is in electronic format and the interactive session with District Planning and Budget Officers was limited, thereby limiting the tool’s appraisal at that level.

Continuous capacity building and campaigns to provide technical backstopping to highlight the threats to water systems and inform decision making remains important to achieve water security.

Key actors influenced in implementation of intervention are:

- National Development Planning Commission;
- Water Resources Commission/River Basin Officers;
- Development Planning and Budget Officers at District Assemblies, and;
- Regional Planning and Coordinating Unit (RPCU) Officers at Regional Coordinating Councils.
Water security mainstreaming into national development planning processes was enabled by GWP in Ghana during the 2014-2017 planning cycle. GWP intervention was in the context of WACDEP initiative, an initiative responding to the Sharm El Sheik Declaration by Heads and Governments of African States. The period witnessed collaboration between the relevant stakeholders including WRC and NDPC, whose effort contributed significantly to the development of Guidelines for water security mainstreaming into development plans. The Guidelines contain guiding principles, measures and screening tool for identification of risks related to project implementation. Development Planning and Budget Officers at the lowest appropriate level were engaged to take into account water security. Great results have been achieved which, at the same time, need to be sustained.

The national development planning landscape provides opportunities for understanding the requirement and integration of issues critical to the country’s socioeconomic advancement. Some lessons include the following:

- the consideration of water security in the 2014-2017 Medium Term Development planning process afforded interaction among the relevant stakeholders and enabled mainstreaming into the national planning landscape;
- capacity development of District Assembly Planning Officers for mainstreaming water security related issues should be enhanced;
- accompany District Planning Officers with Screening for water security document including principles is key to the successful integration of water security measures into development plans, as well as a checklist for project structuring and identification of risks for no/low regrets investments;
- continuous capacity building provides a critical pathway to sustain the gains made. In 2018 for instance, 38 new Districts and 6 Regions were created in Ghana. Accordingly, personnel have been recruited including Development Planning and Budget Officers. The Districts will be required to prepare Medium Term Plans in response to the next planning cycle. This provides avenue to replicate the process in those jurisdictions while undertaking refresher training for ‘older’ districts officers;
- the water security cross-cutting theme in the Guidelines has undergone two cycles of implementation and the 3rd medium term development planning cycle (2022-2025) begins soon. This presents opportunity to engage the different stakeholders towards strengthening the capacity for mainstreaming water security.

**Conclusion, Lessons learned and replicability**

"The insight and tools provided by WACDEP, enabled water security issues to feature strongly, among the plethora of other equally pressing issues in our development policy and planning landscape" - Mr. Farouk Anderson, Planning Analyst, NDPC.

"The training modules in water security and climate resilience, boosted my capacity in IWRM and water related issues. At the Regional Planning and Coordinating Unit (RPCU) of the Upper West Regional Coordinating Council (UWRCC), I supported MMDAs to integrate water security and climate resilient strategies in their Medium Term and Annual Action Plans since 2016. Further, I made inputs to the RPCU Performance Monitoring Checklist, which has contributed to improved service delivery in the districts and region. Indeed, the engagements were timely and useful" - Mr. Oswald Baloo, Development Planning Officer at UWRCC.
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Contact of Key people involved

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Keywords: Water security; mainstreaming; resilience; planning; cross-cutting

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Since the end of the 2000s, Benin has put in place several important instruments for the operationalisation of Integrated Water Resources Management (IWRM). These include the 2009 national water policy, the 2010 water management law and the first National Action Plan for Integrated Water Resources Management (PANGIRE) implemented over the 2011-2015 period. This progress was achieved with the financial support of the Netherlands through the Multiannual Support Programme for the Water and Sanitation Sector (2007-2012) and the Partnership for Africa’s Water Development (PAWD II - 2005-2010). From 2007 to 2012, CWP-Benin participated in the joint implementation, with the Directorate General for Water (DGEau), of component 4 of the PPEA, entitled «Support for the IWRM process». It has initiated, with its Local Water Partnerships (LWP) and other stakeholders, pilot actions on five sites, including the Porto-Novo lagoon.

This lagoon, with a surface area of 35 km², is the most important waterway in Benin. It flows eastward, parallel to the Atlantic Ocean, and empties into the Lagos Lagoon in Nigeria. It communicates with Lake Nokoué through the Totché channel. Together with this lake and the lower Ouémé valley, it forms Ramsar site 1018. The diagnosis carried out in 2010 highlighted major problems affecting the water resources of this lagoon:

- organic and chemical pollution as well as the modification of physico-chemical conditions caused by the deforestation of catchment areas and the construction of engineering works;
- the destruction of fish habitats and spawning grounds due to pollution;
- the invasion of the lagoon by aquatic plants (water hyacinth);
- the anarchic development of inappropriate fishing practices, which have led to a reduction in aquatic biodiversity;
- the silting up and erosion of the banks due to the advanced degradation of the plant cover and the rise in water levels due to climate change.

These problems, which affect the quality and quantity of resources, exacerbate conflicts between lake fishermen and agri-fishermen and threaten the development of their activities, which, along with aquaculture, play an important role in the economy. In Benin, fishing employed around 15% of the total working population in 2013, including more than 150,000 women, whether or not they were fishermen’s wives, who were involved in adding value to fish products. Inland fishing accounted for nearly 75% of national fisheries production (90% lagoon fishing and 10% river fishing). However, there has been a decline in fisheries production and its contribution to national GDP, from 3% in the 1990s to 1.5% in 2007-2009. One of the direct consequences of the scarcity of fish resources is the sharp increase in fishing-related conflicts.

All the obstacles to the sustainable management of the lagoon’s resources have in common the lack of an adequate institutional, legislative and regulatory framework and of appropriate planning and management tools for this ecosystem at the various levels.
The IWRM pilot action Lagoon of Porto-Novo

The objective of the pilot action for IWRM in the Porto-Novo lagoon, initiated by CWP-Benin, was to set up an institutional and technical environment favourable to the sustainable inter-communal management and restoration of the lagoon in consultation with the riparian communes, the State and users. The first phase was implemented from July 2010 to December 2012 by four riparian communes: Porto-Novo, Sémé-Podji, Aguégués and Adjarra. At the operational level, the IWRM action was carried out by the Nokoué Inter-municipal Eco-Development Council (CIED), the coordination structure of the inter-municipal association. The aim was to develop the capacities of the actors and to conduct the appropriate advocacy to establish the required IWRM framework and tools.

At the end of the pilot action in December 2012, the stakeholders acknowledged that its implementation had generated several achievements, including the documentation of water resource management practices in the lagoon, the commitment of local decision-makers and users to improve consultation on issues related to the management of the ecosystem through the Integrated Management Community (Co-GIRE), governed by a stakeholders’ charter, as well as the successful testing of pilot measures to reverse the degradation of the natural resources. The initial results of this pilot action were among those that inspired the finalisation of Benin’s National IWRM Action Plan (PAN-GIRE). However, the action did not lead to the establishment of an institutional framework for the integrated management of the lagoon with the necessary competencies and appropriate regulations for the management of fishery resources and other associated resources of the ecosystem.

The CWP-Benin has therefore motivated the continuation of the pilot action GIRE Lagune de Porto-Novo in the framework of the implementation of the second phase of the PPEA (2013-2015). It has been selected as an implementing partner for the initiative concerning the further development of the national and inter-municipal framework for integrated management of the lagoon, in harmony with the texts organising decentralisation, inter-municipality and water governance in Benin.

For phase 2 of the IWRM pilot action Lagoon of Porto-Novo (2013-2015), CWP-Benin, while continuing its support to the institutional development of CIED Nokoué, focused in particular on the vote of the framework law on fishing and aquaculture, in the context of the finalisation of the Master Plan for Water Development and Management (SDAGE) of the Ouémé Basin and the elaboration of the Delta Plan. It seemed to the stakeholders that this law could facilitate the mobilisation of the investments necessary to restore and establish sustainable management of the ecosystem.

The awareness-raising activities carried out by CWP-Benin and CIED-Nokoué during the first phase of the pilot action, inviting the implementation of sectoral regulations in harmony with the basic principles of IWRM enshrined in the law on water management, led the stakeholders in the fisheries sector to become aware of the importance of the synergies to be built for the management of Benin’s water bodies and the Porto-Novo lagoon in particular. For national actors, particularly those in the fisheries sector, this pilot action was an opportunity to speed up the vote on the framework law on fisheries and aquaculture, the drafting process for which had begun in 2002 and was struggling to reach a conclusion.

It had gone through the following stages:
- the elaboration of a preliminary draft law in 2002, with the technical and financial support of the Belgian Technical Cooperation, and its transmission to the Supreme Court for its reasoned opinion;
- the withdrawal of the Supreme Court and the updating in 2008 of the preliminary draft framework law by integrating the dynamics of rational and sustainable exploitation, management and development of fisheries resources, thanks to the financial support of the United Nations Food and Agriculture Organisation (FAO);
- the request in July 2008 by the President of the Republic for a reasoned opinion from the Supreme Court on the amended preliminary draft, followed by the holding of several working sessions with fisheries sector executives;

The Delta zone includes the Porto-Novo lagoon and the Delta Plan is considered a water development and management plan for the Delta zone, which is located largely in the Ouémé basin.
- the adaptation of the draft framework law, with the support of the ACP Fish II project of the European Union in 2011, according to the observations of the Supreme Court with the participation of various stakeholders and the Directorate of Codification and Legislation of the Ministry of Justice;
- the transmission of the draft framework law to the National Assembly by the Government in February 2012;
- the holding in July 2013 of an advocacy session, instigated by the Directorate of Fisheries, by the collective of professional fisheries and aquaculture organisations with the Chair of the National Assembly in favour of a vote on the framework law;
- the holding of an exchange session on the content, innovations and added value of the draft framework law between the National Assembly and the Minister for Fisheries in October 2013. The session concluded that there was a need for an information workshop on the draft law for the benefit of MPs.

CWP-Benin and CIED Nokoué's advocacy was conducted in collaboration with the DGEau, the Fisheries Directorate (D-Pêches) and the Departmental Directorate of Water and Energy (DDMEE) of Ouémé-Plateau. The following activities marked out the advocacy process:

- inventory of the actions carried out by the Ministry of Fisheries and the existing blockages;
- identification of decision-makers, interests and alliances;
- Signature of a collaboration agreement between CWP-Benin and D-Fisheries;
- Identification by CWP-Benin of opportunities to influence legal processes;
- definition of an advocacy strategy;
- Lobbying of CWP-Benin with MPs, particularly with the Chair and Vice-Chair of the National Assembly's Planning Commission in charge of studying the draft law;
- holding several working sessions between CIED Nokoué and the D-Fisheries to prepare a visit to the lagoon by MPs and the relevant parliamentary administration (design and distribution of an information sheet by CWP-Benin);
- organisation of a field visit to the lagoon in 2014 for MPs, including an exchange with users;
- preparatory work session with the office of the Minister of Fisheries;
- holding a workshop to inform MPs about the content, innovations and added value of the draft framework law in 2014 in Grand Popo, following the field visit.

CWP-Benin and D-Fisheries convinced the MPs of the need to conduct a comparative study of the draft framework law and the 2010 water management law. The presentation of this cross-analysis of the two texts enabled the workshop participants to understand the need to ensure that the draft framework law on fisheries and aquaculture currently under study is consistent with the water law that has already been voted on and promulgated. On the recommendation of the deputies, the D-Fisheries asked the CWP-Benin to revise the explanatory memorandum for the vote on the draft framework law. Following this work, the CWP-Benin took part in the work of the committee with the deputies for the study of the draft framework law in order to provide them with additional information.

This allowed the study of the draft framework law to proceed smoothly in the plenary session of the National Assembly. The advocacy led to the vote on the draft framework law on fisheries and aquaculture in the Republic of Benin on 6 June 2014. Its promulgation formalised the existence of the framework law n°2014-19 of 07 August 2014 on fishing and aquaculture in the Republic of Benin.

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37 The ACP FISH II project aims, among other things, to strengthen the development and implementation of a sectoral fisheries policy in the African, Caribbean and Pacific (ACP) Group of States.
Main results

The adoption of the framework law on fisheries and aquaculture has made it possible to put in place an appropriate and innovative legislative framework in line with the challenges of sustainable management of fisheries resources and the implementation of IWRM. The intervention of the CWP-Benin has allowed, beyond the successful advocacy in favour of the vote of this law, the appropriation of the diagnosis of the management of this sector by the different stakeholders and their preparation for future actions. The principles and institutional framework of IWRM have been taken into account in the framework law. This work of influence of the CWP-Benin has further strengthened its credibility with the Members of Parliament and the administration of the Ministry of Agriculture, Livestock and Fisheries (MAEP). The action carried out has also enabled the DGEau to be rehabilitated in the institutional landscape of IWRM in Benin as a structure in charge of coordinating the action of the Ministry of Water with the sectoral structures, including the APRM. This led to a strong contribution by the APRM to the establishment of the Interministerial Water Commission (CIE) in October 2015 and its participation in sessions on its animation and functioning. Similarly, this advocacy facilitated the understanding of the usefulness of the PANGIRE steering committee, the clarification of the roles of the different actors and their ownership.

Several institutional actors have since taken an interest in the sector for the development of various actions, including the sensitisation of field actors to the new law.

The diagnosis made by the CWP-Benin in 2010, the information gathered during visits to users of the Porto-Novo lagoon and the explanatory memorandum presented by the Ministry of Fisheries to the National Assembly clearly indicate that the framework law on fisheries and aquaculture fills a major gap.

The new framework law opens the door to multiple investments, including in the form of public-private partnerships. It provides a basic regulatory tool to secure interventions and strengthen their sustainability. It also allows for a better codification of the institutional, technical and financial arrangements possible in the management of fisheries in Benin, including those in the Porto-Novo lagoon.

The improvement of the legislative framework has also helped to guide investments and concrete actions for the development and improvement of the governance of the lagoon. Examples include:

- the project «Strengthening Investments for Climate Change Resilient Development» (RICC-Benin) for an amount of 587,420 euros, the financing of which takes into account grant no. ML 0047 of 495,340 euros from CDSF/AfDB, 33,430 from local authorities, which constitutes a step forward in the participation of communes in actions for the sustainable management of ecosystems and their resources. The CWP-Benin contributes 58,650 euros to the implementation of the project. Its aim is to increase investments in adaptation and resilient development to climate change in order to improve the living conditions of the populations of the Lake Nokoué-Lagune complex in Porto-Novo. This project also focuses on the development of proliferating aquatic plants, notably the water hyacinth. In June 2021, a national strategy for the management of these aquatic plants was being developed.
- the government’s commitment since 2017 to clean up water bodies led by the Ministry of Fisheries, showing renewed interest in this sub-sector, with funding from the general state budget through, among other things:
  - the systematic removal of prohibited fishing gear from Lake Nokoué and the Porto-Novo lagoon, at a cost of about 150,000 euros in 2019, in order to promote exchanges between the lagoon and the lake and with the Badagry lagoon (Nigeria), i.e., almost the entire lagoon, which promotes oxygenation of the ecosystem as well as better navigability. The 2019 Agricultural Sector Performance Report estimated that over 8,000 prohibited fishing gears were removed.
  - the setting up, training and equipping of the Surveillance Unit for Water Bodies and Rivers with the recruitment of about sixty fishing brigadiers, to be trained in February 2021, to ensure the non-re-colonisation of water bodies, including the Porto-Novo lagoon, as provided for in the law.

These combined efforts to protect and sustainably manage the lagoon have contributed to a better availability of fish resources: fisheries production was around 90,000 tons excluding tuna production in 2019 compared to 71,000 tons in 2018, an increase of about 26%. The level of aquaculture production has increased from 1,300 tons in 2015 to 5,300 tons in 2019, i.e. an increase of 308%.

38 ClimDev Africa/African Development Bank Special Fund
39 Decision of the Council of Ministers of March 28, 2018, in connection with the sanitation of water bodies. The realization of a mapping of sedimentary fisheries with a view to their reorganization (Lake Nokoué and Porto-Novo lagoon) is also planned
40 This amount reported by the DG of ATDA 7 does not take into account human resources and other direct operating resources committed by the State
41 Agricultural Sector Performance Report 2019, APRM, July 2020
Lessons learned and replicability

To operationalise the IWRM approach at the country level, it is possible to engage stakeholders from a local level as shown by the example of advocacy for the sustainable management of the Porto-Novo lagoon led by CWP-Benin and its partners. An important condition is to target and engage the right actors and partners as well as the opportunities to influence governance processes.

Overall, the CWP-Benin has taken a cautious approach that emphasises sustainability over speed of implementation. Thus, the stakeholders were able to become real partners for action and actors of qualitative changes committed to strengthening the achievements and their sustainability after the end of the IWRM pilot action.

The field visit that allowed the MPs to see the extent of the degradation of Lake Nokoué and the lagoon and to exchange directly with the users and actors of the fisheries sector was decisive in the outcome, less than two months later, of the process of voting on the framework law on fisheries and aquaculture.

The availability and capacity to mobilise the expertise of the CWP-Benin for the cross-analysis of the draft framework law with the law on water management, as well as the updating of the explanatory memorandum, were also key factors in the rapid completion of the process.

Improving intersectoral governance of water resources is an important lever for mobilising the necessary investments and ensuring their sustainability.

Conclusion

The development of IWRM pilot actions has allowed CWP-Benin to test its status as a neutral platform for consultation and to reinforce its credibility, particularly with the authorities. The IWRM pilot action around the Porto-Novo lagoon has enabled local actors to become involved in IWRM: they have been able to appropriate the importance of the tools/instruments at technical and institutional levels. The successful advocacy for the vote of the framework law on fisheries and aquaculture was a real trigger for the appropriation of the importance of intersectoral dialogue and the increase of investments in favour of the development of the Porto-Novo lagoon ecosystem. In sum, a new breath of life has been given to the fisheries sector since the promulgation of the new framework law, but also to the collaboration between this sector and the water sector, which allows progress to be made in the priorities for the development of IWRM in the country.
Quotation from key stakeholders

Prosper Sagbo, Director General of the Territorial Agency for Agricultural Development Pole 7: «Yes, the adoption of the framework law on fishing has encouraged investment in the lagoon of Porto-Novo.

Bani Samari, Member of the National Assembly: «There is a great link between natural resources. When you talk about fishing, you need water first and when you talk about water, you need rain. With the climate changes we are seeing today, there is an effect on rainfall which is causing a drastic decrease in the flow of water in the rivers. Today, you can cross the River Niger on foot in some places. So, the rivers are drying up [...]. My second concern is the authorisation of industrialists to fish in Beninese waters. Fortunately, we have rejected this in our law. We must do everything to ensure that it does not reappear. Accepting it would have been a way of totally impoverishing Benin’s waters... »

Mathurin Coffi Nago, President of the National Assembly: «Today, most of our water bodies are sitting up. Their banks are completely eroded due to deforestation. There is also the transport of people and goods on the water bodies. There are bodies of water where the ordinary fisherman can no longer cast his net. If you throw the net, you risk being attacked because the acadja, which are slick dams built with branches and other materials, and which constitute fish traps, are guarded by guards. There are private properties on the water bodies (...). There has been serious social unrest and there are no more free places for individual fishermen who make up 90% of the fishing communities. The acadja, the fish traps, are installed by economic operators. We are now talking about improving the regulations, not regressing.

The only way to help the fishing community and develop fishing is to preserve the water bodies.”

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Keywords: Advocacy - Law - Fishing - Resilient Investments
In Benin, the sustainable management of multipurpose dams is a national issue. In 2008, the dam on the Okpara River, a tributary of the Oumé River, was in an advanced state of degradation, due to a lack of monitoring and a lack of investment over several years. The government attributed responsibility for financing to the Société Nationale des Eaux du Bénin (SONEB), which indicated that it did not have the required means. According to the experts, the lateral spillway of the dam could fail in case of heavy rain with very important social, sanitary, economic and environmental repercussions. There is no other way to supply drinking water to the city of Parakou, the third largest city in Benin, which had about 200,000 inhabitants in 2008 and is experiencing significant population growth.

Faced with the lack of reaction from the competent authorities at various levels, an advocacy action was first initiated in 2008 by CWP-Benin towards the government and all stakeholders in the water sector. It helped mobilize stakeholders around the preservation of the work. The main objective sought through the mobilization of political decision-makers at the national level was achieved in 2009, with the inclusion in the 2009 national budget of a first amount of 259,163 euros for the conduct of basic studies and a second amount of 670,776 euros for the implementation of rehabilitation work and the establishment of an integrated management system for the water reservoir.

Although the facilitation of dialogue by CWP-Benin led to a reaction from the authorities, the establishment of a sustainable management dynamic for the reservoir in its hydrological space remained a major challenge. The action plan adopted by all stakeholders at the national seminar on the rehabilitation of the dam was a reference tool. However, it remained to determine the means to ensure the effective implementation of the commitments made by these actors for the rehabilitation of the structure and the support to IWRM in this territory as well as the scaling up of the experience at the national level. Although firmly committed to IWRM implementation, at the beginning of 2010 the Beninese state did not have a favorable legal, institutional and technical environment. The law on water management recognizing IWRM as a priority approach was only adopted in November 2010.

CWP-Benin has therefore developed, starting in 2010, a series of pilot initiatives to facilitate the implementation of IWRM at the local level. These initiatives were partly carried out within the framework of the PAWD to support the establishment of an enabling environment for IWRM and Component 4 (support to the IWRM process) of the Multi-year Support Program to the Water and Sanitation Sector (PPEA), funded by the Netherlands.

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Case 7

Advocacy for securing the Okpara dam and access to drinking water in the municipality of Parakou in Benin

Introduction

In 2008, the Country Water Partnership of Benin (CWP-Benin) led an advocacy effort to federate the efforts of stakeholders to save the Okpara dam, then in a critical state of degradation. The initiative helped initiating a broader dialogue on access to drinking water in the municipality of Parakou. Since then, the government of Benin has been able to mobilize several dozens of millions of euros to rehabilitate the dam and secure access to drinking water for the inhabitants of Parakou.
CWP-Benin started the Okpara pilot action by organising training sessions on IWRM for central and local government officials and raising the awareness of the authorities on the need to put in place appropriate and concrete responses to local water-related issues.

The action also focused on the continued mobilisation of the Directorate General for Water (DGEau) and the municipalities to support the initiative. The intervention included, in June 2010, a participatory diagnosis of the management of the dam and its catchment area. Following the validation by the stakeholders of the diagnostic report with an action plan, the « Pilot Action to support the concerted and integrated management of the Okpara dam » project was officially launched. At the same time, the stakeholders had elaborated, under the facilitation of CWP-Benin, a strategic operational framework for the implementation of pilot actions for the application of IWRM at the local level, with a view to reinforcing the national process underway. It was a participatory strategic approach to inform the design and implementation processes of pilot actions at the communal and inter-communal levels, with the commune or an inter-communal structure as the sponsor. The proposed strategic approach included:

- capacity building in IWRM for the actors implementing the pilot action;
- design and operationalisation of a multi-actor institutional framework for coordination and synergy of the pilot action with sustainable water resources management initiatives and associated ecosystems in the intervention area;
- the development and implementation of IWRM instruments/tools and associated ecosystems;
- the implementation of physical measures to restore and/or improve the ecological status of water resources and associated ecosystems.

Concerning the Okpara dam, the project management of the rehabilitation works was ensured from 2011 to 2012 by the Territoire de Développement de l’Ouémé Supérieur (TDOS46 - Upper Ouémé Development Territory), with the financial support of the PPEA. A partnership agreement between TDOS and CWP-Benin allowed for the provision of technical assistance. The Local Water Partnership (PLE) of Borgou acted as delegated project manager. In particular, the action enabled the successful implementation of resource protection measures and the operationalisation of a consultation framework on the integrated management of the dam and associated ecosystems.

Capacity building for concerted management of stakeholders and the implementation of the participatory development and management plan for the livestock

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46 Intercommunal association made up of the municipalities of the Okpara sub-basin (N’Dali, Parakou and Tchaourou).
The process of setting up and operationalizing the CAGC around the Okpara dam has helped to experiment with the installation and animation of an OLE by the national water administration in Benin. In terms of progress in strengthening the institutional management framework of the Okpara sub-basin in terms of water governance, we note in particular:

- the realization of a summary study of the opportunity to create the Public Establishment of Inter-community Cooperation (EPCI) of the sub-basin;
- the validation of the conclusions of the study by the mayors and the decision to create the EPCI;
- the regular holding of the governance sessions of the CAGC of the dam;
- the sharing and valorization of the CAGC’s experience for the definition of the modalities of implementation and operationalization of the pilot OLEs/Local Water Committees (OLEs);
- successful facilitation of the implementation of the Okpara IWRM pilot action by the CAGC as a consultation body for stakeholders (operationalization of the corridor, maintenance of reforested sites, dialogue between the DFO, TDOS, SONEB and the Departmental Directorate in charge of water, transhumant herders and other users of the dam);
- strengthening the commitment of stakeholders to follow up on the implementation of the recommendations of the 2008 seminar on Okpara, the conclusions of which were adopted by the Council of Ministers, with the holding of a workshop to review the implementation of these recommendations in 2014.

The smooth functioning of the CAGC and the processes it has facilitated demonstrate the need for this body to enable all stakeholders to dialogue on the issues at the heart of the pilot action.

Thanks to the facilitation of the CAGC and the continuous dialogue involving all stakeholders, the IWRM pilot action has resulted in the strengthening and maintenance of the government’s commitment to increase the means for improving and securing the drinking water supply in Parakou. The development of the city’s Sanitation Master Plan in 2014 and the mobilisation of funding for other projects have enabled the CAGC member authorities to better understand the water and sanita-
tion problems. Similarly, the workshop on the implementation of the recommendations of the Okpara seminar enabled decision-makers at different levels to support projects aimed at rehabilitating and sustainably managing the dam and securing access to drinking water for the people of Parakou. Members of Parliament and Ministers have shown great interest in these projects, as has the President of the Republic, who visited the Okpara site on several occasions between 2014 and 2016.

Continued targeted advocacy, especially towards the authorities of the Ministry of Water and the MPs, has contributed to the government’s continued efforts to regularly allocate financial resources for studies and basic works. According to SONEB, during the 2010-2020 decade, nearly 44 million euros have been mobilised for the realisation of three structural drinking water supply projects in Parakou, including 20.6 million from the West African Development Bank (BOAD), 2.25 million from the national budget, 11.3 million from a private partner and 9.5 million from SONEB’s own funds. These investments are divided mainly into two components: rehabilitation work on the Okpara dam\(^\text{48}\) and strengthening the drinking water supply system\(^\text{49}\) in Parakou and its surroundings\(^\text{50}\).

### Lessons learned and replicability

At the end of the implementation of the pilot action to support the concerted and integrated management of the Okpara dam, several lessons were learned:

- IWRM pilot actions that integrate advocacy activities with the promotion of a local water body help to establish a functional multi-stakeholder dialogue and facilitate both the understanding of IWRM and the mobilisation of financial resources to ensure water security.
- The establishment of a mechanism for continuous monitoring of advocacy recommendations is essential to keep all stakeholders mobilised around the initial momentum and to achieve the expected results.
- The definition and implementation of local water bodies at the level of a shared ecosystem must take into account the hydrographic territory concerned, the roles and responsibilities of each stakeholder and the interests of users.

### Conclusion

The results of the implementation of the IWRM pilot action around the Okpara dam have contributed to the definition of the strategy for the operationalisation of the IWRM approach in Benin, particularly at the local level. They have also helped users, technical and political decision-makers as well as NGO actors to appropriate the principles of IWRM and to understand the usefulness of this approach.

The results of the operationalisation of the CAGC have convinced stakeholders of the effectiveness of such an institutional framework in promoting the necessary dialogue between stakeholders involved in water resource management.

The pilot action also gave visibility to the municipality of Parakou and its role in the problem of access to drinking water for the population. It highlighted the importance of sustainable management, including the monitoring and regular maintenance of hydraulic structures.

The successful advocacy around the Okpara dam is an example of an action with a strong impact on the lives of the populations with the mobilisation of the different stakeholders including the authorities at the highest level of the State for sustainable investments in favour of water security. This advocacy by CWP-Benin was the basis for its advocacy for the vote of the framework law on fisheries conducted in 2014\(^\text{50}\).

In the institutional landscape of the water sector, CWP-Benin is now recognised as an experienced structure in facilitating IWRM implementation initiatives at the local level, in support of the communes. Examples include the project to strengthen and extend the drinking water supply system in Parakou, known as the Orio project, financed by the Beninese government and the Netherlands, the GIZ’s Support Program for the Water, Hygiene and Sanitation Sector (PROSEHA) and the Omidelta Governance Component (VGO) financed by the Netherlands. On the strength of this recognition, CWP-Benin was asked by the DGEau, in charge of IWRM coordination, to define and implement actions to promote OLE in Benin.

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\(^{48}\) See case study entitled «Promoting the development of an enabling environment and pilot practices for resilient management of the Porto-Novo Lagoon in Benin.

\(^{49}\) Mobilisation of a total amount of 27.179 billion CFA francs of which 19.766 billion for phase 1 (financed to the tune of 13.575 billion by the West African Development Bank (BOAD) and 6.191 billion from SONEB’s own funds) and 7.412 billion for phase 2 financed by a private partner.

\(^{50}\) 1.552 billion CFA francs, including 1.48 billion from the national budget and 72.439 million from SONEB’s own funds, were mobilised from 2009 to 2016 to carry out these works in two phases (phase 1 from 2009 to 2014 and phase 2 from 2014 to 2016).
Quotes from key stakeholders

Samou Séidou Adambi, Minister of Water and mines/Benin: “This project also promotes the development of Parakou and makes it a dynamic economic and cultural development centre, capable of fully playing its role as a multicultural city and a driving force for sustainable prosperity and solidarity in the North.”

Sanni Fidèle Sinagourigui, DPPDRE/ Parakou Townhall: “Concerning the various conflicts previously observed between users of the resource, it should be noted that this is where the success is total. The numerous communication actions for a change in behaviour carried out towards the actors have enabled everyone to know and understand their roles and responsibilities for the preservation and safeguarding of the resource and, above all, the acceptance of the other and the spirit of collaboration.”

Camille Dansou, Director General of SONEB: “It appears that the advocacy actions and IWRM pilot activities carried out by the CWP around the Okpara have enabled all the stakeholders to unite around the sustainability of this sole source of drinking water supply for the city of Parakou. These actions have also led to a much greater interest and commitment from the government to rehabilitate the Okpara dam and strengthen Parakou’s water supply system, as shown by the structural investments made.”
Case study 7

Advocacy for securing the Okpara dam and access to drinking water in the municipality of Parakou in Benin

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Contact of key people involved

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Key words: Advocacy - IWRM - Okpara - Investments - Drinking water

51 WACDEP is an initiative of the African Ministerial Council on Water (AMCOW) following the adoption of the Sharm el Sheikh Declaration in 2008 by the African Union.
Setting the stage for IWRM investment planning

In recent times, water security has been one of the key issues confronting Ghana. As such, increasing investments for water security is key. The Water Climate and Development Programme in Africa (WACDEP) implemented by GWP from 2013 to 2019 in Ghana focused on investment planning for water security. At the conceptual stage, the investment plan targeted information management, institutional and infrastructure for water security. These types of investments are often characterized by no/low regret and contribute to resilience to climate change.

The Water, Climate and Development Program in Africa (WACDEP) is an initiative of the African Ministers’ Council on Water (AMCOW), arising from the 2008 Sharm El Sheikh Declaration by African Heads of State that calls among others, to mainstream water security and climate resilient development into national development planning processes and ensure predictable financing. WACDEP was developed and implemented by the Global Water Partnership (GWP) in collaboration with other partners. The WACDEP Reference Group at the global level visited Ghana in May 2014 invited by the WACDEP Technical Working Group (WACDEP TWG) to support discussions on the pathways for Investment Planning. The meeting enabled understanding of the enabling environment including institutions, strategies and plans, and defined entry points for investment planning in Ghana; these included investment plan for climate change policy, buffer zone policy or IWRM for a river basin. At the same time, the Water Resources Commission (WRC) was identified as the institution to lead the process and stakeholder engagement. Noting that the IWRM Plan for the White Volta Basin was due for review, the WACDEP TWG concluded on the interest of prioritizing the development of an investment plan for IWRM for the White Volta Basin. It was noteworthy that the National Climate Change Policy (NCCP) and Strategy, adopted in 2012 and 2013, provided clarity on the thematic areas to be considered such as water security and sustainable financing.

In August 2014, CWP-Ghana participated in the White Volta Basin Board (WVBB) Meeting. The opportunity afforded presentation of the investment plan preparation process for the White Volta Basin. The Basin Board members noted that the Basin IWRM Plan was due for review for which WACDEP, in implementing the investment plan for the basin could incorporate its review. To this end, GWP and partners supported the Water Resources Commission/White Volta Basin Board and implemented the process to achieve the objective of the Investment Plan.

Why stimulate investment planning for IWRM?

The bid to develop investment plan is to prioritize investment for thematic programs/projects which are critical to implementation of the basin IWRM Plan. The process allows for stakeholders to increase understanding of the costs and benefits of water security; assess resource requirements for implementing the plan; define institutional arrangements; and to propose sources of funding towards ensuring that existing and upcoming projects are adequately funded to meet the stakeholders’ aspirations.

Introduction

Global Water Partnership, in collaboration with Water Resources Commission prepared Integrated Water Resources Management investment plan for the White Volta Basin. The Investment planning process engaged public sector actors and civil society groups across Ghana. The support contributed to sensitizing stakeholders and deepening understanding of investment planning at basin scale.

Background and issues

Supporting Investment Planning for IWRM in the White Volta Basin, Ghana

Case 8

Introduction

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15https://au.int/sites/default/files/decisions/9558-assembly_en_30_june_1_july_2008_auc_eleventh_ordinary_session_decisions_declarations_tribute_resolution.pdf

16In the frame of WACDEP implementation in Ghana, the CWP-Ghana Steering Committee was expanded to include the NDPC, and the Ministries of Sanitation and Water Resources (then MWRWH) and Local Government and Rural Development (MLGRD), which was designated as the WACDEP Technical Working Group (TWG) to oversee the project implementation.
Establishing the process of IWRM Investment planning for the White Volta Basin

The support for investment planning for water security and climate resilient infrastructure (natural and built) began by defining a roadmap. The WACDEP Reference Group supported this effort, and outlined a series of steps/engagements, implemented the same for stakeholder buy-in. A stakeholder mapping analysis identified the relevant institutions to engage for the smooth implementation of the roadmap. The WRC was identified to lead the process of preparing the IWRM investment plan, liaising with the relevant ministries and agencies.

The Investment Forum

WRC organized a White Volta Basin Board Meeting in August 2014 and GWP was invited to make a presentation on Investment Plan preparation for the Basin including update of the IWRM Plan. Also, the opportunity afforded presentation and discussion of the Terms of Reference to engage a consultant for the elaboration of the investment plan for the White Volta River Basin. The comments received on the ToR were incorporated and enabled recruitment of the consultant. At the Board meeting, the need to establish a wider platform for consultations and follow-ups towards consolidating information and data exchange and enhance ownership of the Investment plan preparation process was identified. Thus, the idea of setting up an investment forum was adopted. Taking a cue from the expansion of the CWP-Ghana Steering Committee to create the WACDEP Technical Working Group at national level, the WVBB was expanded to include other relevant institutions to form the Investment Forum. The Forum served as platform for consultation, planning and validation of deliverables of the consultant. The Forum included water users, district assemblies (DAs), regulators, data generation, civil society organizations, traditional authorities and development partners.

It is worth noting that the DAs are in charge of making decisions related to planning and investments. The DAs contributed to discussions about the needs, costs and financing options of thematic programs/projects in the investment plan.

The first workshop of the Investment Forum (expanded WVBB) was held at Bolgatanga in January 2015 involving forty-four (44) participants. The 3-day meeting allowed for discussions of the Investment Plan preparation process for the White Volta Basin. Among others, participants reviewed the IWRM Plan (2008) for the Basin and agreed to the need for review to take into account emerging issues.

The second workshop of the Investment Forum was held at Bolgatanga in November 2015 involving thirty-five (35) participants. The workshop validated the Technical Background report and Investment Objectives report, and saw the Prioritization of thematic Programs of the IWRM Investment Plan. The workshop
coincided with the visit of GWP-WA delegation to the field demonstration area.

The third workshop of the Investment Forum was held at Bolgatanga with forty (40) participants in August 2016. The workshop validated the financing strategy and Overall Investment Plan for the White Volta Basin.

**Setting IWRM Investment Priorities**

A background technical report was prepared for the development of the investment plan. The report allowed for assessment of water resources, detailing the issues that confront the sub-sector in the White Volta Basin. A key reference used was the Strategic Environmental Assessment (SEA) tool developed by government agencies for the water resources, environment and related sectors with focus on environmental sustainability. The SEA tool for the water sector was developed in 2006, and applied subsequently to the National Water Policy, Buffer Zone Policy, National IWRM Plan, and River Basins IWRM Plans development. Thus the SEA tool for the water resources sub-sector was applied for scoping of the issues/problems and the top ten (10) included in the plan. The solutions were assessed based on their importance, magnitude, permanence and cumulative effects. The SEA tool assigns weights to the effects and the highest scores signify importance to national/international interests, major positive effects, permanence of effects of the actions and cumulative and synergistic effects of the solutions/actions to the problem. In addition, the weighting process was adapted, for which a complementary screening tool - taking into account sustainability, resilience, cost, economic values, ease of implementation, maintenance and effect on the marginalized and vulnerable including women and children was developed and validated at the Investment Forum. This allowed for re-ranking the proposed actions/solutions.

The problems and defined optimal solutions formed the basis for the formulation of investment objectives for the plan. The objectives were widely disseminated and inputs made for presentation and adoption by the Investment Forum. The objectives, among others, are: enhancing coordination, capacity and knowledge exchange for water resource development and management; improving knowledge on climate and integrated management of water resources for sustainable utilization; and creating climate resilient infrastructure for water resource development and management. The three objectives have five thematic programs/projects including: strategic knowledge management and communication; robust governance for water resources infrastructure in the basin; robust decision support system for ground and surface water; resilient and healthy water resources system (natural); and resilient water infrastructure (built).

The consultation and further analysis of problems and related actions noted that strategic knowledge management and exchange is critical. Therefore, implementing the program/project in the basin would tend to rally support through strategic communication towards ensuring sustainable management of water resources infrastructure in the basin. Managing the knowledge base of water resources in the basin would ensure sustainable exploitation of resources, protection of natural water courses, proper utilization and maintenance of built water infrastructure, and proper environmental conduct. Also, the actors noted that the built infrastructure was inadequate to harvest and store rain/runoff water yet ranked last among the five thematic program areas. Understandably, the provision of water infrastructure without the preceding programs will render them ineffective and likely abuse. For instance, water infrastructure made available to communities will be resilient where the resource base is of good quality underpinned by effective governance systems and procedures. The thematic programs are in sync with national development aspirations, and they can be implemented in phases through the forecast period.

**Investment Plan Costing**

The cost of implementing the IWRM Investment Plan over a 20-year horizon (2015 - 2035) in the White Volta Basin was estimated and projected at 2.4 billion United States Dollars. This covers the costs of actions under the prioritized programs. Costing of programs/projects relied on allocation and disbursement data and investment trends for water resources at national and some specific basins and donor support. Historical data of water and water related projects was sourced from AID DATA website to support costing of the programs/projects under the IWRM Investment Plan.

**Financing Strategy**

There are three main sources of financing water resources and related infrastructure in Ghana. They are public investment budget including Internally Generated Funds (IGF) and water abstraction Fees, bilateral and multilateral cooperation, and private sector financing. For instance, in the White Volta Basin, funding of water resources is largely driven by Government of Ghana and donor grants.

Together with the development of the Investment Plan, an IWRM Investment Plan financing strategy was outlined towards identifying the pathways to secure funds to implement the programs/projects. Existing financing arrangements were analyzed in the context of strategies for promotion and implementation of the White Volta Basin Investment Plan, and based on three
scenarios namely: business as usual; realistic; and optimistic scenarios of funding the programs/projects over the 20-year plan horizon.

The business-as-usual scenario provided a baseline for financing water security related projects in Ghana. The Available data on past and ongoing water resources related programs/projects suggest that funding is donor driven. In the last decade, however, low interest loans had replaced pro-poor donor support owing to improvement in the economic condition of the country. Secondly, the realistic scenario looked at existing opportunities within the country and external sources to bridge the financing gap between the business-as-usual and the actual project cost/needs for the plan period. Thirdly, the optimistic scenario allowed for procurement of sufficient funds to implement the programs/projects.

The optimistic scenario identified innovative approaches to secure funding including the following:

- **special Purpose Vehicle**: Development of a Special Purpose Vehicle (SPV) to attract investments for the development and continuous maintenance of water resources and related infrastructure in the basin;

- **special Tax/Levy** on Mineral, Petroleum, and rock resources exploration companies which have direct bearing on water resources in the basin. It is expected that the effective implementation of this special levy will improve financing and thereby strengthen water resources governance in the basin. The WRC is exploring ways to operationalize this proposal;

- **upward revision of Water Resources Abstraction Fees**. This strategy will seek to revise the relevant sections of the LI 1692 to allow for increasing rates charged for using water resources for commercial purposes. However, this proposal has not been implemented yet;

- **fundraising and proposal development secretariat**: A fund raising secretariat was proposed with sole responsibility of identifying funding sources and working at winning such funding to support various projects and programs in the basin would prove very useful in the long run. The Planning Unit at WRC leads preparation of project proposals, playing the role of the proposed secretariat;

- **district Assemblies’ Common Fund**: This strategy proposes the direct deposition of 5% of the Assemblies’ Common Fund of all the districts and municipalities within the basin to a central account established by the basin secretariat for use in developing and maintaining water resources natural and built infrastructure, and for supporting water governance in the basin.

**GWP contributions to IWRM investment plan preparation**

GWP played a key role in the IWRM investment planning process including financial, technical and advisory support services, taking advantage of the global network of partners. GWP demonstrated leadership in IWRM investment planning process and provided the expertise to shape the outcome of the initiative. For technical assistance and advisory services, GWP through the WACDEP Reference Group initiated discussion with WACDEP TWG during a working visit to Ghana in 2014. This afforded deliberations on options for investment planning in the water resources sub-sector. The WACDEP Project Management Unit (PMU) outlined a roadmap and engaged the relevant stakeholders for their buy-in. GWP led preparation of Terms of Reference for the study and guided the outline of deliverables of the IWRM investment Plan.

The 7th WACDEP Technical Coordination Meeting was held at La Palm Beach Hotel, Accra in October 2015 and brought together participants from across Africa, WACDEP Reference Group and GWPO. The meeting afforded presentation on progress of the Investment Plan preparation process in Ghana. The presentation generated discussions and inputs were made in respect of the investment objectives and thematic programs/projects. The invaluable contributions helped to fine-tune the objectives and thematic areas while ensuring that they were in sync with national frameworks.

Furthermore, WACDEP PMU provided logistical and technical support at stakeholder consultative meetings. Also, the PMU facilitated meetings of the consultant with the relevant stakeholders to solicit information.

GWP set up investment forum to facilitate dialogue, deliberate on deliverables of the consultant and provided perspectives for the investment planning process.

At every stage, the PMU engaged the WRC/WVBB through the Basin Officer, ensuring the same level of understanding to maintain confidence and trust in the process.

Finally, GWP provided funds for the cost of consultancy, provision of logistics and operationalization of the investment forum meetings. It should be noted however, that WACDEP also benefited from in-kind contributions including by key institutions through use of conference facilities.
Results and Outcomes Achieved

The development of an IWRM Investment Plan for the White Volta Basin was successfully brought to fruition. Related results include the following:
- Establishment of Investment forum platform of stakeholders to validate reports and deliberate on issues.
- White Volta Basin IWRM Investment Plan.
- A validated Technical Background Report on water resources.
- A validated Investment Priorities Report.
- A validated financing strategy report.

The experience acquired from the IWRM investment planning process in the White Volta helps to undertake similar actions in other basins in the future.

Key actors influenced in implementation of intervention are:
- Water Resources Commission/White Volta Basin Officers;
- National Development Planning Commission;
- Development Planning and Budget Officers at District Assemblies;
- Regional Development Planning and Coordinating Officers;
- Environmental protection Agency, Bolgatanga;
- Forestry Commission, Bolgatanga;
- Minerals Commission;
- Department of Women, Bolgatanga;
- Northern Development Authority (then Savanna Accelerated Development Authority).

Developments following the adoption of the Plan

As part of efforts to implement the IWRM Investment Plan for the White Volta Basin, WRC is continues to explore opportunities in government financing arrangements and collaboration with development partners. Recent initiatives included notably:
- Dredging
- Blue Deal project
- GCF project proposal

GWP supported IWRM Investment planning in the White Volta Basin. Recognizing the novelty of such a process in the water resources sub-sector, expertise was drawn from GWP global network to elaborate roadmap for implementation. Strong stakeholder engagements afforded prioritization of actions and programs/projects to improve the socio-economic aspirations of populations. The contributions made by actors at the investment Forum was healthy and at the same time, afforded learning. A financing strategy identified some approaches to raise funds to implement projects that enhance water security and resilience development. The experience of IWRM investment planning in the White Volta basin offers opportunities for replication in other basins in the country.

Lessons learned include the following:
- the development of investment plan for the water resources sub-sector was a novelty that needed guidance for smooth implementation. The GWP Reference Group-led discussion allowed for further reflections on opportunities to demonstrate its feasibility.
- a programmatic approach for IWRM investments has been tested and adjudged viable by stakeholders in the White Volta Basin. Thus, soft aspects of the Plan including governance and effective information exchange should be implemented towards enhanced awareness creation before the hard aspect of infrastructure (natural and built) is introduced.
- the scale of economic analysis (including cost and benefits) of programs/projects outlined in the IWRM investment Plan provides preliminary consideration for further in-depth appraisal.
- the close collaboration with WRC/WVBS and Basin Board members was key to foster understanding of the process by the major actors that has led to the Investment Plan.
Supporting Investment Planning for IWRM in the White Volta Basin, Ghana

Quotation from Main Stakeholders

“Development of the Investment Plan is only the first step. It is obvious that partnership is a critical element that is required to broker funding for the interventions defined in the investment plan. The Government and allied agencies understand that international and regional funding opportunities are available for mobilization of funds and continues to be a priority.” - Mr. Ben Ampomah, Executive Secretary of WRC.

Acknowledgement of GWP Contribution

The Executive Secretary of WRC has noted that the initiative and contribution of GWP in the conceptualization and support in the development of the investment plan was much appreciated. Specifically, the GWP Ghana is acknowledged for creating the awareness and supporting the process and for providing clarity on the water resources sub-sector investment planning process. GWP also provided capacity development in economics of adaptation under the WACDEP programme. It entailed training of personnel from key ministries and other government agencies on mainstreaming water security and climate resilience in the planning and implementation of national development projects and programmes, with priority to no/low regret adaptation options.

Contacts and Supporting References

- National IWRM Plan (2012)
- National Climate Change Policy (2013)
- WACDEP Project Document (2013)
- Water security and climate resilience study report (2014)
- Water security and climate resilient study validation report (2014)
- Capitalisation Draft report (2016).

Contact of Key people involved

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Keywords: Investment; financing, planning, resilience; forum;
Case 9

Cooperation for investment planning for green growth and poverty reduction in the Mekrou transboundary sub-basin in West Africa

Introduction

The Global Water Partnership West Africa (GWP-WA) and the JRC/EU58 accompanied, from 2014 to 2017, the three States crossed by the Mékrou River (Benin, Burkina Faso and Niger) in a concerted strategic planning process to support sustainable development in the basin. The implementation of the Mékrou project has enabled the collection of scientific data on water resources and associated natural resources. It has also led to the establishment of a framework cooperation agreement between the three States and a Master Plan for Water Development and Management (SDAGE) with an investment plan at the sub-basin level.

Background and issues

The Mékrou River sub-basin, located in the Niger River basin and shared by Benin, Burkina Faso and Niger, covers an area of 10,500 km². This area is confronted with the unsustainable management of its natural resources and in particular its water resources, which are subject to competing uses, in a context of worsening poverty and exacerbating the impacts of climate change. Drought is a major risk to the livelihoods of farmers in the sub-basin. High levels of poverty and poor infrastructure make people highly vulnerable to the impacts of climate variability and change. The sub-basin is home to the W Park Transboundary Biosphere Reserve, a UNESCO World Heritage Site, which is also under severe threat.

Prior to the implementation of the project, there was a lack of knowledge about the state of the water resources in the sub-basin. There was no strategic planning framework for development that would assist in its rational use and attract investment to ensure sustainable development. This is compounded by the transboundary nature of the sub-basin which is governed by various administrative, organisational, institutional and legislative arrangements. The States concerned are at different levels of developing and implementing their national IWRM plans and thus the institutional framework and instruments for water resources management.

A number of conventions and cooperation instruments already existed within the Niger Basin Authority (NBA), such as the Shared Vision, the Niger Basin Charter and the Sustainable Development Action Plan (SDAP). However, sustainable development planning was still necessary to allow the harmonious implementation of concerted actions with positive impacts for the populations of the sub-basin.

58 Joint Research Centre of the European Union

Improved ovens in Northern Benin to fight against deforestation
The Mekrou project

In response to these challenges, GWP-WA and JRC/EU, in collaboration with the three States, set up the «Water for Growth and Poverty Reduction in the Mekrou Transboundary Sub-basin» project to enable all stakeholders in the basin, including political authorities at different levels, to make better-informed decisions for the sustainable development of the area, based on agreed principles and scientific findings.

The Mekrou project was therefore conceived in 2013 as a pilot action focused on improving knowledge of natural resources to support socio-economic development efforts and the management of climate change induced impacts and risks, the establishment of frameworks and mechanisms for collaboration between States at national and local levels as well as at the level of deconcentrated and decentralised structures, and the elaboration and implementation of plans for the sustainable development and management of the resources of the sub-basin.

Two intervention components were distinguished: an institutional component, implemented by GWP-WA, to mobilise the stakeholders and ensure that their concerns are better taken into account, and a scientific component carried out by the JRC/EU to strengthen collaboration between international, regional and national scientific structures, to improve knowledge and to develop tools to support decision making. The coordination of the implementation of these two components was carried out by GWP-WA.

5 million, was provided by the European Commission (4 million) and the JRC/EU (1 million). It was implemented from 2014 to 2017.

GWP-WA approach and actions

For the institutional component, active lobbying was undertaken by the GWP-WA branches with the relevant officials in each State. The aim was to identify and involve technical staff in the ministerial departments, researchers in the scientific structures, appropriate local structures, community leaders and local elected representatives in taking into account the various concerns. Studies have been conducted to assess the current situation and propose actions in response to the priority problems identified by the actors.

The signature by the three Water Ministers of the framework agreement for cooperation and promotion of political dialogue for sustainable development in the Mekrou sub-basin was a major axis of commitment by the political actors. NBA has had an important role in coordinating the action: it has ensured its coherence with the general planning in the basin and communication with the other Member States through its bodies. Taking into account the priorities related to the W Park, including its specific environmental priorities, has informed the implementation of the project at all stages, in particular for the EU pilot actions.

In a framework of collaboration with research and training institutions, the scientific component has made it possible to produce decision-making tools to guide decision-makers and other actors in the planning process, based on existing and/or newly collected data.

The participatory nature of the action, in accordance with the second principle of IWRM, resulted in the mobilisation of the Secretaries General of the Ministries of Water, Directors General in charge of water resources, heads of deconcentrated technical services...
involved in the management of water resources, the environment, agriculture, mayors, councillors and local elected officials, heads of NGOs, user associations, research institutions, etc. All were able to appropriate the project to their own needs. All were able to take ownership of the project.

For the research component, renowned institutions participated in the action, with, at the regional level, the AGRHYMET Regional Centre (CILSS) and university structures including the National Water Institute (INE) in Benin, the Institute of Environment and Agricultural Research (INERA) in Burkina Faso and the Hydrogeology, Hydrochemistry and Isotopic Geochemistry Laboratory of the Geology Department of the Abdou Moumouni University of Niamey in Niger.

Through a comprehensive coordination mechanism led by NBA and the three States, the Mekrou project has put in place basic tools and elements to support sustainable development in the sub-basin.

The major concern of the users, which was strongly expressed during the project’s launching workshop, was the implementation of pilot actions capable of impacting their living conditions. This was taken into account through the identification, design and implementation of a pilot project in each of the three countries.

Main results

The Mekrou project has strategically helped:
- to strengthen transboundary cooperation within the framework of the commitments made within NBA by leading a consultative process on the sub-basin;
- obtain from the Ministers of Water a renewal of the commitments made through the international conventions and regional agreements ratified by the States within the framework of ECOWAS and NBA, in particular the Niger Basin Water Charter;
- to improve scientific and technical knowledge on natural resources as well as on the problem of climate variability and change in the sub-basin;
- to carry out a joint planning of the sustainable management of the resources to ensure the socio-economic development in a participative way, by taking into account the collected scientific data and information;
- to ensure the effective participation of key national and regional actors operating in the intervention area as well as beneficiaries and development actors in the implementation of the action, while taking into account the transboundary nature of the sub-basin and the importance of the W parc.

In concrete terms, the results obtained include:
- the establishment of the baseline situation of the sub-basin in the first year of the project in 2014;
- the signature of the framework agreement for cooperation and promotion of policy dialogue for sustainable development in the sub-basin by the three Water Ministers in 2015;
- the joint development by the scientific institutions and technical services of the E-Water module, an innovative information and decision-making tool at transboundary level, with a user’s manual. With 8 thematic components, it includes all the routines and simulation tools available for optimising food and water security (agro-hydrological modelling, analyses of climatic variables, socio-economic analyses).

Good practices to remember include:
- the involvement of international, regional and national scientific research and/or training institutions in the development of the E-Water module, which is functional on the computers of all project partners;
- the choice of an open-source tool for the development of the E-Water module, which avoided annual user fees;
- the provision of 5 computers/data servers including the E-Water module to INE, INERA, UAM, AGRHYMET and ABN.
Development planning and strategic framework for water security

On the basis of the results of all the studies carried out and validated by the stakeholders and in the logic of the basin approach, GWP-WA has conducted a planning process for sustainable development in the Mekrou sub-basin marked by:

- the consolidation of the results of the national studies on the identification of development priorities;
- the preparation of the Strategic Framework for Water Security (CaSSE) for the sub-basin and its area of influence;
- the SDAGE with the Programme of Measures and the Investment Plan (PMPI) for the sub-basin;
- the draft versions of three Water Development and Management Schemes (SAGE), one for each national portion of the sub-basin and its area of influence.

GWP-WA mobilised the expertise of national and regional consultants while ensuring that the contributions of key stakeholders such as the actors in charge of the scientific component were taken into account, with information and forecasts from the E-Water module to guide the decision on investment options. It has mobilised State and NBA representatives on the definition of development objectives as well as Country Water Partnerships on the animation of exchanges, the role of interface between actors and a sustained communication on the project and the results obtained.

Trained under the project, the local expertise that produced the SDAGE and the 3 SAGEs was used in Niger through the development, with financing from the African Development Bank:

- the SDAGE of the Basse Vallée de la Tarka sub-basin (Tahoua region) with an investment amount for its implementation evaluated at nearly 21.4 million euros;
- the SDAGE of the Dallol Maouri sub-basin (Dosso region) with an investment amount for its implementation evaluated at nearly 20.5 million euros;
- the SDAGE of the Goulbi N'Maradi sub-basin (Maradi region) with an investment amount for its implementation evaluated at 18.5 million euros;
- the SDAGE of the Korama sub-basin (Zinder region) with an investment amount for its implementation evaluated at 22 million euros.

The pilot projects: motivations, implementation process and results

Stakeholders involved at the start of the Mekrou project, noting that it was mainly focused on research and institutional aspects, had strongly recommended that it include pilot actions with tangible impact. The decision was therefore taken in 2016, in agreement with the European Commission, to reorganise the budget with the creation of a line and its provisioning to the tune of 150,000 euros.

Consultation with stakeholders in each country allowed the pilot project to be selected, sized and the institutional mechanism for its implementation agreed. The beneficiaries, supported by decentralised government structures, ensured the implementation under the supervision of GWP-WA and the relevant CWP.

Benin’s pilot project, entitled «Projet d’appui à la restauration des écosystèmes de la tête de bassin de la Mékrou» (Support project for the restoration of ecosystems at the head of the Mékrou basin - PAREM), focused on protection actions through reforestation of the riverbanks with 5,000 plants, of which 4,000 have survived. A 30,000-ha protection area has been delimited. It also included capacity building for women to build improved stoves, the delimitation of the protection area of the spring head, the adoption of a protection decree by the commune of Kouandé in 2017, as well as awareness-raising activities (information meetings, radio broadcasts, setting up of an environmental school club). Finally, a multi-purpose borehole was drilled. The project was implemented by the commune of Kouandé and its technical services with the communities. The local monitoring committee includes the mayor and the departmental water service. The Local Water Partnership (PLE) supervised the project. This project supported priority action n°8 of the SDAGE (protection of banks and the head of the basin). The results of this project have made it possible to develop and implement the #YourFutureYourClimate project in order to consolidate the achievements and to scale up.

The pilot project implemented in Burkina Faso, in the Eastern region, allowed for the development of a 125 km pastoral track with the installation of beacons every 200 m. The aim was to respond to the problem of herd mobility in Gourma province, which is crossed by various cross-border transhumance flows. Three supplementary boreholes and rest areas were built...
along the track. Protocols of agreement between the Matiacoali town hall in Gourma province and each of the communities concerned have been signed. The mayor’s office is responsible for the maintenance of the boreholes. However, difficulties linked to the deterioration of the security situation in the region have been noted and are preventing building on these achievements.

The pilot project in Niger focused on the development of a watering hole in the W Niger Park for wildlife, in accordance with the studies carried out under the W ECOPAS Park programme. The work involved the General Directorate of Water and Forests, the Protected Areas Division and the regional park services. For the development, unskilled local labour was recruited in the riparian villages. The project was implemented by the General Directorate of Water and Forests, under the supervision of CWP-Niger.

Each pilot project addresses a cross-border problem. It contributes to ensuring sustainable management of natural resources and to securing the transit of local communities on both sides of the borders by preventing or mitigating conflicts. These projects have made it possible to support the types of actions recommended by the SDAGE for the benefit of the populations, but also the preservation of the W Park. The signing of memoranda of understanding between the Matiacoali town hall in Burkina Faso and the various communities concerned by the marking of the cattle track and rest areas, as well as the inclusion of the protection of the headwaters of the Mékrou river by the Kouandé town hall in Benin in its communal development plan and the active involvement of the various actors in the area, are guarantees of the appropriation by the beneficiaries and of the sustainability of the results of the pilot projects.

Lessons learned from the Mékrou project

The following lessons were learned from the implementation of the Mékrou project:

- projects focusing on governance, institutional organisation or research, even if they aim to build or strengthen an enabling environment for efficient natural resource planning and management, need to include pilot physical investment actions in their design. This approach offers the opportunity to learn from these actions in preparation for large-scale investments. It also allows for ownership by the beneficiaries;

- linking the institutional and scientific/technical components carried out by independent entities, with specific mandates and capacities and separate agreements, is a possible but challenging option. This option requires a significant effort in joint planning, coordination and a real-time consultation mechanism. Formalisation of coordination processes facilitates this interaction.

An IWRM project, especially in a transboundary basin, requires intense dialogue at all scales. Building and facilitating a consultative mechanism to reach consensus requires a lot of time and resources.

Framework cooperation agreements are important tools for engaging political actors in the countries concerned.

The scale of intervention of the transboundary basin implies taking into account the levels of progress of decentralisation and implementation of IWRM in the different States.

The SDAGE, a guiding document for water resources management at the scale of a basin, is a fundamental tool opening the way to the development of SAGEs in line with the commonly defined provisions.

Collaboration between national and regional scientific research and/or training institutions in the South with their counterparts in the North in the development of tools facilitates their appropriation.

Taking into account the concerns of the populations in the implementation of a project is a means of generating interest and a strong commitment to sustainability, an indicator of ownership by its beneficiaries.

Irrigation technique used by countries in the Sahel consisting in digging a big hole to gather water flowing after rains to increase stocking capacity of water
Conclusion

The river basin is commonly considered as the appropriate planning and action space for the sound management of water resources for sustainable development. The approach to sustainable management of the resources of a basin, already complex in itself, becomes a challenge when it is transboundary and includes a natural park shared by several states and the international community, which is the case of the Mekrou River sub-basin.

The project has ensured, through the involvement of the NBA bodies and the taking into account of their orientations throughout its implementation, that the approach used and the results obtained are consistent with the commitments made by the States, the Shared Vision, the Action Programme for Sustainable Development (APSD) and the Niger Basin Water Charter, in a logic of subsidiarity. The project was based on three pillars: a political commitment at the highest level through the framework agreement for cooperation, which made it possible to mobilise the countries' stakeholders and resources; improved knowledge of the socio-economic, hydrological, environmental and climatic context through scientific and technical research and the E-Water module; and participatory planning which, on the basis of the development priorities defined by the stakeholders, made it possible to draw up a SDAGE together with the Programme of Measures and Investment Plan (PMPI) for the sub-basin.

The flexibility offered by the project to take into account pilot projects responding to the major concerns raised by the populations was an excellent thing. It is recommended that this dimension be integrated upstream in the design of similar projects.

As a result of the collaboration between the JRC/EU and regional and national institutions, and as an asset for scientists in the sub-region, the E-Water module can be used and disseminated by scientific structures, within the framework of training, studies and student theses. The challenge is now to collect and make available sufficient data to produce increasingly reliable information for planning and decision-making and to better inform early warning systems.

Finally, the results of the Mékrou project have enabled the development of the Mékrou Phase 2/Niger project in 2019. At the request of the Nigerien government, GWP-WA provided technical and financial support for the preparation of this project, in line with the CaSSE, the PMPI and the SDAGE of the sub-basin. A funding of one million euros has been granted by the European Commission for its implementation as a contribution to the PANGIRE-Niger for the period from January 2020 to the end of June 2023.

In addition, the scientific component of phase 2 of the Mekrou project has been set up for the period 2020-2022 under the coordination of the JRC/EU with a budget of 600,000 euros financed by the European Commission through its Directorate General for International Cooperation.
Quotation from key stakeholders

Robert Dessouassi, Executive Director of the Volta Basin Authority (VBA) and former Director of the Niger Basin Water Observatory: «This type of project should be duplicated for other sub-basins to better understand the specific hydro-climatic, environmental and socio-economic context in order to propose and implement consequent actions. Certainly, such a project would be very well received at the VBA level.»

Didier Zinsou, Director of the Niger Basin Water Observatory: «The cooperation framework agreement is a tool for promoting, regulating and facilitating policy dialogue between the three countries sharing the Mekrou sub-basin for effective participation in the project objectives and other future initiatives in the sub-basin.»

Pr. Mama Daouda, Director of the National Water Institute (INE) of Benin: «The Mekrou project was a great opportunity for INE to be one of the national scientific institutions chosen to follow, together with AGRHYMET, the scientific aspects of its implementation. This experience has been enriching for INE. It actively participated in the step-by-step validation of the different design phases of the E-Water module, which is very useful for decision-makers but also for research. Within the framework of the Master’s theses, it is already being used by some students under the supervision of Dr. N’Tcha M’Po who participated in the development of the tool on behalf of INE. The collaboration between different research institutions has been fruitful from a scientific point of view since it has resulted in scientific publications co-authored by researchers from these institutions. »

Contact of key people involved

<table>
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<th>Nom</th>
<th>Institution</th>
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66 Robert Dessouassi was until 2017 the Director of the Niger Basin Water Observatory.

67 https://doi.org/10.3390/w7126675
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Eleven case studies
People interviewed

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Case study 9
Cooperation for investment planning for green growth and poverty reduction in the Mekrou transboundary sub-basin in West Africa

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Cooperation for investment planning for green growth and poverty reduction in the Mekrou transboundary sub-basin in West Africa

Case study 9

Additional references

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Localization of the Mekrou catchment basin in the Niger River basin

Table: Towns

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<td>500,000 to 1 million</td>
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<td>250,00 to 499,000</td>
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<td>100,000 to 249,000</td>
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<td>50,000 to 99,000</td>
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<td>Less that 50,000</td>
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</table>

Mekrou catchment basin
Influence area
Niger catchment basin
Water courses
Cooperation for investment planning for green growth and poverty reduction in the Mekrou transboundary sub-basin in West Africa.

Water supply sources:
- Private tap
- Connection to the garden/backyard water network
- Collective water point / Fountain
- Borehole
- Protected dug well
- Rainwater harvesting
- Unprotected traditional dug well
- Unprotected spring
- Water tank
- Bottled water
- Tanker truck
- Surface water
- Other

Villages surveyed:
- Mekrou River
- Country limits
- Administrative boundaries
- Mekrou Watershed

Eleven case studies
Starting in 2009, CWP-Benin has implemented various projects/programs that promote integrity in the water sector, in collaboration with Technical and Financial Partners including the Water Integrity Network (WIN)\(^69\), GIZ, SNV and the Dutch Embassy in Benin. This interest in integrity stems from a lesson learned from its interventions during the period 2004-2008: the efficiency and sustainability of investments in the water sector, including in the implementation of IWRM, requires a real consideration of the principles of accountability and transparency as well as quality stakeholder participation.

In 2009, in the Benin Blue Book\(^70\), stakeholders recommended, among other things, «the promotion of a culture and mechanisms of good governance at the local and national levels, with the strengthening of the accountability of municipalities and the inclusion of civil society». Other problems have been attributed to weaknesses related to governance: during the 2012 annual review\(^71\), stakeholders noted a significant drop in the budget consumption rate for the rural water sub-sector (from 90% in 2002 to 68% in 2007 and then to 35% in 2010) and, over the same period, a doubling of allocations, while only 61.5% of Benin’s population had access to drinking water in December 2011, with large regional disparities. These problems were also highlighted by the results of the Annotated Water Integrity Assessment (EAIE) of the rural drinking water supply sub-sector conducted in 2011.

Furthermore, at the strategic level, in order to achieve the Millennium Development Goal (MDG) related to water, Benin has made access to water and sanitation a priority in the 2011-2015 Poverty Reduction Strategy Paper (PRSP). According to this document, stakeholders are aware of the governance deficit and its negative impact on access to water and on the sustainability of water and sanitation investments and services. Despite the existence of a well-developed legal and institutional arsenal, Benin is still confronted with cases of corruption\(^72\) in all sectors, including the water sector.

Faced with this situation, as a platform of public and private actors in the water sector, CWP-Benin has made support for the promotion of integrity a key focus of its interventions.
In the first phase (2009-2013), CWP-Benin carried out actions including:

- the organization of a training workshop for Francophone trainers from West Africa on the understanding and application of the EAIE integrity diagnostic tool;
- the application of this tool to the rural water supply sub-sector;
- sensitization of 27 media and CSO representatives on integrity in the drinking water, sanitation and hygiene sector.

In 2015, the occurrence of the financial scandal related to the Multi-Year Water and Sanitation Program (PPEA 273) financed by the Netherlands strengthened the will of the CWP-Benin to establish a mechanism and a dynamic that engages the actors and allows for periodic evaluation of the efforts of the parties.

Strategically, the CWP-Benin decided in 2009 to make integrity a major issue in the water sector through program and project interventions as well as in sector practices. It targeted the following areas of action: developing knowledge of integrity risks, strengthening national and local capacities in terms of integrity, and setting up an alert and integrity promotion mechanism. This last axis, a pillar of the interventions, led to the development of a charter for governance. The aim was to have a mechanism that would influence accountability practices. To implement this charter, CWP-Benin chose to raise awareness of the concept of integrity and its principles through information and training activities as well as by questioning weaknesses in governance during sector meetings. These interventions were coordinated by CWP-Benin on the basis of consultations with stakeholder representatives, after the participation of a Beninese delegation composed of stakeholders (administration, NGOs, CSOs, private sector) in a regional training on integrity organized by WIN in 2013.

The process of developing the charter was facilitated by CWP-Benin and funded by WIN as part of the multi-year program to promote integrity in the water sector. CWP-Benin initiated and facilitated this process thanks to its experience and the responsibilities it was entrusted with: chairing the Consultation Framework for Non-State Actors in the Water and Sanitation Sector (CANEA), conducting advocacy actions involving all categories of actors, successfully coordinating national initiatives in collaboration with the Ministry of Water (drafting the Benin Blue Book in 2009, national multi-stakeholder consultation in preparation for the 6th World Water Forum 2012, etc.) and alliances with CSOs (Front of National Anti-Corruption Organizations, National Authority for the Fight against Corruption and Association for the Fight against Racism, Ethnocentrism and Regionalism). CWP-Benin has been co-leading a national coalition on integrity since 2009. In its advocacy efforts with the authorities and donors for their adherence to the charter, CWP-Benin has benefited from the support of GWP-WA with the participation of its Chair in the audience granted by the Minister of Water in 2016, in the presence of the representative of WIN.

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23 The technical, financial, and performance audit report of the Water and Sanitation II Multi-Year Program, published in 2015, reported serious irregularities regarding procurement in the sector. The General Directorate of Water was directly highlighted.
The development process of the charter for water and sanitation sector governance lasted 11 months, from August 2015 to June 2016, and was marked by some highlights:

- the drafting of a note justifying the establishment of the charter by a working group, including an analysis of other experiences in developing and implementing charters in Benin;
- submission by CWP-Benin and approval of the charter development process by the Water and Sanitation Sector Group (GSEA), the body that discusses strategic issues and follows up on the recommendations of the annual sector review;
- the design of the charter development process by a consultant based on the methodological guidelines of the working group and its validation during a scoping workshop extended to resource persons;
- continuous advocacy by CWP-Benin with the authorities and donors to obtain their support for the implementation of the charter;
- the realization of a summary inventory of integrity in the sector with a proposed framework for the drafting of the charter and the operationalization mechanism by the consultant and the WIN CWP-Benin focal point;
- the organization of a workshop to validate the state of play and the main elements of the charter as well as its operationalization mechanism, subsequently finalized by three sub-committees;
- consultation with stakeholders (CSOs, private sector, communes and administration) at all stages (content, commitments, etc.) and the implementation of commitments by the group of stakeholders;
- the drafting of the charter and its operationalization mechanism by the working group supported by the consultant and their validation by all stakeholders;
- The presentation of the charter by CWP-Benin during the 2016 annual sectoral review and its approval by the stakeholders, who invited the entire sector to adhere to it.

Strategic actors approached by CWP-Benin contributed to the process: the Secretary General of the Ministry of Water and the Director General of Water, the lead donor in the sector (Embassy of the Netherlands), the communes and the National Association of Communes of Benin (ANCB), and the private sector. The process was accompanied by officials from the Water, Sanitation and Hygiene Sector Support Program (PROSEHA)/GIZ, SNV/Netherlands Embassy and the Rural Drinking Water and Urban Sanitation Project (PEPREAU)/World Bank.

### Content of the charter

The charter for the governance of the water and sanitation sector in Benin, an eleven-page document, details the fundamental values that govern the management of the sector, including equity, a high sense of responsibility, integrity and justice. Through this charter, the different categories of actors commit themselves, according to their respective levels of responsibility, to ensure a rational and equitable distribution of water access infrastructures and sanitation facilities, to encourage community participation in planning and monitoring, and to systematize accountability, as well as to clean up the management system for public contracts and the delegation of public services in the water and sanitation sector.

### Main results

The key outcomes of the governance and integrity initiative are:

- the existence of a charter for governance recognized by the actors and now used as a tool for dialogue on integrity at national and local levels;
- the existence of a mechanism for operationalizing the charter, recognized and accepted by all categories of actors;
- awareness of possible solutions or actions to address governance problems by the actors who participated in the development of the charter;
- the formulation, through the charter, of commitments made by the categories of actors for better governance;
- the strengthening of the consideration of integrity by GIZ and the Dutch Embassy in projects/programs and interventions in the water and sanitation sector.
In 2016-2017, following the evaluation of the National Integrity System (NIS) in Benin coordinated by Transparency International with the NGO ALCRER, the government instructed all ministries to adopt action plans to promote integrity. The Ministry of Water drew on the experience gained from the participation of its executives in the development of the charter and the CWP-Benin to develop its action plan in 2019. The development of this action plan by the Ministry of Hygiene and Sanitation, which began in 2020, was interrupted by the Covid19 crisis. By the end of 2020, three Ministries including Water had an action plan.

In 2019 and 2020, CWP-Benin worked to popularize the charter and to accompany the communes in its operationalization. Of the 77 communes in Benin, about ten have signed the charter and most now have their action plan, produced with technical support from CWP-Benin and financial support from GIZ or the Omidelta/Netherlands Embassy Program.

Advocacy with the donors has led to the mobilization of financial support, in particular the financing of the popularization and operationalization of the charter in the PROSEHA intervention communes by GIZ in collaboration with CWP-Benin and the integration of the governance component into the Omidelta Water-Sanitation Program (2016-2020) by the Netherlands Embassy. Beforehand, a mapping of integrity risks in the sector was carried out with the financial support of the Dutch Embassy, in collaboration with the Ministry of Water, SNV and WIN.

Questions and amendments from members of the Integrity Coalition during the development of the Rural Drinking Water Supply Strategy 2017-2021 resulted in the consideration of capacity building for Drinking Water Consumers Associations (ACEP). It was also included in the PEPREAU Program funded by the World Bank.

The approval of the charter during the 2016 annual sector review makes it an instrument for dialogue on integrity in the sector, whose monitoring and evaluation of implementation can be decided at the highest level of the water and sanitation sector. Each actor can self-assess and report on its level of integrity, efficiency in resource management and sustainability of investments. The implementation of the charter was recommended during the 1st National Forum on Integrity in the Water and Sanitation Sector (FoNIEAu) in which the GWP-WA Executive Secretary participated in 2019. Integrity is thus increasingly addressed and discussed at sector meetings.

The participatory approach adopted by the CWP-Benin has allowed for good ownership of the various products, particularly the EAIE, by the members of the working groups and their commitment to the success of the process. They are the ones who facilitated the various validation sessions of the charter. Another effect is the improvement in the level of knowledge of the actors who participated in the process about the concept of integrity and its principles, which facilitated other actions undertaken subsequently by CWP-Benin.

The study on integrity risk mapping, conducted in 2017, explored possible obstacles to achieving the Sustainable Development Goals (SDGs), and particularly SDG 6 (‘ensure access to water and sanitation for all and ensure sustainable management of water resources’). The results obtained in the four sub-sectors covered (urban drinking water, urban sanitation, rural drinking water and irrigation) revealed risks of corruption or integrity violations throughout the water and sanitation utility delivery chain: in the planning, programming, financing, procurement, construction and supervision processes, and in the operation and maintenance of facilities. The study makes strategic and operational recommendations, including the one on water pricing. In this regard, a process of revision of the tariff system has been initiated with the realization of studies in urban and rural areas.

Since 2016, the National Water Institute (INE) has had Teaching Units (UE) on governance and integrity in the water and sanitation sector at the bachelor and master levels. They already existed in the Water for Agriculture and Society (EAS) department and are to be extended to other departments and to the Center for Continuing Professional Education in Water (CFPC-Eau) where a master’s degree in governance and management of water resources opened in 2020. These courses have also been designed to be taken into account in the short trainings developed for professionals in West Africa and in the Center of Excellence for Water and Sanitation in Africa (C2EA) financed by the World Bank and hosted by the INE since 2019.
Integrity in the water and sanitation sector is also reflected in:

- the carrying out of the pricing study underway in 2021 at SONEB with the objective of establishing a transparent and fair pricing mechanism for nearly three million urban water consumers;
- the signature by CWP-BENIN and other non-state actors of a financing agreement for the governance component of the Omidelta program for an amount of 800,000 euros;
- the realization of a diagnosis on the state of the art, the revitalization and the training in the civic commitment of ACEPs and the setting up of pilot ACEP in the framework of the Rural Drinking Water and Urban Sanitation Project (PEPRAU) financed by

### Lessons learned and replicability

Benin’s experience shows that it is possible to talk about integrity and make progress in promoting it for the benefit of improved governance. The main lessons learned are as follows:

- in the process of promoting change, the choice of entry points (training, baseline study or diagnosis, self-assessment) is one of the determining factors for mobilization;
- a participatory, multi-stakeholder approach is key to achieving sustainable results;
- it is useful to start with an inventory. Analysis of existing charters in other sectors and the reasons for their low or non-implementation was key to getting the GSEA to agree to the charter;
- it is important to recruit an available consultant who can unite the energies of the members of the working group and of all the actors involved;
- it is necessary to have the sustained attention and commitment of the actors throughout the process by ensuring their agreement on the working methods and their interest in the concept of integrity.

The CWP-Benin focused on promoting integrity at a time when, despite shortcomings in expenditure execution and the consumption of funds for sustainable investments, there was little enthusiasm among stakeholders in the water and sanitation sector and a lack of tools to address this sensitive issue. The approach adopted, combining stakeholder engagement, training, diagnostic study and promotion of good governance tools, was instrumental in mobilizing them.

Through the process of developing the charter for good governance, the CWP-Benin, in collaboration with these actors, has been able to facilitate the improvement of knowledge on integrity and to initiate a process of testing an instrument for dialogue on this subject. In addition to taking integrity into account in sectoral practices, this instrument has also made it possible to initiate a national dialogue. In a few years, the charter has helped to strengthen the importance given to integrity in programs and has made it possible to launch several governance improvement projects: risk mapping at the basis of the governance component of the Omidelta Program, development and teaching of course modules on integrity, holding of the 1st National Forum on Water Integrity in Benin in October 2019, which had been prefigured by the 2016 annual sector review.

Citizen monitoring at the national and local levels has improved (more regular and better developed interpelations, development of alternative reports by CANEA and ACEPs, existence of a functional system for managing complaints via an Internet platform, etc.). Funding for integrity promotion activities started with WIN and later expanded to include important donors such as GIZ, Omidelta ANE/SNV/Netherlands Embassy, the European Union and the World Bank, opening a perspective of sustainability of results.

An important field of action for the future remains the strengthening of citizens’ capacities. Faced with the slow pace of behavioral change and a certain reluctance on the part of the authorities to fully engage public structures in improving governance, citizens have an essential role to play.
Jean Claude Dona Houssou, Minister of Energy, Water and Mines: «I will be an ambassador of the charter for the governance of the water and sanitation sector» (Statement during the audience granted to the delegation of CWP-Benin, GWP-WA and the representative of WIN in June 2016).

Étienne Badou, ANLC Representative/Charter Drafting Working Group: «The charter is a tool for the commitment of the various stakeholders in the water and sanitation sector in Benin. It is a step forward, but it is not a panacea, everything depends on the willingness of the actors to strictly apply the provisions of the charter and to change their behavior».

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Contact of key people involved

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Key words: Benin - Governance - Integrity - Charter - Accountability
In Senegal, a Sahelian country, freshwater resources are becoming scarce due to increasing demand and their quality is endangered (pollution, proliferation of aquatic plants) in a context of continuous climate degradation since the 1960s. The concept of IWRM has emerged as an approach to ensure a sustainable balance between supply and demand for all needs, including those of ecosystems.

Before the launch of the IWRM process, the water sector was confronted with the weakness of consultation frameworks at national and local levels and the non-or low involvement of local authorities, as water management was not one of the competences that had been transferred to them. With the implementation of vast urban and village water programmes during the 2000s, it appeared necessary to define the modalities of water allocation and to associate the stakeholders in the management of both infrastructure and the resource.

Local authorities and village communities have gradually mobilised to collect and exploit water resources. From the 2000s onwards, associations of borehole users (ASUFOR) developed, while water management coordination structures were set up on an experimental basis at the level of rivers and other hydrographic entities such as the Lac de Guiers. However, decision-making and water management powers were still concentrated at the level of the central administration and there was a lack of intersectoral coordination for water and sanitation management. This is why, from 2004, the State decided to engage the country in an IWRM process with the development of a PAGIRE. The Senegal Country Water Partnership (CWP-Senegal) was set up in November 2002 to facilitate the participation of all stakeholders in the IWRM planning and implementation process and in the promotion of the right to water.

The launch of the ‘Partnership for African Water Development’ (PAWD 1) project by GWP-WA with financial support from Canada was an opportunity in Senegal, in a context of disengagement of the State from the production sphere, decentralisation, reduction in the number of staff in the public water administration, and frequent changes in the institutional framework housing the water sector.

The challenges were related to the organisation of a water resources planning system, the improvement of knowledge on these resources, the division of the territory into management areas, the inclusion of IWRM principles in policy documents as well as in some development programmes.

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**Case studies**

Institutional support to IWRM process through effective stakeholder participation in Senegal

**Introduction**

The Government of Senegal engaged the country in an Integrated Water Resources Management (IWRM) process since the early 2000s. The Global Water Partnership in West Africa (GWP-WA), through PAWD 1 launched in 2003, has strongly supported this process by contributing to the mobilisation and capacity building of stakeholders as well as to the implementation of the National Action Plan for IWRM (PAGIRE) together with the IWRM-PAP 2008-2015. The dynamics continued with the revision of the PAGIRE in 2017 and the setting up of the PAGIRE 2nd phase 2018-2030.

**Background and issues**

In Senegal, a Sahelian country, freshwater resources are becoming scarce due to increasing demand and their quality is endangered (pollution, proliferation of aquatic plants) in a context of continuous climate degradation since the 1960s. The concept of IWRM has emerged as an approach to ensure a sustainable balance between supply and demand for all needs, including those of ecosystems.

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74 The objective of the IWRM process is to strengthen management capacities and reform institutional, legal and organizational frameworks in order to improve the protection, technical, economic and financial management of water resources by involving all stakeholders  
75 Partnership for Africa’s Water Development  
77 IWRM Priority Action Program  
79 GWP, 2008. «Lessons and questionnings from the PAGIRE-PAWD 1 development process in Mali and Senegal», final version.  
80 This led to the creation of the Water Resources Management and Planning Units (UGP).
The IWRM planning and implementation process in Senegal has benefited from technical and financial support from GWP-WA through CWP-Senegal as part of the implementation of the PAWD project.

PAGIRE81 was developed from 2004 to 2007 with the contribution and facilitation of CWP-Senegal and then validated by the sector’s stakeholders. CWP-Senegal participated in the situational analysis and supported the participatory planning process that led to the PAGIRE: it facilitated the information and awareness-raising workshops on IWRM and the validation of the results of the various studies from the local to the national level. It provided capacity building for the process.

PAGIRE was adopted in 2007 by the government. A capacity building process led by GWP-WA resulted in the development of the IWRM strategies and priority action plan (IWRM-PAP, 2008-2015). This last operational document of the PAGIRE submitted by the Directorate of Water Resources Management and Planning (DGPRE) to the development partners was financed to the tune of more than 12 million Euros, i.e. 65% of the total budget of the PAP-GIRE 2008-2015. PNE-Senegal, which had supported the contribution of the populations to the elaboration of the PAGIRE, also supported their contribution to its implementation. More broadly, it has contributed to the understanding of water issues and IWRM principles among stakeholders and supported the development and implementation of IWRM transition strategies and the development of the required capacities at different levels. As a result, the IWRM approach has been appropriated by stakeholders in the water sector.

Main results

Through its members, CWP-Senegal has positioned itself as a key factor in the process of capacity building of stakeholders on IWRM for their mobilisation and support in the framework of the elaboration of the PAGIRE. The capacities acquired through this process are still sought and valued in the framework of IWRM implementation.

According to the DGPRE, the implementation of the PAGIRE has resulted in a clear improvement in knowledge of the state of water resources and in the capacity to manage and plan water demand.

Administrative agents, private sector actors, local elected officials and representatives of grassroots community organisations took part in more than 14 awareness and information workshops and IEC82 activities in the intervention zones of the water brigades. The participation of stakeholders in the workshops is an important means of popularizing water-related challenges with a view to better managing the resource, both at the national and local levels.

Various actors have been influenced and supported the ongoing process of IWRM planning and implementation at one time or another. These include donors (Canadian Cooperation, EU, ADB, IDA, UNDP), universities (doctoral schools), international and non-governmental organisations (IUCN, Eau vive, EVE, Caritas), local authorities (Diembéring, Lac de Guiers), public administration (DGPRE, PEPAM), transboundary basin organisations (OMVS, OMVG) and the private sector (CSS, zirconium miners).

Capacity building has been a major contribution to the development of PAGIRE. The integration of IWRM in the implementation of the MDGs and then the SDGs has allowed many actors to become aware of the relevance of this approach. Senegal now knows the availability of water resources and has the means to monitor them. It is better equipped to provide an adequate and sustainable response to water demand. The most visible impact results are:

- the revitalisation of the planning system in the water sector, with the mobilisation of state funding in the implementation of IWRM, the support of PEPAM70 to the process of territorialisation of IWRM, the involvement of more donors and NGOs in the implementation of IWRM locally and the development and implementation of IWMR programmes in the basin agencies;
- the beginning of effective implementation of IWRM with the revision of the Water Code and the strengthening of knowledge, the better participation of stakeholders in planning exercises, in projects and impact studies and the establishment of local water management frameworks.

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82 Information Education and Communication
The IWRM-PAP 2008-2015 was a pilot project in terms of water resources management planning using the IWRM approach. Its three main strategic axes have enabled progress to be made, which has led to the IWRM-PAP 2 2018-2030:

- improving knowledge and capacity for water resources management;
- creating an enabling environment for IWRM implementation through legal, organisational and policy reforms;
- improving communication, information, education and awareness on water.

The IWRM-PAP 2008-2015 laid the foundations of IWRM in Senegal and the momentum has continued with the adoption of the IWRM-PAP 2. The strategy of territorialisation of water management advocated through the definition of geographical planning units allows for better consideration of local realities, with the involvement of different stakeholders in the governance mechanisms of the resource. This strategy settles a series of questions, notably at the institutional and organisational levels, but also in terms of the coherence of sectoral interventions and participation. The idea of a national master plan recommended in PAGIRE 2 and integrating all the concerns of the territories will enable the DGPRE to ensure better steering of the IWRM policy at the national level.

By tackling the cross-cutting challenges faced by the different sectors (in particular the fight against climate change, food security, urban development, taking gender into account), PAGIRE 2 is in line with the framework of intersectoral coordination at the national level.
An initiative based on several pillars, including mobilisation of key stakeholders, capacity building and support to participation, and supported by an actor like CWP-Senegal working in close collaboration with mandated institutions, can effectively advance water resources management and development priorities.

Thus, CWP-Senegal has contributed to change in a relevant way by lobbying the authorities for the establishment of an enabling environment for IWRM and PAGIRE, which is recognised as an instrument for planning and implementing sustainable water resources management.

Lessons learned and replicability

GWP-WA's support in the design of the PAGIRE 2008-2015 has allowed the improvement of the coordination of interventions in the water sector with the establishment of an environment favourable to the participation of all stakeholders in a country where water is managed in a decentralised manner.

From the first phase of PAGIRE (2008-2015) to its second phase (2018-2030), water governance, taking into account the principle of subsidiarity and the context of decentralisation in Senegal, sets up an institutional framework that recognises a role for decentralised entities and takes charge of cross-cutting issues in territorialised areas of cooperation integrating the State's strategic objectives.

Thus, the IWRM process initiated in Senegal with the support of GWP-WA from 2003 shows that the effective participation of stakeholders is one of the levers of success for its institutionalisation. It requires the animation of an ecosystem of institutions involved in IWRM training, the management of dialogue and collaboration spaces and the provision of information. CWP-Senegal has effectively led to the recognition of PAGIRE as a participatory instrument for planning and implementing sustainable water resources management.

Financing IWRM in Senegal remains a challenge as current funding sources are low (around 8 billion CFA francs, or about 12.2 million euros) and insecure. The 2008-2015 IWRM-PAP financing strategy provided for resources to be provided by development partners in the form of grants, loans or subsidies, as well as by the State budget and internal resources generated by the taxation of water users through the pumping fee and the urban water surtax. Faced with the weakness of fund mobilisation, the State linked the financing of PAGIRE to that of PEPAM, which had the advantage of retaining PAGIRE as a component of the Poverty Reduction Strategy Paper (PRSP) and of promoting consistency between PEPAM projects and those of PAGIRE.

In terms of political and legal instruments on water, the revision of the Water Code will make it possible to formalise IWRM and, in so doing, to deal with institutional instability, the sectoral nature of water legislation and the insufficiency of decentralisation measures. It should also allow Senegal to implement the values to which it has subscribed at the international level (principles of equity and subsidiarity in the management of the resource, etc.).

Conclusion

References:

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Key words : PAGIRE - Institutionalisation - Cooperation - Financing - Territorialisation

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