A Compendium of National and Regional Policy, Legal and Institutional Frameworks for Water Resources Management in Africa:
Case studies from selected Countries, Regional Economic Commissions, and Transboundary Basin Organisations

AFRICAN MINISTERS’ COUNCIL ON WATER (AMCOW)
TABLE OF CONTENT ........................................................................................................... i
ABBREVIATIONS AND ACRONYMS ................................................................................... v
PREFACE ............................................................................................................................ 1
EXECUTIVE SUMMARY ....................................................................................................... 2
   Methodology .................................................................................................................. 3
   Key findings ..................................................................................................................... 3
   Conclusion ...................................................................................................................... 5
   Recommendations ......................................................................................................... 5
Chapter one: INTRODUCTION ............................................................................................. 7
   1.1- Background ............................................................................................................. 7
   1.2- Scope of the report .................................................................................................. 7
   1.3- Approach and Methodology ................................................................................... 8
       1.3.1. Approach .......................................................................................................... 8
       1.3.2 Methodology ...................................................................................................... 8
   1.4 Definitions ................................................................................................................ 10
   1.5- Outline of the report .............................................................................................. 11
Chapter two: COUNTRY CASE STUDIES .......................................................................... 12
CENTRAL AFRICA
   2.1- CAMEROON ............................................................................................................. 12
       2.1.1- General information ......................................................................................... 12
       2.1.2- Executive summary of water policy document ................................................ 12
       2.1.3- Vision, Objectives and Priorities of the policy .................................................. 13
       2.1.4- Success components of good water governance .............................................. 14
       2.1.5- Overview of lessons learned .......................................................................... 16
       2.1.6- Practical recommendations ............................................................................. 17
       References ................................................................................................................. 18
   2.2- CONGO ................................................................................................................... 18
       2.2.1- General information ......................................................................................... 18
       2.2.2- Executive summary of water policy document ................................................ 19
       2.2.3- Vision, Objectives and Priorities of the policy .................................................. 13
       2.2.4- Success components of good water governance .............................................. 21
       2.2.5- Overview of lessons learned .......................................................................... 23
       2.2.6- Practical recommendations ............................................................................. 23
References.......................................................................................................................24

EAST AFRICA

2.3- BURUNDI ..................................................................................................................25

2.3.1- General information..............................................................................................25
2.3.2- Executive summary of water policy document .......................................................25
2.3.3- Vision, Objectives and Priorities of the policy.......................................................26
2.3.4- Success components of good water governance ....................................................27
2.3.5- Overview of lessons learned ..................................................................................30
2.3.6- Practical recommendations ....................................................................................31

References.........................................................................................................................32

2.4- KENYA ....................................................................................................................32

2.4.1- General information..............................................................................................32
2.4.2- Executive summary of water policy document .......................................................33
2.4.3- Vision, Objectives and Priorities of the policy.......................................................34
2.4.4- Success components of good water governance ....................................................35
2.4.5- Overview of lessons learned ..................................................................................39
2.4.6- Practical recommendations ....................................................................................40

References.........................................................................................................................40

NORTH AFRICA

2.5- ALGERIA..................................................................................................................41

2.5.1- General information..............................................................................................41
2.5.2- Executive summary of water policy document .......................................................41
2.5.3- Vision, Objectives and Priorities of the policy Error! Bookmark not defined.
2.5.4- Success components of good water governance Error! Bookmark not defined.
2.5.5- Overview of lessons learned ..................................................................................44
2.5.6- Practical recommendations ....................................................................................45

References.........................................................................................................................45

SOUTHERN AFRICA

2.6- BOTSWANA ............................................................................................................46

2.6.1- General information..............................................................................................46
2.6.2- Executive summary of water policy document .......................................................47
2.6.3- Vision, Objectives and Priorities of the policy.......................................................48
2.6.4- Success components of good water governance ....................................................49
Compendium of National and Regional Policy, Legal and Institutional Frameworks for Water Resources Management in Africa: Case studies from selected Countries, Regional Economic Commissions and Transboundary Basin Organisations

2.6.5 - Overview of lessons learned ................................................................. 51
2.6.6 - Practical recommendations ................................................................. 51
References ................................................................................................. 52

2.7 - SOUTH AFRICA .................................................................................... 52
2.7.1 - General information ........................................................................ 52
2.7.2 - Executive summary of water policy document .................................. 53
2.7.3 - Vision, Objectives and Priorities of the policy .................................. 54
2.7.4 - Success components of good water governance ......................... 55
2.7.5 - Overview of lessons learned ............................................................. 58
2.7.6 - Practical recommendations .............................................................. 58
References ................................................................................................. 59

2.8 - ZAMBIA ............................................................................................... 59
2.8.1 - General information ......................................................................... 59
2.8.2 - Executive summary of water policy document ................................ 60
2.8.3 - Vision, Objectives and Priorities of the policy .............................. 61
2.8.4 - Success components of water good governance ....................... 62
2.8.5 - Overview of lessons learned ............................................................ 66
2.8.6 - Practical recommendations .............................................................. 66
References ................................................................................................. 67

WEST AFRICA

2.9 - BURKINA FASO ................................................................................. 68
2.9.1 - General information ........................................................................ 68
2.9.2 - Executive summary of water policy document ................................ 68
2.9.3 - Vision, Objectives and Priorities of the policy .............................. 70
2.9.4 - Success components of water good governance ....................... 70
2.9.5 - Overview of lessons learned ............................................................ 73
2.9.6 - Practical recommendations .............................................................. 74
References ................................................................................................. 75

2.10 - GHANA ............................................................................................. 75
2.10.1 - General information ..................................................................... 75
2.10.2 - Executive summary of water policy document .......................... 76
2.10.3 - Vision, Objectives and Priorities of the policy ............................ 79
2.10.4 - Success components of water good governance .................... 79
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.10.5- Overview of lessons learned</td>
<td>83</td>
</tr>
<tr>
<td>2.10.6- Practical recommendations</td>
<td>84</td>
</tr>
<tr>
<td>References</td>
<td>85</td>
</tr>
<tr>
<td><strong>2.11</strong>- SENEGAL</td>
<td>85</td>
</tr>
<tr>
<td>2.11.1- General information</td>
<td>85</td>
</tr>
<tr>
<td>2.11.2- Executive summary of water policy document</td>
<td>86</td>
</tr>
<tr>
<td>2.11.3- Vision, Objectives and Priorities of the policy</td>
<td>88</td>
</tr>
<tr>
<td>2.11.4- Success components of water good governance</td>
<td>89</td>
</tr>
<tr>
<td>2.11.5- Overview of lessons learned</td>
<td>93</td>
</tr>
<tr>
<td>2.11.6- Practical recommendations</td>
<td>94</td>
</tr>
<tr>
<td>References</td>
<td>95</td>
</tr>
<tr>
<td><strong>2.12</strong>- Synthesis of Country Status Overview</td>
<td>95</td>
</tr>
<tr>
<td>2.12.1- Water governance</td>
<td>95</td>
</tr>
<tr>
<td>2.12.2- Water resources management</td>
<td>96</td>
</tr>
<tr>
<td>2.12.3- Practical recommendations</td>
<td>97</td>
</tr>
<tr>
<td><strong>Chapter three: REGIONAL CASE STUDIES</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>3.1</strong>- Shared Water Bodies</td>
<td>100</td>
</tr>
<tr>
<td>3.1.1- Lake Chad Basin (LCBC)</td>
<td>100</td>
</tr>
<tr>
<td>3.1.2- Niger River Basin (NBA)</td>
<td>108</td>
</tr>
<tr>
<td>3.1.3- Senegal River Basin Organization (OMVS)</td>
<td>116</td>
</tr>
<tr>
<td>3.1.4- Orange Senqu River Commission (ORASECOM)</td>
<td>124</td>
</tr>
<tr>
<td>3.1.5. International Commission of the Congo-Oubangui-Sangha (CICOS)</td>
<td>133</td>
</tr>
<tr>
<td>3.1.6- North-Western Sahara Aquifer System (NWSAS)</td>
<td>139</td>
</tr>
<tr>
<td><strong>3.2</strong>- Regional Economic Communities (RECs)</td>
<td>143</td>
</tr>
<tr>
<td>3.2.1- Economic Community of Central African States (ECCAS)</td>
<td>143</td>
</tr>
<tr>
<td>3.2.2- Economic Community of West African States (ECOWAS)</td>
<td>151</td>
</tr>
<tr>
<td>3.2.3- South African Development Community (SADC)</td>
<td>158</td>
</tr>
<tr>
<td><strong>3.3</strong>- Synthesis of regional status overview</td>
<td>168</td>
</tr>
<tr>
<td>3.3.1- Water governance</td>
<td>169</td>
</tr>
<tr>
<td><strong>Chapter four: POST-2015 WATER AGENDA: THE AFRICAN PERSPECTIVE</strong></td>
<td>175</td>
</tr>
<tr>
<td>4.1- Sustainable Developpement Goals (SDG)</td>
<td>175</td>
</tr>
<tr>
<td>4.2- African perspectives on water-related SDG and its implementation</td>
<td>175</td>
</tr>
<tr>
<td><strong>Chapter five: CONCLUSION AND RECOMMENDATIONS</strong></td>
<td>177</td>
</tr>
</tbody>
</table>
5.1 Conclusion .................................................................................................................................................. 177
5.2 Recommendations ...................................................................................................................................... 177

GENERAL REFERENCES .................................................................................................................................... 180

ANNEXES ............................................................................................................................................................. Error! Bookmark not defined.

Annex 1: ............................................................................................................................................................... Error! Bookmark not defined.

Annex 2: ............................................................................................................................................................... Error! Bookmark not defined.

ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Common sections of the report</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMCOW</td>
<td>African Ministers’ Council on Water</td>
</tr>
<tr>
<td>AMCOW-Sec</td>
<td>African Ministers’ Council on Water: The Secretariat</td>
</tr>
<tr>
<td>AMCOW-TAC</td>
<td>African Ministers’ Council on Water: Technical Advisory Committee</td>
</tr>
<tr>
<td>CBO</td>
<td>Community-Based Organisation</td>
</tr>
<tr>
<td>CESCR (UN)</td>
<td>United Nations Committee on Economic, Social and Cultural Rights</td>
</tr>
<tr>
<td>CILSS</td>
<td>Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (Permanent Interstates Committee for Drought Control in the Sahel)</td>
</tr>
<tr>
<td>CSO</td>
<td>Civil Society Organisation</td>
</tr>
<tr>
<td>IWRM</td>
<td>Integrated Water Resources Management</td>
</tr>
<tr>
<td>L/A/RBOs</td>
<td>Lake/Aquifer/River Basin Organizations</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>NEPAD</td>
<td>New Partnership for Africa Development</td>
</tr>
<tr>
<td>RECs</td>
<td>Regional Economic Communities</td>
</tr>
<tr>
<td>RBA</td>
<td>Rights Based Approach</td>
</tr>
<tr>
<td>SAGE</td>
<td>Schéma d’Aménagement et de Gestion de l’Eau (Water Development and Management Plan)</td>
</tr>
<tr>
<td>SDAGE</td>
<td>Schéma Directeur d’Aménagement et de Gestion de l’Eau (Water Development and Management Master Plan)</td>
</tr>
<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>TBOs</td>
<td>Transboundary Basin Organisations</td>
</tr>
<tr>
<td>TOR</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td>UEMOA</td>
<td>Union Economique et Monétaire Ouest Africain (West African Economic and Monetary Union)</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>WASH</td>
<td>Water, Sanitation, and Hygiene</td>
</tr>
<tr>
<td>WATSAN</td>
<td>Water and Sanitation</td>
</tr>
<tr>
<td>WSSD</td>
<td>World Summit on Sustainable Development</td>
</tr>
</tbody>
</table>

Republic of Algeria

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGIRE</td>
<td>Agence pour la mise en œuvre de la Gestion Intégrée des Ressources en Eau (Agency for Integrated Water Resources Management)</td>
</tr>
<tr>
<td>CBH</td>
<td>Comité de Basin Hydrographique (River Basin Committee)</td>
</tr>
<tr>
<td>CNCRE</td>
<td>Conseil National Consultatif des Ressources en Eau (Advisory Council of Water Resources)</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Name</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>CNE</td>
<td>Conseil national de l’Eau (National Water Council)</td>
</tr>
<tr>
<td>EPIC</td>
<td>Etablissement Public Industriel et Commercial (State owned Industrial and Commercial Institution)</td>
</tr>
<tr>
<td>PDARE</td>
<td>Plan Directeur d’Aménagement des Ressources en Eau (Master Plan for Water Resources Development)</td>
</tr>
<tr>
<td>PNE</td>
<td>Plan National de l’Eau (National Water Plan)</td>
</tr>
<tr>
<td>RA</td>
<td>Regulatory Authority</td>
</tr>
<tr>
<td><strong>Burkina Faso</strong></td>
<td></td>
</tr>
<tr>
<td>AEC, AEG, AEL, AEM, AEN</td>
<td>Water Agency for Comoé/Gourma/Liptako/Mouhoun/Nakanbe (Agence de l’Eau de la Comoé, Gourma, Liptako, Mouhoun, Nakanbe)</td>
</tr>
<tr>
<td>CFE</td>
<td>Contribution Financière en matière d’Eau (Financial contribution concerning water)</td>
</tr>
<tr>
<td>CGB</td>
<td>Comité de Gestion de Bassin (Basin management committee)</td>
</tr>
<tr>
<td>CIIE</td>
<td>Comité Inter-Service sur l’Eau (Inter-Service Committee on Water)</td>
</tr>
<tr>
<td>CLE</td>
<td>Comité Local de l’Eau (Local Water Committee)</td>
</tr>
<tr>
<td>CNIEau</td>
<td>Conseil National de l’Eau (National Water Council)</td>
</tr>
<tr>
<td>CGCT</td>
<td>Code Général des Collectivités Territoriales (General Code of local authorities)</td>
</tr>
<tr>
<td>CTE</td>
<td>Comité Technique de l’Eau (Water Technical Committee)</td>
</tr>
<tr>
<td>GIE</td>
<td>Groupement d’Intérêt Économique (Group of Economic Interest)</td>
</tr>
<tr>
<td>OCB</td>
<td>Organisation Communautaire de Base (CommunityBased Organisation)</td>
</tr>
<tr>
<td>PN-AEPA</td>
<td>Programme National d’Alimentation en Eau Potable et Assainissement (National Programme of Water Supply and Sanitation)</td>
</tr>
<tr>
<td>PNDD</td>
<td>Politique Nationale de Développement Durable (National Sustainable Development Policy)</td>
</tr>
<tr>
<td>PSNA</td>
<td>Politique et Stratégies Nationales d’Assainissement (National Policy and Strategies on Sanitation)</td>
</tr>
<tr>
<td>PSE</td>
<td>Politique et Stratégies en matière d’Eau (Water Policy and Strategies)</td>
</tr>
<tr>
<td>PRSF</td>
<td>Poverty Reduction Strategic Framework</td>
</tr>
<tr>
<td>RGP</td>
<td>Recensement Général de la Population (General population census)</td>
</tr>
<tr>
<td>SCADD</td>
<td>Stratégie de Croissance Accélérée et de Développement Durable (Strategy for Accelerated Growth and Sustainable Development)</td>
</tr>
<tr>
<td>SNIEau</td>
<td>Système National d’Information sur l’Eau (National Information System on Water)</td>
</tr>
<tr>
<td>TFP</td>
<td>Technical and Financial Partners</td>
</tr>
<tr>
<td>WA</td>
<td>Water Agency (Agence de l’Eau)</td>
</tr>
<tr>
<td>VBA</td>
<td>Volta Basin Authority</td>
</tr>
<tr>
<td>WSS</td>
<td>Water Supply and Sanitation</td>
</tr>
<tr>
<td><strong>Republic of Burundi</strong></td>
<td></td>
</tr>
<tr>
<td>CNCE</td>
<td>Comité National de Coordination du Secteur Eau (National Committee for Water Sector Coordination)</td>
</tr>
<tr>
<td>CSLP</td>
<td>Cadre Stratégique de Lutte contre la Pauvreté (Strategic Framework for Growth and Fight against Poverty)</td>
</tr>
<tr>
<td>GSEA</td>
<td>Groupe Sectoriel Eau et Assainissement (Water and Sanitation Sector Group)</td>
</tr>
<tr>
<td>NPCC</td>
<td>National Policy on Climate Change</td>
</tr>
<tr>
<td>NS-APCC</td>
<td>National Strategy and Action Plan on Climate Change</td>
</tr>
<tr>
<td>PCDC</td>
<td>Plan Communal de Développement Communautaire (Communal Community Development Plan)</td>
</tr>
<tr>
<td>PDNEau</td>
<td>Plan Directeur National de l’Eau (National Master Development Plan for Water)</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>PIP</td>
<td>Programme d’Investissement Public (Public Investment Program)</td>
</tr>
<tr>
<td>PNEau</td>
<td>Politique Nationale de l’Eau (National Water Policy)</td>
</tr>
<tr>
<td>REGIDESO</td>
<td>Régie de Production et de Distribution d’Eau et d’Electricité (Water and Electricity Provider)</td>
</tr>
<tr>
<td>SNEau</td>
<td>Stratégie Nationale de l’Eau (National Water Strategy)</td>
</tr>
<tr>
<td>SETEMU</td>
<td>Services Techniques Municipaux (Municipality technical services)</td>
</tr>
<tr>
<td>TMC</td>
<td>Technical Monitoring Committee</td>
</tr>
<tr>
<td>UPS</td>
<td>Unité de Planification Sectorielle (Sectoral Planning Unit)</td>
</tr>
</tbody>
</table>

**Republic of Botswana**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSO</td>
<td>Central Statistics Office</td>
</tr>
<tr>
<td>DEA</td>
<td>Department of Environmental Affairs</td>
</tr>
<tr>
<td>DSWM</td>
<td>Department of Sanitation and Waste Management</td>
</tr>
<tr>
<td>DWA</td>
<td>Department of Water Affairs</td>
</tr>
<tr>
<td>DWP</td>
<td>Draft Water Policy</td>
</tr>
<tr>
<td>IWRM/WE</td>
<td>Integrated Water Resources Management/Water Efficiency</td>
</tr>
<tr>
<td>IWU</td>
<td>International Waters Unit</td>
</tr>
<tr>
<td>MMEWR</td>
<td>Ministry of Minerals, Energy and Water Resources</td>
</tr>
<tr>
<td>NCSA</td>
<td>National Conservation Strategy Agency</td>
</tr>
<tr>
<td>NDP</td>
<td>National Development Plan</td>
</tr>
<tr>
<td>NWP</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>NWWP</td>
<td>National Water and Wastewater Policy</td>
</tr>
<tr>
<td>WAMA</td>
<td>Water Management Areas</td>
</tr>
<tr>
<td>WRB</td>
<td>Water Resources Board</td>
</tr>
<tr>
<td>WUC</td>
<td>Water Utilities Corporation</td>
</tr>
</tbody>
</table>

**Republic of Cameroon**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNE</td>
<td>Comité National de l’Eau (National Water Committee)</td>
</tr>
<tr>
<td>CNEnvi</td>
<td>Comité National de l’Environnement (National Committee for Environment)</td>
</tr>
<tr>
<td>MINEE</td>
<td>Ministère de l’Eau et de l’Energie (Ministry of Energy and Water)</td>
</tr>
</tbody>
</table>

**Republic of Congo**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANHYR</td>
<td>Agence Nationale de l’Hydraulique Rurale (National Agency for rural hydraulics)</td>
</tr>
<tr>
<td>CCE</td>
<td>Conseil Consultatif de l’Eau (Water Advisory Council)</td>
</tr>
<tr>
<td>INC</td>
<td>Initial National Communication</td>
</tr>
<tr>
<td>MEE</td>
<td>Ministère de l’Energie et de l’Eau (Ministry of Energy and Water)</td>
</tr>
<tr>
<td>SNDE</td>
<td>Société Nationale de Distribution d’eau (National water distribution Company)</td>
</tr>
<tr>
<td>ORSE</td>
<td>Organe de Régulation du Secteur de l’Eau (Water Sector Regulatory Body)</td>
</tr>
</tbody>
</table>

**Republic of Ghana**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSA</td>
<td>Community Water and Sanitation Agency</td>
</tr>
<tr>
<td>DWSTs</td>
<td>District Water and Sanitation Teams</td>
</tr>
<tr>
<td>GPRS</td>
<td>Growth and Poverty Reduction Strategy</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Agency</td>
</tr>
<tr>
<td>GWCL</td>
<td>Ghana Water Company Limited</td>
</tr>
<tr>
<td>GWSC</td>
<td>Ghana Water and Sewerage Corporation</td>
</tr>
<tr>
<td>MMEDA</td>
<td>Metropolitan, Municipal and District Assembly</td>
</tr>
<tr>
<td>MDDBS</td>
<td>Multi-Donor Budget Support</td>
</tr>
<tr>
<td>MWRWH</td>
<td>Ministry of Water Resources, Works and Housing</td>
</tr>
<tr>
<td>NESSAP</td>
<td>National Environmental Sanitation Strategy and Action Plan</td>
</tr>
<tr>
<td>NWP</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>PURC</td>
<td>Public Utilities Regulatory Commission</td>
</tr>
<tr>
<td>RBB</td>
<td>River Basin Board</td>
</tr>
<tr>
<td>WSSG</td>
<td>Water and Sanitation Sector Group</td>
</tr>
<tr>
<td>WRC</td>
<td>Water Resources Commission</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>WSSDP</td>
<td>Water Sector Strategic Development Plan</td>
</tr>
<tr>
<td>Republic of Kenya</td>
<td></td>
</tr>
<tr>
<td>ACECA</td>
<td>Anti-Corruption and Economic Crimes Act</td>
</tr>
<tr>
<td>ASAL</td>
<td>Arid and Semi-Arid Lands</td>
</tr>
<tr>
<td>CAACs</td>
<td>Catchment Area Advisory Committees</td>
</tr>
<tr>
<td>CEDAW</td>
<td>Convention on the Elimination of Discrimination Against Women</td>
</tr>
<tr>
<td>CMS</td>
<td>Catchment Management Strategies</td>
</tr>
<tr>
<td>EACC</td>
<td>Ethics and Anti-Corruption Commission</td>
</tr>
<tr>
<td>KACC</td>
<td>Kenya Anti-Corruption Commission</td>
</tr>
<tr>
<td>KFS</td>
<td>Kenya Forestry Service</td>
</tr>
<tr>
<td>MWI</td>
<td>Ministry of Water and Irrigation</td>
</tr>
<tr>
<td>NEMA</td>
<td>National Environment Management Authority</td>
</tr>
<tr>
<td>NIMES</td>
<td>National Integrated Monitoring and Evaluation System</td>
</tr>
<tr>
<td>NWCP</td>
<td>National Water conservation and pipeline Corporation</td>
</tr>
<tr>
<td>NWMP</td>
<td>National Water Master Plan</td>
</tr>
<tr>
<td>NWP</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>NWRMS</td>
<td>National Water Resources Management Strategy</td>
</tr>
<tr>
<td>NWQMS</td>
<td>National Water Quality Management Strategy</td>
</tr>
<tr>
<td>WAB</td>
<td>Water Appeal Board</td>
</tr>
<tr>
<td>WASREB</td>
<td>Water Services Regulatory Board</td>
</tr>
<tr>
<td>WRMA</td>
<td>Water Resources Management Authority</td>
</tr>
<tr>
<td>WMRM</td>
<td>Water Resources Management Rules</td>
</tr>
<tr>
<td>WRUAs</td>
<td>Water Resources Users Associations</td>
</tr>
<tr>
<td>WSB</td>
<td>Water Service Boards</td>
</tr>
<tr>
<td>WSPs</td>
<td>Water Services Providers</td>
</tr>
<tr>
<td>WSRB</td>
<td>Water Services Regulatory Board</td>
</tr>
<tr>
<td>WSRSC</td>
<td>Water Sector Reform Steering Committee</td>
</tr>
<tr>
<td>WSSP</td>
<td>Water Supply and Sanitation Policy</td>
</tr>
<tr>
<td>WSTG</td>
<td>Water and Sanitation Technical Group</td>
</tr>
<tr>
<td>WSWG</td>
<td>Water Sector Working Group</td>
</tr>
<tr>
<td>Republic of Senegal</td>
<td></td>
</tr>
<tr>
<td>EESC</td>
<td>Economic, Social and Environmental Council</td>
</tr>
<tr>
<td>EVE</td>
<td>Water, Life and Environment Vision</td>
</tr>
<tr>
<td>LCC</td>
<td>Local Coordination Committee</td>
</tr>
<tr>
<td>MWS</td>
<td>Ministry/Minister of Water and Sanitation</td>
</tr>
<tr>
<td>NAPA</td>
<td>National Action Plan for Adaptation</td>
</tr>
<tr>
<td>NCC</td>
<td>National Coordination Committee (NCC),</td>
</tr>
<tr>
<td>PAP-GIRE</td>
<td>Plan d’Action Prioritaire de la GIRE (IWRM Priority Action Plan)</td>
</tr>
<tr>
<td>NSGEE</td>
<td>National Strategy for Gender Equity and Equality</td>
</tr>
<tr>
<td>OLAG</td>
<td>Office of Lake Guiers</td>
</tr>
<tr>
<td>PEPAM</td>
<td>Potable Water and Sanitation Program of the Millennium</td>
</tr>
<tr>
<td>PWC</td>
<td>Permanent Water Commission</td>
</tr>
<tr>
<td>SCA</td>
<td>Strategy for Accelerated Growth</td>
</tr>
<tr>
<td>Republic of South Africa</td>
<td></td>
</tr>
<tr>
<td>CMA</td>
<td>Catchment Management Agency</td>
</tr>
<tr>
<td>CMC</td>
<td>Catchment Management Committee</td>
</tr>
<tr>
<td>CMS</td>
<td>Catchment Management Strategy</td>
</tr>
<tr>
<td>CRDS</td>
<td>Comprehensive Rural Development Strategy</td>
</tr>
<tr>
<td>DEAT</td>
<td>Department of Environmental Affairs and Tourism</td>
</tr>
<tr>
<td>DWA</td>
<td>Directorate of Water Affairs</td>
</tr>
<tr>
<td>DWAF</td>
<td>Department of Water Affairs and Forestry</td>
</tr>
</tbody>
</table>
### Compendium of National and Regional Policy, Legal and Institutional Frameworks for Water Resources Management in Africa: Case studies from selected Countries, Regional Economic Commissions and Transboundary Basin Organisations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPAP</td>
<td>Industrial Policy Action Plan</td>
</tr>
<tr>
<td>NDP</td>
<td>National Development Plan</td>
</tr>
<tr>
<td>NWA</td>
<td>National Water Act</td>
</tr>
<tr>
<td>NWC&amp;WDM</td>
<td>National Water Conservation and Water Demand Management</td>
</tr>
<tr>
<td>NWP</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>NWRS</td>
<td>National Water Resources Strategy</td>
</tr>
<tr>
<td>WMAs</td>
<td>Water Management Areas</td>
</tr>
<tr>
<td>WSA</td>
<td>Water Services Act</td>
</tr>
<tr>
<td>WUAs</td>
<td>Water User Associations</td>
</tr>
<tr>
<td>WWF</td>
<td>World Wide Funds</td>
</tr>
</tbody>
</table>

#### Republic of Zambia
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>Catchment Council</td>
</tr>
<tr>
<td>DIP</td>
<td>Decentralisation Implementation Plan</td>
</tr>
<tr>
<td>DWA</td>
<td>Department of Water Affairs</td>
</tr>
<tr>
<td>ECZ</td>
<td>Environmental Council of Zambia</td>
</tr>
<tr>
<td>LGA</td>
<td>Local Government Act</td>
</tr>
<tr>
<td>MEWD</td>
<td>Ministry of Energy and Water Development</td>
</tr>
<tr>
<td>MFNP</td>
<td>Ministry of Finance and National Planning</td>
</tr>
<tr>
<td>NDP</td>
<td>National Development Plan</td>
</tr>
<tr>
<td>NHCC</td>
<td>National Heritage and Conservation Commission</td>
</tr>
<tr>
<td>NISIR</td>
<td>National Institute for Industrial and Scientific Research</td>
</tr>
<tr>
<td>NRWSSP</td>
<td>National Rural Water Supply and Sanitation Program</td>
</tr>
<tr>
<td>NUWSSP</td>
<td>National Urban Water Supply and Sanitation Program</td>
</tr>
<tr>
<td>NWASCO</td>
<td>National Water Supply and Sanitation Council</td>
</tr>
<tr>
<td>NWP</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>SAGs</td>
<td>Sector Advisory Groups</td>
</tr>
<tr>
<td>SCC</td>
<td>Sub-catchment Council</td>
</tr>
<tr>
<td>SNDP</td>
<td>Sixth National Development Plan</td>
</tr>
<tr>
<td>WA</td>
<td>Water Act</td>
</tr>
<tr>
<td>WB</td>
<td>Water Board</td>
</tr>
<tr>
<td>WDM</td>
<td>Water Demand Management</td>
</tr>
<tr>
<td>WRMA</td>
<td>Water Resources Management Act / Authority</td>
</tr>
<tr>
<td>WSSA</td>
<td>Water Supply and Sanitation Act</td>
</tr>
<tr>
<td>WUA</td>
<td>Water User Association</td>
</tr>
<tr>
<td>ZEC</td>
<td>Zambian Electricity Company</td>
</tr>
<tr>
<td>ZRA</td>
<td>Zambezi River Authority</td>
</tr>
</tbody>
</table>

#### Lake Chad
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESP</td>
<td>Committee on the Environment, Science and Planning</td>
</tr>
<tr>
<td>LCBC</td>
<td>Lake Chad Basin Commission</td>
</tr>
<tr>
<td>NAPs</td>
<td>National Action Plans</td>
</tr>
<tr>
<td>Nag</td>
<td>National Agencies of the Lake Chad Basin Commission</td>
</tr>
<tr>
<td>ORNL</td>
<td>Oak Ridge National Laboratory</td>
</tr>
<tr>
<td>PFSD</td>
<td>Partners Forum for Sustainable Development of Lake Chad Basin</td>
</tr>
<tr>
<td>PQI</td>
<td>Plan Quinquenal d’Investissement (Five-Year Investment Plan)</td>
</tr>
<tr>
<td>PRC</td>
<td>Parliamentary Regional Committee</td>
</tr>
<tr>
<td>RBM</td>
<td>Results-Based Management</td>
</tr>
<tr>
<td>SAP</td>
<td>Strategic Action Programme</td>
</tr>
<tr>
<td>TC</td>
<td>Technical Committee</td>
</tr>
<tr>
<td>WRCE</td>
<td>Water Resources Committee of Experts</td>
</tr>
</tbody>
</table>

#### Niger River
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNUB</td>
<td>Coordinations Nationales des Usagers de l’eau du Bassin (National Water Users Coordination)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
</tr>
<tr>
<td>CRUB</td>
<td>Coordination Régionale des Usagers de l’eau du Bassin (Regional Water Users Coordination)</td>
</tr>
<tr>
<td>FOREAU</td>
<td>Forum Régional des Acteurs du basin (Regional Forum of Actors and Water Users)</td>
</tr>
<tr>
<td>IP</td>
<td>Investment Programme</td>
</tr>
<tr>
<td>NBA</td>
<td>Niger Basin Authority</td>
</tr>
<tr>
<td>PO.1</td>
<td>1er Plan d’Operation (first Operational Plan)</td>
</tr>
<tr>
<td>PAC</td>
<td>Partner Advisory Committee</td>
</tr>
<tr>
<td>PE</td>
<td>Panel of Experts</td>
</tr>
<tr>
<td>RAG</td>
<td>Regional Advisory Group</td>
</tr>
<tr>
<td>SP</td>
<td>Strategic Plan</td>
</tr>
<tr>
<td>SAP</td>
<td>Strategic Action Programme</td>
</tr>
<tr>
<td>SDAP</td>
<td>Sustainable Development Action Plan</td>
</tr>
<tr>
<td>SFN</td>
<td>Structures Focales Nationales (National Focal Structures)</td>
</tr>
<tr>
<td>SBC</td>
<td>Sub-basin Commission</td>
</tr>
<tr>
<td>TCE</td>
<td>Technical Committee of Experts</td>
</tr>
</tbody>
</table>

**Senegal River**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLC</td>
<td>Comité Local de Coordination (Local Coordination Committee)</td>
</tr>
<tr>
<td>CNC</td>
<td>Comité National de Coordination (National Coordination Committee)</td>
</tr>
<tr>
<td>CC</td>
<td>Comité Consultatif (Consultative Committee)</td>
</tr>
<tr>
<td>CPE</td>
<td>Commission Permanente des Eaux (Permanent Water Commission)</td>
</tr>
<tr>
<td>OMVS</td>
<td>Organisation pour la Mise en Valeur du fleuve Sénégal</td>
</tr>
<tr>
<td>RPC</td>
<td>Regional Planning Committee</td>
</tr>
<tr>
<td>SAP</td>
<td>Strategic Action Programme</td>
</tr>
<tr>
<td>SOGED</td>
<td>Société de Gestion et d’exploitation du barrage de Diama (Management Company of Diama Dam)</td>
</tr>
<tr>
<td>SOGEM</td>
<td>Société de Gestion et d’exploitation du barrage de Manantali (Management Company of Manantali Dam)</td>
</tr>
</tbody>
</table>

**Orange Senqu River**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHWC</td>
<td>Lesotho Highlands Water Commission</td>
</tr>
<tr>
<td>LHWP</td>
<td>Lesotho Highlands Water Project</td>
</tr>
<tr>
<td>ORASECOM</td>
<td>Orange-Senqu River Commission</td>
</tr>
<tr>
<td>PWC</td>
<td>Permanent Water Commission</td>
</tr>
</tbody>
</table>

**Congo-Oubangui-Sangha River System**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>Central African Republic</td>
</tr>
<tr>
<td>CICOS</td>
<td>Commision Internationale du Congo-Oubangui-Sangha (International Commission of the Congo-Ubangui-Sangha)</td>
</tr>
<tr>
<td>Congo-HYCOS</td>
<td>Hydrological Cycle Observing System of the Congo Basin</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
</tr>
<tr>
<td>SIBCO</td>
<td>Système d’information du bassin du Congo (Information System for the Congo Basin)</td>
</tr>
</tbody>
</table>

**North-Western Sahara Aquifer System**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU</td>
<td>Coordination Unit</td>
</tr>
<tr>
<td>NWSAS</td>
<td>North-Western Sahara Aquifer System</td>
</tr>
<tr>
<td>PCM</td>
<td>Permanent Consultation Mechanism</td>
</tr>
<tr>
<td>OSS</td>
<td>Observatory of the Sahara and Sahel</td>
</tr>
<tr>
<td>RSC</td>
<td>Regional Steering Committee</td>
</tr>
<tr>
<td>TWGs</td>
<td>Technical Working Groups</td>
</tr>
</tbody>
</table>

**Economic Community of Central African States**
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMAC</td>
<td>Communauté Économique et Monétaire de l’Afrique Centrale (Central Africa Economic and Monetary Community)</td>
</tr>
<tr>
<td>CRGCRE</td>
<td>Centre Régional de Coordination et de Gestion des Ressources en eau (Regional Centre for Water Resource Management)</td>
</tr>
<tr>
<td>CMPO</td>
<td>Comité Ministériel de Pilotage et d’Orientation (Ministerial Steering and Orientation Committee)</td>
</tr>
<tr>
<td>CNE</td>
<td>Conseils Nationaux de l’Eau (National Water Councils)</td>
</tr>
<tr>
<td>CRE</td>
<td>Conseil Régional de l’Eau (Regional Water Council)</td>
</tr>
<tr>
<td>CTS</td>
<td>Comité Technique de Suivi (Technical Monitoring Committee)</td>
</tr>
<tr>
<td>ECCAS</td>
<td>Economic Community of Central African States</td>
</tr>
<tr>
<td>IWRM-CA</td>
<td>Regional Action Plan for Integrated Management of Water Resources in Central Africa</td>
</tr>
<tr>
<td>PREAC</td>
<td>Politique Régionale de l’Eau de l’Afrique Centrale (Regional Water Policy for Central Africa)</td>
</tr>
<tr>
<td>UNECA</td>
<td>United Nations Economic Commission for Africa</td>
</tr>
<tr>
<td>CPE</td>
<td>Conflict Prevention Center</td>
</tr>
<tr>
<td>ECOWAP</td>
<td>ECOWAS Agricultural Policy</td>
</tr>
<tr>
<td>ECOWAS</td>
<td>Economic Community of West African States</td>
</tr>
<tr>
<td>MMC</td>
<td>Ministerial Monitoring Committee</td>
</tr>
<tr>
<td>IAP</td>
<td>Implementation Action Plan</td>
</tr>
<tr>
<td>IWRM-WA</td>
<td>Regional Action Plan for Integrated Management of Water Resources in West Africa</td>
</tr>
<tr>
<td>PFCM</td>
<td>Permanent Framework of Coordination and Monitoring</td>
</tr>
<tr>
<td>PO</td>
<td>Plan of Operation</td>
</tr>
<tr>
<td>PRDR</td>
<td>Policy on Reducing Disaster Risk</td>
</tr>
<tr>
<td>RCCCWA</td>
<td>Sub-Regional Council for Consultation on Water Resources</td>
</tr>
<tr>
<td>RWP-WA</td>
<td>Regional Water Policy for West Africa</td>
</tr>
<tr>
<td>TCE</td>
<td>Technical Committee of Experts</td>
</tr>
<tr>
<td>WRCC</td>
<td>Water Resources Coordination Centre</td>
</tr>
<tr>
<td>WRCU</td>
<td>Water Resources Coordination Unit</td>
</tr>
<tr>
<td>CCA</td>
<td>Climate Change Adaptation</td>
</tr>
<tr>
<td>COP</td>
<td>Conference of Parties</td>
</tr>
<tr>
<td>IWRMMD</td>
<td>Integrated Water Resources Management and Development</td>
</tr>
<tr>
<td>RISDP</td>
<td>Regional Indicative Strategic Development Plan</td>
</tr>
<tr>
<td>SWCs</td>
<td>Shared Watercourse Institutions</td>
</tr>
<tr>
<td>RSAP</td>
<td>Regional Strategic Action Plan</td>
</tr>
<tr>
<td>RWP</td>
<td>Regional Water Policy</td>
</tr>
<tr>
<td>RWS</td>
<td>Regional Water Strategy</td>
</tr>
<tr>
<td>SADC</td>
<td>South African Development Community</td>
</tr>
</tbody>
</table>
PREFACE

Water resources are so vital and indispensable to the socio-economic growth and development of Africa, environmental protection and ecosystem preservation that its governance at all levels namely the Regional Economic Community level, Basin and Member States levels has become a known imperative. The present compendium of national and regional policy, legal and institutional frameworks for water resources management in Africa was produced on the basis of a case study led on a sample member state, regional economic community and transboundary basin organisations in the five regions of the continent. It provides comprehensive information that allows member states, regional economic communities (RECs) and basin organisations to use as measuring tool for their institutional capacity and to update them periodically, and also for AMCOw to use the information in strengthening its capacity to play the leadership role in providing policy direction for water sector in Africa.

This study focuses on the countries, RECs and the basin organisations in the sub-regions of Central, Eastern, Northern, Southern and West Africa. It is important to note that the basin organisations not only belong to one sub-region but two or three which favours the spirit of regional integration and cooperation. It comprises:

- 11 member states: Algeria, Botswana, Burundi, Cameroun, Congo, Ghana, Kenya, Senegal and Zambia
- 3 RECs: ECOWAS in West Africa, ECAS and SADC
- 6 basin organisation, rivers and lakes: ABN on the Niger basin, OMMVS on the Senegal River Basin, CICOS on the Congo, Oubangui and Sanghai river basin, CBLT on the Lake Chad basin, ORASECOM on the Orange Senqu river basin, OSS on the Aquifer system of the Western Sahara in North Africa.

One of the lessons that we can draw from this document is the strengthening of the political will to coordinate the frameworks for the management of water resources at national level even though certain countries are late. At transboundary level, in spite of a typically African framework, the 1997 United Nations Agreement on the uses of International waters for purposes other than navigation, possesses a highly indicative character for the signature of various agreements on the management of basins by African states. From national and regional policy reforms to legal and institutional frameworks for integrated water resources management (IWRM).

This compendium is therefore a reference document for policy leaders and decision makers with an overview on policy framework of sustainable management of water resources as a way of achieving the objectives of the African water Vision 2025, Africa’s Agenda 2063, the N’gor Declaration on water security and sanitation and the Goal-6 of the Sustainable Development Goals.

Its my pleasure as Executive Secretary of the African Ministers’ Council on Water (AMCOW) to publish this document in the hope it will provoke positive and constructive discussions that will in the long run make it richer and more useful for a sustainable management of our shared water resources at national, regional and basin levels. Other countries, RECs and the basin organisations will receive similar attention in the long run with a view to covering the whole continent and creating a favourable environment for a better sustainable management of the resource as well as guarantee a universal access to water for all.

Dr. Canisius KANANGIRE

AMCOW Executive Secretary
EXECUTIVE SUMMARY

AMCOW is implementing a project with the support of the European Union Commission for “Institutional Strengthening of the Secretariat of the African Ministers' Council on Water (AMCOW-Sec)”. The project aims to enhance policy level interventions for AMCOW, strengthen management capacities and facilitate the development and update of enabling frameworks for managing Africa’s water resources including governance systems, management arrangements, as well as developing and maintaining coordination tools, methodologies and procedures for operations. The compendium is a vehicle for sharing experiences and lessons at sub-regional and continental levels.

One of the expected project’s outputs is a Compendium of national and regional policy, legal and institutional frameworks, and learning review for water resources management in Africa.

Methodology

The compilation entailed a desk review of national and regional policy, legal and institutional frameworks for water resources management in Africa, and case studies of selected countries, Regional Economic Communities (RECs) and Transboundary Basin Organisations (TBOs).

The report was compiled through a desk study mainly based on information obtained from the following sources:
- Official documents of the countries, RECs and TBOs and some discussions with some of them.
- Information on organizations obtained from the Internet.
- Information obtained from specific and various studies, assessments and reports.

Questionnaire-guides were prepared to facilitate the understanding of the aim and to guide the preparation of the inputs from countries, RECs and TBOs.

The present report forms part of a broader study about governance and institutions as cross-cutting theme that will support AMCOW and its Member States to improve water governance and management structures in Africa.

In line with the objectives and the scope of study, the report compiles a total of 20 water resources management frameworks cases collected from the 5 sub-regions of Africa (North Africa, Western Africa, Eastern Africa, Central Africa and Southern Africa). It addresses primarily national and regional/transboundary policy, legal and institutional frameworks, and learning review for water resources management in Africa.

This report is a rapid compilation of national and regional policy, legal and institutional frameworks for water resources management in Africa. It is based on case studies, summarizing priorities of policy documents, success components and lessons, in order to assist member States to develop, review and/or update water management policies and regulatory frameworks. It will add value to some extent in contributing to shared experiences and lessons at sub-regional and continental levels.

The selection of case studies is based on national and regional policies that have successful components with regards to their capacity to enable and enhance good water governance, or to anticipate, prevent, solve a conflict situation at national, transboundary and regional levels (benefits of cooperation, success and benefits of water, energy and food nexus approach…etc.). The countries, RECs and TBOs that were selected for the case studies are:

- 3 RECs: ECOWAS (West Africa), ECCAS (Central Africa), and SADC (Southern Africa).
- 6 L/A/RBOs: NBA (Niger River), OMVS (Senegal River), CICOS (Congo-Oubangui-Sangha Rivers), LCBC (Lake Chad), ORASECOM (Orange Senqu Rivers), and the NWSAS (North-Western Sahara Aquifer System).
Key findings

An analysis of the national and regional/transboundary water policies and high level political statements shows a high degree of commonality between policy objectives across the continent. Policies are driven by the desire to improve the social and economic situation of the population in the countries, sub-regions and transboundary basins. Water is recognised as a key driver for achieving economic growth and improved social conditions. Water policies across the continent stress the principle of Integrated Water Resources Management (IWRM). Importantly, the high dependency of many African countries on shared water resources is expressly recognised and the need as well as potential for increased cooperation and joint management of transboundary water resources is highlighted in the continental and regional policy frameworks.

On the other hand, there is less coherence in the legal frameworks for transboundary water management and the strength of existing frameworks differs considerably. At present there is no binding global or continent-wide transboundary water management Convention applicable to African states. The 1997 UN Convention on the Non-navigational Uses of International Watercourses has strong guiding character for many of the basin-specific agreements entered into by African states. The key messages that derived from study are summarized in terms of recommendations.

At national level

For the eleven countries of the national case studies, we noted significant progress overall. However, much remains to be done to strengthen the enabling environment for water resources management at national level.

Some countries have no policy on water resources management. Countries that have a water policy are, for various contextual reasons at varying levels of application.

The legal and regulatory framework for water resources management varies considerably from one country to another. Many countries have a law on water management and enforcement regulatory measures. The level of implementation varies from one country to another due either to lack of will or weak technical and institutional capacity, or to insufficient budgetary allocations. Sometimes it is a combination of two or three reasons.

At the institutional level water-related issues are of interest to several sectors, several socio-professional circles, and thus several categories of actors. The pillars of the institutional framework for water management are threefold: (i) the priority of the issue of water - the adequacy of the institutional anchoring - (ii) the separation of management functions and water use functions, (iii) participation of all stakeholders. The separation between the functions of management and those of water uses, although institutionalized in many cases, experience some difficulties in being functional or operational when they exist. In addition, the weaknesses of the institutional framework encountered are the result of the lack of inadequacy of the political and legal framework for water management.

Progress has been made in the development of water resources planning and development tools, such as integration of adaptation to climate change in the water sector, management of conflicts over access to water, …but tools that allow consideration of human rights in the water use and management and, monitoring and evaluation of the implementation of water policies and strategies, anti-corruption measures, integrity and transparency in the water sector are not well developed.

The national water resource management policies have experienced an unprecedented development and significant progress has been made towards the adoption and implementation of integrated approaches to water resources management. This momentum initiated since the adoption of the African Water Vision for 2025, should be maintained and strengthened. Africa now has a wealth of experience that can be used either to inspire countries in difficulties and a delay or to update and improve water resources management frameworks of countries making progress. The following policy recommendations are proposed to improve the governance and management of water resources in African countries.
Strengthen the political will:
- To establish and pursue reforms in favor of integrated approaches to water resources management through the development/updating and implementation of real development policies, planning and management of water as a resource for all uses;
- To establish and pursue reforms of the legal and regulatory framework for water resources management through the development/updating of legislation and appropriate regulatory instruments for effective implementation of policies and effective regulatory and administrative mechanisms at required levels;
- To release appropriate budgetary resources for a sustainable and effective implementation of national legislation on water resources management.

Identify and address barriers to legal and policy reforms and target lagging countries to which AMCOW-Sec and its partners (RECs, TBOS ...) could provide political support and support for capacity development.

Improve the water sector institutional base to actually give it the priority and make effective the separation between on the one hand management functions, and functions of water use of the other hand.

Review and strengthen the composition and functioning of consultation frameworks and decision-making bodies in order to better reflect the concerns and views of local communities and water users.

Improve water governance at decentralized basin level and promote it and the principle of subsidiarity through support measures (local populations’ expression platforms, allocation of appropriate financial resources, capacity building…).

Strengthen the capacity of all stakeholders at all levels and improve learning by action mechanisms (learning by doing) to have the human resources necessary for the implementation of IWRM.

Support and promote the establishment governance mechanisms and IWRM-based institutional frameworks at national, local and basin levels through institutions capacity building and the sharing of knowledge and experience between peers.

At sub-regional and transboundary levels

An analysis of the national and regional/transboundary water policies and high level political statements shows a high degree of commonality between policy objectives across the continent. Policies are driven by the desire to improve the social and economic situation of the population in the countries and sub-regions and the countries sharing the basins. Water is recognized as a key driver for achieving economic growth and improved social conditions. Water policies across the continent stress the principle of Integrated Water Resources Management (IWRM). Importantly, the high dependency of many African countries on shared water resources is expressly recognized and the need as well as potential for increased cooperation and joint management of transboundary water resources is highlighted in the continental and regional policy frameworks.

There is less coherence in the legal frameworks for transboundary water management and the strength of existing frameworks differs considerably. At present there is no binding global or continent-wide transboundary water management Convention applicable to African states. The 1997 UN Convention on the Non-navigational Uses of International Watercourses has strong guiding character for many of the basin-specific agreements entered into by African states.

The governance framework for the management of transboundary aquifers is comparatively less developed. However, efforts to strengthen the management architecture for shared groundwater are increasingly made. At shared aquifer system level – analogous to lake/ river basin for surface water – only very few cooperative structures for the management of transboundary aquifers exist and are at various stages of their development. Additional structures are currently being set up for some aquifer systems in southern and West Africa. Management arrangements for the conjunctive use of transboundary surface and groundwater resources remain underdeveloped.
Conclusion

From the selected case studies, African countries, RECs, and TBOs to varying degrees, have undertaken many actions to reform the national and regional policy, legal and institutional frameworks for water resources management by adopting the IWRM approach. They adopted new water policies and sound legal and regulatory frameworks, and put in place well-functioning institutional systems that allow an acceptable level of stakeholders’ participation. Initiatives have also been undertaken to ensure coherence and coordination of water management related initiatives at the sub-regional and transboundary levels and to support actions at national level.

Further, a number of African countries have adopted country-specific regulations, procedures and sub-sectoral guidelines for key sub-sectors of the water resources management. Some degree of awareness and capacity has been built and the process is gradually becoming more integrative and inclusive.

Notwithstanding, the institutionalization of IWRM has been slower in some countries and/or RECs than in other parts of Africa and varies from country to country. Many challenges remain in relation to application effectiveness and the extent to which IWRM findings influence development decisions. Political will and support are key to ensuring that countries overcome these challenges.

However, over the years, African countries have gained valuable experience in the application of IWRM approach and have attained a reasonable degree of success in this regard. Some good practice cases have been recorded and, more importantly, valuable lessons have been learned and documented.

To advance the goal of integrated planning, policy and management, it is important to increase awareness about how these three systems intersect, and why greater coordination is necessary. It is thus important to incorporate the nexus perspective in local, national and other international planning activities focusing on water, food and energy.

Recommendations

a) Many countries, RECs, and TBOs in Africa are yet to fully develop the policy, legal and regulatory, and institutional frameworks for water resources management and good governance of water. They should ensure that appropriate and adequate frameworks, including procedures and guidelines, are developed/strengthened as a matter of priority as they are important prerequisites to the sustainable water resources management systems.

b) Consistency in the institutionalisation and application of IWRM approach at the level of the continent should be encouraged. In this regard, close cooperation and coordination between AMCOW and RECs, and TBOs should be encouraged. The idea for RECs to serve as regional representations of AMCOW-Sec should be pursued and intensified. Ways should be explored to involve all countries that share water resources in CICOS (Central Africa) and in the transboundary aquifer systems.

c) Enhancing capacity in IWRM and much more for the transboundary water management application is key. In this regard, countries, RECs and TBOs should develop capacity building programmes based on clearly identified needs, taking into account experiences and lessons learned.

d) The separation between the management functions (including the functions of coordination and regulation) on the one hand, and the functions of use of water on the other hand, although institutionalized in policy documents and in legal and regulatory texts, are experiencing some difficulties to be functional. There is a strong need to review/adapt water management institutional frameworks to the principles of IWRM.

e) Adopt appropriate procedures and tools, and apply without indulgence legal and regulatory provisions to fight corruption in the water sector. This can be done by promoting citizen participation in the processes of decision making. For this purpose, it is necessary (i) to establish and reinforce partnerships and multi-stakeholder coalitions with expanded impact, (ii) undertake the
necessary reforms (legal and financial reforms, reforms of public service systems, reforms in the private sector) (iii) sensitize the public and build capacities.

f) The lack of adequate and robust consultation, participation and coordination mechanisms that allow stakeholders at all levels to effectively contribute to decision-making in a coherent, holistic and integrated way can greatly undermined the quality of the water management frameworks. In this regard, in addition to capacity enhancement initiatives, countries should set minimum governance frameworks and empowerment initiatives for an effective constructive engagement of stakeholders in water resources management.

g) Public participation is key to integrating social concerns in development policies, plans, programs and projects in an effective manner. In view of the importance of public participation in water management processes, it is recommended that water managers should develop strategies for public participation at all stages of the decision-making, which take into account lessons learned, and the specific country context. A learning group forum and information-clearing house on IWRM and/or Transboundary Water Resources Management should be established to provide experience sharing and learning platforms that could take advantage of existing good practices elsewhere.

h) Develop mechanisms and tools of conflict resolution and consensus development as support for legislative reforms and engage stakeholders in policy dialogue, and ensure that legal procedures are the center of ultimate mechanism of conflict resolution.

i) The importance of the water sector is illustrated by the adoption of a Sustainable Development Goal (SDG) on water by 2030 (SDG No 6). However, the adoption of a single goal for the sector water potentially present a risk of dilution of a flap in favor of other areas - the risk to maintain sanitation in second place, given the relative importance of drinking water. In all cases, water security is a prerequisite for achieving the economic and social targets of SDGs. High priority should be given to sustainable water management. Africa has the potential to explode the main objective of water into sub-goals are compatible with its specific concerns.
Chapter one:
INTRODUCTION

1.1- Background

The African Water Vision 2025 outlined the challenges to the sustainable management of water resources on the continent; it named inappropriate governance and institutional arrangements as one core ‘human threat’ to sustainable water management. The vision called for fundamental changes in policies, strategies and institutional arrangements, the adoption of participatory approaches, as well as for openness, transparency and accountability in decision-making processes as a key success factor.

AMCOW is implementing a project with the support of the European Union Commission for “Institutional Strengthening of the Secretariat of the African Ministers’ Council on Water (AMCOW-Sec)”. The project aims to enhance policy level interventions for AMCOW, strengthen management capacities and facilitate the development and update of enabling frameworks for managing Africa’s water resources including governance systems, management arrangements, as well as developing and maintaining coordination tools, methodologies and procedures for operations.

One of the expected project’s outputs is a Compendium of national and regional policy, legal and institutional frameworks, and learning review for water resources management in Africa.

In view of this background, the overall objective of the study “Compiling a compendium of national and regional policy, legal and institutional frameworks for water resources management in Africa” is three-fold. The compendium is meant to provide an overview of the various frameworks currently in place at national and sub-regional or transboundary levels to promote Integrated Water Resources Management (IWRM) in Africa. It also makes practical recommendations for improving the governance and management and its application. The intent is to use the compendium as a vehicle for sharing experiences and lessons at national, sub-regional and continental levels. As such, it does not investigate the levels of implementation of the current water resources management frameworks, but rather looks at what is being done to promote enabling frameworks for managing Africa’s water resources.

Once finalized, the compendium will be made available in electronic form on the AMCOW’s website.

1.2- Scope of the report

The report forms part of a broader study1 about governance and institutions as cross cutting theme that will support AMCOW and its Member States to improve water governance and management structures in Africa.

The task description states the scope of work with respect to the TOR as follows:


2. Extend efforts to collect and analyse national and regional policy that have successful components with regard to their capacity to enable and enhance good water governance, or to anticipate, prevent, solve a conflict situation at national, transboundary and regional levels (benefits of cooperation, success and benefits of water, energy and food nexus approach, etc.).

Terms of reference of the study are presented in Annex 1.

In line with the objectives and the scope of work described above, the report compiles a total of 20 water resources management frameworks cases collected from the 5 sub-regions of Africa. It addresses

---

1 “Institutional Strengthening of the Secretariat of the African Ministers' Council on Water (AMCOW-Sec)” funded by the European Union Commission
national and regional/transboundary policy, legal and institutional frameworks, and learning review for water resources management in Africa.

This report should be seen as a rapid compilation based on case studies. It gives an overview of priorities of water policy documents, success components and lessons, in order to assist member States to develop, review and/or update water management policies and regulatory frameworks. It will add value to some extent in contributing to share experiences and lessons at sub-regional and continental levels. As such, it is important to view this report, not as a comparative and definitive analysis of selected case studies, rather as an overview of lessons in the implementation of integrated approaches in water resources management in Africa.

As a result, the cases do not consistently discuss the progress and gaps. Since this makes it difficult to draw consistent comparisons, these assessments are not part of the study. The evidence is not available within the cases to make substantive arguments on the level of implementation, progress and gaps in the water resources management frameworks.

1.3- Approach and Methodology

1.3.1. Approach

The compilation entailed a desk review of national and regional policy, legal and institutional frameworks for water resources management in Africa, and case studies of selected countries, Regional Economic Communities (RECs) and Transboundary Basin Organizations (TBOs). The compiling process took stock of global developments, trends and practices in IWRM, ultimately focusing on water resources management and good water governance in Africa. The following issues were as much as possible documented:

- General information relating to the water policy, legal and institutional frameworks including physical characteristics of the water body, mission, vision and objectives of the policy/strategy paper, parties involved;
- National / transboundary / regional priorities of the policy;
- Success components with regard to enhance and promote water good governance;
- Lessons learned;
- Post-2015 Water Agenda: The African perspective; and
- Practical recommendations for improving the governance and management and its application.

1.3.2 Methodology

- Source of information

The report was compiled through a desk study mainly based on information obtained from the following sources:

- Official documents of the countries, RECs and TBOs and some discussions with some of them.
- Information on organizations obtained from the Internet.
- Information obtained from specific and various studies, assessments and reports.

Questionnaire-guides were prepared to facilitate the understanding of the aim and to guide the preparation of the inputs from countries, RECs and TBOs.

- Stakeholder involvement

The time and resources made available did not allow visits and direct discussions with the relevant role players to interact and to determine their perceptions and appreciation of the implementation of the water resources management frameworks and the perspective of the development of the actual situation. The key stakeholders were the AMCOW TAC members or focal points and any resource person known by the AMCOW-Sec or the Consultant.
Stakeholder involvement was done by all kinds of communication (electronic, Skype call, phone… etc.). In order to improve the involvement of the stakeholders, the Consultant proceeded in two steps:

1) The first step was a questionnaire-guide drafted and sent to inform and plead with them to forward all kinds of relevant documents, based on a sound knowledge and understanding of the scope of the study. For this step, the AMCOW-Sec was involved to contact and advocate for their involvement.

2) The second step consisted, after drafting the full case study, to be sent to stakeholders so as to receive comments and clarifications.

The main administrative institution in charge for water resources management in each of the selected countries, RECs and TBOs was contacted to collaborate in the preparation of the respective country, REC and TBO study case. Unfortunately, these two steps did not work satisfactorily, as the stakeholders were rather silent. The feedback expected was not successful.

**Selection of case studies**

The compendium focused on countries, RECs and TBOs selected on the basis of the following criteria:

**Desk review**: The desk review helped in identifying key issues in water sector reforms since the adoption of the IWRM approach as a new paradigm to deal with water resources management, including, developments, trends, interventions and implementation issues.

**Selection of countries, RECs and TBOs for the case studies**: The criteria for selection of countries, RECs and TBOs was based on a number of factors, among them the availability and accessibility of information on the issues. The principle of equitable geographical representation in Africa was used to get balanced case studies. Also relatively level of development and implementation of IWRM approach has been considered. Attention has been also given to represent as much as possible the different African sub-regions and legal systems. Case studies were selected based on a number of factors, among them the existence and availability of a water law.

- 11 Countries: Algeria, Burkina Faso, Burundi, Botswana, Cameroon, Congo, Ghana, Kenya, Senegal, South Africa and Zambia.
- 3 RECs: ECOWAS (West Africa), ECCAS (Central Africa), and SADC (Southern Africa).
- 6 R/L/ABoS: NBA (Niger River), OMVS (Senegal River), CICOS (Congo-Oubangui-Sangha Rivers), LCBC (Lake Chad), ORASECOM (Orange Senqu Rivers), and the NWSAS (North-Western Sahara Aquifer System).

**Content of the report**

As the global water crisis is rarely viewed as a problem of physical water scarcity alone, but rather as a problem of governance, the successful implementation of IWRM is highly dependent upon a country’s – transboundary basin or a regional - water resources governance framework. The focus areas of water management and water governance that are at the heart of the present report are specifically the following:

- **Water management**: Climate change adaptation measures in water management; Monitoring and Evaluation systems for the implementation water policies; Human rights in water supply and water management; and Learning review and capacity building processes.

- **Water governance**: Consultation, participation and coordination mechanisms; Anti-corruption and integrity processes and measures; Transparent water budget processes; Conflicts management; Benefits of water, energy, and food nexus approach; and Benefits of transboundary water management.
1.4 Definitions

The study looks for evidence of integration of a number of key issues in the water management frameworks. The present section provides definitions and description of two concepts that are used in the report, so as to have a common understanding and facilitating the case studies in various contextual setting for water management frameworks in Africa.

- **Water Governance**

  Sustainable water management today is a pillar of social and economic development. Success requires the restructuring of national and regional policy, legal and institutional frameworks to ensure they are appropriate for a new paradigm in water management. Effective legal and regulatory frameworks are fundamental to achieving Integrated Water Resources Management (IWRM). Hence, IWRM-strengthening frameworks for water governance are to foster good decision making.

  The following quote highlights the interconnectedness of water governance\(^2\) and IWRM: "The governance dimension is strongly associated with the IWRM concept. It can be assumed that the specific design of a governance system affects the decision-making and implementation of IWRM" (UFZ, 2011).

  Water governance can be defined in many different ways depending on the perspective from which the issue is addressed. Below are some definitions that help understand the boundaries of the concept.

  Water governance is the broad range of political, social, environmental, economic and administrative systems that are in place to regulate the development and management of water resources and provision of water services at different levels of society (UNDP, 2005).

  Water Governance can be referred to as the range of political, social, economic, organisational and administrative processes through which interests are articulated, input is absorbed, decisions are made and implemented, and decision makers are held accountable in the development and management of water resources and delivery of water (and sanitation) services at different levels of society (Modified from Nowlan and Bakker, 2007).

  Water governance is defined as “[…] the political, social, economic and administrative systems that are in place, and which directly or indirectly affect the use, development and management of water resources and the delivery of water services at different levels of society“ (UNDP 2013).

  For the sake of common understanding in the context of the study, that water governance
  - is about developing and managing water resources and delivery of services;
  - includes a range of issues intimately linked to water - from health and food security to economic development, land use and the preservation of the natural world on which water resources depend;
  - is concerned with drawing up and adopting the right laws, policies and institutions – also how these are established, enforced and implemented Governance in the water sector has political, administrative and economic dimensions and includes both the activities of government, as well as the interaction of civil society with these processes.

- **Human rights and water**

  Recent international discourse has promoted a rights-based approach (RBA) to water management, which asserts that humans have a right to clean water. Thus RBA combines human development with human rights. It deals not only with human needs and development requirements, but also proposes a societal obligation to guarantee and protect inalienable rights of individuals. It empowers people to demand water access as a right, and gives communities a moral basis from which to claim international assistance.

\(^2\) While ‘government’ itself refers to “the governing body of a nation, state, or community“(Oxford Dictionary 2013), the term ‘governance’ refers to the “process of decision-making and the process by which decisions are implemented (or not implemented)” (UN ESCAP 2013).
In November 2002 the United Nations Committee on Economic, Social and Cultural Rights (CESCR) adopted the General Comment No.15 (GC15) “The Right to water” which declares water as a human right as follows: “Water is a limited natural resource and a public good fundamental for life and health. The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights.”

Based on the UN concept of water as a human right, it is analysed if and to what extent these concepts are acknowledged in policy or legal documents.

- **Water, energy and food nexus approach**

  Food, water and energy systems are interconnected. The NEXUS is how and where these three systems intersect. Because actions related to one system can impact one or both of the other systems, it is necessary to take a NEXUS APPROACH in managing water resources.

  The concept of the NEXUS recognises that the provision and consumption of food, energy and water are inextricably interlinked. Addressing the challenges facing these three important aspects in isolation is short-sighted and often counter-productive. Food, energy and water security are all vital for a sustainable future and approaching them as a NEXUS is essential in achieving this.

1.5- **Outline of the report**

This report comprises five (5) Chapters and is organised as follows:

- Chapter 1 is an introductory chapter.
- Chapter 2 provides an overview of country case studies.
- Chapter 3 provides an overview of regional/transboundary case studies (RECs and L/A/RBOs).
- Chapter 4 looks at the African perspective of the Post-2015 Water Agenda.
- Chapter 5 presents the conclusions and recommendations on the basis of the findings.
Chapter two:  
COUNTRY CASE STUDIES  
CENTRAL AFRICA

2.1- CAMEROON

2.1.1- General information

Located in the north-western coast of the Gulf of Guinea, Cameroon is by its pivotal position between Central and West Africa, reputed part of the Central African sub region. The country covers an area of 475,650 km².

Cameroon has significant water resources due to favorable rainfall with an annual average ranges from 5,000 mm in the south to 500 mm in the northern part. Moreover, Cameroon has many lakes with varied and extended forms. These are important sources of fresh water.

Rainfall flow into a dense hydrographic network, the Adamawa Plateau Cameroon water tower, divides into two large hydrographic units: the Atlantic (Sanaga and coastal rivers) and Congo basins in the south, and the basins of Lake Chad and Northern Niger. The average annual height of rainfall is about 1,600 mm, but it is uneven across the country. The main rivers of the Atlantic basin are: the Sanaga, the Nyong, the Ntem, the Mungo, the Wouri, the Dibamba the Lokoundje. With 918 km long and a basin of 140,000 km², the Sanaga is the largest river of Cameroon. The rivers of the Congo Basin are represented by the Dja, the Kadeï, the Sangha and the Ngoko. The Benue and its main tributary the Faro belong to the Niger Basin. Logone is the main river of the Lake Chad Basin.

Cameroon has significant groundwater resources which are distributed among large aquifer areas.

In 2002, the population of Cameroon was estimated at 15.7 million inhabitants. According to the UNDP projections, Cameroon's population will reach 18.9 million in 2015 and the average annual population growth rate in 2002-2015 will be 1.4%.

2.1.2- Executive summary of water policy document

- **Water Policy framework**
  
  Cameroon does not have a clear and specific national policy on water. The issue of water and the definition of policy in terms of management and use of resources are supported through a policy framework which consists of the following texts:

  - The Constitution³
  - The 2035 Cameroon Vision
  - Urban Hydraulics Sectoral policy letter⁴
  - Rural drinking water supply and sanitation policy⁵
  - The 2008-2015 action plan for drinking water supply and sanitation sector in rural areas
  - Liquid sanitation National Strategy

  The Constitution guarantees in its preamble, the right of all citizens to a healthy environment "Everyone has the right to a healthy environment. Environmental protection is a duty for all. The State ensures the defense and promotion of the environment".

  The vision of the Cameroon water management for 2025 is based on general guidelines which essentially arise from international commitments to which Cameroon is a party.

  Till date, there is no formal document as "National Water Policy" as a single framework for guiding actions to be conducted in terms of water resource management of the country, even if there are many documents and various speeches declining political elements in this sector. The Government

---

³ The Constitution in force has been adopted on January 18, 1996
⁴ Adopted in 2007
⁵ Adopted in 2009
has recently undertaken the development of its national water policy but this process has not yet been completed. The policy framework regarding water only applies to drinking water supply and sanitation.

- **Legal and Regulatory framework**

Cameroon does have a water law dedicated to water resource management. The current law on water regime does not address aspects related to water resource management. However, the legal basis for water in Cameroon is characterized by a very protective normative framework and an operating system rigorously framed in relation to drinking water supply and sanitation. The texts that make up the legal basis for water are essentially:

- The law on water regime in Cameroon aims the liberalization of drinking water supply sector, and pays great attention to the protection of water resources, and advocates a national coordination of drinking water supply and sanitation services, the water issues from the perspective of environmental protection.
- The law on the system of mineral and spring water of Cameroun modifies and completes laws n° 73/16 of December 7, 1973 and n° 88/018 of December 16, 1988 laying down fees and royalties relating to the exploration and exploitation of mineral water and spring water.
- The law on framework law relating to environmental management aims at the protection and the rational management of environmental resources in their tangible and intangible content and in their social and cultural aspects. This law, which is not specifically on water, addresses the issue of water in terms of environmental protection.

- **Institutional framework**

The law on water regime does not assign responsibility for the development of the sectoral policy of water and sanitation sector. This competence is defined in Decree n° 2004/320 of December 8, 2004 organizing the government and is included in Article 1 of Decree n° 2005/087 of March 29, 2005 organizing the Ministry of Energy and Water (MINEE) whose mission is to develop, implement and evaluate government policy in terms of production, transport and distribution of energy and water. This is of course what is related to water in terms of drinking water supply and sanitation in its dimensions related to wastewater and excreta and storm water. Article 39 (Decree n° 2005/087 of March 29, 2005 organizing the MINEE) sets out the responsibilities of the Directorate of Hydraulics and Hydrology. The main actors in the water sub-sector and sanitation are grouped into three (3) major colleges of actors: (i) the State and its main branches, especially the Ministry of Energy and the Water but also other ministries, agencies trust, and regional and local authorities; (ii) users and their associations, NGOs (civil society and private sector); (iii) cooperation partners.

### 2.1.3- Vision, Objectives and Priorities of the policy

Cameroon vision on horizon 25-30 is devised as follows: "Cameroon, an emerging, democratic and united country in its diversity", the objectives pursued to achieve that vision include among other things:

- A decentralized and pro-development administration;
- A prosperous economy with performing infrastructures;
- An economy based on regional and global integration;

---

6 Adopted in 2007  
7 Adopted in 2009  
8 This is Law n° 98/005 of April 14, 1998  
23 This is Law n° 98/005 of April 14, 1998  
24 This is Law n° 90/016 of August 1990  
25 This is Law n° 90/016 of August 1990  
26 This is Law n° 90/016 of August 1990  
27 This is Law n° 96/12 of August 5, 1996  
28 According to Decree n° 2005/087 of March 29, 2005
Access for all to basic quality social services.

The conclusion drawn is that addressing water resource management issues in Cameroon remains marginal, despite the existence of a ministry dedicated to the water sector. Admittedly, there is a relatively dense regulatory framework and institutional organs that supervise water management. But these elements are not structured around a true strategy making water a resource, then a development issue which must be preserved, used sustainably and efficiently.

The process of preparation and implementation of a new water resource management framework based on the IWRM concepts and principles, has not yet led to the reforms of policy, legal and institutional frameworks dedicating the IWRM concepts and principles.

National priorities in the water sector can be summarized to drinking water supply and sanitation.

2.1.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**
  Available and accessible documentation failed to note the existence of water resource planning and development tools. The IWRM plans, the SDAGE, or water basin management plans are worksites to open.

- **Climate change adaptation in water sector**
  Given the lack of policy on water resource management and IWRM plan, concerns about climate change are not taken into account in the water sector which is however the sector where climate change manifest more acutely.

- **Monitoring and Evaluation (M&E) systems**
  For water sub-sectoral policies (drinking water supply and sanitation), there is no monitoring and evaluation mechanism, nor does performance indicators exist to monitor and evaluate the implementation of national water policies. Either way there is neither a national water policy, nor an IWRM plan.

- **Human rights in water supply and water management**
  The framework law on environmental management indicates that laws and regulations must guarantee the right for everyone to a healthy environment and ensure a harmonious balance within ecosystems, and between urban and rural areas (Art. 5).

  In Cameroon, the right to water concerns access to water for domestic uses and not water as a resource in general. Its explicit recognition as a fundamental right is an important decision with high symbolic and legal value. It demonstrates the importance that the government assigns to water for health and consideration they have for the users’ wishes which do not have access to clean water.

- **Learning review and capacity building processes**
  Given the cross-cutting nature of water resources for social and economic development, their management involves many actors. To make effective their participation in resource management, it is imperative that these actors have a clear vision of the issues of water resources, which means reinforcing their respective capacity. However, it is clear that the virtual absence of learning process and actions to build capacity in terms of concerted management and sustainable use of water resource.
B. Water governance

- **Consultation, participation and co-ordination mechanisms**

There are no frameworks for the participation of non-state actors. A National Water Committee (CNE)\(^\text{10}\) established in 1998, was created in 2001 but is not functional. Its composition reflects mainly the ministries in charge of one aspect of water with two (2) representatives of the private (leasers of public water and energy services), one (1) representative of the chamber of agriculture, livestock, forests, one (1) representative of mayor associations. For the policy of drinking water and sanitation supply in rural areas, there is no information on the existence of an inclusive framework for consultation and coordination mechanisms.

The 2004 guiding laws on decentralization provide a transfer of competence in favor of regions (decentralized territorial collectivities) and in water field. However, decentralized water management has not been supported by the necessary resources for its implementation. There is a lack of a reliable legal framework to support local actors in the management of water. Thus in practice, the principles of subsidiarity and participation does not yet apply in the water management process in Cameroon.

Coordination, consultation and participation mechanisms in the water sector are limited to drinking water supply and sanitation sub-sector, in both urban and rural areas. Despite the existence of a variety of mechanisms and organizations at national, regional or local level coordination and consultation remain almost nonexistent.

Some agencies benefit from regulatory powers from delegations called to arouse their efficiency. These are the following organs:

- The National Water Committee (CNE) enforcing law on water regime is a consultative body the government can examine to give an opinion and make proposals and recommendations on issues or problems related to water. Its composition is dominated by representatives of the state.

- The National Committee for Environment (CNEEnvi)

These organs or structures, albeit having organic and regulatory frameworks are not operational for a number of reasons.

In conclusion, Cameroon has no instances and consultation and participation mechanisms of all stakeholders in water resource management.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

Cameroon does not have legislation and a regulatory framework integrating procedures and measures of integrity and fight against corruption in the water sector. It neither have mechanisms that ensure transparency in the budget process and including the tools to improve transparency and accountability in the water sector.

In terms of good governance, corruption, power imbalances, fraud impede the efficient management of water resources.

- **Conflicts management**

Tools and instruments for water conflict management were not documented, nor does the existing literature mention conflict situations for access, allocation and use of water resources. So it was not possible to know whether conflicts have existed and how they were resolved or managed.

---

\(^{10}\) Decree n° 2001/161 / PM of May 8, 2001 establishing the powers, the organization and functioning of the National Water Committee in enforcing Law n° 98/005 of April 14, 1998 on water system.
In the current situation where water resources management framework has many limitations and inadequacies, notably on legislative, regulatory and institutional plans, it can be difficult to document success stories in terms of water conflict management.

Regarding international shared water basins (Niger and Congo rivers, Lake Chad), there are conflict management mechanisms within OBT that concern them.

- **Benefits of water, energy, and food nexus approach**

Cameroon has abundant water resources that can contribute significantly to its social and economic development. To achieve this contribution through the enhancement of this potential of water resources, Cameroon has to address challenges related to: (i) Securing agricultural production and food security; (ii) Hydroelectric production for the absorption of energy deficit and meet rising electricity demand of about 80% through hydropower, as after the Democratic Republic of Congo (DRC), Cameroon is the second country in Africa in terms of hydropower potential; (iii) Navigating for main rivers of the country by fighting against silting and siltation affecting them particularly in order to improve their navigability period.

With the huge potential of water resources of Cameroon, this potential should reach a high level of development. But that seems not to be the case (low level of water resource development), particularly in the fields of irrigated agriculture and hydropower. Sector planning of these sub-sectors is not integrated and interdependence between them is not addressed consistently taking into account the balance of the three dimensions of sustainable development.

- **Benefits of transboundary water management**

Cameroon shares with its neighbors several river / lake basins, the most important are the basins of the Congo, Niger, Ntem / Bénito, Ogooué, Cross, Akpa rivers and Lake Chad. From all these basins, only those of the Congo, the Lake Chad and the Niger are managed within the framework of Transboundary Basin Organizations (OBT) which are respectively the International Commission of the Congo-Oubangui Sangha Basin (CICOS), the Lake Chad Basin Commission (LCBC) and the Niger Basin Authority (NBA). Cameroon is member of the OBT and benefits, as such, of the benefits of cross-border cooperation through the numerous regional projects and programs implemented by these OBT.

However, at national level, the absence of clear policy and legislation on joint management and sustainable use of water resources, fail to identify national priorities and improve the benefits that Cameroon could draw from cross-border cooperation in the management of shared water resources.

Cameroon has not signed the United Nations Convention of 1997 on the law of international watercourses uses for purposes other than navigation, which does not allow it to fully enjoy a mutually beneficial cooperation with countries with which it shares the same river hydrographic basins in the perspective of achieving sustainable development.

2.1.5- **Overview of lessons learned**

- Water resources management in Cameroon suffers from poor governance, fragmentation of its institutions, and the absence of a proactive policy firmly focused on the improvement of water resources, etc. This management evolves in fact at the mercy of political, social, economic, cultural and environmental avatars which strongly hinder its implementation.

- Inadequacies of regulation texts result in inadequacies in regulatory frameworks, normative frameworks, a lack of consistency between texts and inadequacy in their implementation.
The institutional framework of the water sector is characterized at the moment by the central role of the Ministry of Energy and Water (MINEE). Several inadequacies characterize the institutional framework for water management in Cameroon. The observation of the functioning of the institutional framework reveals that the State has concentrated all water related prerogatives in the hands of its central or provincial structures, without really integrating the guidelines and principles of IWRM in participatory and inclusive management.

The learning processes and capacity building actions implemented have proved inadequate in comparison with the huge need for capacity building of key stakeholders, including the MINEE.

2.1.6- Practical recommendations

**Policy framework**

a) Problems of access to drinking water and improved sanitation cannot be dissociated from the general framework of water resource management. Deep reforms of institutions, legal frameworks and policies for water are essential to ensure sustainable expansion of access to drinking water and sanitation and improve sustainably the sector performance.

b) It is therefore necessary to undertake reforms in order to adapt the Cameroonian water legislation to the new situation. Anything that could enhance water management by bringing it closer to people and local concerns, thus ensuring, accountability and integrated management according to the principles that govern IWRM.

c) Available and accessible documentation did not allow noting the existence of planning development and tools for water resources. The IWRM plans, the SDAGE, or water management plans by basin are site works to open.

d) The concerns of climate change should be integrated into national, sectoral and local development strategies. A planned adaptation to climate change improves communities and citizens’ resilience that are dependent on natural resources for their daily needs and their specific know-how in order to reinforce the livelihoods and security means.

e) It is then important today to give water the importance it deserves in comparison with its status as strategic natural resource which affects national development. Therefore, it is imperative that the sector be recognized as a priority by the State, as well as health and education.

f) Various tools for integrity, transparency and anti-corruption in the water sector are essential to good water governance. They must be developed and implemented to ensure greater efficiency of water investments.

**Legal and regulatory framework**

a) To get out of legislative, legal and regulatory uncertainty that characterizes the current situation, the adopted texts and especially those in force today should be improved. Applications texts should be developed, completed and published in order to make effective laws enacted.

b) It is important to create an institutional, legal and regulatory environment favorable to the proper functioning of integrated water resource management. To this end, a legal framework will be put in place within which the rights and obligations relating to water will be clear and facilitate its rational use.

**Institutional framework**

a) More effective coordination of the entire water sector is critical. For effective implementation of the national water policy, it is desirable to group water assignments in one ministerial department to avoid the multiplicity of interlocutors which generates human and financial resources waste. This effective coordination should ensure the existence of communication,
exchanges and information frameworks between the different actors, with monitoring and evaluation system. The values such as transparency, participation and equity must be highlighted.

b) The MINEE as a governmental structure in charge of the water issues will organize and provide sustainable solutions to water problems. It will surround itself with competences and qualified staff, with adequate resources and a strong determination in water resource management. The institutional framework for water resource management should be based on the principle of separation of management and use of water resources functions, with a clear and unambiguous definition of roles and responsibilities.

c) The various institutions would benefit synchronizing their actions in order to avoid discrepancies and loss of time and energy. Multisectoral developed actions within a supreme dynamic framework governing water management are worth exploring. The National Water Committee in this regard could be this regulator. The application texts should follow the enactment of laws to enable their implementation.

d) Population and "stakeholders" involvement in IWRM. The populations must be involved in the management following a well-defined geographical space (eg watershed).

References


2.2- CONGO

2.2.1- General information

The Republic of Congo is a central African country covering an area of 342,000 km². Located on both sides of equator, Congo has over most of its length, an equatorial rainfall regime (maximum temperatures and rainfall interrupted by dry seasons made of warmer temperatures).

Congo water resources consist of surface water and groundwater. Frequently and abundantly watered by tropical rains, the Congo has many and powerful rivers. Besides the Congo River - the world's second largest river by its flow after the Amazon - there are more than thirty navigable rivers.
Surface waters are mainly drained by the Congo Basin and the Kouilou-Niari basin. The Congo Basin covers an area of 230,000 km$^2$ in the national territory. This basin includes the sub-basins of the Sangha, Likouala Mossaka, the Alima and the Nkéni. Kouilou-Niari basin covers an area of 56,000 km$^2$ in the country and includes the Louesse and Bouenza sub-basins. To these two main basins, should be added the coastal basins of the Nyanga and the Loémé.

The population of Congo is estimated at 4,448,000 inhabitants (2013) of which over 65% live in urban areas (Brazzaville and Pointe-Noire in particular). The Congo is one of the most urbanized countries in Africa. Brazzaville, the political capital with nearly 950,000 inhabitants, Pointe-Noire, the economic capital, with nearly 500,000 inhabitants, alone account for approximately 55% of the total population and 90% of the urban population.

2.2.2- Executive summary of water policy document

- **Water Policy framework**
  
  In Republic of Congo, the policy framework on water consists of the following:
  - The 2002 Constitution$^{11}$
  - The Political strategy document for development of the sectors of electricity, water and sanitation$^{12}$

  The strategy document that serves as a national water policy in Congo is now the reference framework for the development and implementation of national water policy in the Republic of Congo. It sets the major strategic guidelines that build on IWRM principles and focus on the problem of access to drinking water and sanitation. These guidelines are in accordance with the guidelines of the regional water policy. Moreover, they are in line with the guidelines of the regional water policy of ECCAS.

  The policy letter for the water and sanitation sector has the overall aim to improve the living conditions of the population by the optimal use of water resources and improved access to drinking water and sanitation.

- **Legal and Regulatory framework**

  The legal and regulatory framework comprise the following:
  - The Constitution
  - The Law on Environment protection$^{13}$
  - The Law on water Code$^{14}$
  - The law on the transfer of competences to local authorities$^{15}$
  - The law on determination of local government patrimony$^{16}$
  - The law establishing the National Agency for rural hydraulics (ANHYR)$^{17}$
  - The law establishing the national water distribution (SNDE)$^{18}$

  The Constitution basically addresses the nature, organization and management of the Congo State. It sets out the fundamental principles of the Republic, defines citizens’ rights and duties and sets the organizational forms and the rules of operation of the state. Natural resources and environment related issues are not addressed.

---

$^{11}$ Adopted on January 20, 2002  
$^{12}$ Adopted in December 2010  
$^{13}$ Law n° 003/91 on April 23, 1991  
$^{14}$ Law n° 13-2003 on April 13, 2003  
$^{15}$ Law n° 10-2003 on February 6, 2003  
$^{16}$ Law n° 31-2003 on October 24,2003  
$^{17}$ Law n° 38-2008 on 31 December 31, 2008  
$^{18}$ Law n° 5-67 on 15 June 15, 1967
In terms of water resources, the law on environmental protection aims at reinforcing legislation on the protection and preservation of river resources, management, restoration, protection and conservation of natural resources (Art. 1). Title V specifically addresses the issues of water protection (Art. 28-33).

The Water Code is to implement a national water policy aiming at (i) ensuring a rational use of water resources, (ii) (2 Art.); preventing the damaging effects of water; (iii) fighting against water pollution. But this policy does not exist yet. However, the refocusing of state missions (planning, regulation, control and regulation) is clearly stated and the public service delegation is clearly established. However, the regulatory framework for implementing the Water Code is still very weak and the established bodies are not fully operational yet. Similarly, the contracts between the State and SNDE, incumbent public water service operator in urban areas, are not fully operational.

The specific legal framework to sanitation sub-sector is not specified in the Water Code. However, the GoC is considering the development of a code of sanitation which should cover the provisions of excreta and wastewater (domestic, industrial, hotel and hospital waste water), storm water and solid waste (household waste).

**Institutional framework**

At national level there are three categories of actors who are involved in the development of the water sector:

- State actors who have the statutory task of developing and implementing the national water policy under the coordination of the Ministry of Energy and Water (MEE);
- Local authorities which are the indirect beneficiaries of drinking water infrastructure and equipment supply;
- The civil society organizations which support the government action in this area;
- The private sector.

The organs and structures of the institutional framework for water management in Congo are shown in the Water Code. This institutional framework is characterized by the predominance of state services and structures. The main public sector institutions are: (i) the Ministry of Energy and Hydraulics (MEH); (ii) a number of other key ministries (approximately 7) involved in the water sector; (iii) Water Sector Regulatory Body (ORSE): The regulatory body is established by the Water Code (Art. 55); (iv) water supply state structures in urban and rural areas (the national water distribution company (SNDE), the National Agency for Rural Hydraulics or ANHYR); (v) local authorities; (vi) organizations of the civil society and NGOs (vi) the private sector; (vii) the technical and financial development partners.

2.2.3- Vision, Objectives and Priorities of the policy

The Law on Water Code provides in Article 3 that "national water policy is defined and implemented by the state on the whole territory of the Republic in terms of hydrographic watersheds." Twelve years after the enactment of the Water Code, Congo still lacks a national policy document on water resource management.

The development vision of the Republic of Congo Water Sector is to make available to each Congolese citizen, water in sufficient quantity and acceptable quality and adequate sanitation services, optimization and rationalization e use of water resources that the country overflows.

The specific objectives of the sector policy letter for water and sanitation are:

- To define the implementation framework of the "National Program for Water and Sanitation", which will contribute to achieving the Millennium Development Goals (MDGs) and the recommendations of the World Summit on Sustainable Development (WSSD) on sanitation;
- To implement a coherent, functional and efficient institutional framework for the management of water sector enforcing the Water Code;
- To provide different political actors, partners and the civil society organizations, with a political intervention framework for the development of the water and sanitation sector.
According to the Water Code, the national water policy has the following objectives (Art 2.):

- To ensure efficient use of water resources to meet users’ water needs throughout the territory of the Republic in terms of quantity and satisfactory price;
- To prevent harmful effects of water;
- To fight against water pollution.

In the absence of a water policy document, the Water Code sets (Art 9) the following priorities in the water sector: the hydraulic public domain is allocated as a priority to meet the following requirements:

(i) drinking water supply of the population; (ii) livestock watering and other agricultural needs; (iii) the industrial needs.

2.2.4- Success components of good water governance

A. Management mechanisms

- Water resources planning tools
  The Water Code stipulates that the national water policy is defined and implemented by the state on the whole national territory within the framework of watersheds whose delimitation shall be decided by regulation. Planning the development of the water sector is developed by the Ministry in charge of water, after consulting the Advisory Water Council (Art. 3).
  Despite texts adopted Congo does not have planning and development instruments in the field of water resource management.
  However, Congo is a Member State of ECCAS, which has had since 2009 a regional water policy and an IWRM Action Plan (PARGIRE) since 2014. The formulation of the water national policy document and the development of an IWRM national Action Plan (PANGIRE) should reflect the provisions adopted at ECCAS sub-regional level.

- Climate change adaptation in water sector
  Concerns about climate change are not integrated in the management of water resources as there is no policy and national strategy on water resource management strategy.
  To cope with the impacts of climate change, the Initial National Communication (INC) established in 2001 considered several adaptation measures, including in this case the recalibration of waterways by dredging silted reaches, construction of structural works to prevent floods from reaching the population, promotion of compliance with good practices in the floodplain to limit people's exposure to floods, construction of shelters and refuges.

- Monitoring and Evaluation (M&E) systems
  For water sub-sectoral policies (drinking water supply and sanitation), there is no monitoring and evaluation mechanism, nor performance indicators to monitor and evaluate the implementation national water policies.

- Human rights in water supply and water management
  The 2002 Constitution states that every citizen has the right to a healthy, satisfying and durable environment and has the duty to defend it, and that the state ensures the protection and conservation of the environment (Art. 35).
  In Congo, the integration of human rights into sectoral policies concerns the management of the environment and water supply in urban environment. It is based on two principles, namely the participation of people in the management of the environment and equity through consideration of the gender dimension. Apart from these rather clearly mentioned principles, other
mechanisms of human rights in the water management are consultation which is in the participatory approach, the control that requires the State to respect its commitments, and monitoring.

- **Learning review and capacity building processes**

- In the Republic of Congo there is no proper learning process and review of the implementation of the national water policy; nor organized, structured and coordinated actions building technical and institutional capacities of the different categories of actors intervening in the water sector. The absence of a policy, an intervention strategy and an action plan based on concepts and IWRM principles is the main justification.

### B. Water governance

- **Consultation, participation and co-ordination mechanisms**

  Consultation, participation platforms and existing coordination bodies are essentially:
  - The Water Advisory Council (CCE): instituted by the Water Code (Art 5), it is under the responsibility of the Minister for water. It is responsible for ensuring the overall, integrated and concerted management of water resources. It is not put in place yet.
  - The General Directorate of Hydraulics
  - The local authorities
  - The actors of civil society organizations and the private sector

  The consultation platforms and stakeholder participation are not functional when they exist.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

  The Republic of Congo has no legislation and regulatory framework integrating integrity and fight against corruption procedures and measures in the water sector. It is the same for mechanisms that ensure transparency in the budget processes and including the tools to improve transparency and accountability in the water sector.

- **Conflicts management**

  The Water Sector Regulatory Body (ORSE) by its mission and CCE by its functions should be able to play a role in the management of water-related conflicts. But these structures and organs are not operational and not very effective. There are no clear mechanisms for managing water-related conflicts.

- **Benefits of water, energy, and food nexus approach**

  Congo has enormous hydric potentials. The development of this potential is not made according to the "nexus" approach applied to the water, energy and agriculture sectors. The main reason is certainly the lack of reference framework for the planning and integrated development of water resources.

- **Benefits of transboundary water management**

  Congo shares with its neighbors several international river / lake basins, the most important:
  - The coastal basin of Nyanga, shared with Gabon;
  - The Ogooué River basin, shared with Gabon;
  - The Congo River basin, shared with the Democratic Republic of Congo, the Central African Republic and the Republic of Cameroon, and also upstream of the Sangha with Cameroon and the Central African Republic.
  - The Ivindo basin shared with Gabon and Cameroon;
- The aquifer system of the coastal sedimentary basin, with the People's Republic of Angola and Gabon.

From all these basins, only the Congo is the subject of a basin organization, the International Commission of the Congo-Oubangui Sangha Basin (CICOS). Congo, as a member of CICOS enjoys the benefits of cross-border cooperation through projects and programs implemented by CICOS.

However, at national level, the absence of clear policy and legislation on joint management and sustainable use of water resources, does not allow to identify national priorities and improve the benefits that Congo could draw from cross-border cooperation in the management of shared water resources.

2.2.5- Overview of lessons learned

- The Water Code lays the foundation for a modern legal framework and well suited for the water sector. The refocusing of state functions (planning, regulation, control and regulation) is clearly stated and the public service delegation is clearly established. However, the regulatory framework for implementing the Code is still very low and the established bodies are not yet fully operational.

- Law n° 13-2003 of April 10, 2003 on Water Code provides in Article 3 that "national water policy is defined and implemented by the State on the whole territory of the Republic in the hydrographic basin framework." Twelve years after the enactment of the Water Code, Congo has still no national policy document on water resources management. The approval by the government in December 2010 of a strategy paper and a policy letter for water and sanitation sector still provides the basis for this policy, and gives the great guidelines which will underpin its development.

- The political will displayed by the government in adopting the Law on Water Code or any other law addressing issues related to water, has not been translated into action; regulatory provisions on the implementation of the water code has not yet been adopted by the government.

- The Water Code lays down the basis for a modern legal framework and adapted to the sector. The refocusing of the state missions (planning, rule, control and regulation) is clearly stated and the public service delegation is clearly established. However, the regulatory framework for implementing the Code is still very weak and established bodies are not fully operational yet.

- Concerns about climate change are not integrated in the management of water resources as there is no policy and national water resource management strategy.

- The absence of a national water resource policy, comprehensive, adequate regulatory and legal instruments and an institutional framework promoting participatory and inclusive approach to the management of water resources is a situation which does not allow the development of appropriate tools for a concerted and sustainable management of water resources. The Water Code contains relevant provisions for water resources management but very few, if not almost all remains inapplicable in the absence of operational texts. It lacks several water resource management tools and mechanisms relating to the enabling environment, institutional roles and responsibilities and management tools.

- Finally, Congo has not signed the 1997 United Nations Convention on the Law related to International Watercourse uses for purposes other than navigation, which does not allow it to take full advantage of mutually advantageous cooperation with countries with which it shares the same hydrographic basins with a view to achieving sustainable development.

- 2.2.6- Practical recommendations

---

19 It entered into force on 17 August 2014.
❖ Policy framework

a) Adoption of a true national policy, strategy and a water resource action plan based on the concepts and principles of IWRM
b) Development of water resources planning and management tools by hydrographic basin.
c) Harmonization of the national water governance framework with the regional water policy of ECCAS
d) Contribution to the creation of basin management agencies in all the other hydrographic basins of the sub region

❖ Legal and regulatory framework

a) Rereading the Law on Water Code to direct it on IWRM, to supplement and improve it.
b) Development of regulatory texts for the effective implementation of the Water law
c) Clarification of Congo issues and expectations in cross-border cooperation on shared water.
d) Harmonization of the national legislation to make coherent the management of shared water resources
e) The regulatory framework for implementing the Code is still very weak and agencies created are not fully operational yet. Also, the legal institutional modern and adapted framework, but which remains to be finalized.

❖ Institutional framework

a) Organization and structuring of the institutional framework; clarifying roles and responsibilities; separation of the functions of management of water resources utilization functions; reinforcing the good water governance framework at institutional level.
b) Review of structures and bodies involved in the management of resources and promotion of the participation of all actors at different scales (local, regional, national).
c) Establishment of a formal framework for consultation of the sector actors through the national water partnership.
d) Strengthening of all actors’ technical and institutional capacities, involved in water resource management at organizational, human and financial plan.
e) Establishment at national scale basin agencies responsible for monitoring the quantitative and qualitative management of the water resources at hydrographic basin level.

References


2.3- BURUNDI

2.3.1- General information

Burundi is a landlocked country in the Great Lakes region in Eastern Africa covering an area of 27,834 km². The country is completely located in two major river watersheds namely the Nile basin (an area of 13,800 km²) and the Congo River Basin (an area of 14,034 km²).

Eleven natural areas with different climatic, soil and hydrographic features are grouped into the following five climatic regions: the Imbo region low altitude plains with hot tropical climate (23°C) and low rainfall; the Mumirwa escarpments (western slopes of the Congo-Nile watershed with annual rainfall between 1,100 mm and 1,800 mm); the Congo-Nile watershed (annual rainfall between 1,500 mm and 2,000 mm); the Central plateau region (annual rainfall varies between 1,150 mm and 1,500 mm); Depressions of the East and Northeast (annual rainfall rarely exceeds 1,100 mm).

The Congo watershed collects all the water of the western slope of the watershed through Lake Tanganyika and the Malagarazi. As for the Nile watershed, it gathers water of the central plateau through Ruvubu and Bugezera, Kagera and Kanyaru rivers. The main rivers which collect Burundi water form Burundi's borders (Rusizi, Malagarazi, Kanyaru and Kagera), except Ruvubu which is the most important national river.

The three large lakes owned by Burundi are all located at the borders and shared with neighboring countries. This is Lake Tanganyika, one of the deepest in the world (1,453 m) and the northern lakes, Cohoha and Rweru, characterized by low depths.

In Burundi, the potential of groundwater are not known with sufficient accuracy. The surveys carried out until now enable to distinguish the areas with low, medium, good and high potential groundwater. The country has a significant potential in spring water. Their number is estimated at about 36,000 of which 14,500 have been located.

Burundi is one of the most densely populated countries in Africa with a density of 310 inhabitants / km² for a population of 8,053,574 inhabitants (CSLP-II and Census 2008). With an average growth rate of 2.4% per year, the population was estimated at 10.6 million inhabitants in 2013 (World Bank).

2.3.2- Executive summary of water policy document

- **Water Policy framework**

In Burundi, the policy framework on water contains the following texts and frameworks:
- the 2005 Constitution;
- the 2025 Vision;
- the Strategic Framework for Growth and Fight against Poverty II (CSLP-II);
- the Millennium Development Goals (MDGs);
- the National Water Policy (PNEau);
- the Strategic Action Plan for Integrated Management of Water Resources (IWRM);
- the National Water Strategy for the period 2011-2020 (SNEau);
- the Vision "Burundi 2025”;

Vision Burundi 2025 is a planning instrument for ensuring long-term development which will guide the policies and strategies as regards sustainable development, with the aim of satisfying the needs of the present generations, without thwarting or undermining the opportunities of generations to come. It seeks to put Burundi on the path of sustainable development in the run-up to 2025.

The government's vision for the water sector is set out as follows: a "State where water is available in sufficient quantity and quality to meet the needs of present and future generations and used efficiently and equitably for a sustainable socioeconomic development without compromising the
environment” . This view is divided into five sections corresponding to the key sectors relevant to the development of the country's water resources:

1) Availability of water resources for today and tomorrow;
2) Equitable access to good quality water;
3) Use of water for sustainable socio-economic development;
4) A viable and sustainable environment;
5) Well-being of Burundi people.

Thus the PNEau aims to ensure the availability but also the control of its management to meet current and future needs as priority of the moment under consideration. It sets the guidelines for water resource development and management in the various areas of use including agricultural production, drinking water supply, industrial promotion, energy and environmental protection.

- **Legal and Regulatory framework**

The Water Law\(^{20}\) establishes the basic rules and the institutional framework to ensure the rational and sustainable management of water resources, facilities and public hydraulic infrastructures. The legal and regulatory framework for water management is composed of the following main texts:
- The Constitution of June 2, 1991;
- The Burundi’s Code of Water.

The State ensures the proper management and rational exploitation of natural resources of the country, while preserving the environment and conservation of these resources for future generations (Art.35 of the Constitution of the Republic of Burundi).

The Water Code\(^{21}\) sets the ground rules and the institutional framework to ensure the rational and sustainable management of water resources management, facilities and hydraulic public works.

- **Institutional framework**

The Water Code states that the institutional framework for water resources management relies on the principle of separation of water resource management and use functions. The Manager is responsible for planning, controlling and regulating the sustainable management of water resources, while the user is responsible for planning and implementing the supply programs and use of water in the respect for rights and obligations (Art.29).

By adopting IWRM as an approach to water resources management, Burundi resolutely opts for the application of the principle of stakeholder participation in the water sector. According to this principle, "the development and management of water must be based on a participatory approach, integrating users, planners and policy makers at all levels." In applying this principle, the institutional framework for resource management shows that the parties involved in the implementation of the Burundi PNEau are (1) the State and its components (Regie des eaux, REGIDESO, ...), (2) the local authorities (Services technique Municipaux, SETEMU), (3) the civil society (community-based organizations, user associations, local and international NGOs), (4) private sector, (5) development partners (technical and financial).

2.3.3- Vision, Objectives and Priorities of the policy

The overall objective of the PNEau is to "Ensure sustainable coverage of water needs of all users by a harmonious development of national water resources." The general objectives of the PNEau are:

- Ensure coverage of water needs for sustainable development;
- Reconciling the priorities and interests competing for water resource management;
- Ensure the availability and good control of its management for current and future needs.

---

\(^{20}\) Loi N°1/02 du 26 mars 2012 portant Code de l'eau au Burundi

\(^{21}\) Law N ° 1/02 March 26, 2012 on Water Code in Burundi
To achieve these overall objectives, specific targets have been set.

To operationalize the PNEau, Burundi adopted in 2009 a National Water Strategy 2011-2020 (SNEau) and its framework plan. These documents are implementing the concept of Integrated Water Resources Management (IWRM). The Framework Plan is implemented on field by evolutionary phases starting with a pilot sub-basin. Experiences and good practices developed in this framework will be extended to the rest of the territory.

The PNEau is inspired by national legislation and internationally recognized principles for the management and use of water resources and adapted to the context of Burundi, including the principles of Dublin (1992) for integrated water resources management, Millennium Development Goals (MDGs), the World Summit Targets for Sustainable Development (WSSD) and the New Partnership for Africa Development (NEPAD) vision and purpose.

The ten (10) principles defined for the water sector guide the stakeholders of the water sector in the management, protection, conservation and use of water resources. They are classified into three concepts: (i) the concepts of resource management, (ii) the concepts of good governance and (iii) the environmental concepts.

From these objectives and principles derive national priorities which are divided into the seven following strategic orientations: (1) Creation of an enabling environment for good governance in the water sector; (2) Introduction and implementation of Integrated Water Resources Management (IWRM), (3) Improvement of Drinking Water and Basic Sanitation Services (first priority among all uses), (4) Valuation of water for socio-economic development and the environment and disaster management related to water, (5) Management of transboundary waters, (6) Reinforcing planning and funding of water sector, (7) Reinforcing professional capacities in the field of water.

2.3.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**

In terms of strategic planning of the water sector, investment planning in the development of water resources will be done according to the request made by the beneficiaries through the Communal Community Development Plan (PCDC). To this end, the Water Code stipulates that the management and protection of water resources are carried out in a planned framework. Planning is based on planning tools which are: The PNEau, the SNEau, the PAGIRE, the National Master Development Plan for Water (PDNEau), the Public Investment Program (PIP), the PCDC) (Art 26). The Water Code defines what a master development and water management Plan is (SDAGE) (Art. 4.42), but does not indicate that this is a planning tool, nor does it indicate when or how to develop, adopt and implement it.

- **Climate change adaptation in the water sector**

Through "Burundi’s vision 2025", the government is committed to establishing an environmental policy enabling to ensure the sustainable management of natural resources adapt to climate change and contribute to the reduction of Greenhouse gas emissions.

The National Policy on Climate Change (NPCC) is a reference framework for integrating climate change in all sectors of socio-economic life of the country. The vision of the country in terms of climate change is as follows: "A state that promotes development resilient to the adverse effects of climate change."

Burundi has adopted a National Strategy and an Action Plan on Climate Change (NS-APCC)\(^\text{22}\) to operationalize the PCCP and complement the different programs and activities of the various sub-sector policies and strategies, including water resources. It provides a solution to intervention coordination.

\(^{22}\) Adopted in November 2013
constraints by providing an appropriate institutional framework. It also defines an adequate funding mobilization strategy to ensure the implementation of the proposed programs.

The following objectives of the SN-PACC must be declined in all sectoral programs, in this case the water sector.

- **Monitoring and Evaluation (M&E) systems**

The necessity for monitoring and evaluation (M&E) the implementation of the PNEau was taken into account in the 2011-2020 SNEau. The M&E system for the implementation of PNEau is composed of:

- Detailed activity plans using the framework plan as a basic reference and elaborated in the various departments and sub-sectoral institutions;
- Annual progress reports on the implementation of the PNEau that are regularly prepared by the Technical Monitoring Committee (TMC) for the Minister in charge of water, the Chairman of the National Committee for Water Sector Coordination (CNCE) and the Water and Sanitation Sector Group (GSEA);
- Workshops bringing together key actors in the water sector organized to define actions recovery strategies and for greater empowerment of stakeholders.

The Government plans to introduce a system of M&E to development the sector. For this a number of indicators are used. These indicators fall into two distinct categories:

- Performance indicators, which are used to monitor and assess progress against achieving the results envisaged in the Framework Plan;
- Impact indicators to monitor the impact of the implementation of the strategy in terms of objectives of the PNEau and the beneficiaries.

- **Human rights in water supply and water management**

In Burundi political speech recognizes and adheres to the UN concept of the right to water. But the translation of the right to water in the specific legal obligations and responsibilities is not effective. Based on the available data and information, there is not enough water available and a continuous supply of drinking water, water quality is often degraded, access to facilities and water services is not effective for everyone, everywhere and anytime. Notwithstanding this, the concept of right to water transpires in several aspects of government action:

- The right to water is recognized by the Constitution: "All Burundians are equal in value and dignity. All citizens have equal rights and are entitled to equal protection of the law. No Burundian shall be excluded from the social, economic or political nation of the reasons of race, language, religion, sex or national origin "(Art 3.);
- Sensitizing and awareness of the right to water in water management;
- The priority of water policies given to meeting human needs through the identification of needs and minimum allocations of water for all;
- The government's obligation to ensure adequate access to water and sanitation, and advocacy for the water needs on the basis of political commitments.

- **Learning review and capacity building processes**

The Water Code provides that public authorities are taking steps and measures required to build capacity of populations, user groups, including women, private associations, local authorities to enable them to ensure greater responsibilities in the context of participatory management for appropriate protection and the responsible use of water resources (Art 5).

The government is planning the reform of water and sanitation sector to be accompanied and supported by a professional capacity building of actors. The SNEau through its axis 7 provides for the of professional capacity building in the field of water and sanitation.

Periodic magazines and evaluations (annual reviews, mid-term evaluations, final evaluations, external evaluations) and studies and various evaluations undertaken as part of the implementation of SNEau, plans, programs and projects are opportunities to evaluate the effectiveness of learning processes as well
as actions of capacity building (in terms of processes, modalities, content, results and impacts). Findings and lessons that will result should enrich and improve future planning to better address the stakes of capacity development.

**B. Water governance**

- **Consultation, participation and co-ordination mechanisms**

  The Water Code has retained the principle of stakeholders in the water sector participation according to which development and water management must be based on a participatory approach, integrating users, planners and policy makers at all levels (Art.2.8).

  As part of the implementation of the National Water Strategy and its Framework Plan 2011-2020 (SNEau), the Government works to promote the National Water Partnership (CWP Burundi) and the participation of all stakeholders and the integration of women in water resources management. To this end, the Water Code calls for women's participation in decision-making at all levels and in all activities and reflections (Art. 2.3).

  The main frameworks for consultation, participation and coordination in the water sector are: (i) the National Committee for Water Sector Coordination (CNCE), which is a high-level advisory political structure which members include representatives of the Ministry for Water and ministers in charge of areas of use of water and sanitation, (ii) the Water and Sanitation Sector Group (GSEA) is a framework for exchange and consultation between government structures, development partners, private sector and civil society, (iii) Sectoral Planning Units (UPS) within each ministerial department or each autonomous institution manager or user of water resources which missions focus on program and activities planning relating to the implementation of the PNEau within the department / institution, (iv) the basin and sub-basin Committees that brings together representatives of key stakeholder groups or stakeholders involved in the basin or sub-basin.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

  No specific provision for combating corruption does exist specifically for the water sector. However, in recent years, the government has taken important initiatives to fight against corruption. Structures have been put in place to punish corruption (General Inspection of the State, Audit Office, Brigade and the Anti-Corruption Court), and some progress has already been made in the fight against economic embezzlements. Additional measures were also taken to create an environment for positive collaboration with civil society through local committees of good governance and thanks to the organization of sensitizing campaigns and information on the challenges and consequences economic embezzlements.

  The National Water Strategy (SNEau) 2011-2020 provides for the establishment of an integrity and fight against corruption system for good management of water supply services and infrastructures in urban areas.

  Furthermore, the government adopted the national strategy for governance and fight against corruption. The points of concentration of the strategy action plan include: (i) prevention, (ii) investigation, (iii) the criminalization of acts of corruption, (iv) recovery of assets and proceeds of corruption, and (v) increased public participation.

  Transparency concern in budget processes is taken into account in the Water Code which indicates that good management of the water sector aims equity, efficiency and sustainability of the resource. To this end, institutions are working in a transparent way and have the duty to report. The regulations functions are separated from those of regulating and service provision and use of water. The roles of the different institutions are clarified to avoid duplication or dilution of responsibilities (Art. 2.6 of the Water Code).

  The SNEau 2011-2020 provides for reinforcing planning and funding the sector (Axis 6) to improve transparency and accountability in the court proceedings through the tools and instruments in place.
**Conflicts management**

The existence of an appropriate institutional framework and experienced actors in the vicinity (with clarified roles and responsibilities), is allowed to anticipate and manage conflicts in the water sector and sanitation. These include institutions in charge of data collection (IGEBU), drinking water supply and sanitation (REGIDESO, DGHER, SETEMU, local NGOs), health associations (Town Bujumbura), community health workers in public (GST), the municipality water Authorities and committees of water points and hygiene committees.

The development of legal and regulatory instruments for water management continues with a progressive application.

**Benefits of water, energy, and food nexus approach**

To implement the approach based on the links between water, energy and food, the Government will adopt appropriate strategies to control the water potential available for the use of various purposes. This is to enhance water for socio-economic development, environmental protection and disaster management related to water (Axes 3 and 4 of the SNEau 2011-2020).

In the field of drinking water and sanitation (Axis 3), investments will include the construction of infrastructures, building drinking water and sanitation facilities, improving the management of infrastructures and services in order to achieve in 2020.

The valuation of water for socio-economic development and the preservation of the environment and disaster management related to water, actions will aim (i) improved efficiency of water use by sectoral actors in compliance with IWRM principles, (ii) protection of water resources for sustainable socio-economic development, (iii) protection of populations against disasters related to water.

**Benefits of transboundary water management**

To enjoy the benefits of cross-border cooperation, Burundi plans the following actions:

- The continuation of negotiations on an agreement acceptable to all and mutually beneficial in the Nile water management;
- Participation in the implementation of water resources management structures within sub regional economic groups to which Burundi is part;
- Build the national negotiating capacity on shared water resources management to advance Burundi interests;
- The proposal of the establishment of an Interstate responsible for managing of disasters linked to shared water.

As part of regional cooperation on shared water, Burundi is engaged in a process of negotiating an agreement on the Congo Basin water management and a MoU for water resource management of Lake Kivu and the Ruzizi water.

2.3.5- Overview of lessons learned

- A strong political commitment was manifested in favor of reform of water resources management framework based on the IWRM approach. This was reflected in particular by the creation of a ministry having explicitly, water in its attributions, the adoption of a National Water Policy, a Water Code, and a National Policy of Hygiene and Sanitation.
- The PNEau has generated clear guidelines for the reforms of water management framework and effective water governance. The institutional framework guidelines advocate separation of the different functions of coordination, consultation and regulation from those of the use of water resources. This institutional framework which is for the moment a framework for consultation, does not allow stakeholders "except the State and its agencies" to participate in effectively decision-making. It is not yet fully operational, both in terms of structure creation (some functions such as coordination, regulation, the IWRM are not yet exercised by fault of structures which are responsible of that), and for the view point of human, material and financial availability.
The framework plan is a step in the design and implementation of the IWRM at national level. It sets the main directions of intervention for the period 2011-2020. It is a national framework document which is the basis for the development and implementation of IWRM plans by watershed, taking into account its specificities. This approach is especially pragmatic in that it sets first the national guidelines (strategic) that are declined at the watershed level (operational). This shows the flexibility of the application and extent of implementation possibilities of the IWRM approach.

The Framework Plan is implemented by evolutionary phases starting with a pilot sub-basin (Ruvubu). Experiences and good practices developed in this framework will be extended to other sub-basins. Then IWRM plans will be developed for sub-basins gradually depending on priorities and resources of the State. This is an operationalization strategy that proceeds both by iteration and scaling, by capitalizing on the lessons learned from previous phases.

The Sectoral Planning Units (UPS) within each ministerial department or each autonomous institution manager or resource users have shown their relevance, at least in the phase of introduction of IWRM and implementation of reforms of the water and sanitation sector. By participating in CTS, UPS managers enable the monitoring and evaluation of the implementation of PNEau in different subsectors.

The actions developed in the national water strategy (SNEau 2011-2020) meant to raise awareness and develop a better understanding of how water is linked to economic growth across a nexus of issues and to make clear the water security challenge the country faces if a business as usual approach to water management is maintained.

The necessary reforms of the water resource management framework are underway. The basic elements such as the PNEau, the Water Code, the SNEau and the framework plan have been adopted and are being implemented. The process that led to their development and their adoption favored the learning process and enabled stakeholders’ capacity building at all levels. Moreover, the operationalization phase of these water management tools will also be utilized to implement the recommended actions and tools to improve the processes of learning and capacity building.

2.3.6- Practical recommendations

**Policy framework**

a) Support the IWRM approach and reform of water resource management framework are necessary to begin the transition towards sustainable water resource management. They are not sufficient; they must be implemented and this requires will, resources (financial, capacity and material) and a change of perception and attitude vis-à-vis water.

b) Water resource management in applying IWRM concepts and principles require a good knowledge of water resources and uses. To this end, regular monitoring and evaluation of water resources are essential as well as the tools of inclusive governance and planning.

c) The potential of water resources is not fully exploited for meeting water needs. Water, food and energy systems are interconnected. The NEXUS approach is to examine how and where these systems intersect. Faced with the low water control for socio-economic development, it is necessary to go through the Nexus approach in water resource management.

d) The sustainable management of resources produces its full effect when integrity, transparency and accountability are considered. Also, the fight against corruption in the water sector should be enhanced through the adoption and strong enforcement of legislative and regulatory texts.

**Legal and regulatory framework**

a) Without questioning the support of Burundi to the concept of right to water, this one must be clearly stated in the specific legal obligations and responsibilities. In doing so, awareness will be increased and actions for water availability, accessibility to facilities and water services will be reinforced.
b) Reforms have resulted in the definition of a framework for water resource management. Challenges are now in the implementation of this framework, in terms of political will, mobilizing human and financial resources, peace and security. These challenges must be addressed to achieve sustainable change (long-term impacts) among beneficiaries.

**Institutional framework**

a) Water is everybody's business and for the success of water sector reforms it is important to know the views and interests of all stakeholders. The importance of stakeholder participation in decision-making agencies should be recognized and applied in the preparation and implementation of water resource development projects.

b) Learning mechanisms exist rather informally. These are mechanisms of learning by doing (learning by doing). These mechanisms are not sufficiently structured, organized and monitored making their evaluation difficult. Awareness raising and capacity building of actors at all levels should continue and involve more women, the poor and vulnerable groups.

**References**

5) Republic of Burundi (2005): Law No. 01/010 of 18/03/2005 promulgating the Constitution
6) Republic of Burundi (2012): Law No. 01/02 of 26/03/2012 on the Water Code in Burundi

**2.4- KENYA**

**2.4.1- General information**

Kenya is situated in eastern part of the African continent. The country has a total area of 582,646 km² out of which 11,230 km² is covered by water and 571,416 km² by land. Kenya lies on the equator and has a pleasant tropical climate, but there are large regional climatic variations influenced by several factors, including altitude. Most parts of the country experience two seasons: the dry season is from June to October and the wet season is from November to May.

The mean annual rainfall is 621 mm, ranging from 250 mm to 750 mm in Arid and Semi-Arid Lands (ASAL) areas to 1,000 mm to 1,690 mm in the coastal belt, the central highlands and in the Lake Victoria Basin. Rainfall in Kenya is extremely variable in space and time and also in intensity. These variations are between 35 - 70 percent from the mean while rainfall intensity may be as high as 200 mm per hour over a short time period (e.g. 15 minutes).

Kenya’s water resources are distributed over six catchment areas of five drainage basins namely the Lake Victoria which comprises a North catchment and a South catchment, Rift Valley, Athi, Tana, and Ewaso Ng’iro North.
The major water ‘towers’ in Kenya are Mount Kenya, the Aberdares, the Mau Complex, Mount Elgon and Cherangani Hills. Waters from these towers support all the major sectors of the economy and sustain a very rich and world famous biodiversity.

The lakes include Victoria, Jipe, Challa, Nakuru, Baringo, Bogoria and Turkana.

The groundwater resources are spread over three hydrogeological formations, namely, volcanic rocks in the Rift Valley and outside the Rift Valley; Basement rocks, eastern and western quaternary sedimentary rocks. Although groundwater exploitation has considerable potential for boosting water supplies in Kenya, its use is limited by poor water quality, over exploitation, saline intrusion along the coastal areas and inadequate knowledge of the occurrence of the resource.

The population of the country currently estimated at 42.0 million, is expected to reach nearly 60 million in 2030 and 77 million by 2050.

2.4.2- Executive summary of water policy document

- **Water Policy framework**

  The policy framework for water resources management in Kenya consists of a number of documents:
  - The Vision 2030;
  - The National Water Policy of 2012, (NWP);
  - The Water Supply and Sanitation Policy 2010-2015, (WSSP);

  The new Water Act was promulgated in 2002 and provides a legal basis for the reform of the water sector. An essential aspect of the reform in the water sector outlined in the Water Act 2002 is the separation and decentralisation of roles and responsibilities of water services and water resources management, creation of new institutions and stakeholder participation. The new governance structure was meant to remove bottlenecks in the national water administration and improve efficiency in service delivery.

  The National Water Policy of 2012 (NWP) has been developed in line with the mandate, vision and mission of the ministry responsible for water affairs in Kenya. The Policy aims at moving the sector to the next level of development in order to contribute to the national goals. As stated in the WSSP 2010 – 2015, the critical role of water for national development cannot be over emphasized.

  The National Water Resources Management Strategy (NWRMS) was formulated as a requirement of the Water Act, 2002, to outline the objectives and strategies that address major issues and challenges currently facing Kenya. Both the Water Act and the Strategy fully recognize IWRM as a national priority with obligations for participation and empowerment of stakeholders and decentralized management at the lowest appropriate level.

- **Legal and Regulatory framework**

  The most relevant legal and regulatory instruments for the water sector are as follows:
  - The National Constitution 2010; and

  The Constitution has placed certain key requirements to be met, as regards water resources management, by the National Government.

  Article 42 confers to every person the right to a clean and healthy environment. Article 43(d) confers to every person the right to clean water and safe water in adequate quantities. The management of

---

water Resources in the country must therefore be geared towards achieving these constitutional requirements.

The Water Act 2002 came into effect in 2003. It has introduced comprehensive and, in many instances, radical changes to the legal framework for the management of water sector in Kenya. These reforms revolve around the following four themes: (i) the separation of the management of water resources from the provision of water services; (ii) the separation of the policy making from day-to-day administration and regulation; (iii) decentralization of functions to lower-level state organs; and (iv) the involvement of non-governmental entities in both management of water resources and provision of water services.

### Institutional framework

The Water Act, 2002 provides the legal framework for the implementation of new institutional arrangements based on the principles of the creation of a firewall between the management of water resources and water supply and sanitation services, institutional separation of service provisions from regulation and policy making, and finally, ensuring decentralisation, participation, autonomy, accountability, efficiency and financial and ecological sustainability.

The current water sector institutions as established by the Water Act 2002 are the following. The Ministry of Water and Irrigation (MWI) remains in charge of development of legislation, policy formulation, sector coordination and guidance, and monitoring and evaluation. The Water Resources Management Authority (WRMA) has responsibility for water resources management regulation. The Catchment Area Advisory Committees (CAACs) established by the WRMA provide water resources management advisory functions at water catchment level offices in the regions. Their membership consists of government officials, water users and communities. The Water Services Regulatory Board (WSRB) is a corporate body that is responsible for the regulation of water Supply and sewerage services. Their mandate is to ensure that water is provided for every part of the country. The Water Service Boards (WSBs) are formed, along the seven (7) water basins. Membership of the WSBs includes representatives of the local authorities as directors. The Water Appeal Board (WAB): For the purposes of administering the Water Act of 2002, those parties that may be aggrieved by a decision or order of the authority, minister, or regulatory board over a permit or a license have a right to appeal to the Water Appeal Board (WAB), whose judgment shall be final. The Water Services Providers (WSPs) are responsible of direct provision of water and sewerage services as agents of the WSBs. The National Water conservation and pipeline Corporation (NWCPC) whose mandate is the bulk water supply, dam construction, flood control, land drainage, ground water development and MWI reserve WSP. The Water Resources Users Associations (WRUAs): The government initiated the process of handing over completed supplies to communities. The WRUAs provide a forum for conflict resolution and cooperative management of water resources in designated catchment areas. The WRUAs are responsible for conserving the watershed and advising the CAACs on the available water that may be allocated or re-allocated to other water users.

### 2.4.3- Vision, Objectives and Priorities of the policy

Kenya’s long term vision as enshrined in Vision 2030 document is to transform the country from its current status into a newly industrialising middle income country providing a high quality of life to all its citizens by the year 2030. The overarching vision, therefore, is “A globally Competitive and Prosperous Nation with a high quality of life by the year 2030”.

Kenya is a water scarce country. The country therefore aims to conserve water sources and start new ways of harvesting and using rain and underground water. The 2030 vision for Water and Sanitation is “To ensure that improved water and sanitation are available and accessible to all”. Realising this vision would entail adoption of strategies in five broad areas namely, Resource Management, Water Storage and Harvesting, Water supply, Sanitation, Irrigation and Drainage.
Kenya’s water management vision for IWRM and Water Efficiency (WE) Plan is: “Water resources protected, harnessed and sustainably managed to ensure availability and accessibility to all water uses for present and future generations”. The mission of the IWRM and WE Plan is “to ensure a harmonized, streamlined and coordinated approach to interventions of the many players and contribute to a sector wide approach, addressing key cross sectoral issues and enhance sector performance”.

The overall goal or long-term objective is “to achieve optimum, long-term, environmentally sustainable social and economic benefits from the nation’s water resources”. The short-term objective is to accelerate action towards addressing key water resources-related challenges in national development in a more effective and comprehensive manner.

2.4.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**

  The Government of Kenya (GoK) has adopted five management/planning documents that will be used by WRMA as its tools and innovative ways of managing water resources. These are the National Water Resources Management Strategy (NWRMS) for the period 2012-2017; the National Water Quality Management Strategy (NWQMS) 2012 – 2016; the Water Resources Management Rules (WRMR); the Catchment Management Strategies (CMS); and the National Water Master Plan 2030.

  The National Water Master Plan (NWMP) 2030 aims:

  - to assess and evaluate availability, reliability, quality, and vulnerability of country’s water resources up to around the year 2050 taking into consideration climate change;
  - to renew the National Water Master Plan towards the year 2030 (NWMP 2030) taking into consideration climate change;
  - to formulate action plan for activities of WRMA Regional offices up to the year 2022 in order to strengthen their capability; and
  - to strengthen capacity of water resources management.

- **Climate change adaptation in water sector**

  Climate change projections to the year 2030 for Kenya indicate increasing temperatures with doubling of CO2 levels from baseline scenarios resulting in a decline in rainfall (between 5 and 15 percent) in the semi-arid areas and an increase (of 5 to 45 percent) in rainfall in the wetter areas (GoK, 2002). The expected scenarios in semi-arid areas will include increased aridity and flash floods and incidence of diseases, food insecurity, and shortage of forage and breakdown of infrastructure. The likely scenarios in the wetter areas include flooding, landslides, erosion, siltation of reservoirs, water-related diseases, food insecurity and destruction of infrastructure.

  Medium term flood mitigation programme in areas prone to flooding will be undertaken thus reducing the vulnerability of the community to floods. Adaptation strategies to mitigate adverse climatic impacts in water sector will include:

  - Research on climate change and mitigation options;
  - Inter-basin water transfers;
  - Increased construction of water storage infrastructure/reservoirs;
  - Catchment rehabilitation and conservation measures;
  - Promoting the use of water harvesting technologies; and
  - Building the coping capacities of local communities.

  Adaptation measures will require a wide range of adaptation techniques that will be developed and applied to water resources including flood defenses, water efficiency.
- **Monitoring and evaluation (M&E) systems**

The process of monitoring and evaluation of the IWRM/WE Plan will be done at two levels. The first level will be the integration of the integrated water resources management and water efficiency plan monitoring and evaluation into the National Integrated Monitoring and Evaluation System (NIMES) framework. This is the nationwide monitoring and evaluation framework developed to monitor all government plans, policies, projects, and programmes.

At a lower level, the plan will be monitored and evaluated at the ministerial level through the Annual Water Sector Performance reporting framework that has been developed. This framework includes all the water stakeholders and has been accepted as part of the Sector-Wide Approach (SWAP) process. In addition, the IWRM & WE Plan will generate actionable strategic activities that will be implemented and monitored in the performance contracts framework.

- **Human rights in water supply and water management**

Although the Right to water and sanitation is not explicitly provided in the Water Act, the Right to Water and Sanitation has been formally recognised in a number of national water sector policies (National Water Services Strategy, National Water Resources Management Strategy, Water Services Regulatory Board (WASREB) tariff guidelines, and pro-poor implementation plan).

Kenya is a signatory to the Convention on the Elimination of Discrimination Against Women (CEDAW). Article 14 of CEDAW obliges member states to take into account the particular problems faced by rural women and the important roles they play in managing their families, including the unpaid work that they do. In the wake of water sector reforms, recognition of the role played by women and their inclusion in the water governance institutions is an important step towards highlighting specific gender issues on water and catchment management.

- **Learning review and capacity building processes**

Human resource development lies at the heart of the transformation of Ministry of Water and Irrigation (MWI). The structure of the Ministry has been and is being reviewed and restructured according to the Water Act 2002 to give emphasis to clarity of roles and function of various institutions and managers. The GoK expects that 30% of all employees shall be women.

Critical areas of capacity building needs include water resources assessment, data and information management, monitoring and infrastructure development at national, local, and most importantly at the catchment levels. Water resource management will only be successful if the appropriate personnel are deployed not only in MWI but in all relevant organizations and agencies at all levels. Thus, for Catchment Area Advisory Committees (CAACs) to be successful and to implement sustainable and participatory water management strategies, capacity will have to be built in NGOs and CBOs as well as at the technical level.

Key issues and corresponding strategies of learning processes and capacity building measures have been defined in the IWRM/WE Plan.

Knowledge management and capacity development are critical components for the implementation of the reforms of water and sanitation sector. The following tools contribute to capacity development:

- The Kisima Newsletter: A forum for analysis and debate on water and sanitation issues in Kenya
- The Citizens Report Cards (CRC’s) on water and sanitation
B. Water governance

- **Consultation, participation and co-ordination mechanisms**

  The most important institutional management mechanisms that have been put in place to fulfill the provisions of the Water Act 2002 are as follows:

  - The transfer of the function of the management and operation of water services to the Water Services Boards (WSBs).
  - Catchment Area Advisory Committees (CAACs)
  - Water Services Boards (WSBs)
  - Water services providers (WSPs)
  - Water Resources Users Association (WRUAs)

  However it is difficult for stakeholders in the WSBs and WSPs to hold their directors and top managers to account as they are not shareholders strictly speaking. Special effort should be made to enhance the corporate governance of the new institutions to stem political interference and promote management professionalism.

  The inter-ministerial Water Sector Reform Steering Committee (WSRSC) guides and coordinates the water sector reform process, and the Water Sector Reform Secretariat (WSRS) implements the WSRSC’s decisions.

  The overall coordination in the water sector between the GoK and other stakeholders including private sector, NGOs, CBOs, etc. take place in the Water Sector Working Group (WSWG), an informal arrangement chaired by the Permanent Secretary, MWI, that has membership from all water sector institutions, ministries with links to water management and the NGOs active in the sector.

  Coordination between the departments and parastatals of the MWI takes place through the Water and Sanitation Technical Group (WSTG) coordination meetings. The WSTG is also used to coordinate funding and approach of the donor agencies.

  There is also need for a forum for coordination between different departments and donors supporting some of the sub-sectors. The MWI hosts the water sector consultative meetings. The meetings target a wide range of stakeholders from the sector and allied areas.

  The need for stakeholder coordination in the water and sanitation sector has been identified and a number of mechanisms have already been put on the ground to facilitate the process. The Government and NGOs and other stakeholders form learning networks where they exchange information and improve coordination.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

  - The GoK established in 2003 the Kenya Anti-Corruption Commission (KACC), a public body, under the Anti-Corruption and Economic Crimes Act (ACECA). The country’s Parliament disbanded KACC on 24th August 2011, in line with the requirements for change as stipulated in the new Constitutional dispensation. The Ethics and Anti-Corruption Commission (EACC) was established on 5th September 2011, after the Ethics and Anti-Corruption Act on 29th August 2011 was signed.

  - In 2011, the KACC undertook a study on the topic of corruption in the water and sanitation sector in Kenya. The general objective of the study was to explore the magnitude and impact of corruption in Kenya’s water and sanitation sector. The highlights of the findings of the study show that the root causes of corruption in water sector are policies inadequacies (enormous procurement malpractices and misappropriation of funds); legal inadequacies (duplication of duties between Water Resources Management Authority (WRMA), National Environment
Management Authority (NEMA), and Kenya Forestry Service (KFS) in conservation of water catchment areas); and institutional inadequacies (the MWI has not adequately empowered institutions formed under the Water Act 2002 and it still controls budget and staff of different institutions in addition to ownership of certain assets in the supply of water).

- The GoK introduced performance contracting in the public service as one of the reforms aim at increasing productivity in the public sector and enhancing service delivery and restoring transparency and accountability. Following the inclusion of the “Corruption Eradication” indicator in the performance contracts, all public institutions are expected to mainstream anti-corruption strategies in their management systems.

**Conflicts management**

The Water Act, 2002 provided mechanisms for complaints, public notification and consultation (Section 107). Section 15 of the Act empowered the Water Resources Management Authority (WRMA) to formulate Catchment Management Strategies (CMS) for the management, utilization, development, conservation, protection and control of water resources. This was to be done in consultation with local stakeholders gathered around an entity known as the “Water Resources Users’ Association (WRUA). The (WRUAs) are being established to provide a forum for cooperative management of water resources and conflict resolution.

The intention of WRUAs to act to resolve conflict over water is apparent in the Water Act which provides specifically that “… the catchment management strategy shall encourage and facilitate the establishment and operation of water resources users associations as fora for conflict resolution”. In addition, a constitution often envisages that the Association it governs will “provide a forum to discuss, prevent and resolve water use conflicts”.

Without the forum there is nowhere for grievances to be aired, anger vented and feelings made known. There is then a very real risk of problems escalating into disputes and this is where the existence of a WRUA is so crucial. The most obvious conflicts it helps prevent are those, often much publicised ones, between pastoral users lower down a water course, and agricultural or horticultural extractors in the upper reaches. Being able to bring all users together, and make them more aware of each other’s problems and perspectives is one of the most vital roles of any WRUA.

**Benefits of water, energy, and food nexus approach**

To effectively meet the growing demand for water, food and energy, there is need for well-coordinated and timely management of the three resources and any other interrelated resource or aspect. It is imperative that there is comprehensive understanding of the three resources, all factors contributing to their enhancement, all risks that challenge their sustainable supply and how these risks are being responded to and managed nationally and globally. This requires an integrated effort for the three sectors in terms of strategy and policy planning and implementation.

Implementing a nexus approach must be guided by overarching principles, namely:

- a) Putting people and their basic human rights at the centre of the nexus.
- b) Creating public awareness and the political will to establish effective legislative frameworks, promoting good governance, greatly reducing and eventually eliminating corruption.
- c) Involving local communities, including indigenous and women’s groups fully and effectively in the planning and implementation processes related to water, energy and food nexus for local ownership and commitment.
**Benefits of transboundary water management**

Kenya shares about 50% of her water resources (rivers, lakes, and aquifers) with her immediate neighbouring countries. Some of these river systems are tributaries of the Nile River Basin through Lake Victoria Basin and therefore their development will be hastened by the conclusion of negotiations of the Nile Basin Cooperative Agreement. Amongst the lakes only Lake Victoria has an agreement (Lake Victoria Authority) (LVA) and development plan while the remaining lakes are still under study and consultation. Shared aquifers include the expansive Merti aquifer shared with Somalia, and groundwater system within the Rift Valley and Mount Kilimanjaro system; the latter are less studied and their potential not known. Several initiatives, however, are already being taken to address the management of transboundary aquifers.

Kenya will actively support the development of a system of cooperative framework and protocols to guide the management of shared river systems on an equitable and sustainable basis. Until such an agreement or system exists, Kenya will continue to promote regional and bilateral co-operation in shared river and lake systems and Ministry of Water and Irrigation (MWI) has been empowered, in collaboration with Ministries of Foreign Affairs and Internal Security, to conduct these consultations. Some of these collaborative studies and interventions include the Nile Basin Initiative (NBI), Lake Victoria Basin Commission (LVBC).

The GoK is currently formulating a National Policy on Transboundary waters.

**2.4.5- Overview of lessons learned**

- A new legislation, Water Act 2002, was enacted and came into operation on 18th March 2003. This provided an enabling legislation with clear roles and responsibilities of the key water institutions and the separation of water resource management (WRM) from water supply services (WSS) delivery.

- Ongoing preparation of complementary policy reforms include groundwater policy, water supply and water resources management strategies as well as land use policies which will be harmonized within the present Plan. These are positive developments in a sector with a multiplicity of players and numerous local, regional and national planning processes such is the case in Kenya.

- Most of the institutions provided for in the Water Act 2002 were established in 2004 and are fully operational and implementing their mandates. Restructuring of the MWI and National Water Conservation and Pipeline Corporation (NWCPC) has been documented severally but not yet fully implemented. Each institution and sub-sector seems to be developing at its own pace, without an overall sector strategic allocation of resources to guide their development in line with their mutually supportive and complementary roles towards sector outcomes.

- The regulator under Water Act 2002 is vested only with power to regulate Water Services Boards and Water Service Providers. The Water Act is uncertain on how to deal with crosscutting relationships and overriding issues that influence the water sector regulation. Hence, the regulator has a challenge to forge collaborations and consultations in these and other water sector development issues among the relevant water institutions and stakeholders.

- To date, the transfer of water supply and sanitation assets from the MWI, National Water Conservation and Pipeline Corporation (NWCPC) and Local Authorities to the new Water Services Boards (WSB) has still not been completed.

- The ongoing reforms in the sector have seen enhancement of public participation in all areas of water affairs. With the new constitutional order such participation in development and implementation of sector projects will have to increase, as the right to be informed on progress is to be institutionalised. This will also help to defuse water conflicts timely without violence and create new opportunities for better services to meet the right to water. Public participation can be improved on all levels such as in the representation of boards of WSIs, in decision making processes, dialogue platforms and information sharing among others.
2.4.6- Practical recommendations

Policy framework

a) The Water Sector Strategic Plan (2009-2014) is envisaged to be the Apex body which brings together all water sector players. The current studies on the alignment of water sector institutions to the national Constitution have not taken into account of the efforts towards that end. It is recommended that the learning lessons of the strategic plan are also incorporated in the efforts of aligning to the new constitution and thereafter undertake the review of the National Water Policy.

b) The following challenges need to be adequately addressed so as to improve the implementation of the water sector reforms:
   - Continued mainstreaming of Human Rights to Water and Sanitation;
   - Critical capacity lacking in areas of governance, human rights and commercial orientation and regulation;
   - Inadequate communication and information management systems;
   - Regulation of small scale independent service providers;
   - Sector monitoring and evaluation still lacking; and
   - Weak complaint and feedback mechanism.

a) Legal and regulatory framework

a) The Water Act failed to harmonize its provisions with other statutes affecting the provision of water services. This has led to inter-agency conflicts e.g. between WRMA and NEMA, WRMA and KFS, WSPs and LAs etc. Therefore there is need to ensure that the amendments to the Act in line with the requirements of the national Constitution should resolve these conflicts.

a) Institutional framework

a) Effective water resources management needs to be cross-sectoral: The MWI needs to develop a coordinated approach to water resources management across all the relevant sectors and communities at both basin and local levels. It is difficult for stakeholders in the WSBs and WSPs to hold their directors and top managers to account as they are not shareholders strictly speaking. Special effort should be made to enhance the corporate governance of the new institutions to stem political interference and promote management professionalism.

References

2) Water Resources Management Authority (WRMA) (2014): Managing water resources using NWRMS and NWMP 2030 as tools and innovative ways to meet the vision 2030 water demands, IEK Conference
2.5- ALGERIA

2.5.1- General information

Algeria is located in the extreme north of the African continent on the edge of the Mediterranean Sea. The Algerian territory covers an area of 381,741 km². From north to south, there are three contrasting sets that differ in their terrain and morphology: the Tell chain and the Coast, the Atlas Mountains along the High Plains further south and the Saharan desert that extends beyond the Atlas Mountains. This layout of the relief, marked by different climate conditions, determines the development of economic activities of the regions and affects water resources.

Most of the country (87%) is a desert where rainfall is almost zero, but which conceals important fossil groundwater resources. The northern part of the country is characterized by its Mediterranean climate; it has renewable water resources, both surface water and groundwater. 90% of surface waters are located in the Tell region which covers about 7% of the territory. The country is also characterized by a large disparity between East and West. The western region is well endowed with plains but is little watered. The eastern part of the country is a mountainous area where the main rivers flow.

The Medjerda river source is located in the northeast Algeria (Tellian Atlas but the main part of its watercourse is situated in the territory of Tunisia). It flows from northeast Algeria through Tunisia before emptying into the Gulf of Tunis and Lake Tunis. It has a length of 460 km and a basin area of 22,000 km², with a rate a rate of flow of 1,000 m³/s. 25

Algeria had about 35 million inhabitants in July 2011 with an annual growth rate of 1.17%. About 90% of Algerians live on just over 10% of the territory, concentrated along the Mediterranean coast. The average density of population is 14 inhabitants/km². However, this figure poorly reflects an uneven distribution; indeed it exceeds 100 inhabitants/km² in the northern regions, main populated areas of Algeria.

2.5.2- Executive summary of water policy document

In Algeria there is not a water policy document as such. However, the policy framework on water consists of the following documents of legislation:

- The 1996 Constitution
- The law on water, as amended and supplemented 26
- The Law on Spatial Planning 27
- The Law on Environmental Protection 28
- The law on the prevention of major risks 29
- Health Law 30

Under the 1996 Constitution, public property belongs to the national collectivity. It includes ... waters ... (Art. 17). The Parliament legislates in the domains which the Constitution assigned to it and in the following areas ... the general regulation for water (Art. 122/23).

Between 1995 and 2005, series of reforms have redesigned the mobilization, management and use of water resources taking into account three key aspects that are the principles (regulatory framework, integrated management, efficiency of agricultural water, tariff policy); the institutions (creation of the Department of Water Resources, Watershed agencies and restructuring of national

25 Source : Internet Wikipedia, Medjerda
26 Law No. 05-12 of August 4, 2005
27 Law No. 01-20 of December 12, 2001
28 Law No. 03-10 of 19 July 2003
29 Law N ° 04-20 of December 25, 2004
30 Law No. 85-05 of 16 February 1985
and regional agencies); and the priorities (drinking water, water transfers, etc.). These elements constitute the guidelines of the new national water policy.

Since 1996, Algeria has launched a new water policy focused on the "Integrated Water Resources Management" or IWRM approach to ensure their recovery and sustainability. It aims to promote and ensure integrated and sustainable water resources management per watershed and balance the needs of uses (domestic, agricultural, industrial and other activities) and those of ecosystems.

- **Legal and Regulatory framework**

  The 2005 Law on Water determines the principles and rules for the sustainable use, management and development of water resources as an asset well the national community (Art. 1). Other relevant legislations for the water sector include:

  - The Law on spatial planning: national planning strategy (Article 11, 14, 15, 16, 22.) and the master plan for water (Art. 25)
  - The law on the protection of the environment: pollution, standards and quality objectives, freshwater protection (Art 4.10, 48-51, 100).
  - The law on the prevention of major risks: The management of major risks caused by exceptional climatic conditions (drought, floods) is ensured by specific instruments of flood prevention and flood prevention requirements (Art 10, 16, 19, 24, 25)
  - The Health Act: Water Quality Standards for human consumption (Art 32, 33.) Hygiene safety standards (Art. 29, 30, 34)
  - The Law on Municipality Responsibilities regarding EPA and Sanitation; (Art. 107)
  - Methods of management of communal utilities (including water supply, sanitation (Art. 132-138).

- **Institutional framework**

  Water resources management is performed at the watershed scale. The Algerian territory is divided into five (5) watersheds grouping the 19 hydraulic basins of the country. The actors most involved in water management are: (1) the State, through the ministries (interior and local government, agriculture and fisheries, spatial planning and the environment ...) and their concerned departments, (2) institutions under supervision and the Offices of large irrigated areas, (3) local authorities, (4) users and their associations, NGOs, (5) development partners.

  Furthermore it should be noted the existence of regulatory and supervisory bodies such as the Regulatory Authority (RA) (Art. 65) and Water Police (Art. 159).

2.1.3- **Vision, Objectives and Priorities of the policy**

The issue of water was a national priority for over a decade. The new national water policy is based on a set of institutional reforms and new instruments which are the Basin Agencies and Basin Committees.

As of the early 2000s, the priority given to the water sector has resulted in a significant boost of state intervention on two major strategic areas.

1) The development of water infrastructure as part of the national stimulus and economic growth support programs;

2) Institutional reforms within the framework of national dynamics to strengthen governance.

2.1.4- **Success components of good water governance**

A. **Management mechanisms**

  - **Water resources planning tools**

    The Water Act (2005) provides the following IWRM planning instruments:
The Master Plan for Water Resources Development (PDARE) is developed for each natural hydrographic unit. It defines the strategic choices as regards mobilization, allocation and use of water resources, including unconventional waters (Art. 56).

The National Water Plan (PNE) was adopted in February 2007 and runs until 2025. It defines the objectives and priorities for national mobilization, integrated management, transfer and assignment of water resources (Art. 59). It also defines the measures accompanying economic, financial, regulatory and organizational framework for its implementation (Art. 60).

**Climate change adaptation in water sector**

Among the priorities of the government, there are the mobilization of new resources, the exploitation of the Sahara waters and their transfer to the Central Highlands, the desalination of sea water and the transfer In Salah-Tamanrasset.

In the water sector, the options for adaptation to climate change are mainly: the development of a network information system, the consolidation of decision support tools, the implementation of a strategy for the reuse of treated wastewater in irrigation development, the fight against floods.

**Monitoring and Evaluation (M&E) systems**

The ministry of water resources is in charge of establishing an integrated system of water information management, harmonized with information systems and databases of relevant government agencies. **Human rights in water supply and water management**

The water law adopted in 2005 defines water as a good of the national community. Under this law, the first principle on which is based the use, management and sustainable development of water resources, is the right to access to water and sanitation to meet the basic needs of the population in respect of equity in public water and sanitation services (Art. 3). To operationalize this provision, the law calls for the application of tools and instruments (pricing of public services of drinking water supply, demand management, research of financial stability, social solidarity, water economy, water resources protection, ...).

**Learning review and capacity building processes**

The Agency for Water Resources Integrated Management (AGIRE) and the 5 watersheds agencies have gained experience in IWRM. These institutions could share their experiences in the three (3) following major areas: (i) water resources planning development; (ii) the collection of royalties for the withdrawal of water from public water resources for certain uses; (iii) information and sensitization of different categories of water users about water conservation and preservation of water quality.

The creation of the AGIRE, a permanent structure to lead and coordinate the implementation of IWRM is a clear manifestation of political will in favor of IWRM. It seems to be an approach that facilitates the learning process of capitalization of knowledge and capacity building.

**B. Water governance**

The water governance in Algeria aims to:
- Ensure the sustainable management of water resources (drinking water and irrigation)
- Plan and cooperate to manage infrastructure and resource,
- Improve the efficiency of public services of water and sanitation.

These objectives of good water governance are pursued through water economy and conservation, progressive and supportive tariff system, protection against major risks, participatory management.

**Consultation, participation and co-ordination mechanisms**

The consultation, participation and coordination bodies in the water sector are mainly the National Water Council (CNE), which is a coordinating and regulation body at national level; the National
Advisory Council of Water Resources (CNCRE) representing the new institutional coordination framework for the implementation of water policy; and River Basin Committees (CBH) which are in each natural hydrographic unit, responsible for integrated water resources management in basins Agencies (Art. 64).

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

Algeria does not have either legislation or a regulatory framework integrating the procedures and measures of integrity and fight against corruption in the water sector or mechanisms that ensure transparency in budgetary procedures and including the tools to improve transparency and accountability in the water sector.

- **Conflicts management**

  - The tools and procedures of water conflict management are not addressed either in the law on water or in water resources management policy documents.

- **Benefits of water, energy, and food nexus approach**

  - Algeria has focused on (i) the political, legislative, regulatory and institutional reforms to strengthen water governance according to the concepts and principles of IWRM, and (ii) development of water projects and infrastructure to provide the expected contribution of the water sector to economic growth. In this regard, the action of Algeria is aligned with the AMCOV’s work program 2014-2016 through the theme 1 "Water infrastructure for economic growth". It is also about translating the practical nexus approach between water, energy and food through infrastructure development. The increased water resources mobilization for the coverage of domestic, industrial and agricultural water needs improves understanding and managing the complex interactions between water, energy and food from the nexus perspective.

- **Benefits of transboundary water management**

  In cross-border cooperation, Algeria shares with Tunisia and Libya groundwater of the North-Western Sahara Aquifer System (NWSAS). Algeria also shares the Madjerda river basin with Tunisia, but with no consultation mechanisms between the two countries. In the context of cross-border cooperation around the NWSAS, capacity building actions have been properly carried out for the benefit of member countries including Algeria. Other benefits which countries have benefited from include updating the database, the establishment of water resource management scenarios that need to be updated, the development of salinity indicators and piezometry which is continuing, the development of the observing NWSAS water resources network.

2.5.5- Overview of lessons learned

- Water resources management in Cameroon suffers from poor governance, fragmentation of its institutions, and the absence of a proactive policy firmly focused on the improvement of water resources, etc. This management evolves in fact at the mercy of political, social, economic, cultural and environmental avatars which strongly hinder its implementation.

- Inadequacies of regulation texts result in inadequacies in regulatory frameworks, normative frameworks, a lack of consistency between texts and inadequacy in their implementation.

- The institutional framework of the water sector is characterized at the moment by the central role of the Ministry of Energy and Water (MINEE). Several inadequacies characterize the institutional framework for water management in Cameroon. The observation of the functioning of the institutional framework reveals that the State has concentrated all water related prerogatives in the
hands of its central or provincial structures, without really integrating the guidelines and principles of IWRM in participatory and inclusive management.

- The learning processes and capacity building actions implemented have proved inadequate in comparison with the huge need for capacity building of key stakeholders, including the MINEE.

**2.5.6- Practical recommendations**

- **Policy framework**
  
g) Problems of access to drinking water and improved sanitation cannot be dissociated from the general framework of water resource management. Deep reforms of institutions, legal frameworks and policies for water are essential to ensure sustainable expansion of access to drinking water and sanitation and improve sustainably the sector performance.

h) It is therefore necessary to undertake reforms in order to adapt the Cameroonian water legislation to the new situation. Anything that could enhance water management by bringing it closer to people and local concerns, thus ensuring, accountability and integrated management according to the principles that govern IWRM.

i) Available and accessible documentation did not allow noting the existence of planning development and tools for water resources. The IWRM plans, the SDAGE, or water management plans by basin are site works to open.

j) The concerns of climate change should be integrated into national, sectoral and local development strategies. A planned adaptation to climate change improves communities and citizens’ resilience that are dependent on natural resources for their daily needs and their specific know-how in order to reinforce the livelihoods and security means.

k) It is then important today to give water the importance it deserves in comparison with its status as strategic natural resource which affects national development. Therefore, it is imperative that the sector be recognized as a priority by the State, as well as health and education.

l) Various tools for integrity, transparency and anti-corruption in the water sector are essential to good water governance. They must be developed and implemented to ensure greater efficiency of water investments.

- **Legal and regulatory framework**
  
c) To get out of legislative, legal and regulatory uncertainty that characterizes the current situation, the adopted texts and especially those in force today should be improved. Applications texts should be developed, completed and published in order to make effective laws enacted.

d) It is important to create an institutional, legal and regulatory environment favorable to the proper functioning of integrated water resource management. To this end, a legal framework will be put in place within which the rights and obligations relating to water will be clear and facilitate its rational use.

- **Institutional framework**
  
e) More effective coordination of the entire water sector is critical. For effective implementation of the national water policy, it is desirable to group water assignments in one ministerial department to avoid the multiplicity of interlocutors which generates human and financial resources waste. This effective coordination should ensure the existence of communication, exchanges and information frameworks between the different actors, with monitoring and evaluation system. The values such as transparency, participation and equity must be highlighted.

f) The MINEE as a governmental structure in charge of the water issues will organize and provide sustainable solutions to water problems. It will surround itself with competences and qualified
staff, with adequate resources and a strong determination in water resource management. The institutional framework for water resource management should be based on the principle of separation of management and use of water resources functions, with a clear and unambiguous definition of roles and responsibilities.

g) The various institutions would benefit synchronizing their actions in order to avoid discrepancies and loss of time and energy. Multisectoral developed actions within a supreme dynamic framework governing water management are worth exploring. The National Water Committee in this regard could be this regulator. The application texts should follow the enactment of laws to enable their implementation.

h) Population and "stakeholders" involvement in IWRM. The populations must be involved in the management following a well-defined geographical space (eg watershed).

References


2.6- CONGO

2.6.1- General information

The Republic of Congo is a central African country covering an area of 342,000 km². Located on both sides of Ecuador, Congo has over most of its length, an equatorial rainfall regime (maximum temperatures and rainfall interrupted by dry seasons made of warmer temperatures).

Congo water resources consist of surface water and groundwater. Frequently and abundantly watered by tropical rains, the Congo has many and powerful rivers. Besides the Congo River - the world's second largest river by its flow after the Amazon - there are more than thirty navigable rivers.

Surface waters are mainly drained by the Congo Basin and the Kouilou-Niari basin. The Congo Basin covers an area of 230,000 km² in the national territory. This basin includes the sub-basins of the Sangha, Likouala Mossaka, the Alima and the Nkéni. Kouilou-Niari basin covers an area of 56,000 km² in the country and includes the Louesse and Bouenza sub-basins. To these two main basins, should be added the coastal basins of the Nyanga and the Loémé.

The population of Congo is estimated at 4,448,000 inhabitants (2013) of which over 65% live in urban areas (Brazzaville and Pointe-Noire in particular). The Congo is one of the most urbanized countries in Africa. Brazzaville, the political capital with nearly 950,000 inhabitants, Pointe-Noire, the economic capital, with nearly 500,000 inhabitants, alone account for approximately 55% of the total population and 90% of the urban population.
2.6.2- Executive summary of water policy document

- **Water Policy framework**

In Republic of Congo, the policy framework on water consists of the following:

- The 2002 Constitution
- The Political strategy document for development of the sectors of electricity, water and sanitation

The strategy document that serves as a national water policy in Congo is now the reference framework for the development and implementation of national water policy in the Republic of Congo. It sets the major strategic guidelines that build on IWRM principles and focus on the problem of access to drinking water and sanitation. These guidelines are in accordance with the guidelines of the regional water policy. Moreover, they are in line with the guidelines of the regional water policy of ECCAS.

The policy letter for the water and sanitation sector has the overall aim to improve the living conditions of the population by the optimal use of water resources and improved access to drinking water and sanitation.

- **Legal and Regulatory framework**

Le cadre juridique et réglementaire relatif à l’eau comprend les textes de lois suivants:

- The Constitution
- The law on Environment protection
- The Law on water Code
- The law on the transfer of competences to local authorities
- The law on determination of local government patrimony
- The law establishing the National Agency for rural hydraulics (ANHYR)
- The law establishing the national water distribution (SNDE)

The Constitution basically addresses the nature, organization and management of the Congo State. It sets out the fundamental principles of the Republic, defines citizens’ rights and duties and sets the organizational forms and the rules of operation of the state. Natural resources and environment related issues are not addressed.

In terms of water resources, the law on environmental protection aims at reinforcing legislation on the protection and preservation of river resources, management, restoration, protection and conservation of natural resources (Art. 1). Title V specifically addresses the issues of water protection (Art. 28-33).

The Water Code is to implement a national water policy aiming at (i) ensuring a rational use of water resources, (ii) (2 Art.); preventing the damaging effects of water; (iii) fighting against water pollution. But this policy does not exist yet. However, the refocusing of state missions (planning, regulation, control and regulation) is clearly stated and the public service delegation is clearly established. However, the regulatory framework for implementing the Water Code is still very weak.

---

31 Adopted on January 20, 2002
32 Adopted in December 2010
33 Law n° 003/91 on April 23, 1991
34 Law n° 13-2003 on April 13, 2003
35 Law n° 10-2003 on February 6, 2003
36 Law n° 31-2003 on October 24, 2003
37 Law n° 38-2008 on 31 December 31, 2008
38 Law n° 5-67 on 15 June 15, 1967
and the established bodies are not fully operational yet. Similarly, the contracts between the State and SNDE, incumbent public water service operator in urban areas, are not fully operational.

The specific legal framework to sanitation sub-sector is not specified in the Water Code. However, the GoC is considering the development of a code of sanitation which should cover the provisions of excreta and wastewater (domestic, industrial, hotel and hospital waste water), storm water and solid waste (household waste).

- **Institutional framework**

At national level there are three categories of actors who are involved in the development of the water sector:

- State actors who have the statutory task of developing and implementing the national water policy under the coordination of the Ministry of Energy and Water (MEE);
- Local authorities which are the indirect beneficiaries of drinking water infrastructure and equipment supply;
- The civil society organizations which support the government action in this area;
- The private sector.

The organs and structures of the institutional framework for water management in Congo are shown in the Water Code. This institutional framework is characterized by the predominance of state services and structures. The main public sector institutions are: (i) the Ministry of Energy and Hydraulics (MEH); (ii) a number of other key ministries (approximately 7) involved in the water sector; (iii) Water Sector Regulatory Body (ORSE): The regulatory body is established by the Water Code (Art. 55); (iv) water supply state structures in urban and rural areas (the national water distribution company (SNDE), the National Agency for Rural Hydraulics or ANHYR); (v) local authorities; (vi) organizations of the civil society and NGOs (vi) the private sector; (vii) the technical and financial development partners.

2.6.3- **Vision, Objectives and Priorities of the policy**

The Law on Water Code provides in Article 3 that "national water policy is defined and implemented by the state on the whole territory of the Republic in terms of hydrographic watersheds." Twelve years after the enactment of the Water Code, Congo still lacks a national policy document on water resource management.

The development vision of the Republic of Congo Water Sector is to make available to each Congolese citizen, water in sufficient quantity and acceptable quality and adequate sanitation services, optimization and rationalization e use of water resources that the country overflows.

The specific objectives of the sector policy letter for water and sanitation are:

- To define the implementation framework of the "National Program for Water and Sanitation", which will contribute to achieving the Millennium Development Goals (MDGs) and the recommendations of the World Summit on Sustainable Development (WSSD) on sanitation;
- To implement a coherent, functional and efficient institutional framework for the management of water sector enforcing the Water Code;
- To provide different political actors, partners and the civil society organizations, with a political intervention framework for the development of the water and sanitation sector.

According to the Water Code, the national water policy has the following objectives (Art 2.):

- To ensure efficient use of water resources to meet users’ water needs throughout the territory of the Republic in terms of quantity and satisfactory price;
- To prevent harmful effects of water;
- To fight against water pollution.

In the absence of a water policy document, the Water Code sets (. Art 9) the following priorities in the water sector: the hydraulic public domain is allocated as a priority to meet the following requirements:
(i) drinking water supply of the population; (ii) livestock watering and other agricultural needs; (iii) the industrial needs.

2.6.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**
  The Water Code stipulates that the national water policy is defined and implemented by the state on the whole national territory within the framework of watersheds whose delimitation shall be decided by regulation. Planning the development of the water sector is developed by the Ministry in charge of water, after consulting the Advisory Water Council (Art. 3).
  Despite texts adopted Congo does not have planning and development instruments in the field of water resource management.
  However, Congo is a Member State of ECCAS, which has had since 2009 a regional water policy and an IWRM Action Plan (PARGIRE) since 2014. The formulation of the water national policy document and the development of an IWRM national Action Plan (PANGIRE) should reflect the provisions adopted at ECCAS sub-regional level.

- **Climate change adaptation in water sector**
  Concerns about climate change are not integrated in the management of water resources as there is no policy and national strategy on water resource management strategy.
  To cope with the impacts of climate change, the Initial National Communication (INC) established in 2001 considered several adaptation measures, including in this case the recalibration of waterways by dredging silted reaches, construction of structural works to prevent floods from reaching the population, promotion of compliance with good practices in the floodplain to limit people's exposure to floods, construction of shelters and refuges.

- **Monitoring and evaluation (M&E) systems**
  For water sub-sectoral policies (drinking water supply and sanitation), there is no monitoring and evaluation mechanism, nor performance indicators to monitor and evaluate the implementation national water policies.

- **Human rights in water supply and water management**
  The 2002 Constitution states that every citizen has the right to a healthy, satisfying and durable environment and has the duty to defend it, and that the state ensures the protection and conservation of the environment (Art. 35).
  In Congo, the integration of human rights into sectoral policies concerns the management of the environment and water supply in urban environment. It is based on two principles, namely the participation of people in the management of the environment and equity through consideration of the gender dimension. Apart from these rather clearly mentioned principles, other mechanisms of human rights in the water management are consultation which is in the participatory approach, the control that requires the State to respect its commitments, and monitoring.

- **Learning review and capacity building processes**
  In the Republic of Congo there is no proper learning process and review of the implementation of the national water policy; nor organized, structured and coordinated actions building technical and institutional capacities of the different categories of actors intervening in the water sector. The absence of a policy, an intervention strategy and an action plan based on concepts and IWRM principles is the main justification.
B. Water governance

- **Consultation, participation and co-ordination mechanisms**
  Consultation, participation platforms and existing coordination bodies are essentially:
  - The Water Advisory Council (CCE): instituted by the Water Code (Art 5), it is under the responsibility of the Minister for water. It is responsible for ensuring the overall, integrated and concerted management of water resources. It is not put in place yet.
  - The General Directorate of Hydraulics
  - The local authorities
  - The actors of civil society organizations and the private sector
  The consultation platforms and stakeholder participation are not functional when they exist.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**
  The Republic of Congo has no legislation and regulatory framework integrating integrity and fight against corruption procedures and measures in the water sector. It is the same for mechanisms that ensure transparency in the budget processes and including the tools to improve transparency and accountability in the water sector.

- **Conflicts management**
  The Water Sector Regulatory Body (ORSE) by its mission and CCE by its functions should be able to play a role in the management of water-related conflicts. But these structures and organs are not operational and not very effective. There are no clear mechanisms for managing water-related conflicts.

- **Benefits of water, energy, and food nexus approach**
  Congo has enormous hydric potentials. The development of this potential is not made according to the "nexus" approach applied to the water, energy and agriculture sectors. The main reason is certainly the lack of reference framework for the planning and integrated development of water resources.

- **Benefits of transboundary water management**
  Congo shares with its neighbors several international river / lake basins, the most important:
  - The coastal basin of Nyanga, shared with Gabon;
  - The Ogoué River basin, shared with Gabon;
  - The Congo River basin, shared with the Democratic Republic of Congo, the Central African Republic and the Republic of Cameroon, and also upstream of the Sangha with Cameroon and the Central African Republic.
  - The Ivindo basin shared with Gabon and Cameroon;
  - The aquifer system of the coastal sedimentary basin, with the People's Republic of Angola and Gabon.
  From all these basins, only the Congo is the subject of a basin organization, the International Commission of the Congo-Oubangui Sangha Basin (CICOS). Congo, as a member of CICOS enjoys the benefits of cross-border cooperation through projects and programs implemented by CICOS.
  However, at national level, the absence of clear policy and legislation on joint management and sustainable use of water resources, does not allow to identify national priorities and improve the benefits that Congo could draw from cross-border cooperation in the management of shared water resources.
2.6.5- Overview of lessons learned

- The Water Code lays the foundation for a modern legal framework and well suited for the water sector. The refocusing of state functions (planning, regulation, control and regulation) is clearly stated and the public service delegation is clearly established. However, the regulatory framework for implementing the Code is still very low and the established bodies are not yet fully operational.

- Law n° 13-2003 of April 10, 2003 on Water Code provides in Article 3 that "national water policy is defined and implemented by the State on the whole territory of the Republic in the hydrographic basin framework." Twelve years after the enactment of the Water Code, Congo has still no national policy document on water resources management. The approval by the government in December 2010 of a strategy paper and a policy letter for water and sanitation sector still provides the basis for this policy, and gives the great guidelines which will underpin its development.

- The political will displayed by the government in adopting the Law on Water Code or any other law addressing issues related to water, has not been translated into action; regulatory provisions on the implementation of the water code has not yet been adopted by the government.

- The Water Code lays down the basis for a modern legal framework and adapted to the sector. The refocusing of the state missions (planning, rule, control and regulation) is clearly stated and the public service delegation is clearly established. However, the regulatory framework for implementing the Code is still very weak and established bodies are not fully operational yet.

- Concerns about climate change are not integrated in the management of water resources as there is no policy and national water resource management strategy.

- The absence of a national water resource policy, comprehensive, adequate regulatory and legal instruments and an institutional framework promoting participatory and inclusive approach to the management of water resources is a situation which does not allow the development of appropriate tools for a concerted and sustainable management of water resources. The Water Code contains relevant provisions for water resources management but very few, if not almost all remains inapplicable in the absence of operational texts. It lacks several water resource management tools and mechanisms relating to the enabling environment, institutional roles and responsibilities and management tools.

- Finally, Congo has not signed the 1997 United Nations Convention on the Law related to International Watercourse uses for purposes other than navigation, which does not allow it to take full advantage of mutually advantageous cooperation with countries with which it shares the same hydrographic basins with a view to achieving sustainable development.

2.6.6- Practical recommendations

**Water Policy framework**

- Adoption of a true national policy, strategy and a water resource action plan based on the concepts and principles of IWRM
- Development of water resources planning and management tools by hydrographic basin.
- Harmonization of the national water governance framework with the regional water policy of ECCAS
- Contribution to the creation of basin management agencies in all the other hydrographic basins of the sub region

**Legal and regulatory framework**

- Rereading the Law on Water Code to direct it on IWRM, to supplement and improve it.

---

39 It entered into force on 17 August 2014.
g) Development of regulatory texts for the effective implementation of the Water law
h) Clarification of Congo issues and expectations in cross-border cooperation on shared water.
i) Harmonization of the national legislation to make coherent the management of shared water resources
j) The regulatory framework for implementing the Code is still very weak and agencies created are not fully operational yet. Also, the legal institutional modern and adapted framework, but which remains to be finalized.

*p Institutional framework*

f) Organization and structuring of the institutional framework; clarifying roles and responsibilities; separation of the functions of management of water resources utilization functions; reinforcing the good water governance framework at institutional level.
g) Review of structures and bodies involved in the management of resources and promotion of the participation of all actors at different scales (local, regional, national).
h) Establishment of a formal framework for consultation of the sector actors through the national water partnership.
i) Strengthening of all actors’ technical and institutional capacities, involved in water resource management at organizational, human and financial plan.
j) Establishment at national scale basin agencies responsible for monitoring the quantitative and qualitative management of the water resources at hydrographic basin level.

References


2.7- GHANA

2.7.1- General information

The Republic of Ghana with a surface area of 240,000 km² is located in the Gulf of Guinea, West Africa; and has accordingly a generally hot and humid climate in the south and hot dry climate in the northern parts.

The mean annual rainfall ranges from 2150 mm in the extreme Southwest to 800 mm in the Southeast and about 1000 mm in the Northeast. The country is drained by three main river basin systems namely: the Volta, South western and Coastal, covering in that order 70 %, 22 % and 8 % of the total area of the country.

The Volta system is made up of the Red, Black and White Volta Rivers as well as the Oti River. The south-western river system is made up of the Bia Tano, Ankobra and Pra rivers. The Tordzie/Aka, Densu, Ayensu, Ochi-Nakwa and Ochi-Amissah comprise the coastal river systems. In addition to these, the only significant natural freshwater lake in Ghana is Lake Bosumtwi. This is a meteoritic crater lake located in the forest zone, with a surface area of 50 km², and a maximum depth of 78 m.

The ground water resources of the country are found in two rock formations; the sedimentary and non-sedimentary. The sedimentary formation mainly of Voltaian origin occupies about 43 % of the total area of the country with yields of 1.0-12.0 m³/h at depths of 20-80 meters. The non-sedimentary formation
mainly comprises the crystalline basement complex of pre-Cambrian origin and occupies 57 % of the total area of the country with yields of 1.5-32.0 m³/h at depths of 20-100 meters. The quality of groundwater resources in Ghana is generally good except in few instances of localized pollution. Ghana had a population of about 24.3 million as at 2010 with a population growth rate of 2.4%. Ghana’s population is also rapidly becoming urbanised with the growth rate of the urban population estimated at an annual average of 4.2% between 1990 and 2007. Given the population growth trends, total population will be about 35 million by 2025 with about 55% of the population living in urban areas.

2.7.2- Executive summary of water policy document

- **Water Policy framework**
  Within the overall framework of the 1992 Constitution, the policy framework for water resources management and development in Ghana is anchored on two essential documents: i.e. the Water Resources Commission (WRC) Act 522 and the National Water Policy (NWP).
  Water is a cross-cutting element of the Growth and Poverty Reduction Strategy (GPRS II) and is linked to all Eight of the Millennium Development Goals (MDGs).
  The NWP of Ghana is intended to provide a framework for the sustainable development of Ghana’s water resources. It recognises the various cross-sectoral issues related to water-use and the links to other relevant sectoral policies such as those on sanitation, agriculture, transport, energy, etc.
  To ensure sustainable development of water resources which responds to sector issues, water resources management would be considered within the context of the following two main areas:
  1) Conservation of the water resources stock in all its occurrences to sustain availability and maintain acceptable quality for the betterment of human health and the environment; and
  2) Regulation and control of demands of water use and waste disposal to stay within the natural capacity of the water resources base, which must necessarily maintain its regeneration and self-purification characteristics.

- **Legal and Regulatory framework**
  The legal and regulatory framework for water resources management in Ghana is made of:
  - The Constitution of the Republic of Ghana
  - The Water Act
  - The Water Resources Commission (WRC) Act
  - Local Government Act (Act 462)
  - Community Water and Sanitation Act, (Act 564).
  Water, as an essential natural resource, falls within the provisions of Article 269 of Ghana’s Constitution, which seeks to protect water resources by setting up a Commission to regulate, manage and coordinate Government policies in relation to it.
  The Water Resources Commission Act (Act 552) conferred on the WRC the mandate to enact regulations on water use. Section 12 stipulates that “the property in and control of all water resources is vested in the President on behalf of, and in trust for the people of Ghana”. The vesting of the water resources in the President is to make water resources management consistent with general natural resources management in Ghana and the Constitution.
  The Government of Ghana (GoG) recognises customary and traditional laws, and practices in Ghana for water conservation, pollution control, protection of catchment areas and protection of fisheries

---

40 Ansa- Asare O.D. et. al, 1996.
42 Water Sector Strategic Development (WSSD) Plan (2012-2025)
43 Adopted in 1996
44 Adopted in 2007
and existing legal enactments such as the WRC Act and previous ones such as The Rivers Ordinance (Cap 226 of 1903). The WRC Act is the major instrument that governs water use and management in Ghana.

### Institutional framework

Several institutions play various roles in Ghana’s Water and Sanitation Sector. These include Ministries, Agencies, and Local Government institutions. The Ministry of Water Resources, Works and Housing (MWRWH) leads government institution responsible for water. Its main focus is on overall water resources management and drinking water supply, while other sector ministries deal with sector-related water uses such as irrigation under Ministry of Food and Agriculture, fisheries under Ministry of Fisheries, hydro-power under Ministry of Energy and water transport under Ministry of Harbours and Railways. The Water Directorate of the MWRWH is responsible for developing the implementation plan for the whole policy, while sector agencies responsible for specific areas will develop implementation strategies and plans for delivering the relevant policy actions. The Water Resources Commission (WRC) is responsible for the regulation and management of the utilization of water resources and the coordination of policies related to its functions. The Community Water and Sanitation Agency (CWSA) established by Act 564 of 1998, is a facilitating agency under the MWRWH. Its mandate is to facilitate the provision of safe drinking water and related sanitation and hygiene services to rural communities and small towns in Ghana. The Ghana Water Company Limited (GWCL) established by Act 461 of 1993 in replacement of the Ghana Water and Sewerage Corporation (GWSC), is a state-owned company responsible for producing and distributing potable water to the urban population for domestic, public and industrial purposes.

Metropolitan, Municipal and District Assemblies (MMDAs) established under the Local Government Act, 462, are responsible for the preparation of the District Water and Sanitation Plans. This responsibility, however, does not include urban water supply. Development partners (DP) roles extend from financial assistance to technical assistance and, through participation. NGOs, both international and local NGOs and Faith-Based Organizations (FBO) in the WASH Sector in Ghana are indeed helping to accelerate sector growth.

### 2.7.3- Vision, Objectives and Priorities of the policy

Government’s vision of the water sector is “sustainable water and basic sanitation for all by 2025” which in detailed terms means “all people living in Ghana have access to adequate, safe, affordable and reliable basic water service, practise safe sanitation and hygiene and that water resources are sustainably managed”. The goal of the sector is “to contribute to improvement in the living standards of Ghanaians through increased access and use of safe water, sanitation and hygiene and sustainable management of water resources”. This goal is expected to be achieved by 2025 through the implementation of an investment programme from 2012 to 2025 divided into two (2) main packages of i) service delivery and ii) cross cutting issues.

Consistent with the Growth and Poverty Reduction Strategy (GPRS), the overall goal of the National Water Policy (NWP) is to “achieve sustainable development, management and use of Ghana’s water resources to improve health and livelihoods, reduce vulnerability while assuring good governance for present and future generations”.

The objectives of the sector are as follows:

- To achieve universal coverage for water and sanitation services by 2025
- To ensure sustainable financing for investments, operation and maintenance of water services
- To ensure that water sector institutions have the required expertise, information, equipment, logistics and financing to perform their roles efficiently and effectively in a transparent and well-coordinated manner by 2025
- To ensure sustainable harnessing, utilisation and management of water resources by 2025
The Water Sector Strategic Development Plan (WSSDP) sets out the key challenges, strategic priorities and investment requirements to achieve universal coverage and sustainable water and sanitation services as well as an integrated management of Ghana’s water resources.

2.7.4- Success components of good water governance

A. Management mechanisms

- Water resources planning tools

The main tools for water resources planning and development in Ghana are:
- The National Environmental Sanitation Strategy and Action Plan (NESSAP)
- The Water Sector Strategic Development Plan (WSSDP) for the period 2012-2025

The purpose of the Water Sector Strategic Development Plan (WSSDP) is to provide a framework for coordinated implementation of the vision, policy objectives, goals and targets of the water and sanitation sector. It aims to guide the water sector as a whole (government and other sector stakeholders) in the planning, development and management of the nation’s water resources and in the delivery of sustainable water supply and water related sanitation services. The WSSDP articulates the priorities of GoG in the implementation of its National Water Policy – in the medium to long term. It is based on a vision for water resources and water and sanitation service delivery by the year 2025 and contains a detailed set of objectives and prioritised activities with its associated budget for the period 2012-2025.

The WSSDP being the implementation framework for the NWP consists of three separate strategic planning components, namely (i) The national IWRM Plan, (ii) The Urban Water Supply Strategy, and (iii) The Rural Water Supply and Sanitation Strategy. It addresses key program areas for the period 2011-2025, among which the following areas of interventions: (i) Institutional Development and Capacity Building (sector wide), (ii) Water Resources Management, and (iii) Research, Gender, Governance and M&E (sector wide). The National IWRM plan is fully integrated in the WSSDP.

At the end of 2012, the IWRM Plans for the Pra and Tano River basins were finalised and published. The IWRM plan for the Dayi river basin was completed but awaiting publication. Each of the river basin IWRM plans serves as a ‘blue print’ with prioritised list of actions and measures to address basin specific water management issues and to guide the utilisation and improvement of water resources.

- Climate change adaptation in water sector

Climate change adaptation measures are considered in the water sector through the NWP through focus areas as follows:

- The Focus Area (6) – Climate Variability and Change aims: (i) to minimize the effects of climate variability and change; and (ii) to institute measures to mitigate the effects of, and prevent damage caused by extreme hydrological occurrences (floods and droughts).

- The Focus Area (10) – Emergency and Extreme Events aims to effectively mitigate the effects of droughts and floods and other water-related emergencies.

- Monitoring and evaluation (M&E) systems

M&E systems are considered in the water sector through the NWP as follows:

---

45 Adopted in September 2010
46 Adopted in 2011
47 Adopted in December 2012
- The Focus Area (9) – Monitoring and Evaluation (M&E) objective is to ensure that policies are implemented to achieve desired results of improving access and livelihoods.

- The Focus Area (10) – Monitoring and Evaluation objective is to provide evidence-based decision making and investments in community water and sanitation services.

The major internal progress monitoring tools proposed are the quarterly progress reports and annual sector performance reports to be compiled by the Water Directorate and the WRC secretariat and presented at the regular sector working group meetings. Annual review meetings are organised and the participants draw from key sector institutions, Development Partners, collaborating Partner Ministries, and District and Local Government representatives.

To ensure adequate monitoring, evaluation and reporting on progress in the implementation of the WSSDP, a sector monitoring and evaluation plan and strategy together with a management information system will be developed and operationalised. It will harmonise variation in data sources and collection methods across all the sub sectors of the water sector

**Human rights in water supply and water management**

Human rights issues are considered through the NWP as follows:

- The Focus Area (1) – Access to Potable Water; its objective is to provide basic water and sanitation services for communities, mindful of the need to ensure affordability, equity and fairness for the poor and vulnerable.

- The Focus Area (2) – Improving Access to Water; its policy objective is to enhance the management and development of water resources in a manner which, as first priority, safeguards that the entire population, particularly the poor and vulnerable, will have access to adequate and potable water.

- The Focus Area (11) – Pro-poor Issues; its objective in responding to urban-water issues affecting the poor is to ensure improved and sustainable access to water by the poor for their basic needs.

**Learning review and capacity building processes**

The learning review and capacity building processes are reflected in the NWP. The objectives of the Focus Area (7) – Capacity Building and Public Awareness Creation are: (i) to develop and strengthen human resources and institutional and operational capacities; (ii) to promote the generation and wide dissemination of information on IWRM to the general public; (iii) to build capacities of Community Water and Sanitation Agency (CWSA), DAs, and all key actors including District Water and Sanitation Teams (DWSTs), Non-Governmental Organisations (NGOs), Community-Based Organisations (CBOs), Civil Society Organisations (CSOs), Water and Sanitation (WATSANs); and (iv) to enhance the capacity of local private sector to play a greater role in the delivery of goods and services.

There are a number of review processes in the WASH sector. Some of them examine policies, implementation processes, procedures and specific project/programme achievements and challenges. The MWRWH-led sector review for drinking water supply and sanitation, takes place around September or October every year to ensure that its decisions and recommendations are captured in the Government’s Annual Budget.

Existing sector learning platforms such as Mole Conference, National Learning Alliance, water and sanitation sector working group, Ghana Water Forum and key GoG sector leaders retreat will continue to serve as the platform for providing update on the implementation of the WSSDP.

**B. Water governance**

- **Consultation, participation and co-ordination mechanisms**
At the Operational level, MMDAs, River Basin Boards (RBBs), NGOs/CBOs and other civil society groupings, working together within a river basin focused framework, are engaged to take charge and coordinate water resource management and sanitation activities as far as feasible following the principle of “management at lowest appropriate level”.

The Consultation, Participation and Co-ordination mechanisms defined in the National IWRM plan meant to: Strengthen institutional capacity; Intensify education and training at all levels; Set up inter-sectoral collaboration and co-ordination committees at Basin and National levels; Provide logistics for monitoring and enforcement of regulations.

The water resources management mechanisms in terms of institutional arrangements are reflected in the NWP. The objectives of the Focus Area (8) – Good Governance for assuring good governance - are (i) to ensure participation of all stakeholders, including the private sector, local communities, particularly women, in decision-making on water-related issues; and (ii) to ensure good governance and a stable macro-economic situation to provide the enabling environment for sustainable water resources management and development.

**Anti-corruption and integrity processes and measures - Transparent water budget processes**

The Anti-corruption and integrity processes and measures, and transparent water budget processes as well, are addressed in the National IWRM Plan that integrates the following policy objectives regarding anti-corruption, integrity and transparency:

- to enhance public awareness and interest in water resource management issues;
- to improve access to water resources knowledge base to facilitate water resources planning and decision making;
- to ensure gender equity in participation in water and sanitation issues at all levels; and
- to ensure that the water sector operates in a transparent and accountable manner.

The institutions dealing with water resources present their budgets at a Budget hearing organized by the Ministry of Finance with technical support of the National Development Planning Commission.

**Conflicts management**

Neither the Water law, nor the National Water Policy does address matters concerning conflicts management in water sector.

**Benefits of water, energy, and food nexus approach**

The GoG recognizes water, energy and food nexus approach as key for sectoral development. Many water-related sectoral developments provide procedures for managing sectoral development projects including water management within such projects. These sectors are: Water for food production (Irrigated Agriculture, Fisheries and Aquaculture); Water for Energy (Hydro-power); Water for Transport.

Under the NWP, the Focus Area (3) – Water for Food Security policy objectives are (i) to ensure availability of water in sufficient quantity and quality for cultivation of food crops, watering of livestock and sustainable freshwater fisheries to achieve sustainable food security for the country; and (ii) to ensure availability of water in sufficient quantity and quality to support the functions of the eco-systems in providing alternative livelihoods.

**Benefits of transboundary water management**

Ghana is a riparian state that shares a number of basins with neighbouring countries. The Volta River basin is shared with Cote d’Ivoire, Burkina Faso, Togo, Benin and Mali. The Bia is shared with Cote d’Ivoire, while the lower reaches of the Tano River also form part of the boundary with Cote d’Ivoire.

In the case of the Volta River, Ghana is the most downstream country, making the judicious joint management of the resources of paramount importance to Ghana.
Transboundary water management issues are very considered through the NWP. The objectives of the Focus Area (10) – International Cooperation are (i) to promote international cooperation in the management of shared water resources; and (ii) to ensure efficient basin-wide planning and efficient use of water resources as well as promotion of mutually beneficial economic cooperation with riparian countries.

The WRC continued facilitating collaboration and cooperation at the international level to encourage the effective and resourceful exploitation and management of transboundary water resources. The Volta Basin Authority (VBA) seeks to ensure international cooperation for the rational and sustainable management of the water resources of the Volta basin shared by six (6) countries.

2.7.5- Overview of lessons learned

- Some notable programs and actions already in place include the establishment of the Water Resources Commission (WRC), the adoption of the National Water Policy (NWP), the development of five national river basin IWRM plans and four corresponding River Basin Boards (RBBs) between 2003 and 2011, and the active involvement with neighbouring countries on transboundary issues on the Volta Basin. In addition, substantial capacity building has taken place within the key institutions involved in water resources management over the past 15-20 years.

- Ghana’s approach to implementation of IWRM has gone through strengthening basic parts of the central “Enabling Environment” and by initiating the planning from the river basin level, starting with the most “water stressed” basins of the country. At a later stage, the lessons learnt in implementing these basin plans have provided input to further basin planning and to the preparation of the National IWRM Plan which role actually is to fill the institutional gaps after more basic IWRM functions already have been implemented and lessons learned.

- The GoG has develop key policy issues related to the basic principles and challenges confronting water resources development, management and use in the three subsectors that are of most relevance in the Ghanaian context: (i) water resources management, (ii) urban water supply, and (iii) community water and sanitation. For each of them, an institutional body has been created to deal with specific issues.

2.7.6- Practical recommendations

- **Policy framework**
  a) Ghana has made good progress in the policy front but needs to do more on implementation and enforcement. A Water Sector Strategic Development Plan (WSSDP) will be essential to move into the SWAp approach. Work on the National Environmental Sanitation Strategy and Action Plan (NESSAP), which was at the validation stage, was also another Multi-Donor Budget Support (MDBS) trigger for 2009.
  b) The establishment of the Volta Basin Authority (VBA) continues to provide Ghana and the other five riparian countries with a forum to effectively manage the resources of the Volta River System. However, this could only be sustained if GoG makes the conscious effort to make international cooperation and the management of transboundary waters a priority.

- **Legal and regulatory framework**
  a) The laws are scattered in the different institutional mandates and legislative instruments, with different approaches. There are gaps, which include the regulation of services to the rural sector which would also include some form of water quality monitoring etc, to ensure that good drinking water for rural water supply.
  b) Suggested action could be to consolidate laws on water quality protection and management and setting up mechanism for proper coordination and participation of all under the WRC.
  c) However, it should be acknowledged that the WRC continues to face a number of challenges that calls for a fresh future direction and agenda for the WRC towards:
- Strengthening the institution’s capacity and water governance at all levels particularly at the decentralized basin level;
- Promoting more knowledge transfer;
- Mobilizing financial resources through enhanced partnerships; and
- Scaling up good practices.

d) The water sector performance is difficult to assess in a more precise manner, due largely to the fact that there is currently no agreed set of indicators along which to gather data for reporting. Information is based on fragmented sub-sector definitions and standards. Selecting and agreeing on a set of sector wide harmonized and integrated indicators is therefore critical to the contribution that it can make to the progress of the WASH sector.

**Institutional framework**

a) A number of platforms currently exist for sector coordination. These include the Water and Sanitation Sector Group (WSSG), which was established in 2005 in response to the Paris Declaration on Aid Effectiveness. Ghana has made good progress in the policy front but needs to do more on institutional coordination, implementation and enforcement.

b) The Environment Protection Agency (EPA) and Public Utilities Regulatory Commission (PURC) have inspectorate division’s whiles the WRC is yet to establish one. WRC has basin boards and the EPA has regional and some district units. So there is inadequate collaboration among these agencies with respect to enforcement and general lack of willingness to comply with regulations. District units lack resources to be effective. It is recommended to establish effective collaborative mechanism among the agencies and to create awareness on need to comply with regulations and link with these agencies.

**References**


**2.8- KENYA**

**2.8.1- General information**

Kenya is situated in eastern part of the African continent. The country has a total area of 582,646 km² out of which 11,230 km² is covered by water and 571,416 km² by land. Kenya lies on the equator and has a pleasant tropical climate, but there are large regional climatic variations influenced by several factors, including altitude. Most parts of the country experience two seasons: the dry season is from June to October and the wet season is from November to May.

The mean annual rainfall is 621mm, ranging from 250 mm to 750 mm in Arid and Semi-Arid Lands (ASAL) areas to 1,000 mm to 1,690 mm in the coastal belt, the central highlands and in the Lake Victoria Basin. Rainfall in Kenya is extremely variable in space and time and also in intensity. These
variations are between 35 - 70 percent from the mean while rainfall intensity may be as high as 200 mm per hour over a short time period (e.g. 15 minutes).

Kenya’s water resources are distributed over six catchment areas of five drainage basins namely the Lake Victoria which comprises a North catchment and a South catchment, Rift Valley, Athi, Tana, and Ewaso Ng’iro North.

The major water ‘towers’ in Kenya are Mount Kenya, the Aberdares, the Mau Complex, Mount Elgon and Cherangani Hills. Waters from these towers support all the major sectors of the economy and sustain a very rich and world famous biodiversity.

The lakes include Victoria, Jipe, Challa, Nakuru, Baringo, Bogoria and Turkana.

The groundwater resources are spread over three hydrogeological formations, namely, volcanic rocks in the Rift Valley and outside the Rift Valley; Basement rocks, eastern and western quaternary sedimentary rocks. Although groundwater exploitation has considerable potential for boosting water supplies in Kenya, its use is limited by poor water quality, over exploitation, saline intrusion along the coastal areas and inadequate knowledge of the occurrence of the resource.

The population of the country currently estimated at 42.0 million, is expected to reach nearly 60 million in 2030 and 77 million by 205048.

2.8.2- Executive summary of water policy document

- **Water Policy framework**

  The policy framework for water resources management in Kenya consists of a number of documents:

  - The Vision 2030;
  - The National Water Policy of 2012, (NWP);
  - The Water Supply and Sanitation Policy 2010- 2015, (WSSP);

  The new Water Act was promulgated in 2002 and provides a legal basis for the reform of the water sector. An essential aspect of the reform in the water sector outlined in the Water Act 2002 is the separation and decentralisation of roles and responsibilities of water services and water resources management, creation of new institutions and stakeholder participation. The new governance structure was meant to remove bottlenecks in the national water administration and improve efficiency in service delivery.

  The National Water Policy of 2012 (NWP) has been developed in line with the mandate, vision and mission of the ministry responsible for water affairs in Kenya. The Policy aims at moving the sector to the next level of development in order to contribute to the national goals. As stated in the WSSP 2010 – 2015, the critical role of water for national development cannot be over emphasized.

  The National Water Resources Management Strategy (NWRMS) was formulated as a requirement of the Water Act, 2002, to outline the objectives and strategies that address major issues and challenges currently facing Kenya. Both the Water Act and the Strategy fully recognize IWRM as a national priority with obligations for participation and empowerment of stakeholders and decentralized management at the lowest appropriate level.

- **Legal and Regulatory framework**

  The most relevant legal and regulatory instruments for the water sector are as follows:

  - The National Constitution 2010; and

---

The Constitution has placed certain key requirements to be met, as regards water resources management, by the National Government.

Article 42 confers to every person the right to a clean and healthy environment. Article 43(d) confers to every person the right to clean water and safe water in adequate quantities. The management of water resources in the country must therefore be geared towards achieving these constitutional requirements.

The Water Act 2002 came into effect in 2003. It has introduced comprehensive and, in many instances, radical changes to the legal framework for the management of water sector in Kenya. These reforms revolve around the following four themes: (i) the separation of the management of water resources from the provision of water services; (ii) the separation of the policy making from day-to-day administration and regulation; (iii) decentralization of functions to lower-level state organs; and (iv) the involvement of non-governmental entities in both management of water resources and provision of water services.

**Institutional framework**

The Water Act, 2002 provides the legal framework for the implementation of new institutional arrangements based on the principles of the creation of a firewall between the management of water resources and water supply and sanitation services, institutional separation of service provisions from regulation and policy making, and finally, ensuring decentralisation, participation, autonomy, accountability, efficiency and financial and ecological sustainability.

The current water sector institutions as established by the Water Act 2002 are the following. The Ministry of Water and Irrigation (MWI) remains in charge of development of legislation, policy formulation, sector coordination and guidance, and monitoring and evaluation. The Water Resources Management Authority (WRMA) has responsibility for water resources management regulation. The Catchment Area Advisory Committees (CAACs) established by the WRMA provide water resources management advisory functions at water catchment level offices in the regions. Their membership consists of government officials, water users and communities. The Water Services Regulatory Board (WSRB) is a corporate body that is responsible of the regulation of water Supply and sewerage services. Their mandate is to ensure that water is provided for every part of the country. The Water Service Boards (WSBs) are formed, along the seven (7) water basins. Membership of the WSBs includes representatives of the local authorities as directors. The Water Appeal Board (WAB): For the purposes of administering the Water Act of 2002, those parties that may be aggrieved by a decision or order of the authority, minister, or regulatory board over a permit or a license have a right to appeal to the Water Appeal Board (WAB), whose judgment shall be final. The Water Services Providers (WSPs) are in responsible of direct provision of water and sewerage services as agents of the WSBs. The National Water conservation and pipeline Corporation (NWPC) whose mandate is the bulk water supply, dam construction, flood control, land drainage, ground water development and MWI reserve WSP. The Water Resources Users Associations (WRUAs): The government initiated the process of handing over completed supplies to communities. The WRUAs provide a forum for conflict resolution and cooperative management of water resources in designated catchment areas. The WRUAs are responsible for conserving the watershed and advising the CAACs on the available water that may be allocated or re-allocated to other water users.

### 2.8.3- Vision, Objectives and Priorities of the policy

Kenya’s long term vision as enshrined in Vision 2030 document is to transform the country from its current status into a newly industrialising middle income country providing a high quality of life to all its citizens by the year 2030. The overarching vision, therefore, is “A globally Competitive and Prosperous Nation with a high quality of life by the year 2030”.

Kenya is a water scarce country. The country therefore aims to conserve water sources and start new ways of harvesting and using rain and underground water. The 2030 vision for Water and Sanitation is “To ensure that improved water and sanitation are available and accessible to all”. Realising this vision
would entail adoption of strategies in five broad areas namely, Resource Management, Water Storage and Harvesting, Water supply, Sanitation, Irrigation and Drainage.

Kenya’s water management vision for IWRM and Water Efficiency (WE) Plan is: “Water resources protected, harnessed and sustainably managed to ensure availability and accessibility to all water uses for present and future generations”. The mission of the IWRM and WE Plan is “to ensure a harmonized, streamlined and coordinated approach to interventions of the many players and contribute to a sector wide approach, addressing key cross sectoral issues and enhance sector performance”.

The overall goal or long-term objective is “to achieve optimum, long-term, environmentally sustainable social and economic benefits from the nation’s water resources”. The short-term objective is to accelerate action towards addressing key water resources-related challenges in national development in a more effective and comprehensive manner.

2.8.4- Success components of water good governance

A. Management mechanisms

* Water resources planning tools*

The Government of Kenya (GoK) has adopted five management/planning documents that will be used by WRMA as its tools and innovative ways of managing water resources. These are the National Water Resources Management Strategy (NWRMS) for the period 2012-2017; the National Water Quality Management Strategy (NWQMS) 2012 – 2016; the Water Resources Management Rules (WRMR); the Catchment Management Strategies (CMS); and the National Water Master Plan 2030.

The National Water Master Plan (NWMP) 2030 aims:

- to assess and evaluate availability, reliability, quality, and vulnerability of country’s water resources up to around the year 2050 taking into consideration climate change;
- to renew the National Water Master Plan towards the year 2030 (NWMP 2030) taking into consideration climate change;
- to formulate action plan for activities of WRMA Regional offices up to the year 2022 in order to strengthen their capability; and
- to strengthen capacity of water resources management.

* Climate change adaptation in water sector*

Climate change projections to the year 2030 for Kenya indicate increasing temperatures with doubling of CO2 levels from baseline scenarios resulting in a decline in rainfall (between 5 and 15 percent) in the semi-arid areas and an increase (of 5 to 45 percent) in rainfall in the wetter areas (GoK, 2002). The expected scenarios in semi-arid areas will include increased aridity and flash floods and incidence of diseases, food insecurity, and shortage of forage and breakdown of infrastructure. The likely scenarios in the wetter areas include flooding, landslides, erosion, siltation of reservoirs, water-related diseases, food insecurity and destruction of infrastructure.

Medium term flood mitigation programme in areas prone to flooding will be undertaken thus reducing the vulnerability of the community to floods. Adaptation strategies to mitigate adverse climatic impacts in water sector will include:

- Research on climate change and mitigation options;
- Inter-basin water transfers;
- Increased construction of water storage infrastructure/reservoirs;
- Catchment rehabilitation and conservation measures;
- Promoting the use of water harvesting technologies; and
- Building the coping capacities of local communities.
Adaptation measures will require a wide range of adaptation techniques that will be developed and applied to water resources including flood defenses, water efficiency.

- **Monitoring and evaluation (M&E) systems**

The process of monitoring and evaluation of the IWRM/WE Plan will be done at two levels. The first level will be the integration of the integrated water resources management and water efficiency plan monitoring and evaluation into the National Integrated Monitoring and Evaluation System (NIMES) framework. This is the nationwide monitoring and evaluation framework developed to monitor all government plans, policies projects and programmes.

At a lower level, the plan will be monitored and evaluated at the ministerial level through the Annual Water Sector Performance reporting framework that has been developed. This framework includes all the water stakeholders and has been accepted as part of the Sector-Wide Approach (SWAP) process. In addition the IWRM & WE Plan will generate actionable strategic activities that will be implemented and monitored in the performance contracts framework.

- **Human rights in water supply and water management**

Although the Right to water and sanitation is not explicitly provided in the Water Act, the Right to Water and Sanitation has been formally recognised in a number of national water sector policies (National Water Services Strategy, National Water Resources management Strategy, Water Services Regulatory Board (WASREB) tariff guidelines and pro-poor implementation plan).

Kenya is a signatory to the Convention on the Elimination of Discrimination Against Women (CEDAW). Article 14 of CEDAW obliges member states to take into account the particular problems faced by rural women and the important roles they play in managing their families, including the unpaid work that they do. In the wake of water sector reforms, recognition of the role played by women and their inclusion in the water governance institutions is an important step towards highlighting specific gender issues on water and catchment management.

- **Learning review and capacity building processes**

Human resource development lies at the heart of the transformation of Ministry of Water and Irrigation (MWI). The structure of the Ministry has been and is being reviewed and restructured according to the Water Act 2002 to give emphasis to clarity of roles and function of various institutions and managers. The GoK expects that 30% of all employees shall be women.

Critical areas of capacity building needs include water resources assessment, data and information management, monitoring and infrastructure development at national, local and most importantly at the catchment levels. Water resource management will only be successful if the appropriate personnel are deployed not only in MWI but in all relevant organizations and agencies, at all levels. Thus for Catchment Area Advisory Committees (CAACs) to be successful and to implement sustainable and participatory water management strategies, capacity will have to be built in NGOs and CBOs as well as at the technical level.

Key issues and corresponding strategies of learning processes and capacity building measures have been defined in the IWRM/WE Plan.

Knowledge management and capacity development are critical components for the implementation of the reforms of water and sanitation sector. The following tools contribute to capacity development:

- The Kisima Newsletter: A forum for analysis and debate on water and sanitation issues in Kenya
- The Citizens Report Cards (CRC’s) on water and sanitation

**B. Water governance**

- **Consultation, participation and co-ordination mechanisms**
The most important institutional management mechanisms that have been put in place to fulfill the provisions of the Water Act 2002 are as follows:

- The transfer of the function of the management and operation of water services to the Water Services Boards (WSBs).
- Catchment Area Advisory Committees (CAACs)
- Water Services Boards (WSBs)
- Water services providers (WSPs)
- Water Resources Users Association (WRUAs)

However it is difficult for stakeholders in the WSBs and WSPs to hold their directors and top managers to account as they are not shareholders strictly speaking. Special effort should be made to enhance the corporate governance of the new institutions to stem political interference and promote management professionalism.

The inter-ministerial Water Sector Reform Steering Committee (WSRSC) guides and coordinates the water sector reform process, and the Water Sector Reform Secretariat (WSRS) implements the WSRSC’s decisions.

The overall coordination in the water sector between the GoK and other stakeholders including private sector, NGOs, CBOs, etc. take place in the Water Sector Working Group (WSWG), an informal arrangement chaired by the Permanent Secretary, MWI, that has membership from all water sector institutions, ministries with links to water management and the NGOs active in the sector.

Coordination between the departments and parastatals of the MWI takes place through the Water and Sanitation Technical Group (WSTG) coordination meetings. The WSTG is also used to coordinate funding and approach of the donor agencies.

There is also need for a forum for coordination between different departments and donors supporting some of the sub-sectors. The MWI hosts the water sector consultative meetings. The meetings target a wide range of stakeholders from the sector and allied areas.

The need for stakeholder coordination in the water and sanitation sector has been identified and a number of mechanisms have already been put on the ground to facilitate the process. The Government and NGOs and other stakeholders form learning networks where they exchange information and improve coordination.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

The GoK established in 2003 the Kenya Anti-Corruption Commission (KACC), a public body, under the Anti-Corruption and Economic Crimes Act (ACECA). The country’s Parliament disbanded KACC on 24th August 2011, in line with the requirements for change as stipulated in the new Constitutional dispensation. The Ethics and Anti-Corruption Commission (EACC) was established on 5th September 2011, after the Ethics and Anti-Corruption Act on 29th August 2011 was signed.

In 2011, the KACC undertook a study on the topic of corruption in the water and sanitation sector in Kenya. The general objective of the study was to explore the magnitude and impact of corruption in Kenya’s water and sanitation sector. The highlights of the findings of the study show that the root causes of corruption in water sector are policies inadequacies (enormous procurements malpractices and misappropriation of funds); legal inadequacies (duplication of duties between Water Resources Management Authority (WRMA), National Environment Management Authority (NEMA), and Kenya Forestry Service (KFS) in conservation of water catchment areas); and institutional inadequacies (the MWI has not adequately empowered institutions formed under the Water Act

---

49 KACC, 2011 Sectoral perspectives of corruption in Kenya, the case of water sector and sanitation in Kenya
2002 and it still controls budget and staff of different institutions in addition to ownership of certain assets in the supply of water).

The GoK introduced performance contracting in the public service as one of the reforms aim at increasing productivity in the public sector and enhancing service delivery and restoring transparency and accountability. Following the inclusion of the “Corruption Eradication” indicator in the performance contracts, all public institutions are expected to mainstream anti-corruption strategies in their management systems.

**Conflicts management**

The Water Act, 2002 provided mechanisms for complaints, public notification and consultation (Section 107). Section 15 of the Act empowered the Water Resources Management Authority (WRMA) to formulate Catchment Management Strategies (CMS) for the management, utilization, development, conservation, protection and control of water resources. This was to be done in consultation with local stakeholders gathered around an entity known as the “Water Resources Users’ Association (WRUA). The (WRUAs) are being established to provide a forum for cooperative management of water resources and conflict resolution.

The intention of WRUAs to act to resolve conflict over water is apparent in the Water Act which provides specifically that “… the catchment management strategy shall encourage and facilitate the establishment and operation of water resources users associations as fora for conflict resolution”. In addition, a constitution often envisages that the Association it governs will “provide a forum to discuss, prevent and resolve water use conflicts”.

Without the forum there is nowhere for grievances to be aired, anger vented and feelings made known. There is then a very real risk of problems escalating into disputes and this is where the existence of a WRUA is so crucial. The most obvious conflicts it helps prevent are those, often much publicised ones, between pastoral users lower down a water course, and agricultural or horticultural extractors in the upper reaches. Being able to bring all users together, and make them more aware of each other’s problems and perspectives is one of the most vital roles of any WRUA.

**Benefits of water, energy, and food nexus approach**

To effectively meet the growing demand for water, food and energy, there is need for well-coordinated and timely management of the three resources and any other interrelated resource or aspect. It is imperative that there is comprehensive understanding of the three resources, all factors contributing to their enhancement, all risks that challenge their sustainable supply and how these risks are being responded to and managed nationally and globally. This requires an integrated effort for the three sectors in terms of strategy and policy planning and implementation.

Implementing a nexus approach must be guided by overarching principles, namely:

- **Putting people and their basic human rights at the centre of the nexus.**
- **Creating public awareness and the political will to establish effective legislative frameworks, promoting good governance, greatly reducing and eventually eliminating corruption.**
- **Involving local communities, including indigenous and women’s groups fully and effectively in the planning and implementation processes related to water, energy and food nexus for local ownership and commitment.**

**Benefits of transboundary water management**

Kenya shares about 50% of her water resources (rivers, lakes, and aquifers) with her immediate neighbouring countries. Some of these river systems are tributaries of the Nile River Basin through Lake Victoria Basin and therefore their development will be hastened by the conclusion of negotiations of the Nile Basin Cooperative Agreement. Amongst the lakes only Lake Victoria has an agreement (Lake Victoria Authority) (LVA) and development plan while the remaining lakes are still under study and consultation. Shared aquifers include the expansive Merti aquifer shared with
Somalia, and groundwater system within the Rift Valley and Mount Kilimanjaro system; the latter are less studied and their potential not known. Several initiatives, however, are already being taken to address the management of transboundary aquifers.

Kenya will actively support the development of a system of cooperative framework and protocols to guide the management of shared river systems on an equitable and sustainable basis. Until such an agreement or system exists, Kenya will continue to promote regional and bilateral co-operation in shared river and lake systems and Ministry of Water and Irrigation (MWI) has been empowered, in collaboration with Ministries of Foreign Affairs and Internal Security, to conduct these consultations. Some of these collaborative studies and interventions include the Nile Basin Initiative (NBI), Lake Victoria Basin Commission (LVBC).

The GoK is currently formulating a National Policy on Transboundary waters.

2.8.5- Overview of lessons learned

- A new legislation, Water Act 2002, was enacted and came into operation on 18th March 2003. This provided an enabling legislation with clear roles and responsibilities of the key water institutions and the separation of water resource management (WRM) from water supply services (WSS) delivery.

- Ongoing preparation of complementary policy reforms include groundwater policy, water supply and water resources management strategies as well as land use policies which will be harmonized within the present Plan. These are positive developments in a sector with a multiplicity of players and numerous local, regional and national planning processes such is the case in Kenya.

- Most of the institutions provided for in the Water Act 2002 were established in 2004 and are fully operational and implementing their mandates. Restructuring of the MWI and National Water Conservation and Pipeline Corporation (NWPC) has been documented severally but not yet fully implemented. Each institution and sub-sector seems to be developing at its own pace, without an overall sector strategic allocation of resources to guide their development in line with their mutually supportive and complementary roles towards sector outcomes.

- The regulator under Water Act 2002 is vested only with power to regulate Water Services Boards and Water Service Providers. The Water Act is uncertain on how to deal with crosscutting relationships and overriding issues that influence the water sector regulation. Hence, the regulator has a challenge to forge collaborations and consultations in these and other water sector development issues among the relevant water institutions and stakeholders.

- To date, the transfer of water supply and sanitation assets from the MWI, National Water Conservation and Pipeline Corporation (NWPC) and Local Authorities to the new Water Services Boards (WSB) has still not been completed.

- The ongoing reforms in the sector have seen enhancement of public participation in all areas of water affairs. With the new constitutional order such participation in development and implementation of sector projects will have to increase, as the right to be informed on progress is to be institutionalised. This will also help to defuse water conflicts timely without violence and create new opportunities for better services to meet the right to water. Public participation can be improved on all levels such as in the representation of boards of WSIs, in decision making processes, dialogue platforms and information sharing among others.

2.8.6- Practical recommendations

- **Policy framework**

  - The Water Sector Strategic Plan (2009-2014) is envisaged to be the Apex body which brings together all water sector players. The current studies on the alignment of water sector institutions to the national Constitution have not taken into account of the efforts towards that end. It is recommended that the learning lessons of the strategic plan are also incorporated in the efforts.
of aligning to the new constitution and thereafter undertake the review of the National Water Policy.

d) The following challenges need to be adequately addressed so as to improve the implementation of the water sector reforms:

   • Continued mainstreaming of Human Rights to Water and Sanitation;
   • Critical capacity lacking in areas of governance, human rights and commercial orientation and regulation;
   • Inadequate communication and information management systems;
   • Regulation of small scale independent service providers;
   • Sector monitoring and evaluation still lacking; and
   • Weak complaint and feedback mechanism.

腿部 and regulatory framework

b) The Water Act failed to harmonize its provisions with other statutes affecting the provision of water services. This has led to inter-agency conflicts e.g. between WRMA and NEMA, WRMA and KFS, WSPs and LAs etc. Therefore there is need to ensure that the amendments to the Act in line with the requirements of the national Constitution should resolve these conflicts.

Institutional framework

b) Effective water resources management needs to be cross-sectoral: The MWI needs to develop a coordinated approach to water resources management across all the relevant sectors and communities at both basin and local levels.

c) It is difficult for stakeholders in the WSBs and WSPs to hold their directors and top managers to account as they are not shareholders strictly speaking. Special effort should be made to enhance the corporate governance of the new institutions to stem political interference and promote management professionalism.

References

13) Water Resources Management Authority (WRMA) (2014): Managing water resources using NWRMS and NWMP 2030 as tools and innovative ways to meet the vision 2030 water demands, IEK Conference
2.9- SENEGAL

2.9.1- General information

Senegal forms the most advanced western part in Africa. It is located south of the lower reaches of the Senegal River loop that gave it its name. Senegal is a Sahelian country of West Africa located along the Atlantic Ocean covering an area of 196,722 km².

The climate is tropical with fairly high temperatures. In Senegal, there are four types of well-marked climates. (i) The Mauritanian climate with scarce rains, fresh, moist trade winds from December to May; (ii) The Sudanese climate with scarce rains (iii) The senegalese climate has abundant rains, fresh trade winds; (iv) The Guinean climate has more abundant rains, frequent sea breezes and more constant high temperatures. There are two seasons: a rainy season from June to October; a dry season, fresher, from October to June. Rains vary from 250 mm in the north to 1,500 mm in the south.

Senegal hydrographic network is tributary on the Senegal and Gambia basin Senegal Rivers which water come from the Fouta Djallon located in the Republic of Guinea. The major rivers include (1) Senegal has a length of 1,700 km with a basin area of 350,000 km²; (2) Sine and the Saloum are inlets, penetrating deep in land. The tide is felt up to 130 kilometers offshore; (3) Gambia, 1,150 kilometers long, and its basin covers 80,000 km²; (4) Casamance, made of many streams and effluents, is a large marine estuary to Sedhiou; it has a length of 300 km with a basin area of 37,000 km²; (5) Kayanga/Geba and Anambé with a basin area of 1,100 Km².

The coastal rivers are dry for many months: the Pantior, the Somone, the Balling ...The lakes, numerous enough, tend to dry out: Guiers Bolongs, Niayes, Tamna, Retba ... Surface waters are becoming scarcer with the advancing desert and too dry winters of recent years. The sources are becoming deeper, forcing to regroove wells or drill to great depths to find drinking water aquifers.

Groundwater is represented by the four groups of aquifers: the superficial aquifer system, the intermediate system, the deep aquifer and the base aquifer system. They allow meeting water needs where surface water is lacking (quality and quantity). The aquifer recharge is provided by rainwater.

Senegal water resource potential (surface and groundwater) is considerable. But water resources are highly dependent on rainfall conditions, so precarious. They are poorly distributed, because too far from major consumption centers and development poles, or are difficult to mobilize to meet the demand of drinking water to populations, and other users (industry, agriculture, mining, etc.) because of related costs.

Senegal's population is estimated at 13.5 million in 2013 with an annual growth rate of 2.34% (General Census of Population and Housing, Agriculture and Livestock 2013). The average density is 69 inhabitants / km².

2.9.2- Executive summary of water policy document

- **Water Policy framework**

  In Senegal, the water and sanitation sector Policy documents are:
  - The Water, Life and Environment Vision (EVE)\(^{50}\)
  - The Letter of Sectorial Policy for hydraulic and sanitation in urban and rural\(^{51}\) environment
  - The Strategy for Accelerated Growth (SCA)\(^{52}\) adopted in 2008

---

\(^{50}\) The EVE Vision has been adopted in 2002

\(^{51}\) Adopted on July 15,2005

\(^{52}\) Adopted in 2008

\(^{53}\) Adopted in 2008

---
The Potable Water and Sanitation Program of the Millennium (PEPAM)\textsuperscript{54} 
- The Water , Life and Environment Vision (EVE)\textsuperscript{55} 
- The Letter of Sectorial Policy for hydraulic and sanitation in urban and rural\textsuperscript{56} environment 
- The Strategy for Accelerated Growth (SCA)\textsuperscript{57}

Senegal does not have a national policy on water resource management. Sectoral policy for hydraulic and sanitation is the basic instrument for the implementation of the "potable water and sanitation Program of the Millennium" (PEPAM) designed to contribute to the achievement of Senegal objectives of poverty reduction that the international community has set for 2015. This policy is oriented exclusively on the sub-sectors of supply in drinking water and sanitation. The objectives are to ensure availability and quality to support the increase in water service by 2015, as envisaged in the PEPAM.

**Legal and Regulatory framework**

The legal and regulatory framework for water resources management includes the following key texts:

- The Constitution\textsuperscript{58};
- Law on Senegal Water Code\textsuperscript{59}
- Law on the organization of the public service of drinking water and public sanitation for domestic wastewater\textsuperscript{60}
- Law on Sanitation\textsuperscript{61}

The State guarantees to all citizens, including the right to health and the right to a healthy environment (Art. 8 of the Constitution). The question of water resources is taken in the broad sense through the environmental dimension of sustainable development within the Economic, Social and Environmental Council (EESC) (Art. 87-1 of the Constitution)

Adopted in 1981, well before Rio 1992\textsuperscript{62} the law relating to the Senegal water code does not incorporate the concepts and principles of IWRM. Furthermore, the sectoral approach focuses on the priority resolution of drinking water problems results in little attention received by other water-related sectors.

The Water Code specifies the regime and conditions of water use (Title I), water quality protection (Title II), the various uses of water and prioritization of use (Title III), the restrictions in the private domain (Title IV), offenses and penalties (Title V), transitional provisions (Title VI).

The conclusion that emerges is that the Water Code does not address several aspects such as water resource management (planning, institutional, financing framework), transboundary water. It does not indicate that the institutional framework for water resource management is based on the principle of separation of water resources management and use functions. In short, the current Code of water is not based on the IWRM approach.

**Institutional framework**

Although the Water Code does not formally integrate the concepts and principles of IWRM, drinking water and sanitation sub-sector is open to a plurality of public and private actors. The main actors involved in this sub-sector are the State and its agencies, local authorities, management and delegated users.

---

\textsuperscript{54} Adopted in 2005 
\textsuperscript{55} The EVE Vision has been adopted in 2002 
\textsuperscript{56} Adopted on July 15,2005 
\textsuperscript{57} Adopted in 2008 
\textsuperscript{58} Law N° 1/010 of January 21, 2001 promulgating the Constitution of the Republic of Senegal 
\textsuperscript{59} Law N° 81-13 of February 16, 1981 on Water Code 
\textsuperscript{60} Law N° 2008-59 of September 24, 2008 
\textsuperscript{61} Law N° 2009-24 of July 08, 2009 
\textsuperscript{62} International Conference on Environment and Sustainable Development held in 1992 in Rio de Janeiro, Brazil
By adopting IWRM as an approach to water resource management, Senegal is committed to implement the principle of water sector actor participation. According to this principle, "water development and management must be based on a participatory approach, integrating users, planners and policy makers at all levels." Also, Senegal through IWRM is committed to adapt the inadequate current policies, and integrate neglected sub-sectors in the field. In doing so, actors involved in water resource management will be the State and its agencies, parastatal enterprises, local authorities, civil society, NGOs (local and international) and user associations, the private, development partners.

The Minister of Water and Sanitation (MHA) is responsible for developing and implementing the policy, strategies, action plans and programs for water resource management and sanitation. Several other ministries are concerned in one way or another in the water sector.

Local communities constitute the institutional framework for citizen participation in the management of public affairs. They are freely administered by elected assemblies (Art. 102 of the Constitution).

The State shall ensure the administration of water resources by making use of several variants of organization modes: centralized management (CSE, CTE, ministries, operational directorates and central services), deconcentrated management (decentralized services in connection with civil society organizations), decentralized management (transfer of competence to local communities) and conventional management (international Cooperation).

2.9.3- Vision, Objectives and Priorities of the policy

In line with the goal of sustainable use of water resources, Senegal has developed in 2002 a Water, Life and Environment Vision (EVE), which advocates for committed and resilient human societies in a healthy environment where resources are better managed and the regulating object at all levels.

EVE Vision is accompanied by an action plan that focuses on the following major points: (i) Knowledge of the resource and use of water; (ii) Harmonization of the legal and regulatory framework; (iii) institutional and organizational perspective of water management; (iv) training and "Information-Education-Communication" in the field of water; (v) Financial means.

The preamble to Law 81-13 states that water is owned by the State, which manages it for the public well-being. In so doing, the State must allocate water equitably among the various needs of society, guided by the public interest. The top priority for the State is providing water for human consumption (Law 81-13, art. 75).

The next priority is water for growing food. This is followed by water for agricultural, reforestation and agro-industrial purposes other than growing food, energy, mining, navigation, and tourism (Law 81-13, art. 76). In case of conflict between various uses, the priority should be determined by the economic needs of the local area (Law 81-13, art. 76), subject to change in case of extraordinary events, such as drought or flood (Law 81-13, art. 77).

2.9.4- Success components of water good governance

A. Management mechanisms

- **Water resources planning tools**

  The water resources management tools include the following:

  - The Action Plan for the Integrated Water Resource Management of Senegal (IWRM)\(^\text{63}\)
  - The Potable Water and Sanitation Program of the Millennium (PEPAM)\(^\text{64}\)

\(^{63}\) Adopted in 2008  
\(^{64}\) Adopted in 2005
The Water Code and existing legislative texts regarding water have a low impact on water resource management because of their lack of enforcement on one hand and their inadequacy in relation to IWRM on the other hand. Indeed, the Water Code of 1981 predates the international conferences devoted to the principles of IWRM. The sectoral policy of drinking water and sanitation dates from 2005. The law on the organization of the public service of drinking water and public sanitation of domestic wastewater dates from 2008. There is therefore today no political, legislative and institutional framework for water resources management based on the concepts and principles of IWRM.

It was from 2004 that Senegal is engaged in the development of a Water Resources Management Action Plan (IWRM) in order to "contribute to the implementation of an integrated management of water resources adapted to the national context, complying with guidelines set by the Senegalese Government for reducing poverty, achieving the Millennium Development Goals (MDGs) and complying with the principles internationally recognized for sustainable and environmentally sound management of water resources. "In this perspective, the overall strategy adopted is to "reinforce management means and reform the institutional, legal, organizational frameworks to improve protection, technical, financial and economic management of water resources by involving all actors ".

PAGIRE include three (3) axes that contribute to the global strategy. In this perspective, priorities identified for the 2008-2015 period are: (i) improving knowledge and means for water resource management, (ii) creating an enabling environment for the implementation of the IWRM by political, legislative and institutional reforms, (iii) improving dialogue, communication and sensitization in the field of water resources management, (iv) building human and technical capacities of services responsible of water resource management.

It is through the Priority Action Plan of IWRMP (IWRM-PAP, 2008-2015) that Senegal has undertaken the necessary reforms to comply with the framework of water resources management to IWRM.

- **Climate change adaptation in water sector**

Despite the relatively large potential in water resources (about 35 billion m³/year), the water resources sector is ranked among the most sensitive sectors to climate change. Results of recent studies are included in the National Action Plan for Adaptation (NAPA, 2006).

Also, through the improvement of the performance of protection systems and managements of risks associated with water (Measure 1.4 IWRM Action Plan), Senegal will seek to limit the impacts of climate variability on water and its uses. For this, it is planned (i) to assess the impacts of climate change on water resources and their uses, (ii) to develop appropriate strategies to minimize the impacts of climate change on water resources and their uses, (iii) to enhance the skills and means of support consultancy services for the evaluation and monitoring of climate impacts on water resources and their uses.

- **Monitoring and Evaluation (M&E) systems**

There are no M&E systems and performance indicators to monitor and evaluate the implementation of the policy. Pending the adoption of a new water policy, the IWRM implementation is ensured by the Permanent Secretariat (PS-IWRM Action Plan) which main mission is "to coordinate all the actions comprising the IWRM Action Plan so as to program them, monitor their implementation, assess the results and propose additional actions if needed. " To this end, monitoring and evaluation of IWRM Action Plan consists of (i) mechanisms for monitoring and reporting (periodic reports); (ii) evaluation mechanisms (mid-term and final term), (iii) risk analysis (political, economic, financial, environmental). The logical framework of IWRM Action Plan comes with clear indicators, both for each strategic line and each expected result. With good monitoring and objective assessment, the implementation of IWRM Action Plan will generate useful lessons that can be capitalized.

- **Human rights in water supply and water management**
If the right to water is recognized more or less formally as regards drinking water and sanitation (Water Code), this is not generally the case for users of other sub-sectors. In reality, there is little specific reference on the "right to water".

Any proposed water user requires authorization from the Minister (Law 81-13, arts. 2 & 8). This means that water usage requires a decree issued by the Minister granting rights to individuals or entities to use water according to the terms of the decree. This decree, which can be in the form of a concession, fixes the general rules for water uses. Some water uses require a preliminary authorization, except in the case of uses that utilize less than 5 m³/hour (Law 81-13, art. 42).

- **Learning review and capacity building processes**

Given the many challenges facing all actors in the water sector, capacity to understand ins and outs of these challenges should be developed. Skills should be built enabling them to intervene and contribute to a greater control of the proposed reform. All actors should gain a more detailed vision of the potential of water resources, impacts of uses, existing regulatory frameworks, and defined policies and longer-term development issues (Measure 3.1.). Young people will benefit in particular from actions to reinforce awareness on water through improved education programs (Measure 3.2.).

Monitoring - evaluation of the implementation of the IWRM Action Plan also offers a learning opportunity. The IWRM Action Plan attaches high priority to learning processes and capacity building.

**B. Water governance**

- **Consultation, participation and co-ordination mechanisms**

The institutional framework for water management does not define clearly separation of the different functions of coordination, consultation and regulation from those of the use of water resources. Moreover, this framework is not conducive to dialogue and the involvement of actors and users (especially at the decentralized level) in decision-making on policy development and management of water. The institutional framework must be rethought taking into account the principles of IWRM and made operational. In this respect, the study on institutional and organizational reform is a priority.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

No specific provision of anti-corruption exists specifically for the water sector. However, the state adopted in 2000 a charter of ethics and transparency in public procurements. To curb corruption structures (General Inspection of the State Audit Office ...) have been put in place. The National Strategy for Gender Equity and Equality (SNEEG) also contributes to the fight against corruption.

The objectives of the charter of transparency and ethics are (i) to ensure transparency in public procurement, (ii) to ensure the effectiveness of procedures with the recruitment of professionals trained in modern techniques of procurement contract and impregnated with public procurements regulation, (iii) establish an efficient control and apply sanctions against the Administration agents and / or economic operators responsible for errors in procurement contract and execution.

- **Conflicts management**

The consecration of IWRM also requires the development of arbitration and management mechanisms (prevention and resolution) of conflicts between sectors, between users. Several actions are planned to reinforce the conflict management system. But at this stage it was not possible to assess the implementation of these activities, or to know if the issue of water-related conflicts has received an appropriate response.

The implementation of the Water Police and the creation of the Office of Lake Guiers (OLAG, any action oriented towards the reduction of water-related conflicts have been carried out.
Benefits of water, energy, and food nexus approach

The water sector is an indispensable area of support to the sectors of production and economic and social development. The search for a better integration of water, energy and food production is not addressed in order to advocate the Nexus approach in the development of sectoral policies.

However this approach shines in the development and implementation of IWRM charter which aims to take into account IWRM in programs, plans and projects at different levels (national, regional and local). This operational strategy is a means of promoting sectoral integration and has the advantage of facilitating the consideration of IWRM in the development of productive sectors.

In line with a goal of sustainable use of water resources, Senegal developed in 2002 a Water, Life and Environment Vision (EVE), which advocates for committed and resilient human societies in a healthy environment where resources are better managed and the object of regulation at all levels.

Benefits of transboundary water management

Regarding shared waterways, Senegal is a member of OMVS and OMVG which have specific legal status. OMVS is an exemplary sub-regional integration framework for IWRM. Through the Water Charter and other related programs (IWRM Plan, Observatory, etc.), OMVS is a field of experimentation of IWRM in which Senegal can learn a lot.

The establishment of an integrated information and knowledge system on water remains one of the key actions to be developed. It will be based in part on the establishment of a data exchange mechanism between the transboundary basin organizations (OMVS and OMVG).

As a member of transboundary basin organizations (OMVS, OMVG), Senegal intends to promote IWRM in these sub-regional coordination and consultation bodies. Developed or ongoing programs are opportunities from which IWRM Action Plan will benefit in the field of information management on water resources (Environmental Observatory), consultation for user involvement (Permanent Water Commission (PWC), National Coordination Committee (NCC), Local Coordination Committee (LCC), and the management of environmental risks (strategic action plan under development).

The benefits or advantages that Senegal draws from its participation in regional cooperation on shared water resources of the Senegal and Gambia rivers are (i) the establishment of an integrated information and knowledge system on water; (ii) the funding gap of the water sector that can be absorbed in part by the major programs of OMVS and OMVG through the development of partnerships to facilitate the mobilization of funds from international cooperation.

2.9.5- Overview of lessons learned

- The lack of clarity and precision of the regulation of water resources management by local communities is objectively a limitation for full involvement of stakeholders at local level in water resource management.
- After joining the concepts and principles of IWRM, and making decision to its application as a new approach to concerted and sustainable management of water resources, Senegal has engaged on the way of IWRM by the development and implementation of an IWRM Action Plan (IWRM). Without a national policy and without a water resource law, formally based on the IWRM approach, it was possible, with a strong political will, to initiate in an objective and participatory way the transition towards the IWRM approach.
- The existing legislative texts on water have a low impact on water resource management because of their lack of enforcement on the one hand, and their inadequacy in relation to IWRM on the other hand. Furthermore, the sectoral approach focused on the priority resolution of the problems of drinking water results in Senegal giving priority to drinking water and sanitation sub-sector, while other water sub -sectors have received little attention.
The lack of clarity and precision on the regulation of water resource management by local communities is an objective limit to implementing the principle of participation of all actors in water resource management.

2.9.6- Practical recommendations

- **Water Policy framework**
  
a) There are no M & E systems and performance indicators to monitor and evaluate the implementation of water policies. Efforts must continue on the basis of guidelines of the Pan-African mechanism for M&E and reporting of the implementation of the Sharm el Sheikh commitments on water and sanitation.

b) The year 2015 marks the end of IWRM-PAP without structural reforms (political, legislative and institutional) of water resource management framework completed. Efforts should continue as part of a second action plan for IWRM. The year 2015 must be utilized to develop this plan. Besides the integration of concepts and principles of IWRM, the new texts will adequately address aspects such as human rights and access to water, fighting corruption, integrity, transparency, mechanisms for participation and decision making, conflict management, cooperation on shared waters.

c) Senegal does not have a framework policy on water resources development and management. The actual policy is oriented exclusively on the sub-sectors of drinking water supply and sanitation. It is recommended to develop a national water policy that will set a general approach and be a policy framework which will constitute the basis for the development of sub sectoral policies as regards water.

- **Legal and regulatory framework**
  
a) The existing legislative texts on water have a low impact on water resource management because of their lack of enforcement on the one hand and their inadequacy in relation to IWRM on the other hand. It is necessary to continue efforts of text adaptation and ensure their implementation. Also, the main priority of the legislative and regulatory framework is to revise the IWRM and operationalize legislative and regulation texts (Measure 2.1 of IWRM Plan. In fact, to devote IWRM in Senegal, legal instruments on water must logically be reviewed to incorporate IWRM principles. The revision of Water Code is underway to better reflect the concepts and principles of IWRM.

b) The creation of synergies between actions and programs is necessary to bring stakeholders to take into account the principles of IWRM in global strategies, policies and development programs. The establishment of effective coordination mechanisms is a first response to this challenge. However, this measure will produce its full effect with the adoption and effective implementation of an IWRM Charter to consider IWRM in programs, plans and projects at different levels (national, regional and local).

- **Institutional framework**
  
a) The institutional framework for water management does not clearly define the separation of the different functions of coordination, consultation and regulation those of use of water resources. Moreover, this framework is not conducive to dialogue and the involvement of actors and users (especially at the decentralized level) in decision-making concerning policy development and management of water. The institutional framework must be rethought taking into account the principles of IWRM and made operational. In this respect, the study on institutional and organizational reform is a priority.

b) Coordination of action by different structures (the ministry responsible for water), other ministries or institutions is a major constraint for the implementation of IWRM. The causes of the failure of existing mechanisms must be determined. The establishment and operation of effective and balanced coordination mechanisms in their composition should improve the coordination of action in the field of water and sanitation.
c) An axis for reinforcing actors’ skills on key issues of water management will enable those who will invest in these local and regional consultation frameworks to better understand the challenges and define relevant actions to solve them. All actors should gain a more detailed vision of the potential of water resources, impacts of uses, existing regulatory frameworks, and defined policies as well as longer-term development issues.

References

3) Republic of Senegal (2005): Sectorial Policy Letter for hydraulic and sanitation in urban and rural areas
7) Government of Senegal (2010: Millennium Potable Water and sanitation Program (MRE)
8) Republic of Senegal: Charter of transparency and ethics in public procurement

2.10- SOUTH AFRICA

2.10.1- General information

South Africa is located on the southern tip of Africa with a surface area covering 1 219 602 km$^2$, and a long coastline stretching more than 2,500 km from the desert border with Namibia on the Atlantic coast, southwards around the tip of Africa, then north to the border with subtropical Mozambique on the Indian Ocean.

Almost all of the country lies below the Tropic of Capricorn, and the country is geographically composed of three primary regions: an expansive central plateau, a nearly continuous escarpment of mountain ranges that ring the plateau on the west, south, and east, and a narrow strip of low-lying land along the coast.

Although the country is classified as semi-arid, South Africa has considerable variation in climate as well as topography. The great inland Karoo plateau, where rocky hills and mountains rise from sparsely populated scrubland, is very dry, and gets more so as it shades in the north-west towards the Kalahari Desert. Extremely hot in summer, it can be icy in winter.

In South Africa, water is a scarce commodity with an average annual rainfall of approximately 464 mm compared with a world average of 860 mm. It also has one of the lowest Mean Annual Precipitation to Run-off conversion ratios in the world. Water in South Africa is also unevenly distributed geographically and socio-politically which further exacerbates its scarcity. South Africa is considered a water scarce country with around 1000 m$^3$ water per person per annum. The rainfall is strongly seasonal, varies significantly across the country, and is highly variable from year to year. More than 60% of the river flow arises from 20% of the country along the eastern side. The north western portion of the country is semi-arid to arid and annual potential evapotranspiration in this region may exceed annual precipitation by a ratio of up to 20:1$^{65}$.

The major rivers of South Africa are national and international rivers as follows:

- **National rivers:**
  - The Vaal River with a length of 1210 km and a drainage area of 196438 km$^2$ flows in the Provinces of Free State, Mpumalanga, Gauteng, Northern Cape

---

$^{65}$ Assessment of the SADC regional water policy – South Africa country report, SADC, August 2013
- The Tugela River with a length of 502 km and a drainage area of 29000 km² flows in the Province of KwaZulu-Natal
- The Gamtos River with a length of 645 km and a drainage area of 34635 km² flows in the Province Eastern Cap
- The Great Kei River with a length of 520 km and a drainage area of 12384 km² flows in the Province of Western Cape
- The Great Fish River with a length of 692 km and a drainage area of 30800 km² flows in the Province of Eastern Cape

**International rivers shared with neighbouring countries:**
- The Orange River with a length of 2,200 km and a drainage area of 973,000 km² flows in the Provinces of Free State and Northern Cape and shared with Namibia and Lesotho
- The Limpopo River with a length of 1,800 km and a drainage area of 415,000 km² flows in the Province of Limpopo and shared with Mozambique, Botswana and Zimbabwe
- The Olifants River with a length of 560 km and a drainage area of 54,570 km² flows in the Provinces of Limpopo and Mpumalanga and shared with Mozambique
- The Komati River with a length of 480 km and a drainage area of 50,000 km² flows in the Province of Mpumalanga and shared with Mozambique and Swaziland
- The Molopo River with a length of 1,000 km and a drainage area 367,201 km² flows in the Province of North West and shared with Botswana and Namibia

Groundwater, despite its relatively small contribution to the total water supply in South Africa (~13%), represents an important strategic water resource. Owing to the lack of perennial streams in the semi-desert to desert parts, two-thirds of South Africa’s surface area is largely dependent on groundwater. In these water-scares areas, groundwater is more valuable than gold. Although irrigation is the largest user of groundwater, groundwater provides the water supply to more than 300 towns and smaller settlements.

In over about 90% of the surface of South Africa, groundwater occurs in hard rock that is rocks with no pore spaces. Here it is contained in faults, fractures and joints and in dolomite and limestone, in dissolved openings called fissures.

Hard rock aquifers are known as secondary aquifers because the groundwater occurs in openings which were formed after the rock was formed. Over the remainder of the country groundwater occurs in primary aquifers. These comprise porous sediments and soils where groundwater is contained in the spaces between sand grains. Primary aquifers are found in river (alluvial) sediments, in coastal sand deposits, and the Kalahari deposits.

Statistics South Africa (the national statistical agency of South Africa) estimates the country's mid-year 2013 total population to be 52,981,991, which takes into account the findings of South Africa's 2011 census.

### 2.10.2- Executive summary of water policy document

#### Water Policy framework

The policy framework for water resources management in South Africa is composed of:

- The White Paper on a National Water Policy
- The Free Basic Water Policy (2001)
- The National Water Resources Strategy II (NWRS-2)
- The National Water Conservation and Water Demand Management (NWC&WDM) Strategy

---

66 Index mundi: South Africa Demographics Profile 2014
67 Adopted in 1997
68 The NWRS-1 was adopted in 2004, the current one, the NWRS-2 was adopted in 2013
69 The WC/WDM was finalised in early 2004.
The White Paper on a National Water Policy (NWP) for South Africa provides the policy framework for water resources management, and is based on the principles of IWRM.

The National Water Resources Strategy II (NWRS-2) expands on the IWRM approach, adopting a developmental water management approach, which aligns the water management approach more strongly to the direction and approach of the developmental state, and the direction given through the Industrial Policy Action Plan (IPAP), the Comprehensive Rural Development Strategy (CRDS) and the National Development Plan (NDP). In this way, water management is seen as a tool to support the objectives of the developmental state, not as an end in itself.

The NWP adopted by the Cabinet in 1997 states three fundamental objectives for managing South Africa’s water resources, which are:

- to achieve equitable access to water,
- to achieve sustainable use of water, and
- to achieve efficient and effective water use.

The National Water Act (NWA) provides a two-tier approach to the development of strategies to facilitate the management of water resources. At the national level, the Act provides for the Minister to progressively develop a NWRS that provides the framework within which water will be managed at regional or catchment levels, in 19 defined Water Management Areas (WMAs) that were established in October 1999. At a regional level, the NWA provides for the progressive development of Catchment Management Strategies (CMSs).

South Africa has developed a National Water Conservation and Water Demand Management (WC&WDM) strategy which forms part of the NWRS. The WC&WDM strategy promotes the efficient water use to all water use sectors.

- **Legal and Regulatory framework**

The legal and regulatory framework for water resources management in South Africa is composed of:

- The Constitution of the Republic of South Africa
- The National Water Act (NWA)\(^{72}\)
- The Water Services Act (WSA)\(^{73}\)

In terms of the Constitution of the Republic of South Africa of 1996, water resources management, as part of water management, is an exclusively national government function. From an environment and water perspective, The Bill of Rights, as contained in the South African Constitution, states the following:

- **Environment (Section 24):** All persons have the right to an environment that is not harmful to their well-being. The environment must be protected, for the benefit of present and future generations, through reasonable legislative and other measures.

- **Water security (Section 27):** All persons have the right to have access, among others, to sufficient water. The State must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right.

The NWA is the principal legal instrument relating to water resources management in South Africa and contains comprehensive provisions for the protection, use, development, conservation, management and control of South Africa’s water resources\(^{74}\). The overarching objective of the Act

\(^{70}\) The NWC&WDM was finalised in early 2004.

\(^{71}\) Adopted in 1996

\(^{72}\) Adopted in 1998

\(^{73}\) Adopted in 1997

\(^{74}\) Referenced to the National Water Resource Strategy 2004
is to ensure the beneficial use of water in the public interest while the central guiding principles are equity, efficiency, sustainability and representivity.

Principle 7 of the “Fundamental Principles and Objectives” of the NWA describes the objectives of the government in managing the water resources as “to achieve optimum, long-term, environmentally sustainable social and economic benefit for society from their use”.

The WSA provides a regulatory framework for the provision of water supply and sanitation services to which people are entitled. The Act recognizes that these services must be undertaken in a manner consistent with the broader goals of water resources management. The Act is infused with the spirit of cooperative governance with the emphasis on building capacity at all government levels.

- **Institutional framework**

The NWA establishes various organisations or agencies that have a certain role to play regarding water management and achieving the purpose of the NWA. The organisations or agencies must have appropriate community, racial and gender representation.

Water resources management functions could be delegated or assigned to these organisations or agencies, depending on their capacity, availability of resources and the relevant water resources aspects to be managed within their management areas. The organisations or agencies involved in water management can, for the purposes of interactions and relationships between them, be grouped into regulators, water-service providers, facilitators, water users, conflict resolvers and other interested groups. Each group can be further broken down into subgroups.

1. **Water users**: A water user could be an individual or an organization whose activities impact or might impact on water resources.

2. **Regulators involved in Water Management**: A regulator is usually an organ of the State with a mandate relating to or including certain elements of water management. Regulators can be grouped into those: (i) monitoring and regulating activities that might impact on the water resources; (ii) monitoring and regulating activities generating waste and the waste generated that might affect the water resources; (iii) monitoring and regulating land use that might affect the water resources; and (iv) developing, implementing and improving the necessary framework relating to the provision of water services. The first three groups of regulators are involved in water resources management while the fourth group is involved in the provision of water services.

   - **The Department of Water Affairs and Forestry (DWAF)**: The DWAF is the custodian of the country’s water resources, which is an exclusively national government function. It has three major functions: (i) monitoring and regulating the impacts of water users on water resources, (ii) creating a framework for the provision of water services, (iii) providing water services.

   - **The Directorate of Water Affairs (DWA)**: The DWA is the custodian of water resources and leader of the water sector. It oversees and regulates water sector institutions and regulates the use and protection of water resources.

   - **The Department of Environmental Affairs and Tourism (DEAT)**: The DEAT is an organ of the State in the national sphere of government. This department is, among others, the custodian of the country’s environment, which is a concurrently national and provincial government function.

3. **Water-Service providers**: A water-service provider could be an individual or an organisation providing water services to water users or to another water-service provider. A water-service provider need not be an organ of the State and may even be a private-sector organisation.

   - **The Department of Water Affairs and Forestry (DWAF)**: See above

   - **Water board**: The primary activity of a water board is to provide water services, mainly potable water to water-services institutions within its service area.

4. **Facilitators**: A facilitator is mostly a voluntary organisation usually not involved in water management per se. A facilitator’s role is usually to bring water users, water-service providers and
regulators together to help achieve the objectives of water management. The following organisations are facilitators: Traditional leaders; Water committees; NGOs and Community-Based Organisations (CBOs).

5. Conflict Resolvers: Conflict resolvers could be individuals or organisations helping to resolve conflicts on any water matter between regulators, service providers and water users. The Water Tribunal is an independent body established by the NWA will play a major role in resolving conflicts. The Tribunal hears appeals against certain decisions made by the Minister and CMAs. The NWA also provides for disputes to be resolved by mediation, if so directed by the Minister of Water Affairs and Forestry.

2.10.3- Vision, Objectives and Priorities of the policy

The vision underpinning this NWRS-2 is of: (i) A democratic, people-centred nation with equitable social and economic development enabled through equitable, sustainable and effective water management; (ii) Water valued and recognized as a strategic national asset and fulfilling its central role in society and the economy; (iii) A prosperous society enjoying the benefits of clean water and hygienic sanitation services; (iv) A healthy, ecologically sustainable and protected water environment; (v) A Department of Water Affairs and related water management institutions that serve the public effectively and loyally, meet their responsibilities with integrity, transparency, energy and compassion; (vi) A committed and dedicated water sector, actively co-operating and contributing towards sustainable water management and associated outcomes. This vision reflects and builds upon the principles of equity, efficiency and environmental sustainability that underpin the National Water Policy and National Water Act.

The policy and legislation are founded on the principles of integrated water resources management (IWRM). The core objective of this strategy is to introduce, facilitate and lead South Africa into a new era of smarter and developmental water management.

The White Paper on a National Water Policy (NWP) for South Africa provides the policy framework for water resources management, and is based on the principles of IWRM. It outlines the direction to be given to the development of water law and water management systems, which will take South Africa into the twenty-first century. A policy review is underway, and addresses some elements of the policy, while still remaining true to the original Integrated Water Resources Management (IWRM) concept.

The priorities for water resources management as set out in the NWRS-2 are:

- Achieving equity, including Water Allocation Reform,
- Water conservation and water demand management,
- Institutional establishment and governance,
- Compliance monitoring and enforcement (CME), and
- Planning, infrastructure development and operation & maintenance of water resources infrastructure.

2.10.4- Success components of water good governance

A. Management mechanisms

- Water resources planning tools

The guiding principles of the NWA are designed to promote social and economic development through the use of water and recognise the need to establish suitable water management institutions in order to achieve this purpose. The country has been divided into 19 catchments or Water Management Areas (WMAs), and prescribes processes by which strategies and management institutions will evolve for these WMAs, using the principle of stakeholder participation to ensure that each such area can develop its institutional and management systems to satisfy its own specific situation. These WMAs are governed by a Catchment Management Agency (CMA), a self-governing body corporate. Catchment management as prescribed by the NWP: “...is simultaneously
a philosophy, a process and an implementation strategy to achieve equitable access to and sustainable use of water resources by all stakeholders” (WRC 1998: 5).

The Catchment Management Strategy (CMS) must set out the strategies, objectives, plans, guidelines and procedures for the protection, use, development, conservation, management and control of water resources in the WMA. As with the NWRS, the CMS also addresses the ecological, social and economic imperatives as well as making provision for integrated approaches.

- **Climate change adaptation in water sector**

Many official policy documents in South Africa openly acknowledge that a large number of sectors in the country are extremely vulnerable to the effects and impacts of climate change. For example the health, maize production, plant and animal biodiversity, rangelands and water resource sectors have been identified as the most vulnerable, and are thus earmarked for special mitigation and adaptation interventions.

South Africa has put in place a complex framework of national policies and processes underpinned by commitments to international protocols and declarations to tackle the challenge of climate change and related environmental threats. This appears to suggest a high level of political commitment by the national leadership to dealing with the challenges of climate change and related policy issues.

- **Monitoring and evaluation (M&E) systems**

Readily accessible documentation was not found from the research made. The issue of M&E of the implementation of the NWP needs to be documented.

- **Human rights in water supply and water management**

According to Alix Gowlland-Gualtieri (2007), South Africa is remarkable in that it formally recognised the right of access to water at the constitutional level, where it underpins the whole law and policy water framework. The Bill of Rights in the South African Constitution recognizes the right of all in South Africa of ‘access to sufficient water’ (Section 27).

The Constitution binds all three spheres of government to realise the right of access to water. It does not provide for the right of individuals to access water, but rather places an obligation on the government to take reasonable action to give effect to the general rights of the population.

The right to water found in the Constitution has been concretised in a number of legislative and policy documents adopted as part of the restructuring of the water framework. The two main acts are the 1997 Water Services Act (WSA) and the 1998 National Water Act (NWA).

The implementation of the constitutional right of access to water, and commitment of the national government to its realisation, was taken a step further in February 2001 with the formal adoption of the policy of Free Basic Water Implementation Strategy Document. The Free Basic Water policy targets the water needs of the most impoverished citizens by guaranteeing each household a free minimum quantity of potable water.

The Water Services Act (Act 108 of 1997), and its accompanying regulations, translated the Constitutional right of “access to sufficient water” into firm definitions in terms of quantity, quality and assurance of supply. Since 1994, impressive progress has been made in providing millions of South Africans with access to a safe water supply as the backlog was reduced from 41% to 5% over the period 1994 to 2012.

- **Learning review and capacity building processes**

---


A framework for a Capacity Building Strategy for the South African Water Sector has been developed. Various training and capacity building initiatives will form part of the implementation of this strategy, including the Framework program for Education and Training in Water.

Regulations regarding the levels of operators on Wastewater Treatment Plants and Waste Disposal Sites are being developed. Concomitant to this initiative is the development of Qualifications Criteria for these operators in terms of the National Education Policy, Act 27 of 1996, and South African Qualifications Act, Act 58 of 1995. The DWAE has a program to build the capacity of local government to provide effective water supply and sanitation services.78

B. Water governance

**Consultation, participation and co-ordination mechanisms**

The current policy framework creates an opportunity for water users who were not involved in decision-making processes prior to 1994, to interact with one another and DWAF defines the institutional spaces for these interactions to take place. The objectives of the policy are to attain equity, efficiency, and equality in water matters (DWAF 2002). The NWA recognises the need for consensual participation by relevant stakeholders, both government and civil society, and it reinforces notions that water provision should not be top-down, as was the case with the previous system of delivery, because these systems were unable to produce trust.

The NWA provides for the establishment of a variety of water management institutions. The aim of establishing these institutions is to delegate water resources management to more regional and localised levels, to involve stakeholders in water resources management and thereby give effect to integrated water resources management. The major water management institutions are the Catchment Management Agencies, the Catchment Management Committees, and the Water User Associations.

- **The Catchment Management Agencies (CMAs):** These agencies are established progressively throughout the country, within the Water Management Areas (WMAs). Whilst certain water resource management functions may be assigned or delegated to these agencies, there are initial functions that all CMAs must perform upon establishment. These include, amongst others: (i) Playing a co-ordinating role regarding water-related activities and water management institutions; (ii) Developing and implementing a Catchment Management Strategy (CMS); and (iii) Encouraging public participation.

- **The Catchment Management Committees (CMCs):** The NWA provides specifically for the establishment of committees by the CMA "to perform any of its functions within a particular area or to advise it." It also provides for powers to be delegated to Committees. CMCs provide an important means by which CMAs can broaden their management and technical capacity. They also provide a mechanism through which a broader range of stakeholders can be included in water resource management.

- **The Water User Associations (WUAs):** A Water User Association (WUA) is a statutory body established by the Minister in terms of the NWA. WUAs are, in effect, co-operative associations of individual water users who wish to undertake water-related activities for their mutual benefit. The broad role of a WUA is to enable people within a community to pool their resources (money, person-power and expertise) to carry out water-related activities more effectively.

**Anti-corruption and integrity processes and measures - Transparent water budget processes**

The National Water Policy does not address matters regarding anti-corruption, integrity and transparency in the water sector. One must refer to the provisions of the Revised SADC Protocol on Shared Watercourses.

**Conflicts management**

---

78 South Africa Freshwater country profile
The National Water Policy does not address matters concerning the issue of conflicts management. One must refer to the provisions of the Revised SADC Protocol on Shared Watercourses. However, the NWA will play a major role in resolving conflicts. The Water Tribunal is an independent body whose members are appointed through an independent selection process. The Tribunal hears appeals against certain decisions made by the Minister and CMAs. The NWA also provides for disputes to be resolved by mediation, if so directed by the Minister of Water Affairs and Forestry.

- **Benefits of water, energy, and food nexus approach**

Food, water and energy security forms the basis of a resilient economy, but as a water-scarce country with little arable land and a dependence on coal-fired power and oil imports, South Africa’s economy is testing the limits of its resource constraints. WWF believes that a possible crisis in any of the three systems will directly affect the other two and that such a crisis may be imminent as the era of inexpensive food draws to a close.79

Population growth, shifting diets and urbanisation are putting increasing pressure on food, water and energy supply. At the same time, many natural resources are becoming harder to access, pushing exploration into less accessible resource zones associated with greater technical, social and environmental challenges and increasing cost. Add in the likely impacts of climate change, such as rainfall variability and extreme weather events and the need for integrated planning informed by systems thinking – i.e. to think in terms of the Food, Energy, Water (FEW) Nexus – becomes urgent. Until now, there has been limited recognition of the interdependence of these three resources – water, energy and food – from a policy and sectoral perspective. Rather, all three are dealt with in silos. It is now evident that failure to accurately understand the synergies and trade-offs between these three resources will result in growing numbers – many millions – of South Africans at risk of hunger, waterborne diseases, energy shortages and ever greater poverty.

Achieving the objectives of the NDP requires the country’s economic development paradigm to recognise the increasing pressure on natural resources and shift towards a more balanced approach that is based on the interlinked management of resources. This is not only a risk, it is also an opportunity: improving the domestic management of the links between water, energy and food will increase the resilience of the economy as a whole to withstand the risks of climate variability and economic volatility.

- **Benefits of transboundary water management**

At the national level, the issue of water resources management is thoroughly addressed in the National Development Plan (NDP), giving recognition at the highest level, across sectors, of the important of water to the economic and social development of South Africa. The NDP states that “Several of South Africa’s challenges can only be addressed through regional cooperation. There is thus recognition that regional economic integration can be mutually beneficial at the highest level in South Africa, including in the water sector.

Chapter 10 of the National Water Act (NWA,1998) deals with “International Water Management” and provides for bi-national or multi-national bodies to implement international agreements in respect of the management and development of water resources shared with neighbouring countries and on regional co-operation over water resources.

South Africa is a riparian state that shares a number of basins with neighbouring countries. The Inkomati (KOBWA) basin is shared with Mozambique and Swaziland. The Maputo/Inco-Maputo is shared with Mozambique and Swaziland. The Limpopo River basin (LIMCOM) is shared with Botswana and Mozambique. The Maputo-Usutu-Pongola is shared with Swaziland. The Orange-Senqu River (ORASECOM) basin is shared with Botswana, Lesotho, and Namibia.

Significant progress has been made since 1994 between South Africa and its neighbouring states in co-operation in transboundary water resources. South Africa shares five major river systems

---

(Orange, Limpopo, Olifants, Komati, Molopo) with six neighbouring states (Zimbabwe, Botswana, Mozambique, Swaziland, Lesotho and Namibia). International agreements on water sharing are in place in all of these river basins, in line with the Revised SADC Protocol on Shared Watercourses. These shared river basins raise the importance of water in the regional integration agenda in SADC. South Africa’s policy and legislation recognises international obligations in allocation protocol, which is dealt with in the support strategies.

South Africa is party to many transboundary arrangements as follows:

- Treaty on the Lesotho Highlands Water Project with Lesotho (1986)
- The Permanent Water Commission between South African and Namibia (1992)
- The Development and Utilisation of the Komati River Basin (KOBWA) with Swaziland (1992)
- Joint Water Commission with Swaziland (1992)
- The ORASECOM Agreement with Lesotho, Namibia and Botswana (2000)
- Tripartite Interim Agreement on the Incomati and Maputo watercourses with Swaziland and Mozambique (2002)

South Africa has ratified both the UN Convention and the Revised SADC Protocol on shared Watercourses.

2.10.5- Overview of lessons learned

- South Africa is currently undergoing a water resources policy review process. While much of the existing policy remains sound, there are issues of concern around certain elements of the policy, particularly those which are seen to restrict the ability of the government to implement water allocation reform to address historical inequities in access to water.

- In the NWRS-2, South Africa has introduced the concept of developmental water management. One of the key aspects of developmental water management is that water resources management is not seen as an end in itself, but is driven by the agenda of the democratic developmental state, and informed, for example, by the national development or poverty reduction plans, and/or industrial development plans. This presupposes a strong guiding role of the state in terms of the development direction of the country, and the sectors that are to be promoted and supported. Thus water resources planning and development is driven by the policy and vision of the state as a whole in terms of social and economic development, rather than by internal water driven process.

- The NWA is often described as an "enabling" piece of legislation. It provides little in the way of regulatory procedures, standards and tools which will be used for the integrated approaches that were emphasised in the NWP. The strength of this approach is that it enables the flexibility that is required in regulating a dynamic world.

- The implementation of the new legislation appears to have created problems for DWAF. Some of these problems already existed under the old legislation, but do not appear to have been solved by the new act. There are concerns that the system may be too ambitious and complex. Dealing with existing rights is a massive and expensive exercise.

- The licencing system is still in the early stages but already appears to be too bureaucratic and costly. All this leads to questions about the capacity to administer the system and the costs. These are probably an important reason for the failure to make progress with the catchment management authorities (CMA’s).

- At a regional level, the NWA provides for the progressive development of Catchment Management Strategies (CMSs). Due to the complexity and difficulties of the process in developing the CMSs, South Africa made a choice to use a step-wise approach, starting with the Water Management Areas of urgent needs. This is a wise dynamics, in the sense that the lessons learned could be captured to inform the process and the content of further CMSs.

- South Africa has adopted a progressive law and policy framework for water which is based upon the constitutional recognition of the right of access to water. The Free Basic Water policy implies
that every person has the right to an affordable, basic amount of water and access to sanitation services in line with the constitutional requirement. While on the one hand the implementation of the right to water has resulted in the development of a policy of free entitlement to water for consumption and domestic use, there remain today huge disparities in access to basic water services and allocation of water, mostly as a legacy from the apartheid regime but also as the result of the application of an economic approach to water policy. Indeed, the integration of such concepts as cost recovery and privatisation in water policy have contributed to maintain the poorest segments of the population with little or no access to water for household needs and sanitation, and limited water infrastructure. This creates tensions that underpin the management of water resources at the national level. In terms of water policy, it seems therefore that radical legal change has not translated into significant, substantive improvements for the majority of the poorest citizens.

2.10.6- Practical recommendations

- **Water Policy framework**
  a) There has been significant harmonization of water policy with other sector policies, and, for example, the policy on biofuels was substantially altered to take into account water and food security issues. However, stronger alignment is needed between the water and agricultural strategies where the agricultural strategy is seeking a 50% increase in irrigated agriculture and DWA is seeking a reduction in the water available to agriculture over time. In addition, water resources planning do not yet sufficiently align with the Industrial Policy Action Plan.
  b) South Africa has undertaken relevant basic research on various hydrological processes that also allow for first estimates of the potential impact of climate change on water resources. This has been incorporated into various scenario modelling studies, combining global climate change and hydrological models. There is, however, still a lack of long-term, systematic monitoring at undisturbed reference sites specifically focused on climate change.
  c) The Food, Energy, Water (FEW) Nexus is not so much about the resources themselves as it is about the relationship between them. Addressing the nexus therefore requires a quantum shift in thinking. If South Africa has to avert a crisis in natural resource management and ensure the national security of South Africa through the provision of clean water, electricity and nutritious food, it is important that it urgently identifies the trade-offs and synergies at a local, national and regional scale and recast the governance approach. If the necessary transformation is to occur, it must be based on sound science, accurate data and integrated, effective national policies and regulations that are consistently enforced.

- **Legal and regulatory framework**
  a) The South African legislation has been hailed as the ‘gold standard’ of IWRM legislation internationally, but implementation has proved difficult for various reasons. This has given rise to a recent policy and legislative reform process which is not yet complete. It is recommended to urgently complete the reforms process so as to make all relevant tools available for implementation.
  b) South Africa has a strong policy and legislation framework for the management of water resources, well aligned with the Regional Water Policy (RWP). The policy and legislation are currently under review in order to improve them in certain respects. The major challenges, however, that exist are in relation to implementation and capacity, rather than at the policy and legislative level. Therefore, South Africa must acquire the capabilities and operational tools for implementation of policy and legislation in the water sector.

- **Institutional framework**
  a) Food, Energy, Water (FEW) Nexus presents the right opportunity to put in place systemic planning and policy making that could boost integrated resource management. Optimising integrated policy and planning will require, first and foremost, that the silos between the various
disciplines in government are broken down. Cooperative governance and joint compliance and enforcement are required at three levels: national, provincial and at the local land-use planning level. At the same time, there is a need to be able to plan for resource management beyond government departments through a central authority such as the National Planning Commission. b) In implementing the RWP, member states should prioritise what is appropriate to their circumstances and capacity, rather than trying to take on everything at the same intensity. It is important to ensure that the procedures developed are taken through to the implementation and monitoring stage, so that the full cycle is completed. Policy and procedures must, above all, be practical and implementable.

References

2) SADC: (2013): Assessment of the SADC regional water policy – South Africa country report
6) H. Karodia and D. R. Weston (2000): South Africa's New Water Policy and Law, Department of Water Affairs and Forestry
7) SADC (2005): The Regional Water Policy (RWP)
8) South Africa: Freshwater country profile

2.11- ZAMBIA

2.11.1- General information

Zambia is a land locked country, located in Southern Africa with a relatively large land surface, with a total area of 752,972 km². The rainfall ranges from 600 mm in the south to over 1400 mm in the north with a moderate rainfall averaging 1,000 mm per annum. Most of the rain falls in the wet season between October and April. This means, river flows in the country experience seasonal variations with peaks between March and April. The lowest flows are experienced between October and November. There are also annual variations in rainfall.80

The country lies in two river basins of the Congo and Zambezi Rivers. Two thirds of the territory falls within the Zambezi basin, while the rest falls in the Congo Basin. The main water bodies include tributaries of Congo River - Luapula and Chambeshi and tributaries of the Zambezi - Kafue, Luapula,

---

the main Zambezi River and natural lakes - Lakes Tanganyika, Bangweulu, Mweru and Mweru wa-Ntipa and, the man-made lakes of Kariba and Itezhi-Tezhi. Most of Zambia’s surface water is generated within the country. It is only the Zambezi River that receives substantial quantities of water from other countries.

Groundwater is a major source of water in many parts of the country. It sustains river flows during the dry season for perennial rivers and streams and can contribute from between 30 and over 90 percent of the total flows. Due to lack of data, it is difficult to assess accurately the groundwater potential of the country. The average renewable groundwater potential is estimated to be 49.6 km$^3$ (DWA/JICA, 1995). This is based on an average of 8 percent of the rainfall.$^{81}$

Based on the 2010 Population Census Zambia’s population will increase to 15.5 million by 2015 and will double to 30 million by 2030

2.11.2- Executive summary of water policy document

- **Water Policy framework**

  Water is seen as an important factor in poverty reduction and is recognised in national development frameworks such as the Sixth National Development Plan 2011-2015, (NDP-6) and the Zambia’s Vision 2030.

  The National Water Policy adopted in 2010 (NWP)$^{82}$ aim is to improve the management of water resources by establishing institutional coordination and defining roles responsibilities of various stakeholders. The policy addresses water issues in most key sectors of the economy and strives to address cross-sectorial interests, through water resources planning. It embraces the various sector policies and is cognisant of principles of Integrated Water Resources Management (IWRM).

  The NWP includes seven key principles that also give guidance to the institutional framework for the sector as follows: (i) Separation of water resources functions from water supply and sanitation; (ii) Separation of regulatory and executive functions within the water supply and sanitation sector; (iii) Devolution of authority to local authorities and allowing participation of the private enterprises; (iv) Achievement of full cost recovery in the long run for the water supply and sanitation services through user charges (with due regard for fairness and equity by providing a minimum level of services to persons who are unable to afford the full cost of services); (v) Human resources development leading to more effective institutions; (vi) Technology appropriate to local conditions; and (vii) Increased Government of Zambia (GoZ) spending priority and budget spending to the sector.

  The current policy is relatively more explicit with regard to:

  - Decentralisation in water resources management (to the lowest possible level) sustained by the Decentralisation Policy and by the long-term government vision of a fully decentralized system of governance based on hydrological boundaries that transcend provincial and district boundaries.

  - Advancement of active community and stakeholder participation in the design, implementation and management of water resources related programs and projects for influencing decisions that affect communities.

  - Advancement of regional cooperation in water resources management as well as in areas of research, data collection and information exchange.

  - Assurance of resource efficiency and equity amongst all users, consistently with the social, economic and environmental needs of present and future generations.

- **Legal and Regulatory framework**

$^{81}$ Ibid.

$^{82}$ Adopted in 2010
The legal and regulatory framework for water resources management in Zambia is composed of:

- The Constitution of the Republic of Zambia
- The Water Act
- The Water Supply and Sanitation Act
- Water Resources Management Act, 2011
- The Local Government Act

The Water Act adopted in 1994 (WA) is the supreme law on water resource issues in Zambia. The Act stipulates the ownership of water and the procedures of authorisation and invalidation of water use. The Act shall not apply to the following:

(a) the Western Province; (b) the Zambezi River; (c) the Luapula River; (d) the portion of the Luangwa River which constitutes the boundary between Zambia and Mozambique (As amended by S.I. No. 55 of 1964) (Article 3).

The Water Supply and Sanitation Act (WSSA) is an Act to establish the National Water Supply and Sanitation Council (NWASCO) and define its functions and powers. Its aim is to provide for the establishment by local authorities, of water supply and sanitation utilities.

The Water Resources Management Act (WRMA) is an Act to establish the Water Resources Management Authority (WRMA) and define its functions and powers.

The Local Government Act (LGA) which gives local authorities prime responsibility for the provision of water supply and sanitation services, the decentralization policy (2002) aimed at decentralizing government responsibilities and functions, among which include rural water and sanitation to lower level government through devolution.

There are other associated pieces of legislation including the Environmental Protection and Pollution Control Act, the Public Health Act, etc.

- **Institutional framework**

Currently, the Zambian water sector involves many different organisations and authorities at various levels, ranging from policy/legal formulation and implementation through service provision to consumption.

The major institutions involved in water resources management are:

1) **Government ministries and departments:**
- The Ministry of Energy and Water Development, (MEWD) through the Department of Water Affairs (DWA) and the Water Board (WB); The Water Act (Cap 198) establishes the Water Board (WB) as the organisation responsible for administering water rights in the country.
- Ministries in charge of Agriculture, Environment and Natural Resources, Livestock and Fisheries Health, Local Government, Finance and National Planning, Transport and Inland waterways; etc.
- Office of the Vice-President in charge with the coordination of disaster management
- National Water Supply and Sanitation Council
- Zambezi River Authority (ZRA)

2) **Regulatory authorities** that are statutory bodies established by Act of Parliament. The main authorities, besides the Water Board, are the National Water Supply and Sanitation Council (NWASCO), regulating and setting standards for the urban and peri-urban water supply and sanitation services providers, and the Environmental Council of Zambia (ECZ), which establishes water quality and pollution control standards, and determines conditions for the discharge of water.

---

83 The current one was adopted in 1994
84 Chapter 198 of the laws in Zambia, adopted in 1994
85 The Water Supply and Sanitation Act was adopted in 1997
86 No. 21 of April 2011
87 Adopted in 1991
88 Chapter 467 of the Laws of Zambia adopted in 1987
effluents. Another important body is the National Heritage and Conservation Commission (NHCC) which provides for the conservation of ‘natural heritage’, such as waterfalls. Further, the Water Resources Management Authority (WRMA) is responsible for the water allocation, water charges definition, water quality monitoring and evaluation, water information management, planning and reporting on the implementation, public participation, and provides advice and recommends policies to the Minister for the management of water resources.

3) **Parastatal companies**, such as the Zambian Electricity Company (ZESCO) with the functions of generation, transmission and distribution of electricity, and commercial water utilities that supply water and sanitation services under the general regulation of NWASCO.

4) **Local authorities** (e.g. city, municipal and district councils) are mandated to provide, in an environmentally sustainable way, water supply and sanitation services to the areas under their jurisdiction. This mandate is carried out through nine commercial water utility companies.

5) **Water User Association (WUA)** is dealing with the water allocation through the facilitation and support inspections, collects hydrological, metrological, water quality and quantity, socio-economic and environmental data for submission to the Sub-catchment Council (SCC), proposes local water management plans to the SCC and implement them, and promotes the participation of the community in water management.

6) **Academic and research institutions** (e.g. University of Zambia, Copperbelt University, National Institute for Industrial and Scientific Research (NISIR): Academic and research institutions’ participation in the water sector is mainly in the area of training personnel and in research.

7) **Private sector companies** that operate in the manufacturing, mining, food processing, agriculture and power generation fields (e.g. mining companies, Zambia Sugar Company, industries).

8) **Non-governmental organizations (NGOs) and Community Based Organizations (CBOs)** (e.g. World Wildlife Fund, Care International, WaterAid, Residents/Ward Development Committees) that operate in a variety of fields related to water management, such as the promotion of community-based management of water supply schemes, gender related activities, sanitation and health education.

9) **Bilateral and multi-lateral cooperating partners** (e.g. European Commission, World Bank, African Development Bank, Germany, Denmark, Japan, UNICEF, etc.) that have been the main financiers of water-related projects and programmes in Zambia.

2.11.3- Vision, Objectives and Priorities of the policy

Zambia has articulated its long-term development objectives in the National Vision 2030 which is “To become a prosperous middle income country by the year 2030”. The Vision 2030 long term goal for water is: “A Zambia where all users have access to water and sanitation and utilise them in an efficient and sustainable manner for wealth creation and improved livelihood by 2030”.

The national vision for water as articulated in the NWP is “to optimally harness water resources for the efficient and sustainable utilisation of this natural resource to enhance economic productivity and reduce poverty”. Both the NWP and WRMA provide for the Protocol on Shared Watercourses of SADC, and adopt a multi-sectoral approach to water resources management. The recognised principles and key policy statements of the Regional Water Policy (RWP) are harmonised with NWP.

The current plan, the Sixth National Development Plan (SNDP) outlines Government’s medium-term strategy (2011-2015) for an all-inclusive development agenda. Its goal is “sustained economic growth and poverty reduction”. It articulates the national development objectives and water is cross cutting and impacts most sectors.

---

The SNDP water sector strategic focus is to provide water and sanitation infrastructure and develop skills to ensure effective water resource management and the efficient provision of reliable and safe water and sanitation services. This is to be achieved through six (6) separate programmes: (i) Water Resources Infrastructure Development; (ii) Climate Change Adaptation and Mitigation; (iii) Research and Development; (iv) Integrated Water Resources Management; (v) National Rural Water Supply and Sanitation Program (NRWSSP); and (vi) National Urban Water Supply and Sanitation Program (NUWSSP).

The vision of the IWRM/WE Plan (2007-2030) is “to achieve equitable and sustainable use, development and management of water resources for wealth creation, socio economic development and environmental sustainability by 2030”91, while the goal of the IWRM Implementation Plan is “Supporting economic growth and improving livelihoods through sustainable water resources development and management with equitable provision of water in adequate quantity and quality for all competing groups of users, at reasonable cost, with security of supply under varying conditions”92.

The priority is given to water for domestic use. Any person shall have right to the primary use of public water which is found in its natural channel or bed at such places to which access may be lawfully had (Art. 8 of the Law).

The current priorities for water resources management are shaped by the Vision 2030, the SNDP and the national IWRM/WE Plan. Medium term priorities articulated in the SNDP are:

- Sustainable water resource development for social and economic development
- Strengthening capacity for disaster risk management, mitigation and adaptation to effects of climate change
- Developing innovative approaches and appropriate technologies for the effective management of the nation’s water resources
- Ensure effective water resources management at catchment, regional and national levels

2.11.4- Success components of water good governance

A. Management mechanisms

- **Water resources planning tools**

IWRM instruments in use include water resources assessment, IWRM plans, efficiency in water use Water Demand Management (WDM), awareness and capacity building, conflict resolution, regulatory instruments, economic instruments and information exchange. Water assessments are irregular while WDM is more consistent in urban water supply.

The IWRM/WE Plan (2007-2030) is an inter-sectoral plan with proposed interventions to support the four priority drivers of Zambia’s economic development identified in NDP-5 (2007-2010), which included agriculture, tourism, mining and industry/manufacturing. These sectors continue to be among the priority sectors of the NDP-6 (2011-2015). The plan is aligned to the SADC Regional Strategic Action Plan for Integrated Water Resources Development and Management.

The existing or planned water resources management mechanisms from planning perspective are related to:

- The designation of the six (6) catchments and relevant sub-catchments as hydrological units for water resources planning, development and management.
- The formulation of a national water resources strategy and plan for the management, use, development, conservation, preservation, protection, control and regulation of water resources; and review and update them periodically.


92 Ibid
The declaration of any area as a water shortage area, where there is a need to mobilise water resources and the consideration of any necessary measures due to a number of critical factors linked to water shortage.

- **Climate change adaptation in water sector**

Climate change/climate variability presents significant challenges to managing water resources as well as other areas of human endeavour. The effects of a variable climate have touched virtually all sectors of the economy but notably water, agriculture, forestry, health, and energy. Increases in drought occurrences resulting in water deficiency which in turn affect hydropower generation are expected to increase load shedding. The most frequently recurring natural disaster in Zambia is drought, but in recent years, floods have increasingly become recurrent disasters, especially along the main Zambezi river valley.

Climate change will likely impose additional costs for achieving and sustaining water security in Zambia through increasing water. Clearly these challenges call for expanding water storage capacity.

- **Monitoring and evaluation (M&E) systems**

Over the years, the country has lost resources and programmes that were sidelined, partly due to lack of reviews. The Monitoring and Evaluation (M&E) systems have been weak in the water sector making it difficult to track results. In implementing the NDP-5, a monitoring and evaluation system has been developed by the Ministry of Finance and National Planning (MoFNP).

The M&E framework for the IWRM/WE implementation Plan and the NDP-6 will thus be linked to the national planning monitoring and evaluation framework.

Evaluation is an important source of evidence of the achievement of results and institutional performance, and contributes to knowledge and to organisational learning. Evaluation will be used to improve the design and performance of the IWRM/WE Plan as the tool for implementing water targets in future NDPs as well as to make an overall judgment about the effectiveness of the IWRM/WE Plan after the first five years to better address issues of integrated water resources management.

In order to assess the achievements of IWRM initiatives, a monitoring and evaluation framework has been elaborated which includes indicators of success. A limited number of key performance indicators have been defined to enable regular and quality reporting on the programme implementation progress. These indicators will help to focus efforts and resources for evaluating sector performance. The report on the indicators will form a major input into the annual, mid-term, and end-of-plan progress reports and any other reports that may be required. The underlining factor in selecting the indicators was the logical linkages to the overall plan goal and objectives.

- **Human rights in water supply and water management**

Water rights in Zambia follow a common law property rights system. Common law is mostly applicable in urban centres whereas customary law is more applicable in rural areas. The dual application of the laws makes the translation of water rights at grassroots level an interesting case to explore (Paxina Chileshe, Julie Trottier and Leanne Wilson, 2005).


---


The enabling or framework legislation to provide for the legal entitlement to receive or access water in the case of Zambia is inadequate and incoherent. Consequently, the focus on the goal of universal access is not secured in law. The only hope is that probably, the auxiliary regulations within the framework of the Water and Sanitation Act will provide not only regulation but the enabling environment for serving the urban poor and achieving the goal of universal access. This is yet to be seen (Z. PHIRI (2000))

**Learning review and capacity building processes**

Capacity building is a cross cutting and well acknowledged issue in the transition to IWRM in Zambian society. Although capacity building initiatives are required across all levels (sectoral, institutional and individual), a significant deficiency in existing plans, recommended as a focus area for IWRM, is catchment level capacity.

The institutional structure and distribution of responsibility envisaged in the new Water Resources Management Bill will require extensive and long-term capacity building to ensure effective implementation. In particular, decentralisation will entail the devolution of many significant responsibilities and powers to the catchment and sub-catchment level.

The available human resources do not meet the current institutional needs for water resource management. The NWP promotes capacity building and outlines measures for recruiting and training relevant staff, retaining staff, staff performance evaluation and institutional capacity building. Though gender is mainstreamed in the NWP and provided for in WRM Act, there is no demonstrated commitment as to how gender equity will actually be achieved.

The Communication Plan for the IWRM/WE implementation Plan has been developed as a guide to the dissemination of the IWRM/WE implementation. The objectives of the Communication Plan are: (i) to provide information and raise awareness of the IWRM/WE Implementation Plan, and (ii) to build support for implementing the activities with coordination and cooperation.

**B. Water governance**

**Consultation, participation and co-ordination mechanisms**

i. **Sector Advisory Groups (SAGs)** were introduced in 2003 by the GoZ through the Ministry of Finance and National Planning as a vehicle to contributing to the process of planning, implementation, monitoring and evaluation in the Poverty Reduction Programme. In the water sector, the Water SAG advises government on sector policy issues, on the performance of the sector and on efficient and effective use, transparent management and sub-sectoral coordination of assistance to the sector. The SAGs comprise representatives from key institutions and stakeholders, which currently include the line ministries, statutory bodies, cooperating partners, academic and research institutions, NGOs and other stakeholder associations actively involved in the water sector.

ii. **The Catchment Council (CC)** is responsible within the catchment of its jurisdiction for water allocation through the regulation and supervision of the use of water at a catchment level. It is composed of three (3) representatives from the provincial administration situated in the catchment, and nine (9) other stakeholders representing, as far as is possible, the users of water in the catchment (Art. 17.2).

iii. **The Sub-Catchment Council (SCC)** is in charge of the regulation of the use of water in the sub-catchment. It promotes the participation of the community in water management. It is composed of a representative from each of the local authorities in the sub-catchment, and two

---

95 Ibid 95

96 Water Resources Management Act, 2011: Art. 17.1

97 Water Resources Management Act, 2011: Art. 19.1
(2) persons representing the traditional authorities in the sub-catchment; and nine (9) other stakeholders representing, as far as is possible, the users of water in the sub-catchment (Art.19.2).

iv. The Water User Association (WUA)\textsuperscript{98} is dealing with the water allocation through the facilitation and support inspections, collects hydrological, metrological, water quality and quantity, socio-economic and environmental data for submission to the SCC, proposes local water management plans to the SCC and implement them, and promotes the participation of the community in water management.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

The main Water Sector Advisory Group (SAG) advises the government on sector policy issues, performance of the various sub-sectors, efficient and effective water use, transparent management and sub-sectorial coordination. Furthermore, it provides a forum for sector-wide approaches concerning planning, budgeting, delivery and implementation.

In the implementation of the IWRM/WE Plan, transparency of information and reporting will be emphasised in order to enhance effective utilisation of budgets and inputs and equity of distribution of resources, which will be communicated in the operational and strategic feedback loop. With the decentralisation policy and the Decentralisation Implementation Plan (DIP) in place, districts will be able to participate in monitoring results and making changes as and when required.

- **Conflicts management**

Conflicts over access and water use are not explicitly addressed either in the Water Act, or in the National Water Policy. The Water Act states that, in the event of disagreement between the applicant and an affected registered owner of water rights regarding the amount of compensation, the matter in dispute shall be submitted to arbitration.

The Water Resources Management Act (2011) describes in enough details the institutional framework that will handle the issues of water conflicts. The functions and powers of the Water Resources Management Authority, the Catchment and Sub-Catchment Councils and the involvement of water uses through Water Users Associations are various but levels for dispute settlement.

- **Benefits of water, energy, and food nexus approach**

The NDP places emphasis on “accelerated infrastructure and human development, enhanced economic growth and diversification, and promotion of rural development”. It recognises the importance of balanced growth in all sectors of the economy, but singles out agriculture, livestock and fisheries, mining, tourism, manufacturing and, commerce and trade a priority growth sectors. Increasing investments in rural areas is recognised as an important aspect of increasing employment and reducing poverty.

One of the strategic focus areas of the IWRM/AE Plan (2010-2015) is the “Water Resources Infrastructure Development”. The priority issues relevant for the implementation of the water, energy and food nexus include the following:

- High dependence on rain-fed agriculture and limited utilisation of irrigation;
- Lack of ownership and protection of waylay for water infrastructure; and
- Inadequate development of the country’s water resources infrastructure to meet needs of various sectors.

- **Benefits of transboundary water management**

All waters in Zambia are shared with neighboring countries making them international waters. Zambia is a riparian state of two major river basins: the Zambezi, and the Congo. Managing these

\textsuperscript{98} Water Resources Management Act, 2011: Art. 24.1
shared rivers calls for an approach that reduces the opportunity for conflict and encourages cooperation in attaining equity and the benefits associated with the management, utilisation and development of the resource. To this effect Zambia has signed and ratified several agreements related to the management of shared water courses. These include the Zambezi River Authority (ARA) (1987)\(^{99}\), Lake Tanganyika Convention (2003), and the Revised Protocol on Shared Watercourses in the SADC (2004). Ratification of the agreement on the establishing the Zambezi Water Courses Commission (ZAMCOM) has already been developed and signed by all riparian countries except Zambia.

The Ministry responsible for water resources may, on behalf of the GoZ foster cooperation over shared water resources and take all measures that are appropriate for the needs of Zambia. Provisions on powers and duties of Minister on management of shared water resources are clearly specified in the Water Resources Management Act, 2011 (Art. 57).

2.11.5- Overview of lessons learned

- The water governance system is highly sectorial, and the institutional and legal frameworks are not yet sufficient to support the change towards IWRM. Moreover, the governance structure is highly centralised and leaves little room for effective stakeholder participation, and stakeholders’ influence in the decision making process is still limited. If these features are added to the low resource base, in terms of human and financial resources, and to the weak commitment and resistance to change of key stakeholders and staff in the water institutions, it is easy to understand why a transition to IWRM-based governance practices will be difficult\(^{100}\).

- Adoption of the NWP has resulted in “new” legislation and institutions for water resources management. This is another milestone in water sector reforms under implementation over the two last decades and whose main outcomes have been the separation of water supply services from water resource management. With new legislation the role of different actors in water resources management have been clarified.

- The GoZ took a decision to consider a core of legal instruments to deal with the main priorities areas. For each of them, a legal Act has been adopted, namely: (i) The Water Act that deals with water allocation in Zambia; (ii) the Water Supply and Sanitation Act (WSSA) aims to establishing the National Water Supply and Sanitation Council (NWSSC), to provide for the establishment by local authorities, of water supply and sanitation utilities, to providing for the efficient and sustainable supply of water and sanitation services; and (iii) the Water Resources Management Act, 2011 (WRMA) establishing the Water Resources Management Authority.

- The Water sector in Zambia is primarily under the responsibility of two ministries. The Ministry of Energy and Water Development, through the Department of Water Affairs, Water Board and National Water Supply and Sanitation Council, is responsible for overall water resources management (planning, regulation, development) while the Ministry of Local Government and Housing, through the Local Authorities and Commercial Utilities, responsible for water supply and sanitation delivery services.

- Zambian law recognises a human right to water to some extent although this is not codified within the Constitution. Field observation reveals some discrepancy between the practices in place and the ideals foreseen by a human rights approach. Taking a human rights based approach to water would prove challenging for Zambia as the government may not be able to keep its promises for all citizens. The rights based approach has only been alluded to in the National Water Policy and the Water Act.

- In order to gain support from stakeholders and beneficiaries alike during implementation, the water policy development has also taken a broad based approach and attempts to involve all the major

\(^{99}\) The ZRA is an agreement between the Republic of Zambia and the Republic of Zimbabwe relating to the utilisation of the Zambezi River

stakeholders in the water sector ranging from traditional leaders, parliamentarians, farmer unions, civil society, hydropower companies, chambers of mines and manufacturing and industry, research institutions and key line ministries.

- Key provisions include a decentralised water resource management system that encompasses the basin, catchment, sub-catchment and water user level. Six main river catchments are recognised for which planning, water allocation and regulation and shared water course and shared water resources management activities will be undertaken.

- The management of water resources based on the new institutional setting begins in 2008 at local level through the establishment of two WUAs, namely those in Kamfinsa and Lunsemfwa. The need to form such structures at the local level to manage water resources arose in the areas because of competing uses and disputes. Lessons learned from the two pilot WUAs were fed back into the formulation process of the Revised Water Policy and Water Resources Management Bill.

2.11.6- Practical recommendations

- **Water Policy framework**
  a) Water resource management entails socially efficient and sustainable use of water resources moving away from simply developing new supplies to meet the projected water needs as this approach has not provided water security to the southern African region. The ever-widening search for new water sources against other pressing development needs calls for Water Demand Management (WDM), which is defined as “a management approach that aims to conserve water by controlling demand through the application of measures such as regulatory, technological, economic and social at all spatial and institutional levels.”
  
  b) The present water resources management structure in Zambia does not adequately support the effective management of international waters. There is therefore an urgent need to strengthen the legal framework to include international waters, the institutional capacity to address issues such as data and information exchange, water allocation and water rights issues. It is important to put in place a management system that will increase the benefits derived from the shared water resources while addressing the issue of equity.
  
  c) In order to improve the management of international waters, it is important to understand both the surface and ground water potential through standardisation of assessment methods so that all the countries have the same understanding of the quantity and state of the water resources to ensure that there is sustainable utilisation.

- **Legal and regulatory framework**
  a) Very few institutions in Zambia have a clear understanding of the concept of Water Demand Management (WDM) with inadequate WDM policy or strategy at all resulting in very few practising WDM mostly from the water supply rather than in the water resource institutions. There is a need for one institution to refine this and provide guidelines and procedures for WDM adoption and implementation.
  
  b) The Water Act does not apply for all Zambian territory. The following areas are excluded: the Western Province, the Zambezi River, the Luapula River, and that portion of the Luangwa River which constitutes the boundary between Zambia and Mozambique, because they are totally or partly in the drainage areas of international watercourses.

- **Institutional framework**
  a) The institutional framework makes clear and distinct separations between functions of management, regulation and utilisation of water resources. There is a separation of water resources functions from water supply and sanitation, and also a separation of regulatory and executive functions within the water supply and sanitation sector. This has been indicated in the

---

101 Imasiku A. Nyambe : Institutional implications, issues and necessities for effective Water Demand Management in Zambia, Geology Department, School of Mines, University of Zambia
NWP aims to water resources management by establishing institutional coordination and by defining roles and responsibilities for all. It is recommended to fully implement this institutional framework.

b) Zambia needs to build capacity in negotiation skills, better understanding of international law and cooperation, diplomacy and indeed international water resources management principles.

References

13) Imasiku A. Nyambe: Institutional implications, issues and necessities for effective Water Demand Management in Zambia, Geology Department, School of Mines, University of Zambia.

2.12- Synthesis of Country Status Overview

The study presented an overview of water management frameworks of eleven African countries. These are the policy, legal / regulatory and institutional water management frameworks based on the application of integrated approaches to water resources management. This summary is organized into three areas: water governance, water resource management and practical recommendations to improve the implementation of water management frameworks.

2.12.1- Water governance

Water Governance consists of the political, social, economic and administrative systems in place to develop and manage water resources at different levels of society.

Overall, significant progress has been noted, but much remains to be carried out to consolidate the enabling environment for water resource management at national level.

Some countries have no policy on water resource management. This is the case of Cameroon and Senegal. Congo has a policy on electrical energy and water. Algeria would have a policy document of the water to which it is often referred; but it was not possible in the case of the present study to access
this document. Countries which have a water policy are, for various contextual reasons at varying levels of application.

The legal and regulatory framework for the management varies considerably from one country to another. Many countries have a law on water management and regulatory enforcement measures. The level of implementation varies from one country to another due either to lack of will or weak technical and institutional capacities or insufficient budgetary allocations. Sometimes it is a combination of two or three reasons. Cameroon has neither a political nor a law relating to water resource management based on the concepts and principles of IWRM. The Water Code of Senegal date from 1981 and it is outdated for not integrating the concepts and principles of IWRM and thus has little impact on water management.

On the institutional level, water issue is now recognized as a vital issue and a support sector to development. The development being transverse, we understand why the water-related issues interest several activity sectors, several socio-professional circles, and thus several categories of actors. The pillars of the institutional framework for water management are three: (i) priority of the issue of water - adequacy of the institutional anchoring - (ii) separation of management functions and functions of water use, (iii) participation of all actors. In this regard remarkable efforts have been made by countries such as Burundi, Burkina Faso, Ghana, Kenya, South Africa and Zambia. Even in these countries, despite the priority given to water sector, it is not the subject of a ministerial department that is fully dedicated to it. The separation between the management functions (including the functions of coordination and regulation) on the one hand and the functions of use of water on the other hand, although institutionalized in policy documents and in legal and regulatory texts, are experiencing some difficulties to be functional. There is a strong need to review/ adapt water management institutional frameworks to the principles of IWRM.

Pour certains pays, la séparation entre les fonctions de gestion des ressources en eau, et les cadres de consultation et de participation des parties prenantes, d’une part, et les fonctions d’utilisation de l’eau d’autre part est parfois clairement indiquée dans les documents de politique ainsi que dans les textes législatifs et réglementaires. Toutefois, la mise en œuvre de cette séparation rencontre d’énormes difficultés fonctionnelles et opérationnelles. Pour d’autres pays, les insuffisances du cadre institutionnel sont la conséquence, soit de l’inadéquation entre les cadres politiques et législatifs de gestion de l’eau, soit l’absence d’un cadre politique et législatif relatif à l’eau.

2.12.2- Water resources management

Water management consists of the activity of planning, developing, distributing, managing, and optimizing the uses of water resources under defined water policies and regulations.

It is clear that significant progress has been made in the development of water resource management tools such as, integration of adaptation measures to climate change in the water sector, development of technical and institutional capacities, management of conflicts over water. But it is not the same for consideration of human rights in the management and use of water, M&E of the implementation of water policies and strategies, anti-corruption measures, integrity and transparency in the water sector, as well as the application of the "Nexus" approach between water, energy and food, the benefit of the full potential of cross-border cooperation on shared waters.

In term of integration of human rights in the management of water some countries are remarkable insofar as formal recognition of the right of access to water and sanitation for the satisfaction of basic human needs is effective in the constitution and / or policy documents and other legal texts. This is the case of Algeria, Ghana, Kenya, South Africa and Zambia. In Burkina Faso and Burundi law on water and political discourse recognize and adhere to the concept of the right to water of the UN but this is not reflected in the specific legal obligations and responsibilities. In Cameroon, Congo and Senegal, the right to water is more noticeable regarding the supply in drinking water. There is little specific reference to the "right to water". Under the principle of equity in access to water, Botswana gives priority to meeting human consumption needs. In general, review of documents reveals that the field observations show differences between practices and official provisions of the human rights approach.
Algeria, Burkina Faso, Burundi, Botswana, Kenya, South Africa and Zambia have functioning systems of M&E implementation of water policies and strategies. For Kenya and Zambia, M & E systems for the implementation of water policy are integrated into a broader national system including all development sectors. These M&E systems generally have performance indicators to monitor and evaluate the implementation. It is being developed in Ghana. Cameroon, Congo and Senegal do not have such M&E system.

Regarding the fight against corruption, the promotion of integrity and transparency in the water sector, there are regional texts (strategy or protocol) in ECOWAS and SADC which are imposed to their respective Member States (Burkina Faso, Senegal, Botswana, South Africa, Zambia). The implementation of these regional provisions could not be documented. However, some countries have set up an institutional framework or have developed measures to fight against corruption in the water sector. These are Burundi, Botswana, Ghana, Kenya and Senegal. Algeria, Cameroon and Congo have only legislation and a regulatory framework integrating the procedures and measures of integrity and fight against corruption in the water sector.

Regarding the implementation of the "NEXUS" approach acknowledging, on the one hand the interdependence between water, energy and food, and the importance of a balanced growth in all the sectors of economy on the other hand, countries under review can be classified into three categories depending on the level of application of the "NEXUS" approach. As noted in previous sections, the clear conclusion that emerges from this case study is that we can observe many precursor elements of a "NEXUS" approach or in any case of a systemic or integrated approach which considers the links highlighted by the "NEXUS". The three "poles" of the "NEXUS" nexus are rarely affected simultaneously, but clear links are emerging. Countries which have made efforts conceptually and sometimes at operational level through policies, strategies and even institutional mechanisms enabling on the long run an application of the "NEXUS" approach are distinguished. These are countries such as Burkina Faso, South Africa and Zambia. Then follow the group of countries which have, at varying degrees, precursor elements which could be considered as "areas" of application of the "NEXUS" approach. In this group we find the vast majority of countries, namely Algeria, Burundi, Botswana, Kenya, Ghana and Senegal. Finally some the countries which have no element or little element taking into account the "NEXUS" approach. These countries are Cameroon and Congo.

2.12.3- Practical recommendations

The national policy, legal and institutional frameworks for water resource management in Africa have experienced an unprecedented development and significant progress has been made towards the adoption and implementation of integrated approaches to water resource management. This dynamics initiated since the adoption of the African Water Vision 2025 must be maintained and reinforced. Africa now has a wealth of experience that can be used either to inspire countries in difficulties and delayed or update and improve water resource management frameworks of countries making progress. To this end, key measures below are recommended.

Water Policy framework

a) Reinforce the political will to initiate and continue reforms for integrated approaches to water resource management through the development / updating and implementation of true water development, planning and management policies as a resource for all uses and taking into account emerging concerns and cross-cutting issues.

b) Identify and address barriers to the legal and political reform and target lagging countries. AMCOW-Sec and its partners (RECs, TBOS ...) could provide political support to the development of capacities and learning through exchange of experiences between countries and peer countries.

c) Improve the integration of the three sectors (water, energy, food) and consider them simultaneously and in a balanced way in order to provide a coherent framework for analyzing complex issues and benefit from the full potential of the "NEXUS" approach through the development of multi-sectoral analysis tools and decision support (seeking to remove bottleneck...
factors, model upstream (inputs) and downstream (outputs) of each potential investment. The development of appropriate indicators will enable to measure the level of integration and effective synergies related to the establishment of the "NEXUS" approach.

ẽ Legal and regulatory framework

a) Reinforce the political will, initiate and continue reforms of the legal and regulatory framework for water resource management through the development/updated of a legislation and appropriate regulatory texts enabling effective policy implementation and to provide the effective regulatory and administrative mechanisms at required levels.

b) Update laws on water which are the legal declination of water policies by adopting integrated approaches to water resource management – laws on water are a powerful tool to support IWRM - by clarifying the rights and responsibilities of users and water providers, clarifying the role of the state vis-à-vis other stakeholders.

c) Reinforce political will, technical and institutional capacities and identify appropriate budgetary resources for a sustainable and effective implementation of the national legislation on water resource management. Several countries belong to the same REC or are members of a same TBO or both at once. These countries should translate into their national legislation the provisions of the charters of water (in shared watersheds) or shared water management protocols (in the RECs).

d) Develop mechanisms and tools of conflict resolution and consensus development as support for legislative reforms and engage stakeholders in policy dialogue, and ensure that legal procedures are the center of ultimate mechanism of conflict resolution.

e) Integrate the principles which contain the concept of human rights as well as equity in water policies and its consideration in the legal and regulatory instruments.

f) Harmonize legal instruments with national and regional policies and review national legislations on governance to incorporate the standards of efficiency, especially for large water consumption sectors such as irrigation.

g) Reduce corruption, increase levels of integrity and promote transparency and accountability in the water sector by adopting appropriate procedures and tools, applying without indulgence legal and regulatory provisions agreed, by promoting citizen participation in the processes of decision making. For this purpose, it is necessary (i) to establish and reinforce partnerships and multi-stakeholder coalitions with expanded impact, (ii) undertake the necessary reforms (legal and financial reforms, reforms of public service systems, reforms in the private sector) (iii) sensitize the public and build capacities.

ẽ Institutional framework

a) Improve the institutional anchoring of the water sector if indeed it is considered a vital sector of high priority in order to reduce institutional instability which is not consistent with the priority being granted in the water sector.

b) The separation between the management functions (including the functions of coordination and regulation) on the one hand and the functions of use of water on the other hand, including consultation and participation frameworks, although institutionalized in policy documents and in legal and regulatory texts, are experiencing some difficulties to be functional or operational when they exist. This is the result of the absence or the inadequacy of the political and legal framework for water management. Therefore there is a strong need to adapt institutional frameworks for water management to the principles of IWRM.

c) In general, we encounter three main categories of stakeholders involved in the water sector: the State (and its branches), local communities and users (in various forms). The composition and
functioning, as well as consultation frameworks for decision-making bodies should be revisited to better reflect the concerns and views of local communities and users.

d) If decentralization has a very high political and social importance in the field of water resources through its elaboration of participatory democracy in the management of water, it also raises important challenges for which the main actors must help the local communities to address them. Decentralized water management and the principle of subsidiarity, usually formalized and institutionalized, need to produce their full effect. To do this, the following support measures must be implemented: local population expression platforms, allocation of appropriate financial resources, capacity building. This contributes to the improvement of water governance at decentralized level of the basin.

e) Build the capacity of all actors at all levels and improve learning mechanisms by action (learning by doing) in order to have the human resources necessary for the implementation of IWRM. This has to go through the search for a better structuring, improvement of the organization and monitoring of actors, focusing more on women, young people, the poor and vulnerable groups.

f) Support and promote the establishment of governance mechanisms and institutional frameworks on the principles of IWRM at national and local levels and at the basin scale through capacity building of institutions and sharing of knowledge and experiences among peers.

Water management tools

a) Water resource management instruments provide a concrete basis for the implementation of policies. The intervention areas considered as priorities to progress in the field of water management instruments are contextual, i.e. depending on the conditions and priorities of each country. In general, based on the findings of the study, issues that are the subject of recommendations are monitoring and evaluation of the implementation of water policies, IWRM planning tools, benefit sharing of transboundary water management.

b) The monitoring and evaluation system of the implementation of national policies related to water enables in principle to monitor the degree of implementation of policies, evaluate the performance levels and learn lessons that will serve to make the necessary adaptations or inform the processes of formulating a new policy. It is difficult to achieve because of the lack of mechanisms and indicator performance. Very little effort has been made in terms of development of indicators. It is necessary to develop a guide (based on the Pan-African monitoring and evaluation system being built by AMCOW/AU) to help countries develop their own systems and promote their use.

c) The implementation of water policies is even easier that there are water resource planning and development tools. Countries should be encouraged to develop and implement such tools (SDAGE IWRM plans, etc.) which enable to enhance the control of elements of analysis and decision-making processes, while promoting the participation of stakeholders.

d) Countries involved in the study all belong to at least one watershed / aquifer basin shared with one or more countries. States decide to cooperate when they believe it is in their interest to do so. So it is not without interest - and this is the least we can say - that states want a fair and equitable sharing of benefits and costs of the development and management of shared water resources. Cross-border cooperation regarding shared water is mutually beneficial but countries should identify their interests, strengths and weaknesses and have the technical and institutional capacities to take advantage of available opportunities.
Chapter three: REGIONAL CASE STUDIES

3.1- Shared Water Bodies

The review of water governance frameworks at regional level for water resources management has to do with two levels – the subregional level with an emphasis on the policy framework provided by the Regional Economic Communities (RECs), and the shared basin level with a focus on the role of international lake/aquifer/river basins organisations (L/A/RBOs).

Regional Economic Communities (RECs) are an important building bloc of economic integration and development on the continent. While originally the objective of the RECs is the facilitation of greater regional integration and trade through the creation of Free-Trade Areas, most RECs have since expanded beyond a narrower trade focus and adopted a strong regional development mandate including areas of trade, transport energy and natural resources management and development to name a few of them. The African Union Commission officially recognizes 8 RECs in line with decision No. 1 of its Banjul Summit in July 2006, namely the Arab Maghreb Union (UMA), Common Market for Eastern and Southern Africa (COMESA), Community of Sahel-Saharan States (CEN - SAD), East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Inter-Governmental Authority on Development (IGAD), Southern African Development Community (SADC). The degree to which they deal with transboundary water management differs considerably. Whereas some do not engage strongly (or at all) with transboundary water matters, other RECs have, or are in the process of creating a strong policy, legal and institutional framework for transboundary water management in their region. The latter applies specifically to ECCAS, ECOWAS and SADC. IGAD and EAC deal with water matters indirectly whereas CEN-SAD, COMESA and UMA essentially do not deal with transboundary water matters.

3.1.1- Lake Chad Basin (LCBC)

3.1.1.1- General information

The Lake Chad water basin is a terminal depression consisting of portions of eight countries (Chad, Niger, Nigeria, Cameroon, Central African Republic, Sudan, Libya and Algeria), with a total of 2,381,635 km² of shared drainage. This area represents approximately 8% of the total land mass of Africa. The initial conventional basin consisted of approximately 20% (427,500 km²) of the total area of the Lake Chad basin (i.e., it excluded the majority of the terminal depression consisting of desert that provides little or no effective hydrological contribution to the conventional basin). The conventional basin was subsequently expanded to include additional watersheds in northern Nigeria, southern Chad, and northern Central African Republic, with a current total area 967,000 km².

Lake Chad is Africa’s fourth largest lake (in terms of surface area) – after lakes Victoria, NyassaandTanganyka, the largest in Western and Central Africa. Its basin constitutes an important freshwater. The lake is fed by the Chari River, which flows northward from the highlands of Central African Republic (CAR) through to southern Chad, supplies approximately 95% of the lake’s surface water input. Likewise, the Komadougou-Yobe surface water system which flows from northern Nigeria into Chad is considered to be of minor significance to the whole of the basin, yet locally significant to the northern reaches of the Lake Chad wetlands. The lake is shallow, with an average depth of 1.5 meters, and is of relatively small volume. The lake is subject to considerable evaporation and yet is not saline.

The hydrological context of the Lake Chad Basin is characterized by two subsystems:

The subsystem of Komadougou-Yobe Basin has an area of 148,000 km². The upper basins perform in total long-term natural inflows of about 7 km³/year, most of which is held in reservoirs in the province of Kano. The basin and its impact on the body of water are considered negligible; However, losses due to evaporation in wetlands Yaérés are significant.
The subsystem of Logone-Chari basin, has an area of about 590,000 km$^2$, and supplies wide wetlands, the floodplain of Yaërès (reaching 6,000 km$^2$ of active area during wet years). The sub-basin of the Chari-Logone provides over 95% of the total flows of rivers to Lake Chad.

The Lake Chad Basin is the development center, of trade and cultural exchanges between the populations settled in the north and south of the Sahara respectively. The resident population of the Lake Chad Basin was estimated in 2003 at about 37.2 million people (Oak Ridge National Laboratory, ORNL, 2003). The annual population growth is between 2.5 and 3.0% (World Bank, 2002). Based on this growth rate, the total population is estimated at about 45 million for the entire Lake Chad Basin in 2012. This population generally poor, is closely dependent on natural resources of the basin that ensure its survival.

The Lake Chad Basin Commission (LCBC) was established by the Fort Lamy (now N’Djamena) Convention and Statutes on 22 May 1964 by the Head of States of the four countries that share the Lake Chad (Cameroon, Chad, Niger and Nigeria). It was mandated to promote the “most rational use of water, land and other natural resources” with responsibility for helping to coordinate member activities within the so-called “conventional basin.” The Convention and Statutes are ruled by the international agreements fixed in the framework of the United Nations Organisation and the Organisation of United Africa. In March 1994, Central African Republic was admitted as the fifth Member State. Sudan was admitted into LCBC in June 2000, but it has yet to ratify the Convention establishing the Commission, a precondition to participate in the activities of LCBC.

Considering that the water use in the Lake Chad Basin is likely to affect the hydrologic regime of the basin and thus its exploitation by the other Member States, the founding members judged advantageous to create a Commission in order to:

- Prepare general regulations and to ensure their effective implementation;
- Coordinate the research activities of Member States;
- Study projects prepared by Member States;
- Recommend plans for the execution of surveys and works in the Lake Chad Basin; and
- Establish and maintain liaison between the Member States.

### 3.1.1.2- Executive summary of water policy document

**Water Policy framework**

The main documents that could be regarded as water policy for the lake basin or that could be applied within the lake basin are (i) the Africa Water Vision 2025, (ii) the Lake Chad Water Vision 2025, and (iii) and the basin wide water Charter.

**The Africa Water Vision 2025**: The shared vision articulated in the Africa Water Vision, which was endorsed at an Extra-Ordinary Summit of the African Union, calls for: "An Africa where there is an equitable and sustainable use and management of water resources for poverty alleviation, socio-economic development, regional cooperation, and the environment”.

As can be seen, the scope of this statement significantly expands upon the narrower parameters of the Convention, and recognizes, albeit implicitly, the need to view economic growth in tandem with other considerations as social well-being, the principle of sustainable use, and environmental context.

**Lake Chad Vision 2025**: The Lake Chad Basin vision is IWRM oriented and was adopted in 2000. The vision as stated in the Vision Document 2025 is: “The Lake Chad Region would like to see by the year 2025 the Lake Chad - common heritage - and other wetlands maintained at sustainable levels to ensure the economic security of the freshwater ecosystem resources, sustained by the biodiversity, and the environment they support”.

---

102 The data come from the study on the drafting of a methodological guide for the development and implementation of a Water Charter of the Volta Basin (A. Garané, July 2015)
103 Adoptée en 2000
104 Adoptée en 2000
biodiversity and aquatic resources of the basin, the use of which should be equitable to serve the needs of the population of the basin thereby reducing the poverty level”.

The 2025 Vision of the LCBC was inspired by the African Water Vision for 2025. The two principal objectives of the Lake Chad Vision 2025, also consistent with the Africa Vision, are:

- A Lake Chad Region where the regional and national authorities accept responsibilities for freshwater, ecosystem and biodiversity conservation and judicious integrated river basin management to achieve sustainable development.
- A Lake Chad Region where every Member State has equitable access to safe and adequate water resources to meet its needs and rights and maintain its freshwater, ecosystem and biodiversity resources.

**Legal and Regulatory framework**

The legal framework of the LCBC includes three basic texts:

- The creation of the LCBC; the Commission is designed as a sub-regional cooperation organization.
- The Agreement concerning the common rules on fauna and flora adopted by the four founding member countries of the LCBC; it comes in the footsteps of the 1964 convention.
- The Water Charter of the Lake Chad Basin constitutes the reference legal framework for concerted and sustainable management of water resources of the Lake Chad basin.

The Convention recognises the rights of the Member States over the water resources in the basin, but forbids any unilateral exploitation of the water, especially if there is a negative effect on the interests of the other states. The Convention recognizes the right of the Member States to plan projects if LCBC is consulted beforehand. The Member States have informed the LCBC of all projects planned within the Conventional Basin.

Concerning the flora and fauna and in accordance with the common will of the Member States of the LCBC of protecting species that are endangered, a common regulation Agreement on the flora and fauna has been concluded. This agreement puts more obligations on the Member States. These include Article 1, which states that "the parties shall establish a list of protected species of terrestrial wildlife on the basis of the relevant Annex of Algeria Convention of 1968".

The Water Charter and its annexes is an international agreement concluded in writing between the Member States of the LCBC and governed by the international law (Art. 1.3). The Member States have decided to develop a Water Charter of the Lake Chad basin in order to:

- Ensure greater cooperation between Member States for activities in the basin;
- Ensure sustainable management of the basin;
- Set the rules and water and environmental management principles

The Water Charter is a conventional framework which overall objective is sustainable development of the Lake Chad Basin, using an integrated, equitable and concerted management of shared water and basin environment resources. This framework promotes sub-regional good governance, cooperation and solidarity based on community of interest that links the Member States for this management (Art. 3).

Adopted in April 2012, the Water Charter is not ratified yet by all State Parties (two ratifications at the date of this report). There is therefore the risk of a large delay in the entry into force of the Convention.

In addition to the three legal systems (1964 Convention revised in 1990, 1977 Agreement, Water Charter of 2012) governing the LCBC, Chad and Cameroon signed in Moundou, in Chad, on 21 August 1970 an agreement to set the level of Logone water collection for hydro-agricultural

---

105 Agreement adopted on December 3, 1977 in Enugu, in Nigeria
106 Adopted during the 14th Summit of Heads of Government and States of the CBLT held on April 30, 2012
developments of both parties. This agreement also falls in line with environmentally sound management of Lake Chad water.

- **Institutional framework**

The institutional framework of the LCBC is composed of decision-making bodies, implementing and/or coordination agencies, consultation / participation bodies. These are (i) the Summit of Heads of State that is the supreme authority of the Commission. It is the organ of orientation and decision, but it is clear that the 1964 Convention has remained almost silent on this structure which is supposed to play a key role in such organizations. Only paragraph 1 of article 12 provides that "the Commission will, in the majority of heads of state who will appoint an executive secretary from among the nominees of the Member States". It meets once every two years; (ii) the Council of Ministers composed of two (2) members from each Member State; it meets at least once a year; (iii) the Executive Secretariat implements the decisions of the Summit of Heads of State as well as resolutions of the Council of Ministers.

For the implementation of the Water Charter, these bodies are supported by the following subsidiary bodies: (Art. 82).

- The Technical Committee (TC);
- The Parliamentary Regional Committee (PRC);
- The Water Resources Committee of Experts (WRCE);
- The Committee on the Environment, Science and Planning (CESP);
- The National Agencies of the Lake Chad Basin Commission (NAG);
- The Partners Forum for Sustainable Development of Lake Chad Basin (PFSD)

Specific institutional arrangements have been put in place for the following specific programmes and operations: the Strategic Action Programme (GEF/SAP), and the Investment Plan 2013-2017 whose institutional framework for its implementation is composed of the following structures: (i) Ministerial Monitoring Council, (ii) Technical Secretariat, (iii) National Focal Institutions, and Local Committees.

3.1.1.3- Vision, Objectives and Priorities of the policy

The initial objectives of the 1964 Convention were much more political and security than environmental. The main development challenges and ecological problems were probably overlooked. Indeed, the riparian states that have just got their independence were more galvanized to determine the boundaries between them, so as to avoid de facto any appropriation of national water resources by excessive use on the part of one State and to prevent potential conflicts. It was then to highlight the cross-border nature of the conventional basin in accordance with sovereignty of the member states. Thus, the LCBC has been responsible for:

- Plan the general development of the basin, including activities and projects planned by the Member States;
- Adopt a proposal for uniform regulation to preserve and enhance the resources of the Lake and its basin, especially regarding the use of surface and subsurface water for human and animal consumption, fishing and navigation, agriculture, forestry and transport of goods;
- Arbitrate disputes between Member States (regarding the use of the basin resources). The LCBC is responsible for receiving complaints, contribute to conflict resolution;
- Ensure application of the Convention and the Statute.

Besides the Convention itself which consists of eight (8) items, the Statute, an integral part of the Convention forms the substance of it.

---

107 Since the 8th Summit of Heads of State held in Abuja in March 1994, it was decided to hold summits every year.
Indeed, this will of shared management of the Lake Chad water is remarkable through article 1 of the Statute which provides that "Member States solemnly declare their willingness to intensify their cooperation and efforts to the development of the basin Lake Chad".

Priorities of the Lake Chad Basin appear to be the areas of cooperation set out in Article 7 of the Statute: "The exploitation of the Basin and in particular the use of surface and groundwater is defined in the broadest sense, and refers in particular to the needs of domestic, industrial and agricultural development, and the collection of the products of its fauna and flora".

However, Vision 2025 for the integrated management of the Lake Chad basin mentions the broad guidelines for the integrated management and concerted, harmonious development of the basin, namely (i) reinforcing sub-regional cooperation in particular through the management and the sustainable use of shared and cross-border natural resources, (ii) the promotion of community participation and that of public and private sector, (iii) satisfaction of the basic needs (particularly access to water) as a priority for all, (iv) reinforcing the role of the Commission in the coordination, knowledge development and sharing.

3.1.1.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**
  The LCBC has mainly two (2) planning and development tools for water resources and natural resources of the Lake Chad basin: the Strategic Action Programme (SAP) and the Five-Year Investment Plan (PQI) to 2013-2017.

  To implement the 2025 Vision of the LCBC, SAP outlined five (5) cross-border regional objectives to improve the environmental state and protect the ecosystems of the Lake Chad Basin. It was complemented by the IWRM National Action Plans (NAPs) of member countries. The PQI 2013-2017, consisting of priority actions, was developed in 2011-2012 based on the 2025 Vision and the PAS of which it constitutes the first expression into operational actions.

- **Climate change adaptation in water sector**
  Issues of Climate change adaptation were not explicitly addressed either in the SAP or in the Investment Plan. It has been considered to some extend through only the Water Charter in the principle of sustainable development that shall be applied such that there is a prudent and rational utilization of living resources and the preservation of the rights of future generations to a viable environment.

- **Monitoring and evaluation (M&E) systems**
  There is no monitoring and evaluation system of the performances for the implementation of the policy across borders. On the other hand, projects and programs are the object of monitoring and evaluation of their implementation.

  The implementation of the Water Charter of the basin is provided by the Executive Secretariat which proceeds, every two years, periodic evaluation of its implementation.

  To ensure the effective and efficient implementation of 2013-2017 QIP, it is planned to set up a monitoring and evaluation system based on Results-Based Management (RBM). The system will provide key information on the level of progress of development indicators from expected results. In addition, on the basis of this regular monitoring, the 2013-2017 PQI will be the object of independent evaluations that will ensure the overall performance of the programs implemented.

- **Human rights in water supply and water management**
  The issue of human rights is not explicit in the LCBC water management instruments and cross-border cooperation. It was until the adoption of the Water Charter of the Lake Chad basin that the link elements more or less direct with human rights appeared.
In Article 2 "Definition and use of the terms" the Charter defined "right to water" as a "sufficient, physically accessible and affordable supply of safe water of acceptable quality for the personal and household uses of each one. An adequate amount of safe water is necessary to prevent death from dehydration and reduce the risk of transmission of waterborne diseases as well as for consumption, cooking and personal and domestic hygiene."

The following principles, through which the integration of human rights into water supply and water management is a reality (theoretical), are contained in the basin Charter: the principle of solidarity, right to water and sanitation (Art. 72), the principle of inclusion of gender (Art. 74), the sharing of benefits resulting from the exploitation of genetic resources (Art. 76).

- **Learning review and capacity building processes**

  The process of learning and capacity building activities occupy an important place in the management of water and related resources as well as in cross-border cooperation. They are explicitly covered by the Charter of the water basin and the 2013-2017 PQI who devotes Chapter 13 to "Promotion Activities".

  The process of learning and capacity building actions are also included in the 2013-2017 PQI through Component 3 "Implementation of National Action Plans (NAPs) of Integrated Water Resource Management (IWRM) in member countries of the Lake Chad Basin." Only Niger has not exactly retained capacity building actions. Institutional frameworks planned for the implementation of the SAP and the 2013-2017 PQI are platforms providing learning opportunities of some aspects of IWRM and its implementation in the context of a transboundary basin.

B. **Water governance**

- **Consultation, participation and co-ordination mechanisms**

  The institutional framework for cooperation includes consultation organs at three (3) levels: (i) the Convention and the Statute level, (ii) the Water Charter level (the Parliamentary Regional Committee, Sustainable Development Partners Forum of the Lake Chad Basin), (iii) the implementation of the SAP and the 2013-2017 PQI level (Local Committees). Consultation frameworks provided in the Water Charter and for the implementation of the 2013-2017 PQI are institutionalised but are not yet fully established, the Charter itself has not entered into force.

  Notwithstanding this situation, the Member States of the LCBC laid the concrete benchmarks to promote consultation and participation, particularly through the basic principles of the implementation of the Water Charter which include (Art. 7): The subsidiarity principle, the principle of information and participation, the principle of management by sub-watershed, the principle of taking gender into account, the principle of good environmental governance.

  Several articles of the Charter specify the content and modalities of participation. Among others information and public participation (Art. 73), the special consideration of gender with special attention is given to the needs of women, youth and vulnerable groups (Art. 74).

  In terms of coordination and animation, there are two levels of coordination within the LCBC:
  - coordination at basin scale and between riparian States is provided by the Executive Secretariat,
  - national coordination in a Member State is provided by the National Focal Structure (SFN).

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

  Aspects relating to corruption, integrity and transparency in budgetary procedures are reflected in the financial regulations of the LCBC through "Financial Governance" (Articles 37 and 38).

  Apart from these measures and processes, available and accessible documentation failed to document formal consideration of measures to fight against corruption, of integrity and transparency in budgetary procedures.
**Conflicts management**

At the inception of the LCBC (1964), one of its missions was "to arbitrate disputes between Member States (regarding the use of the basin resources). The LCBC is responsible for receiving complaints, contributing to the settlement of disputes ". Later in 1990, the mission was enhanced to "examine complaints and contribute to the solution of disputes".

However it is with the adoption of the Water Charter in 2012 that the conflict management mechanism was clarified, including conflict prevention, with the assurance of prevention and effective resolution of interstate conflicts related to the management of shared water resource. The Water Charter devotes an entire chapter; Chapter 15 "Settlement of disputes through Articles 85 (obligation of peaceful settlement of interstate disputes), 86 (Friendly settlement), 87 (Appeals to the Commission of the Lake Chad Basin), 88 (Use of regional and sub-regional organizations), 89 (Jurisdictional settlement).

**Benefits of water, energy, and food nexus approach**

The water basin Charter adopted the principle of sustainable development, under which watershed management should help meet the needs of the present generations without compromising those of future generations, by reconciling the requirements of economic development, environmental protection and social development. Although this principle in its formulation gives no precise indication, the "Nexus" approach should show how it has been applied in the planning process of the Lake Chad Basin development, and what are the benefits of the "nexus" approach of which the space of the Lake Chad Basin benefited.

The preparation of these projects and the development of the 2013-2017 PQI took into account the links between sectors at all levels: political dialogue between countries, program by country and concrete programs and projects within LCBC partner countries.

The approach and preparation processes of project and programs, both methodologically and on the content enable to learn valuable lessons on how the themes "nexus" could be taken into account. Arguably the LCBC already applies to an integrated and / or systemic approach and therefore similar to the "nexus" approach.

The common point of these precursor elements is still the weak link with energy aspects - including the 2013-2017 PQI adopted in 2012 and which includes three (3) components: (i) Sustainable use of natural resources and preservation of ecosystems (ii) Improving the quantity and quality of the water of the Lake Chad Basin (iii) Implementation of IWRM National Action Plans (NAPs) of member countries of the LCBC. The three "poles" of the Nexus are rarely simultaneously affected - the "energy security" pole is rarely integrated.

**Benefits of transboundary water management**

The benefits of shared water management of Lake Chad derived from the application of the mandate of the LCBC and the implementation of projects and programs. The Convention, the Statute and any recent Water Charter define the contours and set the modalities for the creation and sharing of benefits.

The Member States solemnly affirm their desire to intensify their cooperation and efforts for the development of the Chad Basin as defined in Article 2 (Art. 1 of the Statute).

In order to obtain cooperation as perfect as possible on the items of Article 5, Member States shall inform the Commission immediately upon their initial phase of any studies and any projects they would propose to launch (Art . 6 of the Statute).

The Water Charter sets out the principles, the framework and the modalities of sharing the benefits from cross-border cooperation. Principles governing the cross-border cooperation are the principle of sharing costs and profits, the cooperative principle, the partnership principle and the principle of complementarity.

3.1.1.5- Overview of lessons learned
The conventional basin of Lake Chad is a "political" watershed in that it is a jointly delimited area by the Member States of the LCBC and does not match a boundary hydrographic basin. Its boundaries are the result of a political decision. With the admission of the RCA in 1994, Sudan in 2000 (observer state) and Libya in 2008, the limits of the conventional basin were extended to 966 955 km² and take into account almost all the water resources that supply the lake itself, floodplains and aquifers in the lake area. These physical characteristics and the fact that all States involved in the management of the lake did not start in 1964 did not promote collaborative management and sustainable exploitation of natural resources of the lake basin.

The Convention establishing the CBC and the 1964 Statute constituted at the beginning the legal and institutional framework of the Lake Chad basin resource management. The Commission has not received sovereignty over the conventional basin because each state had sovereignty over its national portion of the basin. Even Article 8, which devotes supremacy of the Summit of Heads of State remains incomplete. The revised 1990 Convention has not gone very far.

The Water Charter of the Lake Chad Basin (adopted in 2012) comes to reinforce and update the water resource management framework of the basin. This framework promotes good governance, cooperation and solidarity based on regional interest which binds the Member States for this management. Its development was inspired by the existing water charters of the West African sub-region (Senegal River, Niger River) and is part of a logic of innovation by further developing existing provisions in other charters and making new arrangements. At time of writing (October 2015), more than three years after its adoption, only two states have ratified (Niger, Chad); it is therefore not entered into force. To speed up the ratification of the Water Charter, it would have been important from the start for the LCBC, to develop a regional strategy for the ratification including a timesheet and means.

The concomitant development of the Water Charter and four (4) of its annexes is a promising procedure because it saves time for the operationalization of the Charter. Furthermore, and for once, the Water Charter applies to domestic portions of hydrographical basin and hydrogeological basin of Lake Chad. Underground water resources are explicitly taken into account.

LCBC now has the legal and regulatory arsenal and especially a planning document of the medium-term development of the Lake Chad Basin (2013-2017 PQI). It lacks implementing operational documents (entry into force of the Water Charter, institutional framework for implementation of the Charter, operational strategy of implementation of the 2013-2017 PQI,).

There is no performance monitoring and evaluation system of policy implementation at cross border level. However, the international implementation of the Basin Water Charter requires periodic evaluation (every two years) of its implementation. If required, the Executive Secretariat, with the authorization of the Council of Ministers, may commit an inspection mission in the States Parties in order to gather information on the national implementation of the Water Charter. This audit engagement is a step forward for the implementation of the Charter.

3.1.1.6- Practical recommendations

Water Policy framework

a) Regional, sub-regional and cross-border policies related to the management of shared water resources dedicate participation of stakeholders at all levels. However, the consultation frameworks provided in the Water Charter and for the implementation of the 2013-2017 PQI are institutionalized but are not yet fully defined (in their content), in the least implemented. They will be the subject of a new annex to the Charter. LCBC will proceed within a reasonable time in its development in order to make the Charter operational.

b) Although precursor elements of the "nexus" approach have been noted, there is nevertheless a weak link with energy. This could have been resolved in the 2013-2017 PQI which includes three (3) components: (i) Sustainable use of natural resources and preserving ecosystems, (ii) Improving the quantity and quality of the water of Lake Chad Basin (iii) Implementation of
IWRM National Action Plans (NAPs) of member countries of LCBC. By developing at the level of detailed studies, programmes of the components 2 and 3, LCBC could correct this weakness, especially in the project of water transfer from the Oubangui to Lake Chad through the perspective of the Palembo and Bria dam construction.

**Legal and regulatory framework**

a) Since LCBC is member of two Regional Economic Communities (RECs), ECOWAS for West Africa and ECCAS for Central Africa, it must take advantage of this membership to depend the intra-regional cooperation.

b) The non-ratification of the Water Charter by the required number of countries (2/3 on 5), more than three months after its adoption is worrying. Moreover, the low number of States party should push for a quick ratification and enter into force of the Charter. In fact, the Charter as a conventional complementary instrument of an international organization constitutive agreement is essential to the coordinated and integrated management of natural resources of the basin. There is therefore the risk of a large delay in the entry into force of the Convention

**Institutional framework**

There is no completed mechanism for monitoring and evaluating the implementation of the Water Charter and the 2013-2017 QIP. This tool is essential to assess the implementation performance, identify gaps and identify solutions.

**References**

1) LCBC (1990: revised Base Document: Convention, Statutes and Regulations
3) LCBC (2000): Integrated river basin: the Challenges of the Lake Chad Basin, Vision 2025
7) LCBC (2012): Water Charter of the Lake Chad Basin

**3.1.2- Niger River Basin (NBA)**

**3.1.2.1- General information**

The River Niger, long nearly 4,200 km is the 3rd largest river in Africa after the Nile and Congo, and 9th in the world. It drains a basin with an area of 2,170,000 km² of which a hydrologically active area of 1.5 million km² with significant development potential hitherto unexploited. The active Niger River basin is shared by nine (9) founding countries of the Niger Basin Authority (NBA), which are Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Guinea, Mali, Niger, Nigeria and Chad.

The Niger River is composed of two major hydrographical axes oriented as follows:

- For the Niger on the one hand from its source in Guinea, according to a SW-NE direction over more than 1,500 km, and the other hand to its maritime delta according a NW-SE direction over more than 1,600 km ;
- For the Benoue, a major tributary of the Lower stream of the Niger River according to an ENE-WSW direction over 1,000 km.

There are five (5) more or less homogeneous large units or hydro-ecological zones below:

- **The basin of High Niger and Upper Niger** extends over 257,000 km², the upper part (140,000 km²) is supposed to offer the possibility of partial flow regulation over the entire length of the river.
- **The Inner Delta**: it covers a rectangle oriented southwest / northeast over a length of 450 km, a width of 125 km between Kemacina and San in the South and Timbuktu the North.

- **The Middle Niger** goes from Tossaye (Mali) to Malanville (Benin) with an area of 900,000 km² of which 230,000 km² are inactive. The flows are largely dependent on contributions from the Inner Delta.

- **Lower Niger and sea Delta** with an area of 650,000 km² is the wetter area of the basin (Sudan to Guinea zone). It includes the sub basin of the Benoue.

The population living in the Niger basin is estimated at over 130 million inhabitants in 2012 with a growth rate of around 3%.

The NBA was created in 1980 to replace the Niger River Commission dating from 1964. It is intended to promote cooperation between Member States and ensure an integrated development of the basin in the areas of energy, hydraulics, agriculture, livestock, fisheries and aquaculture, forestry development, transport and communications and industry (Art. 3 of the NBA Convention of).

The 5th Summit of Heads of State and Government held on October 29, 1987 in N'Djamena (Chad), decided among other things, the revision of the Convention on the NBA and institutionalization at national level of focal Points who should be used as link between the Executive Secretariat and each Member State. The revised 1987 Convention now assigned to the NBA the following five objectives (Article 4 of the revised Convention of the NBA.):

1) Harmonize and coordinate national policies for the development of water resources of the basin;  
2) Participate in development planning through the development and implementation of an integrated development plan for the basin;  
3) Promote and participate in the design and operation of structures and joint projects;  
4) Ensure the control and regulation of any form of navigation on the river, its tributaries and sub-tributaries,  
5) Participate in the formulation of requests for assistance and the funding mobilization for studies and work necessary for the development of the basin resources.

The main stakeholders involved in the actions and initiatives of the Niger Basin are the statutory bodies of the NBA (Summit of Heads of State and Government, the Council of Ministers, Technical Committee of Experts), users organized in the regional coordination and the national coordination of natural resource users of the basin, the private sector, technical and financial partners.

### 3.1.2.2- Executive summary of water policy document

**Policy framework**

The NBA conducted between 2003 and 2008 a process of developing a shared vision of the Niger River basin in order to create an "enabling environment" for cooperation through a Sustainable Development Action Plan (SDAP) of the basin. This shared vision is akin to a political declaration that defines the long term objectives and commitment of Member States. As such, it is a reference framework for all information for any national or regional development initiative in the basin: "The Niger Basin, a common area of sustainable development through integrated water resource management and related ecosystems, for improving the living conditions and prosperity of populations by 2025."

The SDAP ant its 2008-2027 Investment Programme (IP) were adopted in April 2008. The IP was revised in 2012 with the integration of actions Strategic Action Programme (SAP)\[108\].

The Member States of the NBA agreed to include development activities of the Niger River basin by the year 2027 within three (3) following priority areas:

1) Development of socio-economic infrastructures;  
2) Protection of resources and ecosystems of the basin;

\[108\] The SAP with environmental vocation is the final result of the implementation of the project "Reversing Land and Water Degradation Trends " in the Niger River Basin (ITDTE) funded by the Global Environment Facility (GEF) through the World Bank and UNDP. It covers the period 2011 - 2027.
3) Capacity building and stakeholder involvement.

- **Legal and Regulatory framework**

The legal framework of the NBA consists of a series of regulations; the main ones are:

- The Convention Creating the Niger Basin Authority of October 29, 1987: It defines the purpose, the objectives, the permanent bodies, status of staff, financial resources, and the Authority supervisory bodies.

- The Water Charter of the Niger Basin adopted in 2008 constitutes the reference legal framework for concerted and sustainable management of water resources of the Niger Basin. Together with NBA Convention, the Charter gives a nominative basis for all initiatives based on solidarity and cooperation between Member States. It must be integrated in the legal and institutional system of the Member States. It entered into force on July 19, 2010 with the deposit of instruments of ratification with the African Union and the UN Organization.

The Charter and its annexes is an international agreement concluded in writing between the Member States of the NBA and is governed by the international law (Art. 1.3). It covers all activities devoted to knowledge, governance, preservation, protection, mobilization and use of water resources of the Niger Basin. To this end, the River Niger, including tributaries, sub tributaries and distributaries, is declared an international watercourse (Art.3).

- **Institutional framework**

The institutional framework of the NBA has its legal basis in Chapter III, Articles 5-9 of the Revised Convention of October 29, 1987 on the Establishment of the NBA. The permanent organs of the NBA are: (i) the Summit of Heads of State and Government is the supreme organ of orientation and decision; (ii) the Council of Ministers, which is the Authority monitoring body and responsible for monitoring the activities of the Executive Secretariat and reports to the Summit; (iii) the Technical Committee of Experts (CTE) which is the organ to support the Council of Ministers. It is composed of representatives of Member States and responsible for preparing the sessions of the Council of Ministers to whom it submits reports and recommendations; (iv) the Executive Secretariat (SE) is the executing agency of the NBA and responsible for the administration and implementation of decisions made by higher authorities.

In addition to these permanent and statutory bodies, the participatory implementation of the actions led the NBA to establish the following advisory bodies: (i) the National Focal Structures (SFN) have been adopted in 2004 to replace the National Focal Points. The SFN is composed of structures and actors involved in water resource management and its related sectors in the national portion of the Niger Basin; (ii) the Regional Coordination and National Coordination of the basin users (CRUB and CNUB) have been established in 2004 in conjunction with the Regional Forum of Actors and Water Users (FOREAU); (iii) the Partner Advisory Committee (CCP) examines the possibilities of assistance, defines the nature and the volume, reminds the rules and monitors the implementation of the NBA projects and programs.

Organs devoted to the Water Charter for good governance of water resources of the Niger Basin are: (i) the Permanent Technical Committee (CTP) has a consultative purpose created to facilitate the settlement of all issues relating to water use and contribute to the planning and execution of any project or program interesting the Niger basin; (ii) the Regional Advisory Group (RAG) in charge of implementing the principles of management and good governance for sustainable and shared development of the basin; (iii) the Panel of Experts (PE) is a group of independent experts responsible for making specific technical advice on the development issues in the basin; (iv) Sub-basin Commissions (SBC), responsible for proposing modalities for use of water resources, contributing to the settlement of all issues relating to water use and collaborate in the planning and execution of any project or program interesting the hydrographic sub basin.

3.1.2.3- Vision, Objectives and Priorities of the policy
The priorities of the Niger River basin have regularly been defined based on the concerns of the moment and according to the developed initiatives and actions. The purpose and objectives of the NBA are defined in the 1987 Convention (Art. 3 and 4). Subsequently, the shared vision for the sustainable development of the Niger basin states three (3) areas of intervention indicated above.

Regarding the Water Charter of the Niger River Basin, the objective is to promote cooperation based on solidarity and reciprocity for sustainable, equitable and coordinated Niger River Watershed water resource use. Priorities of the Niger River basin have regularly been defined according to the concerns of the moment and following developed initiatives and actions. Since the adoption of the Water Charter, the needs and priorities among uses were specified in the terms below.

The use of the basin water is to satisfy in a fair and equitable manner:
- The need in water for human consumption;
- The needs for agriculture, animal husbandry, fisheries, industry, navigation, mining, energy, tourism, fish farming, transport and communications, forestry development and environment in general;
- Any other need that the Authority considers necessary (Art.14).

In the use of water resources of the Niger Basin, no use has priority over the other, but in case of competition between several uses, special attention should be given to vital human needs. Notwithstanding this provision, States Parties may mutually agree to establish an order of priority in the use of water resources of the basin (Art. 15).

3.1.2.4- Success components of good water governance

A. Management mechanisms

**Water resources planning tools**

The NBA has mainly three (3) water resources and related resources of the Niger River Basin planning and development tools: Sustainable Development Action Plan (SDAP) and its 2008-2027 Investment Plan (IP), the Strategic Action Programme (SAP) and the 2016-2025 Strategic Plan (SP) adopted in 2012. It initially covers the period 2013-2022. Taking into account the delay in the process of elaboration and adoption of the first operational plan, the period covered by the SP now runs from 2016-2025. It includes the strategic axes and results that will guide the action of the NBA for the ten (10) coming years. The implementation of that Strategic Plan will be made through a "program approach", while the "Project Approach" prevailed. The implementation of the SP is carried out through three-year slippery Operational Plans. The first Operational Plan (PO.1) covers the period 2016-2018.

The Strategic Plan is available in five (5) areas: (1) Water as a lever for economic development; (2) Preservation of ecosystems of the basin; (3) innovative and sustainable funding; (4) Cooperation with States and partners; (5) Organizational Performance.

The first two axes are intended to generate tangible benefits for the people, on the double plan of wealth creation and preservation of the basin as a shared resource. Axes 3 and 4 are the two main pillars on which the NBA will act to increase the impact and ensure the sustainability of economic and environmental benefits to the population.

**Climate change adaptation in water sector**

Concerns about climate change in general, and adaptation measures to climate change in particular are integrated in water resource management of the Niger basin in both the IP and the PO.1.
- In the IP through Component No. 2 "Protection of resources and ecosystems" and sector 2.4 on "Natural Risks and Climate Change";
- In the PO.1 through axis 2: "Basin Ecosystem Preservation" and the corresponding strategic outcome, "Targeted ecosystems are preserved in a sustainable manner."

Recommended actions are:
- Development of hydrological forecast modeling tools;
- Monitoring the implementation in structure, minimum low flows management;
- The development and implementation of a regional strategy to climate change adaptation in support to Member States.

**Monitoring and evaluation (M&E) systems**

The Investment Plan (IP) has a set of monitoring and evaluation tools enabling to establish a continuous and consistent monitoring of its implementation, measure objective achievement, assess the impact and effects of interventions and ensure efficient financial management. The M & E system is dynamic to enable it to adapt to changes in the execution and improve progressively in its application.

The PO.1 advocates an M E mechanism based on three interrelated components, namely monitoring of performance, monitoring of outcomes, and supervision, audit and evaluation.

The 2016-2018 PO.1 recommends an M E mechanism based on three interrelated components namely the implementation monitoring, monitoring results, and supervision, audit and evaluation activities.

As we can see, there is not a tracking system - performance evaluation of the implementation of policies across borders.

**Human rights in water supply and water management**

Concerning the integration of human rights in water supply and water management, no mention is made in the Convention establishing the NBA. It was until the adoption of the Water Charter of the Niger River basin that for the first time and relatively clear, that human rights concepts and notions into policies and legal instruments appear.

In his first article, paragraph 11, the Water Charter defines the "right to water" as the fundamental right to sufficient, physically accessible supply and affordable, to a safe and acceptable quality water for each one personal and domestic uses. Further, the Charter stipulates that State Parties base their actions on the principle of participation and the fair and reasonable use. For this purpose, circumstances and relevant factors are taken into account, including among others, the economic and social needs of States and populations; sharing water resources among all users, aquatic systems and associated ecosystem; the population dependent on the watercourse in each state of the Basin; the right to water of the basin populations; etc. No ranking is introduced between these factors. Thus, the importance to be given to each of them depends on the particular circumstances of each sub-basin (Art. 4).

**Learning review and capacity building processes**

Learning cross-border cooperation mechanisms and reinforcing actors for good water governance and sustainable management of water resources of the Niger River basin are at the center of the action of the NBA. A complete component of the SDAP is dedicated to it: "The capacity building and involvement of actors.” The IP devotes four components namely (i) the definition and implementation of legal and regulatory tools, (ii) building the NBA capacities, (iii) reinforcing the effective participation of water users, (iv) reinforcing the NBA partners.

Learning processes and capacity building actions are also taken into account in the 2016-2018 PO.1 through axis 5 "Organizational Performance". The agreed institutional frameworks for the implementation of the IP and the PO.1 are platforms providing some learning opportunities aspects of IWRM and its implementation in the context of a transboundary basin.

**B. Water governance**

**Consultation, participation and co-ordination mechanisms**
There are several consultative frameworks that give stakeholders the opportunity to be informed and consulted in order to understand the problems, alternatives and solutions and advise on analysis, alternatives / solutions. These consultative frameworks are: the National Focal structures (SFN), the Permanent Technical Committee (PTC), the Regional Coordination and the National Coordination of users of the basin (CRUB and CNUB), the sub-basin commissions (SBC) the consultation framework (Regional Forum of Water Actors and Users, FOREAU), the Regional Advisory Group (RAG), the Consultative Committee of Partners (CCP), the Panel of Experts (PE).

The Charter devotes two chapters to participation. Chapter II (General principles) in its Article 4 states that "State Parties base their actions on the principle of participation and fair and reasonable use. Chapter VII is fully devoted to public participation. Aspects of participation that are highlighted go from access and right to information (Art. 25), modalities of participation (Art. 26).

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

Aspects relating to corruption, integrity and transparency in budgetary procedures are reflected in the financial regulations of the NBA Art. 10.3 of the revised Convention for the NBA). Financial and budgetary operations are controlled by a mechanism comprising a management control committee and a financial controller (Art. 13).

The available and accessible documentation failed to document formal taking into account fighting against corruption, integrity measures and transparency in budgetary procedures.

- **Conflicts management**

The revised Convention of NBA (1987) address conflict management in terms of settlement of disputes arising between Member States in the interpretation or application of the Convention (Art. 20).

To find more elaborate mechanisms for conflict management, it is necessary to refer to the Water Charter. Chapter IX (Dispute Settlement) is dedicated to conflict management. Articles 29-32 indicate that this is a dispute between two or more riparian states and specify the terms of settlement.

- **Benefits of water, energy, and food nexus approach**

The development of the SDAP responds to a need to highlight the potential of water resources of the Niger River basin in the fight against poverty, improve living conditions of populations and promote sustainable development and growth. The Niger Basin Water Development and Management Master Plan (SDAGE-BN) finalized in 2007 retained in Component 1 "Development of socio-economic infrastructures" three categories of actions and measures: (1) Development of structural developments of common interest, and / or cross-border nature, (2) support actions for economic development outside large structuring facilities, (3) support for the development of other infrastructures and basic services. The main sectors concerned by this component focuses on drinking water supply and sanitation, irrigated agriculture, fisheries, livestock and hydropower.

This set has been designed using the "nexus" approach in considering a more holistic and systemic design of interventions in terms of development, taking into account the respective needs and interrelationships between related sectors. The benefits of the "nexus" approach in a framework of integrated management of water resources required the analysis of the compatibility and complementarity of structuring works in the basin. This analysis focused logically on the construction of multi-use large dams and associated measures and the development of hydro-agricultural infrastructures, because they will have a significant impact on water resources in the basin. This analysis led to the prioritization of major structuring developments, according to the great development objectives on the basin, with technical, environmental and economic criteria.

- **Benefits of transboundary water management**

For nearly thirty-five (35) years, the countries bordering the Niger River have been cooperating continuously with a level of cross-border cooperation that has evolved uneven alternating successful good times with difficult times characterized by disengagement often of partners, sometimes of
certain member countries of the NBA. But never has this cooperation been interrupted or suspended despite difficulties met.

By definition, the purpose of any organization of shared water resource management is cooperation between Member States in order to bring to each one and everyone, the benefits of joint management of shared water resources. Actions in NBA fit perfectly into this logic. In fact, all NBA programs and projects are designed and planned in the spirit of maximizing the benefits of this cooperation and that benefits generated from this cooperation are used to sustainably improve the living conditions of the populations.

The Member States of the NBA like all other countries sharing of shared waters, decided to cooperate because they believe it is in their interest to do so. In doing so, the long years of cooperation of the Niger River States have enabled a number of benefits or advantages

- For the river: improvement of the knowledge on the Niger Basin water resources, the development of an observatory and an information system, the conservation, the protection of water resources and related resources, ...
- Because the river: reinforcing cooperation between riparian States in other areas of activity,
- Beyond the river: there is a vast potential for human development which is gradually realized through joint actions, and many other less tangible political benefits.

3.1.2.5- Overview of lessons learned

- The inherent characteristics of the basin itself create governance problems:
  - Presence of 9 Member States (including 8 Francophone and 1 Anglophone) which implies a certain heaviness in decision making and makes it difficult to identify common interests;
  - Inequality in relation to the availability of the resource (position downstream/upstream; riparian country of the main stream or the tributaries);
  - Management problems and tensions on the resource and importance of the stakes in terms of sustainable development.

- The member states of the NBA now have a planning document for long-term development of the Niger River Basin (SDAP and IP) and operational Implementation documents (SP and PO). The necessary resources for the implementation of the IP are to be mobilized.

- The Water Charter of the Niger River basin complements and reinforces the political and legal system for cross-border cooperation among the riparian states of the Niger River. It serves to deepen cooperation, and for the first time, the issue of common works or public interest has been addressed explicitly. It will now be to move to the next level by realizing these noble intentions, which is not won in advance.

- The NBA experienced a cyclical evolution in the implementation of its mandate. Knowledge of the Basin Development state has long remained insufficiently consolidated. Today, and despite the Shared Vision process, Member-States are sometimes still confined to a national resource management. The considerable work achieved in the process has so far resulted in only an amount of national works, not fully optimized or coordinated.

- The institutional framework for transboundary cooperation has significantly been reinforced since the last ten years with the establishment of consultation and stakeholder participation mechanisms. The NFS and all platforms provided in the Water Charter of the Niger River basin aims to qualitatively improve participation.

- Aspects related to water management and good governance (stakeholder participation, capacity building, benefits of cooperation, benefits of the "Nexus" approach, conflict management etc.) are relatively well integrated into the framework of water resources management. However, issues related to the integration of human rights, monitoring and evaluation and performance indicators for the implementation of the SDAP and the SP, the fight against corruption, integrity and budget transparency, are inadequately addressed or not at all.
In the use of water resources of the Niger Basin, no use has priority over the other. The NBA member states have made this deliberate choice to reflect on the one hand, the complexity of the issues of cooperation, and priorities may vary from one country to another, on the other hand. However, in case of competition between several uses, special attention will be given to vital human needs. They thus provide an opportunity to agree together on a priority when needed.

Certain decisions for several years have not been followed by real effect, such as the establishment of the National Focal structures (not fully functional), the necessary institutional reorganization for the implementation of the Investment Program or the establishment the Permanent Technical Committee. Chronic difficulties of collecting state contribution arrears (even if temporarily improved during the process) generate significant contribution arrears and are all negative signals to partners.

3.1.1.6- Practical recommendations

Water Policy framework

a) The states bordering the Niger River have made remarkable efforts to promote the participation of stakeholders. But for this participation to help improve the quality of cooperative management, knowledge and access to information are needed to build confidence, develop ownership and common understanding. The NBA will continue its work on the matter by seeking ways and means of constructive commitment of stakeholders. It is therefore essential to engage relevant stakeholders at the appropriate time; this commitment must be considered as a long-term commitment.

b) The long years of cooperation between the states bordering Niger River helped to draw many benefits or advantages other than those from the River. In fact until then, no work, no development carried out in a country benefited another country. The countries have neither carried out common or of mutual interest work or developments. The foundation for this advanced form of cooperation does not exist until the development of the SDAP and the adoption of the Water Charter. Under current conditions, determination, political will and commitment at the highest level are needed to move forward.

c) Member states of the NBA now have a planning document for long-term development of the Niger River Basin (SDAP and IP) and operational documents for implementation (SP and PO). Mobilization of necessary resources for the implementation of the IP of the SDAP is needed.

Legal and regulatory framework

Dispute resolution mechanisms are an important element in any legal system, particularly in a context of management of international watercourse. The laws on international freshwater are effective in practice when riparian states agree on methods for the peaceful settlement of disputes, and the means of coercion in the event of non-compliance. The legal documents of the NBA include mechanisms to prevent conflicts, particularly the NBA Convention and the more recent Water Charter. It is therefore important that NBA member countries take the necessary measures to facilitate the entry into force the water charter.

Institutional framework

The IP devotes four (4) components for capacity building actions, namely (i) the definition and implementation of legal and regulatory frameworks, (ii) building the NBA capacities, (iii) reinforcing the effective participation of water users; (iv) reinforce the NBA partners. However, the 2015-2017 PO only address building the NBA capacities, which only targets the improved performance of the Executive Secretariat and does not promote good governance of water in the Niger River Basin. The other capacity-building aspects are also important, if not more important which must be priority addressed.

The current M&E system does not affect the performance of the implementation of policies across borders. It will be to apply the performance indicators related to governance developed between 2007
and 2010, as part of the project "Development of IWRM Performance Indicators for the management of African transboundary basins." These indicators have been defined on selected transboundary basins including the Niger River.

References

2) NBA (2008): Sustainable Development Action Plan (SDAP) and Investment Programme (IP)
3) NBA (2011): Five Year Plan Priority (PQP) 2008-2012
4) NBA (2012): Operational Plan (OP) from 2013 to 20,123
6) IOW (2014): Summary of experiences of transboundary basin organizations: Good Practices and Recommendations

3.1.3- Senegal River Basin Organization (OMVS)

3.1.3.1- General information

The Senegal River located in West Africa flows in the East-West direction over 1,790 km and covers a catchment area of 500 km$^2$ which is 337 spans four countries (Guinea, Mali, Mauritania, Senegal) The River as such do that through three (Guinea, Mali, Senegal) and forms the border between Senegal and Mauritania.

It is born from the meeting of Bafing, "black" river of Fouta Djalon down to 800 meters, and Bakoye, "white" river that rises on the Mandinka plateau. Its main tributary is the Faleme which drains the entire eastern part of Senegal. Bafing alone provides almost half of the annual flow of the Senegal River. The main tributaries of the Senegal River below Bafoulabe are Kolombine, Karakoro, Gorgol, right bank, and Faleme, left bank.  

The Senegal River basin is composed of three main regions - the Upper Basin, the Valley and the Delta - which are distinguished by their topographic and climatic characteristic.  

- **The Upper Basin**, which "provides almost all water supplies because it is relatively wet" not experiencing the same problems related to water scarcity.

- **The Senegal River Valley**, an area of flooding in width 10-20 km, is an alluvial plain surrounded by semi-desert lands. Each year, this agricultural area is fertilized by the flooding of the river and as small clay bowls named waloo, which are the foundations of one of the two types of agriculture practiced by local populations.

- **The Delta of the River**, a region characterized by high biodiversity, has several arms, but only one mouth. Before the launching of the Diama dam, during low water, the salt waters of the Atlantic Ocean went back there.

The total population of the Senegal River basin is 3.5 million, but note that a large majority (about 85%) live near the river.

The establishment of OMVS is the culmination of a long series of attempts dating back to the colonial period. However, the process of creating a real basin organization responsible for cooperation between riparian States began in 1968 with the creation of the Organization of States Bordering the River Senegal (OERS) in Labe (Republic of Guinea).

---

IOW (2014): Summary of experiences of transboundary basin organizations: Good Practices and Recommendations

---

110 Ibid 1
111 Ibid 1
112 UNESCO (online)
113 OMVS, "Physical characteristics" [Online]
Guinea retired in 1971 and 11 March 1972, the three riparian countries (Mali, Mauritania, Senegal) adopted the Convention on the Status of the river. In its first article, the Convention says international river, including tributaries, and says in his subsequent articles, the will of the signatories to "develop close cooperation to permit the rational exploitation of resources of the Senegal River and guarantee freedom of navigation and equal treatment of users "(Article 2). Article 11 stipulates that "the Contracting States agree that they will create a joint body cooperation that will be responsible for ensuring the application of this Convention to promote and coordinate research and development work of the Senegal River ". Thus was created the same day the current OMVS (Organisation pour la mise en valeur du fleuve Sénégal). Guinea has reinstated OMVS in 2006.

According to the first article of the Convention on the establishment of the OMVS, it is a common organization of cooperation for development of water resources of the Senegal River basin. To this end, OMVS is implementing an integrated management program and joint water resources and ecosystems for sustainable development of the basin. It is responsible for:

a) the application of the Convention on the Status of the Senegal River;
b) the promotion and coordination of studies and development work of the Senegal River basin resources on the national territories of Member States;
c) any technical and economic mission that the member states will want to entrust it.

3.1.3.2- Executive summary of water policy document

- Water Policy framework
The Charter of the Waters of the Senegal River\textsuperscript{114} water is a legal document that takes place together with the Convention on the Status of the Senegal River and the Convention establishing the OMVS, water policy document and is a major contribution to the implementation of these conventions. It is inspired by the UN Convention of 1997 on international watercourses (to which it refers in the preamble) mainly to strengthen the disclosure requirements between riparian states. It also complements the review and approval procedures for new users of water resources projects. Finally, it specifies the principles which should govern the allocation of water resources (and in more detail the UN Convention as this is to regulate a specific situation, and not to establish agree- framework) ; for the current distribution of the resource by state and sector.

The integration of environmental issues is dedicated in law by the Charter of the Waters of the Senegal River, which also determines a number of rules for the preservation and protection of the ecosystem balance in the basin. It also calls on states to work towards "harmonization of national legislation" in this area (Art.16).

- Legal and Regulatory framework
The legal framework of the OMVS consists of a complete conventional arsenal, strong and consistent composed of four (4) main instruments are the foundation of the OMVS.

The legal regime of the stream is defined by a first convention adopted March 11, 1972 (hereafter, Convention status). The same day, a second convention creates OMVS (the OMVS Convention) and lays down rules for its operation and management of water resources entrusted to it. In 1978 and 1982, finally, the status and funding of certain adjustments are provided respectively by a third and a fourth convention (the convention common works and Financing Convention).

This legal framework reflects the fact that the political project of the OMVS far exceeds the only consultation. It seeks regional integration through the development and pursuit of a water resources development plan for the basin. A priori it thus far surpasses the concept of management at the basin scale (just set by the doctrine through the rules of Helsinki) as Integrated Management of Water Resources (made in 1992). The legal model of the OMVS has three "traits" characteristics.

\textsuperscript{114} The Water Charter was adopted in 2002, May.
First, it reflects a strong desire for legal certainty and predictability (which does not necessarily displease investors), since each element of the collaborative process is the subject of an international convention (status the river, creating and operating the basin organization, definition of rules relating to infrastructure and funding).

Then, it must be noted the affirmation pronounced values underlying this legal framework: equality (of right of "owner" and "veto" - through the prior approval), solidarity (destiny bound by common items) and equity (distribution of costs and benefits).

This basic legal framework was enhanced in 1997 two conventions establishing the dams of Diama management structures (Management Company of Diama dam (SOGED) and Management Company of Manantali dam (SOGEM)).

**Institutional framework**

Even innovative, the legal framework would remain dead letter if it had provided a solid institutional framework for its implementation. The institutional framework of the OMVS the following organs and structures: the Conference of Heads of State and Government, which sets policy for cooperation and development of the OMVS (Article 3 OMVS Convention); a Council of Ministers is the body design and control of the Organization; a High Commissionership is the executive body responsible for implementing and reporting on Council decisions: a Permanent Water Commission (CPE) advisory body "responsible for defining the principles and modalities of the distribution of river water Senegal between sectors of water use: industry, agriculture, transport "and is also responsible for issuing notice to the attention of the Ministers Council and recommendations on equitable use of water resources between different . uses the composition of the Commission illustrates the concern to better involve the public in water management: in addition to state representatives and technicians who are full members, users, local authorities, NGOs and management committees decentralized views were granted observer status.

For advisory bodies we note the existence of a Regional Planning Committee (RPC) composed of representatives of States; it is responsible for issuing opinions and to propose measures to ensure consistency or harmonization of national development policies in the river basin; a Consultative Committee (CC) consisting of representatives of the High Commission and governments and organizations to assist the Office in mobilizing human and financial resources; Local Coordination Committees of (CLC) and National (CNC) to ensure effective public participation in the implementation of the OMVS programs. The degree of public involvement is limited; he meets a logical consultation, not participation in decision making.

3.1.3.3- Vision, Objectives and Priorities of the policy

The specific objectives of the OMVS are:

- Achieve food self-sufficiency for the people of the basin;
- Secure and improve the incomes of people in the valley;
- Preserve the equilibrium of ecosystems in the basin and in the sub-region;
- Reducing the vulnerability of Member States' economies to climate risks as well as external factors;
- Accelerate economic development of Member States.

As part of the formulation of the Strategic Action Programme (SAP) in the Senegal basin, OMVS has developed the 2030 Development Vision of the Senegal River Basin. This view advocates integrated, coordinated and sustainable basin resources in order to: (i) food security, social well-being and a strong and sustained economic growth; (ii) ensure the restoration and conservation of ecosystems and biodiversity of the basin; (iii) consolidate the common destiny and entrench the spirit of solidarity, sharing, fairness and peaceful coexistence among peoples and States bordering.

The Charter of the Waters gives priority to satisfaction of basic needs and the safety of people, according to three different settings (art. 6). The use of water resources intended to meet fairly (art. 8):
- The drinking water needs of people, particularly the most vulnerable;
- The needs for agriculture, livestock, forestry, fish farming, fishing, wildlife, flora, the environment;
- The water needs for energy production;
- The water needs for industry;
- The need for water for navigation.

3.1.3.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**

OMVS has mainly three (3) planning and resource development tools: Strategic Action Programme (SAP), the Integrated Water Resources Management Plan (IWRM Plan) and the Water Development and Management Master Plan (SDAGE).

a) The Strategic Action Programme (SAP)\(^\text{115}\) aims to provide the OMVS and its partners for a sustainable cross-border management tool environment of the Senegal River basin.

b) The Integrated Water Resources Management Plan (IWRM Plan). OMVS has implemented IWRM formally through the IWRM-I 2007-2013. The second phase of the Integrated Management of Water Resources Project and the development of multi-purpose water (IWRM-II), a period of 7 years (2014-2021), aim to enhance joint management of water resources for sustainable development on the economic and social environment in the Senegal River basin. The IWRM-II is structured around three (3) components that support the project's development objective: (i) institutional development; (ii) development of multi-purpose use of water resources; (iii) management and infrastructure planning.

c) The Water Development and Management Master Plan (SDAGE) for 2025 provide decision makers the ability to conduct multi-sectoral policies in a balanced and equitable manner among States. The SDAGE aims at strengthening the capacities and regional planning tools, harmonize policies and legislation to strengthen the coordination of the various stakeholders, to avoid over-exploitation of the environment and natural resources, allowing them efficient, equitable and sustainable, while allowing for development of human activity in the watersheds of the river Senegal. Finally, it is a tool to reduce the risk of conflict related to the availability or accessibility to the water resource, thus contributing to peace and stability in the sub region

- **Climate change adaptation in water sector**

Measures to adjust to climate change are planned as part of PGIRE-II. These actions aim to improve climate resilience in the river basin. The recommended measures are recalled below.

- Sub-component 2.4: Implementation of pilot approaches to improve resilience to climate change; it is to focus on demonstrating adaptation measures to climate change, which are based on the experience gained in the 1.3 and 3.2 subcomponents.
- Sub-component 3.2: Planning for Climate Resilience: This sub-component will support the development of the database to identify the impacts of climate change and support future planning of water resources in order to increase climate resilience.

- **Monitoring and evaluation (M&E) systems**

Because of its regional character, the implementation of IWRM-II falls OMVS has established a Project Coordination Unit (PCU) and a Regional Steering Committee (RSC).

\(^{115}\) OMVS, the Strategic Action Programme (SAP) addresses the basin wide priority transboundary environmental concerns in the Senegal River Basin, final version, 2008
The extent and scope of the regional multisectoral project require an M & E system that is robust and decentralized to facilitate systematic data collection in each Member State. Data will be sought for each of the indicators identified in the results framework and will be aggregated at national and regional level by OMVS.

A mid-term review will assess progress and decide on changes to be made if necessary. In particular, this review will consider: (i) the quality and relevance of the results in relation to specific objectives, (ii) the organizational and management framework, (iii) the level of financial execution; (iv) the difficulties encountered and the recommended solutions.

- **Human rights in water supply and water management**

Fairness and equal treatment of water users figure prominently in the Convention on the Status of the Senegal River. The Member States solemnly declare their will to develop close cooperation to permit the rational exploitation of resources of the Senegal River and ensure freedom of navigation and equal treatment of users (Art. 2).

Legally, local development is also in the spotlight. The Senegal River basin Water Charter sets objectives which include achieving self-sufficiency for the people of the valley and securing and enhancing revenue (Article 5).

The distribution of any of Senegal river water guidelines aim to ensure that populations of the riparian States, the full enjoyment of the resource, while respecting the safety of persons and structures, and of the fundamental human right to a clean water, in the perspective of sustainable development (Art. 4 Charter).

Further the Charter specifies that the vital needs and the safety of people are not only obligations but have priority in the distribution of water between uses (art. 6).

- **Learning review and capacity building processes**

The PGIRE-II like the previous actions of the OMVS places great emphasis on learning and capacity building. All three components address in one way or another, capacity building of institutions and stakeholders at all levels. Capacity building actions are complemented by learning processes and mutually reinforcing. The recommended actions are recalled below.

  - The sub-component 1.2: Modernisation and institutional capacity building of the OMVS and related structures
  - The sub-component 1.3: Capacity building of the OMVS and local and national structures to lead efforts to adapt to climate change in the region.
  - Sub-component 2.1: Hydro-agricultural Development and Water Resources Protection: capacity building activities include training and other support for better water resources management, and operations and the sustainable maintenance of installed systems across the organization, training, IEC (Information, Education and Communication), and support to various groups of water users and producers and their cooperatives.

**B. Water governance**

- **Consultation, participation and co-ordination mechanisms**

Within the Mitigation and Monitoring of the Environmental impacts Programme (PASIE) (1997-2001), OMVS has set up structures to enable the participation of stakeholders in the management of the Senegal River or the Local Coordination Committees (CLC) and the National Coordinating Committees (CNC). These consultative structures allowed the coordination of program activities at national and local level and participation of Basin populations.

Furthermore, the integration of a transverse Component Gender and Public Participation in the PGIRE is particularly innovative. This component comes in support of activities, Information, Awareness and Communication component "Institutional Development" and "Development of multi-purpose use of water resources." Its implementation is based on a strategy and action plan for
gender mainstreaming in the various sub-components of the Project in accordance with the policy and strategy of AMCOW for gender mainstreaming in the water sector in Africa (May, 2011).

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

  The available and accessible documentation failed to document taking into account the formal measures against corruption, integrity and transparency in budgetary procedures.

- **Conflicts management**

  The Charter of waters of the Senegal River basin main purpose is to establish the principles and water allocation arrangements between uses across the entire basin. The institutional framework by setting up consultation and consensus rule as a system of decision making, brings out a basin awareness and develops the feeling of sharing a common resource which leads to the need to decide and act together for management rational long-term where conflicts are resolved.

  In this institutional arrangement, although not issuing an advisory opinion, the Permanent Water Commission (CPE) remains a cornerstone in the prevention and resolution of conflicts. Through its consultative and technical nature, it can go as far as possible in the analysis of files while leaving the final decision to the higher court, the Council of Ministers, which itself may involve as a last resort the Conference of Heads of State and Government. The CPE has prerogatives large enough to give opinions.

- **Benefits of water, energy, and food nexus approach**

  The very ambitious OMVS program is based on the integrated development project adopted in 1972. It includes three areas, Agriculture, Energy, Navigation (Environment constitutes a fourth, but it was added that 'later).

  Under the PGIRE-II, the following sub-components shows a certain level of consideration of the "nexus" approach:
  - Sub-component 2.1 Hydro-agricultural development and water resources protection
  - Sub-component 2.2 Sustainable management of fisheries and aquaculture
  - Sub-component 3.1: management of dams and hydropower development
  - Sub-component 3.3: Developing navigation along the Senegal River

- **Benefits of transboundary water management**

  By definition, the purpose of any organization of water resources management is shared cooperation between Member States in order to bring to each and every one, the benefits of joint management of shared water resources. OMVS is an illustration. Indeed, all the OMVS programs and projects are designed and planned in the spirit of maximizing the benefits of this cooperation so that the benefits from this cooperation are used to sustainably improve the living conditions of the population.

  The PGIRE-II contributes to the strengthening of regional integration among the riparian countries of the Senegal River basin, the development of multi-purpose use of water resources, the impulse to growth and the improvement of livelihoods of communities. The components of PGIRE II that illustrate the benefits of shared water management in the Senegal basin are presented below.
  - Component 1: Institutional Development: The general objective of Component 1 is to build capacity for cooperative management. It supports both institutional development that the implementation of the project through the following subcomponents:
    - The sub-component 1.1 Update Inclusive Framework and strengthening the role of Guinea within the OMVS The subcomponent 1.3 Capacity building of the OMVS and local and national structures to carry adaptation efforts climate change in the region
  - Component 2: Development of multi-purpose use of water resources: The general objective of this component is to promote income generation and improved livelihoods for the people of the basin.
  - Component 3: Planning and Infrastructure Management: The overall objective of the component is to advance the resilient water resources planning and development climate in the region.
3.1.3.5- Overview of lessons learned

- The success of the OMVS is undeniably linked to its innovative legal framework as well as its institutional framework characterized by a strong political commitment and ambitious program objectives. OMVS is often presented as a reference basin organization. This qualification seems to us justified to the extent that the success of the organization depends on a strong and comprehensive institutional and legal framework that allowed exceeding the voltage sources to launch an ambitious process of cooperation and to implement a major program.

- Indeed, this success is due to two basic elements: its mandate and the political commitment of Member States. First, the scope and clarity of its mandate: OMVS is responsible for achieving food self-sufficiency of the basin populations, improve their income, preserve ecosystem balance, speed up economic development and reduce its vulnerability to climate hazards. Moreover, the level of political constructive engagement of its member States that is related to trust each other and that is reflected among others by its institutional architecture and achievements.

- The policy is regularly present in the control of development planning in the Senegal River basin. Whenever necessary, the directions to take are always clearly indicated, with conviction and determination, that operationally, the High Commission can effectively and efficiently implement the various programs. This policy direction can be illustrated among others by the Nouakchott Declaration of 21 May 2003 on the strategic orientation framework for OMVS. This Statement defines the approaches, guiding principles, strategic objectives and decision support tools.

- The Charter of waters, adopted in May 2002 complements these conventions so-called "first generation". It combines law and operability thanks to its principles, modalities, shared management mechanisms and annexes on the modulation of optimal choices.

- Citing the preamble of the United Nations 1997 Convention on the Law of International Watercourses uses for purposes other than navigation, the Charter appears as a rival of IWRM stressing that "sharing water resources between uses, their management and development will be carried out taking into account the objective of sustainable development, involving different actors in a comprehensive and integrated approach.

- The reintegration of Guinea is another major challenge for the future of the basin. As the upper stream State, everything that the country does may have consequences on the waters of the basin. Guinea has joined the organization as of March 21, 2006 and until that date, its absence did not allow a comprehensive consideration of the environment and future achievements.

3.1.3.6- Practical recommendations

- **Policy framework**
  a) The Charter of waters applies to the entire drainage basin of the Senegal River including tributaries, distributaries and associated depressions (art. 3) but does not include transboundary aquifers (Art. 1-17), except those whose total and/or Partial renewal is associated with hydrological regime of the river (art. 1-20). The effective integration of groundwater is essential as taking into account the integration of these with surface water.

  b) OMVS has already expressed its willingness to integrate groundwater to its work program, but more data are needed to take off of the program\(^\text{116}\) (of which the progress is very limited compared to other groundwater. OMVS could again be inspired by Resolution No 63/124 of the

---
\(^{116}\) PIDA could invest in the collection and analysis of data and short term, invest in the development of these underground resources.
UN General Assembly on the law of transboundary aquifers to include, among others, groundwater\textsuperscript{117} the scope of the Charter.

\textbf{Legal and Regulatory framework}

a) For the consecration of the principles, taking into account the different uses and the importance of balancing the multiple interests present within the basin and through the integration of principles advocating the preservation of the environment, the river Senegal Water Charter's clearly falls within the now dominant paradigm of IWRM. However, despite the progress it promised in regard to better integration of the public in decision making, it is clear that progress remained timid, because of the provisions that appear too few, but most of which the practical application set is too little defined.

b) The Charter of waters establishes the principle of public participation. But despite the announcement in its second article that one of its objects is to define "the terms of participation of water users in the basin resources management in decision-making", only Article 23 seems conferring a new power, albeit at remaining very limited, local authorities and representatives of civil society.

\textbf{Institutional framework}

a) The passage of CLC as interfaces that should ensure the compensation of the population towards a participation platform role at the basin scale, making these structures ipso facto the cornerstone of the participation of all stakeholders, has not had the desired effects. After several years of existence, it appears that the CLC are not fully operational, public participation is dependent on funding. Indeed, when the funds dry up, we see that the activities undertaken also stop. If there is no active project, things tend a bit towards lethargy. This shows a lack of commitment to the project by its members and states that if participation structures have been established, they do not adequately challenge local actors. It should strengthen the CLC that, in general, are in great lethargy.

b) Certainly, significant improvements in the inclusion of people in decision-making processes were observed. These improvements consist mainly of increased communication OMVS towards the people and by sporadic activities that usually take the form of consultations. However, while commendable, these initiatives are not sufficient to achieve the participatory management referred to by OMVS now bears watermark. Among the most urgent amendments that it is for OMVS to bring its policy, it should be given to the establishment of an intermediate structure between the CLC and local communities to bring participation in a scale more local.

c) The observer status in the Permanent Water Commission (CPE) may be granted to certain entities of Member States. They will participate effectively in the work of the CPE. Observer status may be granted to: users of Representatives; Representatives of local authorities; Representatives of Non-Governmental Organizations; Representatives of decentralized management committees.

d) While the texts of the OMVS include mechanisms to prevent conflicts, they might arise because enrolling in the register of specific disputes to the management of international watercourses that may also decline in sectoral conflicts or space (upstream against downstream), or awareness of local populations deficit international character of the river. Therefore, beyond the text, dialogue, negotiation and consensus decision-making rule is inevitable. The use of higher instance, every time we reached the limits of an organ to solve a problem is a guarantee to always find a solution within the OMVS.

\textbf{References}

\textsuperscript{117} "Degree of cooperation in the management of some transboundary aquifers".
3.1.4- Orange Senqu River Commission (ORASECOM)

3.1.2.1- General information

The Orange-Senqu River Basin originates in the highlands of Lesotho and it runs for over 2300 km to its mouth on the Atlantic Ocean in Namibia. The river system is one of the largest river basins in Africa with a total catchment area of 972,783 (almost 1.0 million) km² and encompasses all of the Lesotho, a significant portion of South Africa, Botswana and Namibia. In terms of spatial coverage, about 64.2% basin lies in South Africa, 24.5% in Namibia, 7.9% in Botswana and 3.4% in Lesotho.

Within the geographically extremely heterogenic Orange-Senqu River basin there are enormous climatic differences. The climate in the basin is usually discussed in terms of the following regions.

- the mountainous terrain of the Maloti Mountains of Lesotho with relatively temperate climate;
- the undulating dry grasslands of the southern Highveld, a climatic and geographic transition zone from the mountainous regions; and
- the western region of southern Africa, containing three desert systems, characterized by harsh arid conditions: the Succulent Karoo, the Nama Karoo, and the Southern Kalahari.

According to Köppen-Geiger Climate Classification118, the basin is located in a dry and semi-arid climate (B and C) (KOTTEK ET AL. 2006).

Hydrology of the Orange-Senqu River basin varies from one part of the basin to another, in terms of annual rainfall, runoff and evapotranspiration. The contributions to the overall flow of the Orange Senqu River are principally determined by rainfall. Precipitation decreases sharply from east to west, from source to outflow. Although Lesotho covers only 3.4% of the total catchment area, it contributes around 40% of the total runoff.

The main tributaries of the Orange are the Senqu in Lesotho, the Vaal in South Africa and the Fish in Namibia. The mean annual precipitation varies between 2,000 mm in the Lesotho Highlands and less than 50 mm at the Atlantic Ocean in the west. The average precipitation over the catchment is 400 mm/y

---

118 A - Tropical moist climates: all months have average temperatures above 18° Celsius
B - Dry climates: deficient precipitation throughout most of the year
C - Moist mid-latitude climates: with mild winters
D - Moist mid-latitude climates: with cold winters
E - Polar climates: with extremely cold winters and summers
and is arid in terms of world standards. The mean annual runoff is estimated as 11.5 billion m$^3$ of which 53% is from South Africa, 41.5% from Lesotho, 5.2% from Namibia and 0.3% from Botswana. The Orange-Senqu River basin is a highly complex and integrated water resource system characterised by a high degree of regulation and a large number of major inter-basin transfers to manage the mismatch between location of abundant water resources and the location of greatest demands.

The Orange-Senqu River basin is a highly complex and integrated water resource system characterised by a high degree of regulation and a large number of major inter-basin transfers which allow water to be moved from one part of the basin to another, as well as into and out of neighbouring basins. This, together with the highly variable nature of the rainfall and hence hydrology, makes management of the water resources highly challenging.

The occurrence of groundwater is determined largely by geology and its direction and rate of flow by topography. Groundwater is recharged by either rainfall infiltrating downwards or by seepage from rivers and lakes. Recharge also results from leakage from adjacent aquifers and can be enhanced artificially. Recharge rates vary from 25 to 100 mm per annum across the basin. In general, the lowest rates of recharge occur in the areas of lower rainfall.

The four transboundary aquifers in the basin are (i) the Karoo Sedimentary Aquifer (Lesotho and South Africa), (ii) the Coastal Sedimentary Basin V (Namibia and South Africa); (iii) the Khakhea Bray/Dolomite (Botswana and South Africa); and (iv) South Africa (Botswana, South Africa, and Namibia).

These transboundary aquifers can be grouped into two main types of aquifers governing the occurrence and distribution of groundwater in the Orange-Senqu River basin: (1) shallow alluvial primary aquifers along the river, and (ii) a variety of deeper hard rock secondary aquifers. Alluvial aquifers are generally only recharged by surface water, and are usually considered part of that resource. The secondary aquifers in the basin mainly used to supply water to smaller rural towns for rural domestic needs and stock-watering, with no major production well-fields serving large concentrated demands.

The Orange-Senqu Basin as a whole is home to some 15.7 million people, the vast majority of whom (85%) live in South Africa. Botswana and Namibia have relatively few people living in the Basin (0.3 and 1.1 respectively), while Lesotho’s entire population is in the Basin, making up just over 13% of the total number in the Basin$^{119}$.

The Orange-Senqu River Commission (ORASECOM) was established by the Governments of the four riparian States (Botswana, Lesotho, Namibia and South Africa) through the "Agreement for the Establishment of the Orange-Senqu Commission" on 3 November 2000 in Windhoek (Namibia).

The ORASECOM mandate is to manage water resources of the Orange-Senqu River basin and promote its beneficial development for socio-economic well-being and safeguarding the basin environment. Over the past decade ORASECOM, with the support of key development partners, has been assessing the water resources management conditions in the basin and commissioning specific studies to understand the challenges and design appropriate responses to ensure sustainable management of the basin water resources. This has led to the development of a consolidated Integrated Water Resources Management Plan adopted in 2014 by the ORASECOM Member States.

The Preamble to the Agreement recognises the "Orange-Senqu River System as a major water resource in the Region", committing the four Member States "towards the realisation of the principle of equitable and reasonable utilisation, as well as the principle of sustainable development with regard to the River System". It also recognises the following rules and agreements:

- Helsinki Rules (1966)
- UN Convention on the Non-Navigational Uses of International Watercourses (UN Convention; 1997)
- The Protocol on Shared Watercourse Systems in the Southern African Development Community

$^{119}$ ORASECOM, Orange River IWRMP, Demographics and Economic activity in the four Orange Basin (2007)
According to the Agreement, the objective of ORASECOM (the Council) is to serve as a technical advisor to the member countries and perform other functions assigned by the member countries on matters pertaining to the development, utilisation and conservation of water resources in the Orange-Senqu River System.

3.1.2.2- Executive summary of water policy document

- **Water Policy framework**
  
The water policy of the Orange-Senqu Basin is driven by three (3) documents: (i) the Southern Africa vision for Water, Life and Environment in the 21th Century, (ii) the Regional Water Policy, and (iii) the Regional Water Strategy. They all are adopted in the context of the SADC (See the SADC case study for detailed information).

- **Legal and Regulatory framework**
  
The Revised Protocol on shared watercourses of 2000 (hereinafter referred to as the SADC Revised Protocol), is the source of applicable treaty law for the ORASECOM Member States. The Orange River is an international watercourse in terms of definition thereof in this Protocol.

The ORASECOM Agreement was concluded in November 2000 and was ratified by Botswana, Lesotho, Namibia and South Africa during the same year. However, the Agreement is not expressly based on the Revised SADC Protocol (signed in August of the same year), or the principles contained therein (Art.7.3). It does not directly aim at facilitating or implementing the concepts underpinning the management of a shared watercourse as found in the SADC Revised Protocol.

Interestingly, however, within the agreement there are specific references to the Revised SADC Protocol such as in Articles 7.2 and 7.3 that discuss the terms “equitable and reasonable” and “significant harm”. But in its present format it does not seem to be entirely suitable and sufficiently equipped to function as the instrument for accommodating an IWRM Plan for the Orange River. It does not contain a definitional clause. Notwithstanding, it reflects in the preamble the original protocol on shared watercourse systems.

It is important to note that the objective of the Council is provided as “technical advisor to the Parties on matters relating to the development, utilisation and conservation of the water resources in the River System…” (ORASECOM,2000). This is further explored in Article 5 of the agreement which then details the matters upon which the Council makes recommendations. These are specifically relevant to the Council and it is critical to note that the international legal rules that outline water management in the Orange Senqu basin and the framework within which the Commission needs to provide its advice are contained within the SADC Revised Protocol and the bilateral agreements, and not within the ORASECOM agreement.

The main result is the establishment of ORASECOM as an international organization with legal personality and certain institutions and powers. But nothing “shall affect the prerogative of any number of the Parties to establish among themselves river commissions with regard to any part of the River System”. Such commissions will then be subordinate to ORASECOM (Art. 1.4).

Prior to the ORASECOM Agreement, there were two transboundary bilateral legal instruments with respective institutional arrangements in the Orange-Senqu River Basin:

- The Permanent Water Commission (PWC) between South Africa and Namibia on the lower Orange River (1992): The PWC evolved from the Joint Technical Committee formed between Namibia and South Africa in 1987. In 1992, a bilateral agreement between Namibia (which gained independence in 1990) and South Africa established the PWC.

- The Treaty on the Lesotho Highlands Water Project (LHWP) between Lesotho and South Africa (1986): The Lesotho Highlands Water Commission (LHWC) is a bi-national body that evolved from the Joint Permanent Technical Commission established under the terms of the Lesotho Highlands Water Treaty. The LHWP Treaty is project orientated and is generally not in conflict.
with the provisions of the regional treaties (Revised SADC Protocol and ORASECOM agreement)

Both of the above-mentioned bilateral Commissions did, however, not conform to the concept that the management of internationally shared rivers should be done on a multi-lateral, basin wide scale by all basin States. However, they served a useful purpose in the absence of other arrangements and still contribute to do so after the ORASECOM was established.

- **Institutional framework**

ORASECOM's organisational structure includes (i) the Council that is the highest body of the Commission; it serves as a technical advisor to the Parties on matters relating to the development, utilisation and conservation of the water resources in the Orange-Senqu River System. It consists of three permanent members including one leader for each delegation from the four riparian states; (ii) the Secretariat whose functions include administration, coordination and implementation, repository of information, and programme and project development and management; (iii) Task Teams established by Council, and comprise of representatives from member states. The task teams undertake communication, financial, legal and technical functions delegated to them by the Commission.

The Commission works primarily through a sub-committee system of legal and technical Task Teams, the members of which are technical experts or advisors nominated by each delegation.

### 3.1.2.3- Vision, Objectives and Priorities of the policy

The ORASECOM promotes the equitable and sustainable development of the resources of the Orange-Senqu River. It is established as a technical advisor to the Parties and provides a forum for consultation and coordination between the riparian states to promote integrated water resources management and development within the basin. There is broad consensus that one of the primary mechanisms for developing these recommendations will be the development of a basin wide plan. Furthermore ORASECOM is expected to strengthen regional solidarity and enhance socio-economic cooperation within the region.

There is no clear and precise goal assigned to the Commission in the Agreement. But according to the preamble, the goals of ORASECOM (Hollingworth, 2007) are to:

- Develop a comprehensive perspective of the basin;
- Study the present and planned future uses of the river system; and
- Determine the requirements for flow monitoring and flood management

Any shared watercourse institution (SWI) in the SADC sub-region is bound to the regional priorities set in the SADC Regional Water Policy and the Regional Water Strategy. Based on these regional priorities, the ORASECOM has identified six priority areas to promote a Sector Wide Approach (SWAP), namely (i) Institutional and Organisational Strengthening; (ii) Specific Capacity Building on shared watercourses Management; (iii) Development of Shared Information System; (iv) Enhancing ORASECOM Communication and Awareness Building; (v) Specific Transboundary Projects and Studies; and (vi) Promotion of Conservation and Environmental Strategies and Policies.

ORASECOM’s Vision for the Orange-Senqu River basin is “A well-managed water secure basin with prosperous inhabitants living in harmony in a healthy environment”120.

A number of strategic areas and objectives, the realisation of which should lead to the attainment of the Vision, were developed through a stakeholder-driven process.

- **Strategic areas**: Water Governance, Infrastructure Development, and Water Management.
- **Strategic objectives**: Capacity Development, Climate Change Adaptation, and Social Development.

---

120 The IWRM Plan for the Orange Senqu River Basin (December 2014)
3.1.2.4 - Success components of good water governance

A. Management mechanisms

- Water resources planning tools

Since 2006, The ORASECOM initiated the development of a Basin-wide IWRM Plan in three phases:

- Phase I of the GIZ-supported ORASECOM IWRM planning programme was implemented between 2004 and 2007 and focused on collating existing information that described a wide range of areas relating to the management and development of water resources of the Basin.

- Phase II of the GIZ-supported IWRM Planning Programme (2009 to 2011) focused on bridging the planning gaps identified in Phase I. It included major inputs on key areas such as environmental flows, water resources modelling and climate change.

- Phase III dealt with the development and adoption of the IWRM plan (2012-2014) for the Orange-Senqu River Basin.

The ten year IWRM Plan (2015-2024) provides a strategic transboundary water resources management framework and action areas and serves as guiding and planning tool for achieving the long-term development goals in the basin. The IWRM Plan identifies the lack of integrated transboundary water resources investment strategy as key challenge for achieving the sustainable development of the basin water resources. It defines strategic actions that will ensure and enhance water security considering the long term socio-economic and environmental demand on the water resources of the basin. The Plan promotes building climate resilient development taking cognisance of the impact of high variability in rainfall and hydrological flow patterns. It also prioritizes a ten-year planning horizon to focus on the key actions to respond to these challenges. The IWRM Plan is thus an agreed framework towards long-term goals; provides a clear basis for transboundary cooperation; enhances the role of ORASECOM and strengthen its position and supports efficient development of water resources and optimized management.

A key aspect of the transformative approach for strengthening cooperation has been identified as the need for joint project implementation that provides a mutually inclusive transboundary benefit. The long term investment strategy is considered as a critical factor for transforming water resources development in the basin.

The management and development of the water resources of the basin essentially takes place at three levels:

- National level. The basin states have the primary responsibility for the development and management of water resources within their territory. The implementation of the ORASECOM Agreement should be in line with the Revised Protocol on Shared Watercourses in the SADC Region.

- Bilaterals: A number of bilateral agreements pre-date ORASECOM. Bilateral agreements and institutions have come into existence for a specific reason, essentially to implement or manage a project.

- Transboundary level: At the regional level, the SADC Water Division has been tasked with creating an enabling environment for the integrated management of shared watercourses. Supporting this integrated approach are the Revised Protocol on Shared Watercourses and the Regional Strategic Action Plans. The ORASECOM Agreement is strongly influenced by the SADC Protocol.

- Climate change adaptation in water sector

The Overall objective of Work Package 4 “Assessment of global climate change” (Climate Change in the Orange-Senqu River Basin, IWRM plan, phase 2) is to carry out a detailed assessment of the occurrence, extent and possible effects of climate change in the Orange-Senqu River Basin.

The main activities that have been implemented towards the above-mentionned objectives are:
- Identification of all possible sources of reliable climate data and Global Climate Model downscaling for the Orange-Senqu Basin.
- Scenario assessment of impacts on soil erosion, evapotranspiration, soil erosion, and livelihoods.
- Identification of water management adaptation requirements with respect to observed/expected impacts on water resources.
- Assessment of major vulnerabilities and identification of measures for enhancing adaptive capacities.

**Monitoring and evaluation (M&E) systems**

The regulatory frameworks do not contain performance indicators to monitor and evaluate water policy at the Orange-Senqu Basin level. But ORASECOM as any other party to the SADC agreement undertakes an assessment of the implementation of the Southern African development conference regional water policy.

**Human rights in water supply and water management**

Human rights issue in water supply and water management is not addressed in a clear or specific manner in the legislative and regulatory framework. But the idea is little perceived through the preamble of the Agreement at two times. Firstly when considering the need to provide the people in the Region with access to sufficient water supplies. Secondly with regard to the development of the River System as a water source of common interest could significantly contribute towards the mutual benefit, peace, security, welfare and prosperity of their people.

**Learning review and capacity building processes**

In terms of activities relating to learning review and capacity building processes, one must recognize the efforts of the ORASECOM for having planning the following activities under the Support to phase 2 of the ORASECOM Basin-wide IWRM Plan:

- Capacity building for experts and decision-makers under the Work Package 1 “Development of Integrated Orange-Senqu River Basin Model”
- Capacity Development under the Work Package 2 “Updating and Extension of Orange-Senqu Hydrology”
- Capacity building to operate the water quality monitoring system and implement the water quality management plan under the Work Package 3 “Preparation and development of integrated water resources quality management plan.”

By involving the stakeholders of the Orange Senqu River Basin in decision-making processes concerning the management of the basin, ORASECOM is guided by the following vision: “Orange-Senqu River Basin stakeholders actively and effectively participate with ORASECOM in the co-management and sustainable development of the Basin and its resources for enhanced livelihoods”.

The following objective inter alia has been identified in support of the vision: “To build and strengthen capacity in Basin Forums, institutions and stakeholders to effectively participate in decision-making, planning and sustainable co-management of the Orange Senqu River Basin”.

**B. Water governance**

**Consultation, participation and co-ordination mechanisms**

Although Article 2 of the Agreement is about the institutions of the Commission, only the Council was considered. The Secretariat and the Technical task teams are part of the Council. The coordination function of the Council is to harmonise development activities in the basin and facilitate the participation of all relevant stakeholders in activities of ORASECOM. A part from that, the Agreement does not give any provision concerning clear indication for stakeholder consultation and participation.
In recognition of regional and international good practice, the ORASECOM in 2005 embarked on a process to start incorporating other stakeholders in the co-management of the basin for greater involvement of stakeholders. By involving the stakeholders of the Orange Senqu River Basin in decision-making processes concerning the management of the basin, ORASECOM is guided by the vision stated above. One of the key focus areas is Institution creation and development with the following planned activities:

- Identification of national coordination structures,
- Assessment of modes of participation, and
- Socio-ecological Surveys.

**Anti-corruption and integrity processes and measures - Transparent water budget processes**

Article 10 of the Agreement specifies the financial arrangements within the Agreement. Each Contracting Party is responsible for the costs of attending and participating in the meetings of the Council. The Contracting Party hosting a Council meeting is responsible for the costs of holding a meeting. All other costs are shared equally among the Contracting Parties, unless otherwise agreed to by the Council.

The ORASECOM Agreement does not contain explicit reference to corruption prevention and combating activities or transparency and integrity measures.

**Conflicts management**

Article 8 of the Agreement addresses the issue of settling disputes and stresses the importance of negotiations to reach a settlement. The Parties may bring a dispute to the SADC Tribunal, if the parties have not been able to arrive at a settlement within six months after the start of negotiations. The Parties are required to accept the decision of the Tribunal as final and binding.

**Benefits of water, energy, and food nexus approach**

To date, the ORASECOM did not undertake any joint planning or development action (in terms of infrastructural development) that is based on the water, energy and food nexus approach.

**Benefits of transboundary water management**

The preamble of the Agreement indicates that the riparian States are conscious that collaboration between the Parties with regard to the development of the River System as a water source of common interest could significantly contribute towards the mutual benefit, peace, security, welfare and prosperity of their people.

ORASECOM aims to develop the Orange River for the benefit of all the respective states and is the first formal body established for the management of shared water resources since the Protocol on Shared Watercourse Systems became an instrument of international water law in the Southern African Development Community (SADC).

The multilateral commission will not replace existing bilateral commissions between any of the watercourse states, but rather will provide a broader forum for overall consultation and coordination between the states for sound integrated water resources management and development in the Orange River Basin.

3.1.2.5- Overview of lessons learned

- The Parties to the ORASECOM view the Commission as an important forum to discuss water matters of mutual interest at a technical level. The Commission has a duty to advise the respective Governments accordingly about the perceived best technical solution and to what extent the Commission is in agreement about the way forward.

- The ORASECOM Agreement is not sufficiently compatible, despite scant references, with the Revised Protocol on Watercourses of SADC. It is also not conceptually consistent and invokes other international agreements that have replaced each other or are based on different concepts. The fact
that express provision is made to the Revised Protocol in only 2 paragraphs of article 7, and not at all in the Preamble (where the first SADC Water Protocol is referred to), confirms this impression quite directly.

- The ORASECOM Agreement (Article 4) outlines the objective of the Council: “to serve as a technical advisor … in the River System” and “other functions pertaining to the development and utilisation of the water resources as the Parties may agree to assign”. However, it is not clear what the scope of that technical advice may be and no further assignments have yet been made.

- It is clear that ORASECOM is not an infrastructure authority and that in the short term it is unlikely to operate as a regulatory/management body at a basin level. ORASECOM is clearly a body for basin level cooperation, within the context of SADC integration. However, the scope and mechanisms to agree around the principles and frameworks for utilisation, development and protection of the water resources of the basin require further clarity, as does the role of ORASECOM in directly or indirectly facilitating this.

3.1.1.6- Practical recommendations

- Policy framework
  a) The ORASECOM Agreement provides significant latitude in its interpretation of the purpose and structure of ORASECOM, which has resulted in differing interpretations and perspectives between and within Parties’ delegations. Specifically the Agreement does not recognise the organisation (as distinct from Council). The distinction between Parties, and Delegations needs to be clarified.

  b) Lot of work has been done on the existing social, economic, technical and environmental context, and as well on existing policy, legislative and institutional frameworks. Many reports and useful findings have been made available towards preparation of the basin-wide IWRM Plan. It is strongly recommended to use this opportunity to address some very relevant issues such as consultation, participation and coordination mechanisms, M&E system and performance indicator to monitor and evaluate transboundary water policy, strategy and plan, anti-corruption and integrity processes, and transparent water budget processes.

- Legal and Regulatory framework
  a) The mandate provided in Article 5.2 of the Agreement certainly suggests that the intention was for the organisation to play a stronger role in setting a framework for the management of the basin as a whole. It may be suggested that ORASECOM has a mandate to recommend a framework for the management of the River System in terms of the following provisions:

    - The reasonable and equitable utilisation of the water resources of the River System (Art. 5.2.2).
    - Studies conducted separately or jointly with regard to the development of the water resources of the River System (Art. 5.2.3).
    - Measures with regard to the settlement of a dispute between two or more Parties (Art. 5.2.9).

  b) Together these require engagement between the Delegations beyond purely technical water resources considerations, to include social, economic, legal and political dimensions of the relationships between the four countries, within the context of regional economic and foreign policy perspectives. Care then needs to be exercised in giving effect to these provisions and their relationship with the proposed basin-wide plan.

  c) The adoption and implementation of an Integrated Water Resources Management Plan for the Orange River still requires a substantial amount of work in order to bring all four these states on the same level and committed to such a strategy. This will involve both the national (within the four states) and on the inter-state levels. The latter will need a suitable international legal instrument. The ORASECOM Agreement may be a starting point for cooperation on the Orange River but is not adequate for the stated purpose.
d) At present the national water legislation of the four states display considerable differences. In two instances (Namibia and South Africa) the legislation on water usage has been updated and is geared to modern trends. In the other two cases there are plans in the pipeline to do the same. When this happens express provision should be made for an IWRM Plan; going beyond national jurisdiction and creating a basis for a regional plan.

ическая и инфраструктура

a) There seem to be two seemingly contradictory perspectives prevalent amongst the Member States; first that ORASECOM provides a vehicle for Parties to represent their national interests in developing joint positions, or secondly that ORASECOM is a vehicle to adopt a common basin-level perspective / interest (considering national interests) in advising Parties. This means that Council needs to clarify and agree on the modus operandi. It nevertheless seems likely that Delegations need to be prepared to articulate broad national interests in relevant discussions and engage their Principals when an emerging basin-wide perspectives may not align with national interests, but also that annual or biannual Ministers Meetings should be arranged (through recommendation by Council to the Parties).

b) Lack of clarity in terms of the role descriptions of its various structural elements (particularly the Secretariat and Task Teams), and limited formalised operating procedures for the organization are some weaknesses to be addressed in a near future.

c) There is an emerging perspective that Council should become more strategic, the Task Teams focus on technical guidance to project under instruction from Council, and the Secretariat perform operational management within parameters determined by Council (which is consistent with international practice within R/LBOs and with good corporate governance principles). In other words, there is a crucial need to strengthen the functioning of the organization.

References

1) ORASECOM Agreement (2000)
2) ORASECOM, (2007): Orange River IWRMP : Institutional Structures in the four Basins States
3) ORASECOM, (2007): Orange River IWRMP: Demographics and Economic Activity in the four Basins States
4) ORASECOM (2007): Orange River IWRMP: Legislation and Legal Issues surrounding the Orange River Cathment
5) ORASECOM (2011): Document N° 003/2011: Support to phase 2 of the ORASECOM Basin-wide IWRMP, Work Package 1: Water resources modeling of the Orange-Senqu River Basin: Capacity building and setting up the models in each country; Process of continuous review
10) ORASECOM (2007): Roadmap towards stakeholder participation
13) ORASECOM Website : www.orasecom.org
3.1.5. International Commission of the Congo-Oubangui-Sangha (CICOS)

3.1.5.1- General information

Located in the heart of Central Africa, the Congo River basin is one of the richest ecosystems in terms of water resources and biodiversity. Countries that include part of the Congo River basin are ten in number (10) (Angola, Burundi, Cameroon, Central African Republic (CAR), Congo, Gabon, Democratic Republic of Congo (DRC), Rwanda, Tanzania and Zambia). With an area of 3,822,000 km², the few 4/5 (82%) of the watershed area are within four (4) countries (DRC, CAR, Congo and Cameroon).

The watershed of the Congo River spreads out on both sides of the equator with about one third and two thirds in the North to the South. It covers two main climatic zones: (i) a tropical savannah in the north and south, and (ii) a wet equatorial tropics and temperate climate. The Congo River is one of the largest in the world by the area of its basin, the largest river in Africa and the second in the world after the Amazon by its speed (about 41,000 m³ / s in Kinshasa / Brazzaville value interannual average). With a total length of almost 4700 km, the Congo River is the second largest river in Africa after the Nile and the fifth in the world by its length approximately half of which is navigable, although the runs is interrupted in places by waterfalls and rapids.

Approximately one hundred million people live in the Congo Basin with three-quarters of them living in the Democratic Republic of the Congo (DRC) (SEDAC, 2010). The densest populations in the basin are along the DRC’s border with Burundi and Rwanda on the basin’s eastern edge and in the area between Kinshasa and Mbuji-Mayi.

The CICOS was created November 6, 1999 by the Agreement establishing a uniform flow regime. To date, CICOS has five (5) member states on ten (10). Members are Cameroon, Congo, CAR, DRC and Gabon which acceded in 2010. Angola is an observer since 2007 and the other countries that share the basin and which are not members of the CICOS are Zambia, Tanzania, Burundi and Rwanda.

In 2007, an addendum was brought to the Agreement on the promotion of integrated water resources management on the CICOS of jurisdiction (Art. 2). So there are less than ten years that Member States CICOS affirmed their willingness to act in solidarity and concerted manner for integrated water resources management (IWRM) Basin. This commitment was confirmed IWRM dated March 27, 2014, during the 11th Ordinary Session of the Committee of Ministers which adopted the participatory approach to implement IWRM in the Congo Basin and promoting resource management water for sustainable development.

3.1.5.2- Executive summary of water policy document

- **Water policy framework**

  The main texts are the policy documents for the management and development of water resources of the Congo Basin are: (i) the African Water Vision for 2025, (ii) the Agreement Establishing uniform flow regime navigation, (iii) Addendum to the Agreement Establishing IWRM.

- **Legal and Regulatory framework**

  The legal framework of the CBLT has two basic documents: (i) the 1999 Agreement establishing a uniform system of river navigation, and (ii) Addendum to the 2007 Agreement establishing IWRM in the Congo Basin.

  The 1999 Agreement establishes the legal basis for cooperation between States Parties for river navigation. It applies to basin waterways of Congo Oubangui-Sangha in the territories of the Contracting

---

121 Africa Water Atlas (UNEP, 2010)
States (Art. 3). In this context, water management is to organize, coordinate and undertake actions aimed at improving river navigation.

The Addendum to the Agreement (2007) is, without doubt, a solid legal basis for sustainable management and development of the Congo basin through water resources. However, an arsenal of accompanying legal texts must be taken in order to ensure effective and sustainable implementation.

Besides these two legal mechanisms governing the action of CICOS, it is also appropriate to cite the (Service Commun d’Entretien des Voies Navigables, SCEVN), created as part of the implementation of the Memorandum of Understanding of 27 February 1970 on the maintenance procedures of waterways by ATC and ACCF. The SCEVN is an interstate service whose primary mission is to ensure the maintenance of waterways to improve the navigability of the interstate network.

- **Institutional framework**

The institutional framework established in the 1999 Agreement is composed of three (3) organs: (i) the Committee of Ministers is the governing body and is composed of ministers responsible for transport / river navigation and management of the Member States water resources. The Ministry of inland navigation is the Ministry technical supervision and ensures therefore the presidency of the Committee of Ministers; (ii) the Management Committee is an advisory body and support to the Committee of Ministers/ it includes three members per country, including two from the Ministry for inland navigation (the administration of river transport and river operators) and the third representing the ministry responsible for water resources. Observer status with the Steering Committee is granted to entities from Member States and international organizations and / or regional support regional integration and water resources management; (iii) the General Secretariat is the executing agency. It implements the decisions of the Committee of Ministers. It is composed of experts in river navigation in transboundary management of water resources and environment. It should be noted that the Addendum to the Agreement gives no specific award to the Secretariat General for shared water resources management of the Congo Basin. But for the river navigation functions of the Secretariat General were set out in the Agreement (Art. 27).

3.1.5.3- **Vision, Objectives and Priorities of the policy**

The Agreement establishing a uniform flow regime and creating CICOS and its Addendum entrust CICOS two main missions:

- Promotion of inland navigation,
- Integrated water resources management, and
- Promoting food security.

The specific objectives of CICOS in integrated water resources management are explained in the Addendum.

- Establish the principles and modalities of use of waters of the river and its tributaries between the different sectors of use;
- Define the modalities for the review and approval of new projects that may affect the quantity and quality of water;
- Determine the rules for the preservation and protection of the environment, particularly with regard to the flora and fauna of aquatic ecosystems, wetlands and terrestrial ecosystems which depend on it;
- Define the scope and modalities of participation of water users in the management of water resources management decisions of the river basin and its tributaries;
- To strengthen cooperation in all areas of sustainable development through the use, management and conservation of water resources and the river and its tributaries, the optimization of the different water uses and mutual benefit accruing Contracting States to minimize the negative effects that could result from disorderly competition between states.
Two categories of principles coexist for water uses in the Congo Basin. There is, first, the principles governing the implementation of the Agreement on inland waterways, and secondly, the principles of IWRM which sets water use arrangements in the context sustainable development.

The priorities of the Congo Basin in the management and development of water resources are shown in the 1999 Agreement and its 2007 addendum they are supplemented by the operational priorities contained in the Strategic Action Plan for (IWRM-SAP). This indicates three groups of major issues of socio-economic development of the Congo basin (i) improving the regulatory and institutional framework for the management of shared waters, (ii) the development and implementation of a system information, (iii) capacity building.

3.1.2.4- Success components of good water governance

A. Management mechanisms

- Water resources planning tools

As part of the implementation of the Addendum, one of the first initiatives CICOS was the realization of the strategic action plan for integrated water resources management in the Congo Basin (IWRM-SAP) whose purpose was to define the framework of IWRM in the Congo Basin.

CICOS also undertook to prepare a Water Development and Management Master Plan (SDAGE). This is a strategic policy document to provide a planning guide for the implementation of sustainable management of water resources in the basin. The scope of the SDAGE is fixed over a period of 5 years (2020), while the shared vision is projected longer term of 20 years (2035). The SDAGE covers national portions of the watershed in the five Member States CICOS.

- Climate change adaptation and water sector

Concerns about climate change are not explicitly or clearly reflected in the Addendum. The measures to adapt to climate change in water management are addressed indirectly in the IWRM-SAP through specific or transversal themes such as standardization of climatological and hydrological observation system and development of the Information System for the Congo Basin (SIBCO).

- Monitoring and evaluation (M&E) systems

There is no M&E system to monitor the performance of transboundary water management policies. By cons, specific projects and programs are followed up and evaluate their implementation. However, the IWRM-SAP is not accompanied by a monitoring and evaluation mechanism of its implementation.

- Human rights in water supply and water management

The integration of human rights in the water supply and water management is effective across the Addendum. This Addendum defines "sustainable and equitable use" as the use and access by all to adequate and quality water in adequate amounts without weakening vital ecosystems without compromising its use by future generations (Art. 1.17).

The water use rules should take account of priority: (i) the fair treatment of users, whether States or natural or legal persons under their jurisdiction; (ii) the vital needs of people and other living beings; (iii) the security of persons (Art. 6).

- Learning review and capacity building processes

Learning processes and capacity building actions are planned in the IWRM-SAP (available on the strengthening of the capacities of stakeholders). To this end, a capacity-building action plan was formulated to benefit the CICOS and the various actors in the basin to allow them to exercise their responsibilities for water resources management.
Moreover, the institutional framework provided for the implementation of various projects and programs (SDAGE, SIBCO, Congo-HYCOS, etc.) are platforms providing learning opportunities and capacity building of a variety of actors.

Furthermore, the improvement of communication and information relating to IWRM development activities is able to create a climate of trust through which regional and national efforts will be better expressed with the effective participation of stakeholders and the establishment of broad partnerships between public, private, community and local.

- **Benefits of water, energy, and food “Nexus” approach**

Promoting IWRM in the Congo Basin is among others the strengthening of cooperation in all areas of sustainable development through the use, management and conservation of water and the river and its tributaries resources, optimization of various water uses and mutual benefit accruing to the Contracting States in order to minimize the negative effects that could result from disorderly competition between states (Art. 2).

The multi-sectoral investigation conducted as part of the formulation of the IWRM-SAP, resulted in a consolidation of issues concerning areas of concern including (i) food security and poverty reduction and (ii) Enhancement of hydroelectric potential. The development of these two levels integrates the concept of the approach "nexus". The component "Development of Hydropower in the Congo Basin" is the axis most important SSP IWRM, both in terms of number of projects but especially in terms of overall investment amount.

The approach and project preparation processes and programs, both methodologically and content can draw valuable lessons on how the themes "nexus" could be taken into account. Arguably CICOS already applies an integrated approach and / or systemic and therefore similar to the "nexus" approach.

- **Benefits of transboundary water management**

Par ailleurs et selon l’article 33 de l’Accord, la CICOS laisse une ouverture de coopération dans des domaines particuliers entre la Commission et des Etats non parties à l’Accord.

In theory, the implementation of the Addendum provides implementation populations and member states CICOS - individually and collectively - a range of benefits. Indeed, water use arrangements are based on principles that ensure the people of the Contracting States the full enjoyment of the resource in the context of sustainable development, respecting the environment and ensuring the safety of persons and structures, and of the fundamental human right to clean water in sufficient quantity (Art. 4).

So far, the benefits derived from cooperation between Member States CICOS on shared water management are limited to the occasional participation of stakeholders in deliberative and consultative processes in the development and implementation of projects and programs (PAS-IWRM-SAP, Congo-HYCOS, SIBCO, SDAGE ...). No concrete realization has yet emerged under the aegis of CICOS, despite a huge potential for development of water resources of the Congo Basin and despite the intentions for regional cooperation (Art. 5 of the Addendum to the Agreement).

Furthermore and according to Article 33 of the Agreement, CICOS leaves an opening cooperation in specific areas between the Commission and states not party to the Agreement.

**B. Water governance**

- **Consultation, participation and co-ordination mechanisms**

The institutional framework for cooperation between the riparian countries of the Congo Basin is limited to the three bodies mentioned in the Agreement and its Addendum. There is no formal and
permanent dialogue platforms and consultation frameworks actors for water resource management in the Congo Basin. However, it is expected that the Commission defines the framework and modalities of participation of water users in decision making related to water resources management (Art. 2). The water use conditions are based on principles such as the need to involve all stakeholders in water resource management and decision-making (Art. 4).

In the coordination and animation, there are two levels of coordination within CICOS:

- Coordination across the basin among the riparian States is provided by the General Secretariat of the Commission but does not have an organizational structure outside the Management Committee.

- National coordination is a priori ensured by the CICOS ministry which is the ministry in charge of river transport. This anchor has many shortcomings in terms of efficiency and participation of national stakeholders. However, the General Secretariat has set up the National Monitoring Committees. These are structures located in the Member States to monitor CICOS the activities and the implementation of decisions in the states.

**Anti-corruption and integrity processes and measures - Transparent water budget processes**

The available literature has not documented the formal taking account of measures against corruption, integrity and transparency in budgetary procedures. Aspects relating to corruption, integrity and transparency in budget processes are not integrated in the instruments of cross-border cooperation.

**Conflicts management**

When creating CICOS, one of the tasks of the Committee of Ministers was to arbitrate disputes between Contracting States (Art. 19h). The Addendum states that water use arrangements are based on principles such as the need to prevent conflicts between states and the obligation to negotiate in cases of conflict (Art. 4). But prevention and conflict management mechanisms do not yet exist.

3.1.5.5- Overview of lessons learned

- CICOS is a watershed agency of quite particular type. First it is involved in a very large space, the Congo basin characterized by the immensity of its size, physical characteristics and impressive flows. Then the large number of countries (ten in total) which are partially or totally located within the basin. Finally the initial orientation CICOS its creation on navigation. It is precisely because of this last characteristic that only four (4) countries out of ten (10) are parties to CICOS to it. The other countries were not interested to join; ie navigation was not sufficient carrier to attract other countries. However the 2007 Addendum is a favorable element to encourage states Congo basin to join CICOS.

- The waterways navigation on the Congo Basin is a fundamental component of cooperation between the Member States of CICOS. However, it soon became clear that the Basin Development issues beyond the scope of the only river transport sector, to include both protection of the resource issues as those relating to economic development. Thus the concept of IWRM has proved to be the most appropriate to bring together the concerns of various stakeholders, within a harmonized framework that provides the link between the objectives of sustainable development of the area and the means reach. In order not to multiply the institutional structures in charge the management of the basin, it was decided in 2005 to adopt an Addendum to the Agreement extends the missions CICOS those of IWRM.

- The adoption of the additive is a considerable achievement in view of the control of sustainability issues in the Congo Basin. The fact that to date only five (5) countries are members of CICOS is due in large part to the crucial importance of river transportation for socio-economic development of the Congo basin, which was at the origin of the creating CICOS. But the evolution towards the inclusion of fresh water as a resource for any purpose and paradigm shift for concerted and integrated approaches to water resource management is sure to provoke a wider membership movement to eventually include the ten (10) riparian countries of the Congo Basin.
3.1.5.6- Practical recommendations

❖ **Water Policy framework**
   a) The Secretariat General has not received an explicit and clear assignment for implementation of integrated approaches to water resources shared management of the Congo Basin. As with navigation, the duties of the Secretariat General for integrated management of the Congo Basin's water resources must be specified in order to provide the Secretariat with appropriate powers to enable it to accomplish its mission.

   b) Article 33 of the Agreement leaves open cooperation in specific areas between the Commission and States not parties to the Agreement. Furthermore, the additive expands the fields of competence CICOS to integrated water resources management. In order to enable the promotion of IWRM in the whole basin, the participation of all countries is imperative. A plea should be considered for this purpose towards the Non States Parties.

❖ **Legal and Regulatory framework**
   a) Aspects relating to corruption, integrity and transparency in budget processes are not integrated in the instruments of cross-border cooperation. The water governance in the Congo Basin would be incomplete in the absence of development and application of tools relating thereto.

   b) Cooperation on shared water runs from sharing information to the management and the joint development of the basin. It produces benefits that no State can obtain alone, and allows to treat the basin as a holistic system. This is the ultimate goal of IWRM. In the case of the Congo basin, the IWRM-SAP covers only four countries in the initial Agreement creating CICOS (Cameroon, Congo, CAR, and DRC). The Gabon CICOS who joined in 2011 and Angola observer country since 2007 were not considered in the development of the IWRM-SAP. It is strongly recommended to take very high political measures to involve all the countries in the CICOS.

❖ **Institutional framework**
   a) The Addendum through Article 17 extends the Committee of Ministers to the Ministers in charge of water resources management of the Contracting States. However, the ministry in charge of inland navigation is the Ministry technical supervision and ensures therefore the presidency of the Committee of Ministers. With the enlargement of CICOS IWRM, it is more appropriate that this is the ministry in charge of water management that ensures the technical supervision and coordination at the country level.

   b) The low participation of stakeholders in water resource management in the Congo Basin is linked in particular to the lack of frameworks and platforms for dialogue of the actors of the water sector. Indeed, there is no formal and permanent dialogue platforms and consultation frameworks actors for water resource management in the Congo Basin. The institutional structure of participation has many shortcomings in terms of efficiency and participation of national stakeholders. It is highly recommended to improve the involvement of stakeholders at all stages and at all levels of management of shared water resources of the Congo Basin by adopting frameworks and platforms for dialogue and concerted multi actors.

   c) The PAS - IWRM Congo Basin is the starting point for the introduction of IWRM in the Congo Basin, providing CICOS a necessary information base and analysis to develop a planning policy and exploitation of water resources in the basin. For its implementation, there is no indication about the institutional arrangements. It is necessary to remedy the situation in order to give more chance to succeed the implementation of the SAP-IWRM.

   d) The SIBCO will be a very useful tool for cooperation, planning and development of water resources. It will however remain incomplete if it does not include information on climate change. It is therefore necessary to change the SIBCO to a network of information and assistance in the management of water resources, natural resources and development of CICOS Basin populations including climate change component.
3.1.6- North-Western Sahara Aquifer System (NWSAS)

3.1.6.1- General information

The North Western Sahara Aquifer System (NWSAS) also referred to as the Système Aquifère du Sahara Septentrional (SASS) is a large complex hydrogeological basin located in the desert North Africa area. It is one of the major North African transboundary groundwater basins shared by Algeria, Libya and Tunisia. The NWSAS can be categorized as a multi-layered system of aquifers which embodies a huge stock of non-renewable fossil water. It displays a mostly porous and fissured/fractured structure (Struckmeier and Richts 2012)\textsuperscript{123}. From the geological point of view, the NWSAS is made by sedimentary formations the oldest of them date back to the Carboniferous-Permian period, and it includes two main aquifers with different hydrogeological features, the Complexe Terminal (CT) and the Continental Intercalaire (CI). This aquifer system covers an area of more than 1 million km\textsuperscript{2}, including 700,000 km\textsuperscript{2} (69\%) in Algeria, 250,000 km\textsuperscript{2} (23\%) in Libya, and 80,000 (8\%) in Tunisia (Diallo OS and Dorsouma AH, 2008)\textsuperscript{124}.

Even though the NWSAS groundwater has been often considered as “fossil”, recent studies (Baba Sy OM, 2005) found that in some regions in the mountains of Algeria Atlas there is a direct slight annual recharge by rainfall, which is estimated to reach one billion cubic meters per year ($1.10^9$ m\textsuperscript{3}/y). Nevertheless, the NWSAS hydrogeological features show some very low filtration velocities justifying the average groundwater age of about 35,000 – 40,000 years. All these features show the typical nature of non-renewable resource. Although the NWSAS was identified in the 50’s, its exploitation started using water sources and foggaras located in the outlets of the aquifer until they were replaced by new drilling wells.

Many studies and surveys indicate the groundwater potential of the NWSAS has been estimated to be about 60 billion m\textsuperscript{3}. Analogous with the growth of the riparian populations and the growth of their needs and economies, it is anticipated that the exploitation of the NWSAS will growth ever further.

The exploitation of this resource has rising steeply; from 1 billion m\textsuperscript{3} in year 1980, to 2.2 billion m\textsuperscript{3} in 2000 year, to more than 2.5 billion m\textsuperscript{3} nowadays, causing decline of the aquifer artesian pressure, groundwater salinization, and loss of natural oasis. Such impacts could lead to the total depletion of the resource. Accordingly, it is important to establish an aquifer management organisation that will coordinate the implementation of plans and management measures.

In 2000, the population of the SASS basin was estimated at about 5 million people. Based on this estimate, the population will reach 7 million by 2020\textsuperscript{125}.

Authorities of the three countries, well aware of the risks facing the NWSAS, have initiated joint studies under the supervision of the Observatory of the Sahara and Sahel (OSS). In the framework of the joint studies, while no formal treaty has been signed, the three countries reached an agreement in 2002 to

---

\textsuperscript{123} Cited in CEDARE, MEWINA (2014): NWSAS, M&E Rapid Assessment Report, M&E for Water in North Africa

\textsuperscript{124} Ibid 131

\textsuperscript{125} OSS (2007): North Western Sahara Aquifer System, Joint management of a transboundary basin: Main results
establish a “Consultation Mechanism” for the NWSAS. This Consultation Mechanism has been implemented in the form of a steering committee composed of representatives of national agencies in charge of water resources. It evolves into a permanent structure which has been endorsed by the ministers of water in 2006.

3.1.6.2- Executive summary of water policy document

The NWSAS is not yet been the subject of a management institution of the aquifer system. There is therefore no policy development and water resources management of the NWSAS. Also, regarding the case study NWSAS, it will therefore not be possible to examine and document the aspects of the political, legal and regulatory. The study is limited to inform the current institutional framework, to present the lessons learned from the experience of the NWSAS and propose recommendations.

The NWSAS riparian countries have felt the need to deepen their knowledge of the NWSAS and consider the prospect of the creation of a basin organization. Between 1998 and 2010, three stages of technical and scientific studies have been performed in project form:

- Phase 1 (1999-2002): Improving knowledge NWSAS and its operation
- Phase 2 (2003-2008): Development and implementation of a mechanism for
- Phase 3 (2009-2014): Identification and assessment of socio-economic and environmental impacts

Improved knowledge of the NWSAS (database, information system) and the different hydrological modeling has identified the risks facing its water resources and their uses, and the potential offered by the NWSAS for the development of these uses. Beyond hydrology, and with a view to provide decision makers with a comprehensive picture of the NWSAS, it was agreed to deepen the knowledge of the system by looking first to the uses of water through socioeconomic study, and also to the state of the environment throughout the NWSAS zone very highly correlated with the availability of water resources and the uses to which they are made.

Through the consultation mechanism, the Strategic Action Programme (SAP) of the NWSAS was developed with the main priority the efficient management of water in irrigated agriculture. In this regard, the strategy for sustainable water resources management that has been developed can be assimilated, during a political document.

Under the effect of multiplying non-concerted withdrawals, the resource today is confronting many risks such as salinisation, artesian pressure reduction, natural discharge depletion, piezometric level reduction, and inter-country withdrawal interference. Sooner or later, these will threaten the sustainability of the basin’s socio-economic development.

In the face of such stakes, a cooperation process between Algeria, Tunisia and Libya was indispensable. Such was the meaning of the project OSS has facilitated and implemented as from 1998, jointly with the three countries. The shared programme has focused on the scientific stakes in the initial phase, enabling a significant knowledge improvement of the system based on information exchange between the three countries. Thus, the hydrology of the entire system has been made clear, and the water points and the withdrawals have been inventoried and regrouped in a joint database. A geographic information system and hydrodynamic simulation model have been defined and adopted. The simulations and the projections produced by the model, built within this framework, have thus enabled underscoring the most vulnerable zones in the medium and long term in line with the countries’ development scenario. They also have enabled identifying the new potential withdrawal which would increase the current operation while ensuring risk control through reinforced cooperation among the three countries.

3.1.6.3- Institutional framework

On the basis of the shared knowledge, the countries were convinced of the need to put in place a sustainable institutional structure to manage the risks facing the water resource, and to develop a joint network for monitoring its state in order to plan better the zone’s socio-economic development. Thus, the three countries have created the NWSAS consultation mechanism: They equally share its financing
and coordinate it on a rotating basis. This is the first transborder institution dedicated to shared aquifer in Africa.

The Permanent Consultation Mechanism (PCM) is composed of: a Council of Ministers in charge of water affairs in the three countries; a Regional Steering Committee (RSC) consisting of the national institutions in charge of water resources in the three countries; National Committees (including other institutions concerned with water resources, water users associations, and non-governmental organisations); national and regional Technical Working Groups (TWGs); and a Coordination Unit (CU) led by a coordinator at the Tunis-based OSS.

From the standpoint of governance, the mission of the NWSAS PCM is to provide a regional institutional framework necessary to formalise regional cooperation for the management of the shared NWSAS water resources among the three countries. Therefore, the PCM mandate is to collaborate and develop co-operative activities for the sustainable mutual development of the NWSAS, including monitoring the status of utilization of the Aquifer, evaluation of the progress and activities enacted on the regional and national levels (Diallo OS and Dorsouma AH, 2008).

Accordingly, the PCM is responsible to: (i) support the countries in implementing the main technical activities aimed at facilitating consultation, especially data collection by establishing joint networks and updating common databases and models, (ii) simplify the institutional process by identifying transboundary water resources challenges, formulating proposals for solution and formalizing consents; and (iii) ensure information dissemination and organizing discussion at the level of decision-makers on development options in the basin and promote participatory management.

The main missions of the Coordination Unit (CU) consist in:

- Assisting the countries to implement the main technical activities aiming at facilitating dialogue. This refers mainly to data collection through the common measures networks which have been developed, the updating of the common database, and of the hydrological models.
- Sustaining the dynamic of the institutional process through a proper identification of the main transboundary hydraulics issues, the formulation of solutions, as well as the formalisation of consensus or agreements
- Ensuring the information diffusion and to organise debates between decision-makers concerning programmes and options for the development of the basin, supporting participative management with a strong communication axis.

3.1.6.4- Overview of lessons learned

- From the design of the NWSAS project, the three countries, OSS and cooperation partners, have had as main concern that the continuation of their cooperation beyond the projects. Indeed, conscious of the need for a strong technical cooperation and solidarity for efficient management taking into account various potential risks, countries have initiated since 1999 reflections on a permanent technical structure of the NWSAS management.

- Meanwhile, the importance given by Algeria, Libya and Tunisia to the consultation on shared water resources has led to the creation of bilateral institutional mechanisms such as:
  - The Algerian-Tunisian Joint Technical Committee of hydraulics and environment, established since the 80s in a "great commission", which deals with issues relating to the assessment of shared water resources, fight against pollution, exchange of information on water development programs, monitoring of studies concerning the NWSAS and consolidation of bilateral cooperation in water management.
  - Working groups within the "great commission" Algerian-Libyan, setting up in the 90s, with regard to the waters shared by Algeria and Libya; the two countries decided to establish a "Joint Technical Committee in the field of water resources."
  - The Tunisian-Libyan sectoral Committee on Agriculture, created in the early 90s as part of the "great Tunisian-Libyan joint commission", dedicated to the exchange of experiences, protection
of groundwater, conservation techniques water and soil, the identification of studies on shared groundwater monitoring studies of the NWSAS.

- As part of this new vision, there was notably supported the collection and analysis of data, which helped to understand the risks and to increase knowledge and to properly target the potential trade-offs in the distribution of water resources. Therefore, from the outset, the NWSAS project had two objectives:
  - One, of technical order, intended to produce all reliable technical elements (data, simulations, ...), to establish dialogue tools and make them more visible risks;
  - The other institutional, to sustain dialogue, first at the technical level, and ownership at the political level by the establishment of a permanent structure for the harmonization of development planning.

- Knowledge on the NWSAS has been significantly improved thanks to the work and development of the knowledge tools and monitoring of water resources: characterization of the aquifer system, database and information system, NWSAS simulation model, impacts of agricultural water use, economic environmental and social impacts, etc...

- The practice of partnership in the NWSAS project has gradually forged mutual trust between the technical teams, the conviction that joint action increases efficiency solutions and the certainty that the exchange of information, which founded Solidarity, is during the project became not only possible but necessary activity. In this regard, the willingness of the three water authorities for the provision of information has been exemplary.

- Since 2002, the qualitative development of cooperation between the three riparian countries has resulted in strong convergence on the following points:
  - The necessary continuation of the NWSAS project work on improving the knowledge of the system and its operation,
  - The establishment of a consultation mechanism at the technical level and its institutional anchoring in a first phase within an international organization: the OSS,
  - The gradual and progressive nature of the mechanism of efficient and lightweight technical structure to a developed body and with most important functions futures.

- Following the approval of the technical structure of dialogue in 2002, OSS has worked in close cooperation with the three countries, the establishment of a permanent structure for dialogue, which beyond the technical level, is appropriate at the political level by the three countries.

- The third phase of the NWSAS project helped further the development of basin awareness towards sustainable development in arid and semi-arid areas of the NWSAS.

- Finally, we must highlight the exemplary nature of this process, which could not achieve such results without the full commitment of the three countries, now aware of sharing a common destiny through the sustainable development of the NWSAS zone. Technical cooperation (for management and protection of resources) is most often the first step toward greater cooperation for development. SASS is an example of regional cooperation in North Africa focused on the shared groundwater resources. The experience of cooperation around the NWSAS and capacities in place to achieve the consultation mechanism, as the institutional framework for cross-border cooperation is a successful model that could be used elsewhere.

### 3.1.6.5- Practical recommendations

a) The overall consistency of the process towards a permanent consultation mechanism, for the match firmly established among the three countries and the agreement finalized on the consultation mechanism used to face the future more serenely for people and development SASS area. The creation of a sustainable development plan on the scale of this transboundary aquifer, focusing on both the potential of the waters of SASS, on minimizing risks associated with its operations, on
agricultural improvement on technical, economic and environmental, and economic diversification, would represent the most complete realization of this long scientific process, technical, and policy.

b) Shared groundwater between two countries is not yet the subject of an international convention like the surface water. The experience of cooperation between the countries bordering the SASS should be pushed along the lines of the United Nations on the law of transboundary aquifers.\textsuperscript{126}

c) One of the problems of using water resources of SASS is the pursuit of efficiency of agricultural water to reduce losses and waste of water. Address the effects more marked climate change calling for a significant and sustainable reduction of water consumption, the resolution of this issue through improving water productivity through a favorable pricing system negotiated by States and stakeholders.

References

1) CEDARE, MEWINA (2014): NWSAS, M&E Rapid Assessment Report, M&E for Water in North Africa
2) OSS (2007): North-Western Sahara Aquifer System, Joint management of a transboundary basin:
3) Main results

3.2- Regional Economic Communities (RECs)

3.2.1- Economic Community of Central African States (ECCAS)

3.2.1.1- General information

ECCAS is a regional economic community made up of ten (10) countries of Central Africa (Angola, Burundi, Cameroon, Congo, Gabon, Equatorial Guinea, Central African Republic, Democratic Republic of Congo, the Democratic Republic of Sao Tome and Principe and Chad) on a territory equivalent to 6,640,000 km\textsuperscript{2} with a total population estimated to 150 million in 2015\textsuperscript{127}.

Created on October 18, 1983, ECCAS only began operating in 1985 (establishment of the Secretariat General). However, during most of the 90s, ECCAS remained inactive. Although being designated as a pillar of the United Nations Economic Commission for Africa (UNECA), ECCAS has hardly developed significant actions in the field of water until relatively recently.

Article 4 of the Treaty which institutes the ECCAS defines the mission of the Community as follows: "The goal of the Community is to promote and reinforce harmonious cooperation and balanced and self-sustained development in all fields of economic and social activity, in particular in the fields of industry, transport and communications, energy, agriculture, natural resources, trade, customs, monetary and financial matters, human resources, tourism, education, development, culture, science and technology and the movement of people, in view of achieving collective autonomy, raise the standard of living of the populations, increase and maintain economic stability, reinforce the narrow peaceful relations between its member states and contribute to the progress and development of the African continent."

The ECCAS has a Vision for 2025, in order to make Central Africa, "an area of peace and solidarity, an economically and politically united region for a self-sustained and balanced development where every citizen could move freely". According to this vision, the Heads of State and Government adopted in October 2007, the three strategic axes of priority action on which the region will focus by 2015. These

\textsuperscript{126} Resolution 63/124 adopted by the UN General Assembly on the rights of transboundary aquifers, 63rd session, 2009

\textsuperscript{127} Water policy document of ECCAS, UCC-Water, UNEP, DHI, GWP / WA, October 2009
three axes are: (i) peace, security and stability (COPAX), (ii) infrastructure in the areas of transport, energy, water and information and communications technology (ICT), (iii) environment.

3.2.1.2- Executive summary of water policy document

- Water Policy framework

The provisions of the Treaty establishing the ECCAS and its various protocols highlight the importance of development of the water sector in the areas of intervention of the Community. The main provisions relating to water management recommended the harmonization of national policies on maritime and river transport, relating to the exploitation of their water resources, coordination of development programs, coordination of positions in international negotiations, the development of training and transfer of know-how and data. The treaty includes four protocols that affect the water policy: (i) Protocol IX on cooperation in the field of agricultural development among the member states of ECCAS, (ii) Protocol XI on cooperation in the field transport and communication, (iii) Protocol XIII on cooperation in the field of energy and, (iv) Protocol XIV on cooperation in the field of natural resources.

For the realization of its community vision of a "stable, prosperous, united, economically and politically united Central Africa", ECCAS has set for 2015, three priorities which include the promotion of the water sector, to optimize and rationalize the development of water resources that remain largely underutilized. For optimum and rational use of water resources, Central Africa adopted:

- Water resource management Vision in Central Africa in the 21st century
- The Declaration of Heads of State and Government on IWRM (2007);
- Regional Policy on Water of ECCAS (2009);
- The Regional Institutional Framework for the implementation of ECCAS Water Policy aligned with the structures of AMCOW in Central Africa (2009).

Water resource management in Central Africa Vision in the 21st century has identified five basic principles that guide the action of the Community in terms of water by 2025.

The Regional Water Policy for Central Africa (PREAC) was adopted by the Ministers in charge of water in Brazzaville on March 30, 2009 and endorsed by the Conference of Heads of State and Government of ECCAS during its 14th Ordinary Session held in Kinshasa on October 24, 2009. It provides the regional benchmark framework for water resource management and transboundary cooperation on shared water, the objectives of its PRE are (i) improving management and governance framework of water resources, (ii) satisfaction of needs of drinking water and improving access to sanitation services, (iii) development of water resources for economic purposes and (iv) sustainable management of aquatic ecosystems.

ECCAS Heads of States adopted a regional water policy at their Kinshasa Summit in October 2009. The ECCAS Water Policy will be implemented through five strategic areas. Part of the implementation will be the creation of a specialised institution within ECCAS which will be responsible for water resources management. Given the relatively recent adoption of the regional water policy and emerging institutional structure for implementation, the ECCAS is only beginning to play a role in transboundary water management. With the policy and institutional framework in place it can be expected that ECCAS’ role in creating transboundary water management is likely to grow considerably.

- Legal and Regulatory framework

There is not in the zone of ECCAS, a specific legal framework in water resource sector. However the water issue is considered by the Treaty of ECCAS. The legal and regulatory instruments for water resource management are:

- The Treaty establishing the ECCAS (1983): Articles 26, 56 and 57;

128 The vision was adopted in November 2000 by the ministers responsible for water resource management in Central Africa.
- The Declaration of Heads of State and Government of ECCAS aiming the promotion of IWRM and the establishment within the Secretariat General of an appropriate framework for coordination and harmonization in terms of Water (2007);
- Decision N° 21/ECCAS/CCEG/XIV/009 on adopting the Regional Water Policy for Central Africa (2009);
- Decision N° 22/ECCAS/CCEG/XIV/009 on adopting the regional institutional framework for the implementation of the PREAC (2009);
- Protocol related to cooperation in the field of natural resources between the Member States of ECCAS.

### Institutional framework

The provisions of the Treaty which institutes the ECCAS and its various Annexes constitute the legal basis for the establishment of the institutional framework for water resource management within ECCAS.

Chapter 7 of the Document of Regional Water Policy guides and gives the major lines of the institutional framework to implement within ECCAS the implementation of the Regional Water Policy.

The regional institutional framework of ECCAS in terms of water is set by the Decision on the adoption of the regional institutional framework for the implementation of the PREAC, adopted on October 24, 2009. The composition of the institutional framework specified in Article 2 of the Decision indicates that the organs that make up the framework are of two types: the decision making and implementing bodies and advisory bodies:

- Decision-making and implementation bodies are: the Ministerial Committee for steering and guidance (CMPO), the Technical Monitoring Committee (CTS), and the Coordination Centre for Water Resource Management (CGRE).
- Advisory bodies are: the Regional Water Council (CRE) and the National Water Councils (CNE).

The regional framework for water resource management coordination in Central Africa (CRGRE) was adopted in 2013 and its implementation is ongoing. It consists of the following organs and structures:

(i) **the Ministerial Steering and orientation Committee (CMPO)** is the organ of orientation and decision making for the implementation of the Regional Water Policy. It is composed of Ministers in charge of water of the Member States of ECCAS; (ii) **the Technical Monitoring Committee (CTS)** is to assist the CMPO in its role of guidance, steering and monitoring of implementing the PREAC. It is composed of experts representing the ministries in charge of water of the Member States of ECCAS and experts from transboundary basin organizations (OBT) of Central Africa. However, at its request, may participate as observers, representatives of the civil society, specialized organizations of ECCAS, facilitation organizations and major financial partners; (iii) **the Coordination Centre for Water Resource Management (CGRE)** is the implementation technical structure responsible for coordination and implementation of the Regional Water Policy. Administratively and functionally, it is integrated to the General Secretariat of ECCAS. But in the context of the implementation of the Regional Water Policy, it works under the CMPO which it provides technical secretariat; (iv) **the Regional Water Council (CRE)** is an advisory body providing all state and non-state actors of the region interinstitutional and multi-actor consultation platform. It is composed of designated representatives of regional inter-state institutions, civil society and private sector organizations; (v) **the national water committees or Boards (CNE)** for integrated water resource management are consultative bodies providing all state and non-state actors with inter-institutional and multi-actor cooperation frameworks within the Member States of the ECCAS.

#### 3.2.1.3- Vision, Objectives and Priorities of the policy

The principles that underpin water resources management vision in Central Africa in the 21st century are: access to water for all is an inalienable right; Water is both an economic and social good; concerted and joint management of water resources; water fight factor against poverty and gender development; water, environmental balancing factor.
The Water Resources Management Vision in Central Africa in the 21st century is based on five major strategies:

1. Comprehensive and participatory management of water resources;
2. The planning and development of infrastructure projects;
3. Preservation of resources and fight against waste;
4. Human Development;
5. Strengthening regional and international cooperation.

The overall objective of the PREAC is: "To contribute to poverty reduction and economic growth in the space of the Community by implementing integrated water resources management that allows sustainably improve access to drinking water and sanitation as well as the development of water resources for economic purposes, while respecting other functions of water, including its environmental, and guarding its possible harmful effects".

Water is a vital resource that has many uses (including physiological and economic) but also fulfills environmental, social, cultural, religious, etc. If the resource available is not sufficient to satisfy all requests, allocation of resources for different purposes would be done following the priority order shown in the table below.

<table>
<thead>
<tr>
<th>Sectoral priorities</th>
<th>Cross-cutting priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority n° 1</td>
<td>Meeting drinking water needs of populations</td>
</tr>
<tr>
<td>Priority n° 2</td>
<td>Meeting water needs for food production (irrigated agriculture, livestock watering, fisheries and aquaculture)</td>
</tr>
<tr>
<td>Priority n° 3</td>
<td>Meeting water needs for economic uses other than agricultural uses (industry, energy, etc.)</td>
</tr>
</tbody>
</table>

The environmental functions of water (not for use but meet sustainability requirements) cannot be the subject of priorities as well as uses. That is why they are the subject of a cross-cutting priority. They must be considered in all cases in the allocation of resources to ensure the survival of aquatic ecosystems and wetlands, thereby guaranteeing the sustainability of the resource base (eg. Rice, freshwater fishing, etc.).

### 3.2.1.4- Success components of good water governance

#### A. Management mechanisms

- **Water resources planning tools**

The Regional Action Plan for Integrated Management of Water Resources in Central Africa (IWRM-CA) aims to give ECCAS a tool to operationalize PREAC. Adopted in June 2014, the Plan is the appropriate instrument to operationalize the PREAC. Its overall objective is "to contribute to the poverty reduction and economic growth in the space of the Community, through the implementation of integrated water resources management".

The specific objectives of PARGIRE result of the major challenges Central Africa faces. In this case these challenges are:

- Improve knowledge of water resources through the establishment of a common information system, monitoring tools and ad hoc control;
- Develop water resource mobilization programs aimed at increasing people's access to clean water and sanitation at least 10% by 2025, and improve the sustainable development of resources socio-economic purposes;
- Increase the capacity to mobilize financing for the water sector to achieve at least 5% of national budgets allocated to water and sanitation, while enhancing communication to those involved in the sector some water;
- Improve the water governance framework in Central Africa by setting up adequate instruments for integrated water resources management, harmonization of policies and legislation and the exchange of experiences and good practices.

The PARGIRE is aligned with the African Water Vision 2025 and the Millennium Development Goals (MDGs). It is in harmony with the various sectoral and regional programs implemented.

- **Climate change adaptation in water sector**

Regional concerns regarding climate change are initially addressed by the PREAC in terms of preserving the environment and natural resource management. Two of the twelve (12) major strategic orientation axes relate to the fight against climate change in Central Africa (Axis No. 5) and the assessment and early warning for the management of natural disasters or provoked (Axe 11).

The PREAC contains several actions that address different aspects of climate change. Under the strategic axis 1, it is envisaged to develop instruments for the prevention and management of risks and disasters related to water through the implementation of risk management mechanisms and disasters (A.S.1.6). Operationally, the IWRM-CA includes actions aimed at specifically addressing adaptation to climate change in the water sector.

Program No. 4 IWRM-CA addresses the issue of climate change adaptation through the "Development and implementation of regional warning systems and disaster management."

- **Monitoring and evaluation (M&E) systems**

Monitoring the implementation of IWRM-CA is provided through a monitoring and evaluation mechanism (M & E) including:
  - Institutionally: the organs of the Regional Institutional Framework Implementation of PREAC (CMPO, CTS, CRGRE)
  - Technically (i) a mechanism for monitoring, review and reporting of (interim reports, annual reports, balance sheet report at the end phase, final report); (ii) compounds assessment tools: an independent external evaluation mid-term (end of year 5), a final evaluation (six months before the end IWRM-CA); (iii) performance indicators and a general picture of the performance of the board IWRM-CA (technical and financial)
  - On stakeholders’ participation: the water users and civil society (Regional Water Board, CRE) are not involved in monitoring implementation.

- **Human rights in water supply and water management**

The inclusion of the right to water in the foundations of the regional water policy is justified by the following reasons:
  - All CEMAC member countries have ratified the International Covenant on Economic, Social and Cultural Rights adopted by the United Nations in 1966.
  - Ratification by all Member States of ECCAS of the "Universal Declaration of Human Rights" adopted in 1948 and the right to water adopted in 1999 by the United Nations General Assembly has recognized that water is both a common heritage and an essential good and the right to water as a fundamental right.
  - Constitutions of member countries of ECCAS have almost all, in one way or another and in substance, that the state guarantees the management of natural resources and environmental conservation including resources water.

This recognition resulting in rights and duties of the authorities and users, as an organization, sub-regional development and economic integration, ECCAS must therefore take into account the right to water in the formulation of its regional water policy. It also provides for the establishment of the Regional Solidarity Fund for Water (P2 IWRM-CA) that will help improve access to water for all.
Learning review and capacity building processes

The process of learning and capacity building is the cornerstone of PREAC. Moreover, the process of developing the IWRM-CA showed the relevance and interest of good practice in IWRM-CA. Thus the PREAC provides for the development of a capacity building program (AS3.3), training of water stakeholders (AS5.1) and the strengthening of research and development (AS5.3).

To facilitate the implementation of areas of intervention of PREAC, the IWRM-CA states the following necessary actions:

- Support the development of human resources in the water sector (P2 IWRM-CA)
- Capitalization and dissemination of good practices and development of guidelines on procedures, applicable participatory methods, capacity building of stakeholders in terms of water resources management projects in Central Africa (P2 IWRM-CA)
- Develop a training program at regional, national and basin organizations, covering areas of expertise required for IWRM (P3 IWRM-CA)
- Development and implementation of capacity building plans for civil society, local private operators and the population of rural communities (P6 IWRM-CA)
- Formulation and implementation of literacy plans, education and training at local level on IWRM (P6 IWRM-CA)

B. Water governance

Consultation, participation and co-ordination mechanisms

The mechanisms of participation, consultation and coordination are defined by the Regional Institutional Framework Implementation of PREAC which itself provides for the development and implementation of a strategy of participation and integration issues genre (AS3.2). Several actions IWRM-CA involve the establishment of frameworks for consultation and participation and the strengthening of the frameworks.

- Development and implementation of a communication plan and extension of PARGIRE (P2 IWRM-CA).
- Development of a regional strategy of involvement of gender in water resources management in Central Africa (P2 IWRM-CA).
- Development of a regional strategy for communication and education in the field of water in Central Africa (P2 IWRM-CA).
- Support for operational basin organizations for the establishment of appropriate frameworks for dialogue and coordination in water resources management or revitalization (P3 IWRM-CA).

Anti-corruption and integrity processes and measures - Transparent water budget processes

The water sector within the ECCAS has been no process or specific measures in the fight against corruption, integrity and transparency.

Conflicts management

The PREAC provides for the establishment of instruments and mechanisms to prevent conflicts related to the management of international waters (AS2.1). To this end, the following actions will be undertaken:

- Conduct a historical review of international water conflicts that have arisen in Central Africa and analyze the approaches to their resolution;
- Develop a regional framework agreement containing appropriate instruments for the prevention of conflict resolution regarding transboundary waters.

Benefits of water, energy, and food nexus approach

The axis 4 of PREAC concerns the "Development of development programs of water resources." However the "nexus" approach applied between water, food security and access to electricity involves
a real integration in the design and planning of these areas under a single department, that of the Integration Economic and Monetary Physics (DIPEM), through two priorities: (i) Infrastructure, Communication, Water and Energy and (ii) Environment and Natural Resources.

The purpose of the "nexus" approach that is to lead to the improvement of water, energy and food security requires an approach that integrates management and governance across sectors and scales. Without going into considerations of how the General Secretariat of ECCAS, the IWRM-CA has identified several actions that should in principle facilitate the implementation of the "nexus" approach:

- Support the transition to green economies (P4 IWRM-CA)
- Support the development and implementation of national development of irrigation infrastructure schemes (P5 IWRM-CA)
- Support for projects of regional / cross-border hydropower schemes to improve access to electricity in relation to the Power Pool of Central Africa (PEAC) (P5 IWRM-CA)
- Support the development and implementation of national action plans for development of hydroelectricity in Central Africa (P6 IWRM-CA)

**Benefits of transboundary water management**

The Member States of CEEAC are involved in sixteen (16) international river basins whose area exceeds 5,000 km². However, only five (5) are managed within the framework of interstate commissions or basin organizations. This is the Congo basin, the Chiloango, Nile, Lake Chad, Cunene and Okavango. It is therefore necessary to make every effort to develop formal management frameworks not yet institutionalized basins and to ensure a watershed between surplus areas and deficit areas. In the management of shared waters, the PREAC identified the challenges as follows:

- Strengthen cooperation between countries sharing a basin including through the development of joint projects and programs;
- Establish permanent structures of these basin management;
- Ensure the sharing of water between surplus areas and deficit areas to ensure harmonious development of the subregion.

Operationally, the commitment of the subregion to the benefits of cross-border cooperation, IWRM-CA provide several actions grouped under the following programs:

- Support the development of formal frameworks for the management of international basins not yet have management bodies (P1 IWRM-CA)
- Development and ratification of a regional framework convention on the management of international waters (P2 IWRM-CA)
- Support for international basin organizations in the sub-regions for the revision of their founding documents (if necessary) and to equip charters, directives, regulations, etc ... on the water management reflecting their new directions towards IWRM (P3 IWRM-CA)

**3.2.1.5- Overview of lessons learned**

- The IWRM-CA is prepared for the 2015-2025 period and its implementation is scheduled to take place in three (3) phases. A first phase of short-term actions (2015 to 2018) was the first actions that affect the smooth running of the IWRM process and extends for a limited number of shares in the medium term (until 2020). A second medium-term development phase (2019-2022) focuses on supporting the production of economic goods, improving access to drinking water in urban areas while ensuring the preservation of the resource water. A third phase of evaluation and consolidation in the long term (2023-2025). This implementation modality is flexible and offers the possibility of journals at the end of each phase to make the necessary adjustments to better guide the next phase.

- In the implementation of IWRM-CA, priority is given to the operationalization of CRGRE Program (P2) through the development of an implementation of pilot project of IWRM. This is a flagship program of interest to four (4) Member States in which the issues in IWRM are important and the experience which will draw lessons applicable to all countries in the region. The countries are
Gabon, Equatorial Guinea, Cameroon and Congo basins that present that are equipped with no cross-border device. These pools of Ogooué and Ntem.

- The support program for TBOs or for countries for the establishment of not yet existing TBOs (P3 IWRM-CA) is to provide support to international basin organizations in the sub-region for the revision of their founding texts (in case of necessity) and to equip charters, directives, regulations, etc ... on the water management reflecting their new orientations towards IWRM. This support also included the establishment of appropriate frameworks for dialogue and coordination in water resources management or revitalization. It provides support for the creation of OBT for basins and Ogooué Ntem (drafting of constitutional texts creation of basin management bodies).

- The IWRM-CA contribution to regional / existing cross-border initiatives and programmes, supports and / or complement the many initiatives and actions in progress in the Member States. In order to promote its appropriation and its implementation, it is connected to the objectives and sustainable development programs of Member States, particularly the MDG perspective, economic and social development and poverty reduction, sectoral programs and regional (African Water Vision 2025, CAADP / ECCAS, PIDA, PEAC, SRAP, CICOS, LCBC, etc.)

- Adopting a IWRM-CA -financing strategy is a valuable and indispensable tool to secure the implementation of projects and actions. Mobilize the required amounts is an ambitious challenge. That is why the strategy is all possible sources of funding (private sector, national public sector, international donors, ODA, innovative financing mechanisms, etc.). The strategy is based on five pillars: (1) Reaffirmation of Community solidarity; (2) Improving the environment for investment; (3) Development of national instruments to achieve political commitments; (4) Coordination initiatives; (5) Implementation of a 'basket fund 'at regional level.

3.2.1.6- Practical recommendations

- **Water Policy framework**
  
a) The regional context of Central African water resource management has evolved substantially since the Declaration of Heads of State and Government of ECCAS of 30 October 2007. Notwithstanding the progress made, the road is still long, particularly with respect to social changes and political reforms necessary for the transition to IWRM. Also, the following recommendations are made to improve governance and water resource management in the space of ECCAS.
  
b) Taking effective and practical consideration of climate change in water resources management is imperative. Given the nature (development issue) and scale (a question that transcends political boundaries of States), problems of climate change, ECCAS and its member states must improve the integration of adaptation to climate change governance and water resource management.
  
c) ECCAS is to play a leading role to strengthen the integration of sectoral policies, improve coordination and integration of policies and decision making processes, coordinate and harmonize the knowledge base and indicators database covering spatial and temporal scales and planning horizons. IWRM at the regional level should develop into partnerships with users of water sectors whose policies and strategies are influenced by several factors that are outside the water sector.

- **Legal and Regulatory framework**
  
a) The right to water is not sufficiently reflected in the variation of the PREAC. ECCAS should be more explicit about the inclusion of the right to water in the formulation of regional policy and water IWRM-CA. The establishment of the Regional Solidarity Fund for Water (P2 IWRM-CA) that will help improve access to water for all will take time to be operational.
  
b) A regional anti-corruption policy in the water sector is necessary but should be approached with caution, designed on the basis of the lessons of the governance agenda at large and taking into account the knowledge of the sector institutions water and reform needs.
Institutional framework

a) The IWRM-CA, through its Programme No. 2 on "Operationalizing the CRGRE" does not really address the mechanisms of participation and consultation involving all stakeholders in the sub-region. This P2 program almost exclusively address the communication and dissemination of IWRM-CA, the involvement of gender, education and support to OBT to run the executive coordination and consultation. The action of ECCAS water management legislation would benefit from better organize all stakeholders and promote effective participation in the management of water resources in Central Africa.

References

1) ECCAS (2014): Document of the PARGIRE/CEEAC
2) ECCAS (2014): Presentation of PARGIRE, ECCAS Validation Workshop PARGIRE / CEEAC
3) ECCAS (2013): Regional Synthesis Report states places of IWRM, Development of PARGIRE
4) ECCAS (2013): Final report of the institutional study on the creation and establishment of the Regional Centre of Coordination and Water Resources Management in Central Africa
5) ECCAS (2012): Final report of the feasibility study and implementation of the Water Information System (EIS) ECCAS
6) ECCAS (2012): Action framework for the implementation of the Regional Strategy for Central Africa risk prevention, disaster management and climate change adaptation
8) ECCAS (2009): Regional institutional framework implementation of the Central African Water Policy
9) ECCAS (2007): General policy on the environment and natural resource management
10) ECCAS (2000): Water resources management in Central Africa Vision in the 21st century

3.2.2- Economic Community of West African States (ECOWAS)

3.1.2.1- General information

ECOWAS is a community made up of 15 countries in West Africa (Benin, Burkina Faso, Cape Verde, Ivory Coast, Gambia, Guinea, Guinea Bissau, Ghana, Liberia, Mali, Niger, Nigeria, Togo, Senegal, Sierra Leone) with a population of about 220 million inhabitants on a territory equivalent to 6,142,000 km\(^2\).

ECOWAS aims to promote cooperation and integration in the perspective of the West African Economic Union to raise the standard of living of its peoples, maintain and enhance economic stability to strengthen relations between the Member States and contribute to the progress and development of the African continent. "To this end, Community action shall include:

- The harmonization and coordination of national policies and promoting programs, projects and activities especially in the areas of agriculture and natural resources, industry, transport and telecommunications, energy, trade, money and finance, education, information, culture, science, technology, services, health, tourism, law ...
- The harmonization and coordination of policies to protect the environment.

The ECOWAS 2020 Vision is to create:

---

129 Interim Formulation Report of the component "Strengthening Basin Agencies" (SBA) of the subprogram "Improvement of Water Management" (AGIE) of the Regional Program of Agricultural Investment (RPAI) of ECOWAS
130 Article 3.1 of the revised ECOWAS Treaty of July 24, 1993
131 ECOWAS, 2007
- A sub region without borders where people have access to enormous resources and enjoy it, by creating sustainable production and employment opportunities, in the context of equitable distribution systems

- A space in which people make their business and live in peace in the rule of law, good governance and a sound environmental framework

- An area that is part of the African continental space in the context of a global village, where every human being lives in dignity benefiting from fair trade, mutual solidarity, and guided by shared principles

3.1.2.2- Executive summary of water policy document

- **Water Policy framework**
  West Africa has committed since 1998 in a regional process of introduction of integrated management, through the Declaration of the Ministers and Heads of delegations in charge of water issues during the conference of West African on integrated management of water resources held in Ouagadougou from March 3 to 5, 1998. Through this Declaration, the Ministers and Heads of delegations in charge of water, urged ECOWAS member country governments to initiate a regional processes and national IWRM process.

  In March 2000, the Council of Ministers of Water and Environment of ECOWAS adopted the "West African Vision for Water, Life and the Environment for 2025". It states: "In 2025, water resources are managed effectively and practice in a sustainable manner for the environment so that every person in the region to have access to safe drinking water for basic needs, evacuation structures waste, food security; poverty is reduced, that human health is protected, and that the bio-diverse terrestrial and aquatic systems are protected."

  The implementation of these recommendations has resulted under the aegis of ECOWAS by:
  - The adoption in 2000 of a Regional Action Plan for IWRM (IWRM-WA);
  - The establishment in 2001 of a Permanent Framework of Coordination and Monitoring (PFCM) of the integrated water resources management;
  - The adoption in 2008 and the implementation of the West Africa Water Resources Policy RWP-WA) in collaboration with UEMOA and CILSS;
  - Drafting in 2012 of the Implementation Action Plan (IAP) of the RWP-WA.

- **Legal and Regulatory framework**
  It does not exist in the ECOWAS sub region, a specific legal framework in water resources sector. However the water issue is addressed by the revised Treaty of the 1993 ECOWAS.

- **Institutional framework**
  ECOWAS set up a Permanent Framework of Coordination and Monitoring (PFCM) of Integrated Water Resources Management. A PFCM strategic plan was elaborated and adopted over the period 2007-2015. With regard to transboundary water governance, the strategic focus areas are the provision of a support to transboundary basins and IWRM process in the basins, and advancing regional integration in the water sector. For the coordination and implementation of the PFCM a new institutional structure was established. Within that institutional structure the Water Resources Coordination Unit (WRCU) is the executive organ responsible for the day-to-day management of implementation activities under the PFCM, particularly the Regional Action Plan on IWRM in West Africa.

  Under the PFCM of the integrated water resources management, ECOWAS has established a department "Water Resources" in 2004. One of the roles of the PFCM is to set and strengthening a

132 Decision A / DEC.4 / 01/06 of 12 January 2006 adopting the Statutes of the Permanent Framework for Coordination and monitoring of IWRM in West Africa and the Rules of Procedure of the component bodies, Statutes of PFCM, Article 2
process of integration and development of the water sector at the regional level. The PFCM is constituted of four (4) structures: (i) the Ministerial Monitoring Committee (MMC) is the organ of orientation and decision composed of Ministers in charge of water resources of the ECOWAS member states; (ii) the Technical Committee of Experts (TCE) consists of representatives of the countries that are the water experts of the member countries (NFPs IWRM) and representatives of international basin organizations in the sub-region; (iii) the Sub-Regional Council for Consultation on Water Resources (RCCWR) is in consultative body comprising representatives of all stakeholders at the regional level in the public sector, private sector and civil society; (iv) the Water Resources Coordination Centre (WRCC) is the permanent executive body.

The main actors in the implementation of the action plan are:
- ECOWAS, UEMOA, CILSS,
- States and local authorities,
- The bodies of transboundary basins,
- Public partners (inter-governmental organizations ...), private, NGOs, training and research organizations,
- Technical and financial partners,
- Users (user associations, producer organizations, ...).

3.1.2.3- Vision, Objectives and Priorities of the policy

The overall objective of the regional West African water policy (RWP-WA) is to "contribute to poverty reduction and sustainable development by directing the Community and its Member States towards a resource management of water reconciling economic development, social equity and environmental conservation". The specific objectives are:

a. Prompt the development of Community guidelines in terms of water management;
b. Promote harmonization and integration of national and regional policies relating to water resources;
c. Encourage States to develop water management framework at country and cross-border basins in West Africa by reconciling economic development, social equity and environmental conservation.

The RWP-WA retains the guiding principles of equitable and reasonable sharing of international watercourses and water resources of shared aquifers; precaution; prevention; Information and advance notice; the repair or the polluter - pays: user-pay; good governance of water resources; genre; subsidiarity; complementarity; solidarity; progressivity; partnership; cooperation; management by watershed or aquifer system.

To achieve the overall objective of the RWP-WA, regional priorities were grouped according to three (3) strategic areas of intervention: Reforming water governance, promote investment in the water sector, and promote cooperation and regional integration in the water sector.

3.1.2.4- Success components of good water governance

A. Management mechanisms

- Water resources planning tools

The first Implementation Action Plan (IAP) for the RWP-WA focuses on greater involvement of state actors, private sector and civil society in the search for solutions to alleviate the impacts of various constraints such as deficit infrastructure in all countries of the region, degradation of water resources, weak internal financial resources, flooding and recurrent drought.

Developing an IAP of the RWP-WA has its basis in the Additional Act No. A/ SA.5/12/08 adopted by the Conference of Heads of State and Government ECOWAS in December 2008. Moreover, it is based on the 2020 vision of ECOWAS and the West African Water Vision 2025. The IAP replaces
the Regional Action Plan for the integrated management of resources water RWP-WA) adopted in December 2000 and defines the key programs and actions which will be built future strategic plans of the CPCS. In this it takes regional priorities and details of WARWP. Finally, the IAP is implemented through successive plans of operation, the first covering the period 2013-2016.

- **Climate change adaptation in water sector**

Concerns about the variability and climate change are considered in three Community policy documents namely the Environmental Policy of ECOWAS\(^{133}\), the RWP-WA and its implementation plan, the Agricultural Policy (ECOWAP).

Through the Strategic Axis 2, ECOWAS advocates the promotion of sustainable management of resources for improving the sub regional economy while respecting the environment. Moreover, RWP-WA encourages countries to develop information and knowledge on water, including the impact of global change on the development and availability of water resources, research and capacity building (Strategic Line 1: Reforming water governance).

Also the Plan of Operations 2013-2016 (PO) of the IAP provides two major actions in the field. The action 2.5.1 aims to support capacity building of States and basin organizations in reducing environmental risks, through (i) the development and dissemination of a guide on the consideration of the reduction environmental risks in IWRM action plans, and (ii) the formulation and implementation of a training program to States and basin organizations. The action 2.5.2 action aims to develop a regional program of adaptation to climate change and variability in the water resources management.

ECOWAS has also adopted the Policy on Reducing Disaster Risk (PRDR)\(^{134}\) mechanisms whose aim is to facilitate the sustainable integration and development of African States West through the promotion and effective support disaster management.

There is also the Regional Action under the Reduction of economic vulnerability, ecological and social program of West Africa to climate change. In this program, the water resources sector is considered one of the most vulnerable sectors. The vision of this program is that "the population, economies and policies in the region and constantly adapt effectively to climate change." The program's objective is “to facilitate the implementation at the regional level, mechanisms, stakeholders and capacity to provide support to states and communities to adapt to climate change.”

Finally, the Community has initiated in 2007 a reflection on the development of a regional strategy for adaptation to climate change based on the risk sharing approach. This strategy includes four areas, namely:

- Position the climate change as a cross-cutting theme in all the other subjects covered by the WRCC.
- Cooperate with organizations that have long been working on the subject and who have made it their priority thematic (ex. CILSS WASCAL).
- Participate in regional and international conferences on the subject.
- Exercise scientific monitoring function by following the many programs and projects that address climate change impacts on water resources in West Africa.

- **Monitoring and evaluation (M&E) systems**

The implementation of RWP-WA will be accompanied by an M&E mechanism. To this end, ECOWAS in collaboration with UEMOA and CILSS puts in place the tools for monitoring and evaluating the implementation of RWP-WA through the organs of the PFCM.

Periodic M&E will review progress in the implementation of RWP-WA and make the necessary reforms. The ECOWAS Commission encourages joint work (ECOWAS, UEMOA, and CILSS)

\(^{133}\) Published by the Environment Directorate, ECOWAS Commission, 2008. Additional Act A / SA.4 / 12/08 adopting the ECOWAS Environmental Policy

\(^{134}\) Adopted in 2006
definition of a short list of indicators to inform to monitor the implementation of RWP-WA. This work is in progress with the establishment of the Regional Water Observatory ECOWAS under development.

The 2013-2016 Operational Action Plan of the IAP provides 1.1.2 action, which aims to monitor and evaluate the implementation of existing IWRM plan through the preparation of regular reports on implementation of IWRM Plans. It is the same for 1.4.4 Action which aims to adopt the water sector monitoring and evaluation indicators at regional level. Finally, as part of the Commission of the African Union (AU), the 3.3.1 action is to follow the implementation of the Sharm El Sheikh Commitments on water and sanitation through the development of country reports and the holding of an annual regional workshop to validate reports.

- **Human rights in water supply and water management**

Concerns about the inclusion of human rights in drinking water and in water management at the regional level are the subject of attention. There first social equity that is subject to the specific objective 3 of the RWP-WA which means that Member States develop their water management framework (country and transboundary basins) by reconciling economic development, social equity and environmental conservation. Then there are the guiding principles that aim at equitable management that are gender and solidarity. In developing the economic governance instruments by Member States, applying the user-pays principle should be done with care to protect the minority of users who cannot face a high cost of water.

- **Learning review and capacity building processes**

Learning processes and capacity building actions in the areas covered by the water management are present at each of the priority areas of RWP-WA. More specifically, the priority 1 on the reform of water governance encourages Member States to strengthen the capacities of stakeholder groups. To this end, the Community intends to develop a regional strategy building IWRM capacity and supports research efforts and capacity-building in West Africa.

Capacity building of various categories of actors at all levels (local, national, regional / cross-border), and on all aspects of the concerted and sustainable management of water resources is a constant concern of RWP-WA and its PO 2013-2016. Thus, actions 1.2.2, 1.5.1, 1.6.2, 2.1.1, 2.2.5, 2.5.1 are intended to undertake capacity building actions on subjects as varied or thematic instruments such as economic governance, the formulation and implementation of a regional strategy for capacity building, environmental assessments, approaches, programs in the field of water, irrigation and agricultural water management, reduction of environmental risks.

Finally, the M&E implementation mechanisms of IAP participates in general capitalization of learning and the learning process.

B. Water governance

- **Consultation, participation and co-ordination mechanisms**

In terms of stakeholders’ mechanisms for consultation, the Sub-Regional Council for Consultation on Water Resources (RCCWR) consists of representatives of all stakeholders at regional level. It consists of forty-five (45) members, including (i) fifteen (15) members representing the states through the national focal points; (ii) fifteen (15) members representing basin organizations through the focal points of the basins, local authorities and partners; (iii) fifteen (15) members representing civil society including the private sector.

The implementation of the reform of water governance includes the promotion of private sector participation and civil society to complement government efforts. In this respect, the 2013-2016 Operation Plan includes (i) the creation or strengthening of advisory committees of stakeholders from the basin organizations and Member States (action 1.3.1); (ii) setting up a network for exchange of experience of national water councils (Action 1.3.2); (iii) increasing the visibility and participation of private sector in the management and development of water resources; (iv) the
promotion of network participation of journalists trained in IWRM in the activities of regional organizations.

The coordination of actions and regional water initiatives happening at two levels: vertical and horizontal. At the vertical level, we find the bodies of the PFCM whose main mission is to promote, coordinate and ensure the implementation of a Community policy of water resources management legislation in West Africa, according to the mission and ECOWAS policies. This is the WRCC, on behalf of the PFCM, provides this coordination mission. In the same vein, ECOWAS provides role between AMCOW / AUC and the West African region. This role is not yet fully established in practice and is not very visible. Horizontally, apart from ECOWAS, several regional institutional actors involved more or less directly in the water sector. This is among other UEMOA, CILSS, IUCN, GWP / WA, the EAA, ANBO, WA-Net, WWF, etc.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

The water sector in the ECOWAS is subject to no process or specific measures in the fight against corruption, integrity and transparency. However there are the Protocol A/P3/12/01 on the fight against corruption adopted on 21 December 2001. The Protocol aims to: (i) promote and strengthen, in each of the States Parties, the development of effective mechanisms to prevent, punish and eradicate corruption; (ii) to step up and make it more dynamic cooperation between States Parties to make it more effective, measures against corruption; (iii) to promote the harmonization and coordination of national laws and the fight against corruption policies (Art. 2). It requested Member States to commit to harmonize their national legislation to achieve the goals and objectives of this Protocol (Art. 18). This Protocol is not yet in force, for lack of a quorum of ratification by member states (at least 9 Member States).

- **Conflicts management**

Resolution mechanisms of crises and water-related conflicts concern the waters shared by several Member States. It is expected that the Community should establish mechanisms for the prevention and resolution of conflicts over the use of shared water resources. It recommends the mainstreaming water in the prevention of humanitarian crises, notably through:

- The creation of water storage to cope with crises,
- The crisis management plan development,
- The establishment and monitoring of indicators (early warning).

In this respect, the Plan of Operations 2013-2016 (PO) includes the development of a guide on prevention and settlement of crises and conflicts related to water (action 3.2.1).

The other ECOWAS policies that inspire the actions of RWP-WA the action plan are part of the Conflict Prevention Framework (CPF), subject to Regulation MSC/REG.1/01/08 and policies and mechanism of the disaster risk reduction.

- **Benefits of water, energy, and food nexus approach**

Meeting the needs of many users requires strong coordination and close relations with the policies and strategies of all sectors in order to develop as much as possible multi-purpose structures. Applying the approach "nexus" between water, energy and food security should improve the efficiency of Community investment in the water sector.

An example of application of the "nexus" approach is regional dialogue on large water infrastructure led between 2009 and 2011 that led to the development of guidelines as a guide. These guidelines are the result of a regional dialogue conducted by WRCC closely with the departments of ECOWAS in charge of the sectors of energy, agriculture and environment.

Substantial efforts are needed in the implementation of the approach "nexus" in the development of more or less related sectors including water, energy and food security.

- **Benefits of transboundary water management**
The nature and character of the ECOWAS Community institution make a political tool of choice for cross-border cooperation on shared water resources. And it is no coincidence that the third strategic area of intervention of the RWP-WA concerns the promotion of cooperation and regional integration in the water sector.

3.1.2.5- Overview of lessons learned

- Since 1998 the West Africa embarked on a process of introducing IWRM\textsuperscript{135}, through the Ouagadougou Declaration which paved the way for a sub-regional process leading to the adoption of RWP-WA, and the establishment of the PFCM. Well before the World Summit on Sustainable Development (Johannesburg, 2002), the West Africa already had its regional IWRM action plan. This achievement in the early hours of the adoption of IWRM has been possible because of a hand, the experience of Burkina Faso who had already launched reforms in 1995 water resources management framework and begun the transition to IWRM, and secondly, the support of the Kingdom of Denmark to conduct a sub-regional processes across the West Africa. The political will of the member states of ECOWAS was critical.

- Several regional institutional actors intervene more or less directly in the water sector. This is among other UEMOA, CILSS, IUCN, GWP / WA, the EAA, ANBO, WA-Net, WWF, etc. There is therefore a need at this level of coordination for better synergy, complementarity and optimization, both in interventions in resource use. This coordination is not formalized but during more or less occasional thanks to the implementation of certain initiatives, including regional projects.

- By learning from this journey and to further strengthen the different acquired, it has become necessary to develop an Implementation Action Plan (IAP) of the RWP-WA. The IAP resumes and outlines the regional priorities of RWP-WA. It focuses on greater involvement of state actors, private sector and civil society. It is implemented through successive plans of operation, the first covers 2013-2016. It aims to be a tool to improve the search for complementarity between regional projects and programs often indexed for their lack of synergy and efficiency in the use of human and financial resources.

3.1.1.6- Practical recommendations

- **Water Policy framework**
  
  a) Efficiency in the final use of the water is considered an essential aspect of water resources management. It is therefore necessary to ensure that this concern is now treated with the attention and priority that suits in a context of increasing water needs and water resource scarcity.

  b) The Regional Dialogue on large water infrastructure led between 2009 and 2011, showed the issues and the relevance of the definition of guidelines for the development of water infrastructure in West Africa to improve investment efficiency and strengthen coordinated and balanced management of water resources. The application of these guidelines in the form of directives needs to be materialized.

- **Legal and Regulatory framework**
  
  a) West Africa has not yet a specific policy on the management of shared water resources. In order to harmonize understanding, to facilitate the search for common solutions, and to better protect water resources, it is necessary in the medium term to have such a policy framework document on the management of shared water resources. On this occasion, the consideration of transboundary aquifers should be effective. The development of a directive on the management of shared water resources in West Africa is being (a draft directive already exists and is in the adoption circuit) and its adoption must be accelerated to fill an insufficient regional framework.

\textsuperscript{135} Prime founding event is the West African Conference on IWRM (Ministerial Meeting) held in Ouagadougou from March 3 to 5 1998.
b) The need to promote joint management of transboundary waters was perceived by the States of the sub region for more than four decades with the creation of several basin organizations. It notes, however, that issues related to groundwater, including transboundary did not receive much attention and should be remedied.

**Institutional framework**

a) In the field of development of water resources, significant progress has been made in recent years in the development of approaches existing programs (such as SWAP), although this progress varies from one sector to other. This trend has inspired the adoption of a longer-term vision and structure interventions around objectives whose achievement is measured by indicators.

b) In monitoring the implementation of international commitments, the States of the region have ratified or adopted several international commitments and ensured the implementation of some of them. However, some commitments relating to water resources deserve better monitoring by the PFCM. This is the MDG for drinking water and sanitation, the United Nations Convention on International Watercourses for non-navigational uses of 1997, which is not yet, ratified by all community’s states. In addition, some new commitments such as the right of access to drinking water, subject to a UN resolution in July 2010, Sharm El Sheikh Commitments on water and sanitation provoke discussions in States and in view of the importance of the subjects, it is appropriate to consider follow-up actions of their advances.

**References**

1) ECOWAS Revised Treaty  
5) ECOWAS (2008): Environmental policy of ECOWAS  
6) ECOWAS, UEMOA, CILSS (2008): Water Resources Policy for West Africa  
7) ECOWAS (2008): Conflict Prevention Framework (CPF), Regulation MSC / REG.1 / 01/08  
9) Madiodio NIASSE (2007): Elements of regional strategy for adaptation to climate change based on the risk sharing approach - West Africa  
11) ECOWAS (2006): Politics and mechanisms of ECOWAS on Reducing Disaster Risk  
12) ECOWAS (2001): Protocol on the fight against corruption  

### 3.2.3- South African Development Community (SADC)

#### 3.2.3.1- General information

The South African Development Community (SADC) Region comprises 14 Member States with two island states namely Angola, Botswana, Democratic Republic of the Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe.
The region covers an extensive area of approximately 9.3 million km\(^2\). There is tremendous variability in climate across the region, which in turn significantly affects the availability of water resources. Average annual rainfall varies from 4,000 mm in the north to less than 50 mm in south-western parts of the region. The region includes the equatorial rain forests of the Democratic Republic of the Congo, and deserts in Namibia and Botswana.

A large part of the region is semi-arid. Surface runoff is higher in the northern parts of the region and most rivers are perennial; but surface runoff is lowest in the southern and western parts of the region, and many rivers are ephemeral. The region is prone to extreme meteorological events. Severe droughts have covered the region frequently over the last two decades, and extreme floods hit the region in two consecutive years, 2000 and 2001, and affected particularly Mozambique and Malawi.

The major features of water resources in the SADC region are:
- Limited and unevenly distributed geographically and over time;
- Frequently shared between several countries in transboundary hydrological basins (e.g. The Zambezi is shared by eight riparian member states);
- Over 70\% of renewable water resources in the region occurs in shared water;
- There are 15 major river basins which are transboundary or shared watercourses between two or more member state
- Two of these watercourses are shared by SADC and other non SADC Member States

The SADC Declaration and Treaty (Declaration by the Heads of State or Government of Southern African States “Towards the Southern African Development Community” adopted in Windhoek, Namibia, on 17 August 1992, and the Treaty of the Southern African Development Community, which entered into force on 30 September 1993 are the founding documents for the establishment of the Southern African Development Community (SADC).

The original Declaration calls upon all countries and people of Southern Africa to develop a vision of a shared future, a future within a regional community that will ensure economic well-being, improvement of the standards of living and quality of life, freedom and social justice and peace and security for the peoples of Southern Africa. The aim of the SADC is to become an integrated regional economy on the basis of equity and mutual benefit. This is governed by Treaty and Declaration. The Treaty provides for member States to agree on various areas of cooperation (Article 22).

The Treaty states eleven (11) objectives among which three (3) are directly linked to water issues: (i) promote sustainable and equitable economic growth and socio-economic development that will ensure poverty alleviation with the ultimate objective of its eradication, enhance the standard and quality of life of the people of Southern Africa and support the socially disadvantaged through regional integration; (ii) promote and maximise productive employment and utilisation of resources of the Region; and (iii) achieve sustainable utilisation of natural resources and effective protection of the environment (Art. 5).

The areas of co-operation as stated in the Treaty (Art. 21) are the following:

1. Member States shall cooperate in all areas necessary to foster regional development and integration on the basis of balance, equity and mutual benefit.
2. Member States shall, through appropriate institutions of SADC, coordinate, rationalise and harmonise their overall macro-economic policies and strategies, programmes and projects in the areas of co-operation
3. In accordance with the provisions of this Treaty, Member States agree to co-operate in the areas of food security, land and agriculture; infrastructure and services; trade, industry, finance, investment and mining; social and human development and special programmes; science and technology; natural resources and environment; social welfare, information and culture; and politics, diplomacy, international relations, peace and security. Additional areas of co-operation may be decided upon by the Council.
3.2.3.2- Executive summary of water policy document

- Water Policy framework

The Southern Africa water policy is composed of three (3) major documents: (i) the Southern Africa vision for Water, Life and Environment in the 21st Century, (ii) the Regional Water policy (RWP), and (iii) the Regional Water Strategy (RWS).


The main objective of the regional Vision for Water, Life and the Environment is to develop a widely-shared vision of a desirable future and the action required to accomplish that Vision.

Regional Water Policy (RWP) \(^{137}\) is designed to provide a framework for the sustainable, integrated and coordinated development, utilization, protection and control of national and transboundary water resources in SADC region for the promotion of socio-economic development and regional integration and improvement of the quality of life of all people in the region. It highlights various opportunities for water management to achieve the SADC goal and objectives, as well as other recognised international and regional targets such as the Millennium Development Goals (MDGs), the goals of the African Union on water through AMCOW and NEPAD, and the Southern African Vision for Water Life and the Environment.

RWP will be implemented through a RWS. An important vehicle for implementing the policy is the existence of well-functioning River Basin Organisations (RBOs) established particularly on shared watercourses, operating under sound legislation, and systems for planning and stakeholder involvement, and embracing the IWRM principles. RWS gives effect to the Regional Water Policy. The RWP deals with the “What” on regional water issues pertaining to best practices. The RWS adds the “How” element. Detailed Strategic five-year Plans will flow out of the RWS adding the “Who” and “When” of the process.

- Legal and Regulatory framework

The SADC Treaty provides the legal framework of the organisation by setting out the legal status \(^{138}\), principles and objectives \(^{139}\), obligations of Member States \(^{140}\), the membership \(^{141}\), the institutions \(^{142}\), procedural matters relating to areas of cooperation among Member States \(^{143}\), cooperation with other international organisations \(^{144}\), financial issues \(^{145}\), dispute settlement \(^{146}\) and Lastly sanctions, withdrawal and dissolution \(^{147}\). The SADC Treaty makes provision for the formulation of subsidiary legal instruments such as protocols giving specific mandates to various SADC institutions.

The SADC has adopted the principle of basin–wide management of the water resources for sustainable and integrated water resources development. In this regard, the region recognises the United Nations Convention on the Law of Non-navigational Uses of International Watercourses, and has adopted a Protocol on Shared Watercourse Systems (The Protocol) in the SADC Region. The Protocol was first adopted and signed in August, 1995 as part of the broader objective of implementing the SADC Treaty. It is based on the Helsinki Principles and had emphasis on sovereignty of watercourse states in the utilisation of shared watercourse. It came into force on the

---

\(^{136}\) The Vision was endorsed by the Ministers on December 3, 1999.

\(^{137}\) Adopted in 2005


\(^{139}\) Chapter 3, Aa 4 and 5 SADC Treaty (1992).

\(^{140}\) Article 6 SADC Treaty (1992).

\(^{141}\) Chapter 4 Aa 37 and 8 SADC Treaty (1992).

\(^{142}\) Chapter 5 Aa 9 and 16A SADC Treaty (1992).

\(^{143}\) Article 21 SADC Treaty (1992).

\(^{144}\) Article 24 SADC Treaty (1992).


29th September, 1998. The process of amendments started in 1999 – 2000. In the process of negotiating amendments, it became apparent that the proposed changes were tantamount to a revision of the Protocol.

Under this Revised Protocol\(^\text{148}\), a further positive step has been the initiatives towards the establishment of river basin commissions in order to enhance the objectives of integrated water resources development and management in the region, while also strengthening the bilateral and multilateral arrangements that have been in existence for some time.

The revised Protocol recognizes all developments that have taken place in international water law such as:

- the Helsinki rules, 1966
- the Dublin Principles, 1992
- Rio Earth Summit, Chapter 18, Agenda 21, 1992
- the UN Convention on the Law of the non-Navigational use of international watercourses, April 1997

While the original Protocol was leaning mainly on the Helsinki Principles, the revised Protocol is influenced by the UN Convention:

- Embodies the principles of equitable and reasonable utilization and participation by all states in the uses of international waters;
- Confers obligations on watercourse states in their use of the shared watercourse not to cause harm; and
- Protection and conservation of the environment and ecosystem.

### Institutional framework

The mandate for regional coordination and facilitation of the management of the water resources in SADC lies with the SADC Secretariat – Directorate of Infrastructure and Services (Water Division). This means that the Water Division is primarily responsible for promoting, coordinating, and monitoring the implementation of the Regional Water Policy and Strategy and the Revised Protocol on Shared Watercourses. The Division also has the responsibility to encourage and guide regional harmonization of national policy and legislation.

Responsibilities and functions of the SADC Secretariat (Water Division) as stipulated in Regional Water Policy include those pertaining to the implementation of the Regional Water Policy, the Regional Water Strategy, the Revised Protocol on Shared Watercourses, the reporting to the SADC Council of Ministers. The Revised Protocol sets a framework for implementation and proposes the following institutions:

- River basin Commissions between Basin States and in respect of each shared drainage basin, and
- River Basin Authorities or Boards in respect of each shared drainage basin.

The institutions shall have the following broad objectives:

- monitoring and policy development;
- promotion of equitable utilization;
- formulate development and management strategies; and
- monitoring execution of joint development plans

The implementation of the RWP will be at 2 levels: shared watercourse and national.

➢ **Shared Watercourse Institutions (SWCIs):** To ensure the achievement of the Protocol main objective, the Protocol calls for the establishment of shared watercourse agreements and shared watercourse institution (SWI) to facilitate and coordinate the joint management of shared watercourses.

---

\(^{148}\) The Revised Protocol was adopted and signed by all Member States in March, 2000, in Windhoek Namibia, and came into force in September 2003 after attaining the two-thirds majority ratifications by Member States.
watercourses. SWCIs are an important mechanism to promote regional cooperation and integrated water resources management within shared watercourses. In some cases they also enable the joint development and operation of shared water resources infrastructure.

- **For the institutional arrangements at national level**, Member States should ensure that institutional arrangements at national level, including policy and legislation, water resources strategies, water sector administration and finance, and stakeholder participation, support the management of shared watercourses.

### 3.2.3.3- Vision, Objectives and Priorities of the policy

The policy framework for the regional water policy is anchored by the following pronouncements which SADC Member States have formulated over the years. The principles followed in the regional water policy are based on:

- The SADC Declaration and Treaty (Declaration by the Heads of State or Government of Southern African States (1992)

- The Southern African Vision for Water, Life and Environment, aimed at “equitable and sustainable utilisation of water for social and environmental justice, regional integration and economic benefit for present and future generations”. Water is therefore seen as a driving force to a better future for the peoples of Southern Africa.

- The Revised SADC Protocol on Shared Watercourses, whose overall objective is “to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilisation of shared watercourses and advance the SADC agenda of regional integration and poverty reduction” (Art.2).

- The “Dublin Principles” of integrated water resources management (IWRM) enunciated in the 1992 and commonly accepted as representing best water resources management practice.

The purpose of the RWP for the SADC region is to provide a framework for sustainable, integrated and coordinated development, utilization, protection and control of national and transboundary water resources in the SADC region. The RWP is aimed at promoting socio-economic development and regional integration and improving the quality of life of all people in the region. The RWS will then represent the framework for implementation of the Policy and Protocol, indicating actions, responsibilities and timeframes.

The RWP has nine thematic areas which address the water resources management issues and challenges of water resources management and development in the Southern Africa region, or are aimed at optimising the development opportunities. The main policy areas are:

1) **Regional Cooperation in Water Resources Management**: including policy provisions on water for regional integration and socio-economic development; cooperation in water resources management of shared watercourses; inter-sectoral and international cooperation; and the harmonisation of national policies and legislation.

2) **Water for Development and Poverty Reduction**: containing policy provisions on water for basic human needs and for industrial development; water for food and energy security.

3) **Water for Environmental Sustainability**: containing policy provisions on water and the environment, water quality management, and control of alien invasive species in watercourses.

4) **Security from Water-related Disasters**: including policy provisions covering people’s protection from water related disasters; disaster prediction, and management and mitigation.

5) **Water Resources Information and Management**: covering data and information acquisition and management; and information sharing.
6) **Water Resources Development and Management**: including policy provisions on a river basin approach; integrated planning; dams and dam management; water demand management; and alternative sources of water

7) **Regional Water Resources Institutional Framework**: including policy provisions covering institutional arrangements at regional and national levels and for Shared Watercourse Institutions (SWCIs).

8) **Stakeholder Participation and Capacity Building**: including provisions focusing on participation and awareness creation; capacity building and training; gender mainstreaming; and research, technology development and transfer.

9) **Financing integrated water resources management in the region.**

3.2.3.4- Success components of good water governance

A. Management mechanisms

- **Water resources planning tools**

The SADC Regional Strategic Action Plan on Integrated Water Resources Management and Development (RSAP/IWRMD) is designed to provide a programmatic approach to facilitate the implementation of the Protocol on Shared Watercourses through the application of IWRM.

The first phase of RSAP/IWRMD (RSAP/IWRMD I) was approved by SADC Summit in August 1998 and ran from 1999 to 2004. Its main focus was to create an enabling environment for the joint management of regional water resources. It was meant to lay the institutional basis for the execution of infrastructure projects and other related development initiatives. The main change between phase I and phase II (2004-2010) was the emphasis put on infrastructure development.

The third phase or RSAP/IWRMD III (2011-2015) builds upon the recommendations made by the mid-term review. It serves as a work plan to guide the development and implementation of activities in the SADC water sector for the upcoming five years (2011-2015). Its goal is to strengthen the enabling environment for regional water resources governance, management and development through the application of IWRM at the regional, river basin, Member State and community levels.

Like all SADC Sector Plans, the RSAP/IWRMD constitutes an integral part to the Regional Indicative Strategic Development Plan (RISDP).

Similar to the two previous plans, the RSAP III is structured along a set of strategic areas implemented in a complementary and integrated manner. These strategic areas are:

1) Water Governance: The political, social, economic and administrative systems in place to develop and manage water resources at different levels of society.

2) Water management: The activity of planning, developing, distributing, managing, and optimizing the uses of water resources under defined water policies and regulations.

3) Infrastructure Development: The process of developing, financing, implementing and operating structures for irrigation, drainage, water supply and sanitation, hydro-power generation, food management and other purposes.

The two first strategies areas are supporting tools for the third one, using IWRM as an approach.

- **Climate change adaptation in water sector**

  SADC structures and the political leadership of countries in the region are increasingly paying attention to issues of climate change and environmental issues, as this has become an urgent threat for the whole region and the continent. The regional approach to preventing and mitigating the effects floods and droughts is characterised by a number of policy statements.
Climate Change Adaptation measures are integrated in the strategic objective 2 of the RSAP/IWRMD III. The Programme 15 on Climate change adaptation aims to integrate climate change adaptation into water resources planning and management. The priority interventions that address climate change adaptation measures in the water sector are listed below:

- Strengthen the enabling environment for the coordinated management and development of water resources: Climate Change Adaptation Strategy, Joint Assistance Strategy.
- Integrate climate change adaptation into water resources planning and management: Climate Finance, Preparation of COP, RSAP Climate Proofing, Indigenous Knowledge, and Climate change training.

A Climate Change Adaptation (CCA) Strategy for water sector in the SADC region has been adopted in 2011. Its main goal is to improve climate resilience in Southern Africa through integrated and adapted water resources management at regional, river basin and local levels.

**Monitoring and evaluation (M&E) systems**

Monitoring and evaluating the implementation of regional water initiatives is critical to their success and sustainability. An independent and coherent water sector monitoring and evaluation system is necessary for the successful implementation of the Regional Water Policy and Strategy and should focus on meeting SADC Water Sector targets specified in the Regional Indicative Strategic Development Plan.

A comprehensive M&E system has been developed for the implementation of the RSAP/IWRMD III. The system is based on measurable and verifiable indicators and will be conform to basic rules of simplicity, timeliness and cost effectiveness. As for both phases I and II, the RSAP/IWRMD III has been subjected to a mid-term review that was realized in the second half of 2013. The objectives of the mid-term review were to:

- Assess the progress made with the implementation of RSAP III, both at project and programme levels;
- Learn from and build on the processes initiated during the first half of the RSAP implementation phase; and
- Provide strategic guidance to improve the implementation of RSAP programmes in the second phase.

M&E are of limited value unless they are linked to clear reporting mechanisms. Hence, SADC envisages producing an annual progress report on the RSAP/IWRMD III implementation, in which will be documented both achievements and shortcomings.

Furthermore, for all RSAP/IWRMD III projects, at least two project status reports will be produced, namely an interim report, during the implementation of the project, and a final report once the project is concluded, to assess the project’s developmental impact.

**Human rights in water supply and water management**

The priority interventions that address human rights in the water sector are as follows:

- Involve stakeholders in the management of transboundary water resources
- Gender Mainstreaming and youth involvement (Women and the youth are involved with the development and implementation of RSAP/IWRMD III programmes and interventions to facilitate the achievement of intergenerational equity and equality between men and women in the SADC region).

**Learning review and capacity building processes**

IWRM is the integration of the natural and the social environment for the development, management and utilisation of water resources. This requires an intersectoral and multidisciplinary approach delivered through strong institutions which have significant human, technical, institutional and financial resources.
The need for capacity building of water institutions has generally been recognised in national policies and strategies across the region with continual identification of capacity needs in place. Capacity Development is the strategic objective 1 of the RSAP/IWRMD III: Strengthen the abilities of individuals, organisations and institutions to develop and manage water resources sustainably.

B. Water governance

- **Consultation, participation and co-ordination mechanisms**

According to the Treaty and about Stakeholders (Art. 23):

1. In pursuance of the objectives of this Treaty, SADC shall seek to involve fully, the people of the Region and key stakeholders in the process of regional integration.

2. SADC shall co-operate with, and support the initiatives of the peoples of the Region and key stakeholders, contributing to the objectives of this Treaty in the areas of co-operation in order to foster closer relations among the communities, associations and people of the Region.

The Article 16A of the Treaty is clear about SADC national Committees:

- Each Member State shall create a SADC National Committee.
- Each SADC National Committee shall consist of key stakeholders.
- Each SADC National Committee shall, in its composition, reflect the core areas of integration and coordination referred to in paragraph 2 of Article 12 of this Treaty.

The participation of stakeholders in decision-making processes is a fundamental principle of IWRM. The RWP therefore calls for stakeholder participation to be encouraged at all levels within regional and national water resources development and management processes and activities among stakeholders who have been meaningfully capacitated and empowered to participate in the decision making processes.

The Programme 6 on Stakeholder Participation aims to involve stakeholders in the management of transboundary water resources.

- **Anti-corruption and integrity processes and measures - Transparent water budget processes**

Improved integrity and accountability in water-sector institutions for public and private governance and economic transactions constitutes an important tool for countries and local governments to achieve poverty reduction and to improve sustainable management of water resources. Importantly, improved integrity, accountability and the application of anti-corruption measures are fundamental elements in efforts to reduce poverty, and to allocate and distribute water resources and services in fair and efficient ways in line with the principles of Integrated Water resources management (IWRM).

The SADC countries have committed themselves generally to integrity and accountability through good governance and the countering of corrupt practices. They have either signed or ratified the SADC Protocol against Corruption149 which entered into force in July 2005. With regard to the content of the Protocol, the preamble notes the serious magnitude of corruption in the region and its destabilising effects to undermine good governance. The Protocol provides both preventive and enforcement mechanisms and demonstrates a degree of political will in the region to combat corruption. The purpose of the Protocol is three-fold:

- to promote the development of anti-corruption mechanisms at the national level,
- to promote cooperation in the fight against corruption by state parties, and
- to harmonise anti-corruption national legislation in the region.

The SADC Revised Protocol on Shared Watercourses does not contain explicit reference to corruption prevention and combating activities or transparency and integrity measures, as it is a

---

149 The SADC Protocol against corruption was adopted in 2001
specific sectoral protocol dealing with the management of shared watercourses between SADC states. Instead, as far as anti-corruption is concerned, SADC states are bound by the above-mentioned SADC Protocol Against Corruption as the specific instrument dealing with the issue.

The Revised Protocol on Shared Watercourses, as well as the SADC Regional Water Policy and Regional Water Strategy, do however contain elements that indirectly promote transparency and integrity.

- **Conflicts management**

The region has been fortunate not to have had major disputes or conflicts in the development and management of their water resources. The countries do however recognise the potential for water-related conflict and some countries (e.g. Lesotho) have included provisions relating to dispute resolution in their national documents. Other countries (e.g. Swaziland) have provided training in conflict resolution to the relevant government officials engaged in development and management of their water resources.

Conflict management in water resources management is one of the six (6) sub-themes of the theme on Regional Cooperation in Water Resources Management in the SADC sub-region. Conflict management issues were considered in the RWP.

The different national priorities for the development and management of water resources, as well the different levels of development and human and financial resources between Member States may result in dispute which could lead to conflict in the management of the region’s water resources. It was therefore necessary to develop clear, fair and effective dispute resolution mechanism that Member States can employ to minimize and resolve disputes.

- **Benefits of water, energy, and food nexus approach**

One must recall that one of the three strategic areas of the RSAP/IWRMD III is about Infrastructure Development in water sector. Due to the very crucial importance, four (4) RSAP/IWRMD III Programmes out of fifteen (15) address the issue of water infrastructure under different aspects to ensure effective preparation, to secure the means of implementation, and to show the benefits of joint development. These are Infrastructure Project Preparation; Resource Mobilisation for Infrastructure Development; Infrastructure Pilot Projects (Demonstration of the benefits of joint infrastructure development initiatives); Water Supply and Sanitation: Improve access to water supply and sanitation services.

- **Benefits of transboundary water management**

With the majority of the water resources in the region being transboundary in nature, the RWP identifies water as a platform for regional integration and socio-economic development. The first theme of the RWP, therefore, is on regional cooperation in the management of the region’s water resources. To achieve this, the RWP calls for cooperation in the management of shared watercourses, cooperation between sectors within the SADC countries and internationally, as well as the harmonisation of national policies and legislation.

Water resources management in SADC is part of the wider arena of the management of global water resources. SADC Member States therefore have a lot to contribute to the wider debate on the management of global water resources as well a lot to learn from this wider collective. It is therefore necessary that meaningful and effective engagement in initiatives at this level is encouraged.

Enabling institutional environments for the management of shared watercourses exist in countries across the region. Policy and legislative provisions that enable the planning and coordination of transboundary obligations are generally well established. This has resulted in the participation of the Member States in institutions established for the management of shared watercourses. In cases where formal institutions have not been established, Member States have created bilateral arrangements for the management of the shared watercourses.

The overall objective of the SADC Protocol on Shared Watercourse Systems (The Protocol) is to foster closer cooperation for judicious, sustainable and co-ordinated management, protection and
utilisation of shared watercourses and advance the SADC Agenda of regional integration and poverty alleviation.

3.2.3.5- Overview of lessons learned

- The Water sector in SADC region is well organised with clear and robust policy, legal, regulatory and institutional frameworks. The RWP is implemented through the RWS and the Protocol on Shared Watercourses. The operationalisation of these policy and legal instruments is done through the RSAP/IWRMD III, completed with relevant regulatory tools, such as the Guidelines for strengthening RBOs, The Climate Change Adaptation strategy for the water sector, etc.

- With the majority of the water resources in the region being transboundary in nature, the RWP identifies water as a platform for regional integration and socio-economic development. The first theme of the RWP, therefore, is on regional cooperation in the management of the region’s water resources. To achieve this, the RWP calls for cooperation in the management of shared watercourses, cooperation between sectors within the SADC countries and internationally, as well as the harmonization of national polices and legislation. The Theme on regional cooperation in water resources management is a very crucial issue of international cooperation on shared water resources led to the adoption of the Protocol on shared watercourses in SADC region. Thus, the Protocol is a very powerful tool for the promotion of international cooperation on shared water resources.

- Like all SADC Sector Plans, the RSAP/IWRMD III constitutes an integral part to the Regional Indicative Strategic Development Plan (RISDP). This is done in such a way that all actions of the RSAP are targeted and coherent with the RISDP to achieve the SADC overall goal and objectives of peace and stability, regional economic integration, and poverty eradication. To ensure that it contributes to the SADC Agenda of regional integration on and poverty eradication, its focus is on the development of water infrastructure in the region to improve the assurance of water supply for domestic, industrial, energy and food security. The RSAP is the framework for action to achieve the sustainable development of water resources in the region through the development of water infrastructures on the basis of sound water governance and water management.

- SADC issued in 2011 a Climate Change Adaptation (CCA) Strategy for water sector in the SADC. The aim is to assist Member States to tackle this very regionally issue in a more coherent and integrated manner. This means that all the different existing national policies and strategies must therefore be aligned with the regional CCA strategy in the water sector, thus amplifying the chances of all these disparate documents to address effectively and efficiently the challenges posed by climate change and its environmental impacts in a coherent and systematic manner consistent with other regional policy frameworks.

3.2.3.6- Practical recommendations

- **Water Policy framework**
  a) The implementation of many of SADC’s objectives takes place via a series of protocols, treaties, agreements and memoranda of understanding. These protocols specify areas/issues for co-operation, as well as the institutional mechanisms through which regional co-operation is to be effected; many of them are binding but only on the signatory member states. The challenge is to steer the implementation of all these protocols in a more consistent, coherent and integrated manner, bearing in mind the goal of the SADC. The SDAC therefore has to put much more effort to mainstream the implementation of the water sector policy into the Regional Indicative Strategic Development Plan (RISDP) which is a set of strategic priorities meant to guide the region towards realising its development goals and plans for integration.

- **Legal and Regulatory framework**
  a) Much of the policy framework for addressing water management and associated environmental issues at SADC level is driven through protocols. This usually means that enforcement and
compliance with the provisions of these protocols tend to be less strictly observed by many countries. In addition, the willingness of political leaders to prioritise such commitments has to be placed against other pressing challenges facing poor and developing countries. Most of these countries rely on donor funding to carry out their key social policy and development programmes. Consequently, SADC protocols are generally weak in terms of provisions for monitoring compliance and evaluation, and punitive action in instances of non-compliance.  

**Institutional framework**

a) Though a great deal of progress has been achieved with the establishment and strengthening of RBOs in the SADC region, much remains to be done to consolidate their role and strengthen their capacity to carry out that role. In recognition of this evolving situation, the involvement of the SADC Water Division in RBO development will diminish as RBOs get established and strengthened. At such stage the support provided by the Water Division will be limited to the monitoring of the Protocol, strategic guidance and the sharing of best practices amongst RBOs.

b) In spite of some of the positive developments outlined above, a number of difficulties have been identified. One of the basic problems facing SADC in dealing with the challenges of Water resources management and development problems is its capacity to translate policy intentions, public statements, protocols, and declarations on water resources and related environmental challenges into concrete implementation plans with adequate resource allocations, monitoring and evaluation. One must admit that one of the problems facing SADC is to move beyond decisions and towards implementing the national and regional Programmes. In other words, it is time to switch from policy dialogue to implementation.

**References**

1) SADC (2014): Assessment of the Regional Water Policy, Draft Regional Report
2) A. Saurombe (2012): The role of SADC Institutions in implementing SADC Treaty provisions dealing with regional integrations, PER, Volume 15, N°2, 2012
3) SADC (2005): The SADC Regional Water Policy
4) SADC: The SADC Regional Water Strategy
5) SADC (2000): The Revised Protocol on Shared Watercourses
8) Guidelines for Strengthening River Basin Organisations: Establishment and Development
9) SADC: Mapping of Integrity and Accountability in Water Activities and Relevant Capacities in the SADC-Region,

**3.3- Synthesis of regional status overview**

The review of water governance frameworks at regional level (policy, legal, institutional) for water resources management has to do with two levels – the regional level with an emphasis on the policy framework provided by the Regional Economic Commissions (RECs) and the shared basin level with a focus on the role of international Lake/Aquifer/River Basin Organizations (L/A/RBOs).

The governance framework for the management of transboundary aquifers is comparatively less developed. However, efforts to strengthen the management architecture for shared groundwater are increasingly made. At present groundwater is considered only to a very limited extend in continental or regional policies and designated policies for the management and development of shared groundwater.

---

do not exist. Likewise, regional legal frameworks (at REC level) for the management of shared aquifers do not exist on the continent, with the exception of the Revised SADC Water Protocol on Shared Watercourses, which covers groundwater to some degree.

At shared aquifer system level – analogous to lake/ river basin for surface water – only very few cooperative structures for the management of transboundary aquifers exist and are at various stages of their development. Additional structures are currently being set up for some aquifer systems in southern and West Africa. Management arrangements for the conjunctive use of transboundary surface and groundwater resources remain underdeveloped.

As part of this study, the analysis focused on six (6) L/A/RBOs namely CICOS, LCBC, NBA, OMVS, ORASECOM, NWSAS, and three (3) RECs namely ECCAS, ECOWAS, and SADC…). Based on the analysis, this synthesis presents (i) the regional framework for water governance (political, legal, and institutional) for water resources management and (ii) the practical recommendations to improve water management frameworks.

3.3.1- Water governance

In general we must distinguish two situations depending on the nature, mission and space in question. There are the L/A/RBOs and RECs.

It appears from the case studies that significant progress has been made in terms of legal and institutional framework development, development of regional policies and strategies, integration of climate risk management in the water sector to development of technical and institutional capacity, management of conflicts over access to water. Yet much remains to be done in integrating human rights in the management and use of water, monitoring and evaluating the implementation of policies and strategies, application of the approach "nexus" between water, energy and food, the benefit of the full potential of cross-border cooperation on shared waters.

As regards the L/A/RBOs

L/A/RBOs can be defined as permanent institutional arrangements dedicated to all or part of the management of shared waters between at least two countries. As representative organisations, they operate in conjunction with other government agencies and administrative bodies. The organizational form is conferred through the legal and financial framework establishing the mandate. While there is some debate in the literature over how best to categorize international organisations dealing with international waters, the semantics chosen to name the institution, is much less important than its functional mandate. The term L/A/RBO is broad and encompasses a variety of organisational types with different roles and mandates. Across the range of functional forms, the responsibility and authority of the organizations vary. The mandate assigned within the typology of institutional forms varies and there are a range of different functions conferred upon the institutions.

The six (6) international basin organisations include 1 lake, 1 aquifer and 4 rivers. The case studies revealed that all these basins organisations, except that of NWSAS have an international agreement, commonly whose purpose is to organise the joint management and sustainable development of the affected water resources.

In the case of L/A/RBOs, the establishment of legal and institutional framework precedes the policy framework. It generally consists of tools for planning and developing water resources, and legal agreements of the water charter model. In addition to multilateral agreements, we find the existence of several bilateral agreements that preceded the establishment of basin organizations.

Water policy documents of all basins studied refer to the African Water Vision 2025. Some like the LCBC, the NBA developed their own visions of the development of their respective basin through water resources. Others formally refer to regional policy developed in the context of the CER which they belong. This is the case of ORASECOM in the SADC sub-region, OMVS within ECOWAS. In this light, the Congo Basin (CICOS) is riding on the spaces of two RECs (ECCAS and SADC), moreover, does not meet all the ten countries of the basin. It is the same in the Lake Chad Basin (LCBC) located
both in Central Africa (ECCAS) and West Africa (ECOWAS). This situation is not without difficulties in the harmonious development of water resources.

To complete the legal framework for water resources management, some L/A/RBOs adopted a Water Charter. This is the case of the LCBC, NBA and OMVS. Those recently adopted (LCBC, NBA) are not operational.

Several L/A/R/BOs have gone further in the operationalization of the policy development of the resource management planning tools. These tools, if they take different forms and names, always have the same objective, namely the development and management of shared water resources as integrated approaches, namely IWRM. This is the Strategic Action Programme (SAP) for the LCBC, the Sustainable Development Action Plan (SDAP) for the NBA, the Strategic Action Plan (SAP), the Water Resources Management Plan (IWRM) and the Master Plan for the development and management of water resources (SDAGE) for the OMVS, the Plan for IWRM ORASECOM.

Institutionally, all L/A/RBOs of this study have an institutional framework established pretty much on the same model with one exception. The commonalities of these institutional frameworks are the existence of (i) a summit or conference of Heads of State of member countries, (ii) a board or committee of ministers, (iii) a delivery structure (secretariat, General Secretariat, Executive Secretary, High Commission), (iv) a technical committee of experts or steering committee and technical team. The highest authority of ORASECOM is at the ministerial level. Depending on the operational requirements several other organs or structures have been institutionalized.

In the particular case of NWSAS, it does not yet exist a cross-border policy and legal framework for water resources management. However, a permanent consultation mechanism in place facilitates technical cooperation among countries. This consultation mechanism will move forward towards the creation of a political cooperation agreement.

As for the other aspects of governance and management of water resources, the picture is fairly mixed. Consultation frameworks and stakeholder participation are fully functional in some cases (NBA, OMVS, and ORASECOM). In other cases they have institutionalized but not created or not yet functional (LCBC). CICOS is engaged in a process of establishing dialogue platforms and consultation frameworks actors for water resource management in the Congo Basin.

The integration of adaptation measures to climate change is effective for NBA, OMVS and ORASECOM. It is not for CICOS and LCBC.

NBA and OMVS have a system of M&E while LCBC and CICOS do not. ORASECOM uses M&E system developed within the regional framework of SADC.

OMVS, CICOS, and ORASECOM have integrated the issue of human rights in water resources management. NBA and LCBC were reflected in the water charter, which is not yet operational.

None of the L/A/RBOs does not have instrument to fight against corruption, for integrity and transparency in the water sector.

Dispute resolution mechanisms are an important element in any legal system. In particular, a law on international waters is effective in practice when coastal states agree on methods for the peaceful settlement of disputes, and the means of coercion in the event of non-compliance. Institutional and regulatory frameworks border are the pillars of cooperative management systems. Even if they fail to prevent all disputes, they are essential for the clarification of the "rules of the game", hence they improve legal certainty and reduce the probability of occurrence of water tensions between riparian states. In this respect, the CICOS does not have appropriate instruments for the management of water-related conflicts. LCBC and the NBA have recently adopted relevant provisions in their charters water. These charters are not yet operational, the provisions is not effective. The OMVS institutional framework in place supports the issue of conflict, while ORASECOM Agreement includes a provision for conflict resolution.

The NBA and OMVS by their seniority, have a long tradition of cooperation and were able to set up and adapted over time, consultation mechanisms, participation and coordination. These institutional
arrangements for the participation of stakeholders have allowed them to contribute effectively to
decision-making on cross-border cooperation on shared water resources. Then comes the LCBC which
has adopted such mechanisms within the framework of the Charter of the water of the Lake Chad Basin.

Currently numerous precursors of the "nexus" approach are found in the policies/strategies/action plans
for IWRM which are all potential points of application of a "nexus" approach. The supply of drinking
water, energy and food security, are becoming increasingly important in the interventions of
development of water resources. The analysis of policies, strategies and development plans and NBA
CICOS shows they have many precursors of the approach "nexus" in particular the link between sectors
(without going to speak of a systemic approach) and interaction between sectors in terms of rational use
of natural resources. The LCBC and OMVS engage in the implementation of the approach "nexus" while
ORASECOM focuses on knowledge of water resources and associated natural resources, pending the
development of concrete projects.

The benefits of cooperation on shared water resources can be improved in various ways among which
we note the institutional framework and specific tools for cooperation. Regarding the institutional
framework that enhances benefits to riparian countries, the OMVS followed by the NBA are very well
equipped. They are followed by the other three (LCBC, CICOS, ORASECOM) and the NWSAS.

The following table summarized the state of implementation of governance tools and water resources
management in L/A/R/BOs under study (green: existing tools, yellow is under development tools; purple: lack of tools).

<table>
<thead>
<tr>
<th>Governance and/or Water Management issues</th>
<th>CICOS</th>
<th>LCBC</th>
<th>NBA</th>
<th>OMVS</th>
<th>ORASECOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water management tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring and Evaluation (M&amp;E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human rights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-corruption, Integrity and transparency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflicts management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation, Consultation and Coordination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bénéfices de l’approche “Nexus” Eau-Energie-Alimentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bénéfices de la gestion transfrontalière</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**As regards the RECs**

RECs are an important building bloc of economic integration and development on the continent. While
originally the objective of the RECs is the facilitation of greater regional integration and trade through
the creation of Free-Trade Areas, most RECs have since expanded beyond a narrower trade focus and
adopted a strong regional development mandate including areas of trade, transport energy and natural
resources management and development to name but a few. The degree to which they deal with
transboundary water management differs considerably. Whereas some do not engage strongly (or at all)
with transboundary water matters, other RECs have, or are in the process of creating a strong policy,
legal and institutional framework for transboundary water management in their region. The latter applies
specifically to ECCAS, ECOWAS and SADC.

Each REC studied as part of this study has the regional policy documents, a legal and institutional
framework for water resources management. In the water sector, the major role of RECs is to put in
place the framework and tools that are necessary for the harmonious development, cooperation and the
sector’s contribution to development and economic integration. Water, by its very nature of shared
natural resource is a privileged area to get there.

In West Africa, ECOWAS member countries have engaged since 1998 in the process of development
and implementation of integrated approaches to managing water resources based on concepts and
principles of IWRM. Since then, the process has deepened with the adoption and gradual implementation
of the policy and institutional framework and planning and water resource management tools.
- In 2000: adoption of the Water Vision for the 21st Century: From Vision to Action for West Africa and the IWRM Regional Action Plan (IWRM-WA);
- In 2001: creation of the Permanent Framework for Coordination and Monitoring (PFCM) of the integrated water resources management;
- In 2004: creation of the Department "Water Resources" under the name Water Resources Coordination Unit (WRCU), and its transformation into Water Resources Coordination Centre (WRCC)
- In 2008: adoption and implementation of the West Africa Water Resources Policy (WAWRP) in collaboration with UEMOA and CILSS;
- In 2012: Adoption of the Implementation Action Plan (IAP) of the WAWRP.

These efforts are ongoing and soon the ECOWAS will adopt a legal framework for cooperation and management of shared waters. These are (i) of the Directive to improve the consideration of environmental, economic and social considerations in cross-border infrastructure development projects to ensure sustainability, and (ii) of the Directive on the management of resources water shared in West Africa.

In Central Africa, ECCAS member countries have initiated the implementation of IWRM process through the Declaration of Heads of State and Government on IWRM in 2007. Since then, significant progress has been made.

- In 2000: adoption of the Water Resources Management vision in Central Africa in the 21st century;
- In 2007: adoption of the Declaration of Heads of State and Government on IWRM;
- In 2009: adoption of the Regional Water Policy in ECCAS and the Regional Institutional Framework Implementation of the Water Policy of ECCAS;

In Southern Africa, SADC member states have implemented the policy, legal and institutional framework for transboundary water management.

- In 1995: adoption of the Protocol on Shared Watercourses; it has been revised in 2000;
- In 1999: adoption of the Vision for Water, Life and Environment in the 21th Century;
- In 2005: adoption of the Regional Water Policy;

As for the other aspects of governance and management of water resources, the picture is quite encouraging. Indeed, each of the three RECs has developed a regional water policy, monitoring and evaluation of the implementation mechanisms of the regional water policy frameworks for consultation and participation of stakeholders that are functional. ECOWAS has clearly incorporated human rights in drinking water supply and water management. SADC and ECCAS seriously are considering taking it into account. ECOWAS and SADC have adopted legal instruments against corruption, measures to promote integrity and transparency in the budget process. However, these instruments apply to all RECs and interventions are not specific to the water sector. ECCAS does not have one now. SADC has adopted conflict management instruments, while ECCAC and ECOWAS is considering the development of these instruments. SADC is well advanced in the implementation of the approach "nexus" Water-Energy-Food, ECCAS and ECOWAS while demonstrating the existence of precursors. Finally regarding the benefits of cross-border cooperation, ECOWAS and SADC have developed fairly effective tools while ECCAS has provided in the implementation of PARGIRE of Central Africa.

The following table summarized the state of implementation of the tools of governance and water resource management in the RECs under study (green: existing tools, yellow is under development; purple: no tools).

<table>
<thead>
<tr>
<th>Governance and/or Water Management issues</th>
<th>ECCAS</th>
<th>ECOWAS</th>
<th>SADC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management tools</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Governance and/or Water Management issues

<table>
<thead>
<tr>
<th>Issues</th>
<th>ECCAS</th>
<th>ECOWAS</th>
<th>SADC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change</td>
<td>✔</td>
<td>✔</td>
<td>§</td>
</tr>
<tr>
<td>Monitoring and Evaluation (M&amp;E)</td>
<td>✔</td>
<td>✔</td>
<td>§</td>
</tr>
<tr>
<td>Human rights</td>
<td>❌</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Anti-corruption, Integrity and transparency</td>
<td>❌</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Conflicts management</td>
<td>✔</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Participation, Consultation and Coordination</td>
<td>✔</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Bénéfices de l’approche &quot;Nexus&quot; Eau-Energie-Alimentation</td>
<td>✔</td>
<td>✔</td>
<td>☐</td>
</tr>
<tr>
<td>Bénéfices de la gestion transfrontalière</td>
<td>✔</td>
<td>✔</td>
<td>☐</td>
</tr>
</tbody>
</table>

### 3.3.2- Practical recommendations

Regional/transboundary policies of water resources management have experienced unprecedented growth and significant progress has been made towards the adoption and implementation of integrated approaches to water resources management in a regional context and cross-border. The L/A/RBOs and RECs have adopted integrated approaches to managing water resources and gradually adopted or developed appropriate policies and cooperation instruments. The road is still long and to this end, key measures below are recommended to improve / strengthen cross-border cooperation on shared waters.

#### Water Policy framework

a) Clarify and strengthen where necessary the mandate, missions and competencies of L/A/RBOs to enable them to plan and accelerate economic development, coordinating the development of water resources to improve livelihoods of populations, reduce poverty, reduce vulnerability to climatic hazards and protect ecosystems. For this purpose, it is necessary to renew and increase the level of political commitment of Member States to ensure that the implementing bodies perform their functions effectively.

b) Promote participation of all riparian countries of transboundary basin to basin management agency. This is for existing river basin organizations to be inclusive to include all riparian countries; and shared basins which are not the subject of a basin organization to promote the creation of basin organizations. The case of the Mono Basin (Benin and Togo) is an example to follow. A plea should be considered for this purpose towards the Non States Parties.

c) Promote bilateral agreements within the framework of transboundary basins which constitute an important part of institutional arrangements to the extent that they aim to develop detailed plans of projects or initiatives consistently with scale development plans around the basin. In all cases, these bilateral agreements must be subordinated to multilateral agreements.

d) Strengthen measures to adapt to climate change and to integrate climate risk management into the design, planning and implementation of policies, strategies, development plans and projects in the water sector through reduction measures the risk of natural disasters related to water.

e) Extend the expertise of the existing river basin organizations in the management of shared aquifers and promote integration of the law of transboundary aquifers in the legal and institutional framework for managing shared water resources.

#### Legal and regulatory framework

a) The international legal regimes need to be transposed at national level. International law on freshwater needs to be translated into concrete rights and obligations, both for individuals and for the institutions of the riparian States. This is achieved through national and local legislation and in terms of water management processes.

b) Develop stronger, improve the legal instruments relating to the integration of human rights in the management of water, on the monitoring and evaluation of the implementation performance
of regional policies and strategies / border on the anti-corruption, integrity and fiscal transparency.

c) Accelerate the implementation process of water charters to make operational tools and institutional arrangements foreseen.

d) The institutional and regulatory frameworks border are the pillars of cooperative management systems. Even if they fail to prevent all disputes, they are essential for the clarification of the "rules of the game", hence they improve legal certainty and reduce the probability of occurrence of water tensions between riparian states.

❖ **Institutional framework**

a) The institutional framework for integrated water resources management in a context of transboundary basin needs to be sufficiently robust and flexible and involve stakeholders at all levels. It varies from one basin to another because of the mandate and powers of the basin agency. This requires that a clear definition of riparian countries roles and responsibilities of actors, including the modalities of participation of users and the public. We must gather the resources (human and financial) adequate and sustainable to enhance public participation.

b) Strengthen the capacity of all stakeholders at all levels and improve learning mechanisms of action (learning by doing) to have the human resources necessary for the implementation of IWRM. It has to go through the search for a better structure, improving the organization and monitoring of players focusing more on women, youth, the poor and vulnerable groups.

c) Several regional institutional actors involved more or less directly in the water sector. There is therefore a need at this level of coordination for better synergy, complementarity and optimization, both in interventions in resource use. This coordination is not formalized but during more or less occasional thanks to the implementation of certain initiatives, including regional projects.

❖ **Water management tools**

a) Improve the integration of three sectors (water, energy, food) and consider them simultaneously and in a balanced way in order to provide a coherent framework for analyzing complex issues and benefit from the full potential approach "nexus" through multi-sectoral development analysis tools and decision support. The development of appropriate indicators will measure the level of integration and actual synergies from the implementation of the approach "nexus".

b) The monitoring and evaluation system of the implementation of national policies related to water allows in principle to follow the level of implementation of policies, to evaluate the performance levels and learn the lessons that will be used, either make the necessary adjustments, or informing process of formulating a new policy. It is necessary to develop a guide (based on the Pan-African monitoring and evaluation system being built by AMcow / AU) to help countries develop their own systems and to promote their use.

c) Develop profit-sharing tools in order to accelerate the control of planning and joint development and achieve cross-border infrastructure projects, fully optimized and coordinated.

d) For shared aquifers, start with a technical cooperation based on the priorities identified with the ultimate objective, the creation of a basin organization; implement the United Nations on the law of transboundary aquifers.
The African Common Position on African Development Programme after 2015 is contained in the Declaration of Heads of State and Government of the African Union, meeting at the twenty-second regular session of the Assembly of the Union January 31, 2014. Africa's development priorities revolve around six pillars: (i) structural economic transformation and inclusive growth; (ii) science, technology and innovation; (iii) development focused on the human being; (iv) environmental sustainability, natural resource management and natural disaster risks; (v) peace and security; and (vi) financing and partnerships. Aspects relating to water are explicitly contained respectively in the 1st and the 4th pillar.

4.1- Sustainable Development Goals (SDG)

Around the world and particularly in Africa, the Millennium Development Goals (MDGs) produced advocacy and collective efforts focused on achieving objectives, measurable through indicators and targets. However, prior to 2015, initiatives were launched at the global, regional and national levels to define the broad lines of the development program for post-2015. For this, the entire international community has confirmed the relevance and desirability of formulating new sustainable development goals, new indicators and new more suitable targets for after 2015. An intergovernmental process on Sustainable Development Goals (SDGs) was initiated and its results were adopted at the UN General Assembly in September 2015. The SDGs are among 17 including one on water titled as follows:

**Goal 6: Guaranteeing universal access to water, sanitation and sustainable water resource management**

The water scarcity affects over 40% of the world population, an alarming proportion that is likely to worsen due to rising global temperatures consecutive to climate change. Since 1990, 2.1 billion more people now benefit from an improved water and sanitation. However, depletion of drinking water resources remains a major problem affecting all continents.

Ensure by 2030 to ensure universal and equitable access to safe drinking water, affordable, means investing in adequate infrastructure, providing sanitation facilities and promoting hygiene at all levels. Protect and restore water-related ecosystems, including forests, mountains, wetlands and rivers, is essential if we are to limit water scarcity. Strengthening international cooperation is also needed to encourage efficient use of water and sustain water treatment technologies in developing countries.

Indeed, although the water is essential to development, its value is often overlooked. Water is closely related to the most development issues, including food and agriculture, health, energy, etc. It is therefore important that stakeholders in general ensure that the water is truly integrated in all post-2015 programs.

4.2- African perspectives on water-related SDG and its implementation

Now that the SDG are adopted, it is important that Africa examines the relevance and applicability of the SDG and water dedicated recommendations to raise the profile of water in Africa. The implementation of the above recommendations from the case studies, in combination with the analysis of the successes and failures of MDGs should facilitate the implementation of SDG.

SDG No. 6 in its formulation addresses the three sub-sectors namely drinking water, sanitation and sustainable water resources management. These three sections summarize the fundamental aspects and the water sector priorities in Africa. Despite the commendable efforts of African countries in the last fifteen years, much remains to be done.

The implementation of this new SDG on water requires and involves countries and regional institutions, the measures outlined below.

a) The importance of the water sector is illustrated by the adoption of a SDG on water by 2030. However, the adoption of a single goal for the water sector potentially presents a risk of dilution of
a flap in favor of other areas - the risk to maintain sanitation in second place, given the relative importance of drinking water. In all cases, water security is a prerequisite for achieving the economic and social targets of SDGs. High priority should be given to sustainable water management. Africa has the potential to break up the main goal of water into sub-goals that are compatible with its specific concerns.

b) Conduct an assessment of the successes and challenges of the implementation of the MDGs. This should allow the establishment of the baseline situation (end 2015) and facilitate the identification of targets that are realistic with commitments towards achieving the SDGs.

c) As regards 2030 - 15 years - it may not correspond with the timeframes set in strategies and national and regional plans / transboundary water resources management. Reflections should be conducted at appropriate levels to determine the necessary adjustment tracks. It is the same for the review and updating of the African Water Vision 2025, at least in the corresponding edge to SDG in 2025.

d) Experience of the MDGs showed the need to mobilize sufficient financial resources and appropriate capacity of investments to secure and maintain the infrastructure. The budgetary impact should be significant, given the scale of need. An increase in the budget allocation for water and improving the quality of planning of investment and the efficiency of public spending in the water sector are needed. It will also be necessary to set up an infrastructure maintenance system which takes into account the three components (preventive, curative, adaptive). This implies a political will at all levels of governance.

e) Improving the effectiveness of water governance through more effective coordination of the entire water sector is critical. This should ensure effective coordination of the existence of communication managers, exchanges and information between the different actors, with monitoring and evaluation system. The values such as transparency, integrity, participation and equity must be highlighted.

f) Management of wastewater has not been adequately considered under the MDGs. The vast majority of wastewater (90%) in developing countries is discharged untreated, leading to the contamination of water resources, increased prevalence of disease and the deterioration of ecosystems. The post-2015 framework should encourage an integrated approach to managing wastewater and maintaining water quality, and include explicit targets and indicators focused on ensuring safe management of faecal sludge.

g) Capacities issues are critical to the implementation of the SDG and targets over the 2015-30 period. The capacities needed to implement national and regional/transboundary activities are at individual and institutional (policy and legislative framework) levels. Other areas of capacity building include the coordination needs at vertical and horizontal levels. Greater institutional challenges remain which need further attention. These relate to institutional capacity development for the water sector especially for the water resources management institutions, local authorities and community based institutions for building capacity for negotiations, conflict resolution, monitoring and compliance; and effective horizontal and vertical inter-agency coordination amongst water management institutions.

h) Effectively monitoring commitment to the targets will require devising plans for meeting the targets whether separately or integrated into national and regional/transboundary development frameworks. Performance monitoring and accountability have been a challenge in the water sector, compounded by largely lack of a national M&E frameworks. Operationalising a management information system is crucial. Monitoring post 2015 targets will require sufficient allocation of resources to support effective decision making; technical support to relevant monitoring bodies especially at the local level. Without a clear and agreed national information system and methodology on tracking progress on water it will be difficult to assess status of achievement of targets.
Chapter five:
CONCLUSION AND RECOMMENDATIONS

5.1- Conclusion

From the selected case studies, African countries, RECs, and TBOs to varying degrees, have undertaken many actions to reform the national and regional policy, legal and institutional frameworks for water resources management by adopting the IWRM approach. They adopted new water policies and sound legal and regulatory frameworks, and put in place well-functioning institutional systems that allow an acceptable level of stakeholders’ participation. Initiatives have also been undertaken to ensure coherence and coordination of water management related initiatives at the sub-regional and transboundary levels and to support actions at national level. Multilateral, regional and bilateral development agencies and banks as well as UN Agencies have supported initiatives and actions at regional, sub-regional and national levels.

Initiatives and actions undertaken include the review and/or update water management policies, enactment of legislation, and establishment of institutional frameworks for IWRM and for good governance of water. Further, a number of African countries have adopted country-specific regulations, procedures and sub-sectoral guidelines for key sub-sectors of the water resources management. Some degree of awareness and capacity has been built and the process is gradually becoming more integrative and inclusive.

Notwithstanding, the institutionalisation of IWRM has been slower in some countries and/or RECs than in other parts of Africa and varies from country to country. Many challenges remain in relation to application effectiveness and the extent to which IWRM findings influence development decisions. Human and financial capacity still remains the biggest challenge to the effective institutionalisation and application of IWRM in Africa. Political will and support are key to ensuring that countries overcome these challenges.

However, over the years, African countries have gained valuable experience in the application of IWRM approach and have attained a reasonable degree of success in this regard. Some good practice cases have been recorded and, more importantly, valuable lessons have been learned and documented. It is envisaged that the dissemination of these practices and lessons will engender knowledge networking and contribute to enhancing the application of this important water policy tool in Africa.

To advance the goal of integrated planning, policy and management, it is important to increase awareness about how these three systems intersect, and why greater coordination is necessary. In sum, the nexus perspective provides an informed and transparent framework for determining and resolving trade-offs to meet increasing demand without compromising sustainability. It is thus important to incorporate the nexus perspective in Rio + 20 as well as in local, national and other international planning activities focusing on water, food, or energy.

5.2- Recommendations

Based on the findings of the study, which have clearly documented the many challenges faced by African countries in the institutionalisation and application of IWRM, the following recommendations are presented:

j) Many countries, RECs, and TBOs in Africa are yet to fully develop the policy, legal and regulatory, and institutional frameworks for water resources management and good governance of water. Indeed this is non-existent or quite rudimentary in some countries, RECs, TBOs. In view of this, countries, RECs, and TBOs should ensure that appropriate and adequate frameworks, including procedures and guidelines, are developed / strengthened as a matter of priority as they are important prerequisites to the sustainable water resources management systems.

k) Since countries are at different stages in the development and/or implementation of IWRM, assistance should be targeted to meet the specific needs of countries. While priority should be
According to those countries with non-existent or unsustainable systems, the need to improve the IWRM application effectiveness of countries with relatively well-established water management frameworks should also be taken into account.

l) Consistency in the institutionalisation and application of IWRM approach at the level of the continent should be encouraged. In this regard, close cooperation and coordination of activities between AMCOW and RECs, and TBOs should be encouraged. The idea for RECs to serve as regional representations of AMCOW-Sec should be pursued and intensified. Ways should be explored to involve all countries that share water resources in CICOS (Central Africa) and in the transboundary aquifer systems by, for example, facilitating links between these countries and existing transboundary aquifers with which they have close ties.

m) Improve the integration of three sectors (water, energy, food) and consider them simultaneously and in a balanced way in order to provide a coherent framework for analyzing complex issues and benefit from the full potential approach "nexus" through multi-sectoral development analysis tools and decision-making. The development of appropriate indicators will measure the level of integration and actual synergies from the implementation of the approach "nexus".

n) Enhancing capacity in IWRM and much more for the transboundary water management application is key. In this regard, countries, RECs and TBOs should develop capacity building programmes based on clearly identified needs, taking into account experiences and lessons learned. The CapNet capacity building programme provides a holistic framework for capacity enhancement in IWRM in Africa and can be adapted to specific country, REC, TBO needs. Countries should also develop viable financing mechanisms to support the capacity enhancement needs of key stakeholders involved in water management.

o) The separation between the management functions (including the functions of coordination and regulation) on the one hand and the functions of use of water on the other hand, including consultation and participation frameworks, although institutionalized in policy documents and in legal and regulatory texts, are experiencing some difficulties to be functional or operational when they do exist. This is the result of the absence or inadequacy of the political and legal framework for water management. There is a strong need to review/adapt water management institutional frameworks to the principles of IWRM.

p) Reduce corruption, increase levels of integrity and promote transparency and accountability in the water sector by adopting appropriate procedures and tools, applying without indulgence legal and regulatory provisions agreed, by promoting citizen participation in the processes of decision making. For this purpose, it is necessary (i) to establish and reinforce partnerships and multi-stakeholder coalitions with expanded impact, (ii) undertake the necessary reforms (legal and financial reforms, reforms of public service systems, reforms in the private sector) (iii) sensitize the public and build capacities.

q) The lack of adequate and robust consultation, participation and coordination mechanisms that allow stakeholders at all levels to effectively contribute to decision-making in a coherent, holistic and integrated way can greatly undermine the quality of the water management frameworks. In this regard, in addition to capacity enhancement initiatives, countries should set minimum governance frameworks and empowerment initiatives for an effective constructive engagement of stakeholders in water resources management.

r) Public participation is key to integrating social concerns in development policies, plans, programmes and projects in an effective manner. In view of the importance of public participation in water management processes, it is recommended that water managers should develop strategies for public participation at all stages of the decision-making, which take into account lessons learned, and the specific country context. It is recommended that the public participation procedural handbook to be prepared/disseminated by AMCOW-Sec in collaboration with its partners and RECs.
s) A learning group forum and information-clearing house on IWRM and/or Transboundary Water Resources Management should be established to provide experience sharing and learning platforms that could take advantage of existing good practices elsewhere.

t) Develop mechanisms and tools of conflict resolution and consensus development as support for legislative reforms and engage stakeholders in policy dialogue, and ensure that legal procedures are the center of ultimate mechanism of conflict resolution.

u) The importance of the water sector is illustrated by the adoption of a SDG on water by 2030 (SDG No 6). However, the adoption of a single goal for the sector water potentially present a risk of dilution of a flap in favor of other areas - the risk to maintain sanitation in second place, given the relative importance of drinking water. In all cases, water security is a prerequisite for achieving the economic and social targets of SDGs. High priority should be given to sustainable water management. Africa has the potential to explode the main objective of water into sub-goals are compatible with its specific concerns.