

## **REPORT FOR SOUTH SUDAN TO SUPPORT THE ALIGNMENT AND DOMESTICATION OF RELEVANT GLOBAL INSTRUMENTS RELATED TO AQUATIC BIODIVERSITY CONSERVATION, CLIMATE CHANGE MITIGATION, ADAPTATION AND ENVIRONMENTAL MANAGEMENT.**



24<sup>th</sup> – 25<sup>th</sup> April, 2023 Juba, Republic of South Sudan

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## Executive Summary

Biodiversity presents enormous opportunities for sustainable wealth creation and environmental management; enhancing food and nutrition security including revenue generation. This National report on biodiversity and environmental management is developed to provide strategic direction on the action plans desired for domestication and alignment of global instruments with the National Policy and Regulatory Frameworks. Mechanisms for coordination and guided sustainable utilization of the blue resources (biodiversity and environment) are surfaced; particularly through the biodiversity traditional sectors of: fisheries, tourism, River transport, sustainable energy, water resources management, River bed mineral extraction and the related biotechnology.

Concepts of biodiversity and environmental management bring on board new way for economic valuation of the aquatic resources, ecosystems and the role they can play in socioeconomic development. This concept constitutes a new basis for the use and conservation aquatic habitats and resources (natural resources). In so, this SIDA funded and AU-IBAR implemented project on “Conservation of Aquatic Biodiversity and Environmental Management” fits in the United Nations’ 2030 agenda and the AU agenda 2063 for sustainable and inclusive development. In South Sudan context, domestication of these relevant Global Instruments and their alignment with the National Policies and Regulatory Frameworks affirms Government’s reforms and transformation agenda reflected on sustainable use and conservation of the National lakes, rivers, wetlands and the entire environment.

Domestication of relevant biodiversity Global Instruments would therefore organize the set of human activities in an integrated, circular and sustainable manner that would promote production and productivity, distribution, trade and consumption of goods and services resulting from conservation of both aquatic and terrestrial biodiversity and from exploitation and use of aquatic environment to improved health status of the aquatic ecosystems, social and cultural restorative measures.

Biodiversity in South Sudanese context refers to those economic activities that directly or indirectly take place in the aquatic environment; use outputs from the Rivers, Lakes and wetlands, and place ‘goods and services’ into Rivers, Lakes and wetland. In so doing, thirteen (13) Global Instruments were identified and recommended by the stakeholders during the consultative workshop held from 24th – 25th April, 2023 in Juba for domestication, rectification and their alignment with their respective National institutional Policies and Regulatory Framework. The recommended Global Instruments include: RAMSAR –Convention on Wetlands; CBD (Convention on Biological Diversity); CMS (Convention on Migratory Species); CITES (Convention on International Trade in Endangered Species of World Fauna ND Flora); HAWEN (Horn of Africa Wildlife Enforcement Network); AEWA (Agreement on the Conservation of African-Eurasian Migratory Water birds); UNCLOS (United Nations Convention on the Laws of the Sea); UNFSA (United Nations Convention and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks); FAO CA (FAO Compliance Agreement); FAO CCRF (FAO Code of Conduct for Responsible Fisheries); IUU fishing (Illegal, Unregulated and Unreported fishing); AU-IBAR PFR (African Union Inter-Africa Bureau for Animal Resources) and the UNECEC (United Nations Economic Commission for Europe Convention).

Biodiversity activities in South Sudan will be coordinated by the Ministry of Environment and Forestry and implemented by various line Ministries, multilateral and bilateral development partners for transformation of the National blue resources for sustain human well-being and the health of the environmental.

Therefore, this 24th – 25th April, 2023 National consultative workshop report is developed to reflect and respond to the findings of the deliberations. It's also a mandate of the National institutions to review and align their respective National Policies and Regulatory Frameworks when necessarily informed by Regional, Continental and Global developments. Together, we can develop our biodiversity and environment in an inclusive and sustainable manner.

# Table of Contents

<b>Executive Summary</b>	<b>iii</b>
<b>Acronyms</b>	<b>vi</b>
<b>Acknowledgement</b>	<b>vii</b>
<b>1. Introduction</b>	<b>1</b>
1.1 Background	1
1.2 Specific objectives	3
<b>2. The National consultation workshop</b>	<b>4</b>
2.1 Workshop participants	4
2.2 Workshop Objectives	5
2.3 The workshop methodology	5
<b>3. Overview of sectoral challenges</b>	<b>5</b>
3.1 Fisheries, Aquaculture Sector	5
3.2 Water Resources, Dams & Energy	6
3.3 Environment and Forestry	8
3.4 Mineral extraction, oil and gas industry	9
3.5 Wildlife Conservation & Tourism	10
<b>4. Situational analysis on domestication of Global Instruments</b>	<b>11</b>
4.1 Review of relevant Global Instruments	12
4.2 Biodiversity Global Conventions and the National gap analysis	15
4.3 Relevant Global Instruments, domestication Action Plan	16
4.4 Synopsis of existing National Policy or Regulatory Instruments	17
<b>5. Policy measures and objectives for harmonization of National Instruments with relevant Global Instruments</b>	<b>21</b>
5.1 Issues identified on harmonization of national policies	21
<b>6. Implementation and Coordination Framework</b>	<b>22</b>
<b>7. Monitoring and evaluation mechanism</b>	<b>23</b>
<b>8. Way-forward</b>	<b>24</b>
<b>9. Conclusion and Recommendations</b>	<b>24</b>
<b>10. Annexes</b>	<b>25</b>
10.1. List of participants:	25



## Acronyms

ABES	African Blue Economy Strategy
AEWA	Agreement on Conservation of African-Eurasian Migratory Waterbirds
ALME	African Large Marine Ecosystems
AUC	African Union Commission
AU-IBAR	African Union InterAfrica Bureau for Animal Resources
AWFISHNET	African Women Fish Network
CAMP	Comprehensive Agriculture Master Plan
CBD	Convention on Biological Diversity
CITIES	Convention on International Trade in Endangered Species of World Fauna and Flora
CMS	Convention on Migratory Species
DARBE	Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FAO CCRF	FAO Code of Conduct for Responsible Fisheries
GDP	Gross Domestic Products
GoSS	Government of South Sudan
HAWEN	Horn of Africa Wildlife Enforcement Network
IUU	Illegal Unregulated and Unreported Fishing
JAM	Join Assessment Mission
NBI	Nile Basin Initiative
RECs	Regional Economic Commissions
SIDA	Swedish International Development Agency
PFRS	Policy Framework and Reform Strategy
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Program
UNECEC	United Nations Economic Commission for Europe Conventions
UNFCCC	United Nations Framework Convention on Climate Change
UNFSA	United Nations Convention and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

## Acknowledgement

We would like to express our gratitude to all those who supported us in the processes towards development of this workshop report on domestication of Global Instruments of aquatic biodiversity and environmental management to the National Policies and Regulatory Frameworks of the concern sectors in the Republic of South Sudan. We remain thankful for their aspiring guidance, constructive criticism and friendly advice during the period of this task. We are sincerely grateful to them for sharing their honest and informative views on number of issues related to instruments for conservation of biodiversity and environmental management.

Hon. Onyoti Adigo Nyikwec, Minister, Ministry of Livestock and Fisheries and the National Blue Economy Desk Leader for provision of valuable guidance, political-will and support in the communication with Dr. Nick Nwankpa Ag/Director, AU-IBAR and Head of Mission, to facilitate all the processes for the successful accomplishment of this workshop in Juba, South Sudan. We take this opportunity to thank the Undersecretary of the Ministry of Livestock and Fisheries and the Ministry of Foreign Affairs and International Cooperation for according us the necessary support.

Development of this report is a culmination of participatory and inclusive process involving consultations with various stakeholders including line Ministries, Departments and development partners working in the biodiversity and environment sectors. The completion of this report is a step forward for guiding domestication of Global Instruments and their alignment with biodiversity and environmental management national instruments. We therefore, wish to appreciate all our stakeholders for their tirelessly support, during the workshop deliberations and in the process for development of this report.

In particular, we acknowledge the Swedish International Development Agency (SIDA) for providing the necessary support and facilitation of this workshop; the grant obtained from the Swedish Government to implement this project on conservation of aquatic biodiversity and environmental management is a multiplayer effort to prosperity of the AU Member States. Finally, let us take this opportunity to thank our colleagues in the AU-IBAR for their technical support and guidance throughout the process of this stakeholder's consultation workshop.

## I. Introduction

The African Head of States and Governments endorsed the African Blue Economy Strategy (ABES) at the summit of the African Head of States and Governments in Addis Ababa, Ethiopia, in February, 2020; as a blue print to support Blue Economy development in African Union Member States and the Regional Economic Commissions (RECs).

Accordingly, with the financial support from the Swedish International Development Agency (SIDA), AU-IBAR is currently implementing a three (3) year project on “Conserving Aquatic Biodiversity in African Blue Economy’ which is in line with the ABES. Under this project AU-IBAR commissioned studies to “assess relevant Continental and Global Instruments related to Aquatic Biodiversity Conservation, Climate Change and Environmental Sustainability and also to develop priority actions for enhanced ratification and implementation”; which have now been completed by the consultants. The study came up with recommendation and priority actions to enhance ratification and implementation of the relevant Continental and Global Instruments related to conservation of aquatic biodiversity.

Therefore, AU-IBAR endeavors to support selected AU-Member States of which South Sudan has been selected for support to review its National Policies and Regulations and to align them with relevant Regional and Global Biodiversity and Environmental Instruments which are related to Aquatic Biodiversity Conservation, Climate Change Mitigation and Environmental Sustainability. And given the importance of fisheries and the aquaculture, the booming tourism, the oil and gas industry in South Sudanese economy; AU-IBAR wish to extend its technical support targeting these Blue Economy Sectors in the Republic of South Sudan for their adherence with Global good practices as these sectors roll out for full scale development.

### 1.1 Background

African Union Inter-African Bureau for Animal Resources (AU-IBAR), is a specialized technical office of the Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment (DARBE) of the African Union Commission (AUC). AU-IBAR is mandated to support and coordinate development and utilization of livestock, fisheries, aquaculture and wildlife as resources for both human wellbeing and economic development in the African Union Member States (AU-MS).

The “Vision” of the AU-IBAR in its Strategic Plan 2018–2023 is an Africa in which animal resources contribute significantly to integration, prosperity and peace. AU-IBAR’s intervention in the fisheries, aquaculture and other blue economic sectors is guided by the Policy Framework and Reform Strategy for fisheries and aquaculture in Africa (PFRS) and the African Blue Economy Strategy (ABES), both of which aims at socio-economic transformation of Africa, underpinned by increased sustainable contribution to food and nutrition security, livelihoods development and wealth creation within the framework of the African Union Agenda 2063.

The African Continent is adjacent to highly productive marine ecosystems including the seven (7) African Large Marine Ecosystems (ALMEs) like: the Agulhas Current, Benguela Current, Guinea Current, Canary



Current, the Mediterranean Sea, the Red Sea and the Somali Current. The Continent is also endowed with networks of freshwater Rivers and Lakes. The Seas, Oceans, Lakes, Wetlands and Rivers inhabit a significant number of biodiversity, and the ecosystems provide sources of livelihoods, food security and wealth creation. Moreover, the African aquatic ecosystems inhabit living and non-living resources. However, the unsustainable exploitation of these resources is threatening biodiversity, natural resources base, environment and ecosystems sustainability.

Several factors are threatening aquatic biodiversity in Africa's aquatic ecosystems. These threats include; overexploitation of the living resources, pollution from several sources (land-based municipal and agricultural activities), uncontrolled introduction of exotic species in aquaculture systems, effluents from mining activities. Other threats to aquatic biodiversity include poorly and or unplanned urban development and resource-based industries, such as mining, oil explorations, coastal tourism activities, coastal infrastructure development, most of whom destroy or reduce natural habitats for biodiversity propagation. In addition, air and water pollution, soil erosion, sedimentation and siltation including climate change all pose threats to aquatic biodiversity.

African Union Heads of States endorsed the African Blue Economy Strategy (ABES) with the aim of addressing some of these challenges and threats to enable AU–Member States to sustainably harness the biodiversity resources in their aquatic ecosystems. The ABES envisioned an inclusive and sustainable Blue Economy that significantly contributes to Africa's transformation and growth. The Strategy incorporates key critical factors that would promote Blue Economy development in the Continent with entry point being the traditional Blue Economy Sectors of: fisheries, aquaculture, aquatic biodiversity, ecosystems conservation; shipping (River navigation), maritime safety and trade; climate change mitigation and environmental sustainability including ecotourism; sustainable (clean) energy development, mineral extractions, good governance, institutional development and jobs creation.

Therefore, the African Blue Economy Strategy is anchored on five (5) thematic technical areas of:

1. Fisheries, aquaculture, biodiversity, conservation and sustainability of the aquatic ecosystems,
2. Shipping/transportation, trade, ports, maritime security, safety and enforcement,
3. Coastal and maritime tourism, climate change, resilience, marine ecosystem, environment and infrastructure,
4. Sustainable energy, mineral resources and innovative industries; and,
5. Policies, Institutional capacities and governance, gender, job creation and poverty eradication and innovative financing.

The overall objectives of the African Blue Economy Strategy (ABES) is to guide Member States to develop an inclusive and sustainable Blue Economy that would become a significant contributor to National as well as Continental transformation and growth; through advancing knowledge on marine and aquatic biotechnology, environmental sustainability, marine and fresh water ecosystems utilization, conservation and carbon sequestration, the growth of an Africa-wide shipping industry, the development of Sea, River and Lake transport and ports; the management of fishing activities on these water bodies, and the exploitation and benefits accruing from deep Sea mining and the other marine and fresh water resources on the other hand.

AU-IBAR therefore have secured funding from the Swedish International Development Cooperation Agency (SIDA), for a three-years project cord named “Conserving Aquatic Biodiversity in African Blue Economy” it is hereby rolling out implementation of this project in selected AU Member States; with the objectives of enhancing the Policy Environment, Regulatory frameworks and Institutional capacities of AU-Member States to sustainably utilize and conserve their aquatic biodiversity and management of ecosystems.

## *1.2 Specific objectives*

The specific objectives of this project include;

1. To provide support to AU-MS to ratify and/or align relevant International and Regional Instruments related to Blue Economy themes - with specific reference to protecting and conserving biodiversity,
2. Optimizing conservation and sustainable use of biodiversity while minimizing conflicts among Blue Economy sub-themes users,
3. Strengthening measures for mitigating the negative impacts of coastal and marine tourism, oil, gas, deep Sea mining and climate change on aquatic biodiversity and environment; and,
4. Strengthening gender inclusivity in aquatic biodiversity conservation and environmental management.

In line with the provisions of the project, AU-IBAR undertook assessment to uncover relevant Continental and Global Biodiversity and Environmental Instruments and develop priority actions to support AU-MS enhance their ratification and implementation in Countries. In this project stage, AU-IBAR is supporting selected AU-MS to review their National Biodiversity Policies, Regulations and align the National Instruments with relevant Global biodiversity and environmental Instruments. Given the gravity of biodiversity challenges on one hand and to ensure Regional consideration on the other hand, South Sudan has been selected from the Eastern Africa Region for support in the implementation of the project.

## 2. The National consultation workshop

Following successive communication between AU-IBAR and the Republic of South Sudan, Ministry of Livestock and Fisheries (the National desk Blue Economy institution); a date for this important consultation workshop was scheduled as 24<sup>th</sup> – 25<sup>th</sup> April, 2023 in Juba, South Sudan. The aim of the workshop is to support the Country conduct its Nation-wide stakeholder’s consultation workshop for the domestication of prioritized Global Instruments into National Policies related Instruments for conservation of aquatic biodiversity, ecosystems and environmental management.

### 2.1 Workshop participants

This important event drew together 26 participants for relevant Ministries, Departments, Agencies in-charge of environment, aquatic biodiversity, fisheries, aquaculture, blue economy, wildlife, conservation, tourism, mining, oil and gas industry, transport (river navigation), trade and industry, gender, youth, academia and relevant bureau including NGOs working in these sectors; the representative of AWFISHNET South Sudan Chapter and members of the civil society organizations and 6 technical facilitators from AU-IBAR, all together the workshop was attended by 32 participants.

In the opening ceremony, participants were warmly welcomed by Amb. Ador Akok Athuai, of the Ministry of Foreign Affairs and International Cooperation, RSS who expressed his gratitude to AU-IBAR for considering South Sudan for the Member State support in the domestication of relevant Global Instruments related to aquatic biodiversity conservation and environmental management.

Whereas, on behalf of the Ag/Director of AU-IBAR, Dr. Nick Nwankpa; Mrs. Hellen Moepi delivered speech extending solidarity with the workshop and the participants; she also extended the complements of the Commissioner for Agriculture, Rural Development, Blue Economy, and Sustainable Environment of the African Union Commission (AUC), Amb. Josefa Sacko. She reiterated the objectives of the project “Conserving Aquatic Biodiversity in the context of African Blue Economy”. She explained the mandates and roles of AU-IBAR to support its Member State to align its National Policy and Regulatory Frameworks with relevant Regional and Global Biodiversity and Environmental Instruments.

On behalf of Hon. Onyoti Adigo Nyikwec (MP), Minister, Ministry of Livestock and Fisheries Republic of South Sudan, the Hon. Undersecretary of the Ministry Dr. Makuei Malual Kaang delivered the opening remarks. He reiterated South Sudan’s vast aquatic resources and the blue economy development potentials; recounting the necessary actions to be taken towards conserving these blue resources for transformative development. He thanked AU-IBAR for supporting the development of South Sudan’s Blue Economy sector and urged all participants of the workshop to contribute fully to the discussions towards domesticating the relevant Global Instruments aimed at conserving biodiversity and sustainable environmental management. He officially opened the meeting, wishing the participants and facilitators fruitful objective deliberations.

Then Mr. Eric Nadiope, the Policy and Legal Specialist at AU-IBAR set the technical season of the workshop by provided the background information on this project and outlined the objectives of this National stakeholder’s consultative workshop to the all participants.

## 2.2 Workshop Objectives

The objective of this workshop is to support the Republic of South Sudan to review its National Policies and Regulations and to align these National Instruments with domestic relevant Regional and Global biodiversity and environmental Instruments.

## 2.3 The workshop methodology

The workshop adopted a participatory and interactive approach; where the agenda was adopted to guide the flow of discussions. Following technical presentations from AU-IBAR on the African Blue Economy Strategy; Global Instruments related to conservation of aquatic biodiversity and environmental management; Synopsis of existing Policy or Regulatory Instruments on Blue Economy sectors in South Sudan was presented; participants convened in 3 working groups to identify issues, gaps, challenges and priority actions for domesticating Global Instruments related to conservation of aquatic biodiversity and environmental management in shared freshwater ecosystems.

Each working group presented their main discussion points in plenary and received feedback for input into their final submissions as indicated in the report below. Finally, a communiqué for the workshop was drafted and presented in a plenary for the participants to review, make input and adopt.

## 3. Overview of sectoral challenges

South Sudan potentials on Blue Economy development leading to sustainable utilization of the blue resources and therefore conserving the aquatic and terrestrial biodiversity, climate change mitigation and environmental management are commendable; given its remarkable renewable and non-renewable natural resource base. However, those potentials are anticipated to meet noticeable challenges as the country embarks on their development. The overview below presents the biodiversity sectoral potentials and challenges towards their development.

### 3.1 Fisheries, Aquaculture Sector

South Sudan has substantial total water surface area which includes the vast swamp Region of the Sudd Wetlands, formed by the River Nile and known in the local catchment delineation as the Bahr el Jebel system; there is also the Bahr el Ghazal system; the Pibor-Akobo-Sobat system and the White Nile system. From this River systems surface area, it is estimated that fish production in South Sudan could reach 300,000 – 450,000 metric tons per annual. The vast majority of this estimate potential production would come from the Sudd Wetlands which commands sizable aquatic and terrestrial biodiversity including migratory birds of significant importance. It is also estimated that another 100,000 – 150,000 tons would come from full scale development of the aquaculture sector (JAM, 2007 & FAO, 2004). The South Sudan fishery remains a multi-species of high biomass biodiversity; there are over 116 fish species that had been reported belonging to 27 genera of 18 families.

The peak fishing period occurs during the rainy season where accessibility of the fishing grounds becomes a challenge, because this is when water bodies are at their peak flow, thus reducing potential harvest. Following the rainy season substantial fishing also takes place in the wetlands (swamps or “toic”) and the

related floodplains which have sufficient water retention in the dry season for aquatic biodiversity and environmental service as well as for terrestrial biodiversity including watering for livestock (CAMP, 2013).



Figure (1): Sudd Wetlands and the interactive aquatic biodiversity in South Sudan

Distinct sector challenges include: lack of data for proper management of the capture fisheries which also limits estimates and knowledge of the wild fisheries resources of the Country. There are high post-harvest losses, due to poor storage, transportation and inadequate value addition systems. Limited financial institutions support the sector; undeveloped marketing infrastructures including market information system. Research, human and institutional capacity remains challenges. Aquaculture sector remains generally undeveloped limiting potential farmers opportunities for diversify income and mitigate food insecurity under climate socks.

### 3.2 Water Resources, Dams & Energy

South Sudan has profuse surface and ground water; the surface water is supplied from its major River basins of: Bahr el Jebel; the Sudd Wetlands; Bahr el Ghazal; Pibor-Akobo-Sobat and the White Nile. The Bahr el Jebel river system is formed of several tributaries such as Aswa, Kiit, Kayaya and other seasonal Rivers (Rutten et al., 2014) and discharges about 30 billion M<sup>3</sup> per annum in to the Nile system. The Bahr el Ghazal basin is composed of the tributaries of Viki, Jur, Lol, Kiir and other seasonal rivers. It discharges about 12 billion M<sup>3</sup>, of which 11.4 billion M<sup>3</sup> per annum flows to the Sudd Wetland for biodiversity and environmental services, leaving 0.6 billion M<sup>3</sup> flowing into the “Lake No” and the White Nile system (AfDB, 2013). The River Sobat, which is formed at the confluence of the Baro and Pibor-Akobo Rivers, discharges about 14 billion M<sup>3</sup> per annum into the White Nile and the Machar marshes Wetlands with biodiversity services and environmental conservation (GoSS & UNDP 2012; Rutten et al., 2014).





Figure 2: Map of South Sudan showing network of water bodies and dominance of aquatic biodiversity

On the other hand, sustainable and renewable blue energy would be generated from hydro-power plants, geothermal sources, solar panels and wind turbines. South Sudan has the potential for investment in renewable blue/clean energy from the solar and wind sources; potentials for hydro-power generation in the Country are estimated at 2,090 MW. The immediate National hydro-power development plan would include development of hydro-electric generation of about 1,090 MW from the Fulla I dam.

Whilst there are developed National water resources, dams and energy Policies, management and development plans of the Ministry of Water Resources and Irrigation and the Ministry of Dams and Energy respectively; to guide and design develop of territorial water resource, conservation of biodiversity and clean energy development.

However, these sectors yet encounter challenges which revolve around: lack of Regulatory Framework and coherence with Global Instruments; inadequate sources of data; institutional, human and financial capacities for full exploration of water resources and clean energy development and their subsequent potential contributions to the National GDP; nor yet allocations made in terms of water for biodiversity conservation and environmental flow including domestic water demand; industrial and crop water demand. Inadequate gauging stations, technology and mapping for flood and drought vulnerability and development of mitigation measures remains other preoccupation challenges of these National Ministries.



### 3.3 Environment and Forestry



Figure 3: Biodiversity Features in the Sudd Wetlands

Environment and forestry constitute critical components for conservation of biodiversity, climate change mitigation and sustainable environmental health. The national forests on the other hand are unique ecosystems providing benefits from: biodiversity, tourism and carbon sequencing; they are also core in mineral exploration and extractions among others. The role of environment in ecosystem restoration along with maintaining the health of the environment remains critical national undertaking.

In fact, one of the main concerns of environmental experts in South Sudan is on how the environment could contribute to the well-being of its people and support them to cope with climatic changes such as droughts and floods. But integrated implementation of climate change mitigation strategies remains lagging; although environment plays significant role in mitigation and adaptation to climate change effects through range of ecosystem and biodiversity services provision. Moreover, literatures indicated that economic valuation of biodiversity and the Sudd Wetlands ecosystem could contribute to 3.2 Billion USD (NBI, 2020).

The National forest reserves and their role in carbon sequencing and potentials for carbon credit remains yet to be uncovered, if compared to the carbon sequenced by the mangroves forest in the costal Countries. In this regard, specific accounting for blue carbon and other environmental ecosystem services need to be done in order to monitor and measure role and contribution of environment and forestry to biodiversity conservation including carbon sequestration and their contribution to the National GDP.

The Ministry of Environment and Forestry have developed National Policy 2015-2025; the Policy has three (3) pillars which aims at (1) maintaining the balance between environment and development needs through sustainable use of the natural resource base; (2) creating public awareness on the importance of protecting the environment; and (3) providing the basis for formulation of biodiversity and ecosystem protection and management Laws and related guidelines. On the other hand the Ministry developed the South Sudan

Environmental Protection Bill 2013, which emphasis on the importance of conducting Environmental Impact Assessments (EIAs) in relation to any activity that may affect the environment.

Nonetheless, holistic development of environment and forestry Regulations/Laws are yet lagging; rather than the “Ramsar Convention – on protection of wetlands” there is still limitations in domestication of Global environmental Instruments for conservation of aquatic biodiversity, climate change mitigation and their alignment with the National environmental Instruments. Environmental and biodiversity challenges also persist in the management and treatment of solid and liquid pollutions from household, land, Rivers and wetlands; in particular chemicals from mining and mineral extractions; micro and macro plastic pollutants and other biochemical and environmental emerging pollutants remains key sector challenges.

### *3.4 Mineral extraction, oil and gas industry*

Streams, Rivers, Lakes and wetlands bed mineral mining; oil exploration and sand extraction are currently practiced in most parts of rural South Sudan; although using appropriate technology (tools, means) and methods. The practice has never received due attention for development; factors are affiliated to the interest of illegal miners and mineral traders. So, introduction of modern tools, technologies and data collection for potentials and minerals productivity, hence their contribution to the National GDP would continue to remain challenge. Rudimental extraction of such minerals however plays a significant role in the livelihoods of the rural communities and predominate youth and women cash activities among the rural poor; these practices will remain destructive to aquatic biodiversity, environment and water pollution for a longer anticipated time unless due pressure is exerted.

The oil sector currently counts for about 90% of the National economy, although production may at times be disrupted by several factors including floods; expansion of the oil extraction and gas industry into the wetlands and disruption of biodiversity conservation and environmental health is anticipated. The oil and gas industry stand high in investment and employment opportunity in South Sudanese economy. Sector challenges remains on the expansion of oil extraction into the wetlands areas including the “Ramsar designated site”, which might threaten biodiversity conservation, create pollution issues and compromising environmental sustainability; all these threats remains to be informed by credible feasibility studies and thereof environmental assessment and audit reports.

In the gas sector, there are no economic data currently available to assert the value addition of gas industry from the oil production. Professional judgments indicate that the gas is currently been burned in the oil production fields, risking environmental and climate change negative impacts and could currently be an economic loss to the Country in term of clean domestic energy use in lieu of environmentally unfriendly use of charcoal for domestic fuel.



### 3.5 Wildlife Conservation & Tourism



Figure 4: Aquatic and terrestrial biodiversity interactions

South Sudan has six (6) national parks, 12 game reserves and 18 protected areas which need improvement to enable implementation of protection plans. These parks include: Nimule National park, Boma National park, Badinglo National park, the Southern National parks, the Fam-Zeraf area etc. Biodiversity conservation and environmental importance are noticed is the seasonal migration of the white-eared kob across the Boma-Badingilo and Gambella National parks, across to Ethiopia in the given savannah ecosystem making a spectacle and superlative natural wildlife migration. This particular corridor serves as an exceptional wild natural beauty of economic importance; because hundreds of thousands of animals (terrestrial biodiversity) migrate in mega-herds across this wide expanse of intact grassland ecosystem, referred to as “the Jonglei Land Scrape”.



Figure 5: Spectacular migration of wildlife species along boarder with Ethiopia

The Elephants and the Antelope migrations represent one of the World long distances and wide range seasonal movement of terrestrial biodiversity on Earth; similar to that of Serengeti ecosystem. The vast woodland savannah and grassland ecosystems of the Boma-Badingilo-Gambella–Gambella migration landscape serve key purpose for biodiversity conservation. The Ministry of Wildlife, Conservation and Tourism has developed National Policy in this regard and is endeavoring to establishment these gazette areas is a way forward to conservation of terrestrial biodiversity.

Challenges in the sector are on the fact that, there is illegal hunting and trade on products of these terrestrial mammals, efforts are being directed to the conservation of these terrestrial biodiversity in the National parks and protected areas as the sector would generate important flow of foreign currency through tourism and would contribute significantly to the National GDP. There is lack of data to determine full economic contribution and importance of tourism to the economy. Current, the sector contributes probably small share to the National GDP, estimated at 1.8% in 2013; however, the sector is expected to rapidly grow.

#### 4. Situational analysis on domestication of Global Instruments

There are numbers of Global Instruments in biodiversity, climate change, environment, fisheries and wildlife, some of whom South Sudan is a party and other are on the process for the Country to accede; those South Sudan have already acceded to include:

1. The following are Conventions for domestication/hosted and/or implementation by the Ministry of Environment and Forestry are:
  - RAMSAR Convention on protection of Wetlands, South Sudan is a Party
  - CBD South Sudan Acceded to the Convention
  - CMS Convention on Migratory Species
2. The Conventions hosted and to be implemented by the Ministry of Wildlife Conservation and Tourism are:
  - CITIES
  - HAWEN
  - AEWA
3. The Conventions under the Ministry of Livestock and Fisheries
  - UNCLOS
  - UNFSA,
  - FAO Compliance Agreement,
  - FAO CCRF,
  - IUU Fishing (IPOA-IUU),
  - AU-IBAR PFR
4. The Conventions under the Ministry of Water Resources and Irrigation
  - UNECEC

## **4.1 Review of relevant Global Instruments**

The relevant Global Instruments related to aquatic biodiversity conservation, ecosystems and environmental management. The Republic of South Sudan had knowledge on some of the International (Global) and Regional Conventions relevant to National reforms and transformation agenda. The Country have acceded to some of these Conventions with the support of the development partners like the GEF, the UNEP, the IGAD to mention a few; brief back grounds to this accession are provided below.

### **4.1.1 RAMSAR Convention**

This Convention is under the Ministry of Environment and Forestry; the Convention is on Wetlands of International importance; it is an inter-Governmental Treaty that provides the framework for National action and International cooperation for the conservation and wise use of wetlands and their resources.

South Sudan acceded to the Convention and is now implementing the Convention and its Mission is “the conservation and wise use of all wetlands through local and National actions and International cooperation, as a contribution towards achieving sustainable development throughout the world”. It has “three pillars” of: (1) - Convention, of which the contracting Parties commits to work towards the wise use of all their wetlands; (2) - designate suitable wetlands to the list of Wetlands of International importance (the “Ramsar List”) and (3) - ensure Wetlands effective management; cooperate Internationally on transboundary wetlands and shared wetland systems.

### **4.1.2 CITIES Convention**

CITIES is a Convention on International Trade in Endangered Species of World Fauna and Flora); South Sudan is a Party under the Ministry of Wildlife Conservation and Tourism and they are in the process to accede to the Convention probably through the GEF-6-Project which is on Illegal Wildlife Trade and Protected Area Management effectiveness. These activities are jointly overseen by GEF and UNEP.

### **4.1.3 CBD Convention**

CBD is a Convention on Biological Diversity; South Sudan acceded to the Convention and is in the process of acceding to the Nagoya and Cartagena Protocol possibly through a GEF-7- Project and GEF-8 funding.

### **4.1.4 AEWA Convention**

Is an Agreement on Conservation of African-Eurasian Migratory Water-birds;

South Sudan is not a Party to this Convention although it would be relevant under the Ministry of Wildlife Conservation and Tourism. This Convention is founded to coordinate efforts to conserve migratory bird species between European and African Nations. Sudd Wetlands is a home to greater variety of these migratory birds from Europe; so, educating and supporting South Sudan to accede to this Convention is vital.

### **4.1.5 CMS Convention**

Is a Convention on Migratory Species; the Convention on the Conservation of Migratory Species of Wild Animals, also known as the Convention on Migratory Species (CMS) is an International Agreement that aims to conserve migratory wild animals. Under the auspices of United Nations Environment Program;

concerned with conservation of wildlife and habitats of Global importance. South Sudan is not a Party to this Convention although it would be relevant under the Ministry of Wildlife Conservation and Tourism; we have noted the spectacular migration of wildlife species along the Badingilo-Boma National parks across to Gambela Park in Ethiopia.

#### **4.1.6 HAWEN Initiative**

Is an initiative of IGAD on the “Horn of Africa Wildlife Enforcement Network”; this is a Regional Convention initiated by IGAD for Combating Wildlife Crime within the Countries of the IGAD Region. The aim of the Convention is to convert the threatening levels of wildlife and forest crime, affecting the economy, environment, social development, security and Governance in the Region. The Convention embodied joint cross-border cooperation and collaboration in fight against these crimes. South Sudan is a member of IGAD REC although it did not officially accede to this important Regional Convention.

#### **4.1.7 MARPOL Convention**

The MARPOL Convention is an important Convention design to prevent pollution from ships; although primarily it's for marine environment, South Sudan has over 1,360 Km of navigable River stretch, where boats transport merchandise from the capital Juba downstream of the Nile to it board with Sudan. As the MARPOL Convention includes Regulations aimed at preventing and minimizing pollution from ships/boats and related engines used in the aquatic environment from accidental pollution to those routine oil pollutions from the engine's operations. South Sudan in this regard have not acceded to this Convention, but as an in-land Country with commendable navigation activities (1,360 Km), the Country under the Ministry of Transport need support to domesticate the Instrument into its National Policy and Regulatory Framework.

#### **4.1.8 UNECEC Convention**

UNECEC is a United Nations Commission for Europe Convention; it is a Convention on the Protection and Use of Transboundary Water Courses and International Lakes. Established in 1992, is a Convention that South Sudan found it relevant for domestication into its National Policies. The Ministry of Water Resources and Irrigation in this regard is the National institution mandated to processing domestication and therefore accede to this Convention.

#### **4.1.9 UNCLOS Convention**

UNCLOS is a United Nations Convention on the Law of the Sea; South Sudan is not a Party. Much that some of this Convention articles like: conservation and management of straddling fish stocks and highly migratory fish stocks; the sovereignty rights of a State on water body for fishing and mineral exploration, innocent or safety of passengers on board a vessel, dumping of waste or any man-made waste materials on the Sea are relevant articles; however their contextualization to the South Sudanese in-land water bodies makes it not much comfortable for its domestication and ownership at a respective National institutional Policy.



#### **4.1.10 FAO CCRF Convention**

The FAO CCRF is an FAO developed Code of Conduct for Responsible Fisheries, developed to sets out principles and International Standards for responsible practices supporting the sustainable exploitation and production of living aquatic resources; with due consideration for the conservation of ecosystems and biodiversity. The code recognizes the nutritional, economic, social, environmental and cultural importance of fisheries. The Ministry of Livestock and Fisheries is aware of the importance of the code in sustainability of its biodiversity.

#### **4.1.11 IUU Fishing Convention**

The Illegal, Unregulated and Unreported fishing is a Convention designed to protect the commonly affected small scales fisheries of marine as well as in-land fisheries. South Sudan is a small-scale predominant fishery; therefore, developing and enforcing guidelines to prevent deter and eliminate IUU fishing is crucial undertaking of the Ministry of Livestock and Fisheries to regulate and report on fishing activities including stock knowledge, fish population dynamics and management measures essential for sustainability of the sector. Licensing of fishing and transportation boats; use of prohibited gear and methods; illegal transshipment; landing in unauthorized BMU are among other IUU activities to be prevented.

#### **4.1.12 AU-IBAR PFRS framework**

AU-IBAR PFRS is the Policy Framework and Reform Strategy for fisheries and aquaculture in Africa is a Continent intervention in the African fisheries and aquaculture sector aimed at addressing challenges such as poor coordination among actors; lack of coherence in Governance Instruments and approaches; increasing incidences of Illegal, Unreported and Unregulated (IUU), weak production capacity in the AU Member States; inadequate evidence based information to foster reform and monitor sector Policies; poor infrastructure including lack of inclusive Governance. South Sudan is working to align its fisheries and aquaculture Policy with the provisions of the Policy Framework and Reform Strategy for fisheries and aquaculture in Africa, to enhance its biodiversity and fisheries contribution to food security and economic growth of the Country.

#### **4.1.13 UNFCCC Convention**

The United Nations Framework Convention on Climate Change; is an important Convention and South Sudan is a party to the UNFCCC Convention, led by the mandated National institution, in this regard is the National Ministry of Environment and Forestry to process accession to the Convention on behalf of the Country.

## 4.2 Biodiversity Global Conventions and the National gap analysis

S/No	The Conventions	South Sudan Acceded	National Policy alignment	Remark on gaps:
1	RAMSAR	Yes	aligned	Gap is on implementation support
2	CITIES	In the process of acceding	Not yet aligned; probably GEF-6-Project cycle may support	Gap in capacity to first-track accession
3	CBD	Yes	Still in process of acceding to the Nagoya and Cartagena Protocols, then Policy align follow	Probably the GEF-7 and GEF-8 projects may capacity support
4	AEWA	Not acceded,	Policy not aligned, but important Conversion as bird migratory to the Sudd Wetlands	Important on migratory bird species to the Sudd Wetlands
5	CMS	Is not a party to CMS	Not Policy aligned; but conservation is important given the second largest and diverse migratory of wild animals,	Gap: greatly noted given spectacular wildlife migrations; second in the World
6	HAWEN	Not acceded	Policy and Regulations Not Aligned to combating wildlife crime within the Country and the Region	Gap: No Regulation Framework developed to combat wildlife crime
7	MARPOL	Not acceded	Policy Not Aligned; important Convention on prevention of River pollution from boats	Gaps: Policy not aligned; pollution Regulation not developed
8	UNECEC	Processing accession and domestication	Policy Not Aligned; Convention on the Protection and Use of Transboundary Water Courses and International Lakes	Gaps: Not capacity and support to align Policy and Regulations
9	UNCLOS	Not a party	Not yet positively perceived	Gap: Needed awareness on the Convention
10	FAO CCRF	Is aware	Not acceded to, but the code is important in setting principles and International Standards for responsible practices in biodiversity	Gap: Needed awareness on the code and support to its domestication to National Policy
11	IUU Fishing	Is aware	IUU is affecting all small scales fisheries (marine or fresh water); South Sudan is predominantly small-scale fisheries	Gap: Needed awareness on the Convention and support to its effective domestication
12	AU-IBAR PFRS	Is a party	The Policy Framework and Reform Strategy for fisheries and aquaculture in Africa is important Continent intervention	Gap: Needed awareness on the Convention and support to its effective domestication
13	UNFCCC	Is a party	United Nations Framework Convention on Climate Change (UNFCCC)	Gap: lack of awareness creation for ratification and implementation

### 4.3 Relevant Global Instruments, domestication Action Plan

S/No:	Relevant Global Instrument:	Recommended action:	Lead National Institution:	Remarks on action plan:
1	RAMSAR	Global Instrument already domesticated, but National Policy need to be aligned	Ministry of Environment & Forestry – has not wetlands in the Policy areas	Support needed to implement alignment action
2	UNFCCC	United Nations Framework Convention on Climate Change; South Sudan is a Party now on Policy alignment	Ministry of Environment; Ministry of Water Resources	Implementation support needed
3	CITIES	Global Instrument is concerned of trade in specimens of wild animals and plants (fauna & flora)	Ministry of Wildlife; Ministry of Fisheries and Ministry of Agriculture – ALL have no Policy area covering this Instrument	Support needed to incorporate this Policy area
4	CBD	Global Instrument on conservation of biological diversity not yet acceded to nor domesticated	Ministry Environment and Forestry; Ministry Livestock and Fisheries; Ministry Wildlife	Coordination mechanism support need to align this Global Instrument
5	AEWA	Conservation of African-Eurasian Migratory Waterbirds not acceded to nor domesticated; yet the Sudd wetlands host seasonal migratory water-birds	Ministry Environment; Ministry Wildlife; Ministry Fisheries	Awareness creation support, coordination and alignment needed
6	CMS	Convention on Migratory Species of Wild Animals; not acceded to nor domesticated in National Policies	Ministry Wildlife; Ministry Livestock and Fisheries; Ministry Environment	Awareness creation support, coordination and Policies alignment needed
7	HAWEN	Horn of Africa Wildlife Enforcement Network; IGAD regional initiative South Sudan is a member of IGAD	Ministry of Wildlife Conservation and Tourism	Awareness creation support and alignment of Policy needed
8	MARPOL	Convention design to prevent pollution from ships/boats on the aquatic environment; not acceded to nor domesticated	Ministry of Transport (River transport); Ministry Fisheries; Ministry Environment	Support needed to create awareness, coordination and alignment of Policies
9	UNECEC	Convention on Protection and Use of Transboundary Water Courses and International Lakes; in the process of acceding and domestication	Ministry of Water Resources; Ministry of Fisheries; Ministry of Environment	Support needed to create awareness, coordination and alignment of Policies
10	UNCLOS	United Nations Convention on the Law of the Sea; not acceded to nor domesticated	Ministry Transport; Ministry Fisheries Ministry Environment	Awareness creation support, coordination and Policies alignment needed
11	FAO CCRF	FAO Code of Conduct for Responsible Fisheries Convention	Ministry of Fisheries & Livestock	Support needed to align fisheries Policy

12	IUU Fishing	Illegal, Unregulated and Unreported fishing is Convention on protection of small scales fisheries and fish stocks	Ministry of Fisheries & Livestock	Support needed to create awareness and align fisheries Policy
13	AU-IBAR PFRS	Is AU-IBAR Policy Framework and Reform Strategy for fisheries and aquaculture in Africa; on process of alignment and domestication	Ministry of Fisheries	AU-IBAR is supporting in alignment of Policy and awareness creation

#### 4.4 *Synopsis of existing National Policy or Regulatory Instruments*

The outlines below reflect on the current National Policy and Regulatory Framework status on conservation of aquatic biodiversity and environmental management for harmonization with respective Global Instruments on their domestication and implementation.

##### 4.4.1. *Fisheries and Aquaculture*

The Ministry of Livestock and Fisheries in South Sudan is the mandated National institution in-charge of fisheries, aquaculture and Blue Economy. It has developed the National fisheries and aquaculture Policy; the National aquaculture Strategy and the National Blue Economy Strategy (2023 - 2027). The National fisheries and aquaculture Policy covered eleven (10) Policy areas, including: Governance; institutional capacity and human resource development; research, development and resource monitoring; capture fisheries; (wild fisheries); aquaculture (fish farming); post-harvest and value addition; market infrastructure and market information system and investment; fisheries financing; the Blue Economy and ornamental fisheries.

Aquatic biodiversity and ecosystems conservation and environmental issues relating to fisheries, aquaculture and Blue Economy Sector are vested on the lack of fisheries Legal Instruments (Bills or Acts) governing the sustainable development of fisheries, ecosystems conservation, biodiversity and the related environmental issues.

##### 4.4.1.2 *Overall Policy objectives*

- To align Instruments and decentralize institutional arrangements and inclusive management approaches that fosters and promotes sustainable capture fisheries, aquaculture development and Blue Economy
- To create conducive environmental and social-economic conditions that will benefit the consumer and those that depend on these activities for their livelihood.

These objectives will be achieved through adhering to key guiding principles and through Policy outcomes which are outlined below. The Policy calls for collaborating with the National economic cluster institutions including gender and youth empowerment through the establishing inter-agency cooperation and collaboration with respect to the identified Policy Areas. There is also a provision for revisions of fisheries and aquaculture Policy; opportunities for developing sustainable fish processing mechanisms, to promote healthy foods and ways to finalize the fish and fish products standards.

#### 4.4.2 Wildlife Conservation and Tourism

The wildlife resources of South Sudan are contained in the designated 18 protected areas; which comprise of 6 National parks and 12 game reserves. These Protected Areas (PAs) are distributed in the seven (7) major agro-ecological zones of the Country which include:

- Tropical Lowland Forest
- Savanna Woodland
- Grassland Savanna
- Flood Plain
- Sudd Wetlands and other Wetlands
- Montane Forest, and the
- Semi-arid Region

The wildlife species biodiversity and richness is believed to be attributed to these varied ecological zones. Rather than the biomass diversity, a particular International importance for South Sudanese wildlife is the migrations across these ecological zones, of particular; interest is the eastern grassland savannahs and floodplains migrations along the Jonglei and Eastern Equatoria States. This migratory route stretches into the neighboring Gambela National park of Ethiopia.



Figure 6: The seven (7) agro-ecological zones of South Sudan

Wildlife experts recognized and rated this migration as the second largest migration in the World after the Wildebeest migration in the Serengeti-Masai Mara ecosystem between Kenya and Tanzania. Therefore, In South Sudan white-eared kob, tiang and Mongalla gazelle represent one of the greatest animal migrations and wildlife spectacular of the World. This is an invaluable natural resource for South Sudan and the rest of the World.

Further, South Sudan has the largest fresh water Wetland in the World known as the Sudd Wetlands which has been gazette as a “Ramsar Site” – ‘Wetland of International Importance as Waterfowl Habitat’ for

both aquatic and terrestrial biodiversity. Also, the World's population stronghold of the shoebill and black-crowned crane occur in the Sudd Wetlands. The Sudd Wetlands is stop-over point for migratory birds, migrating all the way from Europe and spending part of their annual migration life cycle in this wetland area.

There are three protected areas in the Sudd Wetlands, namely: Shambe National Park, Zeraf and Fanyikang Game Reserves. These areas are home to endangered, rare and endemic wildlife species such as Nile Lechwe, Elephants, Sitatunga, Hippos, Crocodiles, Buffalos and others. Besides the Sudd, there are many wetland bodies which form important biodiversity hotspots mostly in PAs. Wetlands in addition to water harbor are important to propagation of key species of fauna and flora. However, most wetlands of South Sudan are threatened by proposed potential development projects like the Jonglei Canal which is set to drain their waters, exposing its other forms of lives to threats and extinctions. Wetlands are also threatened in some way by oil explorations if the impact assessment and mitigations are not done in the right manner.

South Sudan is one of the Internationally important bird areas. Many bird orders are found in the Country, of which some are common, endemic and migrants. Some internationally endangered bird species such as shoe-bill stork are still doing well in South Sudan calling for instruments to protect them. These bird resources will be major tourist attraction sites just as the mammalian wildlife. Because of this the Ministry of Wildlife Conservation and Tourism has proposed plans for overall bird survey and census and management plans.

By developing the Tourism industry, especially nature-based Tourism, this shall be complementing the Government effort towards environmental conservation since ecotourism is one of our major priorities. In addition, the Nile also represents a major attraction. These potentials shall be developed and promoted to bring benefit ranging from income to the local communities, revenue to the Government and creation of jobs.

In a way forward, it's important to develop management plans for the conservation of wetlands in South Sudan and presence of Global Instruments for domestication and ratification by South Sudan that can safeguard sustainable development in the wetlands areas remains paramount.

#### **4.4.3 Water Resources, Dams & Energy**

South Sudan has abundant surface and ground water; the surface water is supplied from its major River basins of: Bahr el Jebel, Sudd Wetlands, Bahr el Ghazal, Pibor-Akobo-Sobat and the White Nile.

There is a developed National water resources development and management Policy including its development plan; the Policy is designed to develop and govern the territorial water resource of the Country which is divided into respective watersheds named above.

The Policy areas include:

- Water resources management covering transboundary water resources
- Irrigation and drainage
- Hydrology and survey



- Rural water supply and sanitation
- Sanitation and hygiene
- Urban water supply and sanitation

Existing Policy gap is that the aspects of aquatic biodiversity and environmental management are not captured in the Policy of the National Ministry of Water Resources.

However, challenges in the Policy areas include:

- limited data on full water resources potentials, its role in biodiversity and
- therefore, contribution to the National GDP
- mapping for flood prone areas which on the other hand are suitable sites
- for prosperity of biodiversity their mitigation and sustainability
- potential hydroelectric power development sites, if not well designed may
- pose threat to conservation of aquatic biodiversity
- exception of oil extraction into wetlands areas may threaten biodiversity
- pollution due to oil produced waters is a threat to biodiversity, and
- sustainability of the environment

#### **4.4.4 Environment and Forestry**

Environment in South Sudan is a noteworthy sector as it defines the health of the ecosystems (environmental health) and it cuts across in most of the sectors. The Ministry of Environment and Forestry has developed environment Policy and related development Strategies.

The Policy pillars are:

1. Maintaining the balance between environment and developmental needs of the Country;
2. People through sustainable use of the natural resource base;
3. Creating public awareness on the importance of protecting the environment;
4. Providing the basis for formulation of biodiversity and ecosystem protection; and
5. Management Laws and related Guidelines.

Based on these pillars the Ministry of Environment and Forestry developed its environment and forestry policy and drafted “Environmental Bill” which is not yet passed for implementation; the Policy focus areas include:

- a. Forestry conservation and use of forestry products
- b. Environmental Planning
- c. Climate Change, and
- d. Biodiversity

Gaps in the policy areas are noted in lack of wetlands Policy; biodiversity conservation and Regulatory measures (bill) remains a persisting gap in this regard. Further, integrated implementation of climate change Policies and Strategies for blue resources is also lagging including opportunities for carbon sequencing; carbon credit and related ecosystem services provision remains gap in a holistic accomplishment of full-

scale aquatic biodiversity conservation and environmental management Policy and their related Regulations for the Country.

## 5. Policy measures and objectives for harmonization of National Instruments with relevant Global Instruments

Policy measures on harmonization of National Instruments with the relevant Global Instruments are those of National Sovereignty and National commitments of working together with the Regional and International community. In this regard, the overall objectives or the National desire for harmonization of its Policies with the relevant Global Instrument on conservation of aquatic biodiversity and environmental management are:

1. To accomplish the National obligations in the International arena
2. Endeavour for achievement of the Global call for sustainable development
3. Access technical and financial support from the International biodiversity
4. Environmental management agencies in support of the National agenda

### 5.1 Issues identified on harmonization of national policies

Most National Policies are obsolete and lack relevant citations for alignment with Regional and International Instruments; therefore, the Policies need review and updates which would be an opportunity for alignment with current relevant Regional and International Instruments.

Further, South Sudan is not yet conversant to most of the International Conventions, those it had known (like in 4.2 above) are still in the process of enacting due limited capacity and awareness on the positives and the negative aspects and how to mitigate.

Moreover, procedures of accessing benefits that might accrue from domestication and ratification of International Regulations or Conventions on conservation of aquatic biodiversity and environmental management are not adequately known to South Sudanese

Whereas, there are sectors specific issues hampering domestication and harmonization of National Instruments with their relevant Global Instruments; some of these sector issues include:

- a. Lack of legal proclamation for inland water transportation (River navigation) in the South Sudan Ministry of Transport; and the aspects of River dredging and channel maintenance remains a challenge with the Ministry of Water Resources and Irrigation due Policy capacity limitation hampering alignment
- b. Wetland and Biodiversity Policy and Strategy remain an outstanding issue and an Instrument gap, but an opportunity for alignment with Global Instruments
- c. Although there is National fisheries and aquaculture Policy; it's not aligned with the Regional Instruments and there is also no Strategy for implementation of the Policy; yet the bills are not yet developed.
- d. The effects of climate change and environmental pollution is threatening the entire biodiversity and risking the health of the environment as the Policy has limitations in alignment with relevant Global Instruments.

Whilst, sectors specific opportunities exist for example:

- i. Opportunities for developing sustainable fish processing plant to supply healthy food to the local and International markets; and there is an opportunity for promoting community-based fisheries management in South Sudan
- ii. Opportunity for investment to potable water supply to support the Ministry of water resources; also, there are opportunities for investment in the sustainable clean energy sector
- iii. Opportunity for investment in wildlife conservation and tourism industry in South Sudan

## 6. Implementation and Coordination Framework

Biodiversity and environment are multisectoral and National assets, therefore their stakeholder's analysis is based on the National institutions mandated to develop these sector resources. Therefore, the stakeholder institutions which have roles and mandated functions to provide services for prosperity of aquatic biodiversity and sustainable healthily environment includes:

Ministry of Environment and Forestry

Ministry of Livestock and Fisheries

Ministry of Wildlife Conservation and Tourism

Ministry of Water Resources and Irrigation

Ministry of Dams and Energy

Ministry of Petroleum

Ministry of Transport (River Navigation)

Ministry of Gender, Child and Social welfare

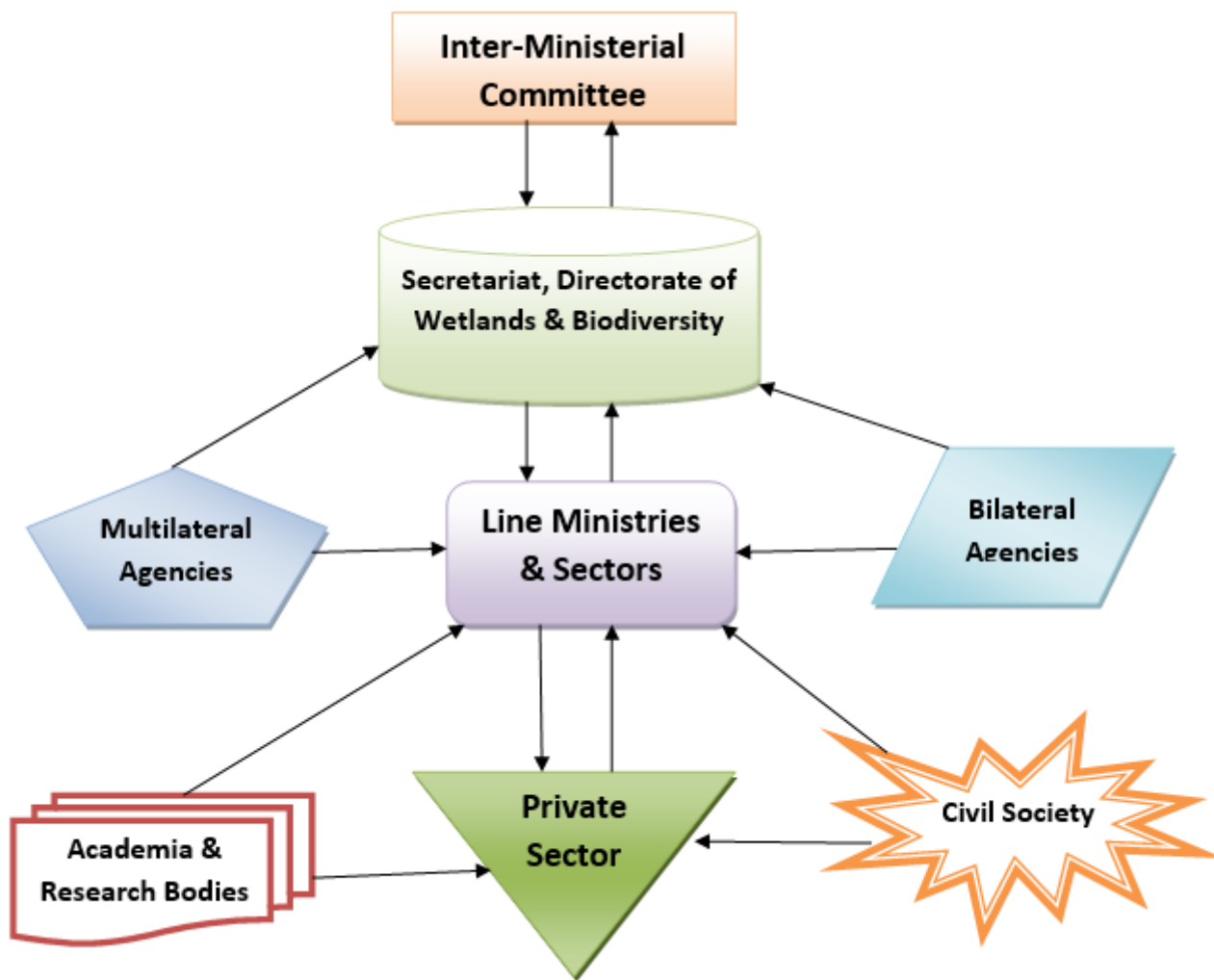
Ministry of Youth and Sports

Ministry of Trade and Industry

Ministry of Finance and Planning, and

The organized forces, the academia, private sector and the non-state actors

Therefore, the report recommends that there has to be an established: Inter-Ministerial Committee, Chaired by the Minister of Environment and Forestry. A Technical Working Committee Chaired by the Undersecretary Ministry of Environment; whom the secretariat in the Directorate of Wetlands and Biodiversity Ministry of Environment would coordination management efforts and implementation of aquatic biodiversity conservation and environmental management activities as they cut across sectors and line Ministries. The chart below is suggested to effect this coordination and implementation of activities.



## 7. Monitoring and evaluation mechanism

The report attempts to exemplify what mechanism would work in the monitoring and evaluation of the Conservation of Aquatic Biodiversity-and Environmental Management project activities; suggesting project indicators and verifying and reporting National Agencies as:

Activity	Indicators			
Domestication and aligning of given Global Instrument	1. Number of institutions aware of Instrument	2. Number of institutions aligning Policies	3. Number of private sectors involved	4. Number of development partners funding
CBD	8/13	4/13	3/13	5/13
<b>CITIES</b>	10/13	10/13	1/13	2/13

## 8. Way-forward

Following the study accomplished by AU-IBAR to uncover the relevant Global Instruments and the study recommendations for AU Member States to domesticate the most relevant Global Instruments for conservation of aquatic biodiversity and environmental management for alignment with their respective National Policies and Strategies. During the workshop organized jointly by AU-IBAR and the RSS in Juba; the presentations and discussions clearly revealed the following undertakings:

1. There are suitable Global Instrument presented on aquatic biodiversity and environmental management relevant for domestication, ratification and alignment with the National sector Policies and Strategies
2. The technical facilitator to compile a comprehensive report with the views of the participants incorporated to enrich the way forward
3. The developed report will surface sectors Policy gaps and call for review of National Policies and Regulatory Framework to enable domestication of the relevant Global Instruments on aquatic biodiversity and environment.

The final workshop report will be shared with all participants to the workshop

## 9. Conclusion and Recommendations

In the workshop conclusion, delegates expressed their appreciation to AU-IBAR for this creditable initiative and urged AU-IBAR to support South Sudan and ensure that the identified stages and tasks for domestication and alignment of relevant Global Instruments with the National Instruments are address to avert the challenges on conservation of aquatic biodiversity and environmental management as South Sudan embark on development of its natural resources.

The participants agreed and outlined the following recommendations:

- Participants stressed on the need to support South Sudan to improve its sector National Policies and Regulatory Framework
- The meeting noted the need to increase efforts towards supporting South Sudan to domesticate the most relevant Global Instruments in aquatic biodiversity conservation and environmental management
- A need for capacity development in aquatic biodiversity conservation and blue resources development including: training to identify roles of gender in biodiversity conservation and Blue Economy
- Capacity development in fish stock assessment; transboundary management of water resources and wastewater treatment facilities
- Expressed need to increase efforts towards mobilizing National, Regional and Global financial and other resources towards implementing aquatic biodiversity and Blue Economy
- There is the need for a technical working group on Blue Economy and biodiversity conservation with clear terms of reference to network and advocate for the sectors.
- The meeting resolved that these Ministries, Departments and Agencies represented at this workshop will constitute the platform to advocate for, domestication, ratification and implementation of the relevant Global, Continental and Regional Instruments on biodiversity conservation and Blue Economy.

## 10. Annexes

### 10.1. List of participants:

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