

**REGIONAL MEETING ON THE
IMPLEMENTATION OF THE RAMSAR
CONVENTION IN THE ARAB REGION
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**WETLANDS AND THE IMPLEMENTATION OF
RAMSAR CONVENTION IN SUDAN**

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Background:

- ❑ **Sudan stretches between latitudes 4 and 22 degrees North.**
- ❑ **Area around 2.5 million km².**
- ❑ **Flat plains with a few mountain areas.**
- ❑ **Bordered by nine countries and a coastline, 750 km long.**
- ❑ **Has around 2 million hectares of surface water.**
- ❑ **The Nile and tributaries(4000 km long).**
- ❑ **Rainfall ranges between almost 0 in the North to about 1400 mm in the South.**

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- **The climate is tropical with large daily and seasonal variations in temperature.**
 - **Population about 30 million people of whom more than 25% live in and around Khartoum.**
 - **More than 500 tribes speaking more than a 100 dialects and languages.**
 - **Average population growth is about 2.9%.**
 - **About 80% of the population depend on agriculture for their livelihood**

Ecological zones

- Deserts
- Semi-deserts
- Low rainfall woodland savannah
- High rainfall woodland savannah
- Swamps
- Highlands
- Red Sea Coast

Sudan's Map Shows the Ecological Zones



Wetlands in the Sudan

- **About 3% of the Nile Basin is covered by wetlands.**
- **They cover 20% of the total area of Sudan.**
- **There are at least 13 distinct types of wetlands include:**
 - * **largest swamps: "Sudd", Bahr el Ghazal and Machar marshes.**
 - * **Oasis (Nukhaila).**
 - * **Riparian forests: (Khartoum Sunt Forest).**
 - * **Back swamps (Known locally as " Mayas").**
 - * **Coral reefs, mangrove Creeks, bays and lagoons, sea grass beds, small off-shore islands (Red Sea coast).**
 - * **Lakes (permanent and seasonal lakes).**
 - * **Man-made Wetlands(Dams and Canals, haffirs, pools).**

Wetlands values in Sudan:

- **Wetlands ecosystems and their adjacent riparian habitats perform important ecological functions as source for water resources, flood storage, erosion control and sediment trapping.**
- **Important component of drainage system and hydrology.**
- **Wetlands provide tremendous economic benefit e.g. water supply, fisheries, agriculture, maintenance of water and nutrient retention in flood plains, timber production, energy sources, wildlife and biodiversity conservation, transport, recreation and tourism opportunities.**
- **Fishing and basin cultivation are important economic practices in the Nile reservoirs, Sudd swamps and mayas.**

Wetlands values in Sudan(cont..)

- **In urban centers brick making for buildings is practiced along the Nile and its tributaries where deposits of sediments are used and are usually replenished by the annual floods.**
- **Have special attributes in supporting cultural diversity.**
- **Crucial for most natural production systems: (El Sleem , Wadi el Mugaddam, Wadi el Milk and El Bashiri Oasis are Government driven agricultural schemes).**
- **National assets for development (Khor Abu Habil, Al Gash and Baraka are the lifeline arteries of their regions).**
- **Socio-economic and cultural patterns and way of life of nomadic or transhumant tribal groups all over the Sudan are dictated and governed by patterns and dynamics of productivity of wetlands**

- Rich sites of biodiversity.-Sudan Country Study on Biodiversity (2001) considered wetlands as a crucial element for biodiversity conservation.



Rich sites of biodiversity(Dinder Ramsar Site)



Examples of wetlands:

- **Sudd swamp(designated 2006)**
- **Important site/stopover area for water birds including significant numbers of migratory species (over 20,000 water birds throughout the year).**
- **It support many people, whose way of life blends harmoniously with the season expanding and shrinking of the area of the swamp and depth of water.**
- **The Sudd also supports vast numbers of livestock, rich fisheries, wildlife and unexplored wealth of biodiversity(Nile lechwe , Elephant, Buffalo, Tiang, Oribi, Nile crocodile ...etc).**
- **They have profound effects on water quality and hydrology of the river.**

Khartoum Sunb Riparian Forest:

- **In the junction of White Nile and Blue Nile or Mognan area in Khartoum City.**
- **The location of White Nile Birds Sanctuary (established in 1939).**
- ***Acacia nilotica* grows best under seasonal inundation provided by the regular annual flooding of the two Niles -function to flood control**
- **Sustains large populations of sedentary and migratory water fowl and other bird species.**
- **RIS was completed for designation as Ramsar site since 2006.**

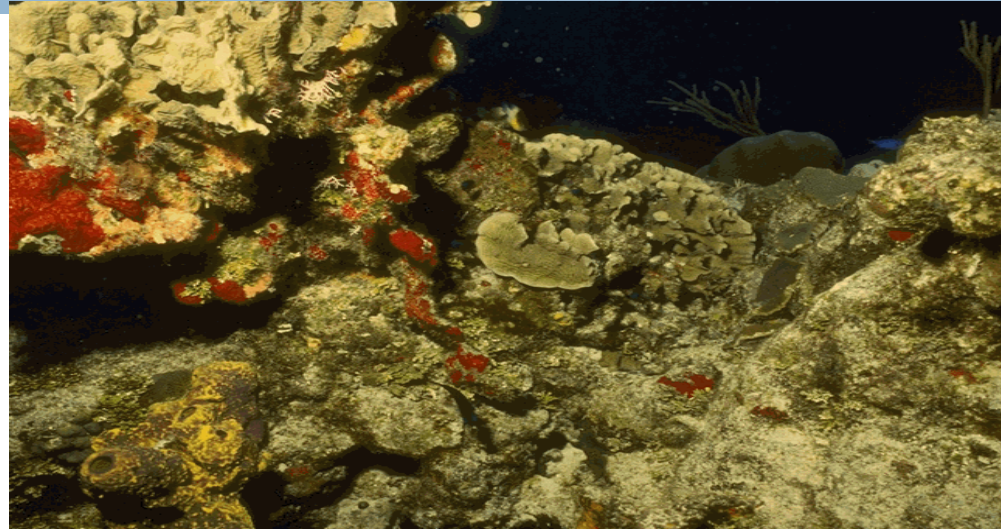
Back swamps ("Mayas")

- **Formed due to the meandering of the river and to the nature of water flow, erosion and deposition processes.**
- **Are the most prominent features and are critical to the survival of the wildlife of the national parks (e.g Dinder Ramsar site and Radom N. Parks).**
- **The *Acacia nilotica* mayas: a distinctive feature of the Blue Nile in the Sudan, are responsible for the continuity of both primary and secondary productivity of the river (Moghraby 1975).**



Red Sea Coast

- **Sudanese Red Sea Coast extends for about 750 km including bays and inlets with unique diversity of habitats.**
- **Important wetlands habitats: Coral reefs, mangroves, bays and lagoons, sea grass beds, small off-shore islands.**
- **Significant coastal sites for birds and other terrestrial wildlife.**
- **Important Touristic areas**



Problems and Threats to Wetlands:

- 1) Horizontal expansion of agricultural**
- 2) Urban development in wetland areas**
- 3) Loss of vegetation covers and increased sedimentation.**
- 4) Petroleum prospecting drilling and transport.**
- 5) Pollution from agricultural disposal of industrial effluent.**
- 6) Construction of dams and bridges are conducted with little concern for environmental impact and mitigation measures.**
- 7) Studies were conducted by engineers and other stakeholders were rarely consulted**

Problems and Threats(cont...):

- 8) Limited capacities for monitoring, assessment and management of wetlands.**
- 9) Wetlands are not even acknowledged or identified as a distinct entity.**
- 10) The distribution and extent of wetlands has not been documented.**
- 11) Wetlands have not been classified by type, size or pattern of traditional use.**
- 12) The potential of wetlands in sustainable development and poverty alleviation has not been recognized.**

Problems and Threats(cont...):

13) Lack of understanding and appreciation of the various values of wetlands could only result in :

- - inadequate planning,
- - poor land use policies,
- - conflicting land use practices,
- - ineffective management,
- - Lack of participation and coordination with important stakeholders.
- - Lack of effective legislation, and
- ineffective law enforcement.

14) Issues related to wetlands management are dealt with as secondary Issues

15) Different management approaches and practices (by different government institutions)

Several governmental and non-governmental institutions, involved in activities related to wetlands management :

- **Ministry of Environment and Physical Development .**
- **Ministry of Irrigation and Water Resources(MIWR).**
- **Ministry of Agriculture and Forestry.**
- **Ministry of Interior.**
- **Ministry of Tourism and Wildlife.**
- **Ministry of Science and Technology.**
- **Sea Ports Corporation.**
- **Ministry of Foreign Trade.**
- **Ministry of Foreign Affairs.**
- **Ministry of Animal Resources.**
- **Ministry of International Cooperation (MIC).**
- **Ministry of Transport.**
- **Ministry of Defense.**
- **Ministry of Higher Education.**
- **Ministry of Health.**
- **Ministry of Local Government.**
- **Ministry of Information, Culture**
- **Ministry of Industry.**
- **Civil Society Organizations (Farmers Unions, Pastoralists, consumers rights, NGOs, etc..)**
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Legislations:

The following legislations are the important ones related to wetlands :

- **The Nile Pumps Control Act of 1939.**
- **The Protection of Agricultural Tenants in Gash Delta and Toker Act of 1928, and the Agricultural Tenants Protection Act of 1950.**
- **The Wildlife Act 1935 amended 1986.**
- **The Fresh Water Fisheries Act of 1954.**
- **The Water-Hyacinth Act of 1960.**
- **The Environment Health Act 1975.**
- **The Rahad Corporation Act 1972**
- **The Western Region Savannah Development Corporation Act 1978.**
- **The Civil Transaction Act of 1984.**
- **The Gezira Irrigation Scheme Act of 1984.**
- **The Irrigation and Drainage Act of 1990.**
- **The High Council for Environment and Natural Resources Act of 1991.**
- **The Water Resources Act 1995.**
- **The Environmental Act of 2001.**
- **Disaster Management and Public Safety Act 2001**

Steps undertaken towards implementation of Ramsar convention:

- **Sudan submitted the necessary documents to join the convention by 9/Nov. / 2004 was on force as partner by the 7th of May 2005.**
- **HCENR had established a National Wetland Committee (NWC) as a first step towards implementation of the convention.**
- **The NWC is composed of 20 members representing almost all stakeholders.**
- **HCENR had organized several National Workshops celebrating the registration of the Dinder and Sudd and celebrating the Environment Day; 5th of June and the Wetland day addressing the issue of Wetland and the National Policy**

Steps undertaken towards implementation of Ramsar convention(cont.....):

- **With the assistance of Ramsar Convention Secretariat and WWF (Living Water Program) Sudan was able to prepare the RIS for 4 nominated sites (Dinder N. Park, Surt Forest Reserve, Sudd and the Red Sea coast sites(Dongonab Bay-Marsa Waiai and Suakin-Gulf of Agig).**
- **Dinder N. Park was designated as the first Ramsar site by the 7th of May/ 2005,**
- **Sudd wetland site by 5th of June/2006 and**
- **Dongonab Bay-Marsa Waiai and Suakin-Gulf of Agig (coastal sites) by 2 Feb 2009.**
- **Initial steps towards formulation of a Wetlands National Policy.**

Towards Sustainable Management :

- **Wetlands conservation issues are included in Sudan Comprehensive National Strategy 1992-2002 and National Biodiversity Strategy (HCENR).**
- **Initiatives for wetland management: The Nile Basin Initiative(NBI)**
- **The Nile Basin Initiative(NBI) is rendering valuable opportunities in capacity building, trans boundary and regional cooperation towards sustainable management of water resources.**
- **Micro-grants program of NBI ,sensitizing communities and involving a national steering committee in selecting projects.**
- **The Nile Basin Discourse(NBD) is a strategic and operational approach by civil society to influence the development of projects and processes under the NBI.**

Towards Sustainable Management(cont....):

- **The Nile Wet regional initiative is a coordination mechanism for wetland activities of the Nile Basin Countries.**
- **It is proposed by Sudan Ramsar Focal Point in coordination with the Nile Basin Initiative on behalf of the riparian states of the Nile: Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda**

Towards Sustainable Management(cont....):

- **Nile Wet :A shared vision to “achieve sustainable socio-economic development through the equitable utilization of, and benefit from the common Nile Basin water resources”.**
- **Aims to promote, and to contribute to the implementation, in the Nile Basin, of the three pillars of the Ramsar Convention, i.e.:**
 - **1) Wetlands of International Importance.**
 - **2)Wise Use of Wetlands.**
 - **3)International Cooperation.**

The Need for a National wetlands Policy :

- **Comprehensive Peace Agreement (CPA) and the Transitional Constitution of 2005 were adopted.**
- **The CPA is a new constitution putting much power on the states control and management of natural resources.**
- **Wetlands cut across the traditional sectors reflecting diverse and conflicting interests which could lead to many conflicting policies and mandates.**
- **National guide rules and directives are needed to assure sustainability and avoid conflicts on managing natural resources, including wetlands.**

The Need for a National wetlands Policy(cont...):

- **Sudan National Water Policy(a draft document) was prepared by the Ministry of Irrigation and Water Resources (MIWR) in 1999 (not yet approved by the Government).**
- **The national water policy still exists and it could address several of the wetland related issues and legislations.**
- **However, wetlands issues should be addressed separately involving all governmental ministries and institutes as well as all stockholders.**

The following principles should be included in the policy

- **Cooperation with other countries for development, optimum use and protection of international waters whenever possible.**
- **Watershed and Environmental sound management.**
- **Sustain wetlands environments which are the water resources base on which human development and well being are dependent.**
- **The impact of the development and use of water resources should not compromise the long term sustainability of wetlands.**

The following principles should be included in the policy(cont...):

- **Equitable sharing of benefits to all stakeholders –poverty reduction programs.**
- **Strategic planning for Participatory approaches.**
- **Conflicts transformation.**
- **Planning control and coordination between institutions.**
- **Synergies with other conventions and multilateral environmental agreements;(UNCBD, UNCCD, CITES..etc)**
- **Assessment of prevailing polices and legislations**
- **land tenure system**
- **Environmental impact assessment of new development projects.**
- **Capacity building measures should considered:-monitoring programs, Improving research and data management capacities, Assessing performance of wetlands and their management.**

Importance of National Wetland Policies:

- **Creating awareness on wetlands and their Values**
- **Government Recognise the uniqueness of wetlands and provide financial support for their conservation**
- **Identify and assign responsibilities for all stakeholders at every level**
- **Design a management plan with goals and objectives**
- **It tend to guide decision making**
- **It will consider the cost and benefit of social, economic and ecological values of conserving wetlands ecosystem**

Conclusions :

- 1) Wetland management and conservation touches on many other areas of activities and all organs of government.**
- 2) Many aspects of wetlands management, relate to a wide range of issues in agriculture, industry, health, energy, transportation, traditional uses, land tenure.....etc.**
- 3) A national wetlands policy and action plan are urgently needed and should be developed in participatory manner involving a wide range of stakeholders.**
- 4) The action plan should be based on experiences from different nations, sectors and on contributions of researchers.**
- 5) The establishment of a Regional Forum of experts and a regional network should be commended as a first step towards proper wetlands management policy in the region.**
- 6) This meeting is the start for more collaboration and achievements.**

THANK YOU FOR LISTENING

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