

# A review of Wetland Conservation and Management Policy in Ethiopian

Tadesse Amsalu<sup>1</sup>, Solomon Addisu<sup>2</sup>

<sup>1</sup>PhD in forestry (Natural resources policy), Institute of Land Administration, Bahir Dar University, Bahir Dar, P.O.Box 79, Ethiopia Email: tadesse\_2@yahoo.co.uk, Ethiopia

<sup>2</sup>MSC in Environmental Sciences, College of Agriculture & Environmental Sciences, Bahir Dar University, Bahir Dar, P.O.Box 79, Email: soladd2000@yahoo.com, Ethiopia

**Abstract:** In Ethiopia, wetlands cover nearly 2% of the total land area of the country. They are one of the most productive ecosystems and perform many functions that maintain ecological integrity. They provide lots of goods and services that encompass agricultural production, tourism, and biodiversity conservation, social, economic as well as cultural activities. More specifically, wetlands are crucial resources of income generation and livelihood for local communities. Despite the diverse benefits that wetlands provide, lack of effective management has led to their continued degradation that includes unsustainable activities such as converting wetlands into agricultural and grazing lands, using them as waste disposal sites, and overexploitation of resources. Misconception about wetlands and considering them as wastelands and breeding grounds of mosquitoes and also absence of clearly defined tenure right on wetlands are further challenges that exacerbate wetlands' degradation. In response to the aforementioned challenges and threats, there have been commendable efforts exerted by scholars in the last decades to publicize the value of wetlands to the national and local economy in a number of national and regional awareness-creation workshops. In many of these workshops, apart from emphasizing the significance of wetlands and expressing the looming threats imposed on them, the need for formulating a national policy or a wetland development strategy that could enhance sustenance of their ecological and socioeconomic functions for the present and future generations of the country was boldly stated. Ethiopia stands for environmentally safe world and has given due consideration to natural resource protection and management in which wetlands are a component. Although the country hasn't adopted clearly defined national policy on wetland conservation and management, the issue of wetlands has been indirectly mentioned in various policies and legal frameworks including the National Water Resources Management Policy, the Federal Environmental Policy, the Biodiversity Policy, Agricultural and Natural Resources Development Policy and the Land Administration and Use Policy, National Conservation Strategy of Ethiopia. Though these policy frameworks are potentially helpful to introduce better management of wetlands in the country, the reality on the ground shows that wetlands are being mismanaged and some of them are in a state of extinction. To assure a sustainable wetland ecosystem development and addresses the multiple interests of stakeholders, it seems rational either to strengthen and act in accordance with the existing policy frameworks or to initiate a National Wetland Conservation and Development Policy. Adopting international conventions, such as the Ramsar Convention, that facilitate wetland conservation and sustainable utilization is also very important. To influence policy makers appreciate the value of enacting a strong policy framework for wetland conservation and management professionals would be required to further strengthen their efforts to produce more tangible data on current status of wetlands and also clearly demonstrate how wetlands support the livelihood of the local people and the ecosystem in general. Considering the cross-sectoral nature of wetland management, it is of crucial importance to designate a responsible agency to guide and coordinate the development interventions in wetland resources.

**Index Terms:** Community-based wetland management, Ramsar Convention, Wetland conservation, Wetland policy, Wetland tenure

## I. INTRODUCTION

Wetlands are defined as: "areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six metres"[1] Wetlands are found in different parts of the world including in Ethiopia. Even though an exhaustive inventory of wetlands is not done yet, wetlands are estimated to cover about 2% of the country's land coverage [2]. Despite their small area coverage, wetlands in Ethiopia are among the most productive ecosystems, and have immense economic, social, and environmental benefits. The importance of

our wetlands goes beyond their status as habitat of many endangered plant and animal species but they are a vital element of national and global ecosystems and economies.

Wetlands provide with various benefits to local communities. They are vital sources of water and fodder, particularly during dry season and in times of drought, to both domestic and wild animals. Wetlands also serve as important sources of food, construction and fuel wood, raw materials for making household furniture, fodder, and medicine to rural communities. Poor rural households, particularly women, rely on wetlands for additional income to their families. Hence, wetlands contribute significantly to efforts aimed at poverty reduction and food self-sufficiency. Growing number of people in Ethiopia, in both rural and urban

areas, depend on wetland resources for their survival. Many peasant farmers in the western parts of the country make their living from wetlands. Communities who live around the wetlands in the Rift Valley lakes, and Lake Tana benefit a lot from fishing and irrigation farming [2]. Wetlands are exceptional habitats for endemic birds and are endowed with many natural attractions offering immense potential for tourism development in Ethiopia.

Wetlands have their own positive impacts on the environment. They serve to slow down storm flood, trap sediments, protect property damage in downstream, and the siltation of dams. Studies also reveal that wetlands have a role in ameliorating adverse climatic variations. As scientific understanding of wetlands has increased, more subtle goods and services have become apparent. Wetlands have been described both as “the kidneys of the landscape”, because of the functions they can perform in the hydrological and chemical cycles, and as “biological supermarkets” because of the extensive food webs and rich biodiversity they support [3].

Notwithstanding their diverse services and values, the misconceptions on wetlands have led people to consider them as waste lands that are infested by malaria and other vectors. Because of this and due to shortage of farm land and absence of clearly defined land tenure, there is a tendency to drain them for agricultural and settlement activities thereby weakening other multiple benefits that they provide. To make their situation worse urban wetlands are polluted by all kinds of waste dumped and/or discharged on them and are exposed to excessive pressures from open grazing. The degradation of adjacent watersheds, excessive utilization of water, and the diversion of feeder streams are seriously damaging wetlands.

Although wetlands provide wide ranging social, economic, and environmental benefits, because of mismanagement and inappropriate utilization, several of them have either disappeared or are on the verge of drying out globally. In Ethiopia the recent total drying up of Lake Alemaya and the precarious existence of Lake Abijata are clear evidences of the looming danger on wetland ecosystem. Unless the necessary management and conservation strategy is in place, the disappearance of more wetlands appears to be unavoidable. In countries having wetlands a continuous and un-interrupted supply of wetland benefits can be ensured if only a strategy to sustainably utilize them is in place.

The precarious national and global situation of wetlands has signaled the need for taking swift action to curb the severe situation and move on facilitating the formulation of a wetland development policy and strategy. Accordingly, the Ramsar Convention, a convention which focuses on the conservation and wise use of wetlands and associated resources by national action and international cooperation has been put in place as a means to achieving sustainable development throughout the world [1]. The convention came into force in 1975 and currently there are number Contracting Parties, which are obliged to undertake four main activities, including:-

- Designating wetlands for inclusion in the ‘List of Wetlands of International Importance’ and to maintain their ecological character.

- Developing national wetland policies, to include wetland conservation considerations within their national land-use planning, to develop integrated catchment management plans and, in particular, to adopt and apply the guidelines for implementation of the Wise Use Concept, which is the sustainable utilization of wetlands for the benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem.
- Promoting the conservation of wetlands in their territory through establishment of nature reserves and to promote training in wetland research, management and wardening.
- Consulting with other Contracting Parties about transfrontier wetlands, shared water systems, shared species and development aid for wetland projects.

In this way the Convention plays an important role in helping to prevent detrimental changes to wetland sites in states that are party to the Convention. Recognizing the value of wetlands in the livelihood of local communities as well as in sustaining a productive ecosystem and biodiversity, Ethiopia is in the process of developing a protocol consistent with the Ramsar Convention and also has drafted a National Wetland Policy awaiting approval of the law makers. A number of National and Regional Wetland Awareness creation and consultative workshops have been carried out in Ethiopia to attract the attention and win the will of policy makers on wetlands management. Mention could be made to the 2001, 2003, 2005, 2004 and 2008 wetland related workshops all carrying similar messages to policy makers and practitioners that are conservation and development of wetlands for the benefit of the nation. In addition organizations such as the Ethiopian Wildlife Conservation Organization, the Ethiopian Wildlife and Natural History Society, The National Environmental Protection Authority; various scholars from Universities and research institutions, the Ethiopian Wetland Research Programme (EWRP) and the Ethio-Wetlands and Natural Research Association (EWNRA) have been making tremendous efforts to promote the case of wetlands [3]. All these endeavors signal the need for capitalizing our efforts on what has been achieved so far and design strategies that will enhance wetland development in the country

## II. METHODS

In order to gather background and historical information, an extensive literature review were explored. Both published and unpublished papers, reports, wetland related government policies and discussion with stockholders was included in the review. Moreover, to a comprehensive understanding of this review, we sought informants from multiple different international conventions and other countries experiences were assessed. To create an insight about the existing situation of wetlands, focus group discussion with Community members representing cross section of the wetland beneficiary, spot check visit, and local government authorities were contacted. Finally, after having all the secondary data from different sources, analyses were made qualitatively for the rapid understanding of wetland policies of Ethiopia.

### III. RESULTS

#### **Ethiopian Policies, Legislation and Strategic Documents Dealing with Wetlands**

Many sectoral and cross-sectoral policies, legal and strategic documents implicitly mention issues pertaining wetlands though wetland conservation and management is not vividly articulated as a standalone policy [4]. Wetland-related policy statements are reflected in the overall policy objectives of different sectors including the Ethiopian Water Management Policy, Environmental Policy of Ethiopia, Agriculture and Natural Resources Development Strategies, the Conservation Strategy of Ethiopia, the policy on Biodiversity, Land administration, etc. Some of them have explicitly stated the issue of wetland management and some others mentioned in implicit forms. This issue is well argued by Mellese [5] in his article dealing with policies, laws and strategic documents in protecting wetlands in Ethiopia.

To give some examples, the Environmental Policy of Ethiopia [7] addressed water resources, land use and biodiversity issues and indicates the need to integrate the rehabilitation and protection of wetlands with the conservation, development and management of water and biodiversity resources. Specifically Article 3.4 of the policy element on water resources states the following:-

- To recognize that natural ecosystems, particularly wetlands and upstream forests, are fundamental in regulating water quality and quantity and to integrate their rehabilitation and protection into the conservation, development and management of water resources”.
- To promote the protection of the interface between water bodies and land (e.g. lake shores, river banks and wetlands);
- To subject all major water conservation, development and management projects to the environmental impact assessment process and to include the costs and benefits of protecting watershed forests, wetlands and other relevant key ecosystems in the economic analysis of such water projects. The policy in its water resource section emphasizes the need to integrate the rehabilitation and protection of wetlands with the conservation, development and management of water resources. Similarly stipulations on environmental impact assessment for development projects and environmental education and awareness are fundamental issues that may not exclude wetlands.

The National Conservation Strategy of Ethiopia which is the basic policy document addresses a variety of sectoral and cross-sectoral issues among which environmental protection is widely indicated as a cross cutting issue. Regional states have also formulated their own Regional Conservation Strategy in their own context and circumstances. In this regard it has been recognized the Gambella region has boldly stated the issue of wetland management in its regional conservation strategy. Likewise the ANRS conservation strategy has also referred to wetland conservation and management owing to the prevalence of bird species in and around Lake Tana [8].

As related to The Water Resources Management Policy [9], one of the five main objectives clearly states the need to conserve, protect and enhance water resources and the overall aquatic environment on a sustainable basis. In the definition of terms, wetland is clearly defined implying that it is part of the policy. In addition, Messele Fesseha [6] has clearly indicated that the River Basin Development Master Plans in Ethiopia have given due emphasis to wetlands and have integrated wetland management issues. For example the Awash Basin Master Plan indicates a preliminary investigation of three major swamps in the basin, including Borkena, Becho and Gedebera (Gewan) which are annually flooded and serve as major sources of grazing during the dry season. Likewise the Abay River Basin study has identified wetland coverage of the basin in the order of 579,876 ha or 2.9% of the basin area and prepared project profile for the Lake Tana Fogera plain considering that the wetland in these areas is an important habitat for local and migratory birds. The Policy on Water Supply and sanitation states that water bodies should be protected from pollution by wastewater and other waste indiscriminately discharged by industries and other institutions. Despite all these assertions in the national water resource development policy attention given to wetland management seems implicit [6].

The ANRS Rural Land Proclamation No. 133/2006, provisions under article 13 clearly indicated the need for considering effective land use plan which in deed does not exclude wetlands. All these policy elements, therefore, could serve as an entry point to consider immediate actions pertinent to the protection, conservation and rehabilitation of wetlands in the country.

In Ethiopia, natural resources conservation and development activities have been given due consideration and great strides forward have been made to mobilize the public to rehabilitate degraded lands. Although there is no a standalone policy for wetlands, it seems that pertinent legal frameworks are in place so that we cannot undermine the value of wetlands. In reality, however, apart from pieces and isolated efforts by few organizations and communities wetland resources management in the country seems overlooked and it is hardly possible to come across concrete management actions on the ground. In a country where huge efforts are being exerted to rehabilitate land resources, in which wetlands are not out of this domain, and where many of the policy frameworks, legislations and development strategies have some elements of wetland management, failure to address wetland issues poses a great challenge. Some scholars argue that this reality may give a ground to critically review the content of policy frameworks, legislations and strategies in place whether they have provisions to address strategies on wetland resources conservation and management.

It is evident that Ethiopia has suffered a lot from natural resources degradation and the severity of the problem has urged the government to make environmental protection a top agenda of the country and assure sustainable development. As stated above wetland resources seem lacking due attention and their ecosystem is degrading. In terms of land tenure arrangement, it seems that there is no clarity that actually has command on such valuable resources. The reality on the ground forces us to pose

critical questions such as - are our wetlands degrading because of policy gaps or due to our negligence and ignorance? Or lack of legal frameworks on wetland tenure? Although the issue of a standalone policy for wetlands can be challenged on certain grounds there is a line of argument that for wetlands in Ethiopia to get attention and serve their intended purposes they need to be supported by a standalone National Wetland Policy.

## Why are national wetland policies needed?

Many scholars argue that wetlands are seldom explicitly covered at a national level in other existing natural resource management policies such as for water, forest, land, agriculture or other sectors. Development of a unique or standalone wetland policy statement and/or strategy can be an important step in recognition of wetland problems and targeted action to deal with them. A unique wetland policy provides a clear opportunity to recognize wetlands as ecosystems requiring different approaches to their management and conservation, and not being masked under other sectoral management objectives [1].

In many cases, however, wetland policies or strategies are made a component of national sustainable development, water or other sectoral environmental policies. The wetland messages can therefore become diffused and remain dominated by the broader objectives of other Government policy objectives. The implication is that in many countries, institutions having a stake in natural resources management will not be motivated to assign adequate staff and even the available staff will be overloaded and pressurized to deal with the broader issues and tend to overlook wetland conservation and management [10]. This seems an all pervading challenge observed in many areas of Ethiopia where wetlands are located. In view of these challenges, initiating a standalone wetland policy has the potential to draw the attention of legislators and the public to consider better and strong management interventions on wetlands.

Policy in principle must be viewed as a statement of the considerations which will guide both rational decisions and actions. It is within this context of policy that the national wetland policy has to be developed and implemented. Articulation of clear goals and objectives for wetland ecosystems in general helps to identify clear responsibilities of the Government and an expectation that the Government will actually deliver on these commitments. Cognizant of this, many countries having substantial wetland resources such as Uganda and Kenya have already developed a national wetland policy and strategy.

A National Wetland Policy in general will function as a framework that enables clear conclusions to be drawn about what actions are required (but does not in itself set out detailed prescriptions for actions) and what end result is expected. It must be clear how things would be different if the policy did not exist – and thus demonstrate its own net added value.

Experiences of many countries show that national initiatives towards developing a wetland policy, strategy, legislation, or

technical guidelines require preparation of detailed background document on the status of wetlands. The background paper should clearly demonstrate the following elements [1] which indeed are of crucial importance in Ethiopia's efforts to do the same.

- a. The functions and values of wetlands in the nation;
- b. The types of wetlands and resources present in the nation's existing wetlands;
- c. Historical review of the uses and impacts of development on wetlands;
- d. Review of existing statistics on inventory and wetland loss;
- e. Examination of the relationships of wetlands to other sectoral resource management issues;
- f. Summary of existing legislative and government responsibilities for wetlands;
- g. Examination of opportunities for programme development, partnerships and support; and
- h. The value of wetlands to the environment and people, with quantified economic values.
- i. The review of patterns of use and impacts of development on wetlands;

## Defining stakeholders in national wetland policy development and implementation

While developing a national wetland policy, it is of crucial importance to define stakeholders who play significant role in the design, discussion and implementation of the Policy. Hence, stakeholders include: government departments, non-governmental organizations, agencies, institutions, groups and many others who have an interest in, or are affected by, the National Wetland Policy. Defining pertinent stakeholders having vested interest in wetlands, and involving and consulting them in the whole process of wetland management issues helps to achieve effective results in wetland development.

An effort to develop a national wetland policy requires an agency to lead the development and implementation of the national policy. Initially, developing issues, planning of meetings and workshops and then in due course, actual writing of a policy or strategy, requires coordination and resource support (e.g. staff time, office support, travel costs). A national government agency should coordinate and facilitate the development phase in cooperation with appropriate regional or local authorities. In this regard the Federal Environmental Protection Authority which is already promoting the issues of wetlands seems the appropriate organization to handle the case.

As clearly stated by the [1], policies should assist in the protection of wetlands in good condition, rehabilitate degraded wetlands where feasible, and support appreciation of wetlands by protecting wetland biodiversity, functions and services through:-

- protecting social and economic benefits of wetlands;
- providing flow regimes that mimic natural conditions, where possible;
- providing wetlands with water of appropriate volume and quality;

- limiting further fragmentation and reconnecting wetland systems;
- preventing or limiting catchment activities that impact upon wetlands;
- protecting the cultural heritage and spiritual significance of wetlands;
- rewarding wetland managers who improve the condition of wetlands; and
- promoting the importance of wetlands to the community.

Additionally, in order to implement the wise use concept in national legislation at a minimum level the following variables should be observed as Ntambirweki (1998) has expressed it in the context of Uganda's wetland policy.

- Controlling development interventions in wetland areas;
- Determining what activities are unsustainable on the basis of a country's social and economic circumstances and prohibiting such activities;
- Providing incentives for conservation of wetlands especially for activities which do not affect the natural properties and functions of wetlands;
- Controlling the introduction of alien species;
- Carrying out Environmental Impact Assessment and environmental audits in wetlands;
- Creating strict nature reserves for representative samples of wetlands;
- Maintaining a national inventory of wetlands;
- Increasing public awareness of wetland values and functions; and
- Providing modalities for restoration of degraded wetlands on the basis of the polluter pays principle and the user pays principle.

#### IV. CONCLUSION AND RECOMMENDATIONS

Wetland resources in Ethiopia could be considered as an integral component of the environment in the country and provide multifarious social, economic and ecological benefits. It is, however, a common incident that much of these resources are exposed to exploitation and signs of wetland degradation have become rampant across the country. To curb the situation and to rehabilitate wetlands and sustain their benefits, scholars have been exerting tremendous efforts to create awareness on the benefits and status of wetlands in Ethiopia since the beginning of the 1990s. The need for initiating wetland development policies and strategies has been a point of discussion and different views have been expressed by different scholars; some arguing that the issue of wetlands has been addressed in the general framework of the existing policies and development strategies and others have stressed the need for a standalone wetland development policy.

After reviewing previous policy debates on wetlands and considering the threats imposed on wetlands two points of argument have been forwarded. One, to revisit existing wetland policy elements in the different sectors and magnify the issue of wetland development and encourage the respective institutions to consider the issues of wetland development in their strategic and annual development plans. The other contention attaches prime

importance of designing a national wetland development policy and using this framework regional states need to develop their own policies that reflect objective realities on the ground. The later argument indeed demands compilation of facts on wetlands in the context of ecological, social and economic benefit of the country clearly depicting concrete data on area coverage, magnitude local community dependence on the resource, ecological significance from biodiversity and water resource management.

The multi-sectoral interests on wetlands make it imperative to involve a number of sectors to coordinate their efforts to generate reliable data on the value and other attributes of wetlands to influence policy makers take appropriate actions. In this regard, the Ministry of Agriculture, Ministry of Water and Energy, Environmental Protection Authority, Institute of Biodiversity Conservation, Ethiopian Institute of Agricultural Research and the Ethiopian Wildlife Conservation Authority, and the sectors in the Regional State having a stake including land administration institutions have to come together to discuss the issue and produce a document that clearly depicts the national wetland scenario and development interventions required. To enable these sectors produce the needed output one institution amongst them has to serve as a lead agency to coordinate the overall activities. Currently, the Federal Environmental Protection Authority seems to have been working in this line and making significant efforts to realize the signing of the Ramsar Convention and approval of the draft wetland policy.

It is axiomatic that the management and conservation of wetlands, as it is true in other sectors, shall be based on research, planning and monitoring. To this end, the national and regional agricultural research institutions in collaboration with development partners need to carry out research on wetland resources and develop technologies that enhance wetland management.

An Environmental Impact Assessment should be carried out before undertaking any development that affects wetlands irrespective of the presence or absence of wetland development policy or strategy.

To update existing information and also to collect a comprehensive data on wetland resources across the nation, there is a need for preparing a fund soliciting project by interested groups and forward the project to potential donors to secure the fund to carry out the task. In this regard universities can take the initiative to establish a consortium and enhance the overall activity. This consortium can also be made in charge of reviewing all the national and regional workshops conducted in the country over the years and synthesize the salient features of wetland resource management in the country. This has to be followed by an immediate national workshop to bring the issue to the attention of policy makers and also enlighten them on the importance of being signatory of the Ramsar Convention and also approving the draft national policy on wetlands.

Finally, successful conservation of wetlands is fundamentally determined by the institutions and property rights associated with resource management decisions. Thus, an understanding of

property rights regimes, the constraints which they impose on users of wetlands resources, and the distribution of benefits of use among users and non-users are essential if the economic values of wetland ecosystems and functions are to be realized. Efforts focusing on promoting sustainable development of wetlands should therefore give due consideration to the unique property right regimes due to their ecological characteristics, such as multiple resource characteristics, the indivisible nature of these resources and the seasonal and cyclical nature of different wetland resource components.

## REFERENCES

- [1] Ramsar Convention Secretariat (2007). National Wetland Policies: Developing and implementing National Wetland Policies
- [2] Afework Hailu (2005). Ethiopian Wetlands Distribution, Benefits and Threats, Ethio- Wetlands and Natural Resources Association. In: the Proceedings of the second Awareness creation Workshop on Wetlands in the Amhara Region. Pp.3-17. Addis Ababa.
- [3] Mitsch, W.J. and J.G. Gosselink,(1993). Wetlands. Van Nostrand Reinhold, New York. 2<sup>nd</sup> edition
- [4] Desalegne MEsfin (2003). Wetland policy development in Ethiopia. In Abebe, Y. D. and Geheb, K. (Eds). Wetlands of Ethiopia. Proceedings of a seminar on the resources and status of Ethiopia's Wetlands. Pp.81-85.
- [5] Mellese Damte (2008). Policies, Laws and Strategic Documents in Protecting Wetlands in Ethiopia and the Need to Ratify the Ramsar Convention. Abebe, Y. D. and Geheb, K. (Eds), Proceedings of the National Stakeholders' Workshop on Creating National Commitment for Wetland Policy and Strategy Development in Ethiopia. Addis Ababa;
- [6] Messele Fisseha. (2003). Water resources policy and river basin development as related to Wetlands Ministry of Water Resources. **In:** Abebe, Y. D. and Geheb, K. (Eds), (2003). Wetlands of Ethiopia. Proceedings of a seminar on the resources and status of Ethiopia's Wetlands. Pp.76-80.
- [7] Environmental Protection Authority (2004). Proceedings of the National Consultative workshop on the Ramsar Convention and Ethiopia. Federal EPA. Federal EPA, Addis Ababa.
- [8] Ministry of water resources development (1999). Water Resources Management policy. Addis Ababa.
- [9] Ministry of Water Resources, (1999). Ethiopian Water Resources Management Policy. Addis Ababa. Proclamation No. 133/2006. The Revised Amhara National Regional State Rural Land Administration and Use Proclamation, Bahir Dar.
- [10] Ntambirweki, J. (1998). The Evolution of policy and legislation on wetlands in Uganda. Case Study prepared for the Technical Consultation on Designing Methodologies to Review Laws and Institutions Relevant to Wetlands, Gland, Switzerland.