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**A VALUE FOR MONEY AUDIT REPORT ON THE MANAGEMENT
OF WETLANDS IN UGANDA BY THE WETLANDS MANAGEMENT DEPARTMENT (WMD)
UNDER THE MINISTRY OF WATER AND ENVIRONMENT (MWE)**

A REPORT BY THE AUDITOR GENERAL

DECEMBER, 2018

T H E R E P U B L I C O F U G A N D A



**A Value For Money Audit Report on the Management of Wetlands in
Uganda by the Wetlands Management Department (WMD) under the
Ministry of Water and Environment (MWE)**

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December, 2018

AUDITOR GENERAL'S MESSAGE

24th December 2018

The Rt. Hon. Speaker of Parliament
Parliament of Uganda
Kampala.

VALUE FOR MONEY AUDIT REPORT ON THE MANAGEMENT OF WETLANDS IN UGANDA BY THE WETLANDS MANAGEMENT DEPARTMENT, MINISTRY OF WATER AND ENVIRONMENT

In accordance with Article 163(3) of the Constitution, I hereby submit my report on the audit undertaken on the Management of Wetlands in Uganda by the Wetlands Management Department, Ministry of Water and Environment.

My office intends to carry out a follow-up at an appropriate time regarding actions taken in relation to the recommendations in this report.

I would like to thank my staff who undertook this audit and the staff of the Ministry of Water and Environment for the assistance offered to my staff during the period of the audit.



John F.S. Muwanga
AUDITOR GENERAL

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ABBREVIATIONS

DEA	Directorate of Environment Affairs
DEAP	District Environment Action Plan
DEC	District Environment Committee
DEO	District Environment Officer
EIA	Environmental Impact Assessment
EPPU	Environmental Protection Police Unit
GIS	Geographical Information System
JICA	Japanese International Cooperation Agency
LG	Local Government
MLHUD	Ministry of Lands, Housing and Urban Development
MPS	Ministerial Policy Statement
MWE	Ministry of Water and Environment
NDP II	National Development Plan II (2015/16 – 2019/20)
NEA	National Environment Act
NEMA	National Environment Management Authority
NWIS	National Wetland Information System
PB	Project Brief
SPR	Sector Performance Report
ToRs	Terms of Reference
WMD	Wetlands Management Department

EXECUTIVE SUMMARY

The Wetlands Management Department (WMD) is charged with management and protection of wetlands in collaboration with NEMA, District Local Governments and other key players. However, a decline in the countrywide wetland coverage has been reported over the years with rampant encroachment for sand mining, cultivation, settlement and industrial establishment, reports of issuance of land titles in wetlands, among others.

In light of the above, the Office of the Auditor General conducted a Value for Money audit to establish the extent of reduction in wetland coverage countrywide and evaluate the adequacy of measures put in place by the Wetlands Management Department (WMD) to ensure protection and restoration of wetlands.

KEY AUDIT FINDINGS

1. STATUS OF WETLANDS COUNTRYWIDE

Wetland coverage dropped from 15.5% in 1994 to 13% in 2015. 50% of permanent loss happened in L. Kyoga and L. Victoria basins alone. Currently, 31% of the remaining wetlands countrywide are degraded, while 69% are intact. Almost half of degradation (46%) is in Eastern Uganda. 55% is in L. Kyoga drainage basin.

2. PERMITS AND LAND TITLES IN WETLANDS

During the review period, NEMA issued 239 wetland user permits, but it was noted that both NEMA and WMD had limited staff to monitor compliance countrywide, while the districts were underfunded to undertake this task. In addition, it was noted that land titles were issued for 782 plots wholly or partially located in wetlands in Kampala, Wakiso and Mukono alone, meaning that this figure is much higher countrywide. WMD reported that it had shared shapefiles showing wetland boundaries with MLHUD in 2015, though no evidence of this was obtained. Importantly, cabinet resolved to cancel titles in wetlands in 2016. The estimated cost of cancellation for Kampala, Wakiso and Mukono only was 6.74 billion, but no funding had been released for this by the time of audit.

3. RESTORATION OF WETLANDS

WMD's efforts to restore degraded wetlands fell far below the ideal, with only 0.3% of the required area having been restored in the 4 years under review, leaving a restoration shortfall of 99.7% less than two years to 2020. Moreover, annual wetland degradation continues to outpace restoration rates. However, WMD's shift to prevention of encroachment rather than emphasis on post-encroachment eviction and restoration is a step in the right direction.

4. DEMARCATION AND GAZETTEMENT OF WETLANDS

WMD's delay to gazette wetlands and complete demarcation makes it difficult to identify wetland boundaries and encourages continued encroachment. There is also potential wastage of UGX 662,841,802 due to failure to utilize all pillars and beacons purchased for demarcation.

5. PROMOTION OF KNOWLEDGE ON MANAGEMENT OF WETLANDS

WMD has not prioritized implementation of the necessary measures to acquire, disseminate and promote knowledge on management of wetlands. For instance, WMD had not developed a wetlands inventory since the year 2000. Also, the NWIS is characterised by out-dated data, relevance for only 45 districts, limited accessibility and heavy software. In addition, no evidence was provided for training of staff and stakeholders using government releases over the 4 years under review despite expenditure amounting to UGX 207.23 million. As a result, there is insufficient knowledge to guide decision-making in management of wetlands both at national and local government levels.

6. COORDINATION BETWEEN WMD AND NEMA

There was poor coordination between WMD and NEMA, characterised by unclear delineation of roles, responsibilities and expected outputs between WMD and NEMA; failure by NEMA to delegate to WMD the power to enforce compliance; differing visions of management of wetlands; conflicting decisions; gaps in information-sharing; and absence of a dispute-resolution mechanism and hierarchy of authority to step in in case of conflicts or differing positions between WMD and NEMA. However, government was taking action to improve coordination between the two agencies and more clearly define their respective roles in the revised National Environment Bill and the draft Wetlands Resources Bill.

KEY RECOMMENDATIONS

To Government

- a) Government should consider making it mandatory to involve environment officers in the titling process right from local government level;
- b) Government should set up mechanisms to protect civil servants from pressure or undue influence from powerful actors in execution of their duties related to wetland management or issuance of titles;
- c) Allegations of corruption in issuance of land titles in wetlands should be investigated and culprits given deterrent punishments;
- d) MoFPED should prioritise the release of funds to facilitate implementation of the cabinet decision to cancel land titles in wetlands and ensure vacation of the illegal occupants.

To WMD/ MWE

- a) WMD should engage MLHUD to ensure the shapefiles indicating wetland boundaries are shared with all districts/ land offices and utilised;
- b) WMD should plan for and expedite the demarcation of critical wetland boundaries to ensure they are clearly visible, beginning with utilisation of the unused pillars and beacons in FY 2019/20 as committed;
- c) WMD should train members of the Uganda Land Commission, District Land Boards and Area Land Committees on the requirements of the land and wetland laws, and what constitutes a wetland/ wetland boundary;
- d) MWE should continuously engage MAAIF, MLHUD and other players to:
 - (i) Expand interventions which seek to prevent wetland (re-)encroachment by addressing the factors that lead to encroachment such as declining fertility of traditional farmlands, water scarcity, unplanned urban expansion, to other areas not covered by the GCF project;
 - (ii) Implement the plan to extend irrigation infrastructure especially in rice-growing regions to encourage the farmers to leave wetlands, after which they can re-generate on their own, saving government restoration costs;
- e) WMD, in consultation with NEMA and other relevant stakeholders, should develop guidelines or mechanisms to ensure wetland degraders pay for the costs of degradation.
- f) MWE should prioritise completion of the wetlands coding and gazettment activity.
- g) The Accounting Officer MWE should prioritize compilation of an updated Wetlands inventory;
- h) MWE Management should further upgrade and update the NWIS software and explore options to make it more easily accessible;
- i) The Accounting Officer (MWE) should ensure that released funds are spent on planned activities in order to meet performance targets.
- j) MWE should prioritise completion of the draft legislation on wetlands and develop a framework to govern coordination between WMD, NEMA and other key players in management of wetlands.

OVERALL AUDIT CONCLUSION

Wetland coverage dropped significantly between 1994 and 2015 with the Lake Kyoga drainage basing experiencing particularly high levels of degradation and permanent loss of wetlands.

Government efforts to reverse this decline during the 4 years under review had registered little success mainly due to emphasis by WMD on restoration of degraded wetlands which is expensive and does not adequately address the factors that push people to encroach on wetlands; unclear delineation of roles, responsibilities and mandates between WMD, NEMA and other key players in regulation and management of wetlands; failure to utilise all pillars and beacons purchased for demarcation; gaps in collection and dissemination of knowledge on wetlands to stakeholders to guide decision-making; failure to utilise training funds for the intended purpose; delay to fund implementation of the Cabinet resolution to cancel land titles in wetlands; and limited funding to district local governments to restore, protect and manage wetlands.

On a positive note, however, it was observed that starting late in 2017, WMD had started implementing a project to address factors that encourage encroachment in 20 districts, and review of legislation to clarify the mandates and roles of the different players was in advanced stages. It is hoped that these ongoing interventions, coupled with implementation of the proposed audit recommendations, will go a long way in stemming the worrying trend of wetland loss and improve the management of wetlands in Uganda.

CHAPTER ONE

Management of Wetlands in Uganda by the Wetlands Management Department (WMD)
under the Ministry of Water and Environment (MWE) | A Report by the Auditor General

01

INTRODUCTION

1.1 BACKGROUND

The Constitution of the Republic of Uganda refers to wetlands as a natural resource and therefore emphasises the need for their protection¹. The mandate for protection of wetlands is vested in the Ministry of Water and Environment (MWE) through the Wetlands Management Department (WMD), in collaboration with the National Environment Management Authority (NEMA).

A wetland is an area of the land that is permanently or seasonally saturated with water. According to estimates from 2008, wetlands cover about 11% of Uganda's surface area and are classified into seasonal and permanent wetlands as well as swamp forests². Uganda's wetlands are unique ecosystems that house plant species such as papyrus, and animal species such as fish and sitatunga³, among others, and mostly sand and clay soils.

1.2 MOTIVATION

Wetlands provide employment and contribute to human welfare as they support commercial and subsistence activities such as fishing, grass, papyrus stalks and reeds used to weave mats and baskets, sand mining, brick-making, among others. They also provide critical ecological services upon which human welfare depends, namely water supply, storage and purification, climate regulation and flood control.⁴

Largely due to their ecological significance, the National Development Plan II (NDP II) emphasises the preservation of wetlands as a means to attaining sustainable development.⁵

The Wetlands Management Department (WMD) has also implemented the National Wetland Project which is currently in its third phase with the objective of supporting activities aimed at conserving wetlands, including strengthening legislation.⁶

Whereas government has taken steps to conserve wetlands, there are indications of increased encroachment on wetlands for sand mining⁷, settlement or agriculture⁸; irregular issue of land titles in wetlands to people who then demand compensation from Government, causing financial loss⁹; abuse of wetland permit conditions; limited funding for implementation of wetland protection activities¹⁰; inadequate knowledge of the importance of wetlands¹¹; the politicization of wetland issues¹²; and conflicting interests and divergent opinions between WMD, NEMA and different political actors regarding the protection of wetlands.¹³

1 The Constitution of the Republic of Uganda, 2015 part XIII.

2 Uganda Wetland Atlas, Volume II (2016); Pages 1-3. The 2008 estimate was the latest figure at the time the atlas was written.

3 The sitatunga or marshbuck is a brown or greyish antelope, inhabiting swampy areas in central and East Africa.

4 Public investment plan 2015/16-2017/18; Page 994.

5 National Development Plan II.

6 MWE Ministerial Policy Statements (2015/16-2017/18); Public Investment Plan 2015/16-2017/18; Page 994

7 <http://chimpreports.com/wakiso-boss-threatened-with-impeachment-over-lake-victoria-sand-mining/>;

<http://observer.ug/news/headlines/56880-gen-saleh-wakiso-sand-row-deepens.html>

8 NAPE presentation to OAG, 2015.

9 <http://www.monitor.co.ug/News/National/Government-loses-wetlands-money-speculative-encroachers/688334-4489612-ynt902/index.html>

10 Glass et al. (2007): Implementing Uganda's Wetland Policy: A case of Kabale District; Table of Contents, and Pages 17-31.

11 Ibid.

12 Ibid.

13 <http://chimpreports.com/wakiso-boss-threatened-with-impeachment-over-lake-victoria-sand-mining/>;
<http://observer.ug/news/headlines/56880-gen-saleh-wakiso-sand-row-deepens.html>

The increased flash floods in recent years that have resulted in loss of lives and destruction of infrastructure, silting of water bodies, and the significant increase in the treatment cost of water¹⁴ have also been partly attributed to the compromised ability of wetlands to perform their ecological functions.¹⁵

In light of the dangers associated with extensive wetland destruction, the NDP II has set a target to increase wetland coverage from an estimated 10.9% in 2008¹⁶ to 12% by 2020.

It is on the basis of the above concerns and resolutions that a Value for Money Audit was undertaken to assess the interventions put in place by WMD to ensure proper management of wetlands.

1.3 DESCRIPTION OF THE AUDIT AREA

1.3.1 Mandate and Legal framework for Management of Wetlands

The Wetlands Management Department (WMD) is mandated to manage wetland resources and its goal is to sustain the biophysical and socio-economic values of the wetlands in Uganda for present and future generations¹⁷. This mandate is derived from the following legislation and policies:

General Principle XIII of Uganda's Constitution requires that wetlands be protected as one of the "important natural resources" on behalf of the people of Uganda.¹⁸

The policy guidance for management of wetlands is laid out in the National Environmental Policy 1994 which calls for sustainable use of natural resources, and the National Wetland Policy 1995 which outlines principles for wise use of wetlands and prohibits drainage of wetlands for development activities unless more important environmental management requirements supersede¹⁹. It also provides for the restoration of degraded wetlands, and compels government to cause the offender to foot part or all of the cost (ibid.).

To operationalize the provisions in the Constitution and the above policies, Section 36(1) of the National Environment Act Cap 153 (NEA) restricts the use of wetlands and prohibits activities that may degrade them. The National Environment (Wetlands; River Banks and Lake Shores Management) Regulations, 2000, give more detailed prescriptions to ensure wise use of wetlands. The Local Government Act (1997) and the NEA also decentralise the management of wetlands to District Environment Committees, with oversight being provided by NEMA and WMD. Finally, the Land Act Cap 227 prohibits leasing of wetlands by either the Central or Local government.

Internationally, Uganda is a signatory to the Ramsar Convention (1971) which is the principal international framework for conservation and management of wetlands. The convention was ratified in 1988, and therefore its provisions are binding on Uganda.

14 20 years of Wetland Conservation-Have Uganda Wetlands become Waste lands again. Public Talk at Uganda Museum Kampala by Dr. Aryamanya-Mugisha, Henry (Ph.D)

15 UNDP, 2018: Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda Project. Source: <http://www.ug.undp.org/content/uganda/en/home/operations/projects/SustainableInclusiveEconomicDevelopmentProgramme/BuildingResilientCommunitiesWetlandEcosystemsandAssociatedCatchmentsinUgandaProject.html>

16 <http://www.mwe.go.ug/dept/wetlands-management-department>

17 MWE (2018): Wetlands Management Department- <http://www.mwe.go.ug/dept/wetlands-management-department>

18 The Constitution of the Republic of Uganda (as amended): National Objectives and Directive Principles of State Policy; Principle XIII.

19 GoU, 2014: Wetland Management Plan for Gulu - Oyam Tochi; Page 13.

1.3.2 Objectives of the WMD in relation to management of wetlands

The strategic objectives of MWE in relation to management of wetlands are²⁰:

- a) To increase the sustainable use of the environment and natural resources through restoration and to maintain hitherto degraded ecosystems;
- b) To promote the wise use of wetlands through implementation of approved management plans developed in a participatory manner.

WMD aims to contribute to the above strategic objectives by initiating policies to promote sustainable management of wetlands, as well as enforcement of compliance with best wetland use practice²¹.

1.3.3 Key Activities of the Wetlands Management Department (WMD)

WMD is in charge of managing wetlands, and does this through the following key activities:

- a) Promotion of knowledge of environment and natural resources;
- b) Restoration of degraded and protection of ecosystems;
- c) Development of an adequate policy, legal and institutional framework for wetlands management;
- d) Monitoring and inspection of activities in wetlands;
- e) Coordination, mobilisation and supervision of Local Governments and other stakeholders in wetland management; and
- e) Capacity building and technical back-stopping.

1.3.4 Organization Structure

The most senior technical officer in Ministry of Water and Environment (MWE) is the Permanent Secretary, who doubles as the accounting officer. Below him is the Directorate of Environmental Affairs, headed by a Director. It is under this directorate that the Wetlands Management Department (WMD) falls. WMD is headed by a Commissioner, assisted by two Assistant Commissioners.

The Assistant Commissioner in charge of the Policy and Enforcement Division supervises 1 Principal Wetlands Officer, 1 Senior Wetlands Officer, 4 Regional Wetlands Coordinators in charge of East, Central, West and North, and 4 Wetlands Officers.

The Assistant Commissioner for Assessment, Information and Management supervises one Principal Wetlands Officer, 4 Senior Wetlands Officers, 3 Wetlands Officers and 1 Documentation Officer.

The detailed organogram showing WMD staff involved in wetlands management is attached as Appendix I.

20 MWE Ministerial Policy Statement, 2017/18; Pg. viii

21 MWE Ministerial Policy Statement, 2017/18; Pg. 121

1.3.5 Funding of WMD for Wetlands Management

Table 1 below shows the approved and revised budgets, releases and payments to the WMD for wetland management. Funding to the department is released under Programme 16 (Wetland Management Services) and Project 0146 (National Wetland Project Phase III). From 2014/15 to 2016/17, UGX 8,476,170,818 billion was approved for the department, UGX 8,190,111,261 billion was released and UGX 8,129,623,958 billion was spent, corresponding to an average budget performance of 99.26%. Figures for 2017/18 were not available to the audit team.

Table 1: Funding for wetlands management by WMD

FY	Approved Budget (UGX)	Revised Budget (UGX)	Total Releases (UGX)	Total Payments (UGX)	Budget Performance (%)
2014/15	2,592,170,818	2,587,170,818	2,448,160,818	2,426,739,643	99.13%
2015/16	2,992,000,000	2,992,000,000	2,872,788,543	2,863,399,030	99.67%
2016/17	2,892,000,000	2,892,000,000	2,869,161,900	2,839,485,285	98.97%
Total	8,476,170,818	8,476,170,818	8,190,111,261	8,129,623,958	Av: 99.26%

Source: OAG Analysis of MWE data and figures from IFMS for FYs 2014/15 - 2016/17

1.4 AUDIT OBJECTIVE

The objective of the audit was to evaluate the measures put in place by the Wetlands Management Department (WMD) to ensure protection and restoration of wetlands.

1.5 AUDIT QUESTIONS

- a) What is the extent of reduction in wetland coverage countrywide?
- b) Are the measures put in place by WMD to address the above decline and ensure proper management of wetlands adequate? Specifically:-
 - i. To what extent has WMD in collaboration with NEMA and MLHUD ensured that no titles are issued in wetlands and that wetland permit holders adhere to the conditions of approval?
 - ii. How adequate are WMD's efforts to restore national wetland coverage to 12% as envisioned in the National Development Plan II?
 - iii. To what extent has WMD achieved protection of wetlands through demarcation and gazettment?
 - iv. Has WMD put in place adequate measures for promotion of knowledge on management of wetlands?
 - v. To what extent does WMD coordinate with NEMA in management of wetlands?

1.6 AUDIT SCOPE

The audit assessed protection and restoration of wetlands by the Wetlands Management Department (WMD) under the Directorate of Environmental Affairs in the Ministry of Water and the Environment. It covered a period of 4 financial years (2014/15, 2015/16, 2016/17 and 2017/18) in order to establish the trend in WMD's performance.

CHAPTER TWO

Management of Wetlands in Uganda by the Wetlands Management Department (WMD)
under the Ministry of Water and Environment (MWE) | A Report by the Auditor General

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AUDIT METHODOLOGY

The audit was carried out in accordance with the International Organisation of Supreme Audit Institutions (INTOSAI) standards and guidelines. The standards require that the audit is planned in a manner which ensures that an audit of high quality is carried out in an economic, efficient and effective way and in a timely manner.

2.1 SAMPLING

Since WMD implements its activities countrywide, 15 wetlands were selected from across the country. First, stratified random sampling was used to select at least one wetland from each of Uganda's 7 wetland drainage basins. Thereafter, 8 wetlands were selected purposively based on whether they were designated as Ramsar sites (wetlands of international importance); encroachment was reported; or if WMD had reportedly undertaken restoration or demarcation on them. Details are contained in Table 2 below:

Table 2: Uganda's drainage basins and Wetland systems sampled for audit

S/N	Drainage basin	Wetland system selected for audit	District(s)	Reason for selection
1	Lake Kyoga	Namatala-Doho	Dokolo	Reported encroachment
		Mpologoma	Butaleja	Random selection
		Lumbuye	Kaliro	Reported demarcation
		Nyangahia	Masindi	Random selection
2	Lake Victoria	Lake Wamala	Mityana & Mubende	Reported demarcation
		Lwajjale	Mukono	Reported restoration
		Butabika-Kinawataka	Kampala	Reported restoration
		Lutembe bay	Wakiso	Ramsar site
		Lake Mburo-Nakivale and River Rwizi	Mbarara	Ramsar site
3	Lake Albert	Lake George	Kasese	Random selection
4	Victoria Nile	River Kafu	Kibaale	Random selection
5	Achwa River	Achwa	Moroto	Random selection
6	Albert Nile	Enyau	Gulu	Random selection
7	Lake Edward	Nomuremu-Reshebeya-Kashambya	Kisoro	Random selection

Source: MWE Sector Performance reports 2015-2018 and the Ramsar document.

Data was collected from key stakeholders in management of wetlands namely; Ministry of Water and Environment (MWE); Ministry of Lands, Housing and Urban Development (MLHUD); National Environmental Management Authority (NEMA); and District Environment/Wetland/Natural Resources Officers.

2.2 DATA COLLECTION METHODS

The study relied upon document review, interviews and inspection to obtain relevant information to answer the audit questions as detailed below:

a) Document review

Ministerial Policy Statements (FY 2015/16-2018/19)²² of MWE, Sector Performance Reports (2015-2018), Integrated Financial Management Information System (IFMIS) Payment Files, Restoration and Demarcation Reports, Procurement files for restoration and demarcation, Cabinet minutes, reports from Remote Sensing and GIS Analysis, among others were reviewed in order to establish the budget performance and outputs of MWE in relation to Wetlands Management compared to their plans. Appendix II contains details of documents reviewed and information extracted.

b) Interviews

Interviews were conducted with staff from MWE, NEMA, MLHUD, and selected districts to corroborate and complement information from document review. The detailed list of people interviewed is herein attached as Appendix III.

c) Field Visits

Field visits were undertaken to establish the physical condition of selected wetlands, and to verify information contained in Restoration and Demarcation end-of-activity reports.

22 MPSs for the respective next years were used because they showed both the planned and actual outputs of the previous year.

CHAPTER THREE

03

Management of Wetlands in Uganda by the Wetlands Management Department (WMD)
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CHAPTER THREE

SYSTEMS AND PROCESS DESCRIPTION

3.1 ROLES AND RESPONSIBILITIES OF KEY PLAYERS

Entity/Player	Key Roles and Responsibilities
Wetlands Management Department	- The department's responsibilities are outlined under 3.3 (Activities). Specifically, WMD takes the lead in: - Reviewing and advising NEMA on the adequacy of Terms of Reference (ToRs), Environment Impact Assessments (EIAs) and Environment Audits (EAs) for projects in or around wetlands; - Maintaining an up-to-date inventory for wetlands and a National Wetland Information System; - Develop a National Wetland Master Plan; - Developing wetland legislation; - Sensitisation of the public on the importance of wetlands; - Restoration and protection of wetlands. - Supports the Environment Protection Force (EPF) to arrest and prosecute wetland degraders.
National Environment Management Authority	- Review and Approve all EIAs countrywide, including projects in wetlands; - Issue (and revoke) Wetland resource use permits to (of) applicants who (do not) satisfy conditions laid out in the Wetlands Regulations or specified by NEMA; - Conduct periodic inspection and monitoring of wetlands and enforce compliance to the wetland legislation;
Ministry of Lands, Housing and Urban Development	- Issue all land titles countrywide and ensure none are issued in wetlands; - Cancel titles erroneously issued; - Develop countrywide base maps indicating land available for titling, and that which is not, such as wetlands.
District Land Boards and Area Land Committees	- Conduct due diligence on applications for titles within the Local Government to ensure titles are not issued in known wetlands;
District Wetland/ Environment Officers	- Develop district Wetland Management Plans following WMD guidelines; - Assist District and Local Environment Committees to conserve wetlands within their locality and enforce legal compliance.
District and Local Environment Committees	- Inform the District Environment Officer (DEO) in writing of any activity that degrades or threatens to degrade a wetland; - Conserve and manage wetlands within their area of jurisdiction;
Lower Local Government Councils	- Ensure activities in the catchment area of wetlands do not affect the water level of the wetland; - Regulate activities in wetlands; - With District Council approval, advise NEMA to declare an area a "protected wetland"; - Authorise research activities in a protected wetland; - Formulate by-laws, guidelines and directives for management of wetlands; - With approval of the DEO, order an EIA for projects that involve the use of a wetland within ten metres of the edge of the wetland;

3.2 PROCESS DESCRIPTION

a) Issuance and revoking of Wetland Resource Use Permits

An application for a wetlands resource use permit is submitted by the applicant to the Executive Director, NEMA for regulated activities permitted under the First Schedule of the Wetlands Regulations, 2000. The Wetlands and Aquatic Specialists in NEMA review the application and based on adequacy of information provided and may recommend that an EIA be undertaken if the activity is likely to have significant adverse impacts on the wetland. Once all requirements are satisfied by the applicant, the Executive Director, NEMA, issues the wetland resource use permit with conditions to be complied with.

Regular inspections are then undertaken by NEMA and WMD officials to monitor compliance, and the permit may be revoked by the Executive Director NEMA in consultation with WMD if inspections find that conditions of approval are not being complied with.

b) Issuance of Land Titles

An application for issue of a land title is submitted by the applicant to the Commissioner, Land Registration, Ministry of Lands, Housing and Urban Development (MLHUD) together with a surveyor's report plotting the boundaries and coordinates of the land and the sale agreement signed by the transacting parties. The Ministry overlays the coordinates with existing land maps to ensure that the land is not located in a wetland. Ideally, an officer from MLHUD should conduct ground trothing to verify the plotted coordinates. Upon satisfactory assessment, a title is issued by the Commissioner, Land Registration.

c) Development of wetland legislation

The need for specific wetland legislation or revision of existing ones is raised by WMD or other stakeholders in Government, the private sector or the general public; The Minister of Water and Environment, through the Commissioner WMD initiates a consultative process involving relevant stakeholders to come up with Terms of Reference (ToRs) for drafting of the legislation. The procurement office, in consultation with the Solicitor General, sources for a consultant who then drafts the legislation as per the ToRs and submits it to the Commissioner WMD

who then reviews it together with other relevant stakeholders; it is then forwarded by the Minister of Water and Environment to the First Parliamentary Counsel (Ministry of Justice) for further review. After this stage, some draft legislation e.g. regulations, may be signed by the Minister and gazetted. Others may need to be forwarded to Parliament for further discussion before gazettelement.

d) Promotion of Knowledge of Environment and Natural Resources

Compilation and updating of wetland information
Compilation of a Wetlands Inventory is undertaken every 5 years by WMD in consultation with NEMA and District Environment Committees, and the boundaries indicated on suitable boundary maps. For each wetland, the inventory should indicate: the location of the wetland; type of fauna and flora; the soil and hydrological characteristics; the discharge and composition of water; the volume, flow and quality of water where possible; the existing uses; the density of population in the wetland catchment drawing attention especially those most dependant on the wetland; conservation status; the area of the wetland, and any other factor relevant to the wetland. During this process, District Environment Committees advise WMD on whether a wetland should be included in the list of wetlands of local or national or international importance.

WMD is also required to periodically inspect the wetlands and if any changes need to be made to the inventory, make them in consultation with NEMA. Finally, NEMA, in consultation with WMD, should review the conservation status of wetlands every two years, determine those degraded, and take appropriate action to ensure their protection.

Organisation and dissemination of wetland information

All gathered wetland information should be entered into the National Wetland Information System for further analysis by WMD and easy access by authorised stakeholders to inform decision-making. WMD prints wetland maps, fact sheets as well as awareness and restoration materials for particular wetlands and disseminates them to targeted users, such as Local Governments. It also sensitises stakeholders on the importance of wetlands, and the process of cancelling a land title in a wetland.

e) Restoration of degraded ecosystems

The first step involves an assessment of all wetlands and prioritization of those to be restored most urgently. This is followed by an assessment to determine the area of the wetland to be restored, people to be affected, identification of activities that have caused degradation, and estimated cost of restoration.

Next, sensitization of local leaders and degraders on value of wetlands, legal regime for wetlands management, and the activities permitted and forbidden in the wetlands is done.

Degraders/ Encroachers are then issued an Improvement notice by WMD officials detailing their degrading activities, actions they should take to restore the wetland and a directive to leave voluntarily within a specified time frame.

Encroachers who refuse to comply are then issued a Restoration order by the Executive Director, NEMA, with orders to vacate and restore the wetland.

Where the degrader refuses to restore or leave, MWE conducts the restoration, and the offender is liable to community service, a fine not exceeding UGX 3 million and/or imprisonment of not less than 3 months.

f) Demarcation of wetlands

Wetland demarcation involves the following steps:

- Rapid Assessment of the wetlands earmarked for demarcation conducted by WMD officials in consultation with district staff to obtain baseline information e.g. key features, existence of encroachers and potential of resistance, type of developments in or around the wetland, socio-economic issues. This information serves as a basis for selection of the section to demarcate.
- Procurement by WMD (through MWE's procurement department) of pillars and beacons for use in wetland boundary demarcation;
- The Commissioner, WMD, obtains the instrument to survey, mark and demarcate the wetland boundary from the Commissioner Mapping and Surveys, MLHUD;
- Sensitisation and engagement of local leaders and the community adjacent to the wetland on legal

obligations pertaining to wetlands and the need for demarcation;

- Acquisition of cover maps of the wetland(s) to be demarcated;
- Identification of wetland boundaries using the cover maps, verification by surveyors from MLHUD, technical officers from WMD and Districts. Global Positioning System (GPS) coordinates are documented and pillars and beacons planted by WMD to mark the wetland boundary. Pillars, which are visible above the ground, are planted in intervals of 50 m, 100 m or 200 m- with more frequent intervals where there are higher risks of encroachment- while beacons are buried (between pillars) below the ground.

g) Coordination, Monitoring, Inspection, Mobilisation and Supervision

These are activities aimed at protecting wetlands from encroachment. They involve compliance monitoring, inspection and regulation of proposed and existing developments within or near wetlands by WMD, after which monitoring reports are produced.

In addition, WMD, as the lead agency for wetlands management, reviews and gives feedback to NEMA on Terms of Reference, EIAs, Project briefs and Environmental Audits for proposed or existing projects within or near wetlands.

WMD and NEMA also conduct periodical inspection, monitoring, supervision and coordination visits to districts to assess their compliance with approved guidelines for wetlands management.

h) Capacity building and Technical back stopping

WMD develops a training programme, plans for and undertakes annual training of its own staff, district staff, wetland officers and Environmental Protection Police Unit (EPPU) staff in environment monitoring, auditing and assessment, as well as in wetland restoration techniques. A training report is then produced.

CHAPTER FOUR

Management of Wetlands in Uganda by the Wetlands Management Department (WMD)
under the Ministry of Water and Environment (MWE) | A Report by the Auditor General

04

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

In this chapter, Section A presents the status of wetlands countrywide, while Section B assesses the efforts of the Wetlands Management Department to improve the observed state of wetlands using appropriated resources.

A. STATUS OF WETLANDS COUNTRYWIDE

The audit team noted a trend of wetland loss over the years. According to the latest data collected in 2015 by WMD in collaboration with the National Forestry Authority (NFA), wetland coverage countrywide fell from 37,346.3 sq. km in 1994 (15.5% of the total national land cover) to 31,411.4 sq. km in 2015 (13%), representing a permanent loss of 5,934.9 sq. km of wetlands - equivalent to 2.5% of the total national land cover²³. The change per drainage basin is detailed in Table 3.

Table 3: Change in wetland coverage by drainage basin (1994-2015)

Drainage basin	1994 Area (sq. km)	2015 Area (sq. km)	Loss (sq. km)	Loss (%)
Lake Kyoga	15,008.0	13,182.0	1,826.0	-12%
Lake Victoria	7,167.6	6,022.7	1,144.9	-16%
Lake Albert	2,838.6	1,935.6	903.0	-32%
Victoria Nile	5,728.3	4,873.5	854.8	-15%
Achwa	3,028.0	2,347.8	680.2	-22%
Albert Nile	1,736.3	1,421.0	315.3	-18%
Lake Edward	1,671.1	1,447.8	223.3	-13%
Kidepo	168.1	180.9	(12.8)	+8%
TOTAL	37,346.3	31,411.4	5934.9	-16%

Source: OAG Analysis of WMD data.

From the table above, it can be seen that there was a drop in wetland coverage between 1994 and 2015, in all wetland drainage basins except Kidepo which saw an 8% increase in coverage. In terms of absolute area (sq. km) lost, 2,970.9 sq. km were lost in Lake Kyoga and Lake Victoria drainage basins alone, comprising 50% of the total net loss.

The drop in wetland coverage is due to intensive rice cultivation in Lake Kyoga basin, and rapid, unplanned urban expansion in Lake Victoria Basin. The Audit team also noted that out of the remaining 31,411.4 sq. km of wetlands countrywide, 21,526.3 sq. km ($\approx 69\%$) were intact, while 9,885.1 sq. km ($\approx 31\%$) have been degraded. In Eastern Uganda, almost a half (46%) of the wetland area was degraded while Northern Uganda registered the lowest degraded area (21%). Degradation levels in the Central and Western regions stood at 29% and 28% respectively as shown in Appendix IV.

The degradation levels by drainage basin was highest in the Lake Kyoga and Edward basins (42% and 34% respectively) and lowest in the Kidepo and Achwa basins (1% in each), as detailed in Table 4.

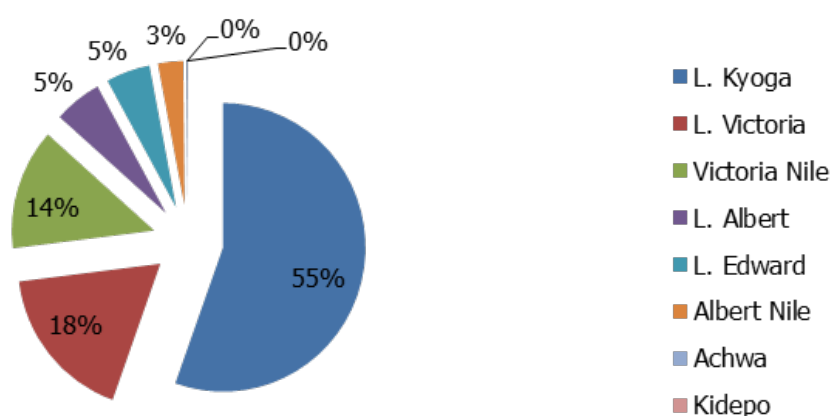
Table 4: Intact vs. degraded wetland area presented by drainage basin

Drainage basin	Intact Wetlands (sq. km)	Degraded Wetlands (sq. km)	Total (sq. km)	% degraded
Lake Kyoga	4,284.4	1,738.3	6,022.7	29%
Lake Victoria	954.3	493.5	1,447.8	34%
Lake Albert	3,534.1	1,339.4	4,873.5	27%
Victoria Nile	1,399.4	536.2	1,935.6	28%
Achwa	1,140.1	280.9	1,421	20%
Albert Nile	2,333.1	14.7	2,347.8	1%
Lake Edward	179.9	1	180.9	1%
Kidepo	7,701	5,481.1	13,182.1	42%
TOTAL	21,526.3	9,885.1	31,411.4	31%

Source: OAG Analysis of WMD data.

From the table above, out of the 9,885.1 sq. km of degraded wetlands countrywide, 5,481.1 sq. km (55%) were found in the Kyoga drainage basin alone. The contribution of each drainage basin as a proportion (%) of the total degraded wetland area countrywide is represented in Figure 1:

Figure 1: Degraded wetland area per drainage basin as a % of countrywide degradation



Source: OAG analysis of WMD's 2015 wetland data.

The high levels of wetland degradation in the Kyoga drainage basin were mainly due to conversion of wetlands into farm land- predominantly for rice growing.

Other major forms of degradation noted in the selected wetlands systems included commercial agriculture (e.g. flower farming and tree planting), extraction (e.g. sand mining and stone quarrying), construction of houses, industries, commercial buildings, schools, and establishment of washing bays as detailed in Table 5 below:

Table 5: Major forms of degradation in sampled districts

S/N	Wetland system	Major forms of degradation observed/ reported				
		Construction	Agriculture	Mining (Extraction)	Dumping of Waste	Washing bays
1	Enyau	✓	✓	✓		✓
2	Namatala-Doho		✓			
3	Lake George		✓	✓		
4	River Kafu	✓	✓	✓		
5	Nomuremu-Reshebeya-Kashambya	✓	✓	✓	✓	
6	Nyangahia	✓	✓	✓	✓	✓
7	River Rwizi	✓	✓	✓		
8	Lake Wamala (Mityana)	✓	✓	✓		
9	Lwajjali	✓	✓		✓	
10	Lake Wamala (Mubende)	✓	✓			
11	Mpologoma	✓	✓			
12	Lumbuye		✓			
13	Achwa		✓		✓	✓

Source: OAG analysis of interview responses from 13 District environment staff.

According to documents reviewed and interview responses from District, WMD, NEMA and MLHUD officials, the rampant degradation of wetlands above was due to: Poor physical planning for rapidly expanding urban centres, industries and commercial agriculture projects; unclear wetland boundaries; unclear laws regarding management of the environment; poor inter-sectoral coordination between players in the environment sector; use of poor-resolution base maps by MLHUD in processing titles and alleged corruption of district land boards and some surveyors which leads to issuance of titles in wetlands; declining fertility in traditional farmlands; population increase; inadequate political will especially at Local Government level to protect wetlands; poor community attitude towards conservation of natural resources; and limited capacity and facilitation of district environment officials.

B. MEASURES TO RESTORE, PROTECT AND MANAGE WETLANDS

In light of the above decline, what follows is an assessment of the measures put in place by WMD to restore, protect and manage wetlands, and adequacy of interventions to reverse wetland loss.

4.1 PERMITS AND LAND TITLES IN WETLANDS

According to the 1995 Constitution, all wetlands are held by government in trust for the people of the Republic of Uganda. Therefore, no activity is permitted in a wetland without a Wetland User Permit from NEMA. Furthermore, following the coming into force of the 1995 Constitution, it was forbidden for land titles to be issued in wetlands.

a) Permits

During the period under review, NEMA had issued 239 wetland user permits, and reported that there was general compliance to the conditions of approval, except for sand-miners, more so in Lwera wetland who extracted sand at much deeper levels than allowed by the permit. Furthermore, cases were reported where developers who had been issued permits abandoned the sites without restoring them. This violates permit conditions and costs government restoration fees.

NEMA attributed the challenges in enforcing compliance to permit conditions to inadequate specialized professionals to monitor compliance with permit conditions. NEMA has only 4 aquatic and wetlands staff supposed to follow up on the 239 permits issued in the 4 years under review, besides performing other duties e.g. review of permit and EIA applications, among others. According to WMD, even the Local Government staff who would have helped in compliance monitoring and enforcement of EIA approval conditions are underfunded and ill equipped with monitoring tools.

b) Land Titles

Since 1995, land titles had been issued for 782 plots wholly or partially located in wetlands in the districts of Kampala, Mukono, and Wakiso.²⁴ This contravenes both the Constitution and the Land Act, 1998. Similar irregularities were also reported in the districts of Kasese, Masindi, Mbarara and Butaleja.²⁵

MLHUD attributed the issuance of land titles in wetlands to resource constraints which crippled ability of their staff to conduct due diligence on all applications before issuing titles, though no evidence was obtained to ascertain this. Another cause was reliance on out-dated (1960-70's) low-resolution base maps to process land titles, since production of updated base maps was not yet complete. Use of out-dated maps resulted in errors in issuance of titles, as detailed in the text box below.

In cases where MLHUD has not conducted field verification of submitted applications, they rely on information submitted by surveyors. However, some unscrupulous surveyors may submit misleading information. Given that the current maps have a scale of 1:50,000 (for rural areas), if the coordinates submitted by a surveyor encroached into a wetland by 50m, it would be almost impossible for the MLHUD officer reviewing the application to notice any encroachment, since this translates to only 1 mm on the map.

²⁴ Analysis of information in Cabinet Memo CT (2017) 84

²⁵ Interviews with DNRs/DEOs/DWOs from the respective districts

Other reasons advanced by interviewees²⁶ included:

- Unclear wetland boundaries;
- Interference/ pressure from powerful politicians or high-ranking government officials;
- Possible corruption of officials from the Uganda Land Commission, District Land Boards and Area Land Committees or ignorance regarding requirements of the land and wetland laws, or what constitutes a wetland/ wetland boundary;
- Failure to seek technical guidance from environmental officers or involve them in the titling process;
- Poor coordination between WMD and districts regarding dissemination of information on wetland boundaries.

In an interview with WMD staff, it was indicated that shapefiles showing wetland boundaries which were shared with MLHUD in 2015 were used to ensure no more titles were issued in wetlands. However, no evidence was availed by either WMD or MLHUD to confirm this.

Issuing titles in wetlands endangers the right of the public to enjoy the ecological and societal benefits of wetland protection since the individual (now legal owner of the land) has much more freedom to use the land as they see fit. It also exposes government to potential losses.

c) Government actions to address the issue of land titles in wetlands

To deal with this problem, Cabinet passed a resolution on 16th April, 2014 directing one of three courses of action for all titles in wetlands: a) For critical wetlands, the entire land title was to be cancelled; b) Where only part of the land is in a critical wetland, the land is to be re-sized with the critical sections reverting to government and the non-critical part remaining with the title holder; c) if the wetland is not critical or degradation is too severe to justify restoration, the land obtained is to be vanquished/ relinquished by government. However, the title owner is required to pay offset fees of UGX 106 million per hectare to government.

UGX 6.74 billion has been earmarked by government to facilitate cancellation of titles in Kampala, Wakiso and Mukono alone, though no funds had been disbursed by the time of the audit. It is expected that this figure will go up once the exercise is rolled out to the whole country. This is a further loss that would not have been incurred if the law governing protection of wetlands had been observed to begin with.

Recommendations

To Government

- i) Government should consider making it mandatory to involve environment officers in the titling process right from local government level;
- ii) Government should set up mechanisms to protect civil servants from pressure or undue influence from powerful actors in execution of their duties related to wetland management or issuance of titles;
- iii) Allegations of corruption in issuance of land titles in wetlands should be investigated and culprits given deterrent punishments.
- iv) MoFPED should prioritise release of funds to facilitate implementation of the cabinet decision to cancel land titles in wetlands and ensure vacation of the illegal occupants.

26 Staff from WMD, MLHUD, NEMA, and selected districts

To WMD

- i) WMD should engage MLHUD to ensure the shapefiles indicating wetland boundaries are shared with all districts/ land offices and utilised;
- ii) WMD should plan for and expedite demarcation of critical wetland boundaries to ensure they are clearly visible;
- iii) WMD should train members of the Uganda Land Commission, District Land Boards and Area Land Committees on requirements of the land and wetland laws, and what constitutes a wetland/ wetland boundary.

4.2 RESTORATION OF WETLANDS

One of the key outputs of the WMD is to restore degraded sections of wetlands.²⁷ In line with this, a commitment was made in the National Development Plan II and the Water and Environment Sector Development Plan 2015/16-2019/20 to increase coverage of intact wetlands from 10.9% in FY 2014/15²⁸ to 12% by the end of FY 2019/20.²⁹

Accordingly, UGX 256,621,400 was reportedly spent on restoration between 2014/15 and 2017/18, as shown in Table 6 below.

Over the 4 years under review, WMD planned to restore 920 ha of wetlands, and reportedly restored 1,172.4 ha, representing 127% performance. An additional 1,343.2 ha of wetland area were also restored by districts (supported by NGOs) and NEMA, bringing total wetland area restored over the 4 years to 2,515.6 ha (273% overall), and an average of 628.9 ha restored per annum. Details are shown in Table 6 below.

Table 6: Planned vs. actual restoration

FY	Amount spent by WMD on wetland restoration (million UGX)	Wetland restoration targets (area in ha)	Actual area of wetlands restored (ha)			Overall Performance (%)
			by WMD	other players	Total	
2014/15	47.9	120	52	153.3	205.3	171%
2015/16	57.3	250	151	1,189.9	1,340.9	536%
2016/17	14.1	250	482	0	482	193%
2017/18	137.3	300	487.4	0	487.4	162%
TOTAL	256.6	920	1,172.4	1,343.2	2,515.6	273%

Source: OAG Analysis of MWE's payment files for 2014/15 – 2017/18 and Sector Performance Reports 2015-2018.

The audit team was not able to explain the differences in the above restoration expenditure vs. area restored due to absence of accountability. Of the UGX 256.6 million spent, only accountability for projects amounting to UGX 48,642,000 was provided for review.

27 MWE, 2018: Structure and Establishment of the Wetlands Management Department, Page 3

28 2008 estimates of wetland coverage were used

29 MWE Water and Environment Sector Development Plan 2015/16-2019/20; Pages vii and 36.

Figure 2 illustrates a case of successful restoration in Lubigi wetland.

Figure 2: A section of Lubigi wetland re-generating after restoration



Source: OAG photo taken on 27th November, 2018 at 11:14 am

As seen in Figure 2 above, the section in the foreground was observed to be re-generating following restoration. It was previously occupied by a church building.

Despite the seeming over-performance reported in Table 6 above, further analysis indicates that the rate of restoration still falls far below what is required to increase wetland coverage to 12% by 2020 as explained below:

Area of intact wetlands as at 2015 was 2,152,650 ha, which is 8.9% of Uganda's total land surface. In order to increase this coverage to 12% (2,899,514 ha) as envisioned by MWE, 746,864 ha should have been restored by 2020. As shown above, only 2,515.6 ha have been restored to date, representing 0.3% of the required area, leaving a restoration shortfall of 99.7% less than two years to 2020.

Evidently, the extreme underperformance of MWE in relation to the achievement of wetland coverage of 12% was because the target set was too ambitious. WMD explained that they hoped to achieve this target largely by relying on Local Governments to budget for and conduct restoration, since wetlands management is a decentralised function. WMD would only concentrate on restoring the degraded sections of critical wetlands. However, the audit team established that restoring 746,864 ha would require 1.083 trillion³⁰, and this is too high in light of the average funding to the department and the local governments- WMD received an average of UGX 2.73 billion per annum during the review period, while the total releases to all the country's districts for environment and natural resources activities (including management of the environment, forests, wetlands and mines) stood at about UGX 790 million per year.

³⁰ According to WMD, the unit cost of restoring 1 ha is UGX 1.45 million (MWE, 2017: Briefing to Members of Parliament for the Natural Resources Committee on the status of wetlands and strategies undertaken for protection and restoration; page 6)

This means that even if all funding to the department and districts were devoted to restoration alone, it would only restore 2,427.6 ha per year $((\text{UGX } 2.73 \text{ billion} + \text{UGX } 0.79 \text{ billion}) / \text{UGX } 1.45 \text{ million}^{31})$ translating into 14,565.6 ha in 6 years (2014/15-2019/20)- 1.95% of the target.

Moreover, assuming a constant degradation rate for wetlands from 1994 to 2015, it would mean that an extra 28,261.43 ha were lost each year, yet only 628.9 ha were restored on average, resulting in a net loss in spite of WMD's efforts.

Another ever-present challenge was re-encroachment on restored wetlands. The audit team found that wetlands in Kampala (Kinawataka- Butabika wetland), Kisoro (Sereri and Kigezi wetlands), Masindi (Kyabagenyi), Mbarara (Nyakikara and Rwemiginya wetlands), Mityana (Wabiruko and Nyakitundu) and Kaliro (Kyanfuba wetland) were encroached on again even after restoration. Figure 3 shows re-encroachment on Kinawataka-Butabika wetland after restoration.

Figure 3: Re-encroachment on Kinawataka-Butabika wetland after restoration



Source: OAG photo taken on 27th November, 2018 at 10:02 am

The reasons advanced for the re-encroachment included scarcity of water in Masindi, poor physical planning of expanding urban areas in Mbarara, declining fertility loss in farmlands and population increase, inadequate post-restoration monitoring to keep away encroachers, and in the case of Kinawataka-Butabika, differences between MWE and the Uganda Police Force regarding the eviction of encroachers during restoration.

Re-encroachment resulted in financial loss to government since funds had already been spent on restoration, and denied Ugandans the benefits of fully restored wetlands e.g. UGX.13,380,000 in the case of Kinawataka-Butabika wetland.

The audit team noted that starting September, 2017, WMD- supported by Green Climate Fund (GCF) and UNDP- had begun implementation of an 8-year project to address some of the factors that push people to (re-)encroach on wetlands. The project will be implemented in 20 districts in Eastern and Western Uganda.

MWE further explained that in line with the Uganda Irrigation Policy (2017), the ministry aims to work with Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) to promote upland rice and provide the necessary irrigation infrastructure in order to encourage rice-growers to move out of wetlands since this is a major cause of encroachment in Eastern Uganda as previously noted. According to MWE, the water for irrigation will be obtained from the wetlands, and this will provide further incentive to the farmers to protect them. However, no evidence was provided that steps were being taken to implement this intervention.

31 Cost of restoration per hectare

Application of environmental best practice (Polluter Pays Principle) to restoration of wetlands

The audit team noted that another reason for rampant (re-)encroachment was failure by WMD and NEMA to apply the Polluter Pays Principle.

This principle is provided for in Section 2(2)(k) of the National Environment Act (1995), Cap. 153, and aims to ensure that the true and total costs of environmental pollution are borne by the polluter. Applied to wetland degradation, would mean that anyone guilty of degrading a wetland should pay for the loss of ecological benefits suffered during the time of encroachment, and either restore the wetland at his/ her own cost, or reimburse government for the expenses incurred during restoration. It was anticipated that NEMA, in consultation with WMD, would develop detailed procedures to enable application of this principle.

However, it was noted that NEMA and WMD had not developed any procedures to operationalize this principle and did not plan or budget for the intervention during the 4 years reviewed. Consequently, they did not recover any restoration costs from degraders, and therefore the UGX 256,621,400 spent on wetland restoration during the review period constituted a potential loss to government. It also encouraged continued degradation as encroachers went unpunished.

Management Response

It is true the Department may not be able to achieve its objectives of increasing the wetland coverage from 8.9% in 2015 to 12% in 2020 with UGX 2.5 billion annual releases by MoFPED to the Department.

The Department now targets to achieve the 12% wetland coverage under the SDG, SSIP, NDP II, NDC, and Green Growth Strategy by 2030. This would translate into annual restoration target of 70,836.9 ha at a cost of 102.7 bn. It is important that this funding is realized.

Currently, the Green Climate Fund (GCF) Project on Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda is targeting wetlands in Eastern and Western Uganda. The project area includes the following districts in Eastern Uganda: Kaliro, Namutumba, Pallisa, Kibuku, Budaka, Butaleja, Tororo, Mbale, Bukedea, Ngora, Butebo and Kumi under Mpologoma Wetlands system draining into Lake Kyoga; in the Western part of Uganda, the project districts include Kanungu, Kabale, Kisoro and Rukungiri, Rubanda, Rukiga under Ishasha wetlands system draining into Lake Edward; and Ntungamo, Bushenyi, Mitoma, Buhweju, Rubirizi, Sheema, under Rwizi – Rufuka system draining into Lake Victoria. The project targets to restore 64,000 Hectares of degraded wetland and 11,630 Hectares of catchment over the eight year period, and support 75,000 Households with alternative livelihoods after vacating wetlands. The project will also facilitate planting of 33,000 ha of the catchment with agroforestry and forestry.

In addition to the GCF Project which is injecting USD 44 million (approx. UGX 164 billion³²) over 8 years for restoration of 20 critical wetlands, there is need for additional projects and increased funding from Government of Uganda to Wetlands Management.

Re-encroachment is happening as a result of low funding to the Local Governments. Currently a district on average receives 3 million shillings as ENR- Conditional Grant which is inadequate for the Local Government Officers to ensure compliance after restoration. There is need to increase the ENR Conditional Grant to a basic minimum of UGX 15 million per year to ensure compliance and districts' participation in the restoration and demarcation of wetlands.

32 1 USD = UGX 3,706 as at 18th December, 2018

The Polluter Pays Principle is provided for even in the revised National Environment Management Bill. Once the revised bill is assented to by His Excellency the President of Uganda, the principle will be implemented.

Audit Comment

The audit team agrees that the cost of restoring wetland coverage to 12% is very high, and notes the ministry's interventions to restore degraded wetlands.

More importantly, however, it is critical that in all parts of the country, the factors that push people to (re-)encroach on wetlands are addressed, or the cycle will continue to repeat itself, and the Department will need about UGX 40.98 billion each year just to restore wetland area equivalent to what has been lost in the course of the year (28,261.43 ha*UGX 1.45 million³³). Receipt of such funding is unlikely, given the government's current resource envelope.

Conclusion

WMD's efforts to restore degraded wetlands fell far below the ideal, with only 0.3% of the required area having been restored in the 4 years under review, leaving a restoration shortfall of 99.7% less than two years to 2020. Moreover, annual wetland degradation continues to outpace restoration rates. However, WMD's shift to prevention of encroachment rather than emphasis on post-encroachment eviction and restoration is a step in the right direction.

Recommendations

- a) MWE should continuously engage MAAIF, MLHUD and other players to:
 - i) Expand interventions which seek to prevent wetland (re-)encroachment by addressing the factors that lead to encroachment such as declining fertility of traditional farmlands, water scarcity, unplanned urban expansion, to other areas not covered by the GCF projects;
 - ii) Implement the plan to extend irrigation infrastructure especially in rice-growing regions to encourage the farmers to leave wetlands, after which they can re-generate on their own, saving government restoration costs;
- b) WMD, in consultation with NEMA and other relevant stakeholders, should develop guidelines or mechanisms to ensure that wetland degraders pay for the costs of degradation.

4.3 DEMARCATION AND GAZETTEMET OF WETLANDS

WMD is required to demarcate and gazette selected wetlands³⁴ in order to discourage wetland degradation/encroachment.

4.3.1 Demarcation of Wetlands

The audit team established that WMD spent UGX 1.54 billion during the 4 years under review on demarcation of wetlands. WMD demarcated 923.24 km out of 1,018 km of wetlands it had planned to demarcate, representing 90.7% performance. However, in total, 1,306.44 km were demarcated, mainly as a result of supplementary demarcation by districts in 2014/15 and 2015/16, bringing overall performance to 128%. Details of expenditure and length of wetland boundaries demarcated are shown in Table 7 below:

33 1 USD = UGX 3,706 as at 18th December, 2018

34 1 USD = UGX 3,706 as at 18th December, 2018

Table 7: Demarcation targets vs. actual

FY	Amount spent by WMD on wetland restoration (million UGX)	Wetland restoration targets (km)	Actual length of wetland boundaries demarcated (km)			Overall Performance (%)
			by WMD	other players	Total	
2014/15	622.2	150	173	221.2	394.2	263%
2015/16	490.8	274	257	162	419	153%
2016/17	123.4	274	167.7	0	167.7	61%
2017/18	303.8	320	325.54	0	325.54	102%
TOTAL	1,540.2	1,018	923.24	383.2	1,306.44	128%

Source: OAG Analysis of MWE's payment files for 2014/15 – 2017/18, MPSs (FY 2015/16-2018/19) and MWE Sector Performance Reports 2015-2018

Management explained that the underperformance in 2016/17 was because most of the funding was channelled to procuring pillars and beacons to ease demarcation in the subsequent financial years. However, audit noted that in 2016/17, WMD only spent 25% on purchase of pillars and beacons, compared to the other years where the ministry spent 58-80% on the activity³⁵, as detailed in Table 8 below:

Table 8: Breakdown of expenditure on demarcation-related activities

FY	Total spent on demarcation (UGX)	Breakdown (UGX)		Km demarcated	% spent on purchase of pillars
		Amount spent on supply and branding of pillars	Amount spent on other demarcation-related activities		
2014/15	622,153,999	496,329,999	125,824,000	173	80%
2015/16	490,799,000	287,040,000	203,759,000	257	58%
2016/17	123,390,822	31,054,822	92,336,000	167.7	25%
2017/18	303,815,000	178,000,000	125,815,000	325.54	59%
TOTAL	1,540,158,821	992,424,821	547,734,000	923.24	

Source: OAG Analysis of MWE's payment files for 2014/15 – 2017/18, MPSs (FY 2015/16-2018/19) and MWE Sector Performance Reports 2015-2018.

Table 8 above shows a further breakdown in the expenditure on demarcation over the 4 years under review. It shows that 80% of expenditure in 2014/15 was spent on purchase of pillars, some of which were then used in subsequent years.

Compared to 2017/18, the high expenditure in 2014/15-2016/17 versus the number of kilometres demarcated by WMD was due to implementation of pre-demarcation activities such as rapid assessment and inception meetings for wetlands, which were then demarcated in subsequent years; utilisation of WMD funds to facilitate the demarcation of River Nile banks by the Department of Environment Support services (DESS); and expenditure on verification of the number of pillars and beacons supplied to various districts.

35 Source: OAG Analysis of MWE's payment files for 2014/15 – 2017/18.

The audit team further noted that the annual demarcation rate ranged from 167.7 km - 325.54 km annually, which is way below WMD's long-term annual target of WMD to demarcate 725 km per year.³⁶

All DEOs/DNROs/DWOs and WMD staff interviewed stated that demarcation had proved very effective in reducing encroachment as the pillars and beacons installed clearly showed boundaries to potential and actual encroachers within communities and served as irrefutable reference points during sensitisation or eviction.

Utilisation of pillars and beacons procured for demarcation

The audit noted areas of potential wastage in the procurement of pillars and beacons for demarcation. For instance, in two sampled procurements during the 4-year period, 4,720 pillars and 4,400 beacons were purchased at a total cost of UGX 1,071,706,850 for use in demarcation of 25 wetlands in 22 districts. However, demarcation was only done for 18 wetlands, leaving 7 un-demarcated. Even when demarcation was done, the pillars and beacons used were fewer than planned for. Table 9 below provides details:

Table 9: Pillars and beacons purchased for demarcation vs. actual used

District	Wetland demarcated	Unused Pillars	Cost per pillar (UGX)	Unused Beacons (UGX)	Cost per beacon (UGX)	Total potential wastage (UGX)
Dokolo	Aminkwac	124	140,000	58	70,000	21,420,000
Pallisa	Limoto	60	170,000	80	65,000	15,400,000
Kisoro	Sereru, Kigezi, Mulehe, and Chahafi	29	185,000	69	39,000	8,056,000
Sheema	Orusindura	47	185,000	0	39,000	8,695,000
Hoima	Wambabya	36	169,920	10	76,700	6,884,120
Luweero	Lumansi-Lugogo	35	123,000	23	98,500	6,570,500
Nakasongola	Ssezibwa	64	123,000	49	98,500	12,698,500
Nebbi	Nyarwodo	171	135,700	140	97,300	36,826,700
Maracha	Ayi	48	135,700	150	97,300	21,108,600
Arua	Enyau	00	177,000	100	82,600	8,260,000
Masindi	Nyangahya	108	177,000	114	82,600	28,532,400
Mukono	Lwajjali	146	152,928	91	19,116	24,067,044
Iganga	Walugogo	41	152,928	170	19,116	9,519,768
Amuru	Acwee	200	140,000	200	70,000	42,000,000
Amuria	Adome	200	170,000	200	65,000	47,000,000
Kiboga	Mayanja	200	169,920	200	76,700	49,324,000
Gomba	Katonga	200	172,280	200	95,580	53,572,000
Wakiso	Mayanja-Kato	200	172,280	200	95,580	53,572,000
Buyende	Nabigaga	200	171,100	200	79,060	50,032,000
Namutumba	Nawaibete	200	171,100	200	79,060	50,032,000
Bulambuli	Bunambutye	250	152,527	200	78,706	53,872,950
Kaliro	Lumbuye	260	152,527	200	78,706	55,398,220
Total		2,819		2,854		662,841,802

Source: OAG Analysis MWE procurement files for purchase of pillars and beacons for wetland demarcation, wetland demarcation reports from 2014/15-2017/18 and MWE post-demarcation audit of pillars and beacons

36 1 USD = UGX 3,706 as at 18th December, 2018

The table above shows that at the time of audit, 2,819 pillars and 2,854 beacons were unutilised, presenting a potential loss of UGX 662,841,802. Demarcation of Lwajjali wetland was not completed owing to resistance from some neighbouring communities, while demarcation of Acwee, Adome, Kalonga, Mayanja-Kato, Nabigaga, Nawaiibete, Bunambutye and Lumbuye had not been done at the time of audit. This is significant since all of these wetlands except Acwee are located in Eastern and Central Uganda where encroachment was noted to be highest.

WMD Management explained that Bunambutye wetland had not yet been demarcated because it is at the centre of a land use conflict between Bulambuli and Kapchorwa, while the land use conflict in Apaa had delayed demarcation of Acwee wetland in Amuru District.

WMD further stated that following the piloting done by WMD, the respective districts were required to utilise the remaining pillars and beacons to complete demarcating the remaining wetland sections. However, the audit team noted that only Arua district had done this, demarcating an extra 41 km after WMD had demarcated 15.4 km. District officials from the other districts stated that they had not used the pillars and beacons left by WMD due to the higher cost involved in demarcation using pillars and beacons compared to use of live markers (plants) which the districts preferred given the limited funding they receive for wetlands management.

Management Response

WMD has taken note of the Audit concern and is committed to finalise the demarcation of the pending wetlands by the end of FY 2019/20. Once the land use conflicts affecting Bunambutye and Acwee wetlands are resolved, they will also be demarcated.

MWE is also lobbying the Ministry of Finance to increase funding to each Local Government to at least UGX 15 Million from the current average of UGX 6.37 million³⁷, so that they are able to continue with demarcation and restoration of wetlands beyond the piloting done by WMD.

In addition, the Green Climate Fund project currently being implemented aims at demarcating an additional 18,172 kms of wetlands over an eight-year period from 2018 to 2025.

4.3.2 Gazettement of Wetlands

The audit established that out of the 8 wetland drainage basins, none had been gazetted. Prior to gazette, a wetland should be coded in order to give it a unique identifier. Coding of 4 out of the 8 wetland drainage basins had been completed; one was partially complete; and 3 had not been coded. Details are in Table 10 below.

Table 10: Status of wetland coding and gazette

S/N	Drainage Basin	Coding Status	Gazette Status
1.	Lake Victoria	Complete	Pending
2.	Lake Kyoga	Complete	Pending
3.	Achwa	Complete	Pending
4.	Victoria Nile	Complete	Pending
5.	Albert Nile	Partially complete	Pending
6.	Lake Edward	Not started	Pending
7.	Lake Albert	Not started	Pending
8.	Kidepo	Not started	Pending

Source: Review of WMD data and interview responses

37 Source: Annual releases of the Environment and Natural Resources Conditional Grant to districts in 2017/18 and 2018/19

WMD explained that a decision was made to delay gazettement until coding for all wetland systems was complete in order to avoid a scramble for the ungazetted wetlands that would likely result if they had undertaken piecemeal gazettement.

Whereas the Constitution declares that wetlands should be held in trust for the people of Uganda, it neither lists them nor states their boundaries. Gazetting wetlands aims to do just that, and the delay to complete this process leaves wetlands vulnerable to encroachment and WMD to legal challenges in case it tries to stop encroachers.

Management Response

Wetlands Management Department plans to complete the coding of wetlands by end of financial year 2018/2019. Thereafter, the process of gazettement starting with the 40 major wetland systems with a total boundary length of 8,667.8 km and an area of 2,890,415 ha will be carried out during FYs 2019/20, and 2020/21.

Conclusion

WMD's delay to gazette wetlands and complete demarcation makes it difficult to identify wetland boundaries and encourages continued encroachment. There is also potential wastage of UGX 662,841,802 due to failure to utilize all pillars and beacons purchased for demarcation.

Recommendations

- a) MWE should endeavour to complete the demarcation of the remaining sections of the wetlands during FY 2019/20 using the remaining pillars and beacons as committed.
- b) MWE should prioritise completion of the wetlands coding and gazettement activity.

4.4 PROMOTION OF KNOWLEDGE ON MANAGEMENT OF WETLANDS

In order to ensure proper management of wetlands, it is necessary for WMD to compile and disseminate information on wetlands countrywide, as well as to build the capacity of relevant stakeholders.

4.4.1 Compilation and upgrade of the National Wetlands Inventory

Regulation 10 of the National Environment (Wetlands; River Banks and Lake Shores Management) Regulations, 2000 requires the WMD to develop an inventory of all wetlands in the country in consultation with NEMA and the District Environment Committees. This inventory should be updated and published every 5 years.³⁸ The purpose of the inventory is to provide wetland managers at both local and national level with updated information on the state of wetlands within their jurisdiction and enable them to devise strategies for their sustainable use or conservation.

The Audit team, however, noted that whereas WMD had developed an inventory of all wetlands in the country, it was not up to date and was last published in 2000. Of the required information (e.g. the location of the wetland; type of fauna and flora; the soil and hydrological characteristics; the discharge and composition of water; the volume, flow and quality of water, major land use forms; the density of population in the wetland catchment, conservation status; the area of the wetland/ coverage), only data on wetland coverage and major land use forms had been updated in 2015.

Although WMD stated that inadequate funds were the reason for failure to update other aspects of the Inventory, the activity had not even been budgeted for during the years under review.

38 [Reg. 10(8)]

Management Response

The budget ceiling for the entire WMD is 2.5 billion per financial year. To develop an inventory for all wetlands in Uganda, WMD requires an additional UGX 2.5 billion at the very minimum. MWE is looking for funding from partners to have the exercise done. Alternatively, once the Ministry of Finance increases the budget allocation to the WMD, the inventory shall be conducted.

Audit Comment

The audit team was not availed any evidence that WMD was sourcing funding from donors or engaging the Ministry of Finance to fund this activity yet it is a statutory requirement.

4.4.2 Dissemination of wetland information using the NWIS

WMD, with support from The Japanese International Cooperation Agency (JICA), undertook to upgrade and maintain the National Wetlands Information System (NWIS). The upgrade involved creating suites for entry of data on the wetland boundaries, state of a wetland (health, extent of encroachment), soil type, as well as water supply, hydrograph, hydrology, land cover and land use maps of the surrounding area. It was then connected to ArcGIS Online to allow access by external users like all LGs, Municipalities and other stakeholders in order to inform decision-making.³⁹ Authorized users (e.g. District Wetland/Environment Officers) would be able to upload information on wetlands within their jurisdiction in a specified format.

The Audit team, however, established that the potential of the NWIS to streamline wetlands management is still under-tapped. This is because most of its suites have not been populated. For instance, it contains information on the current area of wetlands, but lacks details on moisture concentration, soil and vegetation type which would guide decisions on how to optimally utilize the wetlands.⁴⁰

The low potential of the NWIS is due to absence of information that would have been collected if the Wetlands Inventory had been compiled.

Other challenges hindering full utilization of the NWIS include the following:

- a) Managerial challenges: The NWIS contains out-dated data collected in 1994 and 2008 respectively. Also, the NWIS provides for only 45 districts yet Uganda currently has 112 districts.
- b) Technical and financial challenges: The NWIS is only accessible in-house to the GIS staff because WMD has not procured a server to host the NWIS nor paid to have it hosted by a web host. As a result, stakeholders, both within and outside MWE –such as NEMA and DEOs- cannot access it. The software currently used by the system is too heavy and significantly slows down the computers on which it is installed, making it difficult to access and/or navigate.

Management Response

WMD has noted the Audit concern. Limitation in the budget allocation to WMD is what is delaying full utilisation of NWIS. However, the Green Climate Fund project – Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda, has a provision to improve on the NWIS, though even then it will not cover all the districts.

39 Water and Environment Sector Development Plan 2015/16-2019/20; pg. 43.

40 Interview with WMD staff

4.4.3 Capacity Building

From the financial year 2014/15 to 2017/18, WMD has consistently planned to undertake capacity building and technical back-stopping of staff from WMD, EPPU and selected local governments.⁴¹ The trainings were meant to impart knowledge and skills on wetland restoration techniques, wetland management planning and assessment, monitoring oil and gas activities, compliance monitoring, database management, administrative law, investigative GIS mapping, Environment monitoring, auditing and assessment, and preparation of District Environment Action Plans (DEAPs).⁴²

It was however noted that, whereas WMD budgeted for UGX 296 million for capacity building, at least UGX 207.23 million was released over the four years under review (releases for 2017/18 were not availed). Of this, UGX 168.36 million was spent on capacity building, as illustrated in Table 11 below:

Table 11: Budget performance for capacity building by WMD

FY	Planned no. of staff for training	Actual number trained	Approved budget (Million UGX)	Releases (Million UGX)	Expenditure (Million UGX)	Budget performance (%)
2014/15	112	127	80	69.43	68.52	98.7%
2015/16	115	37	100	100	99.84	99.8%
2016/17	100	0	60	37.8	0	0%
2017/18	40	0	56	Not availed	0	0%
TOTAL	367	164	296	207.23	168.36	

Source: Analysis of MWE Ministerial Policy Statements and Financial information for 2014/15-2017/18.

According to the table above WMD reportedly trained only 164 (45%) out of the planned 367 staff and stakeholders, though no accountability, training reports or attendance lists, were presented to prove the implementation of the activities. Furthermore, no staff or stakeholders were trained in 2016/17 and 2017/18 using funds released for capacity building despite expenditure amounting to UGX 72.01 million from the budget line for training. The money was instead spent on foreign travel, payment of salaries, demarcation, inspections, and purchase of fuel, among others.

Failure to train staff and key stakeholders hampered their ability to contribute effectively to wetland management through application of skills that would have been obtained. For instance, 12 out of 13 district wetland, environment and natural resource officers interviewed expressed a need for training in Remote Sensing and GIS. This would enable them utilise GIS software and available shapefiles effectively to produce and/or update wetland boundary maps for use in the districts. It would also equip them to feed data into the NWIS once it became accessible.

Management Response

Staff of the Department have been receiving training from development partners such as ENABEL (formerly BTC). Regarding the expenditure highlighted under the budget line for capacity building, the items listed are normally also budgeted for under Capacity Building since they facilitate implementation of the activity.

Audit Comment

No evidence of staff training was availed to the audit. In addition, activity on a given budget line is only justified if the planned activity is undertaken, and this was not the case in FYs 2016/17 and 2017/18.

⁴¹ MWE Ministerial Policy Statements 2015/16-2018/19.

⁴² MWE's Ministerial Policy Statements for 2015/16-2017/18

Conclusion

WMD has not prioritized implementation of the necessary measures to acquire, disseminate and promote knowledge on management of wetlands. As a result, there is insufficient knowledge to guide decision-making in the management of wetlands both at national and local government level.

Recommendations

- a) The Accounting Officer MWE should prioritize compilation of an updated Wetlands inventory;
- b) MWE Management should further upgrade and update the NWIS software and explore options to make it more easily accessible;
- c) The Accounting Officer (MWE) should ensure that released funds are spent on planned activities in order to meet performance targets.

4.5 COORDINATION BETWEEN WMD AND NEMA

WMD and NEMA are the foremost agencies charged, respectively, with management and regulation of wetlands in Uganda. Therefore, coordination between them is critical for achievement of WMD's objectives in relation to wetland management.

However, the team noted the following:

- i. There was unclear delineation of the respective roles, responsibilities and expected outputs between WMD and NEMA resulting in duplication of outputs such as restoration and demarcation, as detailed in Tables Table 6 and Table 7 above;
- ii. Whereas WMD was the Lead Agency for wetlands management, NEMA did not delegate to WMD the power to enforce compliance and other functions as provided for by Section 6(2) of the National Environment Act, Cap. 153. Consequently, WMD's authority was challenged in court when it attempted to halt activities that it deemed deleterious to wetlands, in the case of Meera Investments Ltd vs. Attorney General (Misc. Cause No. 167 of 2014 and Delmas Investments Ltd vs. Attorney General and Ministry of Water and Environment (Misc. Cause No. 15 of 2012).
- iii. WMD and NEMA did not agree on a common overall goal/ vision in the management of wetlands with WMD favouring a strict interpretation of "wise use" to mean total conservation of wetlands, only allowing the activities permitted by the Wetlands Regulations, while NEMA emphasised "sustainable development", and thus authorised several projects that WMD had objected to, on condition that the EIA conditions of approval were adhered to.
A second instance of conflicting views/ decisions involves the case of Namakwekwe wetland in Mbale district which WMD restored from 20th - 31st August, 2017, only for it to be declared vanquished by NEMA a year later (29th August, 2018).
This constituted a loss to government of the money spent on the activity. This would not have occurred if the two entities had collaborated and harmonised their positions.
- iv. There were gaps in information-sharing between WMD and NEMA. For instance, it was noted that in the 4 years under review, WMD stated that 19 projects in wetlands were approved by NEMA without consulting them as required by law. According to WMD, this led to degradation of 295.5 ha of critical wetlands. NEMA strongly denied this charge, but provided the audit team no evidence of consultation on the said projects. NEMA further explained that for the projects mentioned by WMD, NEMA ensured the permit-holders complied with the conditions of approval and restored them after use. Details of the projects are contained in Appendix V.
- v. There was no dispute-resolution mechanism and hierarchy of authority to step in in case of conflicts or differing positions between WMD and NEMA.

The above notwithstanding, the audit noted that government was taking action to improve coordination between the two agencies and more clearly define their respective roles. Ministry of Water and Environment (MWE) was spearheading revision of the existing policy and legislative framework for environment and wetlands management to provide for emerging environmental challenges and to clearly delineate the mandates, roles and responsibilities of the different players in the sector.⁴³ This included development of an updated National Environment Bill, a framework law that would repeal and replace the National Environment Act, Cap. 153, as well as the Wetlands Resources Bill that would operationalize the provisions of the revised Environment Act related to wetlands management.

The revised National Environment Bill was passed by Parliament on 14th November, 2018, and was awaiting the President's assent at the time of audit. On the other hand, MWE was preparing to conduct regional stakeholder consultations on the draft Wetlands Resources Bill, which would further be reviewed by MWE's Top Policy Committee and the First Parliamentary Counsel before submission to Parliament for debate and approval, and finally to the President for assent. Revision/ development of both bills has dragged on for over 10 years.

Management Response

The delay in development of the Wetlands Management Resources Bill was due to the deadlock in separation roles and responsibilities among stakeholder agencies. However, the new National Environment Bill has now harmonised the roles of different stakeholders and recommended the development of the wetlands bill. The process has now begun with support from Wetlands International, Care and Ecological Christian Organisation. It is planned that by May, 2019 the bill shall be passed into law. Currently we are having regional stakeholder consultations on the Bill development.

Conclusion

WMD and NEMA do not coordinate adequately and this has negatively affected the management of wetlands in Uganda. Also, the delay by MWE to complete the update and review of environmental and wetland legislation resulted in continued unclear delineation of roles and responsibilities between NEMA and WMD resulting in overlapping mandates and duplication of work.

Recommendation

Government should prioritise the completion of the draft legislation on wetlands and develop a framework to govern coordination between WMD, NEMA and other key players in management of wetlands.

43 MWE, 2018: Structure and Establishment of the Wetlands Management Department, page 2.

OVERALL AUDIT CONCLUSION

Wetland coverage dropped significantly between 1994 and 2015 with the Lake Kyoga drainage basins experiencing particularly high levels of degradation and permanent loss of wetlands.

Government efforts to reverse this decline during the 4 years under review had registered little success mainly due to emphasis by WMD on restoration of degraded wetlands which is expensive and does not adequately address the factors that push people to encroach on wetlands; unclear delineation of roles, responsibilities and mandates between WMD, NEMA and other key players in regulation and management of wetlands; failure to utilise all pillars and beacons purchased for demarcation; gaps in collection and dissemination of knowledge on wetlands to stakeholders to guide decision-making; failure to utilise training funds for the intended purpose; delay to fund implementation of the Cabinet resolution to cancel land titles in wetlands; and limited funding to district local governments to restore, protect and manage wetlands.

On a positive note, however, it was observed that starting late in 2017, WMD had started implementing a project to address factors that encourage encroachment in 20 districts, and review of legislation to clarify the mandates and roles of the different players was in advanced stages. It is hoped that these ongoing interventions, coupled with implementation of the proposed audit recommendations will go a long way in stemming the worrying trend of wetland loss and improve the management of wetlands in Uganda.

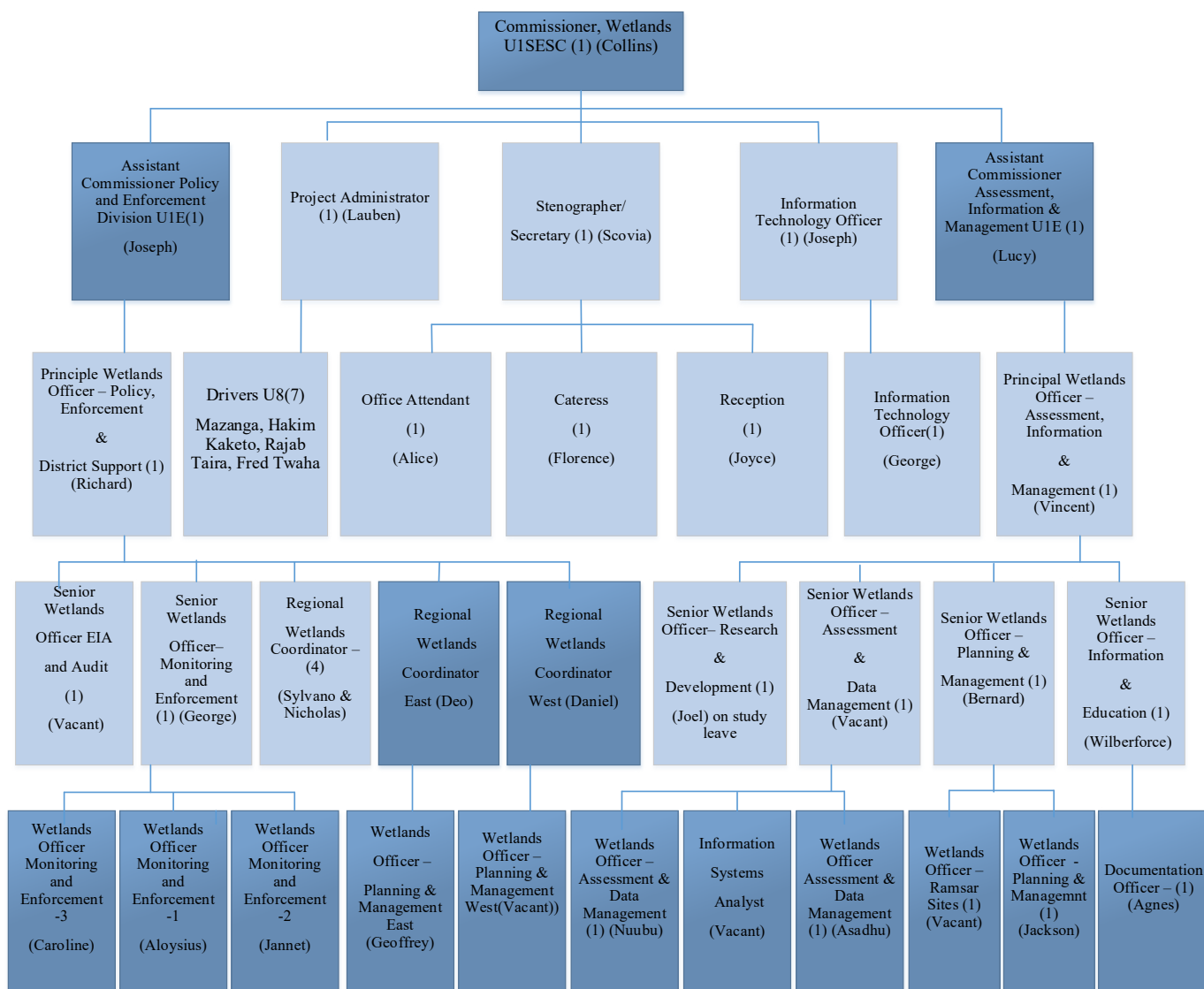
GLOSSARY OF TERMS

Shapefile

A shapefile is a format for storing GIS data related to a particular area, including location mapped, key physical and geographical features, and various land uses. Geographical features in a shapefile can be represented by points, lines, or polygons (areas).

Appendix I: Organogram

ORGANOGRAM DEPARTMENT OF WETLAND MANAGEMENT, 2017/18



Appendix II: Documents Reviewed

S/N	Document(s)	Purpose of Document Review
1.	MWE Ministerial Policy Statements 2015/16-2018/19	To obtain breakdown of restoration targets; annual planned and actual implementation progress of key WMD activities.
2.	MWE Sector Performance reports 2015-2018	To obtain information on actual wetlands (names and area) demarcated per year.
3.	MWE individual end-of-activity restoration and demarcation reports	To obtain details of restored and demarcated wetlands, and number of pillars and beacons used.
4.	MWE procurement files for supply of branded pillars and beacons for wetland demarcation	To establish cost and number of pillars and beacons purchased for demarcation.
5.	MWE wetlands GIS dataset (2015) obtained from NFA	To establish wetland coverage and extent of degradation by drainage basin and region
6.	MWE BIG report 2014/15-2017/18	To verify annual releases to WMD
7.	MWE payment files 2014/15-2017/18	To obtain details of expenditure on planned activities
8.	Wetlands Atlas (Volumes I and II)	To obtain information on wetland systems in Uganda, drainage basins, extent of encroachment and total wetland cover countrywide.
9.	Structure and Establishment of the Wetlands Management Department 2018	Obtain information on staff structure and staffing of WMD; Key functions and outputs of WMD.
10.	National Development Plan II (2015/16 – 2019/20)	Obtain wetland restoration targets
11.	Ramsar document	Obtain information on names, location, richness and status of conservation of all Ramsar sites countrywide
12.	PIPA Policy Brief (2018): unsustainable urban development in Uganda's Wetlands is a time bomb	To obtain information on the level of restoration in 2016/17.

Appendix III: Interviews conducted

S/N	Interviewee(s)	Purpose of the interview.
1.	Director of Environment Affairs, MWE	Obtain information on the adequacy of the policy and legislative framework for wetlands management, gaps, progress of review, and recommendations on how to make it more efficient.
2.	Commissioner, WMD	Get explanations for the observed status of wetlands countrywide, clarification on varying costs of restoration per annum, adequacy of regulatory and institutional framework for wetland management, coordination with NEMA and MLHUD, and challenges to wetlands management.
3.	Assistant Commissioner, Policy and Enforcement Division, WMD; Senior Wetlands Officer, Monitoring and Enforcement	Reasons for issuance of titles in wetlands, progress of regulatory and institutional review, progress of restoration and demarcation, monitoring and coordination with districts, NEMA and MLHUD.
4.	Assistant Commissioner, Assessment, Information and Management, WMD	Understand WMD efforts to collect, manage and disseminate up-to-date wetland data; capacity building of staff and stakeholders in wetlands management.
5.	NEMA Natural Resources Manager (Aquatics)	Get explanations for the observed status of wetlands, reasons for encroachment and issuance of titles in wetlands, regulatory and institutional framework for wetlands management, role of NEMA in restoration and demarcation of wetlands, access to and use of the NWIS, trainings received from WMD, coordination with WMD and challenges to wetlands management.
6.	Senior Wetlands Officer, Information and Education	Understand the restoration and demarcation process
7.	Senior Wetlands Officer, Planning and Management	Obtain information on guidelines developed for different aspects of wetlands management
8.	Wetlands Officer, Assessment and Data Management	Get details on the functionality and accessibility of the NWIS and progress of collection of Inventory data.
9.	District Natural Resource Officers, District Environment Officers and/or District Wetland officers of: Gulu, Dokolo, Kasese, Kibaale, Kisoro, Masindi, Mbarara, Mityana, Mukono, Mubende, Butaleja, Kaliro and Moroto	Obtain information on the status of wetlands in their respective districts, reasons for encroachment and issuance of titles in wetlands, Restoration and Demarcation of wetlands in their districts, trainings received from WMD, information on monitoring and coordination by WMD and challenges in wetlands management.

Appendix IV: Intact vs. degraded wetlands by region

Region	Intact Wetlands (sq. km)	Degraded Wetlands (sq. km)	Total (sq. km)	% degraded
Central	6,404.9	2,534.6	8,939.5	28%
Eastern	4,617.8	3,944.6	8,562.4	46%
Western	4,039.6	1,654.1	5,693.6	29%
Northern	6,464.1	1,751.8	8,215.9	21%
Total	21,526.3	9,885.1	31,411.4	31%

Source: WMD wetland data, 2015

Appendix V: Projects approved by NEMA in wetlands without consultation with WMD

S/N	EIA Certificate no./ Permit no.	Approval date	Project Details/ Developer/ Owner	Wetland (reportedly) degraded	Approved Area (ha)
1	NEMA/RB/LS/WT/432	7/09/2015	Zou Yunyan	Lwera-Katonga Wetland System located in Mabira Lwera, Mpigi district	120
2	NEMA/EIA/6237		King Albert Distillers Limited	Nakyesanja Wetland Section comprised as Plot 536, 537 & 538 Block 82, Kiryowa Kirolo Village, Kiryamuli Parish, Gombe Sub County, Wakiso district.	10
3	NEMA/EIA/4360		Meera Investment Limited	Plots comprised of 26-29 and 30-35 and 1A-8A Mukubya close, Kyambogo Industrial Area, Nakawa Division, Kampala District	8
4	NEMA/EIA 7549		Tirupati Development Uganda Limited	Plot 1127, Blocks 211, Kisalosaloo-Kikaya village Kyebando parish, Kawempe division Kampala district	4
5	NEMA/EIA/ 4621		Omega Construction Ltd	Location Plot 12, Block 185 Kasenge, Mbalala Zone, Mutuba Sub county, Mukono District	1
6	NEMA/EIA/5480 and NEMA/EIA/7516		Keshwala Group Of Companies Ltd	Plot 88-90, 92-94 along Walukuba road, Walukuba Division, Jinja	15
7	NEMA/EIA/6257		Huaxia International Construction Company Ltd	Plot 2235 Block 183, Wankoba LC1 Mbalala Parish, Nama Sub-County, Mukono.	7
8	NEMA/RB/LS/WT/412	22/06/2015	He Sha Duo Co. Ltd	Plot 8, Block 140 Kamuwanga village, Kyamulibwa Parish, Bukulula Sub County, Kalungu District.	100
9	NEMA/EIA/4785		Amber Infrastructure (U) Limited	Plot 747, Block 101 in Watubavillage, Watuba parish, Nangabo sub-county, Kyadondo county, Wakiso District.	12
10	NEMA/EIA/8678 and NEMA/EIA/7694		Cibed Transport Co. Ltd C/O Igra Petrol Station	Wetland Section of Kigombya Ssezibwa wetland system indicated As Plots 126, 494, & 535 Block 198 Kigombya Zone A, Kyetume Muyuba- 1, Central division, Mukono municipality	4

11	NEMA/EIA/6246		Katabazi Buyombo Faw Trucks	A section of Namanve Wetland Plots 2108-2115 & 2845 Block 236 along Kampala-Jinja highway in Kireku Village, Bweyogerere Kira municipality.	1
12	NEMA/EIA/9434		Amber Infrastructure (U) Limited	Plot 30 Block 110 Kyaggwe, Bagala Zone In Seeta Goma Division Mukono Municipal Council.	2
13	NEMA/EIA/9514	6th March, 2017	Metro Cement Limited	Plot 811, Block 2, Nyanza Village, Kamukoli Parish, Kamukoli Sub-county, Iki-iki County, Budaka District.	1
14	NEMA/EIA/9520	6th March, 2017	Bajaawa International (U) Limited	Musita village, Muringirire parish, Baitambogwe Sub County, Bunya county, Mayuge District.	3
15	NEMA/EIA/4396	12th March, 2013	Auro Meera Industries (U) Limited	Masese Industrial area, Plot 19-25, Kigenyi- Naluwairo road, Jinja Municipal Council, Jinja District.	0.5
16	NEMA/EIA/10180	22 May, 2017	Nilus Group Limited	Masese village, Walukuba division, Jinja Municipal Council, Jinja District.	0.5
17	NEMA/EIA/4121	19th April, 2012	Conveyers and Transmission solutions (Uganda) Limited	Plot 2, 4, Hill crescent Band- Kyambogo, Nakawa Division, Kampala Capital City.	1.5
18	NEMA/EIA/7915	23rd November, 2015	China Railway Seventh Group	Plots 3147,3448, 3449,1161, Kumambuga-Kyebando Zone, Kyebando Parish, Kawempe Municipality, Kampala District	3
19	NEMA/EIA/5307	2nd October 2014	Pride Chicken Uganda Limited	Wakimese Zone, Kyengerera Parish, Nsangi sub- county	2
TOTAL					295.5

Source: MWE (2018): Contribution of the weak EIA process in the declining of wetlands coverage in Uganda: Policy Paper for Enhanced Wetlands Management





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