



REPUBLIC OF ZAMBIA

REPORT

OF THE

COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM

FOR THE

FIRST SESSION OF THE THIRTEENTH NATIONAL ASSEMBLY

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REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM FOR THE FIRST SESSION OF THE THIRTEENTH NATIONAL ASSEMBLY

1.0 MEMBERSHIP OF THE COMMITTEE

The Committee consisted of Mr Romeo L Kangombe, MP (Chairperson); Mr Chanda B Katotobwe, MP (Vice Chairperson); Mr Christopher C Kangombe, MP; Ms Mirriam B C Chonya, MP; Mr Pavyuma Kalobo, MP; Eng. Raphael S Mabenga, MP; Mr Gregory Ngowani, MP; Mr Michael J Z Katambo, MP; Mrs Kampamba S Mulenga, MP and Mr Lameck Hamwaata, MP.

The Honourable Madam Speaker
National Assembly
Parliament Buildings
LUSAKA

Madam

The Committee has the honour to present its Report for the First Session of the Thirteenth National Assembly.

2.0 FUNCTIONS OF THE COMMITTEE

The functions of the Committee on Energy, Water Development and Tourism, are set out in Standing Orders 197 and 198 of the National Assembly Standing Orders, 2021.

3.0 MEETINGS OF THE COMMITTEE

The Committee held fifteen meetings during the year under review to consider the topical issue: 'Water Resource Management in Zambia.' The Committee also considered the Action-Taken Report on the Report of the Committee for the Fifth Session of the Twelfth National Assembly.

4.0 ARRANGEMENT OF THE REPORT

The Committee's Report is organised in two parts. Part I deals with the topical issue, and tour report and Part II speaks to the Action-Taken Report on the Report of the Committee for the Fifth Session of the Twelfth National Assembly.

5.0 PROCEDURE ADOPTED BY THE COMMITTEE

The Committee requested for detailed memoranda on the topical issue under consideration, from relevant stakeholders, who later appeared before it to make oral submissions and clarified matters arising therefrom.

6.0 LIST OF WITNESSES

The stakeholders who interacted with the Committee are listed in Appendix II.

PART I

WATER RESOURCE MANAGEMENT IN ZAMBIA

7.0 Background

Zambia was recognised as one of the countries in Southern Africa with an abundance of fresh water resources. These ranged from rivers, lakes and wetlands to springs and underground water reserves. The estimated amount of available surface water resources annually, in the country was 100Km³ with an annual groundwater potential estimated to be 49.6Km³ (WWF Zambia Country Office, 2022). The country has six catchments (basins) which drained into two major transboundary basins, namely: the Congo and Zambezi basins. The six (6) basins are Kafue; Luangwa; Zambezi; Chambeshi; Luapula and Tanganyika. The water sector in Zambia was classified in two distinct groups; one which focused on water resources management and development and the other concentrated on water supply and sanitation. In the Seventh National Development Plan, 2017 to 2021, the Government of the Republic of Zambia had recognised the need to address water development and management challenges with a view to increase availability of water resources for utilisation by productive sectors, for enhanced health of the ecosystem and sustainable economic growth.

The Government had put in place various strategies to enhance the country's water resources. The strategies employed by the Government to harness and protect water resources were informed by the *Water Resources Management Act, No. 21 of 2011* and the 2010 National Policy on Water. The Ministry of Water Development and Sanitation was the overarching body over water resources country wide, while water resources and development were the responsibility of the Department of Water Resources Development, formerly known as Department of Water Affairs under the same Ministry. The *Water Resources Management Act* was enacted to bridge the gaps in the *Water Act, Chapter 198 of the Laws of Zambia*. The Act led to the creation of the Water Resources Management Authority, which was responsible for the management, development, conservation protection and preservation of the water resources and its ecosystems, as well to provide for the equitable, reasonable and sustainable utilisation of the water resource.

However, in spite of having in place a robust legal, policy and institutional framework, the water sector continued to face challenges such as low investments and risks due to the effects of climate change, including uncontrolled anthropogenic activities.

7.1 Objectives of the Study

The objectives of the study were to:

- (i) determine the adequacy of the legal and policy framework governing water resource management in Zambia;
- (ii) ascertain the status of water resource infrastructure;
- (iii) learn the measures that the Government was undertaking to protect and harness water resources;
- (iv) assess the challenges, if any, in managing water resources; and
- (v) make recommendations on the way forward.

8.0 SUMMARY OF SUBMISSIONS FROM STAKEHOLDERS

A summary of the submissions received by the Committee from various stakeholders on the topical issue is presented below.

8.1 ADEQUACY OF THE POLICY AND LEGAL FRAMEWORK GOVERNING WATER RESOURCES IN ZAMBIA

8.1.1 Legal Framework

The Committee was informed that the *Water Act, Chapter 198 of the Laws of Zambia*, which was enacted in 1949, was the first piece of legislation to govern water resources in Zambia. The Act supported the Department of Irrigation and Rural Development established by the Colonial Government in 1947, which later became the Department of Water Affairs. The Department, which was an administrative unit of the Government, had vast administrative powers over water resources bestowed upon it, with the statutory mandate of the Minister under the Water Ordinance. The mandate of Department of Water Affairs was to manage and develop water resources for industrial use and accelerate rural development through irrigation.

The Committee learnt that overtime, the Government realised that the law was inadequate to fully address challenges in the water sector and embarked on sector reforms, which resulted in the first National Water Policy in 1994. Through the passage of time, it became apparent to the Government that the water resources component suffered from poor funding partly because the 1994 Policy was heavily skewed towards water supply and sanitation. In that regard, the Government reviewed the 1994 Water Policy in 2010 to, among other issues, boldly pronounce matters of water resource management and development. However, the *Water Act, Chapter 198 of the Laws of Zambia*, was not reviewed until 2011, when it was repealed and replaced with the *Water Resource Management Act, No. 21 of 2011*. The new law brought into existence the Water Resources Management Authority with a core mandate to superintend over water resource management in the country. The aspect of water supply and sanitation was administered under the *Water Supply and Sanitation Act, No. 28 of 1997* and the National Water Supply and Sanitation, was responsible for regulating the provision of water supply and sanitation services throughout the country.

8.1.2 Adequacy of the Legal Framework

The Committee was informed that the legal framework that governed water resources in Zambia was adequate as it was aligned to internationally acceptable principles of Integrated Water Resources Management. Conversely, the law appeared not to respond to the challenges in the water sector due to none or partial implementation of the provisions of the *Water Resource Management Act, No. 21 of 2011*. For instance, Sections 17, 19 and 24 of the Act, provided for constitution of Catchment Councils, Sub-Catchment Council and Water User Association, but these had not been established since the law was enacted over ten years ago. Further, the Minister of Water Development and Sanitation was permitted under Section 29 of the Act to declare a catchment, sub-catchment or geographical area as a water resource protection. Regrettably, this too had not been actualised.

The Committee was further informed that the Water Resources Management Act provided for the Minister of Water Development and Sanitation to promulgate subsidiary legislation on the construction of dams and other water related activities. However, the Minister had not promulgated any subsidiary legislation to actualise the provision and the construction of water infrastructure was relegated to outdated laws.

Stakeholders informed the Committee that a lot of provisions in the law that had potential to address some of the challenges that beset the water sector had not been effected as stated above. The Committee learnt that failure to decentralise water resource management functions to Catchment Councils, Sub-Catchment Council and Water User Associations, had compromised effective water resource management. Further, the inability to declare protected areas implied that even the most ecologically sensitive areas were prone to degradation as a result of various anthropogenic activities such as agriculture, settlement and mining, among others.

The Committee heard that there were overlapping mandates for water resources management between the *Water Resources Management Act No. 21 of 2011* and the Decentralisation Policy. The *Water Resources Management Act* assigned the Water Resources Management Authority overall authority for water resources management, whereas the Decentralisation Policy specifically directed the Ministry of Water Development and Sanitation to devolve water resources management functions to district councils. Further, the Committee learnt that there were no modalities for collaboration between the *Water Resource Management Act* and other complementary acts, such as the *Water Supply and Sanitation Act, No. 28 Of 1997*, *Environmental Management Act, No. 12 of 2011*; *Lands Act Chapter 184*; and the *Forests Act, No. 14 of 2015*. This had resulted in uncoordinated management of water resources.

8.1.3 Policy Framework

With regard to the 2010 National Policy, the Committee was informed that the Policy expired in 2020 and needed to be reviewed. The Committee learnt that the defunct Policy had outlined key aspects of water resource management and was underpinned by

principles of Integrated Water Resources Management, as was the case with the *Water Resource Management Act, No. 21 of 2011*.

8.1.4 Adequacy of the Policy Framework

The Committee was informed that the 2010 Policy had a number of shortfalls, some of which included failure to provide adequate guidance on ground water extraction. The Policy addressed groundwater as 'water resources' but when it came to implementation, it was the surface water element that dominated. This gap had resulted in over extraction of groundwater without due consideration to the amount or level of underground water availability. In addition, issues of climate change and gender were not adequately enunciated in the Policy, even though they were critical themes in effective water management. The Committee was further informed that the Policy was not in harmony with the policies of key water demanding sectors such as agriculture; mining; energy; fisheries; and livestock.

8.2 THE STATUS OF WATER RESOURCE INFRASTRUCTURE

The Committee was informed that the country's water infrastructure was twofold, namely physical and ecological infrastructure. Ecological infrastructure included forests, wildlife, soils and water, all of which offered key assets critical for realising the National Vision of becoming 'A Prosperous Middle-Income Nation by 2030' as espoused in the Vision 2030. The Committee was further informed that a secure ecological infrastructure base underpinned sustainable development of the country. The Committee was apprised on the fact that in order to realise this goal, there was need for the Government to prioritise and focus on ensuring productive and resilient forests; safeguard fisheries; enhance climate resilience for people and biodiversity; support resilient and diverse food systems; and safeguard and secure freshwater resources.

In terms of physical infrastructure, the Committee was informed that these comprised establishments that had to do with holding, conveying or harvesting water. Examples of water infrastructure included, but were not limited to dams; canals; levees; weirs; boreholes; rain gardens; rainfall harvesters; and cisterns. The Committee was further informed that among the social challenges in the improvement of water infrastructure was the cultural orientation of the people that water was a gift from God. The Committee heard that because of the perception that it was a free good, water and its infrastructure, had been subjected to negligence and vandalism. The challenge was further exacerbated by low investments towards the water sector in general and in particular infrastructure, coupled with non-cost reflective fees and charges.

The Committee further learnt that the storage capacity for many of the dams distributed across the country was not fully understood due to high sedimentation rate. Except for studies conducted by the University of Zambia, bathymetry assessments at national level did not exist. The Committee was informed that the Government should introduce enabling legislation and policies to attract private sector participation in order to mobilise

capital from both domestic and international markets to invest in water reservoir expansions and construction.

8.2.1 MEASURES BEING UNDERTAKEN BY THE GOVERNMENT TO PROMOTE WATER RESOURCES INFRASTRUCTURE DEVELOPMENT

The Committee was informed that the Government intended to undertake measures set out below in order to promote water resources infrastructure development.

- (i) Operationalise the sustainable financing mechanism for the water sector to mobilise resources for the development and management of water resources in line with the provision of the *Water Resources Management Act No. 21 of 2011*.
- (ii) Increase funding towards development, rehabilitation and maintenance of dams and other hydraulic infrastructure for increased water storage capacity to stimulate various socioeconomic activities such as water supply; hydropower generation; irrigation; aquaculture; tourism, as well as mitigate the effects of climate change.
- (iii) Review the 1995 Water Resources Master Plan to inform water resources infrastructure development and investment planning.
- (iv) Develop and implement bilateral agreements for shared watercourses with the Democratic Republic of Congo to promote socioeconomic activities through the exploitation of the Luapula River.
- (v) Review the 2010 National Water Policy in line with the aspirations of the Eighth National Development Plan once completed and to take into account emerging issues, such as, climate change, and development frameworks such as the Sustainable Development Goals, among others.
- (vi) Amend the existing legal and institutional framework regarding water resources infrastructure development to ensure the model for operationalisation of the decentralised water resources management institutional framework, namely; catchment councils; sub-catchment councils and water user associations were cost effective and efficient to operate.

8.3 SUBMISSION BY THE MINISTRY OF WATER DEVELOPMENT AND SANITATION ON MEASURES BEING UNDERTAKEN TO PROTECT AND HARNESS WATER RESOURCES

The Committee was informed that the Ministry of Water Development and Sanitation was in the process of developing the National Dams Development Plan, which would be completed by the end of 2022. The Plan would provide a roadmap on where and how many dams and weirs would be constructed and rehabilitated across the country. Further, the Government had in place a dam inventory programme which took stock of all hydraulic infrastructure, mainly dams and weirs in the country, whether privately or publicly owned. It facilitated development, maintenance and update of comprehensive geospatial database on dams and weirs in order to facilitate storage and retrieval information for decision making. In addition to updating the statistics and producing thematic maps of hydraulic

structures countrywide, the programme also provided a basis for recommending appropriate action (rehabilitation, maintenance or decommissioning) on the structures.

The Committee was further informed that as part of its implementation plan, the Ministry of Water Development and Sanitation had undertaken an inventory in eleven districts, namely, Nyimba; Sinda; Petauke; Katete; Kasenengwa; Chipata; Isoka; Nakonde; Chinsali; Shiwang'undu; and Mpika under the Luangwa Catchment. Further, partial works had been conducted in Monze; Mazabuka; Gwembe; and Pemba Districts under the Magoye Sub-catchment; and Serenje; Chisamba; Kabwe; Mkushi; and Chitambo districts under the Lunsemfwa Sub-Catchment.

The Committee was informed that the Government, through the Ministry of Water Development and Sanitation, was undertaking specific measures aimed at harnessing water resources as outlined below.

- (i) Enhanced compliance and monitoring and enforcement of the provisions of the Water Resource Management Act and the regulations through employing more inspectors and other technical staff. Further, taking the services of the Water Resources Management Authority close to the people by opening up new satellite offices in Chipata, Solwezi and Mansa to add to the four existing catchment offices;
- (ii) Signing of Memoranda of Understanding with various local authorities to advance cooperation through establishment, collaboration, management and operation of water resources protection and preservation in selected areas;
- (iii) Countrywide identification and mapping of potential water resources protection areas for subsequent declaration as water resources protected areas;
- (iv) Implementation of an equitable water allocation and permitting system for commercial water users;
- (v) Enhanced enforcement of groundwater regulation to ensure sustainable development and management of groundwater resources;
- (vi) Undertaking catchment area based assessments of water resources to determine current and future water availability in light of growing water demand in order to inform planning and permitting;
- (vii) Enhance public awareness to educate members of the public on the importance of sustainable water resources management;
- (viii) Ensure enhancement of flood forecasting and timely information dissemination to stakeholders; and
- (ix) Catchment delineation and protection.

The Committee was informed that the Government was also undertaking various water resources developments aimed at harnessing water as listed hereunder.

- (i) Construction, rehabilitation and maintenance of small, medium sized dams and weirs across the country to enhance the existing water storage infrastructure to ensure more water was harvested for various socioeconomic uses.

- (ii) Development of groundwater resources by construction and rehabilitation of boreholes to improve availability of water for various uses.
- (iii) Promotion of rainwater harvesting at community and national levels.
- (iv) Identification and mapping of aquifers as well as aquifer exploration and development to profile the groundwater resources in Zambia.
- (v) Management of transboundary surface water resources and aquifers to ensure water security as well as regional integration under the River Water Basin Commissions; and
- (vi) Undertaking inventory of water resources infrastructure such as dams and weirs to have data and information on the number of dams across the country to assist the management and development of infrastructure.

8.3.1 SUBMISSION BY STAKEHOLDERS ON MEASURES TO PROTECT AND HARNESS WATER RESOURCES

The Committee was informed that the effects of climate change and adverse human activities were putting pressure on the water resources and hence the need to put in place measures to protect and harness water. The Committee learnt that increasing storage facilities by constructing new dams and rehabilitating existing ones was of paramount importance. The Committee was further informed that the country should invest in technologies that could for instance divert water from excess areas or catchments to scarcity areas through linked waterways. The country should also invest in technologies that could recycle polluted water for other uses.

The Committee learnt that the agriculture sector was one of the largest single user of water and impacted the quantity of available water for other uses. Stakeholders further informed the Committee that efficient utilisation of water in the agriculture sector, was paramount given the recurring droughts and other extreme weather events that threatened the sustainability of agriculture and food security.

8.3.2 SUBMISSION BY THE MINISTRY OF WATER DEVELOPMENT AND SANITATION ON THE ESTABLISHMENT OF LUAPULA RIVER AUTHORITY

The Committee was informed that the Luapula River was part of the Congo Basin and the second largest river basin in the world after the Amazon and the largest in Africa. On an annual basis, 1260 billion cubic meters was discharged from the basin into the Indian Ocean at the Democratic Republic of Congo border. The Committee learnt that the Congo Basin traversed nine riparian states namely; Zambia, United Republic of Tanzania, Burundi, DRC, Cameroon, Central African Republic, Congo Brazzaville, Angola and Rwanda. Further, the entire Congo Basin covered about 12 percent of the African continent landmass.

The Committee learnt that the Congo Basin was governed by the Revised Southern African Development Community Protocol on Shared Watercourses of 2000. The Protocol aimed to foster enhanced cooperation for judicious, sustainable and co-ordinate management, protection and utilisation of shared watercourses and to advance the Southern African

Development Community agenda of regional integration and poverty alleviation. In order to achieve the overall objective, the Protocol sought to undertake the following:

- (a) promote and facilitate the establishment of shared watercourses agreements and Shared Watercourse Institutions for the management of shared water courses;
- (b) advance the sustainable, equitable and reasonable utilisation of the shared watercourses;
- (c) promote a coordinated and integrated environmentally sound development and management of shared watercourses;
- (d) promote the harmonisation and monitoring of legislation and policies for planning, development, conservation, protection of shared watercourses, and allocation of the resources thereof; and
- (e) promote research and technology development, information exchange, capacity building, and the application of technologies in shared watercourses.

The Committee was informed that Zambia as a member state of SADC was obliged to manage and develop water resources of the Congo Basin in line with the protocol. In that regard, Zambia proposed from the established of the Luapula River Authority to be jointly owned with the Democratic Republic of Congo. The Committee was further informed that the establishment of the Luapula River Authority was necessitated by the fact that the Luapula River was a transboundary water body faced with challenges that included underdevelopment, unsustainable fishing and security. The challenges could only be overcome by enhancing transboundary water cooperation and benefit sharing between Zambia and the Democratic Republic of Congo through joint establishment of a bilateral arrangement such as the proposed Luapula River Authority.

The Committee learnt that the proposed Luapula River Authority would be a multipurpose vehicle with the mandate of promoting hydropower generation, fishing, tourism, transport and agriculture, among others.

8.3.3 STATUS OF THE LUAPULA RIVER AUTHORITY

The Committee was informed that a Technical Working Group on the establishment of the Luapula River Authority had been constituted. Consequently, the Technical Working Group had in put in place a draft roadmap on the establishment of the Luapula River Authority. However, a comprehensive roadmap was yet to be compiled which would incorporate the input of Democratic Republic of Congo. The Committee was informed that establishment of the Luapula River Authority as a corporate body would be through parallel legislation in the respective Parliaments of Zambia and Democratic Republic of Congo. Once enacted in respective countries, the legislation would then determine the structure of the Authority in terms of establishment of the Council of Ministers, Board of Directors and the executive management.

8.4 CHALLENGES IN WATER RESOURCE MANAGEMENT IN ZAMBIA

(i) Pollution of Surface and Ground Water

The Committee was informed that water pollution from agricultural and mining activities presented a huge challenge to water resource management. The problem was caused mainly by some mining companies, industries and commercial farmers failing to pre-treat the water in their production processes. The Committee was further informed that surface runoff and leakages of underground fuel tanks also had potential to pollute both surface and underground water.

(ii) Inadequate Funding to Water Resources Management Authority

The Committee learnt that the water sector was underfunded even though water resource management was an expensive exercise requiring constant monitoring, collecting and analysing data to inform allocation of water resources to key drivers of the economy in the country. In addition, the Water Resources Management Authority was operating at less than half its statutory capacity due to the inability to fill vacancies in its establishment. This had severely impacted the effectiveness of the Water Resources Management Authority in meeting its mandate and had given it negative publicity among the water users.

(iii) Weak Enforcements

The Committee was informed that weak enforcement of legal provisions and non implementation of policies relating to groundwater management caused by inadequate human capacity and technology, had led to overexploitation of the resource. The absence of clear guidelines on exploitation of groundwater resources had made the situation even worse.

(iv) Climate Change

The Committee was informed that climate change was a major threat to both the quality and quantity of the country's water resources due to the increase in the frequency and intensity of extreme events such as floods and droughts. Environmental degradation caused by indiscriminate cutting down of trees, was another major problem, leading to desertification and drying up of water basins, especially in the Southern Province, because the rainfall cycle had been severely disturbed.

(v) Rapid Population Growth and Proliferation of Unplanned Settlements

The Committee was informed that Zambia's population was growing at nearly 3 percent per annum, and stood at about K19 million with 45.3 percent of the population residing in urban and peri urban areas. Without a doubt, such a demographic trend had definite implications for water security in terms of water availability in quantity and quality.

Stakeholders informed the Committee that the mushrooming of unplanned settlements and poor planning had resulted in the conversion of water recharge zones into dwelling and/or industrial areas, which was a major threat to both the country's underground water quantity and quality. As a result of unplanned settlements, there was over abstraction of groundwater and encroachment on groundwater recharge zones.

(vi) Human Encroachment on Aquatic Ecosystems

The Committee heard that human encroachment on ecosystems was a global threat for aquatic ecosystems, particularly in urban settlements. In Zambia, rapid expansion of human settlements particularly in urban areas had caused encroachment on aquatic ecosystems such as rivers and wetlands. Stakeholders further informed the Committee that human settlements had been established on riparian zones of rivers, recharge zones for groundwater systems and wetlands to the effect that the flow regimes had been altered leading to water resources degradation in quantity and quality.

(vii) Limited Human Capacity in the Water Sector

The Committee learnt that inadequate human capacity for the development and management of sustainable water resources was by far, the greatest threat to the vision of equitable and sustainable use, development and management of water resources for the management of water resources for wealth creation, socio-economic development and environmental sustainability by 2030. The Committee further learnt that higher education institutions that trained students in water-related disciplines had limited infrastructure and facilities to impart the relevant competencies and skills.

(viii) Failure by Local Authorities to Collaborate with Water Sector Stakeholders

The Committee was informed that there was no legal requirement for local authorities to collaborate with commercial utility companies to develop parcels of land that were given out as plots. Further, the revenue collected by local authorities, excluded funds for the water utilities to service the areas. Consequently, residential plots were allocated without water and sanitation services and most residents of these plots resorted to on-site sanitation as a solution. The Committee heard that the lack of service provision regulation had resulted in most faecal sludge not reaching the treatment plants (illegal dumping), unhealthy emptying methods that risked public health and pollution of groundwater resources due to poorly constructed sanitation facilities.

(ix) Unclear Mandates of Water Sector Stakeholders

The Committee was informed that players in the water sector had either overlapping or to some extent, unclear mandates. There were no mechanisms in place of how, for instance, the Ministry of Infrastructure, Housing and Urban Development; Ministry of Agriculture; Ministry of Lands; Engineering Institution of Zambia; National Council for Construction;

and Local Authorities, could collaborate with the Ministry of Water Development and Sanitation.

(x) Lack of Information on the availability of water resources

The Committee learnt that the non-availability or partial information on the available water resources, changes in quality and the state of other physical and socioeconomic conditions, posed fundamental challenges in terms of planning and design of sustainable, economically efficient water projects. Tied to the problem of lack of information, was the issue of technological challenges in the collection of data. Most data collection platforms used manual systems, which resulted in data uncertainties. In some cases, human error from semi-skilled data recorders led to errors in information about water resource availability and dynamics. The implementation of an initial national groundwater monitoring network had stalled due to lack of funds. Therefore, data capture was slow and was limited to selected parts of the country and the basic hydrogeological map, which was forty years (40) old. The Committee was informed that the Water Resources Management Authority Government should consider transitioning to electronic data management in the water sector.

(xi) Failure to Fully Operationalise the Organisational Framework of the Water Resources Management Sector

The Committee was informed that the organisational framework of the water resources management sector was not yet fully set up. The Committee was further informed that according to the Joint Annual Water Sector Review Report of 2018, the recruitment of staff had commenced in five out of six (6) catchment authorities and the task of establishing Sub Catchment Councils and Water Users' Associations was still pending. This had affected the smooth implementation of activities.

(xii) Failure to Seize Opportunities on Transboundary Watercourses

The Committee was informed that Zambia had not taken keen interest in how it could benefit from shared water courses between itself and Democratic Republic of Congo.

8.5 LOCAL TOUR

The Committee undertook local tours to the Central, Copperbelt and Southern Provinces. The major findings of the Committee's findings are presented below.

8.5.1 Tour of the Magoye Catchment Protection Measures Sites - Mutama-Bweengwa and Magoye River Headwaters

The Committee was informed that Accelerate Water and Agriculture Resources implemented catchment restoration programmes under the auspices of the Germany Agency for International Cooperation and the European Union. The Committee was further

informed that the main objective of the programme was to ensure improved climate-sensitive water management and efficient use by small-scale farmers in the lower Kafue Basin. In that regard, the Mutama-Bweengwa Catchment Protection Site; Magoye Headwaters; and Mweemba Musende Catchment Restoration Sites, were part of the Accelerate Water and Agriculture Resources programmes.

The Committee visited the Mutama-Bweengwa and Magoye River Headwaters Catchment Protection Measures Sites in Pemba. During its visit, the Committee noted that the catchment protection interventions at the two sites were implemented by a shadow Water User Associations and District Expert Team comprising officers from the District line Government ministries and community members. The Committee was informed that the actual works undertaken towards restoring the catchments included digging of 15,585m of soil bunds, 945m of trenches along contours, planting of 7,000 indigenous trees; gully treatment (reshaping and planting grass) and construction of permeable Check dams. Regarding the interventions carried out on site at the source of Magoye River, the Committee learnt that a team comprising the Water User Association, District Expert Team and community members implemented the restoration measures. The Committee further learnt that the works involved digging of 5m soil bunds measuring 6,250m, 1,725m of trenches along contours and planting of an estimated 9,000 indigenous trees. The volume of rainwater that was estimated to be harvested and percolated into the ground per storm once all the measures had been implemented, was estimated at 3.3 million liters.

8.5.2 Tour of the Mweemba Musende Catchment Protection Measures Site and Magoye River

The Committee was informed that interventions carried out at the Site included digging of soil bunds, trenches along contours, planting indigenous trees planted, gully treatment (reshaping and planting grass) and construction of the permeable Check dam. The Committee learnt that there was rampant sand mining happening right on the banks of the Magoye River defying the statutory 50 metres buffer zone away from banks of the river. This had resulted in excessive siltation of the river channel. The Committee was informed that it was difficult to control the vice as the community had no alternative sources of income to support their households. That notwithstanding, the Committee learnt that in the areas that Catchment Protection Measures had been implemented, there was progress as evidenced by the trickling of water into the rivers and streams, including healthy grazing pastures.

In light of the above, the Committee notes conclusions as set out below.

- (i) All the Water User Associations that the Committee visited were operating without any legal backing. This was as a result of failure by the Government to pass statutory instruments for the General Regulations that were supposed to give effect to the establishment of the decentralised water resources governance structures (Catchment Councils, Sub-catchment Councils, and Water User Associations).

- (ii) The Water Resources Management Authority was mandated under the *Water Resources Management Act, No. 21 of 2011* to superintend over catchment protection matters but due to limited funding and low staff establishment, the Authority was unable to fulfill its mandate in totality.
- (iii) The sand mining taking place Magoye River was a source of great concern both to the surrounding communities and the environment.
- (iv) Weak enforcement of legal provisions and non-implementation of policies relating to groundwater management had led to overexploitation of the resource.
- (v) Evidence of developments and agricultural activities taking place too close and/or in the worst circumstances right in the river were a source of concern.

8.5.3 Tour of Lukanga Water Supply and Sanitation, Kabufu Water Supply and Sanitation and Nkana Water Supply and Sanitation Company

8.5.3.1 Lukanga Water Supply and Sanitation Company

The Committee was informed that Lukanga Water Supply and Sanitation Company operated in nine Districts, namely; Chibombo; Chisamba; Kabwe; Kapiri Mposhi; Mkushi; Serenje; Mumbwa; Itezhi tezhi; and Shibuyunji. The company was yet to commence operations in three districts namely, Chitambo, Luano and Ngabwe. The Committee was further informed that the company serviced a population of 500,000 with customer connections of about three thousand two hundred (3200). Its turnover was K53.3 million in 2019 and K64 million in 2020. It produced 14.2 million cubic metres of water per year and treated sewer effluent of up to 202 million cubic metres per year. The company was involved in the following projects:

- (i) Makululu Project:- valued at K64.5 million whose main objective was to produce clean and safe water and improve supply to more than 50,000 people in Makululu and surrounding areas.
- (ii) Integrated Small Towns Project:- covering Kabwe, Kapiri Mposhi, Mkushi, Serenje and Mumbwa. The Techno Economic Studies had been completed and the design report were being awaited.
- (iii) New Serenje Project:- aimed at providing clean drinking water to more than one 1200 houses, health facilities and schools. In terms of progress made, three boreholes had been drilled, a tank and 32 kilometres water system network have been installed. K8.8 million was required to complete the project.
- (iv) Mulungushi Treatment Plant Improvement Project:- valued at US\$2 million meant to rehabilitate the water treatment plant and restore capacity through replacement of main equipment and rehabilitation of civil and auxiliary equipment and systems. The designs had been completed and the Ministry of Finance had written to the African Development Bank for realignment of funds.
- (v) Shamabanse Sewer Line Rehabilitation Project:- whose primary objective was to collect sewer effluent from the industrial and town centre areas. The project was about 97 percent complete.

- (vi) Mumbwa Water Restoration Project;- under the project seven boreholes were expected to be drilled and dam rehabilitation with dredging and desilting works.

8.5.3.2 Kabufu Water Supply and Sanitation Company

The Committee was informed that the company serviced Ndola, Luanshya and Masaiti with a total population of about K1 Million. The Company had water supply coverage of about eighteen to nineteen hours per day. The Committee was further informed that once the Kafulafuta Dam Project was completed, Mpongwe District would be part of the serviced areas with a stand alone water supply system.

The Committee was informed that the company had implemented a number of projects which included the Kariba Sanitation Project (Bio-gas) that was completed in 2013 and financed by the Devolution Trust Fund at a total cost of US\$3.8 million. The Emergency Water and Sanitation Interventions Project, financed by the Zambian Government, which cost US\$19 million and was completed in 2013. Another notable project involved the Kafulafuta Dam Water Supply System Project which was aimed at improving water supply in Ndola; Luanshya; Mpongwe; and Masaiti Districts. The Project targeted 678, 800 beneficiaries and 160, 000 cubic meters of water would be extracted from the 125 million cubic meters dam every day to supply the four towns.

The Committee was informed that once completed, the project would result in increased water supply hours from an average of 18 hours to 24 hours per day, reduce water loses from 64 per cent to 35 per cent through replacement of old infrastructure and increase Kafubu Water Supply and Sanitation Company's customer base from 504, 000 to 678, 800, in addition to improving the utility's revenue base.

The Committee was further informed that the Kafulafuta Dam Water Supply System Project which was at 85 percent completion stage was suspended in 2020 following failure by the Government to pay the contractor, US\$43 million was required to complete the project. The Committee was further informed that Kabufu Water and Sanitation Company, the Ministry of Finance and Planning together with the contractor held a meeting to discuss payment modalities for the remaining works. Arising from the meeting, a resolution was made to pay the contractor an initial amount of US\$30 million and US\$9 to be paid on a quarterly basis until the year 2025. However, the Committee was informed that no payment had been made and the project was still on hold.

The Committee was also informed that the Government owed Kafubu Water and Sanitation Company a total of K27 million in unpaid water bills. The water utility company had written to the Secretary to Treasury to request for payment and to debt swap part of the debt towards statutory obligations that the utility company had not fulfilled. However, the committee learnt that nothing had been done to that effect. The Committee visited the Kafulafuta Dam Water Supply System Project to appreciate the status of the remaining works yet to be completed.

8.5.3.3 Nkana Water Supply and Sanitation Company

The Committee noted that the company operated in three towns namely Kitwe, Kalulushi and Chambishi with 72,959 customers. In terms of water service, water supply was at 98 percent while sanitation coverage stood at 79 percent. The Committee was informed that metering coverage was at 90 percent and constancy of water supply was about eighteen hours per day. The company produced 180,000 cubic metres per day of water and treated about 65,000 cubic metres per day of sewage. Despite the positive statistics, the company experienced challenges as listed hereunder.

The Committee notes that all the commercial utility companies visited shared common challenges as set out below.

- (i) Non-cost reflective tariffs.
- (ii) Encroachment of water resources and other properties coupled with lack of title deeds.
- (iii) Indiscriminate drilling of boreholes and shallow wells in serviced areas.
- (i) Owed colossal sums of money in unpaid water bills
- (ii) Water utility companies were subjected to purchase chemicals to treat water at exorbitant prices due to the fact that the suppliers of the commodity had monopolised the business.
- (i) Old dilapidated water infrastructure and inadequate metering leading to high Non-Revenue Water.
- (ii) Old aged sewer network infrastructure leading to sewer flooding.
- (iii) High Cost of doing business (Energy, fuel and maintenance materials).
- (iv) Illegal Connections, vandalism and thefts.
- (v) High turnover of professional staff.
- (vi) Pollution of raw water sources.
- (vii) Uncoordinated and unplanned settlements made it difficult to undertake water reticulation.

8.5.4 Lunsemfwa Hydro Power Corporation

The Committee was informed that the Lunsemfya Hydro Power Company Limited worked closely with the Water Resources Management Authority in the Luangwa catchment Office, farming community and other stakeholders in the area. The Committee was further informed the collaboration had resulted in the establishment of the Mulungushi Water User Association. In addition, plans were underway to establish the Lunsemfwa sub-catchment Water User Association. However, the process to fully establish the two Water User Associations had stalled because the Minister of Water Development and Sanitation had not issued the necessary Statutory Instrument as required by the law. The Committee was informed that Lunsemfya Hydro Power Company Limited was willing to offer support towards financing of water resources and environmental management activities in the Lunsemfwa, Mulungushi and Mkushi Catchment areas.

The Committee was further informed that increased irrigation activities upstream had an effect on water abstraction, which consequently affected the downstream available water resource for hydro power generation. The Committee was informed that according to the Report on the Munshibemba Sub-Catchment Hydraulic Structures Capacity Estimates, that was conducted in 2018 by the Water Resources Management Authority Luangwa Catchment Office, there were observed abstraction points observed from satellite imagery within the Lunsemfwa Catchment likely not to be documented and could be deemed illegal.

The Committee was informed that the *Water Resources Management Act, No. 21 of 2011* provided a very good basis for investment in Hydro Power Generation in terms of water permits. The Committee further learnt that a permit validity period of twenty to thirty years was a reasonable timeline to recoup the investment. The Committee was further informed that failure by the Government to actualise and fully implement the legal framework through Statutory Instruments to operationalise the Water Governance Structures was a source of concern. Key challenges included those outlined below.

- (i) There were competing water needs with upstream water users, mainly commercial agriculture farmers. The problem had been compounded by a number of clusters of small scale farmers along the rivers.
- (ii) High encroachments on headwaters and riverbanks through uncontrolled housing developments in upstream areas, as well as sand mining activities.
- (iii) Indiscriminate cutting down of trees in recharge areas.
- (iv) Adverse effects of climate change resulting in poor rainfall in the upper reaches of the catchments.

The Committee's key findings are set out below.

- (i) The Water Resources Management Authority was unable conduct inspections and take appropriate action regarding the illegal abstraction activities in the Luangwa Catchment area due to limited funding and staff.
- (ii) Lack of investment in Research and Development through exploration of possibilities of water transfer schemes from rich catchments to stressed ones.
- (iii) Over subscription or issuance of water permits in the Lunsemfwa Catchment, without taking into account the water yield.

8.5.5 Konkola Copper Mine

The Committee was informed that Konkola Copper Mines comprised of Konkola Mineral Resources and Konkola Copper Mines Smelterco. The company obtained dewatering and water use permits including those for boreholes for its operations from the Water Resources Management Authority. The Committee was further informed that the Konkola Copper Mine experienced risks in the course of its operations in terms of water pumping column failures in the shafts, national power grid failures, electrical substations and pump failures in the pump chamber. In that regard, the company employed various safety

measures, such as emergency flooding procedures, emergency flooding response team and stage pumping.

The Committee was further informed that the availability of power capacity from ZESCO Limited as of March 2022 was 1,540.7 megawatts but 1,370.7 megawatts was what was recommended for generation. Further, the electricity cost to dewater KCM was about US\$ 3.8m per month, this was necessary in order to safeguard the mining infrastructure from flood damage. The Committee learnt that there was need to establish another pump chamber in the future to allow for mining access to the copper deposit at KCM. The Committee was informed that the installation of an additional chamber was expected to increase KCM's dewatering levels to 600,000 cum per day and would result in about 92.6MW of additional power capacity and raise the dewatering cost to about \$5.2m per month. In that regard, KCM's total power capacity would then be expected to be in the range 285 to 300 mega watts.

The Committee was informed that in order for Konkola Copper Mine to meet the energy deficit, it had engaged third party experts to carryout high-level studies on the possibility of self-generation. The first option that was being considered involved a Mini Hydro Electric Power Project. A company called Tata from India had been engaged to carry out the study and establish the viability of generating mini-hydro power from the underground discharge water at Konkola Copper Mine. The second option was through a Photovoltaic Solar-Wind-Battery Hybrid Power Project to be implemented under a Joint Venture between North American Development Group, Pele Green and the Zambia Consolidated Copper Mines –Investment Holdings.

8.5.6 Stakeholders' meeting in Chingola (Office of District Commissioner, Mulonga Water Supply and Sanitation Company, District Education Board, District Health Office, Depart of Water Resources Development)

Mulonga Water Supply and Sewerage Company

The Committee was informed that Mulonga Water Supply and Sanitation Company serviced Chingola, Chilabombwe and Mufulira towns, with about nine to ten hours of supply per day. The company's monthly electricity bill was K4,000,000 and only K500,000 was paid per month towards offsetting the bill, resulting in an increase of about K3.5 million per month as arrears. The Committee was further informed that the outstanding water bills for Government institutions stood at K20,595,099.64, as at 31st March, 2022. The Committee was also informed that the company's operations profit and loss for the 2020 and 2021 financial years was 2 million (loss) and K12.1 million (profit), respectively.

The Committee was informed that the company with the support of the European Investment Bank, Agence Française de Développement and the Government of the Republic of Zambia was implementing the Zambia Water and Sanitation Project. The aim of the project was to rehabilitate and expand the water and sanitation infrastructure in the three towns serviced by the utility serviced.

During the stakeholders' meeting, the Committee learnt that there were increased acts of vandalism and theft of ZESCO Limited infrastructure in Chingola. As a result, some Government institutions, including health institutions, companies and households were subjected to prolonged periods without electricity. The Committee further learnt that owing to the gravity of the matter a task force comprising the District Commissioner's Office; Office of the President; Police; ZESCO Limited; the Church; and members of the community, had been constituted to try and address the problem. The Committee was further informed that while the efforts of the task force had yielded some positive results in bringing the crime levels down, the issue of theft of copper cables remained a serious concern in Chingola.

8.6 FOREIGN TOUR OF LESOTHO

During the course of its work for the First Session of the Thirteen National Assembly, the Committee undertook a foreign tour to Lesotho. The Committee visited the Mohale Dam under the Lesotho Highlands Water Project and interacted with Government Ministries, Departments and Institutions, namely; the Ministry of Water, Lesotho's Water and Sanitation Company, RENOKA and the Lesotho Electricity and Water Authority. The key findings of the Committee during its foreign tour are summarised below.

8.6.1 Tour of Mohale Dam

Prior to undertaking the tour of Mohale Dam, the Committee received a briefing on the genesis of the Lesotho Highlands Water Project. The Committee was informed that the Project could be traced as far back as the 1930s during the colonial era. The Project came to fruition in 1986 following the signing of a Treaty between the Kingdom of Lesotho and the Republic of South Africa. The Committee was further informed that the 1986 Executive Order resulted into the establishment of the Lesotho Highlands Development Authority

Thereafter, amendments were made to the 1986 Treaty which resulted into Protocol VI of 1999. The revised Protocol informed the restructuring of the functions, powers, and obligations of Lesotho Highlands Development Authority, Trans Caledon Tunnel Authority and Lesotho Highlands Water Commission. The Committee was further informed that the Lesotho Highlands Development Authority Amendment Act of 2000 culminated into the Domestication in Lesotho of the 1999 Protocol and later the Agreement of Phase II of the Lesotho Highlands Water Project in 2011. The Committee was also informed that the project took long to commence due to the fact that the negotiations started at the time when the Kingdom of Lesotho was still under colonial rule. The delay was also attributed to the strained bilateral relationship of the Kingdom of Lesotho and that of the Republic of South Africa at the time.

The Committee was informed that the Lesotho Highlands Water Project had resulted into the construction of the Mohale and Katse Dams with the later being the second largest dam in Africa. The Muela Hydropower Station and associated tunnels which were completed in 2003 and inaugurated in 2004, were built as part of the project deliverables. The

Committee was further informed that Phase II of the Lesotho Highlands Water Project was in progress and consisted of two separate but related components namely, water transfer and hydropower generation. Feasibility studies were in the process of being completed for the hydropower component of Phase II.

During the tour of the Mohale Dam, the Committee was accompanied by Honourable Members of the Committee on Natural Resources, Tourism and Land Cluster from the Parliament of the Kingdom of Lesotho and officials from the Lesotho Highlands Development Authority. The Committee appreciated the massive infrastructure development at the Mohale Dam. The Committee also visited one of the houses of the people who had been resettled as result of the project.

8.6.2 Rational for the Lesotho Highlands Water Project

The Committee was informed that the Lesotho Highlands Water Project was a multi-phased project aimed at providing water to the Republic of South Africa and hydro-power for the Kingdom of Lesotho. The Committee was further informed that the project involved harnessing the water from the Senqu and Orange rivers into the Lesotho Highlands through the construction of a series of dams for the mutual benefit of the two countries. It was noteworthy that prior to commencement of the project, two options were available on which the project could be implemented namely; the Lesotho Highlands Water Project) and the Orange Vaal Transfer Scheme at a cost of 1.6825 Billion Rands and 3.4618 Billion Rands, respectively. The Committee learnt that the Lesotho Highlands Water Project was selected based on the computation of the operating costs of each scheme whose conclusion was that the Orange Vaal Transfer Scheme would be twice as expensive as the Lesotho Highlands Water Project.

8.6.3 Financial Arrangements and Responsibilities

In terms of the financial benefits for the two countries, the Committee learnt that the Republic of South Africa collected rates in that country which were shared on the basis of 56 percent on the part of Lesotho and forty-four per cent for the Republic South Africa. With regard to the governance structure, the Committee was informed that the Lesotho Highlands Water Commission provided oversight responsibility and represented both the Republic of South Africa and Kingdom of Lesotho. The Committee also learnt that the Ministry of Water and the Department of Water and Sanitation of the Kingdom of Lesotho and Republic South Africa, respectively, occupied the highest position of the governance structure. The Boards of the Lesotho Highlands Development Authority and the Trans Caledon Tunnel Authority reported to the Lesotho Highlands Water Commission which was headed by a Commission Secretary.

The Committee was informed that the Lesotho Highlands Development Authority managed the Lesotho Highlands Water Project infrastructure in Lesotho and was also responsible for the implementation of Phase II, supported by the project management unit. On the other hand, the Trans Caledon Tunnel Authority was accountable for the management and

maintenance of the Lesotho Highlands Water Project infrastructure in the Republic of South Africa. The Trans Caledon Tunnel Authority was also responsible for securing funding for the water transfer component of Phase II. The Committee further learnt that the Republic of South Africa was fully responsible for the water transfer costs, while the Kingdom of Lesotho assumed the hydro-power generation costs.

8.6.4 Environmental and Social Issues

The Committee was informed that in order to pave way for the project some individuals and communities lost their fields and grazing land. Therefore, any person that was found to have been affected by the project was eligible for compensation. Consequently, affected parties were compensated and resettled either as individuals or communally. The options available included compensation as a lump sum or paid as an annuity for a period of fifty years. The Committee was further informed that in order to empower the people and to protect the environment, fish farms and botanical gardens were established under the project. However, the Committee learnt that some of the beneficiaries were of the view that the Lesotho Highlands Water Project compensation was inadequate based on the fifty (50) year time frame and the fact that there was no compensation for surviving persons once the claimant died.

The Committee learnt that during implementation of Phase I of the project a plethora of some challenges were experienced as encapsulated below.

- (i) Lengthy approval processes meant that some components of the project could not be executed without the necessary authority.
- (ii) Incidents of corruption were reported under phase I of the project, especially in procurement matters.
- (ii) Delays in the domestication of the Phase II Agreement
- (iii) Long funding requirements as parties were required to meet the obligations of capital expenditure (OPEX) and operating expenditure (CAPEX)
- (v) Compensation and community issues.
- (vi) High Expectations (General Public, Communities and Principals)
- (vii) Wetlands degradation as a result of the project.
- (viii) Sedimentation of Muela Dam and Matsoku Weir that could affect the operation of the hydropower power station and reduced water diverted into Katse Dam.
- (viii) Ageing Infrastructure for both water transfer and hydropower, resulting in major maintenance works and high capital expenditure.

The Committee was informed that while the Kingdom of Lesotho and Republic of South Africa enjoyed a mutually benefiting bilateral relationship on its shared water course, the Lesotho Highlands Water Project is leaving behind a negative ecological footprint through the degradation of wetlands and siltation of water bodies. The Committee was further informed that no Environmental Impact Assessment was conducted for Phase I of the Lesotho Highlands Water Project. The omission had negatively impacted the social and environmental wellbeing of the country.

The Committee was informed that despite the above highlighted challenges, there were a number of benefits that accrued to both the Kingdom of Lesotho and Republic of South Africa. For instance, the Kingdom of Lesotho benefited as listed below.

- (i) Royalty Revenue of about 1,280 million Maloti per month as 2021.
- (ii) Cum Royalties Revenue equivalent to 12,646 billion Maloti (Jan 1998 to Feb 2022)
- (iii) High quality infrastructure (Roads, Bridges, Camps) which translated into improved access into the highlands area and greatly reduced travelling time
- (iv) Tourism potential as visitors were attracted to the water reservoirs, nature reserves and other features associated with the Project.
- (v) Job opportunities of more than 16,000 jobs and about 1 billion Maloti paid in wages under Phase I.
- (vi) Skills transfer to Basotho in terms of both blue and white collar jobs.
- (vii) Work for local Contractors and consultants.

The Republic of South Africa benefited as set out below.

- (i) High quality water of about more than 17,370 million m³ as at February, 2022.
Improved security of water supply for Gauteng Province thereby significantly reducing water treatment costs.
- (ii) Secure low cost water supply for mining, agriculture, household and other industries.
- (iii) Benefit to the country's contractors and consultants.

The Committee was informed that in addition to the benefits that accrued to the two countries, the Lesotho Highlands Project was show-cased as a successful bilateral co-operation and Transboundary Water Resources Management in the region.

8.6.5 Interaction with the Lesotho Ministry of Water

The Committee was informed that the Kingdom of Lesotho was well endowed with abundant water resources. Therefore, sustainable management of the resource was key to the socio-economic development for the country and its people. The Committee was further informed that the value of Lesotho's water was not only appreciated by its citizens but also by other states in the region owing to its strategic geographic location. The Committee learnt that the Ministry of Water was initially created as a stand-alone ministry in 2015 from the then Ministry of Energy, Meteorology and Water affairs. The ministry was mandated to develop, manage, and protect the nation's water resources to achieve sustainable provision of clean water, sanitation and promotion of hygiene services for the benefit of the people of Lesotho, and to contribute to the country's socio-economic development. The policy and legal framework that informed the management of water affairs in Lesotho was as outlined below.

- (i) The National Strategic Development Plan (2018-2023)
- (ii) Sustainable Development Goals (2016-2030)
- (iii) Water and sanitation Policy (2007)

- (iv) Water Act (2008)
- (v) Water and Sanitation Strategy (2016)
- (vi) Orange-Sengu River Commission (ORASECOM) Agreement
- (vii) Revised SADC Protocol on shared water courses (2000)

The Committee was informed that the country was in the process of establishing the Lesotho Bulk Water Authority to oversee water infrastructure development. The Committee was further informed that apart from funds appropriated by Parliament, the ministry received financial assistance from the World Bank, European Union European Investment Bank, Germany International Cooperation and the Africa Development Bank, among others. Lesotho's water sector was marred with some challenges which included but not limited, lack of integrated planning, lack of legislation on water supply and sanitation and high turnover of skilled personnel in the field of water.

The Committee learnt that the Department of Water Affairs had five key functions namely, water resources assessment (quantity and quality) integrated catchment management Wetlands conservation and rehabilitation Water resources allocation, water resources use management and water resources pollution management. The country had one hundred and five (105) Hydrometric stations to measure the flow of water in rivers. The information derived from the assessment was disseminated to various stakeholders to inform decision making in the water sector. The Committee was further informed that wetlands were important ecological asset to the country and as such, robust strategies had been devised to conserve them. With regard to the challenges that the Department of Water Affairs faced, the Committee learnt that there were high staff turnover in the Department resulting in a shortage of skilled personnel. Other challenges included budgetary constraints and lack of high quality laboratories.

The Committee was informed that the Kingdom of Lesotho was considered the water tower of Southern Africa, it supplied 40 percent of the annual run-off of the Orange-Senqu river despite occupying only four percent of the basin's territory. Lesotho supplied water for agriculture, industry and households across the basin area, which was one of Africa's most economic centre. In terms of its contribution to Lesotho, the Committee learnt that the aquatic ecosystems in Lesotho were directly responsible for about 22 percent of the country's Gross Domestic Product and 30 percent of employment.

The Committee, however, learnt that Lesotho's river catchments were facing severe land degradation, which was an existential threat to water security for the country, the Orange-Senqu River Basin and to the livelihoods of the rural population in the catchments. The Committee further learnt that healthy catchments and wetland ecosystems were critical for the absorption of rainfall and eventual release into rivers and streams, as degraded catchments worsened floods and drought events increased soil erosion and siltation.

In order to mitigate the above highlighted challenges, the Committee was informed that an organisation called ReNOKA which meant (We are the river) spearheaded a national movement for integrated catchment conservation. ReNOKA used tools of Integrated

Catchment Management to facilitate stronger economic growth and climate resilience for Lesotho. The Committee learnt that ReNOKA represented a network of individuals, communities and professionals that were dedicated to the restoration of water, land, and the long-term prosperity of all communities.

8.6.6 Lesotho Water Supply and Sewerage Company

The Committee was informed that the Lesotho Water Supply and Sewerage Company was wholly owned by the Government of the Kingdom of Lesotho. The company was mandated to provide water supply and sanitation services to the urban population and operated in sixteen service centres. Its main source of funding was from the Ministry of Finance and Ministry of Water. The Committee was informed that the utility provided its customers with eighteen hours of water supply per day and had a customer base of about 115,000. The main challenges included those listed below.

- (i) High Revenue Water (HRW) of about 50 percent.
- (ii) Old and dilapidated infrastructure.
- (iii) High operational costs (energy and maintenance materials).
- (iv) High staff turnover; and
- (v) Non cost reflective tariffs.

8.6.7 Rural Water Supply

The Committee learnt that the Department of Rural Water Supply (DRWS) was responsible for overseeing water and sanitation services in rural areas. This was achieved through community managed water schemes and on-site sanitation. The Department had adopted a multisectoral approach in delivering water and sanitation services, key stakeholders included the traditional leadership, Area Councillors and Water Committees. The Committee further learnt that most of the rural water and sanitation projects were financed by the Government of the Kingdom of Lesotho with assistance from cooperating partners.

The Committee was informed that rural water supply in Lesotho was delivered by simple piped water systems serving individual villages and in instance where it was not possible, pumping systems were installed from either boreholes or springs using diesel, electrical or solar pumps. The systems typically served between two hundred (200) and two thousand (2000) people, with the shortest distance from the nearest water point being about 150 metres which was estimated to be the shortest in the Southern African Development Community region. In addition to the piped systems, approximately 25 percent of the rural population with access to potable water was served by hand pumps. These were mostly located in the lowland communities. The Committee further learnt that in addition to improving the service in the lowlands villages, the rural water sub-sector was faced with the task of reaching the un-served villages that are typically in the more remote mountainous areas of Lesotho.

8.6.7 Lesotho Water and Electricity Authority – LEWA

The Committee was informed that the Lesotho Water and Electricity Authority was a statutory body established in 2002 to regulate the electricity sub sector. Owing to the gap in the water sector, legislative reforms were undertaken during the period 2013 to 2014, to include aspects of urban water and sewerage services to the mandate of Lesotho Water and Electricity Authority. The Committee was further informed that Lesotho Water and Electricity Authority roles and functions were set out in the Lesotho Electricity Authority Act (2002) as amended in 2006 and 2011. In terms of the governance structure, the Authority was supervised by a seven Member Board and the Chief Executive Officer formed part of the Board. The Committee learnt that the Lesotho Water and Electricity Authority issued various categories of licences, for instance, the Muela Hydro Power Plan was issued with a generation licence only, the Lesotho Electricity Company was licensed to distribute, transmit and supply electricity and Independent Power Producers were at liberty to apply for generation licences. The Committee was further informed that the Lesotho Water and Sewerage Company was the only entity that was licensed to treat, produce, transmit, distribute and supply water. The company was also permitted to treat sewage and dispose of it safely into the environment through sewerage systems in urban areas.

The Committee learnt that Lesotho Water and Electricity Authority enjoyed financial and administrative independence. The Authority prepared its own budget which was approved by the Board. The Committee further learnt that Lesotho Water and Electricity Authority was not funded by the Government but earned its revenue from fees prescribed for any service offered by the Authority, levies on consumers, investments and monies earned or accrued, loans and grants. The staff establishment and terms and conditions of service were determined by the Board of the Lesotho Water and Electricity Authority. The members of staff enjoyed attractive terms and conditions of service which resulted in high staff retention.

The Committee was informed that in accordance with the law, service providers in the energy and water sector applied to Lesotho Water and Electricity Authority for tariff adjustments. The Authority ensured high levels of transparency and stakeholder participation in the tariff review process. The Committee learnt that all tariff determinations were published on the Lesotho Water and Electricity Authority website and Public Hearings held for all tariff decisions, including Public notices for licence applications.

8.7 COMMITTEE'S OBSERVATIONS AND RECOMMENDATIONS

The Committee notes that water cuts across many key economic sectors such as: agriculture; health; mining; and energy, among others. The Committee further notes that if well harnessed, this resource can contribute to the socio-economic development of the country and towards realisation of the Sustainable Development Goals on poverty; hunger; good health and wellbeing; including clean water and sanitation. The Committee, however, notes that the water sector is marred with a number of challenges which inhibit effective

water resource management. The Committee, therefore, makes the observations and recommendations as set out hereunder.

(i) Operationalise the Water Resources Management Act, No. 21 of 2011

The Committee observes that the *Water Resources Management Act, No. 21 of 2011*, in Sections 17, 19 and 24 provides for the decentralisation of water resource management through establishment of Water Catchment Councils, Sub-Catchment Councils and Water User Associations. However, no progress has been made to operationalise these structures since the law was enacted in 2011. The Committee finds this inexcusable as these structures can immensely contribute to effective and sustainable water resource management in Zambia.

The Committee, therefore, urges the Government to abide by the law and constitute the structures in accordance with the *Water Resources Management Act, No. 21 of 2011*. The Committee further recommends that the Government should ensure that the *Water Resource Management Act* is fully implemented.

(ii) Review the Water Resources Management Act

The Committee observes that the *Water Resources Act, No. 21 of 2011*, does not clearly define the roles and responsibilities of the different players in the water sector. For instance, the Department of Water Resource Development under the Ministry of Water Development and Sanitation performs some of the functions of the Water Resources Management Authority, thereby creating a conflict of interest and a vacuum as to who must be held accountable for failure to perform certain duties.

Another observation that the Committee makes relates to other pieces of legislation that interfere with the effective water resource management. A case in point is the *Forestry Act, No. 4 of 2015*, which mandates the Forestry Department under the Ministry of Green Economy and Environment to degazette forests without consulting the Ministry of Water Development and Sanitation. The Committee further observes that many of the challenges in the water sector stem from lack of coordination among the different stakeholders.

In light of the above, the Committee recommends that the *Water Resources Act* should be revised in order to harmonise it with other pieces of legislation that impact water resources in the country. The Committee further recommends that the Ministry of Water Development and Sanitation, should take a lead in coordinating and creating a collaborative platform for all players in the sector.

(iii) Intensify Efforts to Protect Ecologically Sensitive Water Recharge Areas

The Committee notes that the *Water Resource Management Act* in Section 29 (2) permits the Minister of Water Development and Sanitation based on a recommendation from the Board to declare, by statutory notice, a catchment, sub catchment or geographical area that

is ecologically sensitive to be a water resource protection area. However, no area has been designated as such since the enactment of the law in 2011. It is the Committee's considered view that if this trend is allowed to continue, the country risks running into a problem of water scarcity for both the current and future generations.

The Committee, therefore, recommends that in order to maintain the status of a water-secure country, the Government should, without fail, declare all sensitive water recharge areas as protected areas to prevent further deterioration of ecosystems.

(iv) Enhance Public Awareness on the Need to Protect Water Resources

The Committee notes that some of the challenges in the water sector are as a result of failure to enforce stipulated regulations by relevant institutions. For instance, there is in existence, Statutory Instrument No. 1 of 2000 - The Water Act (Protection of Public Streams and Sources of Water Supply) Regulations of 2000 that aims at regulating the disruption of river banks. It further stipulates that no development should take place along a river up to fifty metres. However, this regulation is not followed as evidenced by the existence of some developments that are close and/or in the worst circumstances right in the river. The Committee further observes there is limited awareness among members of the public on the importance of water and they are usually oblivious to the negative effects of their actions.

The Committee strongly urges the Government to ensure that the Water Resources Management Authority enhances its monitoring role to deter people from undertaking activities within the stipulated threshold prescribed under Statutory Instrument No. 1 of 2000 - The Water Act (Protection of Public Streams and Sources of Water Supply) Regulations, 2000 is strictly enforced to penalise would be offenders who contravene stipulated guidelines and regulations. In light of this, the Committee urges the Government to sensitise the public on the importance of sustainable water resource management, including the penalties for failure to abide by the law.

(v) Update the 2010 National Water Policy

The Committee notes that the 2010 National Water Policy is outdated and needs to be reviewed. The absence of a policy in the water sector has created a vacuum in terms of policy direction. The Committee further notes that the Policy is not harmonised with other key policies that impact on water resource management, such as the National Lands Policy of 2021; the National Policy on Environment of 2007; the National Water Supply and Sanitation of 2020; the National Policy on Climate Change of 2016; and the Agriculture Policy of 2016, among others.

The Committee recommends that the Government should, as a matter of urgency, review the 2010 National Water Policy and in the process take into account the different policies that impinge on effective water resource management in the country. The Committee

further recommends that the review of the Policy should boldly pronounce aspects of climate change and gender matters.

(vi) Develop Water Resource Infrastructure

The Committee observes that there are no meaningful investment flows in the water sector that can result in sustained water resource management and infrastructure development. Most of the dams in the country were constructed before independence and have not been upgraded to respond to emerging issues such as climate change. The Committee also notes that most of the water projects being undertaken in the country are funded by donors and cooperating partners.

The Committee, therefore, recommends that the Government should ensure that funds are channelled into the Water Development Trust Fund and employ other resource mobilisation strategies in order to develop water infrastructure in the country. The Committee further recommends that Government should take a lead in promoting water resource infrastructure development rather than relegated the responsibility to donors and cooperating partners.

(vii) Streamline the Composition of the Water Resources Management Authority Board

The Committee observes that the fourteen Member Board of Directors at the Water Resources Management Authority, is too bloated for an institution that is grappling with both human and financial resources for its operations. The Committee further notes that despite being a key stakeholder, the Ministry of Fisheries and Livestock is not represented on the Board. In this vein, the Committee recommends that the *Water Resources Act No. 21 of 2011* should be amended to review the composition of members on the Board and in the process consider including the Ministry of the Fisheries and Livestock. The Committee opines that the saving that will be made from this undertaking can be channelled to activities that can enhance water resource management in the country.

(viii) Provide adequate Human and Financial Resources to the Water Resources Management Authority

The Committee notes, with sadness, that the Water Resources Management Authority is underfunded and lacks adequate human capacity to discharge its mandate effectively. In this light, the Committee strongly recommends that the Government should commit significant financial resources to the Water Resources Management Authority to enable it fully discharge its functions, including effecting the full staff establishment without further delay.

(ix) Channel Resources towards Research and Data Collection

The Committee observes that the amount of groundwater in the country is not fully understood and this hinders effective water resource management. This problem is further

exacerbated by inadequate data and information. It is the view of the Committee that research will assist the Government to employ evidence based water resource management interventions.

The Committee, therefore, recommends that the Government should invest in Research and Development in the water sector to inform evidence based decision making and effective water resource management. The Committee further urges the Government to create collaborative partnerships with research institutions, academia and other relevant stakeholders to conduct in-country research studies.

(x) Strengthen and Develop Human Capital in the Water Sector

The Committee observes that there is a general lack of expertise in the water sector and that only a few institutions of higher learning offer programmes at diploma and masters level. Lamentably, these institutions that train students in water-related domain have limited infrastructure and facilities to impart the relevant competencies and skills. The Committee further notes that there is inadequate Government support towards learners who desire to pursue water related disciplines.

In light of the above, the Committee recommends that the Government should provide support to institutions of higher learning to in order to transform the training facilities into modern ones with the necessary infrastructure and equipment required to teach such a discipline. The Committee further urges the Government to take a deliberate effort and set aside a specific quota for bursaries for students who wish to study water resource management programmes given that the country is in dire need of such expertise.

(xi) Develop Water Resource Management Curriculum at Primary and Secondary Level

The Committee notes that the primary and secondary school curricula do not have aspects of water resource management. The Committee, therefore urges the Government to review the primary and secondary curricula to include subjects or topics of water resource management.

(xiv) Enhance Regional Cooperation on Transboundary Water Courses

The Committee observes that Zambia is not fully benefitting from some of its water basins despite them having potential to contribute to the socio-economic development of the country. The Committee further notes that there is little progress on the full establishment of the Luapula River Authority.

The Committee, therefore, recommends that the Government should, through the necessary diplomatic channels, enhance regional cooperation with other riparian nations on shared watercourses, especially on the Luapula River.

(xv) Curb illegal Sand Mining at the Magoye River

The Committee observes that if not addressed, the sanding mining activities taking place at the Magoye river will result in adverse effects to the ecosystem and communities living near the river.

The Committee, therefore, urges the Government to enforce Statutory Instrument No. 1 of 2000 - The Water Act (Protection of Public Streams and Sources of Water Supply) Regulations of 2000 that is meant to deter people from carrying any activities near a river. The Committee further urges the Government to explore ways of empowering the communities with alternative sources of livelihoods that do not negatively impact the environment.

(xvi) Enhance collaboration

The Committee observes that the Kafue and Mwambashi Rivers are highly polluted as a result of mining and agricultural activities, the two rivers are critical to the effective and sustained operations of the commercial water utility companies on the Copperbelt given that the Kafue River is the main source of water abstraction. The Committee further notes that the two water utility companies huge water treatment costs as a result of pollution from mining and agricultural activities.

In light of the above, the Committee recommends that the Government should enhance collaboration among stakeholders whose business activities impact the Kafue and Mwambashi rivers to ensure a fair and transparent business environment. The Committee further recommends that the affected water utility companies should invest in water quality monitoring systems and tools in order to effectively check pollution activities on the two rivers.

(xvii) Harness Water from Water Rich Catchment Areas

The Committee observes that the country has water rich catchment areas that it can leverage to benefit scarcity areas. The Committee, therefore, urges the Government to facilitate the financing of a proposal to undertake a feasibility study on the possibility of transferring water from the water rich catchments to stressed catchments.

(xviii) Expedite Acquisition of Title Deeds For Commercial Utility Companies

The Committee notes with concern that the majority of properties including land and infrastructure for nearly all commercial utility companies are not on title. As a result, some of the richest wellfields such as those for the Lukanga Water Supply and Sanitation Company are highly encroached and the utility company has no legal mandate to compel the illegal settlers to vacate the land. The Committee further notes that there is lack of collaboration between water utility companies and Local Authorities which results in disjointed planning.

In light of the above, the Committee urges the Government through the Ministry of Local Government and Rural Development to expedite the acquisition of title deeds for all water utility companies without further delay. The Committee also strongly urges the Government to enhance collaboration between the Local Authorities and water utility companies to ensure enhanced service delivery for the water supply and sanitation sub sector.

(xix) Explore other Means of Procuring Water Treatment Chemicals

The Committee observes that high cost of water treatment chemicals is an overarching challenge for most water utility companies and this has negatively affected the liquidity of most of the companies. This problem is exacerbated by the fact that there is only one supplier of the commodity.

In order to ameliorate this challenge, the Committee recommends that the Government should create an enabling environment and bring on board more players to supply the commodity. The Committee further urges the Government to consider setting up plants that can produce water treatment chemicals within the country.

(xx) Address High Prevalence of Non-Revenue Water

The Committee observes that that water infrastructure for most water utility companies are dilapidated and thus, high non-revenue water. The Committee, therefore, recommends that water utility companies should continuously monitor and carry out maintenance works on its water infrastructure to reduce non revenue water. As a long term measure, the Committee further recommends that the Government should prioritise and set aside funds to replace all old infrastructure in order to permanently deal with the problem of non revenue water.

General Observation and Recommendation

The Committee learnt that there is rampant vandalism of Zesco Limited infrastructure in Chingola, particularly copper electricity service cables. The challenge is compounded by the factor that there is a readily available illegal scrap dealer market for the products. The Committee further learnt that the penalties prescribed under the *Electricity Act, No. 11 of 2019* are not stringent enough to deter the perpetrators.

The Committee, therefore, recommends that the Government should amend the Electricity Act in order to stiffen the penalties for the people involved in the vice. The Committee further urges the Government to ensure that Zesco Limited transitions from using copper cables to aluminum cables in order to permanently deal with the problem of vandalism and theft of its infrastructure.

Photo Gallery – Local and Foreign Tour



Mutama-Bweengwa Headwater Catchment Protection Measures Site



Mutama-Bweengwa River Headwater Gully treatment



Check Dams Mutama-Bweengwa River Headwater Site Trees Planted



Water User Association Executive Member Mr. Likolo explains about the Check Dams



Check Dam at Mweemba Musende Catchment Protection Measure Site

Soil Bunds and Trenches at Mweemba Musende Catchment Protection Measure Site



Gully erosion at Mweemba Musende site

Group photo at Mweemba Musende site



Sand mining on Magoye River Bank near the Magoye Bridge on the main road



Members of the Committee with staff of Nkana Water and Sanitation Company



Members of the Committee and officials from Kafubu Water and Sanitation Company during the tour of Kafulafuta Dam

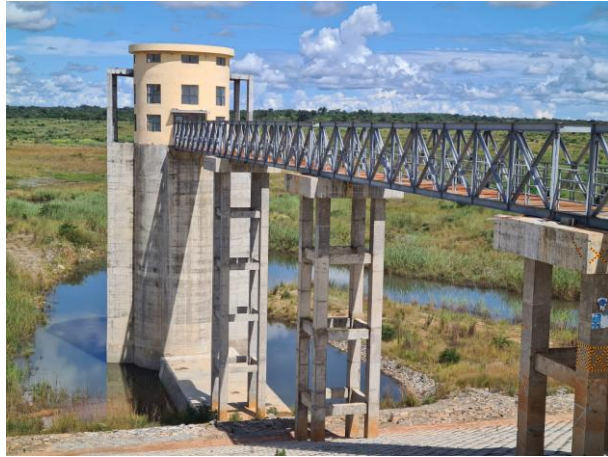


Photo Gallery – Foreign Tour



Members of the Committee with the Rt Hon Speaker of the Kingdom of Lesotho



Members of the Committee with their counterparts in Lesotho and officials from the Lesotho Highlands Water Development Authority during the tour of Mohale Dam.

PART II

9.0. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM FOR THE FIFTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY

9.1 Accommodation Classification and Grading System in Zambia

(i) Need to Amend the *Tourism and Hospitality Act, No. 13 of 2015*

The previous Committee had observed that it was difficult to enforce the law in the tourism sector due to the provisions of the *Tourism and Hospitality Act*, in particular sections 60(7), 61(4), 62, and 79, which stated that 'A person who contravened a provision of the Act for which a specific penalty was not provided, shall upon conviction, be liable to a fine not exceeding one hundred thousand penalty units or to imprisonment for a period not exceeding one year or both.' The provision entailed that no action could be taken against a person or entity that abrogated the law until a matter was determined in the courts of law.

The previous Committee recommended that the Government should amend the *Tourism and Hospitality Act*, in order to give powers to the Ministry of Tourism to enforce the law against defaulters summarily to ensure compliance in the tourism sector.

Executive Response

It was reported in the Action Taken Report that the amendment of the *Tourism and Hospitality Act, No. 13 of 2015* had commenced after Cabinet Approval, in principle, to amend the legislation. An internal consultation on the matter was still underway and would be completed within 2021.

Committee's Observations and Recommendations

The Committee resolves to await the review of the *Tourism and Hospitality Act, No. 13 of 2015*.

(ii) Need for a Grading Implementation and Resource Mobilisation Plan

The previous Committee had noted that the *Tourism and Hospitality (Accommodation Establishment Standards) Regulations, 2018, Statutory Instrument No. 14 of 2018*, did not provide a clear roadmap on how the grading system was to be implemented. In this regard, the Committee urged the Executive to devise a robust implementation plan that included a resource mobilisation strategy in order to accelerate the grading exercise.

Executive Response

It was reported in the Action Taken Report that Statutory Instrument No. 14 of 2018, provided a clear roadmap stipulating that an accommodation establishment was eligible for grading upon obtaining the tourism enterprise license in the second year of operation. However, the law did not exclude grading of accommodation establishments before the two-year period elapsed. The Government noted the Committee's recommendation and would work towards devising a resource mobilisation strategy to ensure continuous assessment of the establishments.

Committee's Observations and Recommendations

The Committee notes the Executive's response and requests a progress report on the formulation of a resource mobilisation strategy, as well as a timeframe within which it will be done.

(iii) Develop Training Programmes for Grading Experts

The previous Committee had noted, with concern, that none of the colleges and universities in the country offered training programmes or courses for assessors. Zambia relied on external support from within the region to train assessors. The Committee, therefore, urged the Government to collaborate with institutions of higher learning to develop curricula and study programmes for assessors.

Executive Response

Through the Action Taken Report, it was reported that the Ministry of Tourism was working with other Government institutions such as the Technical Education, Vocational and Entrepreneurial Training Authority and Zambia Institute of Tourism and Hospitality Studies to develop curriculum and programmes in standards and Grading for the tourism sector. To that effect, Technical Education, Vocational and Entrepreneurial Training Authority had accredited the certification of training for Assessors offered by Zambia Institute of Tourism and Hospitality Studies.

Committee's Observations and Recommendations

The Committee notes the response and awaits the development of curricula and study programmes for assessors. The Committee further requests for a timeframe within which this will be done.

10. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM FOR THE FOURTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY

10.1 The Petroleum Industry in Zambia: Challenges and Opportunities - Downstream Petroleum Sub Sector

(i) Address Infrastructure Challenges in the Downstream Petroleum Sub Sector

The previous Committee had requested a progress report on the engagement of a strategic equity partner to revamp and recapitalise INDENI Petroleum Refinery Company Limited. The previous Committee further requested an update on the proposed New Multi-Product Petroleum Pipeline from Dar-es- Salaam in Tanzania to Ndola in Zambia.

Executive Response

It was submitted in the Action Taken Report that a tender to procure a Strategic Equity Partner to modernise Indeni Petroleum Refinery was issued. However, the procurement process failed at negotiation stage. The Government was considering other alternatives on the matter. The Executive further reported that a Cabinet Memorandum had been drafted to approve the concept note, feasibility studies and financing modalities for the New Multi-Product Petroleum Pipeline from Dar-es- Salaam in Tanzania to Ndola in Zambia.

Committee's Observations and Recommendations

The Committee notes the response and requests a progress report on the matter.

(ii) Need to Procure a Diesel Hydro Treater Unit

The previous Committee had urged the Government to expedite the process of procuring a diesel hydrotreater to enable Indeni Petroleum Refinery process low sulphur diesel and consequently meet the regional requirement for the production of cleaner fuels as stipulated in the Southern Africa Development Community Regional Framework for Harmonisation of Low Sulphur Fuels and Vehicle Emission Standards.

Executive Response

It was reported in the Action Taken Report that the Industrial Development Corporation, was negotiating with the Strategic Equity Partner to ensure that the procurement of the diesel hydro treater was included in the partnership agreement. However, the procurement process failed at negotiation stage. Therefore, the Ministry of Energy was exploring other options to ensure that INDENI procured the diesel hydro treater.

Committee's Observations and Recommendations

The Committee notes, with concern, failure by the Government to facilitate the procurement of the diesel hydro treater. The Committee, therefore, requests for specific details on what the Government is doing to ensure procurement of the equipment.

(iii) Review of the Petroleum Act, Chapter 435 of the Laws of Zambia

The previous Committee had recommended that the *Petroleum Act* should be reviewed in order to align it with the key changes and developments that had taken place in the downstream petroleum sub sector since its enactment in 1930.

Executive Response

It was submitted in the Action Taken Report, that a draft layman's Petroleum Development and Management Bill to repeal and replace the *Petroleum Act, Chapter 435 of the Laws of Zambia*, was submitted to Ministry of Justice for drafting. It was further submitted that internal legislation at Ministry of Justice was completed and the Ministry had since reverted with comments to review the Bill with stakeholders. A roadmap to initiate reviews with key stakeholders was ready.

Committee's Observations and Recommendations

The Committee notes the response and requests an update on when the *Petroleum Act, Chapter 435 of the Laws of Zambia* will be repealed and replaced.

(iv) Curb Fuel Illegal Vending

The previous Committee had urged the Government to devise other strategies to deal with the problem of illegal fuel vending, so that the country could begin to realise revenue that was being lost as a result of non-remittance of the applicable taxes.

Executive Response

It was submitted in the Action Taken Report that the Energy Regulation Board had continued to implement the fuel-marking program. The programme had resulted in an improvement in the compliance levels of legitimate fuel being sold on the Zambian market from 79 percent at the start of the programme in 2018 to around 97 percent as at the close of quarter one of 2021. Further, there was an improvement on the quality of petroleum products being sold on the Zambian Market from around 87 percent at the start of the program to above 95 percent as at the close of quarter one of 2021.

It was further reported that ERB had continued to facilitate the activities of the Illegal Fuel Vending task team. The task team had carried out surveillance of illegal fuel vending areas

and was now in the process of undertaking raids. This was an ongoing exercise aimed at bringing the perpetrators of illegal fuel vending to book and thereby reducing the vice.

The following relaxed standards for setting up of service stations in peri-urban and rural areas at lower start-up costs were available for developers:

- (a) Zambian Standard: 703 Rural filling stations – Code of Practice; and
- (b) Zambian Standard: 385 part 4: The Petroleum Industry–Code of Practice; Above ground Containerised Tank Installation.

The enhancement mechanisms to do with marking, tracking and tracing of transit and inbound fuels would be considered in the next phase of the Fuel Marking Program, resources allowing. This was because the running contract for the fuel marking service provider was due to expire in February 2022.

Committee’s Observations and Recommendations

The Committee notes the tremendous milestones recorded in reducing illegal fuel vending in the country. The Committee is, however, concerned that there are no details on how the programme will continue beyond the expiration of the contract for the fuel marking service provider in February, 2022. The Committee, therefore, requests for details on the sustainability of the programme after February, 2022.

(v) Inadequate Rural Service Stations

The previous Committee had urged the Government to expedite the process of constructing more service stations in rural areas.

Executive Response

It was stated in the Action Taken Report that the Ministry of Infrastructure, Housing and Urban Development, was working on the Bills of Quantity for Lukulu and Kalabo Filling stations. In addition, the Ministry was analysing modalities of engaging the private sector for the construction of rural service stations using Private Public Partnership basis.

Committee’s Observations and Recommendations

The Committee notes the response but is concerned at the inordinate delay by the Executive to construct the Lukulu and Kalabo Filling Stations. The Committee further notes that illegal fuel vending is rampant in rural areas that do not have service stations. If not addressed, this will negate the efforts that have so far been achieved through the fuel marking programme. The Committee, therefore, urges the Government to hasten the completion of the two filling stations in question and for the rest of the rural parts of the country.

(vi) Harness the Use of Liquefied Petroleum Gas

The previous Committee had recommended that the Government should intensify efforts to sensitise the public on the benefits of using Liquefied Petroleum Gas

Executive Response

It was reported in the Action Taken Report that both the Zambia Integrated Forest Landscape Project and Clean Cooking Projects, should have been funded through loans. However, due to Government's position not to contract additional loans as a result of fiscal constraints, the project had stalled. With regard to the Clean Cooking Project, the Ministry of Energy was in discussion with the World Bank in order to access grant financing from the Climate Investment Fund.

Committee's Observations and Recommendations

The Committee notes the response and requests a progress report regarding the outcome of the discussions between the Ministry of Energy and the World Bank on the possibility of accessing funds from the Climate Investment Fund.

(vii) Storage Facilities for Liquefied Petroleum Gas

The Committee had recommended that the Government should construct more storage facilities for Liquefied Petroleum Gas across the country so that more people could have access to the product.

Executive Response

It was submitted in the Action Taken Report that the private sector needed incentives to invest in storage facilities. However, in view of the fiscal austerity measures, the Ministry of Finance and National Planning could not grant additional incentives. It was further reported in the Action Taken Report that the problem of inadequate storage facilities for Liquefied Petroleum Gas was exacerbated by lack of distribution points, though the private sector (Oil Marketing Companies and Liquefied Petroleum Gas dealers) were slowly investing as seen from kiosks at Fuel Service Stations, supermarkets, among others.

Committee's Observations and Recommendations

The notes the response and requests an update on the matter.

(viii) High Tax Regime for Petroleum Products

The previous Committee had recommended that the Government should review the tax regime for all petroleum products in order to ascertain the actual cost of fuel, and reduce the cost of doing business and the consumer pump price.

Executive Response

It was stated in the Action Taken Report that due to the COVID-19 pandemic, consultations regarding the review of the cost structure for the fuel supply chain was not finalised. Once finalised, the review would help eliminate any cost inefficiencies and make Zambia more competitive with regards to pricing in the region. Further, in order to mitigate the upward movement in the cost of fuel, the Government issued Statutory Instruments No. 125 of 2020 and No. 5 of 2021, to provide for the zero-rating of VAT (removal of VAT) and the reduction of the excise duty rate on petrol and diesel respectively. Statutory Instrument No. 5 of 2021 amended the tax rates for petrol (HS code 27101210) and diesel (HS code 27101910) to revise excise duty on petrol to K5.56 from K12.01 representing a 57.90 percent reduction and Fuel Levy to K1.344 from K8.69 representing an 84.53 percent reduction hence reduction in wholesale price to K0.64/litre from K2.07/litre in terms of taxes. As for diesel, fuel levy was adjusted to K0.00/litre from K6.6/litre representing a 100 percent reduction hence reduction in wholesale price to K0.00/litre from K0.66/litre in terms of taxes.

Further, factors that affected the final pump price included the Ndola Fuel Terminal fees, excise duty, transportation costs, oil marketing company margin, dealer margin, ERB fees, Strategic Reserve Fund and Value Added Tax. A holistic review would be undertaken and expose any cost inefficiencies.

Committee's Observations and Recommendations

The Committee requests an update on the matter.

(ix) Lack of Strategic Petroleum Reserves

The previous Committee had urged the Government to build enough storage depots in order to ensure that the country had strategic petroleum reserves.

Executive Response

It was reported in the Action Taken Report that the construction of the Chipata Fuel Depot was at 98 percent completion stage, while the Lusaka Fuel Depot was at 79.8 percent. It was further reported in the Action Taken Report that the Ministry of Energy had not yet designated any storage depots for petroleum reserves.

Committee's Observations and Recommendations

The Committees notes the response and requests an update on when the Ministry of Energy will designate storage depots for petroleum reserves.

10.2 UPSTREAM PETROLEUM SUB SECTOR

(x) Need to formulate a Policy for the Upstream Petroleum Sub Sector

The previous Committee requested an update on when the petroleum policy would be formulated.

Executive Response

It was stated in the Action Taken Report that the Ministry of Mines and Minerals Development was in the process of formulating a petroleum policy that would inform the upstream petroleum sub-sector.

Committee's Observations and Recommendations

The Committee notes the response and resolves to seek an update on the matter.

(xi) Harmonisation of the *Petroleum (Exploration and Production) Act, No. 10 of 2008* and *Mines and Minerals Development Act, No. 11 of 2015*.

The previous Committee had observed that the *Petroleum (Exploration and Production) Act, No. 10 of 2008* did not provide for the services of the Geological Survey Department and its Director as the provider of basic geological data. This information was, however, found in the *Mines and Minerals Development Act, No. 11 of 2015*. For the avoidance of doubt and since the *Petroleum Act* was the overarching piece of legislation guiding the upstream sub-sector, it was important that information relating to the Geological Survey Department and its Director was also reflected in the Act.

The previous Committee had recommended that the Government should harmonise the two pieces of legislation in such a manner as to ensure that the provisions on the role of the Geological Survey Department, including its Director, which were contained in the *Mines and Minerals Development Act, No. 11 of 2015* were equally applicable to the *Petroleum (Exploration and Production) Act, No. 10 of 2008*.

Executive Response

It was reported in the Action Taken Report that the Ministry of Mines and Minerals Development had continued to engage the Public Service Management Division regarding the upgrading of the Hydrocarbon Unit into the Hydrocarbon Directorate. Additionally, the Ministry of Mines and Minerals Development, in collaboration with the Ministry of Justice and other stakeholders such as the Zambia Law Development Commission and the Business Regulatory Review Agency, were reviewing both the *Petroleum (Exploration and Production) Act, No. 10 of 2008* and *Mines and Minerals Development Act, 2015*.

Committee's Observations and Recommendations

The Committee notes the response and requests an update on the matter.

(xii) Need to Create the National Petroleum Company

The previous Committee had urged the Government to ensure that the National Petroleum Company was created in accordance with the *Petroleum (Exploration and Production) Act, No. 10 of 2008* and the Petroleum (Exploration and Production) (National Petroleum Company) Regulations of 2011.

Executive Response

It was stated in the Action Taken Report that on 31st March, 2021, the Ministry of Mines and Minerals Development presented a concept paper to the Petroleum Committee over the need for the formation of the National Petroleum Company, as provided for in Section 100, Part XVI of the *Petroleum (Exploration and Production) Act, No. 10 of 2008*. During the Petroleum Committee meeting, approval was granted for the establishment of the National Petroleum Company in line with the law. Therefore, the Ministry of Mines and Minerals Development, working collaboratively with the Ministry of Finance and other stakeholders, would be taking relevant steps to ensure that the National Petroleum Company was established.

Committee's Observations and Recommendations

The Committee notes the response and requests a progress report on the matter and the time frame for its establishment.

(xiii) Absence of Geological and Geophysical Data

The previous Committee had requested an update on when the Government would provide funding to the Ministry of Mines and Minerals Development to facilitate development and packaging of geological and geophysical data.

Executive Response

It was reported in the Action Taken Report that there were no funds in the 2021 budget to facilitate the generation, processing/development and packaging of geological and geophysical data for the upstream sub-sector. However, the Ministry of Mines and Minerals Development continued to engage the Ministry of Finance so that the activity was budgeted for and ultimately accomplished.

Committee's Observations and Recommendations

The Committee requests further update on the matter.

11. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM FOR THE THIRD SESSION OF THE TWELFTH NATIONAL ASSEMBLY

11.1 REVIEW OF THE RURAL ELECTRIFICATION PROGRAMME IN ZAMBIA

(i) Cost of Service Study

The previous Committee had recommended that the Government should expedite the process of concluding the electricity cost of service study.

Executive Response

It was indicated in the Action Taken Report that the Cost of Service Study would be completed by end of third quarter of 2021.

Committee's Observations and Recommendations

The Committee notes the response and awaits the completion of the Study.

(ii) Management and Operations of the Rural Electrification Fund

The previous Committee had requested for an update on the actual measures the Government was taking to ensure that the Rural Electrification Fund was properly managed. The Committee had further requested an update on the strategy meant to improve funding to the Rural Electrification Authority, which would lead to the attainment of the targets set in the Rural Electrification Master Plan.

Executive Response

It was reported in the Action Taken Report that a draft Statutory Instrument was completed and was yet to be subjected to stakeholder consultations and approval. But due to the COVID-19 pandemic restrictions, progress had stalled.

Committee's Observations and Recommendations

The Committee resolves to request further update on the matter.

(iii) Electrifying Rural Areas by Grid Extension

The previous Committee had requested an update on the implementation of the regulatory framework for the off-grid system pilot project.

Executive Response

It was reported in the Action Taken Report, that the development of the mini-grids regulatory framework commenced in May 2018 with a view to develop a light handed regulatory framework for mini-grid and attract private sector participation by providing certainty to mini-grid investments. The regulations were developed through wide stakeholder consultations and the key elements of the framework were licensing procedures, tariff rules and technical requirements. The draft regulatory framework was approved by the ERB on 30th October 2018 prior to gazetting. The road-testing of the Regulations was conducted for one year (October 2018 to October 2019), after which the draft regulations (legal, grid encroachment, technical and economic) were updated and subsequently approved by the Energy Regulation Board on 7th February 2020. Following the enactment of the new *Electricity Act, No. 11 of 2019* and the *Energy Regulation Act, No. 12 of 2019*, the regulations were being reviewed with a view to re-aligning them with the new Electricity and Energy Regulation Acts prior to finalisation and gazetting.

Committee's Observations and Recommendations

The Committee notes the response and requests a progress report and timeframe of completion.

(iv) Over dependence on Funding from the Government

The previous Committee had requested an update on when the Government would establish a transparent and sustainable financing model, which would allow for cross-financing of rural electrification programmes with the private sector.

Executive Response

It was reported in the Action Taken Report that REA was conducting negotiations that if successful would result into an agreement with the Standard Microgrid Zambia for the implementation framework under the Increased Access to Electricity and Renewable Energy Production demonstration project framework and the Grant Agreement between the Private Partner and the National Authorising Office. The Project would be implemented in accordance with the *Public-Private Partnership Act, No. 14 of 2009* based on a Distributed Energy Services Model and Build Operate and Transfer Split Asset Model Mini-Grids. The planned date for PPP agreement was 31st August, 2021. The Project would be executed at three sites involving the design; financing; supply; installation; commissioning; and operation, as set out below.

- (a) One location in Chunga in Mumbwa District, Central province with a development of 26 kWp of solar photovoltaic generating capacity that would be distributed along a 3.83 km distribution line to serve about 102 customers.

- (b) Ten village locations in Lunga District, Luapula province with the total development of 169 kWp solar photovoltaic generating capacity that would be distributed along a 15.56 km distribution line to serve about 1,240 customers.
- (c) Four village locations in Chishi Island in Chifunabuli District, Luapula province with a total development of 117 kWp of solar photovoltaic generating capacity that would be distributed along a 20.70 km distribution line to serve about 650 customers.

The private partner envisaged to also provide PICO Battery systems for households and businesses that were far from the mini grid network.

Committee's Observations and Recommendations

The Committee resolves to await a progress report on the matter.

11.2 MANAGEMENT OF NATIONAL PARKS AND GAME MANAGEMENT AREAS IN ZAMBIA

(i) Harmonisation of Legislation

The previous Committee had requested an update on the review of the *Wildlife Act, No. 14 of 2015*.

Executive Response

It was reported in the Action Taken Report that Cabinet had granted authority to the Ministry of Tourism to commence the process of reviewing the *Wildlife Act, No. 14 of 2015*. The process had since commenced with stakeholder consultations.

Committee's Observations and Recommendations

The Committee notes the response and awaits a progress report on the review of the *Wildlife Act, No. 14 of 2015* and the time frame for completion.

(ii) Human Resource and Poor Conditions of Service for Wildlife Police Officers

The previous Committee had recommended that the Government should expedite the process of recruiting more wildlife police officers in order to meet the international standards, as guided by the International Union for the Conservation of Nature. The Committee also recommended that the Government should review the conditions of service for wildlife police officers and bring them in tandem with prevailing conditions for other law enforcement officers in the country.

Executive Response

It was reported in the Action Taken Report that in 2021, the Ministry of Tourism was granted Treasury Authority for ninety positions out of which thirty-five were for law enforcement positions at supervisory level. The Authority was accompanied by “Authority to Employ”. This resulted in the employment of thirty-nine additional Wildlife Police Officers. The Ministry would request for Treasury Authority in 2022 and beyond in order to employ more Wildlife Police Officers.

It was further submitted, in the Action Taken Report, that the harmonisation of conditions of service with other law enforcement officers in the country, the Ministry of Tourism and Arts, working in collaboration with the Public Service Management Division had proposed amendments to the conditions of service for wildlife police officers. The Ministry was awaiting feedback.

Committee’s Observations and Recommendations

The Committee notes the response and awaits a progress report on the harmonisation of conditions of service for Wildlife Police Officers.

(iii) Review of Licence Fees

The previous Committee had requested a progress report on the review of Statutory Instrument No. 60 of 2007 on licenses and fees.

Executive Response

It was reported in the Action Taken Report, that the Government remained committed to ensuring that the Statutory Instrument was revised. Progress had been constrained by lack of financial resources to undertake the activity. Further, the impact of the Covid-19 pandemic had hindered progress because some of the tour operators in national parks and GMAs, who were key stakeholders had closed their facilities due to lack of clients. Therefore, as soon as Covid-19 cases receded and business operations resumed, the process to revise the Statutory Instrument would be resuscitated. In the meantime, the Ministry of Tourism and Arts would continue to engage the Ministry of Finance on the need for funding to undertake the exercise.

Committee’s Observations and Recommendations

The Committee notes the response and requests a progress report on the matter.

(iv) Need to Train Community Village Scouts

The previous Committee had recommended that the Government should ensure that Community Resource Boards received their share of revenue from hunting activities in

good time to enable them train community village scouts and implement other developmental community programmes. The Committee had further requested an update on how many community scouts were trained in 2019.

Executive Response

It was stated in the Action-Taken Report that the Ministry of Tourism had scheduled to conduct training of the sixty untrained village scouts in March 2020. However, the activity had been deferred due to the COVID-19 pandemic. The Committee was further informed that the untrained scouts had since been detailed to carry out community awareness campaigns. It was further reported t that no progress had been made due to the COVID-19 pandemic.

Committee's Observations and Recommendations

The Committee resolves to await a progress report on the matter.

12. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM FOR THE SECOND SESSION OF THE TWELFTH NATIONAL ASSEMBLY

12.1 WATER SUPPLY AND SANITATION IN ZAMBIA

(i) Inadequate Water and Sanitation Investment

The previous Committee had urged the Government to increase financial support to enable commercial utilities to expand water and sanitation coverage to urban and peri-urban areas and to consider entering into Public-Private Partnerships (PPPs) in order to leverage additional investment into the sector.

Executive Response

It was reported in the Action Taken Report that there was collaboration between the Ministry of Water Development and Sanitation and the University of Zambia to address the matter. So far, the University of Zambia had developed concept notes which the Ministry, together with the eleven commercial water utility companies reviewed and provided feedback. The University was yet to finalise the concepts for possible piloting of water meter and chlorine production from local raw materials.

Committee's Observations and Recommendations

The Committee notes the response and awaits a progress report on the matter.

(ii) Outstanding Water and Sanitation Bills

The previous Committee had requested an update on debts owed to commercial utility companies by Government institutions and when installation of prepaid metres in all Government departments and institutions would be done.

Executive Response

It was indicated in the Action Taken Report that the status of utility bills was as follows: a total of K224, 121,228.36 was previously reported as outstanding from the last report and a total of K41, 470,602.34 was paid before closure of the 2020 financial year. It was further reported that the latest position with regard to the total outstanding bills for water and sanitation, was yet to be ascertained after a thorough reconciliation and consolidation was undertaken for 2021.

Committee's Observations and Recommendations

The Committee notes the response and awaits the consolidated figure for outstanding utility bills by the Government. The Committee further requests an update on the installation of prepaid metres in Government Departments and Institutions.

(iii) Uncoordinated and weak collaboration

The previous Committee had recommended that in order to foster a well-coordinated and integrated system, there was need to undertake a comprehensive review of the *Water Supply and Sanitation Act, No. 28 of 1997*.

Executive Response

It was indicated in the Action Taken Report that the Ministry of Water Development and Sanitation had completed the revision of the *Water supply and Sanitation Act, No. 28 of 1997* and the drafting of the Layman's Water Supply and Sanitation Bill. The draft layman's bill was in place and had since been submitted to the Ministry of Justice for internal review and clearance

Committee's Observations and Recommendations

The Committee notes the response and requests an update on the matter.

12.2 REVIEW OF THE OPERATIONS OF THE ZAMBEZI RIVER AUTHORITY

Tour of the Batoka Gorge Hydro-Electric Scheme and the Kariba Dam Rehabilitation Project

The previous Committee had recommended that the Government should ensure that there were no further delays in completing the Batoka Gorge Hydro-Electric Scheme (BGHES).

Executive Response

It was indicated in the Action Taken Report that there was a delay in the spillway works mainly arising from the need to re-design a new cofferdam which was a result of the design review carried out by the technical services and supervision consultant who was working on the project. Furthermore, the project was negatively affected by the Covid-19 pandemic as there was a stoppage of work for one month in the manufacture of the Hydro-mechanical equipment in China. The progress of the spillway refurbishment was as outlined below.

- (a) All components for Cofferdam No. 1 were delivered by end of July 2021.
- (b) Delivery of Cofferdam No. 2 had been further delayed due to port congestion linked to Covid-19 in China. Its delivery had been postponed and was expected in October, 2021.
- (c) Manufacturing of first sets was on-going with good progress in Poland.
- (d) The manufacturing drawings of the emergency gate had been finalised and a purchase order issued by the Contractor to Bureau Eight in China.

Committee's Observations and Recommendations

The Committee notes the response and awaits a progress report on the matter.

13. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM FOR THE FIRST SESSION OF THE TWELFTH NATIONAL ASSEMBLY

13.1 THE CONTRIBUTION OF THE TOURISM SECTOR TO SOCIO-ECONOMIC DEVELOPMENT

Lusaka National Museum and Livingstone Museum

The previous Committee had recommended that the Government should find concrete solutions to the following problems faced by the two museums:

- (i) poor state of the buildings;
- (ii) shortage of specialised staff;
- (iii) poor funding to the institutions;
- (iv) lack of adequate and appropriate storage facilities for various artefacts;
- (v) repairs at the Livingstone Museum building;
- (vi) poor funding to the Lusaka National Museum and Livingstone Museum; and
- (vii) storage facilities for the two museums.

Executive Response

It was reported in the Action Taken Report that there no progress was recorded on both the Lusaka and Livingstone Museums due to inadequate funds.

Committee's Observations and Recommendations

The Committee notes the response and urges the Executive to treat this matter with the seriousness it deserves and allocate funds to the activity.

14. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM ON THE REPORT OF THE AUDITOR GENERAL ON THE PERFORMANCE OF THE TOURISM SECTOR IN ENSURING AN INCREASE IN THE LENGTH OF STAY OF INTERNATIONAL TOURISTS, FOR THE FIFTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY

(i) Length of Stay and Influx on International Tourists

- (a)** The previous Committee had expressed concern that in comparison to other countries in the region, Zambia was considered an expensive tourist destination. Air travel and Jet A1 fuel costs; accommodation; visa; and landing and parking fees were too high. The situation was partly attributed to shorter periods of stay for international tourists. In that regard, the Committee had urged the Government to review the cost structure of the tourism industry in Zambia.

Executive Response

It was reported in the Action Taken Report that the Government, through the Ministry of Transport and Communications and the Zambia Airports Corporation Limited, had provided incentives on landing, parking charges and ground handling charges. Further, start-up and existing airlines were provided with a gradual discount from the first year of operation to the fourth year negotiated based on load factors. Further, Zambia Airports Corporation provided support to new airlines with logistics during the launch of their flights to assist them settle down. The logistics included securing office and advertising space at the airports. The corporation also collaborated with the Zambia Tourism Agency to attract tourists and airlines by jointly participating at strategic global events.

Regarding the high cost of Jet A1 fuel, it was reported in the Action Taken Report that there was need to cap the pocket margin for Oil Marketing Companies to 15 per cent of the total costs of Jet A1 fuel. From the last study conducted by the Competition and Consumer Protection Commission in 2016, Oil Marketing Companies pocket margins after taking into consideration of all input costs was around 23 per cent which was quite high compared to the industry average.

The Executive further submitted that the Government was considering declaring strategic tourist spots in both the Northern and Southern circuits as tax free economic zones. While Government would lose revenue in the short term, general revenue would increase in the medium to long term due to increased economic activity, job creation (Pay As You Earn) and Tourism Levy. In addition, the Ministry of Home Affairs was considering increasing the number of countries that could obtain visas on arrival, a model which had been successfully implemented by countries like Rwanda and Zimbabwe with positive results.

Committee's Observation and Recommendations

The Committee notes the response and requests a progress report on specific measures the Government is undertaking regarding the high cost of Jet1A fuel. The Committee further requests a progress report on when the Government will declare the strategic tourist spots in the Northern and Southern circuits as tax free economic zones.

- (b)** The previous Committee had further observed that tourist's destinations in Zambia were not easily linked, thus difficult for tourists to connect from one destination to another. The Committee, therefore, recommended that the Government should accelerate implementation of plans for tourism circuits, especially the Southern and Northern circuits.

Executive's Response

It was reported in the Action Taken Report that that the Government, through the Ministry of Housing and Infrastructure Development, had embarked on the development of numerous road infrastructural projects in the Northern Tourism Circuit. This was not only designed to boost trade in the region but also to open up the area to more tourism opportunities by improving access to the tourist sites.

Committee's Observation and Recommendations

The Committee takes notes of the response and requests for information on which specific road infrastructure projects have been undertaken in the Northern Tourism Circuit.

(c) Data Collection Systems for International Tourists

The previous Committee had noted that while the Government had adopted the Tourism Satellite Account framework as a measuring tool, it had taken long to put it into operation. In this regard, the Committee urged the Government to accelerate the implementation of the Tourism Satellite Account.

Executive's Response

It was reported in the Action Taken Report that the Ministry of Tourism and Arts was yet to carry out the planned domestic and exit surveys, which were expected to inform the operationalisation of the Tourism Satellite Account. However, the surveys had not been conducted due to non-availability of resources.

The Executive further submitted that in 2020, the Ministry had embarked on the process of engaging the UNDP for support to undertake a survey on how COVID-19 had impacted the Zambian Tourism sector, which among others, would have included information for the Tourism Satellite Account. The Ministry had also engaged the Common Market for Eastern and Southern Africa to support training in Tourism Satellite Account data collection.

Committee's Observation and Recommendations

The Committee notes the response and requests an update on when the planned domestic and exit surveys will be conducted.

(d) Number of International Tourists Visiting the Northern Circuit in Comparison to the Southern Circuit

The previous Committee had recommended that the Government should prioritise infrastructure development, especially road, air travel and comfortable accommodation facilities if the Northern Circuit in order to attract more tourists and investment.

Executive's Response

It was reported in the Action Taken Report that the Government through the Road Development Agency was undertaking several road projects in the Northern Tourism Circuit of which some of the underlisted infrastructure projects were directly and indirectly providing access to major tourist destinations.

- (a) The Mbala - Kasaba Bay Road was earmarked for upgrading to bituminous standard using the Contractor Facilitated Initiative. The implementation will be done at a contract sum of US\$286,627,532.93 with a duration of thirty six (36) months. The commencement of the project was dependent on the signing of the Financing Agreement between the project financiers and the Ministry of Finance.

Committee's Observations and Recommendations

The Committee notes the response and requests a progress report on whether the financing agreement between the project financiers and the Ministry of Finance to facilitate commencement of the rehabilitation works for the Mbala to Kabasa Bay Road has been signed.

- (b) Mporokoso Nsama via Mutundu Gate to Kaputa and Nsumbu District- leading to Nsumbu National Park and Mweru-wantipa National Park

The Government through the Road Development Agency had varied the Nseluka to Chozi Road Project to include a collective total of 260 kilometres of the Mporokoso to Kaputa and the Mutundu Gate to Nsumbu Roads. The scope of works included upgrading of existing road to gravel standard. The cumulative progress is currently at 17 per cent.

Committee's Observations and Recommendations

The Committee requests an update on the matter.

(c) Mpika to Nabwalya to Mfuwe Road

The Government undertook to re-gravel the 211 kilometres of the Mpika to Nabwalya to Mfuwe Road with a view to provide connectivity to South Luangwa National Park. The original scope of works involved upgrading of the 235 kilometres of the Mpika to Nabwalya to Mfuwe Road to bituminous standard. However, due to budgetary constraints, the scope of work was revised to re-gravelling option being adopted on the 211 kilometres of 235 kilometres full length. The implementation of the Mpika to Nabwalya to Mfuwe Road had been divided into two lots for ease of implementation as follows:

- (a) Mpika to Nabwalya Road - Lot 1
Lot 1 of the Mpika to Nabwalya Road which is 93 Km in length was being implemented at a contract sum of K312, 628,189.60. The cumulative progress was currently at 20 per cent.
- (b) Nabwalya to Mfuwe Road - Lot 2
Lot 2 of the Nabwalya to Mfuwe Road which is 118Km in length is being implemented at a contract sum of K458, 781,986.97. The cumulative progress is currently at 20 per cent.

Committee's Observations and Recommendations

The Committee requests an update on the matter.

(e) Tourism Promotion and Marketing

The previous Committee had recommended that the Government should enhance collaboration with the private sector and offer marketing incentives that could spur the growth of emerging tourists' destination such as the Northern Circuits.

Executive's Response

It was stated in the Action Taken Report that the Ministry of Tourism and Arts, through the Zambia Tourism Agency, was collaborating with private sector in destination marketing. A number of measures had been put in place to enhance marketing which included those outlined below.

- a. Revised visa regime for some of the countries on category B and C.
- b. Relief measures in the 2021 budget.
- c. Cabinet circular compelling stakeholders to promote the hosting of Meetings Incentives, Conferences and Events (MICE) in Zambia.
- d. Plans to initiate a tourism marketing television programme (hopeful that the private sector would come in to sustain the programme).
- e. Articles and materials on Zambian tourism were distributed on local and international Airlines.

Committee's observations and Recommendations

The Committee notes the response and requests a progress report on when the tourism marketing television programme will commence.

(v) Diversification of Tourism Products

The previous Committee had observed that there was lack of diversified tourism products in Zambia, particularly in the Northern Circuit. As a result of the limitation, it was difficult to attract and retain international tourists. The Committee therefore, recommended that the Government should provide incentives for the development and promotions of tourism products based on the uniqueness of the tourism development areas enshrined in the Zambia Tourism Master Plan.

Executive's Response

It was stated in the Action Taken Report that the Ministry of Tourism and Arts would continue to promote and facilitate the diversification of the tourism product by focusing on opening up other areas such as the Northern Circuit. The Ministry would continue to engage cooperating partners and stakeholders to promote tourism products in different tourism destination areas as enshrined in the Zambia Tourism Master Plan.

Committee's Observations and Recommendations

The Committee requests for specific details on how the Government plans to diversify tourism products.

(vi) Investment in the Tourism Sector by both Local and Foreign Investors

The previous Committee had observed that the onerous licensing procedures and scrutiny were a deterrent to potential investors. The Committee had further observed that the high cost of doing business in the tourism sector was a hindrance to both local and foreign investors. The Committee, therefore, urged the Government to review the entire requirements needed to set up an enterprise in the sector.

Executive's Response

The Executive responded that the Government, through the Ministry of Tourism and Arts, endeavoured to prioritise investment in the sector by both local and international investors through various engagements with potential investors. Following the devastating impact of the COVID-19 on the sector, the Ministry had proposed a number of measures to the Ministry of Finance for resuscitating the tourism sector. In that regard, the National budget speech for 2021 announced a number of incentives to not only resuscitate the tourism sector but also to encourage both local and foreign investment.

Committee's observations and Recommendations

The Committee notes the response and is of the view that the Executive has not outlined the specific measures that the Government is undertaking to deal with the encumbrances of licensing procedures. The Committee, therefore, urges the Executive to address that aspect.

15. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM ON THE REPORT OF THE AUDITOR GENERAL ON THE PERFORMANCE AUDIT ON THE CONTROL OF WATER POLLUTION IN ZAMBIA FOR THE PERIOD 2016 TO 2019.

(i) Accelerate Implementation of the Ambient Water Quality Standards and Guidelines

The previous Committee had observed that the Ambient Water Quality Standards and Guidelines had not been put into operation, despite being gazetted. The Committee therefore, urged the Government to disseminate and hasten the implementation of the standards without any delay, in order to enhance compliance in the water sector.

Executive Response

It was reported in the Action Taken Report that the Ministry of Water Development and Sanitation had developed the Ambient Water Quality Standards and Guidelines and was scheduled to officially launch the standards and guidelines in the third quarter of 2021. The launch was expected to inform members of the general public as well as various players and stakeholders in the water sector, the contents of the Ambient Water Quality Standards and Guidelines. It was envisaged that after the launch of the Ambient Water Quality Standards and Guidelines, the Water Resources Management Authority and the Zambia Environmental Management Agency would ensure adherence to the standards and guidelines by all stakeholders in the water sector in accordance with the provisions of the *Standards Act, No. 4 of 2017*.

Committee's Observations and Recommendations

The Committee requests an update on the matter.

(ii) Establish Laboratories as Provided for in the *Environmental Management Act, No. 12 of 2011*

The previous Committee had urged the Government to abide by the provisions of Section 48(1) (f) of the *Environmental Management Act, No. 12 of 2011* and establish laboratories for the Zambia Environmental Management Agency.

Executive's Response

It was submitted in the Action Taken that the Government, through the Zambia Environmental Management Agency, had planned to construct a National Analytical Laboratory in Ndola with financial support from the World Bank under the Zambia Mining Environmental Remediation and Improvement Project. The process of facilitating the construction of the laboratory had already commenced and the Zambia Environmental

Management Agency was undertaking the Environmental Impact Assessment for the construction of the laboratory. Actual construction was planned to commence during the course of the year 2021, with a view of completing the project within two years.

It was further reported in the Action Taken Report that the Zambia Environmental Management Agency would continue to collaborate with the Water Resources Management Authority, Zambia Bureau of Standards, University of Zambia, Food and Drugs Control Laboratory and in some instances, private laboratories for analysis of water samples prior to the Zambia Environmental Management Agency before it constructs its own laboratories.

Committee's Observations and Recommendations

The Committee notes the response and requests a progress report on when construction of the National Analytical Laboratory will commence.

(iii) Conduct Environmental Audits

The previous Committee had urged the Government to allocate more resources to the Zambia Environmental Management Agency to enable it carry out environmental audits as mandated by law. The Committee had further recommended that the Government should review the organisation structure for the Zambia Environmental Management Agency organisational so that appropriate personnel could be recruited by the Zambia Environmental Management Agency to enable it carry out the environmental audits.

Executive's Response

It was submitted in the Action Taken Report that the Government acknowledged the Zambia Environmental Management Agency's failure to undertake environmental audits during the period under review as a result of inadequate human resources and finances. In that regard, the Zambia Environmental Management Agency had heightened engagements with strategic partners to support some of their operations which included undertaking environmental audits. To that effect, Zambia Environmental Management Agency had included in its 2021 work plan to undertake six detailed environmental audits around the country.

With regard to inadequate human resources at the Zambia Environmental Management Agency, the Ministry would continue to engage the Treasury for increased budgetary allocation to the Zambia Environmental Management Agency to enable it fully operationalise the organisational structure which had 242 positions but only 121 positions were filled due to inadequate financing.

Committee's Observations and Recommendations

The Committee notes the response and requests an update on the matter.

(iv) Prioritise and Increase Funding to the Zambia Environmental Management Agency

The previous Committee had urged the Government to prioritise and increase funding to the Zambia Environmental Management Agency and ensure that the staff establishment at the Zambia Environmental Management Agency was filled.

Executive Response

It was reported in the Action Taken Report that the Ministry of Water Development and Sanitation would continue to engage the Treasury to lobby for increased budgetary allocation to fully operationalise the approved establishment of 242 positions of which only 121 were filled, in order to improve staffing at the Zambia Environmental Management Agency. The Ministry would also continue to lobby the treasury for timely and consistent disbursement of funds for the Zambia Environmental Management Agency's operations.

Committee's Observations and Recommendations

The Committee requests an update on whether or not there is improvement regarding funding to the Zambia Environmental Management Agency and consequently staffing levels.

(v) Strengthen Enforcement of the Polluter Pays Principle

The previous Committee had noted that the Zambia Environmental Management Agency did not fully enforce the 'Polluter Pays Principle' on defaulting facilities, as evidenced by the unpaid amount of K4, 992,666 that Nkana Water and Sewerage Company incurred as excess treatment costs when Konkola Copper Mines polluted the Mwambashi and Kafue Rivers.

The previous Committee had urged the Government to ensure that the Zambia Environmental Management Agency effectively enforced the 'Polluter Pays Principle' so that a defaulter bears all the costs associated with pollution caused by a facility.

Executive's Response

It was reported in the Action Taken Report that the Ministry of Water Development and Sanitation remained committed to ensuring that the Polluter Pays Principle was implemented effectively through various mechanisms. For example, with regard to the pollution of Mushishima stream, a tributary of Mwambashi stream, an Environmental Restoration Order was the mechanism used to implement the Polluter Pays Principle. The polluting company was ordered to undertake remedial works in the Mushishima stream. The Order further required the polluter to restore the water quality in Mushishima stream. The Agency had been enforcing the implementation of the Order and Konkola Copper Mines had undertaken the actions outlined below.

- (a) Development of a Water Recycling Plant at Muntimpa tailings dam was underway and stands at about 50 percent complete. Once completed, there would be no discharge of pollutants into the Mwambashi River where Nkana Water Supply and Sanitation Company abstracts its raw water.
- (b) De-silting of the Chingola and Muntimpa streams which had been silted by the mining activities was in progress and stood at about 40 percent completion stage. Once completed, the carrying capacity of the streams would be restored.
- (c) Conducted an Environmental Impact Assessment for the restoration of the Mushishima stream and Hippo Pool which lay in the Kafue River. The project was approved by the Zambia Environmental Management Agency in July, 2020.

The projected amount of adherence to the Restoration Order by the polluting company was US\$975,547. At the time of reporting, about 80 percent of the Order had been adhered to, with the expected date of completion set for 30th June, 2021. Further, the funds spent by the polluting company towards adhering to the actions directed in the Restoration Order amounted to US\$810, 000.

It was further reported in the Action Taken Report that the Polluter Pays Principle was one of the major tools that the Zambia Environmental Management Agency had used in licensing and compliance monitoring as the very essence of obtaining an environmental licence related to the polluter paying for the activity licensed under the licence. The Zambia Environmental Management Agency had consistently enforced this principle through the various Orders issued under the Environmental Management Act. Further, in an effort to enhance the implementation of the Polluter Pays Principle, in December, 2020 The Zambia Environmental Management Agency conducted training of the Judiciary (Judges and Magistrates) on the provisions of the *Environmental Management Act, No. 12 of 2011* and its subsidiary legislation with a view that adequate penalties be imposed for environmental crimes. The proposed amendment to the Environmental Management Act, had also included provisions that ensured that polluters of the environment were liable to pay penalties that were stringent.

Committee's Observations and Recommendations

The Committee notes the response and requests an update on the completion of the Water Recycling Plant at Muntimpa Tailing Dam and de-silting of the Chingola and Muntimpa streams.

16. CONSIDERATION OF THE ACTION TAKEN REPORT ON THE REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM ON THE AUDITOR GENERAL ON THE PROMOTION OF RENEWABLE ENERGY SOURCES IN RURAL AREAS IN ZAMBIA, 2015-2019

(i) Enact Renewable Energy Legislation

The previous Committee had noted that both the *Electricity Act, No. 11 of 2019* and *Energy Regulation Act, No. 12 of 2019*, did not adequately provide for the effective exploitation and promotion of renewable energy sources in Zambia. The *Electricity Act* was heavily skewed towards electricity generation, while the *Energy Regulation Act* was more focused on regulatory matters. In that regard, the Committee had urged the Government to develop legislation to specifically address the development of renewable energy sources in Zambia.

Executive Response

It was reported in the Action Taken Report that besides the provisions of the *Electricity Act, No. 11 of 2019* and *Energy Regulation Act, No. 12 of 2019*, the Government was also guided by the National Energy Policy 2019 in the implementation of renewable energy projects. Further, within the policy framework, the Government through the Ministry of Energy was developing the Renewable Energy and Energy Efficiency Strategies to provide blueprints in the implementation of projects. The objective of the Renewable Energy Strategy was to translate the objectives of the National Energy Policy into a practical implementation plan. Other objectives were to formulate renewable energy targets, which were meant to guide the country in achieving its strategic energy access objectives. The targets were for solar, small hydro, Biomass, and bio fuels technologies.

Committee's Observations and Recommendations

The Committee notes the response and requests for a progress report on the completion of the Renewable Energy and Energy Efficiency Strategies that are meant to serve as blueprints in the implementation of renewable energy projects.

(ii) Devise Robust Maintenance Plans for Renewable Energy Technologies

The previous Committee had noted that the approach that the Government was using for maintenance of renewable energy technologies was not sustainable. The Committee further noted that beneficiaries of renewable energy technologies did not regard the equipment as their own and tended to abandon the equipment when it developed a fault. In that regard, the Committee had urged the Government to devise a robust sustainability plan that covered the entire project cycle from procurement, installation, operation and maintenance, training, monitoring and evaluation for the solar home systems and other renewable energy technologies.

The Committee had further urged the Government to involve communities at an early stage in the project cycle so as to create a sense of ownership.

Executive Response

It was reported in the Action Taken Report that in its quest to ensure a robust sustainability plan for renewable energy technologies, the Government, through REA was revising the terms of awarding the capital subsidy to include a clause that would compel companies that had been awarded tenders to install Solar Home Systems and other Renewable Energy Technologies to undertake operation and maintenance, training of trainers and remote monitoring on the usage and limitations of the systems installed as well as maintain the system in terms of repairs for an agreed period. It was further reported that communities were engaged at various levels of the project cycle and more information relating to technological issues were also collected through the Monitoring and Evaluation (M and E) Unit charged with the responsibility of undertaking the M and E activities.

Committee's Observations and Recommendations

The Committee notes the response and requests an update on completion of the formalities that would compel companies awarded tenders to install Solar Home System and other renewable energy technologies to undertake operation and maintenance, among others.

(iii) Enhance Private Sector Participation in Renewable Energy Projects

The previous Committee had observed that while the Government had put in place investment guidelines and a methodology for tariff determination to promote renewable energies, such measures alone, without a specific legal and regulatory framework in place, would not advance the development of alternative sources of energy and attract investment for the renewable energy sub sector. In that light, the Committee urged the Government to, as a matter of urgency, enact legislation on renewable energy so as to, among other issues, promote development of renewable energies and enhance private sector participation.

Executive's Response

It was submitted in the Action Taken Report that the Government was in the process of developing a regulatory framework for the off-grid space in order to guide the operations of the private sector. Further, the Government had waived import duties on the importation of solar and energy efficient products through Statutory Instrument Nos. 32 and 33 of 2008. Further smart subsidies were also provided through the Rural Electrification Fund to private players in the sector.

Committee's Observations and Recommendations

The Committee resolves to request an update on the development of the regulatory framework for the off-grid space.

17. Conclusion

Water is vital to almost all the economic sectors of the country and if well harnessed, it can contribute to the country's economic development through job creation and poverty reduction. However, the Zambia's economy is vulnerable and increasingly constrained with a number of water related challenges such as frequent droughts and floods, hydrological variability and seasonal water shortages. This is compounded by the growing water demand from the major sectors of the economy. In addition, failure to fully implement the *Water Resources Management Act, No. 21 of 2011* and the notably low investments in the water sector have hampered the effective implementation of water resource programmes including infrastructure development. Another notable challenge in the water sector has to do with lack of adequate funding to the Water Resources Management Authority which has resulted in inability to discharge its mandate effectively. It is important that water resource management is prioritised as it has cross cutting impact on many economic sectors of the country.



R Kangombe, MP
CHAIRPERSON

June, 2022
LUSAKA

Appendix I

List of National Assembly Officials

Mr C Haambote, Acting Principal Clerk (Financial Committees)
Mrs D C Mukwanka, Acting Deputy Principal Clerk (Financial Committees)
Mr C Chishimba, Acting Senior Committee Clerk (Financial Committees)
Mrs S B M Nyirongo, Committee Clerk
Mrs D M Manjoni, Administrative Assistant II
Mr M Chikome, Committee Assistant
Mr D Lupiya, Committee Assistant
Mr M Kantumoya, Parliamentary Messenger

APPENDIX II

Witnesses

MIZU ECO CARE

- Mr T K Phiri - Executive Director
- Ms M Kapena - Chief Executive Officer (Namfumu Conservation)
- Mr I Mwaipopo - Executive Director (Centre for Policy and Trade)

NIRÀS

- Mr L Namayanga - Senior Non-Key Expert – European Union

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

- Mr J Msimuko - Permanent Secretary
- Mr E Shitima - Director, Green Economy and Climate Change
- Ms N Manza - Director, Finance
- Mr E Nkonde - Director, Meteorology
- Mr G Gondwe - Director, Environmental Management
- Mr D Kasaro - Principal Forestry Officer
- Ms N Soko - Parliamentary Liaison Officer

NATURAL RESOURCES DEVELOPMENT COLLEGE

- Ms A Tembo - Principal
- Mr D Mwanza - Head of Department, Water Engineering
- Mr O Mulenga - Senior Training Officer
- MR R Banda - Training Officer
- Mr P Kupikwa - Training Officer

LUSAKA CITY COUNCIL

- Mr A Mwanza - Town Clerk
- Mr A Zimba - District Planning Officer
- Ms V Namuwelu - Environmental Planner

GLOBAL WATER PARTNERSHIP - ZAMBIA

- Professor I Nyambe - Member
- Mr C Chilongo - Publicity Secretary
- Eng Dr M Chongo - Programme Manager, Africa Water Investment Programme

POLICY MONITORING AND RESEARCH CENTRE

- Ms M Simukali - Head Communications
- Mr S Mwamba - Head Research and Analysis
- Ms A Pearce - Senior Researcher
- Mr K Chiwele - Researcher

UNIVERSITY OF ZAMBIA

Dr K Banda	-	Senior Lecturer
Dr W Nchito	-	Director of Directorate of Research and Graduate Studies
Dr E Nyirenda	-	Lecturer
Dr M Muchanga	-	Lecturer
Mr M Chisola	-	Lecturer
Dr P Nyambe	-	Professor

MULUNGUSHI UNIVERSITY

Dr K Nyirenda	-	Acting Vice Chancellor
Mr J T Mwale	-	Lecturer

GIZ - ACCELERATE WATER AND AGRICULTURAL RESOURCES

Mr P Kammerer	-	Senior Advisor/Team Lead
Mr Henli Otte	-	Programme Coordinator
Dr C Chindaile	-	Senior Advisor

WATER RESOURCES MANAGEMENT AUTHORITY

Mr K Nyundu	-	Director General
Ms M Ngulube	-	Authority Secretary
Mr B M Chishimba	-	Acting Director Human Resource & Administration
Mr C Chishala	-	Acting Director Water Resources Management & Information
Mr A Chumba	-	Manager, Regulations & Compliance

MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT

Mr W Bwalya	-	Permanent Secretary, Technical Services
Ms N Munthali	-	Director, Planning
Mr N Siame	-	Director, Housing & Infrastructure
Mr M Nkwemu	-	Chief Planner

ZAMBIA ENVIRONMENTAL MANAGEMENT AGENCY

Mr S Mwansa	-	Acting Director General
Mr M Songwe	-	Director, Operations
Ms C N Mundia		Manager, Climate Change & Natural Resources Management

MINISTRY OF AGRICULTURE

Mr G Mbozi	-	Permanent Secretary
Mr M Mwale	-	Director, Agriculture
Ms P Mlewa	-	Director, Policy & Planning
Mr I Mukuka	-	Acting Director, Zambia Agriculture and Policy Institute

MINISTRY OF LANDS AND NATURAL RESOURCES

Ms D Chabu	-	Permanent Secretary
Mr G S Sindila	-	Director of Lands
Mr A Dauchi	-	Chief Natural Resources Management Officer
Mr K Zambezi	-	Senior Land Surveyor
Mr M Chisupa	-	Acting Assistant Chief Registrar

MINISTRY OF FISHERIES AND LIVESTOCK

Dr A C Songolo	-	Permanent Secretary
Mr M J Shimbela	-	Director, Policy Planning and Information
Mr V Simoongwe	-	Chief Livestock and Production Officer
Dr A Kefi	-	Assistant Director, Department of Fisheries

MINISTRY OF WATER DEVELOPMENT AND SANITATION

Mr J Kalusa	-	Permanent Secretary
Mr O Katooka	-	Director, Department of Water Supply and Sanitation
Mr H Mpamba	-	Assistant Director, Department of Water Resource Development
Mr U Nyirenda	-	Assistant Director, Department of Water Supply and Sanitation
Mr P Mwila	-	Principal Engineer, Department of Water Resource Development
Mr E Peteli	-	Principal Planner

WORLD WIDE FUND FOR NATURE

Ms Beauty S Mbale	-	Freshwater Programme Lead
MR R N Jani	-	Water Resources Management Specialist
Ms I Mukelabai	-	Chief Conservation Officer

ENGINEERING INSTITUTION OF ZAMBIA

Eng C K Chola	-	Vice President, Policy
Eng M A Munkonge	-	Member
Eng A Muchelembe	-	Member
Mr D Kamungu	-	Deputy Registrar

NATIONAL INSTITUTE FOR SCIENTIFIC AND INDUSTRIAL RESEARCH

Dr H Kambafwile	-	Chief Executive Officer
Dr A Muvundika	-	Acting Manager – Research and Development

HIVOS

Mr M Mhuru	-	CSO-SUN/HIVOS Partner
Ms N Sakala	-	HIVOS Partner

ZAMBEZI RIVER AUTHORITY

Eng M C Munodawafa	-	Chief Executive Officer
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Mr B Mfula - Senior Manager Water Resources and Environmental Management
Mr B Philemon - Legal Council/Acting Board Secretary
Mr C Chisense - Director – Water Resources and Environmental Management
Mr P C Mwiinga - Hydrologist

LOCAL GOVERNMENT ASSOCIATION OF ZAMBIA

Ms M Namumba - Executive Director
Mr S I Zulu - Director of Finance
Mr S Chanda - Project Coordinator