

**MZUMBE UNIVERSITY
(CHUO KIKUUMZUMBE)**

**MZUMBE UNIVERSITY POLICY ON ENVIRONMENTAL
MANAGEMENT**

Second Edition

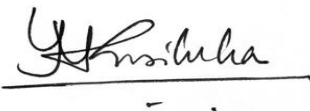
Approved by the University Council on 26th June, 2020

FOREWORD

I am pleased to present the second edition of Mzumbe University Policy on Environmental Management. The policy is a result of extensive efforts of the University in its efforts to keep abreast the prevailing national and international policy orientations. The approval of this Policy will replace the earlier Mzumbe University Policy on Environmental Management of 2013, which has been revised.

In developing the second edition of this Policy, a professional policy making process was adopted. During the process, intensive review of relevant documents was carried out followed by extensive consultation with various stakeholders from within and outside the University. The stakeholders consulted include but not limited to Mzumbe University community members, selected higher learning institutions of Tanzania, selected central government offices, the local government, and non-governmental organisations. I would like to take this opportunity to extend my sincere gratitude to all those who have contributed at various stages of developing this Policy.

It is my belief without doubt that diligent implementation of this policy will result in development of a more environment-sensitive culture within Mzumbe University community and hence a more aesthetic environment, attractive to both internal and external customers, and friends of the University. I am appealing to everybody to take part in implementing this policy for the betterment of Mzumbe University and the neighbouring communities.



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POLICY DECLARATION

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CHAPTER ONE

INTRODUCTION

1.1 Preamble

Mzumbe University (MU) is a public University, which is run by the Government of the United Republic of Tanzania under the Ministry of Education, Science and Technology (MoEST). The core functions of MU are teaching, research, consultancy and outreach services. As a training institution, Mzumbe University started in 1953 as a Local Government School for training chiefs, native authority staff and councillors. In 1972, it was transformed into the Institute of Development Management (IDM) - Mzumbe and later in 2001 into a fully-fledged University after the enactment of Mzumbe University Act No. 21 of 2001. The Act was repealed by the Universities Act No. 7 of 2005, which is an umbrella act, providing for and regulating University education in Tanzania. In line with the provisions of the Universities Act, the University was granted its Charter in 2007, which provides for its continued existence as a successor of the University established by the Mzumbe University Act.

As a vision statement, MU aims to be a centre of excellence in training, research, consultancy and outreach services in management and allied sciences for socioeconomic development of the people by 2025. To achieve the vision, the University embarks on its mission, which is to provide opportunities for acquisition, development, preservation and dissemination of knowledge and skills through training, research, technical and professional services. The University's core values are accountability, creativity and innovativeness, diligence, integrity, professionalism, respect for others, responsiveness to society needs, transparency, and teamwork.

Currently, MU has three campuses, namely, the Main Campus located at Mzumbe area in Morogoro Region, Dar es Salaam Campus College located at Upanga area in Dar es Salaam City and Mbeya Campus College located at Forest area in Mbeya City a few metres off the Dar es Salaam – Lusaka Highway.

1.2 Mzumbe University Policy on Environmental Management

Environmental management involves a combination of aspects including protection, allowing regeneration of nature, monitoring of destructive activities of man and regulation for attaining sustainable development (SD). SD is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only at present, but also for generations to come. The concept of sustainable development arose from a number of environmental movements including the 1972 UN Conference on the Human Environment, but it was not definitely defined until 1987 by the World Commission on Environment and Development (WCED). The release of Our Common Future's report by the WCED was followed by the United Nations Conference on Environment and Development (UNCED) or simply the Earth Summit in 1992. This implies that environmental management cannot be separated from the concept of sustainable development.

The Commission described sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. SD ties together concern for the carrying capacity of natural systems with the social and economic challenges facing humanity. It offers a vision of progress that integrates immediate and longer-term objectives, local and global action, and regards social, economic and environmental issues as inseparable and interdependent components of human progress. This policy on environmental management is an important working tool aiming at attaining green status at Mzumbe University Campuses.

The field of sustainable development can be conceptually categorized into three constituents parts namely, environmental sustainability, economic sustainability and socio-political sustainability. Environmental sustainability is the process of making sure that current processes of human interaction with the environment are pursued in tandem with the idea of keeping the environment as pristine as naturally possible. Sustainability requires that human activity only uses nature's resources at a rate at which they can be replenished naturally. On the other side unsustainable situation occurs when the sum total

of nature's resources is used up faster than it can be replenished or is just degraded to the extent of reducing or totally inhibiting its utility.

Achieving environmental sustainability requires careful balancing of human development activities while maintaining a stable environment that predictably and regularly provides resources such as freshwater, food, clean air, wood, fisheries, productive soils and aesthetic values whilst protecting people from adverse events like droughts, pest infestations and diseases outbreaks. Environmental sustainability is in line with Sustainable Development Goals (SDGs), especially number 6, 7, 11 and 13 which is to ensure clean water and sanitation, affordable and clean energy, sustainable cities and communities and climate action respectively. The SDGs were preceded by the Millennium Development Goals (MDGs) which ended in 2015. The MDGs had similar orientation of protecting the environment and ensuring human wellbeing which in particular the MDGs goal no 7 was on ensuring environmental sustainability.

Since the conception of SD in 1987, the world's nations have been discussing the need for greater achievements in sustainable development in all countries. This need has arisen from the increase in environmental problems as a result of rapid and unmanaged human development actions. As a result, many of the planet's ecosystems have been degraded, survival of some species is threatened, and environmental problems are becoming progressively more apparent. To slow the damage caused by human development, it is essential that our actions become more sustainable, which requires management of human activities with respect to their environment.

The Earth is experiencing environmental degradation and in response ecosystems are becoming ever vulnerable to the imposed rapid changes. This calls for urgent concerted efforts to manage and protect the environment with particular concern in issues such as maintaining biodiversity, promoting use of alternative and renewable energy, finding climate change solutions and generally foster sustainable development. The mechanism of managing the environment requires collective actions by involving the United Nations and its agencies, governments, Non-Governmental Organizations (NGOs), corporations and

individuals interconnected via different environmental conventions and protocols. The process to establish world status of environment involves assessment and reporting of environmental issues which is being done at both global and national levels where monitoring and assessment of environmental management activities of all public organizations and Private Corporations form an important source of data.

At global level, United Nations Environmental Programme (UNEP) has been providing a comprehensive assessment and reporting framework through the so called UNEP Global Environment Outlook Project which was initiated in 1995 in response to the reporting requirement under agenda 21. Global environmental issues include ozone layer depletion, global warming, acid rain, tropical deforestation, desertification and pollution problems in developing countries, endangered species, marine pollution and trans-boundary movement of hazardous wastes. They are called global environmental issues because their impacts and damages affect not only the specific countries that caused the problems, but they go beyond their national boundaries and can reach a global scale. The problems also require international efforts while local people and organizations still remain key components to the local and global solutions.

Tanzania is one of the first countries which expressed commitment to SDGs implementation. However, Tanzania is facing environmental problems such as degradation of land, water catchments, marine and coastal areas, lakes, dams and rivers to mention but few. The National Environmental Policy of 1997 identifies six major environmental problems for urgent attention. These are problems of: land degradation; Access to good quality water for both urban and rural inhabitants; Environmental pollution; Loss of wildlife habitats and biodiversity; Deterioration of aquatic system and deforestation. Several aspects of these environmental problems are linked to widespread poverty in Tanzania hence failure to attain environmental sustainability. To address those problems the Government through the Vice Presidents' Office adopted the Strategy for Urgent Actions on Land Degradation and water Catchments to halt land degradation and to protect water sources and catchments in the country. Other strategies include the formulation of National Environmental Policy (NEP) of 1997 and National Environmental Management

Act of 1983, which was repealed by the Environmental Management Act(EMA) No. 20 of 2004.

Additionally, Tanzania has been preparing Interim State of the Environment Reports each year since 2006 to address the national environmental and sustainable development challenges. The MU policy on environmental management is in harmony with the national efforts to protect the environment by promoting awareness to its community on environmental sustainability and reducing impact of the university operations including both construction developments and day to day activities of procurements, utilisation and waste disposal to the environment.

In the quest to ensure proper environmental management MU Policy on Environmental Management was formulated in 2013. The policy has been in use for more than five years and thus, it is due for review due to the dynamics of both the societal needs and the natural environment. Accordingly, a team of four Mzumbe University members of staff was appointed to coordinate the review of the Policy and formulate an updated version of the same. To make the process participatory, wider categories of stakeholders were involved in soliciting data. In the process, the identification of policy issues took into consideration two broad areas, which are the physical environmental situation at MU and behaviours of MU community members towards environmental management activities.

The team deployed different methods to ensure reliable identification of environmental policy issues of concern at MU. The methods included conducting physical inspection and/or observation of the MU surroundings with the purpose of collecting data for the general scenery. Another method was the administration of a questionnaire aimed at collecting opinions from MU community members to apprehend different issues concerning environmental management. The team also collected opinions from external stakeholders for benchmarking the policy with other public universities such as Sokoine University of Agriculture, University of Dares salaam, Ardhi University and Mbeya University of Science and Technology. Another source of data was from Mzumbe University Auditing Report of 2017/2018, which raised a concern about solid and liquid

wastes as policy issues to be addressed by Mzumbe University. Furthermore, target number D4.4.2 of Mzumbe University's Fourth Corporate Strategic Plan (CSP) (2017/2018 – 2021/2022) concerns developing and deploying Waste Management Policy and systems in efforts to enhance environmental management. This Mzumbe University Policy on Environmental Management will address both the auditors' concerns and enable MU to achieve the CSP's target because it is more comprehensive than the planned waste management policy.

The collected data were analysed to determine the current environmental situation at Mzumbe University and hence identify the policy issues to be covered in the second edition of the MU Policy on Environmental Management. The first draft of the policy document was shared to members of MU for soliciting comments, which were then incorporated into the revised draft in order to promote ownership of the policy. The revised policy document was then presented to the Management Committee for more comments and improvement.

This policy document has five chapters starting with Chapter One, which serves as the Introduction. Chapter Two is about the Current Environmental Situation at MU; Chapter Three presents the Policy Rationale, Objectives and Statements; Chapter Four is about Policy Implementation, Monitoring and Evaluation, and Legislative Arrangements; and Chapter Five presents the Conclusion.

CHAPTER TWO

CURRENT ENVIRONMENTAL SITUATION AT MZUMBE UNIVERSITY

2.1 Overview

There is an increased level of consciousness with regard to the complex relationship that exists between development and the quality of the environment. Mzumbe University (MU) community is not an exception in this matter. There are various environmental problems that hinder the University's efforts of attaining green campus status. The main areas of concern include: unsustainable solid and e-waste disposal, liquid wastes management, food wastes, wastes from animals, deforestation, land degradation (sometimes leading to soil erosion), low quality and shortage of supply of tap water, environmental pollution (air, soil and noise pollution), informal entrance and short-cuts all over the campus, frequent sewage system-blocks and unsustainable energy use.

2.2. Solid and e-waste

2.2.1 Solid waste

Inappropriately managed solid waste leads to environmental pollution. This occurs when the environment is deposited with both biodegradable and non-biodegradable wastes, at their broad categories. These are capable of emitting greenhouse gases, toxic fumes, and particulate matters as they accumulate in open landfills. These wastes are also capable of leaching organic or chemical substances that contaminate the ground where such wastes lay in accumulation. This is one of the environmental problems in the MU surroundings where solid wastes such as plastic bags and bottles are carelessly thrown around MU premises. These not only cause unattractive scene but they also lead to contaminations when they are carried by rainwater run-offs or by flood water to the main water streams and finally reach larger water bodies such as big rivers, lakes and oceans. Some solid wastes may contain contaminating residues which remain non-degraded in the soil for a long time that render it unfit for farming activities and when they enter water bodies, they impair reproduction of fish and other water inhabitants.

In managing solid waste, the University has an authorised dump site, but it is not being utilized as required. In addition, solid wastes at both the authorized dumpsites and the unauthorized ones are dumped in such a way that they are let to scatter and spread to other nearby places. Also, there is no sorting of solid wastes at Mzumbe University Main Campus and its other campuses. All sorts of solid wastes are just dumped together at the collection points without separating them according to the nature and type of wastes. As a result, plastic, glass, wooden, metallic and all sorts of food wastes are mixed and carried to the dumping sites.

2.2.2 Electronic waste

Electronic waste or generally, e-waste is a solid waste from a discarded electric or electronic appliance. Used electronic appliances or products that are condemned for dumping, resale, reuse, or salvage recycling are also part of e-waste. Lack of formal e-waste processing activities at Mzumbe University causes an accumulation of used electronic appliances in unauthorised places and in storerooms alike. While e-waste can lead to adverse effects to human health, it leads to environmental pollution too because some of them consist of harmful ingredients such as lead.

2.3 Liquid wastes

Liquid waste is any water that has been adversely affected in quality by anthropogenic influence. It comprises wastewater discharged by domestic residences, commercial establishments, industrial plants and/or agriculture and can encompass a wide range of potential contaminants. Having sustainable liquid wastes management is important especially in large community like MU. However, the prevailing scenario at MU surroundings regarding liquid waste management is inadequate due to the fact that the university's population has been increasing while the infrastructure remained the same. This causes frequent blockages of the sewerage system especially in hostels and residential houses.

2.4 Food wastes

Food waste is one of largely produced solid waste based on the population of MU community. Food waste is the largest component of generated wastes by weight. Mzumbe University has a large community and thus enormous amount of food wastes are produced daily. Food wastes include uneaten portion of meals and trimmings from food preparation activities in kitchens, restaurants and cafeterias. The leading areas for production of this kind of wastes are cafeterias within the University, staff residences as well as students' hostels. Production of food wastes at MU poses great challenge towards attaining green campus status. Management of food wastes at the University needs attention. In the first place food wastes are not collected separately; rather they are mixed with all other non-food products like plastic, glass, wood and metallic wastes.

Given their biological nature, food wastes tend to decay faster than non-food wastes. It thus, requires more frequent collection from the collection point so as to avoid bad smell resulting from their decay. The problem of decaying foods is not only with the resultant bad odour but also high bacterial load and harbouring of disease transmitting insects like flies and cockroaches causing a danger of outbreak of communicable diseases. Also delaying collection of food wastes invites nuisance animal pests like rodents and wild cats around University campuses. Collection and transferring of food wastes to the designated dumping sites is supposed to be relatively more frequent.

2.5 Soil pollution

Soil pollution is the contamination of a soil in a particular region. Soil pollution mainly is a result of penetration of harmful substances such as industrial by-products, pesticides and insecticides, fuel leakages from automobiles, which get washed away by rainwater and seep into the sub-surface. As a result, it brings about deterioration of the soil quality, thus making it unfit for use. Another cause of soil pollution is improper sewage system management. Increased soil pollution leads into increased salinity of the soil, which therefore makes it unfit for vegetation growth including cultivated crops. Even if some crops and other vegetation manage to grow, the harmful pollutants may enter the food chain and finally when ingested as food material they may cause health problems to both

grazing animal and human beings. Soil pollutants may contain heavy metals which have carcinogenic potentials when consumed in foods and drinking water.

Given the nature of activities that are taking place, Mzumbe University is at risk of experiencing severe soil pollution. Currently, some tracts of the University lands are being used for farming whereas there is a possibility of applying agricultural chemicals such as artificial fertilizers, insecticides, growth boosters and herbicides to mention but a few. A more serious problem is the cultivation of vegetables near wastewater stabilization ponds where there is a high possibility of that water to have been contaminated by both harmful micro-organisms and chemicals used in bathrooms and toilets. The University also operates a garage/workshop for servicing its vehicles. The petroleum wastes from the garage such as fuels, oils and acids, and solid wastes such as old tyres and metallic body parts which can pollute the environment when poorly managed. Such pollutants when haphazardly discarded may chemically decompose and further produce harmful chemical by-products which enter the soil through rainwater.

2.6 Noise pollution

Noise pollution refers to intrusive noise that disrupts or distracts regular life and functioning of an organization. While people mainly think of noise pollution as a problem of the big cities, with the competing sounds of more people in a smaller space, noise pollution can also be found in suburban neighbourhoods like Mzumbe. Noise pollution may be associated with design of buildings which do not take seriously issues of environmental sustainability which may be for individual homes, offices and dormitories. It may also come from ongoing constructions or constantly running radio, music systems and TV set at high volumes to mention just a few. In an overall, high noise level can have a negative impact on human labour efficiency and health such as triggering high blood pressure and mental stress. The scenario at MU is that there is students' tendency of standing along corridors and shouting and Mzumbe Primary School pupils making noise while collecting water at water tap points. Students who talk loudly or drum their fingers on the desks or offer other distracting noises can decrease the productivity of other people around them without realizing it.

2.7 Air pollution

Air pollution is the introduction into the atmosphere of chemicals, particulates, and biological matter that cause harm to humans, other living organisms, or cause damage to the natural environment. Normally, the Earth is capable of cleaning itself of a certain level of pollution, but in some places man-made pollutants have exceeded the level the Earth's natural mechanisms is capable of removal. The world is witnessing the results of this overload in the form of acid rain, smog, and variety of health problems that can be contributed by polluting the atmospheric environment. Furthermore, accelerated air pollution will have negative aftermath to the environment by damaging crops, forests and escalation of green house gases (GHG) into the atmosphere that will lead into destruction of ozone layer, enhanced global warming culminating into climate change.

The impact of air pollution is associated with among others, health problems like breathing problems, reduced lungs functioning and development of cancer, especially of the respiratory system. Air pollution has become one of the environmental challenges surrounding Mzumbe University Main Campus due to haphazard burning of bushes, solid wastes including plastics, burning of petroleum fuels to produce electricity especially when there is overhead power cut-offs. Similar problems prevail at Dar es Salaam and Mbeya Campus Colleges. For the case of Mbeya Campus College, the problem which was accelerated by the motor vehicles passing across the compound has been reduced after the University restricted movement of public vehicles in the campus.

2.8 Unreliable quality and safety of tap water

The tap water supplied at MU main campus comes from Tangeni River and from bore hole. Depending on the quality of this source, the water that comes from various taps are almost certainly have to undergo a form of treatment to make it safe for human consumption. All water supplies that are used for human consumption must meet certain standards, which have been laid down by World Health Organization (WHO). They have to be free from micro-organisms, parasites and any chemical substances that may cause danger to public health if they are found in sufficient concentrations. The real situation of water that has been supplied at MU are of unreliable quality, which may lead to serious

problems to the University community by making it vulnerable to water borne diseases such as dysentery, cholera and typhoid fever to mention just few. Water treatment at the distribution point might be ineffective as it uses chlorination method which is an old technology. Another factor which causes low quality of water at MU is high rainfall, where muddy run-off waters enter the rivers making the river water to lose its normal clear colour. As a result, tap water loses its physical qualities in terms of colour and particle contents. Water of this quality when used for washing purposes cause soiling/dirty in toilets and bathrooms as well as tarnishing of clothes. Intermittent treatment process is also another possible source of supplying poor quality or contaminated drinking water to consumers.

2.9 Unreliable supply of water

Initially, Mzumbe University main campus relied on tap water supply from Tangeni source only which was not adequate. In order to curb the shortage, the university initiated and implemented a borehole project. The borehole is now providing water to complement that from Tangeni River which has shown declining tendency especially during dry season. The declining tendency may also be associated with unsustainable cut down of trees in the upper course of the rivers by the surrounding community. However, according to National Water Policy 2002, protection and management of water sources is supposed to be participatory in the sense that different stakeholders should be involved. In that regard communities around water sources and the catchment at large have the responsibility of ensuring sustainability of water resource. For this reason, communities around water sources need to be supported by providing them with required knowledge of environmental management and even supplying tree seedlings which are environmentally friendly, i.e having tendency of preserving water. Nonetheless, the problem of unreliability of water supply is yet to be eliminated. The University's Dar es Salaam and Mbeya Campus Colleges rely on water from Dar es Salaam Water Supply Company (DAWASCO) and Mbeya Urban Water and Sanitation Authority (MUWSA) respectively. Likewise, the two campus colleges do face water shortage from time to time.

2.10 Informal entry and short-cuts

Informal short-cuts have become a challenge in attaining quality green environment at MU. Almost in every area surrounding the University, there are informal short-cuts. The problem seems to be more alarming at the main campus than at the other campuses. The most affected areas are around students' hostels, classrooms, offices and playgrounds. Informal entrance to the University campus is another problem which needs attention to be paid at as it causes other problems such as making it difficult to control illegal activities like burglary and general low security for MU community. Generally, presence of such entrances jeopardizes security of MU compound and community.

2.11 Deforestation and land degradation

Forests are one of the most important aspects of the planet we live in. Forests are vital to the environment, animals, and human beings as well as for the Earth's climate. The forests act as filters of carbon dioxide which is the major contributor to global warming and its chain of environmental impact. Forests and vegetation generally are habitats and shelters to millions of species, and they are also important for their aesthetic appeals. However, the forests on our planet are being depleted at a very fast rate. Mzumbe University is not exceptional; it is experiencing the problem of deforestation due to practices of land clearing by MU and the neighbouring communities for agricultural land, building materials and fuel wood. Deforestation may lead to land degradation in forms of enhanced soil erosion, disruption of the water cycle, loss of biodiversity, flooding as well as drought and desertification to mention just few.

2.12 Inadequate infrastructures for liquid waste management

Liquid waste management refers to the procedures and practices to handle sewage and run-off water. The system for handling liquid wastes at MU is relatively old and thus its capacity is becoming overwhelmed by the ever-increasing population of students and staff. Generally, the sewage system at the University is in poor condition as there are frequent blockages, which poses the possibility of impacting the health of MU and surrounding communities due to frequent discharge of untreated liquid wastes to the open surface. The

problem occurs more in residential houses. On the other hand, rainwater run-off is not adequately contained by having sufficient and secure drainage system. This allows rainwater to flow haphazardly thereby causing dangers of soil erosion. The problem associated with rainwater run-off is more evidenced in bare land areas like in playgrounds and informal walkways.

2.13 Unsustainable use of energy

Energy use efficiency refers to efforts made to reduce energy consumption. It encompasses all changes that results in the reduction in the energy used for any given energy service (coking, heating, lighting, running some machines, etc). It aims at using less energy to provide the same level of performance and comfortability. In MU inefficiency energy use is likely attributed to among others unawareness of and irresponsible behaviour of stakeholders who leave on electric gadgets such as fans, lights, air conditions, etc. when it is not necessary. The aspect of sustainable energy use also concerns the use of alternative or renewable energy sources like biogas and solar energy, which are currently not utilized at MU. The use of renewable energy sources contributes largely to sustainable development by firstly preserving non-renewable energy sources like petroleum which are vulnerable to exhaustion and total depletion. Secondly the use of renewable energy sources contributes to reduction of global warming and environmental pollution caused by accumulation of petroleum combustion by-products like Carbon dioxide and Sulphur dioxide in the atmosphere.

2.14 Environmentally unfriendly behaviour amongst mu community members

Generally, it has been observed that there are environmental problems at Mzumbe University Main Campus, Dar es Salaam Campus College and Mbeya Campus College. Despite that MU is an organization whose community is highly educated there are behaviour and practices that leads to existing environmental problems as described in the next sub-items:

i. Unattractive scenery of the University premises due to trespasses /shortcuts:

There has been a tendency of MU community members trespassing on lawns rather

than using the formerly established walkways. This practice not only makes the University compounds look unattractive, but the informal paths expose the land to agents of erosion, especially rainwater. Usually informal walkways will later develop in small gullies which if not controlled may lead to serious degradation of the landscape.

- ii. **Poor handling of sanitary towels in toilet rooms:** There has been poor handling of the sanitary pads. For instance, such pads are placed on unauthorized places or thrown into the sewerage system hence causing frequent blockage of the system. Mzumbe University has a large number of female inhabitants and therefore the use of sanitary pads is equally enormous.
- iii. **Carelessness in handling environmental resources:** There has been a tendency of some community members being careless in using tap water. Many times water taps are left running hence causing substantial loss of water and fouling environment as well as encouraging harbouring noxious insects like mosquitoes which transmits malaria. Inspection carried out by the reviewing team revealed that the problem is mostly significant in students' hostels.
- iv. **Littering around:** Littering behaviour is a serious problem at MU. Despite the provision of waste bin at many strategic points within the university compound, rather than using them, the community members haphazardly throw such items as plastic bags and bottles to the surroundings, classrooms, hostels and lecture halls, hence tarnishing the environment.
- v. **Blockage of public toilets:** Using solid materials such as pieces of clothes and papers in public toilets were identified to cause blockage of public toilets at MU and it has become a serious problem which requires members to be frequently reminded or sensitized especially because each year the University receives new members, especially new students.

- vi. **Putting posters/advertisements on unauthorized places such as walls, doors, trees etc.** This behaviour has made the university compounds and buildings unattractive. When the posters are for instance fasten on walls and doors by using pins or glue, then in removing them causes the pin or glue to peel the wall paints. Also, the remaining spots cause ugly looking of glass walls and doors. This practice not only affects the attractiveness of buildings but also causes unnecessary cost of maintenance to the University. Thus, sensitizing the community is important because not all people are aware or even see the importance of maintaining attractive environment.

- vii. **Unsustainable use of energy:** This occurs when electric gadgets like lights, ceiling fans, air conditions etc are left on even in the absence of the user or when not necessary. There has been a tendency of the community members using energy unsustainably for instance by leaving lights, ceiling fans, air conditioners on for the whole day or several days. This problem is more evident during weekends. Areas mostly affected are staff offices and student hostels. This behaviour causes a substantial cost to the University and global environment at large.

2.15 Policy issues

From the analysis done in the preceding sections of this chapter, the following list provides a summary of policy issues to be addressed by MU Policy on Environmental Management:

- (a) Environmental pollution in such areas as solid, liquid and E-wastes, food wastes (garbage), water pollution, soil pollution, noise pollution and air pollution.
- (b) Unreliable supply of good quality and safe water
- (c) Informal short-cuts in campuses
- (d) Deforestation and land degradation
- (e) Inadequate infrastructure for liquid waste management
- (f) Unsustainable use of Energy
- (g) Unethical behaviour amongst community members, which threaten environmental sustainability of the university premises.

CHAPTER THREE

POLICY RATIONALE, OBJECTIVES AND STATEMENTS

3.1 Rationale for the policy

The MU Policy on Environmental Management guides the process of addressing environmental issues at MU as identified in Chapter Two. The Policy is in line with the National Environmental Policy of 1997 and Environmental Management Act (EMA) No. 20 of 2004. In response, MU formulated the first edition of MU Policy on Environmental Management in 2013 whose review resulted in this edition.

Before 2013, MU had no policy on environmental management except that the University was offering one environmental degree programme of study and individual courses at Master's and undergraduate levels respectively. The programmes and course are offered under the Centre for Environment, Poverty and Sustainable Development established under the Institute of Development Studies (IDS) in 2002. The centre is charged with *inter-alia* the dissemination of knowledge and skills on environment and natural resources in relation to poverty reduction for sustainable development through teaching, conferences, workshops, consultancy assignments and outreach activities. In the academic year 2010/11 the centre established a Master of Science degree Programme in Environmental Management (MSc EM), which is currently named Master of Environmental Management (MEM) after being reviewed.

3.2 Policy objectives

The general objective of Mzumbe University Policy on Environmental Management is to provide the framework of addressing the present and future environmental challenges, which the university is facing in her efforts to attain green status of the campuses.

Based on the current environmental situation at MU, the following are specific objectives of the Policy:-

- i. To ensure efficient and effective management of solid and E-wastes at MU.

- ii. To ensure effective management of garbage in all areas of MU premises.
- iii. To ensure proper management of liquid waste within the university premises.
- iv. To ensure supply of adequate and good quality water at MU.
- v. To ensure effective conservation of environmental resources (forests woodland, grassland and wildlife) within MU's estates.
- vi. To ensure clean energy and energy use efficiency in MU.
- vii. To ensure the development of environmental ethics and conservation attitude among the community members of MU.
- viii. To ensure policy integration and coordination between environmental policy and related policies in handling cross-sector issues.

3.3 Policy statements and accompanied strategies

3.3.1 Overview

The policy statements are presented based on the objectives of the Policy as identified in the preceding section 3.2. Since the policy objectives aim to eliminate the policy issues, the policy statements presented in this section are accompanied by strategies, which will facilitate smooth achievement of the objectives by having a direct link with the policy issues.

3.3.2 Policy Objective 1

To ensure efficient and effective management of solid and E-wastes at MU for a pollution-free environment.

Policy Statement 1

The University will ensure that there is effective control of all solid wastes within the university surroundings for a pollution-free environment.

Strategies

The following strategies will be pursued:-

- a) To place waste bins labelled (or coloured) for different types of wastes in every building of the University and ensure they are emptied daily.
- b) To redesign and maintain the officially recognised dumping sites and discourage the use of unauthorised dumping places by enacting and enforcing environmental management by-laws.
- c) To organise awareness campaigns aimed to educate the University community on keeping the University surroundings clean and green.
- d) To design and administer record keeping sheets for effective monitoring of contract implementation processes of the outsourced cleaning services.
- e) To design and build specific car parking lots in order to reduce the spread of the impact of soil pollution.
- f) To design and run awareness raising programmes and/or campaigns for the reduction of air, soil and noise pollution
- g) To make sure classrooms, hostels, staff offices and residential houses have the desired ventilation and temperature.
- h) To discourage the use of loudspeakers in the habitat zones except for important meetings/functions for noise pollution control.
- i) To establish a link with recycling companies in order to add value to various types of wastes produced within the premises of MU.
- j) To introduce water recycling for tree planting (or general irrigation) and having green zones.

Policy Statement 2

The University will ensure that there is a professional handling of E-wastes for a pollution-free environment.

Strategies

- a) To design and use modern ways of handling E-wastes emanating from the use of electronic appliances.

- b) To establish collaborative links with organisations experienced in e-waste handling.
- c) To utilise MU students and academic staff in researching the problem of e-waste and develop appropriate solutions such as detective applications.
- d) To

3.3.3 Policy Objective 2

To ensure effective management of garbage in all areas of MU premises.

Policy Statement

The University will make sure there is an effective management of garbage in all University premises.

Strategies

The following strategies will be pursued:-

- a. To perform sorting of the wastes and ferry them to the appropriate dumping site.
- b. To design and daily administer record keeping sheets for effective monitoring of garbage handling by the outsourced catering service providers.

3.3.4 Policy Objective 3

To ensure proper management of liquid wastes within the University premises.

Policy Statement

The University will ensure there is efficient management of liquid wastes including on-campus waste stabilization ponds and/or systems.

Strategies

The following strategies will be pursued:-

- a) To introduce down-pipes in all buildings and surface canals avoid haphazard splashing by rainwater.

- b) To ensure drainage system is in good condition all the time.
- c) To rehabilitate all existing University washrooms on regular basis.
- d) To carry out regular maintenance of water stabilisation ponds.
- e) To expand the existing liquid waste management infrastructure in order to cope with the increasing needs of MU.

3.3.5 Policy Objective 4

To ensure the supply of adequate and good quality water at MU.

Policy Statement

The University will ensure the supply of adequate clean and safe water to its communities. The University will ensure the observation of water quality standards in providing water services as specified by the law from time to time.

Strategies

The following strategies will be pursued:-

- a. To ensure environmental conservation in areas surrounding the water catchments and sources of River Tangeni.
- b. To ensure there is effective water treatment using modern technologies.
- c. To dig more wells and dams.
- d. To establish infrastructures for rainwater harvesting and distribution to all campuses.

3.3.6 Policy Objective 5

To ensure effective conservation of environmental resources (forests, woodland, grassland and wildlife) within MU's estates and the neighbouring communities.

Policy Statements

The University will ensure effective conservation of environmental resources (forests, woodland, grassland and wildlife) in the University surroundings and the neighbouring communities.

The University will ensure the observation of air quality and soil quality standards as specified by the law from time to time.

Strategies

The following strategies will be pursued:-

- a. To establish MU Environmental Day, which will be used to sensitize the community on environmental conservation.
- b. To establish students' environmental clubs, which will be dealing with environmental awareness raising.
- d. To involve and cooperate with local communities around the University in implementing environmental conservation initiatives.
- e. To design and run awareness raising programmes and/or campaigns on the role of community members in controlling bush fires and other environmental threats within the University estates and the neighbouring communities.
- f. To advocate tree planting within MU surroundings and the neighbouring communities for carbon sink and good scenery
- g. To ban or discourage open burning of agriculture residues such as straw, leaves, animal dung and other pollution generating material.
- h. To establish close links with the local government in matters related to environmental conservation.

3.3.7 Policy Objective 6

To ensure clean energy and energy use efficiency in MU

Policy Statement

The University will ensure the use of clean energy and energy use efficiency at MU through promoting conservation behavioural and adopting modern technologies.

Strategies

The following strategies will be pursued:-

- a. To raise awareness on efficient use of energy at MU.
- b. To ensure structures and systems per the requirements of energy use efficiency are in place.
- c. To introduce clean energy production and environmentally friendly technologies in appropriate processes.
- d. To adopt alternative sources of energy such as solar energy infrastructure, biogas technology and smart lights.

3.3.8 Policy Objective 7

To ensure the development of environmental ethics and conservation attitude among the community members of MU.

Policy Statement

The University will ensure that regular awareness programmes and campaigns are conducted aiming to cultivate good conduct and promote observance of environmental ethics within the university premises in the areas of personal hygiene, public health, energy and water use efficiency, noise control, and promotion of good aesthetic view.

Strategies

The following strategies will be pursued:-

- a. To abolish all informal short-cuts surrounding MU environment.
- b. To design awareness programmes and/or campaigns aimed to discourage informal walkways (trespassing and unauthorised entry/exit), practices leading to blockage of toilets, and instead, promote the use of formal

walkways, ensure consistent availability of water in toilets, and cultivate the habit of energy use efficiency at MU.

- c. To design and run awareness raising programmes to the community on the relevance and benefits of having green environment in line with the need to observe the prevailing national environmental legislations.
- d. To design outreach programmes to assist neighbouring schools and villages in promoting green environment and promote environmental health.
- e. To post banners at different places within the university surroundings aiming to promote proper dumping of wastes, the use of formal walkways, and discourage informal walkways and littering behaviour.
- f. To put small posters on the doors of public toilet rooms to provide guidance on proper use of the facilities in such aspects as handling of feminine towels and other items that can lead to blockage.
- g. To put small but visible posters about “*turning off lights when not in use*” or related message on the doors of offices, classrooms, washrooms, along corridors etc in all buildings.
- h. To design monitoring and evaluation programmes and awareness campaigns for proper food handling for hygiene and general public health improvements.
- i. To mainstream environmental ethics in environmental courses and encourage students to take elective courses related to environmental ethics.
- j. To design cultural change programmes aimed to cultivate hygiene-related behaviour among MU community members so that they become the custodians of environmental protection thereby contributing greatly in reducing the risk of contagious diseases’ outbreaks.

3.3.9 Policy Objective 8

To ensure policy integration and coordination between environmental policy and related policies in cross-sector issues.

Policy Statement

Mzumbe University will make sure that cross-sector issues identified and those not identified by this Policy are attended by the appropriate policy or organ of Mzumbe University.

Mzumbe University will make sure there is a close cooperation between academic staff, administrative staff, outsourced service providers responsible for sanitation and estates, and investment entities such as those at “Uswazi” area in promoting environmental sustainability.

Strategies

The following strategies will be pursued:-

- a. To form a university-wide committee to comprise both administrative and academic members of staff with environmental expertise and interest to co-ordinate all university units in matters related to environmental management for sustainability.
- b. To carry out physical auditing to make sure that issues like house-roof leaking and other issues related to infrastructure are attended adequately by an appropriate MU policy for the provision of life comfort.
- c. To include environmental objectives in corporate strategic plans of the University.
- d. To review and hence revise the current bylaws, guidelines and other administrative instruments for the provision of legal adequacy in the control of environmental problems within the university premises.

CHAPTER FOUR

POLICY IMPLEMENTATION, MONITORING, EVALUATION AND LEARNING, AND LEGAL ARRANGEMENTS

4.1 Policy implementation

Although the DVC (A&F)'s Office is the lead implementation organ, MU Policy on Environmental Management will be implemented by different stakeholders where the whole MU community, both individuals and formal structural organs will have roles to play. It is important to note that a common and shared commitment in attaining the policy objectives will be realised only if various actors play their roles effectively. For the achievement to be realised, a committee will be established under the Office of the DVC (A&F), which will coordinate the implementation of all activities of this Policy across the University. The committee will work closely with the Directorate of Buildings and Estates, which is the custodian of the Policy. The committee will comprise members from both the academia and the administrative staff in order to provide for the opportunity of a wider reach and thus enabling the use of expertise from a wide spectrum. Specifically, the committee will be comprised of but not limited to members from each campus of the University, the Directorate of Buildings and Estates, the Faculty of Law, the Directorate of Planning, the Directorate of Human Resources and Administration and from among the academic members of the Institute of Development Studies with environmental expertise. The formation of the Environment Management Committee is included in Mzumbe University's Fourth CSP ((2017/2018 – 2021/2022) as target number D4.4.1

Meanwhile, MU's neighbouring local communities will be involved in implementing this Policy through participating in MU Environment Day and environmental outreach activities. The university schools, faculties, directorates, and institutes will be responsible for designing and introducing academic environmental management programmes and courses as well as environmental outreach programmes and/or campaigns to disseminate the achievements of this Policy. The neighbouring institutions such as Mzumbe Secondary and Primary Schools will also be involved in the implementation of the Policy through the

environmental outreach programmes and/or campaigns and green environment competition ceremonies to be organised by the University.

4.2 Monitoring, evaluation and learning

All activities of the MU Policy on Environmental Management will be monitored and evaluated in accordance with the prevailing Monitoring and Evaluation (M&E) system of MU. Specifically, the committee to be established (as per Sections 3.3.9 and 4.1 above), charged with the coordination role will monitor the implementation of all activities of this Policy across the University. The committee shall provide quarterly and annual reports, which will provide the basis for evaluating the achievement of the Policy, hence leading to learning. While monitoring will be conducted continuously, evaluation of the Policy will be done semi-annually and annually following the financial and planning calendar.

There is no specific period for the Policy to continue operating as a valid University instrument before its revision. The revision of the Policy will be subject to various forces that shall necessitate its review and hence revision to produce another edition. M&E reports as well as changes in global and national policies will be some of the forces that can trigger the revision of this Policy. The revision will be approved by the relevant university organs endowed with powers of policy approval.

4.3 Legal arrangements

The implementation of MU Policy on Environmental Management will be done within the existing legal frameworks of MU. However, for smoother implementation of the Policy, MU will review the existing bylaws, guidelines and other administrative instruments (as promised in Section 3.3.9) in order to identify areas that need improvement followed by necessary updating of the same.

CHAPTER FIVE

CONCLUSION

Mzumbe University has been successful in setting aside areas for conserving its environment whose long-term goal is to attain the status of green campus university and hence provide healthier environment to the community members. In order to attain this goal, MU Policy on Environmental Management puts emphasis on involving all stakeholders in attaining sustainable use and management of environmental resources both in and around MU campuses. The Policy will be implemented by the MU staff, MU students, neighbouring institutions and local communities, and the private sector. The engagement of various stakeholders is expected to foster the spirit of inclusive participation in the implementation of the Policy.

The Policy has put forward several policy statements aimed at meeting the aspirations of MU community. To operationalise the statements, MU has identified some selected strategies to be implemented as enablers of the achievement of the policy objectives.

The successful implementation of this policy is dependent on the efforts of all stakeholders. MU Management will take responsibilities to lead the process of implementing this Policy including advocacy and working out the modalities of establishing a university-wide committee for environmental management (as promised in Section 3.3.9) in the manner that will produce fruitful results.

MU will continue to cooperate with different institutions within and outside the country for attaining the status of green university as well as for experience sharing. Finally, MU welcomes support from national, regional and international communities on promoting environmental management.