



COLLEGE OF
AFRICAN WILDLIFE
MANAGEMENT
MWEKA

SHORT COURSES CURRICULUM ON ENVIRONMENTAL AND WASTE MANAGEMENT

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INTRODUCTION

A rapidly increasing human population coupled with industrialization, modernization, and overall urbanization are associated with the increase in generated waste and environmental degradation. The effects of uncontrolled waste and environmental deterioration are a major threat to society's ability to sustain itself, as they have detrimental effects on public health, tourism, the environment, and overall economic growth and sustainable development. As various actors such as local communities, protected area management authorities, local government authorities, business community strive to manage the wastes and ensure environmental health, challenges remain on the availability of relevant skills, knowledge, and technologies.

Moreover, sustainable development and economic growth are clearly linked to environmental health and sustainable consumption and production patterns. The current trends in human population increase across the SADC region create more stress to the already threatened environment in the wake of climate change impacts. This in turn threatens the achievement of development goals. To address the current and potential challenges to environmental and waste management in SADC region, it is critical to have a curriculum with specific short courses that target key personnel working on the issues related to environmental and waste management. Such personnel are key in providing guidance to communities, business leaders and policy makers on ways to manage the environment, creation of resilient local mechanisms for revenue acquisition and diversifying revenue-generating options from environment and waste management sectors.

RATIONALE OF THE SHORT COURSES ON ENVIRONMENTAL AND WASTE MANAGEMENT

The environment is a key component of human economic development. A well-managed environment is essential for economic growth, a healthy population, and a prosperous future. Because the environment provides resources that power the economy, a large portion of the population depends on nature-based products for their livelihoods. However, rapid urbanization and changing consumption patterns have contributed to a global waste crisis, adversely affecting the environment. Recognizing this, African governments have significantly shifted their approach to environmental and waste management, placing greater emphasis on enhancing resource recovery and promoting sustainable practices.

Nevertheless, a lack of updated knowledge and skills related to environmental and waste management remains a significant obstacle. Therefore, these short courses are designed to train personnel who are at the forefront of addressing environmental degradation and unmanaged waste, acting as a crucial link between communities and key actors in the waste management value chain. These individuals include, but are not limited to, environmental and waste management officers, waste management scientists/researchers, environmental planning officers, sustainability officers, recycling program officers, environmental management scientists/researchers, environmental risk consultants, environmental safety and compliance specialists, and eco-entrepreneurs working within environmental management sectors.

COURSES

1. Waste management technologies and innovation
2. Circular economy
3. Environmental risk management
4. Hazardous waste management
5. Life cycle assessment
6. Waste Management

Overview

Waste Management Technologies and Innovation course delves into the evolving landscape of waste management, exploring both fundamental principles and cutting-edge technologies. Participants will gain a comprehensive understanding of modern waste management practices, focusing on innovative solutions for a sustainable future and advocacy for Cleantech.



Duration

Two (2) weeks

Content

- Waste management principles
- Technological transformation in waste management
- Advanced sorting and processing technologies
- Advanced recycling technologies
- E-waste management
- Waste-to-energy technologies
- Advocacy for cleantech and innovation in Waste management

Targeted group

Environmental managers, scientists, engineers, designers and professionals in the field of environmental and waste management and other related fields

Fee

TZS TZS 800,000/=

for EAC and SADC countries

TZS 1,600,000/=

for non EAC and SADC Countries

How participants will benefit

At the end of the course, participants will be able to:

- Identify innovative technologies used for waste collection, sorting, and processing
- Describe the functionalities of advanced recycling technologies
- Discuss the importance of sustainable waste management strategies
- Analyze the potential of emerging technologies like AI and robotics in transforming waste management practices

CIRCULAR ECONOMY

Overview

A Circular Economy course provides a comprehensive introduction to the circular economy, a transformative model that aims to decouple economic growth from the consumption of finite resources. Participants will explore the core principles of the circular economy, its practical applications, and its potential to create a more sustainable and resilient future.

Content

- Introduction to the circular economy
- Key principles of a circular economy (Reduce, reuse, recycle, redesign)
- Circular design
- Biodegradable and compostable materials
- Implementing a circular economy
- Business model innovation for circularity
- Bio-circular economy issues
- Case studies



Duration

Two (2) weeks

Targeted group

Environmental managers, scientists, engineers, operators, designers and professionals in the field of environmental and waste management and other related fields, procurement personnel and products designers

Fee

TZS TZS 800,000/=

for EAC and SADC countries

TZS 1,600,000/=

for non EAC and SADC Countries

How participants will benefit

At the end of the course, participants will be able to:

- Explain the core principles of a circular economy
- Discuss the environmental and economic benefits of circularity
- Identify opportunities for circular design in different products
- Analyze the challenges and opportunities for implementing a circular economy

Overview

An environmental risk management course provides a wide-ranging introduction to environmental risk management, equipping participants with the knowledge and skills to identify, assess, and mitigate environmental risks. Participants will learn about various risk assessment methodologies, environmental regulations, importance of ISO 14001 and best practices for managing environmental risks in diverse settings

Content

- Overview of environmental risk management and assessment
- Environmental risk assessment and hazards
- Risk analysis
- Risk mitigation strategies
- Risk communication
- Risk governance
- Overview and importance of ISO 14001

How participants will benefit

At the end of the course, participants will be able to:

- Understand the key principles and frameworks of environmental risk assessment and management procedures
- Identify and classify potential environmental hazards and risks associated with various activities and projects
- Apply risk assessment techniques to evaluate the likelihood and severity of environmental impacts
- Develop strategies to monitor, control and mitigate environmental risks



Duration

One (1) week

Targeted group

Environmental managers, scientists, engineers, operators, community waste practitioners, designers and professionals who need to lead or undertake environmental risk management processes for their organization and facilities.

Fee

TZS 800,000/=
for EAC and SADC countries

TZS 1,600,000/=
for non EAC and SADC Countries

Overview

Hazardous waste management course provides a comprehensive overview of hazardous waste management, equipping participants with the knowledge and skills to handle hazardous materials safely and responsibly. Participants will learn about regulatory requirements, waste identification and characterization, proper handling and storage techniques, transportation and disposal procedures, and emergency response protocols.

Content

- Understanding hazardous waste
- Classify wastes
- Waste management hierarchy (the 5 R's)
- Classifying and Identifying Hazardous Waste
- Safe handling and storage of hazardous Waste
- Transportation and disposal

How participants will benefit

At the end of the course, participants will be able to:

- Classify hazardous waste based on its characteristics and potential hazards
- Explain the environmental and health risks associated with improper hazardous waste disposal
- Classify and segregate hazardous waste streams according to regulations
- Implement safe handling and storage practices for hazardous waste, including proper labeling and containerization
- Use appropriate Personal Protective equipment (PPE) based on the type of hazardous waste encountered



Duration

Two (2) weeks

Targeted group

Health, safety, and environmental professionals, Laboratory technicians and technical assistants, community-based enterprises, Staff responsible for contamination issues e.g. operators

Fee

TZS TZS 800,000/=
for EAC and SADC countries

TZS 1,600,000/=
for non EAC and SADC Countries

Overview

Life Cycle Assessment (LCA) course provides an inclusive introduction to LCA, a powerful methodology for evaluating the environmental impacts of a product, process, or service throughout its entire life cycle – from raw material extraction to end-of-life management. Participants will learn the principles and framework of LCA, its applications, and how to interpret and use LCA results for informed decision-making.

Content

- Introduction to Waste Management and LCA
- LCA Framework and Methodology
- Applying LCA to Waste Management
- Interpretation and Use of LCA Results
- LCA Software and Resources



Duration

Two (2) weeks

Targeted group

Waste management professionals, Sustainability practitioners, Policymakers, Engineers and consultants, community waste practitioners interested on life cycle thinking.

Fee

TZS TZS 800,000/=
for EAC and SADC countries

TZS 1,600,000/=
for non EAC and SADC Countries

How participants will benefit

At the end of the course, participants will be able to:

- Evaluate the environmental impacts of waste management options
- Make informed decisions about waste management strategies
- Apply LCA principles to environmental challenges

WASTE MANAGEMENT

06

Overview

Waste management short course provides a comprehensive introduction to modern waste management principles, practices, and technologies. Participants will gain a thorough understanding of integrated waste management systems, focusing on sustainable solutions for minimizing waste generation, maximizing resource recovery, and protecting public health and the environment.

Content

- Introduction to waste management
- Categorizing waste by physical state (solid, liquid and gaseous)
- Special waste categories (hazardous, electronic and medical)
- Waste management strategies



Duration

Two (2) weeks

Targeted group

Waste management professionals | Sustainability practitioners | Policymakers | Engineers and consultants, community waste practitioners interested on life cycle thinking.

Fee

TZS TZS 800,000/=
for EAC and SADC countries

TZS 1,600,000/=
for non EAC and SADC Countries

How participants will benefit

At the end of the course, participants will be able to:

- Identify different types of waste based on their properties
- Understand the environmental and health impacts of various waste streams
- Explain the principles of waste management hierarchy
- Discuss proper handling and disposal methods for different waste categories
- Apply their knowledge to make informed choices that contribute to a more sustainable waste management system

Acknowledgment:

The development of this course was supported by the RINaWa Project, funded by the EU through the OACPS and SADC Secretariat



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