MARINE AND WETLAND RESOURCES MANAGEMENT

UNIT CODE: ENV/CU/MGT/CR/04/6/A

Relationship to Occupational Standards

This unit addresses the unit of competency: Manage marine and wetland resources

Duration of Unit: 90 hours

Unit Description

This unit describes the competencies required to manage marine and wetland resources. It involves utilizing marine resources, managing marine protected area (MPAs), classifying wetland ecosystems, conserving and restoring wetlands.

Summary of Learning Outcomes

1. Utilize marine resources
2. Manage marine protected area (MPAs)
3. Classify wetland ecosystems
4. Conserve wetlands
5. Restore wetlands

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Utilize marine resources	• Marine ecological systems • Impact of development on marine environment • Policy legislations and international conventions	• Observation • Oral questioning • Written tests • Projects • Practical assignments
2. Manage marine protected area (MPAs)	• Meaning and importance of MPAs • Roles and benefits of MPAs • Processes in the marine environment • Types of MPAs in East Africa • Advantages and disadvantages of transboundary MPAs • MPA management plan	• Observation • Oral questioning • Written tests • Projects • Practical assignments

	• Principles of MPA management
	• Closure systems
	• Regulation of activities in MPAs
	  • Size limits and harvest limits
	  • Gear limits
	  • Licensing and permit
	  • Limiting access
	• Threats to MPAs
	• Human impacts on marine
	• Conflict resolution	

3. Classify wetland ecosystems	• Types and classes of wetlands • Functions of wetlands • Wetland ecosystems in Kenya • Ramsar sites in Kenya • Wetland biodiversity	• Observation • Oral questioning • Written tests • Projects • Practical assignments

4. Conserve wetlands	• Guiding principles for wetland management
	• Sustainable utilization of wetlands
	• Process of preparing wetland management plan
	  • Factors to consider
	  • Stages of preparation
	  • RAMSAR guidelines
	  • Zonation
	• Threats to wetlands
	• Conventions for wetland resource management
		• Observation
		• Oral questioning
		• Written tests
		• Projects
		• Practical assignments

5. Restore wetlands	• Establishment of buffer zones placement • Wetland mitigation • Wetland conditions monitoring • Wetland restoration measures • Process of creation of constructed wetlands • Community sensitization • Wetlands monitoring	• Observation • Oral questioning • Written tests • Projects • Practical assignments

Suggested Methods of Instruction

- Lectures
- Group discussions
- Demonstration by trainer
- Exercises by trainee

Recommended Resources

- Monitoring Equipment
- Laboratory
- Data
- Computer
- Stationery
- Internet