


OVERVIEW OF WETLANDS

Dan Ashitiva
National Environment Management Authority

Outline

- ▶ Definition
 - ▶ Types
 - ▶ Functions and Values
 - ▶ Challenges
 - ▶ Management interventions
- 

Definition

- ▶ areas of land that are permanently or occasionally water logged with fresh, saline, brackish, or marine waters, including both natural and man-made areas that support characteristic plants and animals, the depth of which at low tide does not exceed 6m.
 - ▶ *include swamps, marshes, bogs, shallow lakes, ox-bow lakes, dams, riverbanks, floodplains, fishponds, lakeshores and seashores.*
- ▶ Occupy about 3–4%, of the land surface and fluctuate up to 6% in the rainy seasons.

Types of wetlands

- ▶ **Estuarine:** deepwater tidal habitats with a range of fresh–brackish–marine water chemistry; deltas, tidal marshes and mangrove swamps



- ▶ **Marine:** open ocean, continental shelf; coastal lagoons, rocky shores, and coral reefs



- ▶ **Palustrine:** Non-tidal wetlands substantially covered with emergent vegetation, trees and shrubs e.g swamps, marshes



- ▶ **Lacustrine:** inland water bodies situated in topographic depressions, lack emergent vegetation, trees and shrubs e.g lakes and ponds



- ▶ **Riverine:** Freshwater perennial streams comprised of deepwater habitat contained within a channel –rivers, stream




Functions and values of wetlands

- ▶ **FUNCTION:** Properties that a wetland naturally provides
- ▶ **VALUES:** Properties that are valuable to humans

Ecological functions



Water quality improvement

- ▶ Wetlands improve water quality by acting as sediment sinks or basins. They are especially effective at trapping sediments in slow moving water.
 - ▶ Wetland vegetation slows water velocity and particles settle out.
- 

Flood control

- ▶ Wetlands act as protective natural sponges by capturing, storing and slowly releasing water over a long period of time, thereby reducing the impact of floods.

Ground water recharge


- ▶ wetlands often contribute to groundwater and can be important in recharging aquifers



Coastal protection

- ▶ Coastal marshes, mangrove swamps and other estuarine wetlands act as effective storm buffers
- ▶ The erosive nature of tides is also dampened by wetland plants because their roots hold soil in place and their stalks reduce the destructive energy of waves and wind.

Carbon trapping and storage

- ▶ Wetlands store carbon within live and preserved plant biomass instead of releasing it to the atmosphere as carbon dioxide, a greenhouse gas affecting global climates.
 - ▶ On the other hand, filling, clearing and draining wetlands releases carbon dioxide.
- 

Habitats for plant and animal species

- ▶ Wetlands provide habitat for various animal and plant species such as antelope, flamingoes and other water fowls




Biodiversity hotspots

- ▶ Wetlands serve as important nursery and breeding areas for animals, fish and birds



Socio-cultural and Economic values




- Source of food e.g fish, rice
 - Animal grazing and watering points
 - Source of fuel and building materials
 - Domestic water supply
 - Means of transport
 - Research and education
 - Recreational and aesthetic sites– bird watching, canoeing, hunting, fishing
- 

Values of wetlands




Threat and Challenges to wetlands

- ▶ Encroachment for settlement, agriculture or industry
 - ▶ Pollution, eutrophication and salinisation
 - ▶ Siltation and sedimentation
 - ▶ Over-exploitation of wetland goods and services
 - ▶ Reclamation and conversion
 - ▶ Alien and invasive species
- 



Management intervention

- ▶ Laws and regulations: International and national laws
 - ▶ Management frameworks: WEMASK, IWMPs
 - ▶ Assessment, Monitoring and Restoration programmes—biological and physio-chemical parameters
 - ▶ Awareness creation
- 

Thank you for
listening