BEATING PLASTIC POLLUTION IN UGANDA

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What is environment?

Section 2 of national Environment Act, 2019 defines Environment as

- The physical factors of the surroundings of human beings, including land, water, air, atmosphere, climate, sound, odour and taste;
- The biological factors of animals and plants; and
- The social factors of aesthetics, health, safety and wellbeing of people, and includes human interaction with both the natural and the built environment

WHY ENVIRONMENT?

- Devine Command:
  - "It is He who has made you successors upon the earth… so fear Him." Qur'an 6:165
  - "The Lord God took the man and put him in the Garden of Eden to work it and take care of it." Gen 2:15
  - "The Earth is our mother and we are her children." Hindu-Atharva Veda 12.1.12
  - "As a bee – without harming the flower, its color or fragrance – takes its nectar and flies away: so should the sage go through a village."Dhammapada 49
  - "You shall not destroy its trees by wielding an axe against them..Torah-Deut 20:19

WHY ENVIRONMENT?

- Conservation of Human life: Air, Water, Food, Medicine, Disease prevention..
- Basis for Development: Agriculture, Tourism, Mining/Oil and Gas, Energy, Industry, Science and Technology
- Legal requirement: Article 39, 237, 245 of the Constituion, Acts of Parliament-NEA, LG Act, several sectoral laws

INSTITUTIONAL FRAMEWORK

- President and Cabinet-Policy and Strategic Direction
- Policy Committee on Environment-support to Cabinet
- Ministry responsible for Environment-MWE
- National Environment Management Authority
- Ministries, Departments, Agencies, Local Governments, Urban Authorities

Key environment segment Lead Agencies

- NFA-Forests in CFRs
- UWA- Wildlife
- WMD-Wetlands
- DWRM-Water resources
- MAAIF-Fisheries
- LG and UA-Waste, Noise, local forests, wetlands

FUNCTIONS OF NEMA

The National Environment Management Authority established by an Act of Parliament in 1995 and continued under National Environment Act, 2019 as the Principal Agency in Uganda responsible for:

- Regulation,
- Monitoring,
- Supervision,
- Coordination of all activities in the field of environment.

Plastic Pollution

- Plastic is a synthetic or semi-synthetic material made primarily from polymers, which are long chains of repeating molecules.
- Comes from the Greek word “plastikos” meaning “capable of being shaped or molded.”
- Usually derived from petrochemicals (oil and gas), though some modern plastics come from plant-based sources (bioplastics).
- Alexander Parkes created first plastic from cellulose (plant-based) in 1862 then in 1930s petrochemicals arrived resukting in boom in 1970s

State of Plastic pollution

- 400 million tonnes of new plastic are produced annually; projected to reach over 516 million tonnes in 2025, and 1.2 billion tonnes by 2060
- Only 9% recycled, ~21% economically recyclable
- 40% ends up in landfills, 11 million tonnes leaks into aquatic ecosystems each year
- 8.3 billion tonnes produced to date; only ~12% recycled, 79% in landfills or the environment
- Microplstics account for 57 million tonnes annually; pervasive and found in human tissues
- Africa generates 5% of global plastics and consumes 4% of the global plastics

Sate of Plastic Pollution

- In Uganda, 600 tonnes/day of plastic waste generated across Uganda. Kampala alone produces ~800,000 t annually
- Uganda plastic production accounts for 0.04% of global plastic production
- Only 40–50% of plastic waste is collected; 60% remains uncollected, flooding drains, landfills, and natural spaces

Do we need plastics?

- Healthcare: Used in syringes, IV bags, PPE—essential for hygiene and infection control.
- Food Packaging: Preserves food, extends shelf life, and reduces waste.
- Water & Sanitation: Pipes, tanks, and containers ensure clean water access.
- Construction: PVC pipes, roofing, and insulation materials are durable and affordable.
- Agriculture: Seedling bags, irrigation systems, and silage wraps boost productivity.
- Transport: Lightweight plastic parts improve fuel efficiency and vehicle safety, tyres, interiors etc
- Electronics: Used in casings, wires, and components for insulation and safety.

Then whats the Problem?

- Non-biodegradable – Plastics take 100–500 years to decompose, polluting the environment long-term
- Wildlife danger – Animals die from eating or getting trapped in plastic waste
- Toxic chemicals – Plastics can leach harmful substances like BPA and phthalates into food and water.
- Climate impact – Plastic production and burning release greenhouse gases, worsening global warming.
- Health risks – Burning plastic emits toxic fumes linked to respiratory illness and cancer.
- Microplastics in humans – Found in blood, lungs, and food—posing unknown health risks.
- Urban flooding – Plastic blocks drains and causes floods, especially in cities like Kampala.
- Economic costs – Governments and communities spend billions on cleanup and health care. About US$3000 (500-1500 direct costs) per tonne of total clean up.
- Low recycling – Only about 9% of plastic is recycled; most ends up in landfills or the environment.

What we can do!

- Reduce Single-Use Plastics — Ban or limit disposable plastic bags, straws, and packaging.
- Promote Recycling — Improve collection systems and invest in recycling infrastructure.
- Adopt Biodegradable Alternatives — Support development and use of eco-friendly materials.
- Public Awareness Campaigns — Educate communities about plastic pollution and waste management.
- Extended Producer Responsibility (EPR) — Make producers accountable for plastic waste management.
- Strengthen Legislation & Enforcement — Enforce bans and penalties for illegal plastic disposal.
- Support Waste-to-Energy Projects — Convert non-recyclable plastic waste into energy safely.
- Encourage Reuse and Circular Economy — Design products for multiple uses and easier recycling.
- Community Cleanups & Incentives — Organize regular cleanups and reward responsible waste disposal.
- Fund new technologies for plastic alternatives, recycling, and cleanup.

Asanteni sana wandugu katika mapambano