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**AFRICA INSTITUTE FOR PROJECT MANAGEMENT STUDIES (AIPMS)**

**DIPLOMA IN WATER SANITATION AND HYGIENE (WASH)**

**MODULE THREE**

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**Explain what municipal solid waste (MSW) means?**

MSW also called trash or garbage is defined at the national level as wastes consisting of everyday items like product packaging, furniture, clothing, bottles, cans, food scraps.

These wastes come from homes, institutions like schools, hospitals, commercial sources like restaurants.

Once generated MSW must be collected and managed

MSW waste type consisting of everyday day items that are discarded by the public

Although the waste may originate from a number of sources that has nothing to do with the municipality, the traditional role of municipalities in collecting and managing these kinds of waste have produced the term municipal

MSW industry has four components and these are; recycling, composting, disposal and waste to energy.

The composition of municipal solid waste varies greatly from municipality to municipality and it changes significantly with time.

In municipalities which have a well-developed waste recycling system, the waste stream mainly consists of intractable wastes such as plastic film and non-recyclable packaging materials.

In developed areas without significant recycling activity it predominantly includes food wastes, market wastes.

Waste can be classified in several ways, but the following list represents a typical classification

Biodegradable waste, this includes food and kitchen waste, green waste, paper.

Most of them can be recycled although some are difficult to compost

Recyclable materials like paper, cardboard, glass, bottles, jars, tin cans, aluminium cans

electrical and electronic waste.

This includes electrical appliances, light bulbs, washing machines, computers, mobile phones

Composite waste like waste clothing, waste plastics such as toys

Hazardous waste including most paints, chemicals, tires, batteries, fertilisers

Toxic waste including pesticides, herbicides and fungicides

Biomedical waste expired pharmaceutical drugs.

MSW is made up of four levels ordered from most preferred to least preferred methods. Source reduction and reuse, recycling or compositing energy recovery, treatment and disposal.

The functional element of collection includes not only gathering of solid waste and recyclable materials but also the transport of these materials after collection to the location where the vehicle is emptied.

The location maybe a materials processing facility, a transfer station or a land fill disposal site (1)

**Explain the importance of the following MSW properties in solid waste management and treatment?**

**Outline the advantages and disadvantages of source separation of MSW?**

**Advantages:**

Keeps the environment clean and fresh so this helps the people to go disease free

Saves the earth and conserves energy, recycled wastes make quality papers this therefore saves cutting down of trees

Reduces environmental pollution, eliminates the surrounding waste

Creates employment as a huge amount of labour is needed right from collection to the final step of segregation. Every phase needs manpower

**Disadvantages:**

The process is not always cost effective. It needs a lot of money, time and land to set up a plant and run

The resultant product has a short life.

The recycled products though are eco-friendly, it’s expected to have a shorter life span than the intended original one

The sites are often dangerous as they lead to the spread of diseases

It causes a considerable extent of water pollution. (1)

**Discuss the challenges faced in disease surveillance?**

Non-sustainable financial resources.

Proper disease surveillance requires adequate finances which are most of the times not available

Lack of coordination, this makes disease surveillance difficult

Inadequate training and turnover of peripheral staff, most of the times the staff lacks adequate training on most of the diseases

Technical and technological issues (1)

**Explain 5 diseases that can be prevented by observing proper hygiene?**

Good hygiene which includes hand washing, preparing and cooking food properly are critical in aiding disease prevention

Numerous diseases are spread due to failure to practice good hygiene

Hand washing, this is the effective way of preventing the spread of **diarrhoeal diseases**.

Soap and wood ash are both cleansing and disinfecting agents.

This can be done after defecating, cleaning a child who has defecated, before eating and handling food

Bathing and laundering are important for cleanliness and good personal appearance. This prevents diseases like **ringworms, trachoma, and scabies**.

Bathing with soap prevents transmission of trachoma an illness that can cause blindness.

Inadequate provision of proper hygiene on the surroundings leads to an increased risk of diseases such as **Malaria diseases**, caused by parasites that are transmitted to people through the bites of an infected female anopheles’ mosquitos.

It is preventable and curable.

vector control is the main way of preventing and reducing malaria transmission. If coverage of vector control intervention within a specific area is high enough then a measure of protection will be conferred across the community.

WHO recommend protection for all people at risk of malaria with effective malaria control.

Two forms of vector control, insecticide-treated mosquito nets and indoor residual spraying- effective in a wide range of circumstances. (1)

**REFERENCES:**

1. (AIPMS) Water and sanitation course reference materials and guidance.