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DIPLOMA IN WATER AND SANITATION HEALTH

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1. Explain what municipal solid waste (MSW) means.

Answer:

Municipal solid waste is defined to include refuse from households, non-hazardous solid waste from industrial, commercial and institutional establishments (including hospitals), market waste, yard waste and street sweepings. (WASH Diploma Module 4 2018)

In urban area there are a number of wastes that are produced. These come in different forms and need to be collected, separated and managed. These as the definition alludes come from different facets of industry and life, the most common being from households, like in India they produce tons of solid waste per year and the mandate to manage that waste falls on the local authority. If not managed properly through proper collection and disposal parameters there can be long lasting negative ramification like disease outbreak or further pollution. The most common way of disposing the waste is using landfills and this is not the answer. This is common because its cheap and requires no processing it’s basically dumping.

The problem that intel’s with this form of waste management is there might be seepage of the waste and air pollution become the problem thus becoming a negative impact to the environment.

2. Explain the importance of the following MSW properties in solid waste management or treatment.

Answer:

The importance of MSW in the solid waste management or treatment is great. As the primary authoritative in the handling of that sector in the urban area is not implemented then there will be the frequency of diseases. Furthermore, waste management is an essential task which has important consequences for public health and well-being, the quality and sustainability of the urban environment and the efficiency and productivity of the urban economy (WASH Diploma Module 4 2018). The principals of MSW is to increase quality of life and protect the environment. How is this achieve by using the principals of collection, reusing, recycling, and treatment of solid waste. The whole chain is designed to help the urban ecosystem if done properly. For example, by collecting that waste you are taking away harmful contaminates from the household to be able to be collected or processed at another location, this make sure that the house hold environment is somewhat kept relatively clean. Also, the municipal council if it cannot manage the load of collection it can sub-contract the collection contract to private companies that increases the employment rate and benefits the local community. After collection then there is the sorting out phase. Some local authorities just go straight to Landfills which is not the answer to the waste management as some are not properly prepared for the that purpose. But is they are taken to sorting out that means organic and solid waste are separated it makes it easier to treat the waste. If its glass and rubber and metals it can be recycled to be reused back in the community that means less global footprint in terms of resources but it also gives employment in the local communities. There will be less air and underground pollution is less waste goes to the landfills. It also increases income of the value chain in the community.

3. Outline the advantages and disadvantages of source separation of MSW

Answer:

Waste separation is vital in terms of msw management processing. This usually happen either before collection of the waste or after collection of the waste. The composition of msw is usually biodegradable, plastic or rubber that is ( bottles, milk packets, hard plastics (Shampoo, bottles caps), plastic thread, ropes, fibres, chair cane, plastic cups and glasses ), paper that is ( white, mix shredded paper, cartons, brown paper, newspaper, tetra pack) , metal that is (Steel (utensils) copper wire , aluminium (beer / cold drink cans, deodorant, scent cans, foil), glass that is (broken glass, bottles) , rags, inert etc. MSW in India has approximately 40-60% compostable, 30-50% inert waste and 10-30% recyclable. (Rana)

As above the different solid waste need to be separated at the source so that they can be processed or recycled or composited the advantages of separation at the source is that it will be cheaper for the authority to direct the waste to where it can be proceeded. That is why in some cities there are different bins for different type of waste. That process of separation at landfills is long and not cost efficient. The other advantage is that it creates income for the employed workers that means in the processing stage. If the waste is mixed then some cannot be separated and we lose on vital resource that can be processed. There other advantage is physiological, by educating the community on the different wastes they can also recycle waste thus producing less that will go to the land fill. The informal sector in India handles the recycling sector and contributes to the employment of large number of people, efficiently and competitively operates, formal sector at same point in the recycling stage, environmental offsets such as carbon emissions by making recycling possible and reducing the extraction. The challenges in unacceptable working condition, child labour and exploiting of middle men and waste merchants. But the informal sector collects and recycles more than 10 000tons day. If all waste ends up at landfills then if not separated efficiently it will cause pollution etc (Rana) . The disadvantages of sources separating is less complete waste goes to the landfills that means that families that leave of the sorting and peaking of waste will not have any work then there is an increase in the unemployment rate. Also is costs more to educate the public on the proper use of the different bins that might impact on the municipal budget. If not separated properly on site like is glass goes into organic waste then when it comes to processing it will be difficult and time consuming.

4. Discuss the challenges faced in disease surveillance.

Answer:

The challenges faced by disease surveillance are the record keeping as some nations hospital don’t have a clear picture of what is an outbreak or not. This might be because of poor training and poor systems. To do a proper disease surveillance needs proper record keeping of the area, some people go to private clinics that do not have a mandate to report any irregularities. But in developing nation we lack a central database system that can pick this up. Also, religious sects in Zimbabwe they don’t allow their large membership to go to hospital so we don’t know the cases of diseases in their membership like certain Apostolic Sects. They believe it is a lack of their God that takes someone the doctor. So, you can have cases that can go without being reported and no post-mortem as its against their religion to disturb the dead. Government need to work with these sects to all them to seek medical attention if possible. The other challenge is some deaths happen away from any hospital so there will be no one to record them and post-mortem are taboo in some area. This might happen because they are not vehicles to get to the nearest medical centre or some are no literate enough to know that they need medical attention. That means they end going to traditional healers that have to records keeping etc. Doctors and nurses might misdiagnose the symptoms and disease thus recording the wrong thing in their medical journals.

5. Explain 5 diseases that can be prevented by observing proper sanitation.

Answer:

Sanitation I all about managing faecal waste, with low sanitation systems there will be an outbreak of different diseases. Nearly half the population of developing countries is suffering from diseases linked to inadequate water and sanitation.15 Drinking contaminated water transmits waterborne diseases such as cholera, typhoid, diarrhoea, viral hepatitis A, dysentery and dracunculiasis (guinea worm disease). (United Nations Human Settlements Programme (UN-HABITAT)). The 5 diseases that can be prevented by observing proper sanitation are:

• Diarrhoea:

Proper sanitation can prevent diarrhoea. In the way that if there is clean water that is not contaminated by faecal waste then there won’t be the transmitting of pathogens to the human body. When the body is trying to release the pathogens then diarrhoea starts. This also causes stunting of young children.

• Typhoid

House flies are the vector that leads to Typhoid. If proper sanitary processes like there is no open defecation or toilets are kept clean thus less flies in the area then the disease can be managed. Typhoid starts like malaria with dizzy spells and delirium and also diarrhoea. In some cases, it can cause fever. If not treated it might cause death.

• Viral Hepatitis A

The house flies are the culprit vector on this too. Without proper sanitary processes it affects foods thus causing Viral Hepatitis A. Nausea, slight fever, tools, dark coloured urine, jaundiced eye whites and skin after several days. (WASH Diploma Module 1)

• Dysentery

Dysentery is an inflammation of the intestine characterized by the frequent passage faces with blood and mucus. It is spread by faecal contamination of food and water. To eradicate the epidemic especially in refugee camps thee is need to distribute soap, provide clean water for washing hands before eating or preparing food install and maintain proper sewage systems and treatment plants. (Cohen)

• Cholera

Modest fever, severe, but Liquid diarrhoea (rice water stools), abdominal spasms, vomiting, rapid weight loss and dehydration, rapid deterioration of condition. (WASH DIPLOMA MODULE 1, 2018). Mainly caused by contaminated water with faecal matter. Is sanitation is excised then thee will not be cholera.

# Bibliography

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