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| **WASH ASSIGNMENT 6-READY** |

**COURSE TITLE: POST GRADUATE DIPLOMA IN WATER, HYGIENE & SANITATION.**

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1. Explain four examples of potential benefits and four examples of possible drawbacks from public–private partnerships in urban sanitation and waste management.

QN1. A public –private partnership is any collaboration between public bodies, such as a municipality or even the government, and private companies in the water supply/distribution system, urban sanitation and waste management. The belief is that private companies are some efficient and better run than bureaucratic public bodies, and the management skills and financial acumen that they bring will create better value for money for customers. The incentive for the private companies is the profit that can be generated. PPPs have become popular, to the extent that the number of people served by private water operators in developing and former Communist countries increased from 94 million in 2000 to more than 160 million in 2007 (Marin, 2009). The following are some of the potential benefits from the public-private partnerships in urban sanitation and waste management.

They can be more efficient and provide a better service because private companies are motivated by the potential profits.

Private companies can be specialists in the service area and have access to expert knowledge and special equipment.

They may be able to access funds that are not available to government offices.

Manufacture of latrine slabs; digging latrine pits and building the superstructure; emptying latrines; operating public latrines; setting up and operating handwashing facilities; collecting recyclable materials from households and taking them to merchants; composting organic wastes and latrines sludge and selling the compost. Private sector operators become eligible to obtain permits to take part in waste collection, transport and treatment.

These commercial opportunities range from product design and manufacture through to recovery and reuse of materials and all bring both economic and environmental benefits. In most of the urban and peri-urban areas of South Sudan, these opportunities are increasingly being taken up by micro- and small enterprises.

The following are the drawbacks from public–private partnerships in urban sanitation and waste management. Potential drawbacks include:

Seeking higher profits can lead to lower standards. Private companies can ‘walk away’ from a contract if it proves less profitable than they expected, leaving householders without the service.

The risk of a monopoly situation developing, so that there is no alternative to one particular service provider – who can then increase prices and/or reduce standards without fear of losing the contract.

Corruption (bribes paid to inspectors and officials to award contracts to a particular firm or to overlook shortcomings and associated penalties) can happen.

Private companies may be greedy and more interested in profit than in providing a good service.

They may not be committed to providing the service over a long period of time and may leave or close down unexpectedly.

If a single company provides a service with no competition they may take advantage of their monopoly by raising prices.

1. Briefly describe the main activities needed for planning improvements in sanitation and waste management in local institutions.

Solid waste management systems are developing in many Ethiopian towns and cities, but there is still considerable scope for improvement. Based on a study of Addis Ababa, Desta et al. (2014) identified several ways of increasing efficiency including:

Raising awareness of the public health implications of poor waste management.

Improving planning decisions and the enforcement of regulations

Increasing the number of transfer stations at accessible sites

Increasing the number of trucks available for transportation

Promoting compost production from organic waste

Promoting the separation of waste at the source (household level)

Enhancing the collaboration and participation of the private sector and communities.

To make significant and sustainable progress in solid waste management, an integrated approach that used a combination of these methods should be adopted.

Sanitation and waste management as part of institutional framework.

Awareness campaigns in the neighborhoods. Healthcare waste management should include; healthcare workers should try to reduce the amount of waste but reducing (or reusing) waste should never be carried out if it compromises patient care or creates any other risk of infection.

Hazardous and non-hazardous waste must be separated and stored separately.

Waste should be separated immediately by the person generating it. The different wastes should be placed in containers with the appropriate colour for that particular type of waste (FMHACA, 2013). The container for each waste type is:

Black bins for all non-hazardous waste such as paper, packaging materials, office supplies, drink containers, hand towels, boxes, plastic bottles and food wastes.

Yellow bins for infectious waste, which includes any material that has been in contact with blood or body fluids such as gauze, dressings and gloves.

Red bins for highly infectious wastes such as anatomical wastes (e.g. teeth, placenta) and pathological wastes (e.g. sputum-containing materials, test tubes containing specimen fluids).

A safety box for sharps wastes that have the potential to cause injuries and spread disease, such as needles, scalpels, syringes, blades, and broken glass.

Waste disposal facilities such as an incinerator and burial pits must be available, appropriate for the type of waste and health services provided.

Water supply and hand washing facilities are very important for good personal hygiene practice among health workers and patients.

In addition, all staff that handle or come in contact with the waste should be provided with appropriate protective clothing including gloves, aprons and face masks.

(Source: Institutional sanitation and waste management study session 12, study session 10: disposal of solid wastes and study session 11: Integrated solid waste management).

1. Composting is an example of waste recycling but it could also be described as an example of recovery from waste. Explain why this statement is true.

Composting is an example of recycling because the waste is reformed into a new material, compost, which is different from the original waste. It is also an example of recovery because the compost has value as a soil improver and has been recovered from the waste.

**Composting** is the process where biodegradable organic wastes (food and garden waste) are converted into compost in a natural biological process. Composting can be done by individual householders and community groups or on a commercial scale. On the larger scale, the waste from an entire town or city could be composted if sufficient land, labour and equipment are available. The benefits of composting are not only the reduction of waste, but also the production of compost which is a valuable **soil improver**. Soils treated with compost are better able to withstand droughts and are more fertile because plant nutrients are returned to the soil, which reduces the need for manufactured fertilisers. It is possible to add a certain amount of animal manure to residential waste for composting, which may help with other waste problems in the community and adds to the amount of useful soil improver that is made.

(Source: Study session 8: Solid Waste Reduction, Reuse and Recycling).

1. Imagine there is a local NGO working in the town you are assigned to that wants to develop a school WASH programme. While preparing the project documents, the delegates of the local NGO come to your office and ask you to support them. Describe the minimum requirements that you will advise them to include in the sanitation and hygiene part of their programme.

I will advise the local NGO to consider the following minimum requirements;

Separate latrines for boys and girls should be provided that are located in a convenient place in the school compound, give privacy to users, are easy to clean and agreeable to use.

The number of latrines should be calculated based on the number of students (one cubicle per 100 students) with a minimum of two cubicles for girls and two for boys, with urinals as well.

Latrines should be designed and constructed to be appropriate for children of the age at the school; small children will need facilities they can reach and feel comfortable using.

There should be appropriate latrine and hand washing facilities for students with disabilities.

Hand washing facilities with soap should be provided very close to the latrines with separate facilities for boys and girls. The supply of water for hand washing must be maintained at all times.

There should be appropriate provision of menstrual hygiene management facilities that ensure privacy for girls and allow them to dispose of or wash used menstrual pads hygienically.

Girls’ latrines should be in a separate location from boys’ latrines.

Individual cubicles should be fitted with doors that close properly.

Disposal facilities should be available for used disposable adjacent to the latrines.

Hand washing facilities and soap should be provided adjacent to the latrines.

School offices should have menstrual hygiene management (MHM) products available for emergency use.

Disposal facilities should be available for used disposable MHM products and washing facilities for reusable products.

1. Giving examples, explain three examples of ways of encouraging or supporting an ISWM approach

**Integrated Solid Waste Management** (ISWM) can be defined in many ways but it is probably best to think of it as a way of using a combination of waste management techniques to treat the different types of waste in ways that are environmentally, financially and socially sustainable. ISWM should be based on the waste hierarchy and focus on using the 3 Rs; (Reduction of waste, Reuse and Recycling of waste) while finding a suitable way of dealing with the remaining waste. It also depends on collaboration among all the organizations and individuals involved in waste management.

Waste reduction means avoiding producing waste in the first place. In manufacturing industry, it is about using fewer raw materials to make a given product. In the home, waste reduction could include avoiding buying over-packaged products.

Reuse happens when something is used more than once for its original purpose – perhaps refilling a drinks bottle with water.

Recycling is the reprocessing of materials recovered from waste so that they can be used as raw materials in manufacturing processes, for example melting of glass bottles and forming them into new bottles.

The following are some of the ways of encouraging/supporting an ISWM approach.

The national government can allow greater flexibility in budget spending by municipalities.

Extra funds may be allocated to adopt or extend ISWM.

Start-up funding can be provided for new initiatives such as waste collection, composting and recycling schemes.

Special awards could be given to individuals and organizations to celebrate successful projects.

Providing effective training for people who wish to start new schemes and supporting them in the early stages of development.

Organizing promotional campaigns to raise awareness of the 3 Rs among all members of the community.

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