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OF PROJECT MANAGEMENT STUDIES

1-Explain what municipal solid waste (msw) means

Municipal solid waste (also called trash or garbage) is defined at the national level as wastes

Consisting of everyday items such as product packaging, grass clippings, furniture, clothing, bottles

And cans, food scraps, newspapers, appliances, consumer electronics, and batteries. These wastes

Come from homes; institutions such as schools and hospitals; and commercial sources such as

Restaurants and small businesses. EPA’s definition of municipal solid waste (MSW) does not include

Municipal wastewater treatment sledges, industrial process wastes, automobile bodies, combustion

Ash or construction and demolition debris. Once generated, MSW must be collected and managed.

Common management methods include recovery for recycling or composting, combustion (with the

Resulting energy used to generate electricity or steam in some cases), and landfill disposal. Many

Wastes that are disposed of in landfills represent a loss of materials that could be reused, recycled, or

Converted to energy to displace the use of virgin materials

2-Explain the importance of the following msw properties in solid waste management.

The first goal of MSWM is to protect the health of the urban population, particularly that of low-income groups who suffer most from poor waste management. Secondly, MSWM aims to promote environmental conditions by controlling pollution (including water, air, soil and cross media pollution) and ensuring the sustainability of ecosystems in the urban region. Thirdly, MSWM supports urban economic development by providing demanded waste management services and ensuring the efficient use and conservation of valuable materials and resources. Fourthly, MSWM aims to generate employment and incomes in the sector itself. The goals of MSWM are:

**Solid-waste management**, the collecting, treating, and disposing of solid material that is discarded because it has served its purpose or is no longer useful. Improper disposal of municipal [solid waste](https://www.britannica.com/topic/solid-waste) can create unsanitary conditions, and these conditions in turn can lead to pollution of the [environment](https://www.merriam-webster.com/dictionary/environment) and to outbreaks of vector-borne disease—that is, diseases spread by rodents and insects. The tasks of solid-waste management present complex technical challenges. They also pose a wide variety of administrative, economic, and social problems that must be managed and solved.

3-Outline the advantages and disadvantages of source separation of maw

**Advantages or Benefits of Waste Management:**

As said above, Waste management involves the collection and disposal of both hazardous and non-hazardous wastes from all the sectors of a society. We shall now look in detail the benefits of proper garbage disposal.

**1. This practice is highly lucrative:**

The Journal of Waste management says that the revenues generated by the waste management would top by $60 million by 2018. But, there are only a few people who sincerely consider this as an industry into various facets of waste management like recycling and reusing, and reap the benefits. Now many companies are looking forward to associate themselves with this industry and are ready for a long term investment.

**2. Keeps the environment clean and fresh:**

Perhaps, the greatest advantage of waste management is keeping the environment fresh and neat. These waste disposal units also make the people go disease free as all the resultant wastes are properly disposed and taken care of.

More number of waste disposal units can be placed in all the tier-1 and tier-2 cities so that the waste disposal process can be prepped up. Also a point worthy of our consideration here is that this advantage can be taken into account only if extensive and [proper safety measures](https://content.wisestep.com/importance-cleanliness-workplace/) are implemented along with proper waste disposal techniques. There is no use in simply implementing a half-baked technique which, if no use to both the people and the environment. This is the best effects of proper waste disposal.

**3. Saves the Earth and conserves energy:**

This characteristic of waste management includes specifically the recycling aspect. As recycling of waste helps in reducing the cutting down of trees. This cutting of trees is mainly done for the production of paper.

By using this method, we can use the recycled waste to make quality papers rather than relying on trees. Also, recycling needs only a minimal amount of energy for utilization and complete processing. The resultant product we obtain is a renewable source of energy and is eco-friendly.

**4. Reduces environmental pollution:**

As explained above, waste management if done in a proper manner not only eliminates the surrounding waste but also will reduce the intensity of the greenhouse gases like methane, carbon monoxide which is emitted from the wastes accumulated.

The depth of the existing landfills and incineration will be curbed, thereby cutting down the harmful factors that affect the environment. Also, the amount of fossil fuels will get reduced in this manner, leading to a cleaner and a greener environment.

**5. Waste management will help you earn money:**

Can you believe if I say that what I have said above is absolutely true? Yes, waste management earns you a few extra bucks every month. Actually, there are many companies which will pay you for your waste.

Right from old and used bottles to tin cans and e-wastes, all kinds of wastes are collected and paid. These wastes are then segregated according to the extent of pollution they cause to the environment and these wastes are recycled accordingly for various purposes.

There are also crash courses available which will aid you to reuse your trash. Above all, by following this method you can create awareness to your fellow people by earning money, which is a win-win concept.

**6. Creates employment:**

Again, this aspect too is unbelievable for you… right? You may even ask how come this is possible. But in all the facets of waste management, a huge amount of labor is needed. Right from the collection to the final step of segregation, every phase needs manpower and ultimately a large number of employment opportunities get opened up. This claim is evident from the labor statistics provided by the US government, according to which around 3.1 million new jobs are produced due to the waste management factor.

**Disadvantages of Waste Management:**

We have now seen the merits of waste management in detail. Let us now have a look at the disadvantages also.

**1. The process is not always cost-effective:**

Yes, though it may pay cash to the contributors, the truth is this processes needs a lot of money, time and land to set up a plant and run. As the amount of waste that is being contributed to the waste product unit increases, so are the numbers of plants that process these resources.

Setting up a huge factory obviously needs a lot of money, and this management will start fetching yields only in the long run. Hence, this is not seen as a short-term lucrative investment. While dumping more and more garbage’s in the landfills cause only $50 per ton, recycling them in the proper manner will cause $150 per ton, which is exactly, triple the cost and thus many of the companies tend to switch over to the landfill method itself.

**2. The resultant product has a short life:**

This is also true since the resulting recycled product cannot be expected to have a durable quality. As the product itself has its origin from the remains of the other trashed waste products and heaps of partially used ones. The recycled product, though, is eco-friendly is expected to have a shorter life span than the intended original one.

**3. The sites are often dangerous:**

As the waste management sites include the landfills to recycling units under its aegis, these sites are highly susceptible to fungal and bacterial growth thereby leading to various diseases.

Even the debris formation will be accelerated by such bacterial growth, which makes it totally unsafe for the workers who work there. It also causes widespread pollution and releases harmful chemicals. These chemicals, when mixed with drinking water or any other consumable item pose a high amount of danger to human health.

**4. The practices are not done uniformly:**

Still, a large scale of these waste management practices are done only as a small scale process and is mostly confined to residential homes, schools and colleges and is not practiced in a uniform manner in large industries and conglomerates. It is not even practiced globally, as the global level consists of curbing oil spills, ocean disposals and decreasing the tree felling.

**5. Waste management can cause more problems:**

Though waste management creates employment, it only has the ability to produce low quality jobs. These jobs include right from sorting the garbage collected to the intensive and laborious jobs that are needed in the factories and outlets.

Daily basis collection of garbage’s will make the streets look unpleasant and unhygienic leaving excess debris on the streets to rot up. Even after the successful completion of the final stage, many chemical stews will be left behind which needs to be properly and completely disposed, otherwise, they will also pose a threat to the environment which makes the ultimate purpose of waste management go redundant.

Also, in the areas where these management units are present, it is noticed that the groundwater gets affected. So, it too causes a considerable extent of water pollution and land pollution.

Thus, considering the pros and cons of waste management, we can only realize that the ultimate goal of waste management relies in waste minimization and curbing only. However, the aspects of recycling and processing wastes cannot be omitted since they attribute an environmental flavor to our area of study. It also makes the whole process to be economically viable and increase the sustenance of the process thereby making it less susceptible to the legal frameworks and conventions of each country. The energy flow from the producers to the consumers must be retained as it is in the original ecosystems and the recycling should work in tandem with the generalities of nature.

Thus, not even a single aspect can be deleted from the whole process. At the same time, the process too cannot be stopped by considering the demerits alone. It should be implemented step by step and should move from a small scale industry to a larger one, thereby eliminating the problems which arise in the midway by finding suitable strategies and solutions for the problems.

The government too should support the practices by easing the rules and encouraging all its citizens to practice the same in their households and can also provide a reward for those who practice these measures in an effective manner.

Methods like vermicomposting, generating energy from solar cells and e-wastes, using the recycled water for household practices can be easily preached to the commoners in a simple way to follow. This will aid and enhance the fertility of our soil, reduce environmental pollutions, [increase the groundwater level](http://itra.medialabasia.in/?portfolio=improving-groundwater-levels-quality) ultimately making our environment a safe haven to live. This will be the real legacy we have to leave behind for the forthcoming generations.

4- Discuss the challenges faced in disease surveillance.

Main issues identified include the following

-Non sustainable financial resources

-Lack of co-ordination

-Inadequate training and turnover of peripheral staff

-Erratic feedback

-Inadequate supervision from the next level

-Weak laboratory capacities coupled with unavailability of job aids.

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

1-Cholera

2-Malaria

3-Scabies

4-Trachoma

5-Typhold

6-Polio

7-Ringworm

8-Acute respiratory infections

9-Diarrhal

1- Cholera is a bacterial infection throughout the intestinal tract. It causes diarrhea and if left untreated, can cause severe dehydration and death. Cholera can be stopped by having access to drinking water that is safe. Developing good sanitation and hygiene can also prevent this infection.

2-Malaria is a life-threatening disease. It’s typically transmitted through the bite of an infected *Anopheles* mosquito. Infected mosquitoes carry the *Plasmodium* parasite. When this mosquito bites you, the parasite is released into your bloodstream. It can be prevented by clearing nearby bush and staged water

3-

**Cabbies** are not an infection, but an infestation. Tiny mites called Sarcoptes scabies set up shop in the outer layers of human skin. ... As the mites burrow and lay eggs inside the skin, the infestation leads to

And an angry rash.

4- Trachoma, an eye infection affecting both eyes, is the world's leading cause of preventable blindness. Trachoma is caused by a bacterium...

5-

**5-Typhoid** fever is an acute illness associated with fever caused by the Salmonella enteric serotype Typhoid bacteria it can be prevented by drinking clean water.

6- **Polio**, or **poliomyelitis**, is a crippling and potentially deadly infectious disease. It is caused by the poliovirus. The virus spreads from person to person and can invade an infected person's brain and spinal cord, causing paralysis (can't move parts of the body).

[7-Diarrheal diseases are the most common problem caused by poor sanitation and contaminated water. Long-term health issues caused from contaminated water include skin lesions that can cause skin, bladder, and lung cancer. Millions of people are at risk for developing arsenic poisoning because they depend on water supplies that may be contaminated and do not have a water supply that is safe.](https://www.cdc.gov/polio/about/index.htm)

[8-](https://www.cdc.gov/polio/about/index.htm)