South Sudan

Lakes state-Rumbek

Mottmacdonald ( water for lakes)

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

The composition of municipal solid waste varies greatly from municipality to municipality,[1] 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](https://en.wikipedia.org/wiki/Plastic_film) and non-recyclable [packaging materials](https://en.wikipedia.org/wiki/Packaging_material). At the start of the 20th century, the majority of domestic waste (53%) in the UK consisted of [coal ash](https://en.wikipedia.org/wiki/Coal_ash) from open fires.[[2]](https://en.wikipedia.org/wiki/Municipal_solid_waste#cite_note-2) In developed areas without significant recycling activity it predominantly includes food wastes, market wastes, yard wastes, [plastic containers](https://en.wikipedia.org/wiki/Plastic_container) and product packaging materials, and other miscellaneous solid wastes from residential, commercial, institutional, and industrial sources.[[3]](https://en.wikipedia.org/wiki/Municipal_solid_waste#cite_note-3) Most definitions of municipal solid waste do not include [industrial wastes](https://en.wikipedia.org/wiki/Industrial_waste), agricultural wastes, [medical waste](https://en.wikipedia.org/wiki/Medical_waste), radioactive waste or [sewage sludge](https://en.wikipedia.org/wiki/Sewage_sludge).[[4]](https://en.wikipedia.org/wiki/Municipal_solid_waste#cite_note-4) Waste collection is performed by the [municipality](https://en.wikipedia.org/wiki/Municipality) within a given area. The term *residual waste* relates to waste left from household sources containing materials that have not been separated out or sent for processing.[[5]](https://en.wikipedia.org/wiki/Municipal_solid_waste#cite_note-5) [Waste](https://en.wikipedia.org/wiki/Waste) can be classified in several ways but the following list represents a typical classification:

[Biodegradable waste](https://en.wikipedia.org/wiki/Biodegradable_waste): [food and kitchen waste](https://en.wikipedia.org/wiki/Food_waste), [green waste](https://en.wikipedia.org/wiki/Green_waste), [paper](https://en.wikipedia.org/wiki/Paper) (most can be recycled although some difficult to compost plant material may be excluded[[6]](https://en.wikipedia.org/wiki/Municipal_solid_waste" \l "cite_note-6))

[Recyclable](https://en.wikipedia.org/wiki/Recycling) materials: [paper](https://en.wikipedia.org/wiki/Paper), [cardboard](https://en.wikipedia.org/wiki/Cardboard), [glass](https://en.wikipedia.org/wiki/Glass), [bottles](https://en.wikipedia.org/wiki/Bottle), [jars](https://en.wikipedia.org/wiki/Jar), [tin cans](https://en.wikipedia.org/wiki/Tin_can), [aluminum cans](https://en.wikipedia.org/wiki/Aluminum_can), [aluminum foil](https://en.wikipedia.org/wiki/Aluminum_foil), [metals](https://en.wikipedia.org/wiki/Metal), certain [plastics](https://en.wikipedia.org/wiki/Plastic), [fabrics](https://en.wikipedia.org/wiki/Fabric), [clothes](https://en.wikipedia.org/wiki/Clothes), [tires](https://en.wikipedia.org/wiki/Tire), [batteries](https://en.wikipedia.org/wiki/Battery_(electricity)), etc.

[Inert](https://en.wikipedia.org/wiki/Chemically_inert) waste: [construction and demolition waste](https://en.wikipedia.org/wiki/Construction_and_demolition_waste), [dirt](https://en.wikipedia.org/wiki/Soil), [rocks](https://en.wikipedia.org/wiki/Rock_(geology)), [debris](https://en.wikipedia.org/wiki/Debris)

Electrical and [electronic waste](https://en.wikipedia.org/wiki/Electronic_waste) (WEEE) - [electrical appliances](https://en.wikipedia.org/wiki/Home_appliance), [light bulbs](https://en.wikipedia.org/wiki/Lamp_(electrical_component)), [washing machines](https://en.wikipedia.org/wiki/Washing_machine), [TVs](https://en.wikipedia.org/wiki/Television), [computers](https://en.wikipedia.org/wiki/Computer), screens, [mobile phones](https://en.wikipedia.org/wiki/Mobile_phone), [alarm clocks](https://en.wikipedia.org/wiki/Alarm_clock), [watches](https://en.wikipedia.org/wiki/Watch), etc.

Composite wastes: waste [clothing](https://en.wikipedia.org/wiki/Clothing), Tetra Packs, waste plastics such as toys

[Hazardous waste](https://en.wikipedia.org/wiki/Hazardous_waste) including most [paints](https://en.wikipedia.org/wiki/Paint), [chemicals](https://en.wikipedia.org/wiki/Chemical), [tires](https://en.wikipedia.org/wiki/Tire), [batteries](https://en.wikipedia.org/wiki/Battery_(electricity)), [light bulbs](https://en.wikipedia.org/wiki/Light_bulb), electrical appliances, [fluorescent lamps](https://en.wikipedia.org/wiki/Fluorescent_lamp), [aerosol spray cans](https://en.wikipedia.org/wiki/Aerosol_spray), and [fertilizers](https://en.wikipedia.org/wiki/Fertilizer)

[Toxic waste](https://en.wikipedia.org/wiki/Toxic_waste) including [pesticides](https://en.wikipedia.org/wiki/Pesticide), [herbicides](https://en.wikipedia.org/wiki/Herbicide), and [fungicides](https://en.wikipedia.org/wiki/Fungicide)

[Biomedical waste](https://en.wikipedia.org/wiki/Biomedical_waste), expired [pharmaceutical drugs](https://en.wikipedia.org/wiki/Pharmaceutical_drug), etc.

**2. Briefly describe waste management**

**Waste management** (or **waste disposal**) are the activities and actions required to manage waste from its inception to its final disposal.[1] This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

Waste can be solid, liquid, or gas and each type has different methods of disposal and management. Waste management deals with all types of waste, including industrial, biological and household. In some cases, waste can pose a threat to human health.[2] Waste is produced by human activity, for example, the extraction and processing of raw materials.[3] Waste management is intended to reduce adverse effects of waste on human health, the environment or aesthetics.

Waste management practices are not uniform among countries (developed and developing nations); regions (urban and rural areas), and residential and industrial sectors can all take different approaches.[4]

A large portion of waste management practices deal with municipal solid waste (MSW) which is the bulk of the waste that is created by household, industrial, and commercial activity.[[5]](https://en.wikipedia.org/wiki/Waste_management#cite_note-HMSW-5)

Principles of waste management

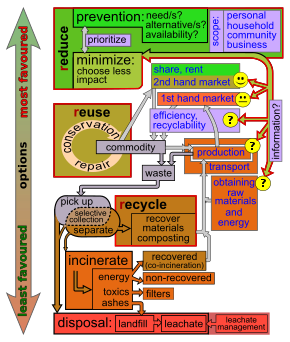
[](https://en.wikipedia.org/wiki/File:Waste_hierarchy_rect-en.svg)

Diagram of the waste hierarchy

Waste hierarchy

The waste hierarchy refers to the "3 Rs" reduce, reuse and recycle, which classifies waste management strategies according to their desirability in terms of [waste minimization](https://en.wikipedia.org/wiki/Waste_minimisation). The waste hierarchy is the cornerstone of most waste minimization strategies. The aim of the waste hierarchy is to extract the maximum practical benefits from products and to generate the minimum amount of end waste; see: [resource recovery](https://en.wikipedia.org/wiki/Resource_recovery).[[6]](https://en.wikipedia.org/wiki/Waste_management#cite_note-6) The waste hierarchy is represented as a pyramid because the basic premise is that policies should promote measures to prevent the generation of waste. The next step or preferred action is to seek alternative uses for the waste that has been generated i.e. by re-use. The next is recycling which includes composting. Following this step is material recovery and [waste-to-energy](https://en.wikipedia.org/wiki/Waste-to-energy). The final action is disposal, in landfills or through incineration without [energy recovery](https://en.wikipedia.org/wiki/Energy_recovery). This last step is the final resort for waste which has not been prevented, diverted or recovered.[[7]](https://en.wikipedia.org/wiki/Waste_management#cite_note-UN-7)[[*page needed*](https://en.wikipedia.org/wiki/Wikipedia:Citing_sources)] The waste hierarchy represents the progression of a product or material through the sequential stages of the pyramid of waste management. The hierarchy represents the latter parts of the life-cycle for each product.

Life-cycle of a product[[edit](https://en.wikipedia.org/w/index.php?title=Waste_management&action=edit&section=3" \o "Edit section: Life-cycle of a product)]

The life-cycle begins with design, then proceeds through manufacture, distribution, and primary use and then follows through the waste hierarchy's stages of reduce, reuse and recycle. Each stage in the life-cycle offers opportunities for policy intervention, to rethink the need for the product, to redesign to minimize waste potential, to extend its use.[[7]](https://en.wikipedia.org/wiki/Waste_management#cite_note-UN-7)Product life-cycle analysis is a way to optimize the use of the world's limited resources by avoiding the unnecessary generation of waste.

Resource efficiency[[edit](https://en.wikipedia.org/w/index.php?title=Waste_management&action=edit&section=4" \o "Edit section: Resource efficiency)]

[Resource efficiency](https://en.wikipedia.org/wiki/Resource_efficiency) reflects the understanding that global economic growth and development can not be sustained at current production and consumption patterns. Globally, humanity extracts more resources to produce goods than the planet can replenish.[[7]](https://en.wikipedia.org/wiki/Waste_management#cite_note-UN-7)[[*page needed*](https://en.wikipedia.org/wiki/Wikipedia:Citing_sources)] Resource efficiency is the reduction of the environmental impact from the production and consumption of these goods, from final raw material extraction to last use and disposal.

Polluter-pays principle[[edit](https://en.wikipedia.org/w/index.php?title=Waste_management&action=edit&section=5" \o "Edit section: Polluter-pays principle)]

The [polluter-pays principle](https://en.wikipedia.org/wiki/Polluter-pays_principle) mandates that the polluting party pays for the impact on the environment. With respect to waste management, this generally refers to the requirement for a waste generator to pay for appropriate disposal of the unrecoverable material.

1. **Discuss the challenges facing local authorities in your country in waste management**

Negative attitudes of the general public towards the environment in general;

Inadequate waste infrastructure;

Inadequate equipment and operational funds to support waste management activities;

Poor planning for waste management programme;

Unplanned human settlement;

Lack of political will to enforce bye laws on sanitation and building regulations by the MMDAs

**Challenges of liquid waste management**

About 80-100 cesspit emptiers dislodge liquid waste directly into the sea at Lavender Hill.

Uncontrolled human settlement leading to slum formation.

Lack of adequate sanitation facilities provision.

Lack of maintenance culture.

Lack of adequate coverage of central sewage system as well as in ability to connect to the central sewage system.

Rapid population growth with limited information for national planning.

The practice of emptying cesspit emptiers directly into the ocean poses both environmental and health impacts some of these includes: Stench, Water pollution, Disincentive to tourists, Loss of aquatic life and Health Impacts.

The 1992 C0nstitution of Ghana section 41(k) spells out clearly that, it shall be the duty of every citizen to protect and safe the environment.

Criminal Code, 1960 (Act 29); ‘provides that whoever places or permits any refuse, or rubbish, or any offensive or otherwise unwholesome matter, on any street, yard, enclosure, or open space, except at such places as may be set apart by the local authority or health officer for that purpose commits a punishable offence’

**4. Outline the advantages and disadvantages of source protection of MSW**

Advantages or Benefits of Waste Management:

As mentioned above, waste management involves the collection and disposal of both hazardous and non-hazardous wastes from all the sectors of society. We shall now look in detail the advantages of waste management or 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 associating 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 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.

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 labour 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 number 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 garbages 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 collector 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.

5. discuss the challenges faced in disease surveillance

**Political challenges[[edit](https://en.wikipedia.org/w/index.php?title=Disease_surveillance&action=edit&section=3" \o "Edit section: Political challenges)]**

As the lead organization in global public health, the [WHO](https://en.wikipedia.org/wiki/World_Health_Organization) occupies a delicate role in [global politics](https://en.wikipedia.org/wiki/Global_politics). It must maintain good relationships with each of the many countries in which it is active. As a result, it may only report results within a particular country with the agreement of the country's government. Because some governments regard the release of *any* information on disease outbreaks as a state secret, this can place the [WHO](https://en.wikipedia.org/wiki/World_Health_Organization) in a difficult position.

The WHO coordinated *International Outbreak Alert and Response* is designed to ensure "outbreaks of potential international importance are rapidly verified and information is quickly shared within the Network" but not necessarily by the public; integrate and coordinate "activities to support national efforts" rather than challenge national authority within that nation in order to "respect the independence and objectivity of all partners". The commitment that "All Network responses will proceed with full respect for ethical standards, human rights, national and local laws, cultural sensitivities and tradition" ensures each nation that its security, financial, and other interests will be given full weight.[[4]](https://en.wikipedia.org/wiki/Disease_surveillance#cite_note-4)

**Technical challenge**

Testing for a disease can be expensive, and distinguishing between two diseases can be prohibitively difficult in many countries. One standard means of determining if a person has had a particular disease is to test for the presence of antibodies that are particular to this disease. In the case of H5N1, for example, there is a low pathogenic H5N1 strain in wild birds in North America that a human could conceivably have antibodies against. It would be extremely difficult to distinguish between antibodies produced by this strain, and antibodies produced by Asian lineage HPAI A(H5N1). Similar difficulties are common, and make it difficult to determine how widely a disease may have spread.

There is currently little available data on the spread of [H5N1](https://en.wikipedia.org/wiki/H5N1) in wild birds in Africa and Asia. Without such data, predicting how the disease might spread in the future is difficult. Information that scientists and decision makers need to make useful medical products and informed decisions for health care, but currently lack include:

Surveillance of wild bird populations

Cell cultures of particular strains of diseases

**H5N1[[edit](https://en.wikipedia.org/w/index.php?title=Disease_surveillance&action=edit&section=5" \o "Edit section: H5N1)]**

Surveillance of [H5N1](https://en.wikipedia.org/wiki/H5N1) in humans, poultry, wild birds, cats and other animals remains very weak in many parts of Asia and Africa. Much remains unknown about the exact extent of its spread.

H5N1 in China is less than fully reported. Blogs have described many discrepancies between official China government announcements concerning H5N1 and what people in China see with their own eyes. Many reports of total H5N1 cases have excluded China due to widespread disbelief in China's official numbers.[[5]](https://en.wikipedia.org/wiki/Disease_surveillance#cite_note-5) (See [Disease surveillance in China](https://en.wikipedia.org/wiki/Disease_surveillance_in_China).)

"Only half the world's human bird flu cases are being reported to the World Health Organization within two weeks of being detected, a response time that must be improved to avert a pandemic, a senior WHO official said Saturday. Shigeru Omi, WHO's regional director for the Western Pacific, said it is estimated that countries would have only two to three weeks to stamp out, or at least slow, a pandemic flu strain after it began spreading in humans."[[6]](https://en.wikipedia.org/wiki/Disease_surveillance#cite_note-6)

[David Nabarro](https://en.wikipedia.org/wiki/David_Nabarro), chief avian flu coordinator for the [United Nations](https://en.wikipedia.org/wiki/United_Nations), says avian flu has too many unanswered questions.[[7]](https://en.wikipedia.org/wiki/Disease_surveillance#cite_note-7)[[8]](https://en.wikipedia.org/wiki/Disease_surveillance#cite_note-IISD-8)

[CIDRAP](https://en.wikipedia.org/wiki/CIDRAP) reported on August 25, 2006 on a [new US government Web site](https://web.archive.org/web/20060928222400/http:/wildlifedisease.nbii.gov/ai/) that allows the public to view current information about testing of wild birds for H5N1 avian influenza which is part of a national wild-bird surveillance plan that "includes five strategies for early detection of highly pathogenic avian influenza. Sample numbers from three of these will be available on HEDDS: live wild birds, subsistence hunter-killed birds, and investigations of sick and dead wild birds. The other two strategies involve domestic bird testing and environmental sampling of water and wild-bird droppings. [...] A map on the new USGS site shows that 9,327 birds from Alaska have been tested so far this year, with only a few from most other states. Last year officials tested just 721 birds from Alaska and none from most other states, another map shows. The goal of the surveillance program for 2006 is to collect 75,000 to 100,000 samples from wild birds and 50,000 environmental samples, officials have said."[[9]](https://en.wikipedia.org/wiki/Disease_surveillance#cite_note-9)

**References[[edit](https://en.wikipedia.org/w/index.php?title=Disease_surveillance&action=edit&section=8" \o "Edit section: References)]**

^ [Jump up to: ***a***](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-:0_1-0) [***b***](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-:0_1-1) [WHO SARS](http://www.who.int/csr/don/archive/disease/severe_acute_respiratory_syndrome/en/index.html)

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-2) [WHO H5N1](http://www.who.int/csr/disease/avian_influenza/en/)

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-3) [WHO EPR](http://www.who.int/csr/disease/en/)

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-4) [WHO Outbreak Network](http://www.who.int/csr/outbreaknetwork/guidingprinciples/en/index.html)

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-5) [WHO](http://www.who.int/csr/disease/avian_influenza/Timeline_28_10a.pdf) [Archived](https://web.archive.org/web/20110727000000/http:/www.who.int/csr/disease/avian_influenza/Timeline_28_10a.pdf) July 27, 2011, at the [Wayback Machine](https://en.wikipedia.org/wiki/Wayback_Machine) [WHO](http://www.who.int/csr/disease/avian_influenza/country/cases_table_2006_01_19/en/index.html) [Archived](https://web.archive.org/web/20060213164120/http:/www.who.int/csr/disease/avian_influenza/country/cases_table_2006_01_19/en/index.html) 2006-02-13 at the [Wayback Machine](https://en.wikipedia.org/wiki/Wayback_Machine) [WHO](http://www.who.int/csr/don/2003_02_27a/en/index.html) [WHO](http://www.who.int/csr/don/2003_07_04/en/)

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-6) [ABC News](http://abcnews.go.com/Health/wireStory?id=1931433) from AP published May 7, 2006

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-7) [NYT article picked up by IHT](http://www.iht.com/articles/2006/03/27/news/worrier.php)

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-IISD_8-0) [International Institute for Sustainable Development (IISD)](http://www.iisd.ca/ymb/ais/ymbvol123num1e.html) *Scientific Seminar on Avian Influenza, the Environment and Migratory Birds on 10–11 April 2006* published 14 April 2006.

[**^**](https://en.wikipedia.org/wiki/Disease_surveillance#cite_ref-9) [CIDRAP News](http://www.cidrap.umn.edu/cidrap/content/influenza/avianflu/news/aug2506wildbirds.html) article *New Web tool tracks H5N1 testing of US wild birds* published August 25, 2006

**6. Disease Prevention Through Sanitation and Cleanliness**

In medieval times, people would dispose of their trash out the window. This was not a problem until there was an increase of population and decrease of land. The great amount of trash in the streets and land became a problem. For example, in the beginning of the 19th century in London, England, the population doubled from the beginning of the century to the middle. London’s streets became filled with trash. Disease and death were blamed on lack of sanitation and inadequate garbage disposal in the city.

Clean water is a necessity for life. Water treatment plants clean and treat water so that it is safe to drink. Water treatment plants get rid of harmful pollutants and liquid waste and make the water safe to return to the environment. Water enters treatment plants from rivers, reservoirs, wells, and streams. It is treated and returned into the environment. Sewage water runs through sewer pipes into wastewater treatment plants. After it is treated, it is sent out to streams, oceans, rivers and used for irrigation systems. Both wastewater and water treatment plants remove dangerous materials, chemicals, and microorganisms from the water.

When countries do not have waste management programs, it puts individuals at risk for serious risk of contracting diseases. For example, a country that does not have a health care waste program is putting their citizens at risk for contracting blood illnesses. Medical scissors, syringes, and other hospital wastes need to be carefully disposed of after use due to the risks to citizens and the environment. One of the most important problems in developing a sanitation program is money. Some countries do not have the funding to run the sanitation and water plants.

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.

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.

Acute respiratory infections can also be caused by poor sanitation. Respiratory infections are one of the biggest causes of death in the world. There are about 4 million cases of death annually reported in the world. Half of these individuals are children. Studies show that better hygiene practice prevents the increased infections. Combining the cases of diarrheal diseases and acute respiratory infections, uncontrolled sanitation and hygiene is the leading cause of death in children.

Food sanitation is important because it prevents contamination of food. By following protocols, the chance of food becoming contaminated becomes less. People who work in the food industry need to understand and follow regulations from public health agencies. Sanitation protocols need to start from the moment the food is harvested to the time it is eaten. It is also important for people who cook at home to understand basic food safety and sanitation.

One mistake in food sanitation could cause thousands of people to become sick. Food borne illness can be caused by poor sanitation. Food processing issues cause sickness all over the world. Recent examples of failed food processing are: peanut butter, spinach, and hamburger meat. Even a bake sale has risk of food contamination.

It is important to remember to wash your hands after using the bathroom, diaper changing, touching animals, and before and after preparing food to prevent the spread of infection from person to person. Wash hands after smoking, working in the garden, or attending to a sick person. Hand washing is most effective when liquid soap is used with warm water. Do not use hot water because it can alter the natural oils in your skin. Bar soap should be avoided, especially in public places.

Bar soap is susceptible to contamination because it normally rests in pools of water that contain many germs. This may cause more germs to develop and be spread from person to person. Bar soap tends to dry out easily and crack. Germs can get inside the crack of the soap. It has been shown that people are less likely to wash their hands if they have to use bar soap. Most places have converted to liquid soap only, especially in the health care field.

**References[[edit](https://en.wikipedia.org/w/index.php?title=Waste_management&action=edit&section=29" \o "Edit section: References)]**

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