

Water Pollution

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Summary

Water pollution is a serious environmental issue that can be caused by many contaminants. Human health can be affected by consuming, entering, or washing in polluted water. There are various ways to help to limit water pollution. If a person experiences any effects of water pollution, they should speak to their doctor.

Water pollution can come from a variety of sources. Pollution can enter water directly, through both legal and illegal discharges from factories, for example, or imperfect water treatment plants. Spills and leaks from oil pipelines or hydraulic fracturing (fracking) operations can degrade water supplies. Wind, storms, and littering especially of plastic waste can also send debris into waterways.



Water Pollution



Water pollution is the water that had been exposed to the harmful substance such as chemical or microorganism which demote the quality of water.

Water pollution occurs when harmful substances often chemicals or microorganisms contaminate a stream, river, lake, ocean, aquifer, or other body of water, degrading water quality and rendering it toxic to humans or the environment.

The data released by the Department of Environment (DoE) shows that 219 (46%) of the 477 rivers monitored were categorised as safe, 207 (43%) were slightly polluted and 51 (11%) were polluted in Malaysia.

The Category of River Pollution

Garbage

Garbage, trash, rubbish, or refuse is waste material that is discarded by humans, usually due to a perceived lack of utility.

For example, plastics bag, wrapping materials, plastics containers.



Credit by worradirek



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Medical Waste

Medical waste is a anything that contains any infectious material.

The example of medical waste are human or animal tissue created during procedures, anything soaked in blood (gloves, gauze, gowns, etc.), any waste produced in patient's rooms with communicable diseases, discarded vaccines, etc.



Credit by Kelly Maile



Credit by Alex Billingsley

Chemical Industrial Waste

Industrial waste is a waste that is produced from harmful chemicals which is mostly produced by large factories.

As types which include cafeteria garbage, dirt and gravel, masonry and concrete, scrap metals, trash, oil, solvents, chemicals, weed grass and trees, wood and scrap lumber, and similar wastes



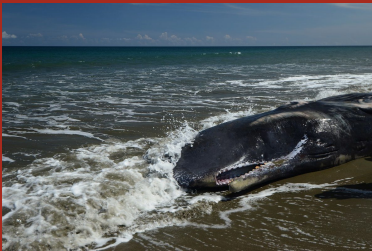
Credit by Ken Silverstein

The Impact on Marine Environment, Organisms, and Humans

Garbage



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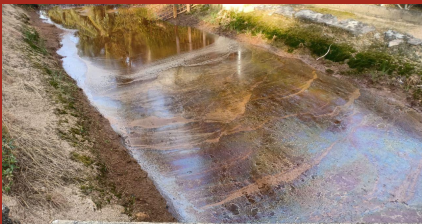
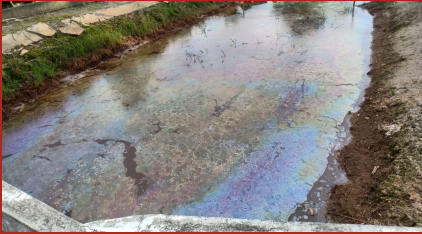
By traveling to all rivers and oceans around the world, accumulating on the beach and in the gyres. These fragments endanger physical habitats, transport chemical pollutants, threaten aquatic life, and disrupt human consumption from rivers, seas, and coastal environments.

Moreover, aquatic life can be mistaken the **garbage as foods**. It causes to the problems associated with the ingestion of plastics include development of internal and external wounds due to blockage of the digestive system, decreased mobility and predatory avoidance, and toxicity. Also, its can kill a lot of habitats and lead to extinction of the species if the problem is not taken very seriously.

Impact on humans is also involved in **health problems to the human body**. Overflowing garbage is air pollution which causes various respiratory diseases and adverse health effect as contaminant are absorbed from lungs into other part of the body.



Industrial Waste



As a result of bioaccumulation, toxic chemicals accumulate in the tissues of marine animals and plants in high concentrations. They do not get disintegrated in the aquatic organisms and hence stay stored in their muscles, which eventually lead to their death. The marine life absorbs hazardous metals such as copper, mercury, and lead due to bioaccumulation.

Waste from industries can also causes serious health risks on human. Furthermore, co-disposal of industrial hazardous waste with municipal waste can expose people to chemical and radioactive hazards.

Medical Waste



Credit by Tel Aviv



Credit by Gary Stokes

What humans dumps into the rivers, oceans, etc., has its own effects on all the living things.

Once a medical waste damages one organism, the entire food chain of marine life and humans will be destroyed. In addition to the excessive handling of medical waste, it contaminates aquatic life and kills corals, fish and sea mammals, but also affects the surrounding life, such as human and marine birds that eat fish.

In fact, genetic defects, diseases, and many other adverse effects of improper certified product destruction are more likely to occur in any species that digest the affected marine life.

The Solutions To Reduce Waste

Use **reusable water bottle** which everyone may have their own bottles but have to practice by using your own bottles frequently.

Use **metal straw** which can replaces the plastic straw. Its can eliminate the needs of plastics straw. Also, keeps the clean environment.

Garbage

Garbage can be reduce by **cooking more at home**. This is because by making your own meals does not involve takeout containers or doggy bags.

Purchase wisely and recycle can reduce waste of garbage. For example by purchasing product that come with less packaging or come in packaging that can be recycled.

Dispose of Medical Waste Properly. Never flush medicine in the toilet or nearest pond or creek because this causes health problem to fish and others in the ocean.

Use **color-code containers** to ensure the appropriate separation of wastes. For example, use red containers for “red bag waste” and green containers for recycling.

Medical Waste

Make **post signage**. Place signs throughout the the facility that describe the type of waste that can be put into each container.

When possible, use **reusable products in waste of single-use products**. For example, some sharps containers and certain medical instruments can be disinfected and reused.

Change the composition of the product to reduce the amount of waste resulting from the product's use.

Purchase what you need to avoid waste from unwanted materials.

Industrial Waste

Cut down on bottled water. Many businesses produce waste in the form of plastic drinking bottles. It is important to reduce the forms of waste to save our nature.

Be More Efficient Business Review manufacturing process. Try and discover a way that can use your raw materials in a more efficient manner.



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Rosmidatul A. M. Y. (2012)



Azrina S. (2015)

Laws and Regulations to Controls Pollution

Garbage

Malaysia also has laws to address this problem which is Environmental Quality Act, 1974 (Act 127). This is an Act relating to the prevention, abatement, control of pollution and enhancement of the environment, and for purposes connected therewith. Be enacted by the Duli Yang Maha Mulia Seri Paduka Baginda Yang di-Pertuan Agong with the advice and consent of the Dewan Negara and Dewan Rakyat in Parliament assembled, and by the authority of the same.

Medical Waste

The Environment Quality Regulations 2005 define clinical waste as scheduled waste, which includes discarded drugs containing psychotropic substances that are toxic (SW403), pathogenic and clinical waste and quarantined materials (SW404), a mixture of scheduled waste (SW421) and a mixture of scheduled and non-scheduled waste (SW422).

Under the Environmental Quality Act 1974, the Department of the Environment (DOE) is empowered to control and avoid pollution and to protect and improve the quality of the environment. Since May 1989, a series of hazardous waste management regulations regulating the storage, transport, treatment and disposal of hazardous waste have been implemented.

Industrial Waste

Environment Quality Act 1974 (Act 127) and Regulations (EQA 1974) define industrial waste as waste include any matter prescribed to be scheduled wastes or any matter whether in a solid, semi-solid or liquid form, or in the form of age or vapor which is emitted, discharges or deposited in the environment in such volume, composition or manner as to cause pollution.

Before being discharged into rivers, all industrial companies are expected to build wastewater treatment systems to arrest their water contaminants. The effectiveness of regulating the discharge of effluent from these manufacturing industries varies from industry to industry.

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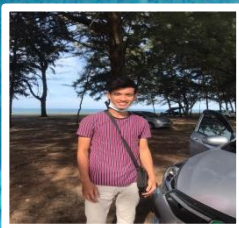
NURUL HAFIFI BINTI MAZLAM

“Your thoughts, feelings and sensations are the waves of the ocean, coming and going.”



SITI NORAINI BINTI AHMAD

“Appreciate the the beauty of ocean before we no longer can”



ZUL IRFAN ZIKRI BIN ZULKIFLI

“If you cannot make a function, then don't try to make a problem”



SITI KHADIJAH BINTI AZAM

“There are no points of living without any life support system.”



MUHAMMAD SYAZWAN BIN AZIZAN

“No water, no life.”



ADRINA BINTI SAIDIN

“Let's maintain the beauty, unique and cleanliness of the ocean together”