

A Systematic Study of the Wastes, Their Side Effects and Solutions, Present around Us

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ABSTRACT

Solid and liquid wastes generated from both animal and domestic sources can significantly impair drinking, irrigation, recreational water and other water sources in rural and urban areas. Waste as a management issue has been evident for over four millennia. Disposal of waste to the biosphere has given way to thinking about, and trying to implement, an integrated waste management approach. This paper reviews the history of solid and liquid waste operations and summarizes the current environmental monitoring program and its major findings. Various problems of wastes in past and present, environmental ecology, general aspect of recycling and materials recovery are defined.

Key words: waste material, liquid waste, solid waste.

1. Introduction

We are surrounded by many of the wastes, like chemical waste, medical waste, nuclear waste, Home waste, toxic waste, industrial waste, agriculture waste, Hazardous waste, water waste, electronic waste, environmental waste etc. we are affected by all these wastes in different ways. We can't stop the wastes but we can control the effect of these wastes. Some of the wastes, their side effects and solutions are discussed below .

2. Chemical Waste

Chemical waste is the chemical bi-products or harmful chemicals produced by manufacturing facilities and laboratories as well as the smaller scale solvents and other chemicals disposed of by households.

- **Side effects:** If chemical waste is not handled or disposed of properly, both the environment and nearby individuals are put at risk by its potentially corrosive, toxic, flammable or explosive nature.
- **Solutions:** chemical waste has to remove in a manner that complies with healthy and safely regulations. It is then transported to a special disposal facility, where it is eliminated according to its nature. Most chemical waste is incinerated at a high temperature while others are treated by wet chemical methods. After it has been incinerated or treated by wet chemistry, the residues are then safe to dispose of in a landfill.

3. Medical Waste

Medical waste generated by health care activities includes a broad range of materials, from used needles and syringes to soiled dressing, body parts, diagnostic samples, blood, chemicals, pharmaceuticals, medical devices and radioactive materials.

- **Side effects** : poor management of health care waste potentially expose health care workers, waste handlers, patients and the community at large to infections, toxic effects and injuries, and risks polluting the environment.
- **Solutions:** it is essential that all medical waste materials and segregated at the point of generation, appropriately treated and disposed of safely.

4. Nuclear Waste

Nuclear waste is the radioactive waste left over from nuclear reactors, research projects and bomb production. It can be low, medium, and high level waste by the amount of radioactivity it produces. Although this waste can be very dangerous and should not be handled by untrained person.

- **Side effects:** the environmental impact of nuclear power results from the nuclear fuel cycle, operation, and the effects of nuclear accidents. The routine health risks and greenhouse gas emissions from nuclear fission power. Nuclear reactors can be brought about by overheated fuels melting and releasing large quantities of fission products into the environment.
- **Solutions:** managing and disposing of radioactive waste is to protect people and the environment. This means isolating or diluting the waste so that the rate or concentration of any radionuclide returned to the biosphere is harmless. To achieve this, practically all wastes are contained and managed – some clearly need deep and permanent burial.

5. Hazardous Waste

A hazardous waste is waste that poses substantial or potential threats to public health or the environment. Many types of businesses generate hazardous waste. For example dry cleaners, automobile repair shops, hospitals, exterminators, and photo processing centers may all generate hazardous waste. Some hazardous waste is generators are larger companies such as chemical manufacturers, electroplating companies, and oil refineries.

- **Side effects:** Hazardous wastes are solid, liquid, or gas wastes that can cause death, illness, or injury to people or destruction of the environment if improperly treated, stored, transported, or discarded. Air may become contaminated by direct emission of hazardous waste.
- **Solutions:** the best way to eliminate hazardous wastes is not to generate them in the first place. Wastes may be made less hazardous by physical, chemical, or biological treatment.

6. Toxic Waste

Toxic waste is waste material that can cause death, injury, or birth defects to living creatures. It spreads quite easily and can contaminate lakes, rivers, and the atmosphere. Toxic material that can pose a long term risk to health or environment.

- **Side effects:** Toxic wastes often contain poisons, and exposure to these by some route,

such as leakage or evaporation from the storage, cause cancer. People encounter these toxins buried in the ground, in stream runoff, in groundwater that supplies drinking water, or in floodwaters.

- **Solutions:** disposal is the placement of waste into or on the land. Disposal facilities are usually designed to permanently contain the waste and prevent the release of harmful pollutants to the environment. The most common hazardous waste disposal practice is placement in a land disposal unit such as a landfill, surface impoundment, waste pile, land treatment unit, or injection well.

7. Electronic Waste

Electronic waste or e-waste is a term for electronic products that have become unwanted, non-working or obsolete, and have essentially reached the end of their useful life. Many electronic devices become “trash” after a few short years of use. E-waste is created from anything electronic: computers, TVs, monitors, cell phone, VCRs, CD player, fax machines printers, etc.

- **Side effects:** the processes of dismantling and disposing of electronic waste in lead to a number of environmental impacts. Liquid and metals while dismantle releases, goes in bodies of water, groundwater, soil and air and therefore in land and sea.
- **Solutions:** solving the e-wastes problem starts with education, and habit changes as a result of knowledge. Most people are trained to recycle a newspaper, bottles, and cans. Almost anything electronic in nature can be recycled properly with effort.

8. Conclusion

Chemical waste or wastes are hazardous. Improper handling of chemical waste can result in serious consequences such as explosion, fire, personal injury and may cause damage to the environment. Waste producers are reminded to exercise due care and follow local regulations and University’s requirements when handling chemical waste. It is important to note that citizens who consider themselves well-informed about waste (radioactive) see fewer risks in the transport and disposal of this type of waste. Furthermore, well-informed citizens would be more ready to accept the use of recycled uncontaminated materials coming from the nuclear industry.

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