



## WASTE IS NOT WASTE BUT STILL IT HAS IMPACT ON ENVIRONMENT AND HEALTH

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### **Abstract:**

A material becomes waste when it is discarded without expecting to be compensated for its inherent value. These wastes may pose a potential hazard to the human health or the environment (soil, air, water) when improperly treated, stored, transported or disposed of managed. Currently in India even though hazardous wastes, emanations and effluents are regulated, solid wastes often are disposed of. Out of the various categories of the wastes, solid waste contributes a major share towards environmental degradation. Dengue is rampant in Nagpur city. The highest number of positive case was 260 and 231 in 2013 and 2012 respectively. 293 positive cases out of total 2,396 serum samples tested were registered between 1 January to 31 October 2014. Malaria cases in Nagpur city with as many as 68 positive cases being registered in seven months in 2011. The health impacts of new waste management technologies and the increasing use of recycling and composting will require assessment and monitoring. Recycling will help health to protect environment, conserves natural resource and save energy the products price can come down.

**Keywords:** waste, environment, health, solid waste disposal

### **Introduction:**

Nature provides us the basic needs like food, shelter, clothes, etc. for our survival. We use air, water, soil, minerals, coal, petroleum, animals, plants etc. in our daily life. But do we ever think how long these precious materials of the nature will be available for our use. The growing population, rapid industrialisation and urbanisation have created heavy demand on all these materials. It is feared that unless proper steps are taken to conserve them in time, we will face tremendous hardship in future.

### **Types of Waste:**

**Solid Type Waste:** Solid waste predominantly, in any garbage, refuse or rubbish that we make in our home and other places. These include old car tyres, old newspaper, broken furniture and food waste. Open dumpsite





approach as solid waste disposal method is a primitive stage of solid waste management in many parts of the world. It is one of the most poorly rendered services by municipal authorities in developing countries as the systems applied are unscientific, outdated and in-efficient. Solid waste disposal sites are found both within and on the outskirts of developing urban cities. Impact of improper solid waste cause: 1) Pollution - Air Pollution, Water Pollution and Soil Pollution. Human are the ones who are making continuous efforts to pollute the nature knowing or unknowing. Harmful gases from the vehicles and industries are giving rise to global warming and turbulence in atmosphere. We often encounter sudden heavy rainfall and tornadoes in some part, at some and the rest of the area are becoming constant prey to earthquakes and tsunamis. Some quantity of industrial smoke and pollutants from the automobiles effect environment.2) MSW clogs drains, creating- stagnant water for insect breeding and floods during rainy seasons.3) Insect and rodent vectors are attracted to the waste and can spread diseases such as cholera and dengue fever.4) Some Health problems linked to improper solid waste management are, Nose & throat infections, Lung infection, Breathing problems, Infects, High PM10 exposure, High Bacterial infection Obstruction in airways, Elevated mucus production, Covert lung haemorrhage, chromosome break, Anaemia, Cardiovascular risk, Altered immunity, Allergy, asthma and other infections.

**Liquid Type Waste:** Liquid waste is that not solid. Some solid waste can also be converted to a liquid waste form for disposal. It includes point source and non-point source discharges such as storm water and waste water or water used in cleaning in industries and detergent. With regard to hazardous waste disposal sites, at least five different routes of human exposure are possible: direct ingestion through drinking, inhalation of contaminants that volatilize from heated water absorption through the skin during washing and bathing, ingestion through consumption of goods derived from plants or animals, absorption through the skin when handling contaminated soil.

Dengue is transmitted by the bite of a mosquito infected with one of the four dengue virus serotypes. It is a febrile illness that affects infants,





young children and adults with symptoms appearing 3-14 days after the infective bite. (WHO). Dengue is not transmitted directly from person-to-person and symptoms range from mild fever, to incapacitating high fever, with severe headache, pain behind the eyes, muscle and joint pain, and rash. There is no vaccine or any specific medicine to treat dengue. People who have dengue fever should rest, drink plenty of fluids and reduce the fever using paracetamol or see a doctor. (WHO). The World Health Organization's 2009 classification divides dengue fever into two groups: uncomplicated and severe. There are no approved vaccines for the dengue virus. Prevention thus depends on control of and protection from the bites of the mosquito that transmits it. The World Health Organization recommends an Integrated Vector Control program consisting of five elements:

- 1) Advocacy, social mobilization and legislation to ensure that public health bodies and communities are strengthened;
- 2) Collaboration between the health and other sectors (public and private);
- 3) An integrated approach to disease control to maximize use of resources;
- 4) Evidence-based decision making to ensure any interventions are targeted appropriately; and
- 5) Capacity-building to ensure an adequate response to the local situation

In Nagpur city reels under an outbreak of dreaded dengue, a surprising fact has emerged that all the cases have come from relatively better off areas of the city. As the suspected dengue cases shot up to 2,778 in the city, of which 293 were confirmed positive, not one was reported from any slum area. These are highest numbers on record. Results of another 382 suspected cases are awaited and that would undoubtedly push up the number of positive cases further. The highest number of positive cases was 260 and 231 in 2013 and 2012 respectively.

"NMC is doing its best to prevent the spread of dengue. Still 293 positive cases out of total 2,396 serum samples tested were registered between 1January to 31October 2014. The reason for posh and outer areas of the city getting affected is simple Pilings of garbage or unclean condition does not cause mosquito breeding. Instead they breed in stagnant water in water-coolers, flower pots, dog bath tubs etc found in well-to-do homes.





Door-to-door survey of 4.88 lakh households revealed mosquito breeding sites in 20,977 of them. Most positive cases are from Laxmi Nagar and Dharampeth zones (West and South-West Nagpur) which are considered posh zones," said Ramesh Shingare, chairman of NMC health consultative committee. Dengue is rampant in Nagpur.

In Nagpur city, it was found that the cases of Malaria have shown a considerable increase. While the local civic body Nagpur Municipal Corporation is conducting "Cleanliness campaign" many areas still are seen with filth, garbage, over-flowing gutters, clogged up sewage, rain-water clogging etc, which provides the right and favorable conditions for mosquitoes to live and multiply. According to doctors people should not be panic but they should take care to keep the premises clean and do not have stagnant water in the houses for longer time. Pregnant women, diabetic patients and infants are more prone to dengue. Malaria cases in Nagpur city with as many as 68 positive cases being registered in last seven months in 2011. Out of these, 40 cases have been registered in past 60 days. However, no case of death has been reported. As per records of Nagpur Municipal Corporation's (NMC) malaria and filaria department, a total of 68 positive cases of malaria were registered in the city from January 1 to July 31 in 2011 year. While seven out of these were tested as 'Plasmodium Falciparum', which is the deadliest among all four species of malaria, the remaining 61 cases were tested as 'Plasmodium Vivax', which is the most common species.

**Hazard Type Waste:** Harmful wastes are those that those that potentially that threaten public health or the environment. Such waste are inflammable (can easily catch fire), reactive (can easily explode), corrosive (can easily eat through metal) or toxic (poisonous to human and animals). Examples are fire extinguishers, old propane tanks, pesticides, mercury and lamps. Toxic waste, also known as hazardous waste, is often a type of dangerous waste that is harmful to living organisms. These waste products are not easily recycled and are usually discarded and disposed of in landfills. The effects of toxic waste can impact individual health and the environment. The





consequences of poorly disposed toxic waste can impact the environment long after its effect on individuals.

### Environmental management of industrial hazardous wastes in India

| Sr. No. | Hazardous characteristics  | Potential hazards on living animals / environment   |
|---------|----------------------------|---|
| 1       | Flammable/explosive        | This type of waste may cause damage to the surroundings by producing harmful gases at high temperature and pressure or by causing fire hazards        |
| 2       | Oxidizing                  | Type of wastes that may yield oxygen and thereby cause or contribute to the Combustion of other materials.  |
| 3       | Poisonous (Acute)          | These wastes have high potential to cause death, serious injury or to harm health if swallowed, inhaled or by skin contact                            |
| 4       | Corrosives                 | These wastes are chemically active and may cause severe damage to the flora and fauna, or to the other materials by direct contact with them          |
| 5       | Eco-toxic                  | These wastes may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and/or toxic effects upon biotic systems |
| 6       | Toxic (Delayed or chronic) | These wastes, if inhaled or ingested or if they penetrate the skin, may cause delayed or chronic effects, including carcinogenicity                   |
| 7       | Organic peroxides          | These are organic waste containing bivalent-O-O-structure and may undergo exothermic self-accelerating decomposition                                  |

**Organic Type Waste:** It comes from plant or animals source. Commonly they include food waste, fruit and vegetable peels, flower trimmings and even dog poop. This waste is also used as compost in garden. Greenhouse gases are generated from the decomposition of organic wastes in landfills more importantly; composting is extremely beneficial to the environment. Composting is nothing new; it is what goes on naturally all around us. By throwing organic waste into your garbage bags, which are thrown in landfills, this natural process is halted. After your food scraps and yard waste reach the composting site, they are turned into a rich soil amendment that is distributed to local landscapers.





**Electronic Waste** may be defined as discarded computers, office electronic equipment, entertainment device electronics, phones, television, and refrigerators. With increase in modern technology E-waste has become major problem in world. This includes used electronics which are destined for reuse, resale, salvage, recycling, or disposal. Others are re-usable (working and repairable electronics) and secondary scrap (copper, steel, plastic, etc.) to be "commodities", and reserve the term "waste" for residue or material which is dumped by the buyer rather than recycled, including residue from reuse and recycling operations. Because loads of surplus electronics are frequently commingled (good, recyclable, and non-recyclable), several public policy advocates apply the term "e-waste" broadly to all surplus electronics.

Some waste products are recycle such as Aluminium products, plastic, glass products, paper. Waste that can be potentially recycled is term as Recycling waste.

The waste hierarchy refers to the "3 Rs" reduce, reuse and recycle, which classify waste management strategies according to their desirability in terms of waste minimization. Recycling is beneficial in many ways it will help health to protect environment, conserves natural resource and save energy the products price can come down.

**Swachh Bharat or Swachh Bharat Abhiyan** (Clean Indian Mission) is a national level campaign by the Government of India covering 4041 statutory towns to clean the streets, roads and infrastructure of the country. This campaign was officially launched on 2 October 2014 at Rajghat, New Delhi, where Prime Minister Narendra Modi himself wielded broom and cleaned a road. The campaign is India's biggest ever cleanliness drive and 3 million government employees and schools and colleges students of India participated in this event. The mission was started by Narendra Modi, the Prime Minister of India, nominating nine famous personalities for this campaign, and they take up the challenge and nominate nine more people and so on (like the branching of a tree). It has been carried forward since then with famous people from all walks of life joining it. According to old saying charity begins at home, we need to clean our minds first from the





thought of spreading filth and garbage. It will eventually help in to restore the eventually helps in to restore the green glory of our beautiful planet.

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