**ENGLISH PAPER**

**WASTE MANAGEMENT**



**ENVIRONMENTAL HEALTH STUDY PROGRAM**

**WIDYAGAMA HUSADA SCHOOL OF HEALTH SCIENCE**

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**WASTE MANAGEMENT**

**A. Definition of Waste**

Waste is the residue of human daily activities or natural processes that

solid or semi-solid in the form of organic or inorganic substances

biodegradable or non-biodegradable which is considered no longer useful and

thrown into the environment. Based on this definition, waste can be in the form of easy waste decomposes such as kitchen waste, dry leaves, animal waste and

the like. Meanwhile, waste that is not easily decomposed or decomposed, such as plastic, metal, glass, rubber and other waste (Abidin,2021).

**B. Kind of Waste**

**1. Based On The Source :**

a. Natural Waste : Waste that is produced in the wild and through natural recycling processes. For example, dry leaves in a forest that break down into soil

b. Human Waste : Waste products of human digestion. For example, feces and urine

c. Consumption Waste : Waste generated by humans from the process of using goods. For example, food skins and food scraps

d. Nuclear Waste : Waste generated from nuclear activities that produce uranium and thorium which are harmful to the environment and humans

e. Industry Waste : Waste originating from industrial areas consisting of general waste and liquid or solid hazardous waste

f. Mining Waste : Waste from the rest of the mining process that has no economic value anymore. For example carbon monoxide, carbon dioxide and various harmful and toxic chemicals (Kamandang,2021).

**2. Based on the nature :**

a. Organic Waste – degradable : Waste that easily decomposes like leftovers food, vegetables, dried leaves, and so on. This trash can processed into compost

b. Inorganic Waste - not biodegradable (undegradable) : Waste that does not decompose easily, such as plastic food packaging containers, paper, plastic toys, bottles and glasses drinks, cans, wood, and so on. This trash can be turned into trash commercial waste or waste that is sold to be used as other products

c. Toxic (B3): Waste from hazardous and toxic materials such as waste

hospital, factory waste and others (Kamandang,2021).

**3. Based on the shape**

a. Solid Waste : Solid waste is any waste material other than human waste, urine and liquid waste. Can be in the form of household waste, kitchen waste, garden waste, plastic, metal, glass and others

b. Liquid Waste : Waste made from liquid materials that have been

used and not needed again and thrown away waste disposal (Kamandang,2021).

**C. Waste Management**

Waste management does not only concern technical aspects, but what is much more important is the issue of knowledge in order to encourage changes in attitudes and mindsets towards the realization of an environmentally friendly and sustainable society (Dermawan,2018). The following are important points in waste management and an ideal series of waste disposal, which must be carried out in the context of ideal waste management, namely :

1. Sorting includes sorting from the source of the generated waste consisting of organic and inorganic waste, the selection of waste that still has energy sources and reuse of waste that has high value resources

2. Containers include individual containers provided at the home level by providing 2 units of garbage collection consisting of organic and inorganic waste, communal containers (containers or TPS) specifically for accommodating various types of waste, both organic and inorganic, such as plastic, glass, clothing/textile waste, metal, large waste, B3 waste (stones, batteries, neon light balloons).

3. Collection includes door to door collection time every 1 to 2 days and waste collection time from TPS 1 x a week.

4. Garbage transportation with compactor trucks is different for each type of waste.

5. Recycling is the reuse of used paper that can be used primarily for external purposes, used plastic is reprocessed to be used as plastic pellets to be used as various household appliances such as buckets, used electronic equipment is separated for each component of its use (metal, plastic / cable, battery) and a selection is made for each component that can be reused, glass/glass bottles are separated based on the color of the glass (white, green, and dark) destroyed, and other environmental waste in the form of leaves.

6. Compost includes pilot facilities, counseling, training and development of composting on an environmental scale that is managed by the community which will increase awareness that household waste must be managed from the source.

**D. 3R Waste Management Concept**

3R waste management is an effort to reduce waste disposal, through activities to reuse, reduce, and recycle. The concept can be described as follows :

1. ***Reuse*** : Namely the direct reuse of waste for the same function or other functions. Examples that can be done at home include reusing used honey bottles for knick-knacks, paint cans for trash cans, plastic bottles for flower pots and so on.
2. ***Reduce*** : Which is to reduce everything that causes waste. This can be done for example by using durable bags for shopping for daily necessities, using products that can be refilled, reducing the use of single-use materials such as tissues with napkins or handkerchiefs, bringing your own food or drink containers and so on.
3. ***Recycle*** : Which is to reuse waste after undergoing a processing process. Things that can be done for this concept on a household scale include always choosing products or packaging that have a sign that they can or are easily recycled, make compost from the organic waste produced, and turn canned waste into other more useful items.

 Waste management with the 3R concept requires community participation as a very important part. Community participation is a community involvement to play an active role in a clean and healthy activity, especially in managing waste (Trisnawati,2020).

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