

Role of Solid Waste Management in Our Ecosystem

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Abstract: At present, the whole world is facing strange changes in the climate, which poses a challenge to human survival. Among them, the most important are heavy rains in some areas, less rains in some areas and disasters like earthquakes. Although there are many reasons for this, if we look at the causes of sudden changes in climate, we will understand one thing. There are many reasons for sudden changes in climate, the most important of which is changes in biodiversity in those places. The reason for this is the destruction of the ecosystem, the reason for the destruction of this ecosystem is human error. Garbage generated in various forms as a part of human daily activities mainly in daily life has an incalculable impact on our environment. So solid management is all about collecting this important waste (Garbage) in a proper manner and managing it without harming the environment. Various countries and organizations around the world have been explaining the importance of this solid waste management on various platforms. But many countries are still facing many environmental problems due to not giving due importance to solid waste management. Therefore, it is our intention that the world should wake up and organize awareness programs to make people aware of the importance of solid waste management and its climate-related risks. In such situations we hear some new words; they are cloud burst, Heavy rain fall, droughts, Floods, Global warming, Climate change and Pollution.etc.

Key words: cloud burst, Heavy rain fall, droughts, Floods, Global warming, Climate change and Pollution

INTRODUCTION:

The most important problem facing the world today is climate change and its consequences, the most important of which are global warming and abnormal rains. The world hears new words like global warming, cloud burst etc, because of these unusual rains. Does it mean that heavy rainfall in the same area in a short period of time is causing floods and disasters similarly, low rainfall in some areas is also a reason this leads to drought. For example Europe faces severe water shortages. After one hundred years, Europe's lifeblood the Danube River looks set to dry up.

Due to these types of reasons, the environment is damaged, especially the ecosystem is destroyed and it has an impact on the biodiversity. There are many examples of this, the extinction of some species of animals; the number of some species of birds is decreasing day by day. This has a great impact on the ecosystem and biodiversity. Due to climate change, the whole world is facing many kinds of problems. If we consider what the reasons are for these important climate changes happening now and then. They are the reasons given below.

The most pressing problems we face with the world right now:

1. Destruction of Ecosystem
2. Climate change

Why does climate change? Why does Destruction of Ecosystem?

What causes damage to the ecosystem? i.e. due to climate change, what causes climate change i.e. due to the reasons given below?

1. Generating power, 2.Manufacturing goods, 3.Cutting down forest, 4.Using transportation and
5. Due to solid waste management (Human activity).

Among these reasons, the world is realizing that solid waste management has a greater impact on the environment, and at the present time, almost all governments are paying special attention to solid waste management and making people aware and involved in it.

1. Losses due to Ecosystem degradation

Global warming, Climate change, Water pollution, Loss of Biodiversity

Causes of Ecosystem degradation

- Pollution is one of the main reason
- Various Human activities threaten to disrupt this Ecosystem
- Climate change

- Animal tracking technology

2. Damages/problems due to climate change:

- Microbiological problems
- Cloud burst
- Increasing droughts
- Not enough food

Causes of climate change:

Generating power, manufacturing goods, cutting down forest, using transportation, Due to Solid waste management. In this reasons the pollution, climate change, human activities are depends on Solid Waste Management.

What is Solid Waste?

Wastes are inevitable part of human activity. The problems associated with waste can be traced back to the very beginning of civilization, when humans gathered in communities. Wastes generated then were contained and disposed of by natural processes. However, as population increased and villages grew into towns and then into cities, the amount of waste generated increased. Consequently, wastes were dumped indiscriminately into waterways, empty lands and access roads. The appalling conditions gave rise to many epidemics so that destroyed large population of world.

Solid waste is the unwanted or useless solid materials generated from human activities in residential, industrial or commercial areas. It may be categorized in three ways. According to its: origin (domestic, industrial, commercial, construction or institutional), contents (organic material, glass, metal, plastic paper etc), Hazard potential (toxic, non-toxin, flammable, radioactive, infectious etc). Solid Waste Management reduces or eliminates the adverse impact on the environment & human health. A number of processes are involved in effectively managing waste for a municipality. These include monitoring, collection, transport, processing, recycling and disposal. The solid of waste generated varies mainly due to different lifestyles, which is directly proportional to socio economic status of the urban population. Solid waste management is completely based on the principle of 3R. 3R stands for REUSE, RECYCLING, REDUCE. The principle of 3R is to collect and manage the garbage produced by humans in everyday life.

Types of Solid Wastes

1. Household Hazardous Waste (HHW) it's from human activity at home.
2. Construction and Demolition Buildings etc.
3. Industrial/Commercial Waste.
4. Medical Waste.
5. Used Electronic Equipment.
6. Plastic waste, etc.

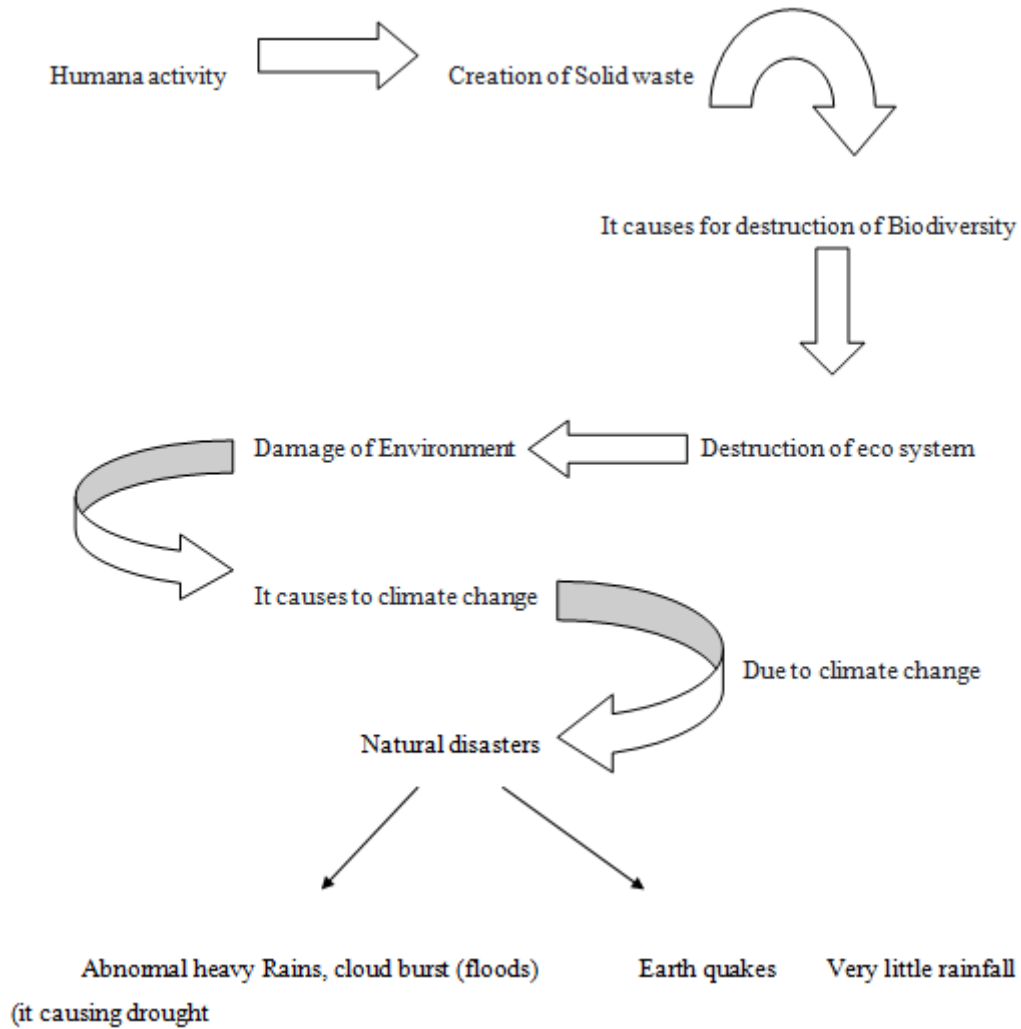
Methods of Solid Waste Disposal and Management:

- 1) Solid Waste Open Burning
- 2) Sea dumping process
- 3) Solid wastes sanitary landfills
- 4) Incineration method
- 5) Composting process
- 6) Disposal by Ploughing into the fields
- 7) Disposal by hog feeding
- 8) Salvaging procedure
- 9) Fermentation/biological digestion

II.HYPOTHESIS:

According to my hypothesis, human error is the reason for the disasters and communal diseases caused by unexpected climate change. The most important thing is various types of garbage and garbage management errors made by humans.

Let's see below how solid waste management is destroying our ecosystem and causing climate change.



According to my hypothesis, human error is the cause of the natural disasters caused by unexpected climate change. The main purpose of this article is to find the reasons for the destruction of the environment due to the various wastes created by humans and the errors in the management of these wastes.

IV.IMPACT OF SOLID WASTE MANAGEMENT ON ECOSYSTEM:

Perfect Solid Waste Management	Failure Solid Waste Management
<p>Successful 3R in Solid waste management</p>  <hr/> <p>Perfect Garbage segregation system</p>	<p>Failure 3 Rs in Solid waste management</p>  <hr/> <p>Improper Garbage segregation system</p>



Perfect Garbage collection system



Improper Garbage collection system



Clean Drainage system



Drainage with Garbage



Clean Ponds



Ponds with Garbage



Perfect Ecosystem



Imperfect Ecosystem



Floods





Sufficient water



The most important thing in this solid waste management is people's participation, every morning it starts from our home. As a part of the people, our daily duty is to segregate the garbage in the right order and support the garbage collection staff

Solid waste management is perfect, our ecosystem also perfect



Drought/Water Problem



If solid waste management is not good in any area, the ecosystem and biodiversity of that area will be damaged. Due to this we are currently hearing about global warming, untimely rains and floods due to this we are seeing and experiencing cloud bursting.

V. Solid waste management challenges for destruction of ecosystem in developing countries: Garbage collection from household, hospitals and commercial Jones, Segregation of Garbage for Recycle and Reuse, Reduction of plastic, paper etc, Reduce deforestation and protect forests, Ensuring that factories causing air pollution comply with international standards. Through various national and international conferences, we understand that all these are in our hands and in the hands of the governments who take decisions. Therefore, it is no exaggeration that if we do not pay special attention to the solid waste management which is being made by our hands and destroying our living and environmental system, then there will be a threat to human survival. This is evidenced by the natural disasters that are seen in front of our eyes all over the world, abnormal rains, floods, and lack of rain in some areas. They are causing drought in the face of drought.

The impacts of mismanaged plastic waste on the climate and ecosystems:

Open burning: Open burning is a common waste management practice in around the developing world. The amount of waste burned in India and Nepal combined accounts for 8.4 percent of waste burned globally. Burning of waste in open fires leads to the production of a serious air pollutant (CO₂). (5)

1. Methane gas released from solid waste. its directly effects on greenhouse gas emission and emission of nitrous oxide. Production of these gases is directly effected on our climate.
2. Disposing of plastic waste in drains: Disposing of plastic waste in canals and rivers causes it to accumulate in ponds and oceans, forming water pollution and remaining in the ground for years without dissolving, destroying soil fertility and directly harming biodiversity and the environment.

VI. OBSERVATIONS ON THIS ISSUE:

Different countries and organizations of the world are constantly observing the effects of solid waste management on climate change, changes in biodiversity, global warming, various types of pollution and the negative effects on the environment.

VII. LITERATURE REVIEW, DATA COLLECTION AND ANALYSYS:

We read various national and international journals and various newspapers on relation between the solid waste management and environmental issues. As a part of the research work I have collected data from secondary source of data (national and international journals, conferences and various newspapers).

- 1.11th International Conference on Waste Management and Environmental and Economic Impact on Sustainable Development [1]
2. The World Bank organized an International Conference on **Municipal Solid Waste Management (SWM)** in partnership with Global Platform for Sustainable Cities (GPSC) and in collaboration with NITI Aayog and Ministry of Housing and Urban Affairs (MHUA), Government of India, on October 10-11th, 2019 in New Delhi. [3]
3. The 17th International Conference on Waste Management and Technology 11-14 June 2022 is also of the same opinion [4].etc.

VIII. SUGGESTIONS:

1. Collection of garbage in orderly manner.
2. Proper handling of the collected garbage,
3. Establishing public awareness programs on the adverse effects of improper waste management on human survival, biodiversity and the environment.
4. Establishing public awareness programs on the adverse effects of improper waste management on human survival, biodiversity and the environment.
5. Garbage burning should be stopped immediately(open burning)

IX.CONCLUSION:

If solid waste management is not good in any area, the ecosystem and biodiversity of that area will be damaged. Due to this we are currently hearing about global warming, untimely rains and floods due to this we are seeing and experiencing cloud bursting. The most important thing in this solid waste management is people's participation, every morning it starts from our home. As a part of the people, our daily duty is to segregate the garbage in the right order and support the garbage collection staff

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