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AN OVERVIEW OF THE ISSUE OF SOLID WASTE MANAGEMENT IN SRI LANKA

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INTRODUCTION:

Almost every year the world's newspapers and television screens are dominated at some point or another by a natural disaster of international concern. One year it is flooding in Ratnapura in Sri Lanka: another year drought and hunger in the dry lands of Africa. Recent years have also produced a succession of major environmental issues such as acid rain, the dumping of toxic wastes, damage to the ozone layer, the destruction of the tropical rain forests, people problems, raw materials and energy, alternative energy, soil erosion, air pollution, etc.....

To quench the thirst of economic development and the enjoyment of the riches of nature, humans must come to terms with the reality of resource limitation and the carrying capacities of ecosystems, and must consider the needs of future generations. Man must ensure Earth's capacity to sustain development and support all forms of life.

The limitless capacity of human beings for building and creation is matched by equally great powers of destruction and annihilation. The escalating needs of soaring numbers have often driven people to take a short-sighted approach when exploiting natural resources. The toll of this approach has now become glaringly apparent: a long list of hazards and disasters. Therefore, globally, there is a need for quick action to build and conserve a healthier environment. It should consist of ecologically sound management of productive systems and maintain their viability and versatility. The global interrelatedness of actions with its corollary of global responsibility is vital.

In the twentieth century we experienced an explosion in knowledge and communication technologies which have far reaching relevance to education, its expansion and its quality. It has serious implications for the very nature of teaching and learning process at each stage of education. The roles of school, community and the teacher are changing at a very fast pace. The responsibility and the accountability of governments are under severe stresses and strains. Education has to respond to realities of globalization on one hand and the emerging identifications with local and ethnic bonds on the other. This was and is being realized the world over to respond to these changes,

challenges, issues and tensions. The many tensions have been identified as central to the problems of the 21st century.

Anthropogenic changes to the natural environment pose serious threats to human health, welfare and security. Many examples link human health, environmental degradation and pollution at local, regional, and global scales. For example, use of chemical substances, known to be persistent, toxic and bio-accumulative pose serious threats to both natural ecosystems and human health and improper management of surface water resources may promote mosquito breeding-vectors for malaria and filariasis.

Therefore global strategies for management of health, development, nature and environment is very vital. Such efforts, backed by will and determination at the national and international level should be discussed, implemented and monitored for the continued existence of man.

OBJECTIVES

- 1.To describe various life cycles of solid waste
- 2.To investigate how they are becoming hazardous problems.
- 3.To find out some remedial measures to overcome them.

METHODOLOGY

In order to overview the problems encountered

- Visited the Central Environmental Authority of Sri Lanka.
- Visited Raddolugama (one of the biggest housing schemes)Sewerage Plant.
- Visited Raddoluwa “ SUPER COMPOST PROJECT “
- Met some Urban Council Members and Mayors
- Visited various websites.
- Visited many dumping sites.
- Interviewed the relevant people responsible.

DATA COLLECTED

Rules and regulations connected to solid waste are the National Environmental Act, the Pradeshiya Sabha Act and the Urban Council and Municipal Council Ordinances.The Environmental Act restricts the dumping of solid waste into the Environment and the act further states the functions of the Central Environmental Authority.The Local Government Acts and Ordinances state that the local authorities are responsible for proper removal of non-industrial solid waste and should provide proper sites for the dumping of solid waste.

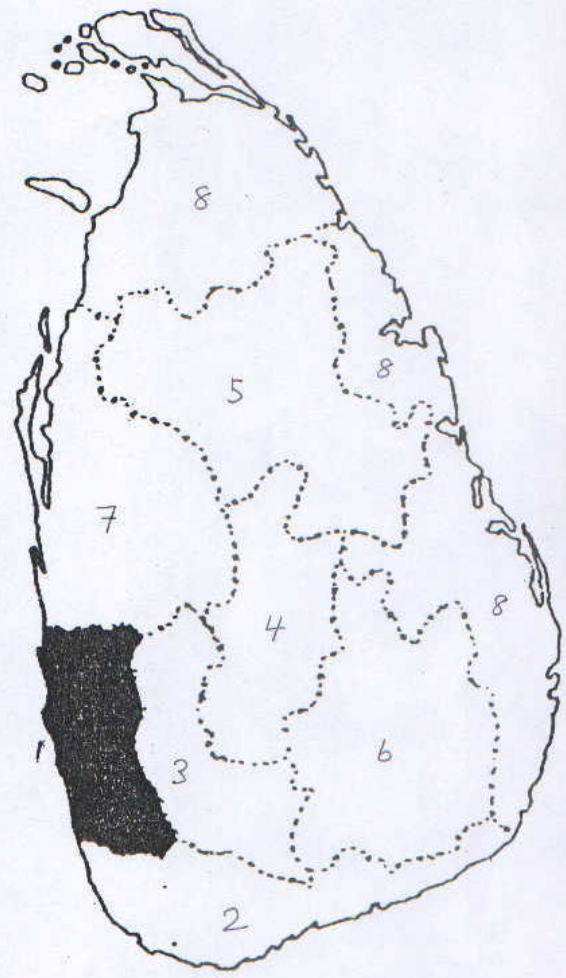
Sri Lanka is a country of some 65,610 sq km and a population of 19.6 million people giving a population density of 298 persons/sq km, one of densest in Asia. Life

expectancy is 72 years. Literacy rate is 96.9% and the major ethnic group is Sinhalese at 74% followed by Tamil at 18% and others, 8%.

Solid waste management is a problem in Sri Lanka, especially in urban areas. Colombo is the most affected area facing a severe crisis with respect to the disposal of around 1500 Tons of solid waste material per day. Approximately 80-85% of Municipal domestic solid waste produced in Sri Lanka consist of organic waste, including food and garden waste. The balance, 15%-20% consists of paper, plastics, glass, metals and other inorganic materials. The organic fraction has a strong impact on the environment and can be hazardous.

THE SUMMARY OF THE REMOVAL OF SOLID WASTE BY LOCAL GOVERNMENT INSTITUTIONS OF SRI LANKA AS PER DAY IN METRIC TONS

PROVINCE	TONS
1. WESTERN P.	1448
2. SOUTHERN P.	143
3. SABARAGAMUWA P.	223
4. CENTRAL P.	80
5. NORTH CENTRAL P.	88
6. BADULLA P.	169
7. NORTH WEST P.	9
8. NORTH & EAST P.	470
TOTAL	2658



It is a common practice in Sri Lanka to collect solid waste from residential, commercial and industrial sources and deposit this material in the outskirts of the cities and towns, in dumping sites. Composting, on-site disposal, and illegal dumping on roadsides, vacant land or river/stream banks, account for various other methods of solid waste disposal. The quantity of solid waste has increased with economic development and the household waste generation varies between low and high income communities.

Collection methods vary from place to place. They include hand cart collection, hand tractor collection, tractor and trailer, compactor truck etc.. Some areas have a stationary trailer system.

There is no proper garbage discharge, so the sanitary conditions are poor due to animals like goats, dogs, cows, cats, and crows foraging for food. Concrete bins are common but due to poor design garbage is dumped alongside these. Many drains are full of and blocked with garbage, causing health problems.

Composting has been carried out on various scales with varying degrees of success.

Manufacture of bio-gas from market waste and cowdung is still being tested.

Landfill conditions are very bad and there is strong public opposition to any landfill project.

In many cities and towns food and kitchen waste from hotels goes to piggeries.

According to Central Environmental Authority solid waste management is a responsibility of the local authorities.

The Ministry of Forestry and Environment is working on a National strategy for solid waste management. Responsibilities are to be shared with the National Government bodies, local authorities, the private sector, and the general public.

CONCLUSION

- Hazardous problems arising due to this major issue are health problems like mosquito menace causing dengue fever, malaria, leprosy, Japanese encephalitis, and
- Various other respiratory illnesses.
- Drainage systems, streams, rivers, lagoons, reservoirs, and tanks are covered and blocked causing damages and creating problems.
- Flora and fauna are affected.
- Stagnant water causes problems
- Chemicals seep through the ground and wells are contaminated.
- Natural habitat is destroyed.

A SUPER COMPOST PROJECT

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7. Built on 2002 .10.02 with 7 million rupees to protect the environment in Raddolugama.



In this project household garbage is categorised into :- Polythene, Glass, Metal, and Others. Polythene and glass are to be recycled while metal is to be sold. The remaining portion which includes mostly organic material (vegetables and food) is broken into small particles, crushed and converted into fertilizer after going through a few stages.

Floating population as well as seasonal variations and festivals and other special occasions such as Sinhala/Tamil new year affect solid waste generation.

SEWERAGE PLANT OF RADDOLUGAMA(A BIGGER HOUSING SCHEME)



No :1 The well to which about 200 cubic ft of liquid solid waste gathers daily



2 Then goes up through the three pipes into large tanks for stirring up with chemicals added.



3. Next it is released again into large tanks filled with layers of sand and metal for the water to be removed down under the ground which flows into the near by river.



4. Solid waste dries up on the surface of the layers of sand.



5. Next the dried up particles of solid waste is collected and stored outside.



6. Then it is packed in sacks and given to people without any charge, which is used as a source of fertilizer.