

Waste



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Environmental pollution encompasses the different ways that the human activity damages the natural environment. It can be in the form of an open garbage dump or as simple as a burning house. Pollution can also be invisible, odourless, and tasteless, thus, making environmental pollution one of the most serious and insidious problems facing humanity and other life forms today. One of the chief sources and most visible forms of environmental pollution is solid waste. In order to reduce solid wastes, one has to understand the sources and volumes of solid waste generated by humans, and then the impacts and handling of the solid wastes. Only then can one begin to propose solutions to this environmental problem.

Locally, every year millions of tons of solid garbage are disposed of in Canada. Canada has been said to generate almost 600kg of waste per person per year; one of the highest per person rates in the world. The numbers are not so astounding given the fact that Canadians are among the highest consumers in the world, and thus most of what is consumed becomes waste. According to the B. C. ministry of Environmental Lands and Parks, it is estimated that 40% of solid waste is generated by the industrial, commercial, & institutional (ICI) sector, 30% of the solid wastes is reportedly generated by the residential sector, and the remainder of 30% is generated by the demolition, landclearing, & construction sector (DLC). The cost of disposal for each of the three sources respectively are: \$100 million for ICI, \$90 million for residential, and \$40 million for DLC.

Majority of solid wastes are trucked to landfills which occupy valuable land space. The remainder of the solid wastes are sent to incinerators. According to Ministry of Environmental Lands and Parks, by the year 2000, it is

estimated that 60% of the 236 existing landfill sites in B. C. will be filled to capacity. Furthermore, with the high rate of consumption and increased standard of living, it is possible that the future of the environment will be dismal.

Impacts on the environment inflicted by solid waste is at minimum, very harmful. Solid wastes sent to landfills can contribute to groundwater contamination and air pollution. Other methods of disposal of solid wastes can also cause damages. For example, although high-tech incinerators produce much lower levels of pollutants, they still emit acid gases, carbon dioxides, and toxic chemicals. There are several views on which way is the best way to dispose of solid wastes. Incineration is popular based on its 99.9% effectiveness rate to destroy the solid waste; however, the question still exists about the .1% of the emissions, which might contain dioxins. Landfills are starting to lose popularity because they take up too much precious land space, plus they have to be monitored regularly for methane gases.

Furthermore, the idea that everything that goes in the landfills decays is a myth. Due to the lack of oxygen the decomposition process is very slow, for example, according to *Once and Future Landfills* (National Geographic, May, 1991) by William Rathje, a newspaper about 25 years old was recently unearthed at a landfill barely decomposed. The future of landfills looks bleak as finding new landfill sites is a difficult task primarily because few communities want a landfill site in their backyard. Another way to manage solid wastes is through recycling. According to Ministry of Environmental Lands and Parks, over 75% of waste generated in many communities can be recycled, reused, or recovered. Recycling receives lots of publicity; however,

it is not really cost-effective if used improperly, as it costs tax payers \$200 per ton to recycle while just \$130 per ton to throw it to the dumps. Turning waste products into contents of a recycled product might be something worth looking into, and that is exactly what businesses abroad, especially in Asia, are discovering.

Controlling solid waste pollution depends on the efforts made by governments, business & industry, environmental organisations, and individuals. Governments should pass recycling laws which would make it mandatory for every individual to recycle, such is the case in countries like Austria. Governments should also ban disposal of certain products in landfills because they could take up too much space, and there could also be regulations proposed that would require that landfills have double lining on nonporous substances, such as clay and plastic, which helps prevent leaching of toxic chemicals in to the ground water.

Companies should concentrate on developing products with environmentally safe ingredients and less packaging to satisfy customer demands. These ideas will help lower their overall costs and many businesses and industries have also found that reducing solid wastes gives them a better image.

Companies should be required to develop some sort of pollution control system. Environmental organisations are helpful because they can influence law makers and use their findings to persuade government to reduce or prevent pollution. A proposal could be made to charge for recycling since there is extra costs due to transportation, as two trucks have to be sent , one for pick up of garbage, the other for pick up of recyclable products.

As an optimist one can be hopeful that a deposit-refund system will be the

ultimate market-based solution to the environmental problem of solid wastes. The deposit-refund system would require consumers to pay extra money on recyclable products and once the products are sent back to be recycled, the consumer gets refunded. The deposit-refund system would be essentially the combination of a tax and a subsidy. The subsidy is paid when the consumer returns the products to be recycled, and funds for the subsidies are raised by the taxes that are charged to the consumers when they purchase the products. This system would require little monitoring, and will help reduce litter and assure recycling. The deposit-refund system should be applied to recyclable products ranging from soda cans to cars. The deposit-refund system offers incentives in terms of the subsidy and offers convenience to consumers in terms of collection times. The deposit-refund system should be instituted on industries which create wastes which are otherwise disposed of improperly. In this particular example, the materials involved in creating toxic by-passes would be charged a tax, which is then in turn used to subsidise the industries once their harmful solid wastes are disposed of properly.

On a smaller but just as important scale, individual households should be subsidised if they create less solid waste than the average household. Households should also be charged extra if the volume of solid waste created is over a set amount. Individual households and businesses should also be fined a heftier amount if their solid wastes contain substances considered harmful to the environment. Monitoring costs should be low, considering that check ups can be done during pick ups.

Everyone would want to have the volume of solid waste reduced.

Unfortunately, much of the pollution that now threatens the health of the

planet and its species comes from products, that many people want and need. A person living in an industrialised nation produces two to three times as much solid waste as a person in a developing country. For a genuine reduction in solid waste, people of the industrialised world will have to accept less convenience and luxury in their lives. Will using solid waste as a landform afloat an ocean to build houses on (Japan), or will co-operation of government and industries of all countries, rich and poor, as well efforts of all individuals all over the world lead to the solutions of environmental problems? Environmental economics can propose number of paths that can lead to a healthier world but it is up to individuals to follow that path.

Bibliography: