

**Legal Control of Transboundary Movements of Hazardous Wastes:  
the Emerging Trends**

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This is to certify that M.Phil dissertation entitled, "Legal Control of Transboundary Movements of Hazardous Wastes : The Emerging Trends" submitted by Mr. T.R. Subramanya for the award of degree of MASTER OF PHILOSOPHY of Jawaharlal Nehru University is his original work. This has not been published or submitted to any other University for any other degree.

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- SUBRAMANYA, T.R.

## PREFACE

The movement of hazardous waste from one country to another for their disposal is no small issue given the frequency of the movements and the quantity of shipments involved in the trade. Hence hazardous waste management has become a major environmental issue of this decade. Until the adoption of the Basel Convention in 1989, states were not greatly concerned about its regulation. Chapter I of the present study makes an attempt to highlight the nature and types of hazardous wastes and the diseases that are spread and that may possibly result from its improper disposal, and the damage that it causes to nature and man. The chapter also tries to ascertain the reasons for the transboundary movement of hazardous waste.

Chapter II is split into two parts. The first part focuses on the Management of Hazardous Waste in Japan and the United States. Further it carries a discussion and an evaluation of the major legislations adopted in Japan and the United States in this area. Part B of this chapter examines the efforts undertaken at the regional level, like the EEC, OECD and OAU to control and regulate the transboundary movements of hazardous wastes.

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Part I of Chapter III deals with the patterns and methods followed in waste dumping as an international phenomena. Part B mainly concentrates on the events leading to the adoption of the Basel Convention, its nature and scope and a critical evaluation of the Convention.

Chapter IV is devoted to an examination of hazardous waste management in India. Here the legal mechanisms involved in the various legislations and the necessary safeguards mentioned in these legislations have been analysed. The approach of the Supreme Court of India towards environmental cases also briefly figures in this chapter.

The last chapter records the summary of preceding chapters and draws the emerging legal norms in the area of hazardous waste management in the light of the study.

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ABBREVIATIONS USED

CADE	..	Coalition Against Dangerous Exports
CERC	..	Consumer Education Research Centre
CERCLA	..	The Comprehensive Environmental Response Compensation and Liability Act
DOT	..	Department of Transportation
EEC	..	European Economic Community
EPA	..	Environmental Protection Agency
FWPCA	..	The Federal Water Pollution Control Act
HIW	..	Hazardous Industrial Waste
HMTA	..	Hazardous Material Transportation Act
IAEA	..	International Atomic Energy Agency
ILM	..	International Legal Materials
IRPTC	..	International Register of Potentially Toxic Chemicals
MBT	..	Maryland Bank and Trust
OAU	..	Organisation of African Unity
OECD	..	Organisation for Economic Cooperation and Development
PCBs	..	Polychlorinated biphenyls
PPM	..	Per Million by Volume
PRPS	..	Potentially Responsible Parties
RCRA	..	Resource Conservation and Recovery Act
SARA	..	Superfund Amendments and Reauthorisation Act
TEC	..	Transport Emergency Card

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TNC .. Trans National Corporation  
TSD .. Treating, Storing and Disposing Facility  
Facility  
US .. United States  
UNEP .. United Nations Environment Programme

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## CHAPTER ONE

## CHAPTER I

### THE PROBLEM AND SETTING

Waste means different things to different people. To the producer it is valueless, uninteresting, and even distasteful and he demands that it be removed for disposal by the authorities, at little or no cost and preferably to someone else's area. To the waste manager it is a heterogeneous mixture of materials, predictable only in its infinite variability. At best it is awkward, and at worst virtually impossible to handle.<sup>1</sup>

Hazardous wastes are legally defined as those wastes that may cause adverse or chronic effects on human health or the environment when not properly controlled.<sup>2</sup> Under the Resource Conservation and Recovery Act of the United States, hazardous waste means "a solid waste or combination of solid wastes, which because of its quantity, concentration or physical infectious characteristics may:

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- 1 Tunaley, "Solid Waste Disposal - Problems Associated with Tipping and the Licensing of Landfill Sites", in John R. Holmes, ed., Practical Waste Management (New York, 1983), p.237.
  - 2 Louis Theodore and Joseph Reynolds, Introduction to Hazardous Waste Incineration (New York, 1987), p.3.

- (A) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
- (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.<sup>5</sup>

The statutory definitions given by France,<sup>4</sup> Federal Republic of Germany,<sup>5</sup> Netherlands and the United Kingdom<sup>7</sup>

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3 The Resource Conservation and Recovery Act, 42 USC (1976), Section 6903(5).

4 ...categories of waste may be defined by decree and the enterprises that produce, import, transport or dispose of wastes which belong to these categories and which are in a state such that they cause, or at the time of their disposal may cause, a nuisance such as...injurious effects on the soil, plants, or animals, to degrade the scenery or the country side, to pollute the air or water, to create a noise or odor, or...(are) harmful to human health or the environment... (Art.8 and 2; Law No.75-633; July 1975).

5 Special wastes are such wastes from commercial or trade companies which due to their nature, composition or quantities are especially hazardous to human health, air or water, or which are explosive, flammable, or may cause diseases. Their disposal must be subject to additional requirements according to the Act. (Federal Act on the Disposal of Waste, 1972, as amended, 1976).

6 Chemical wastes are: (1) Wastes consisting wholly or partly of chemicals indicated by General Administrative order and (2) Wastes produced by chemical processes designated by General Administrative order (Chemical Waste Act, 1977).

7 Waste of a kind which is poisonous, noxious, or polluting and whose presence on the land is liable to give rise to an environmental hazard (Deposit of Poisonous Waste Act, 1972); Special Wastes are those which "may be...dangerous or difficult to dispose of" (Control of Pollution Act, 1974).

consider wastes as hazardous or potentially hazardous.

Generally, wastes are of three kinds: (1) liquid wastes, (2) solid wastes, and (3) radioactive wastes.

### Nature and Sources of Liquid Wastes

Liquid wastes include water borne substances such as dissolved and suspended organic matter; inorganic materials like metals and salts; chemicals in solution like nitrates, phosphates, acids and bases; collids such as oil and grease; and small organisms like bacteria and viruses. The sources of these wastes are almost endless, including agriculture and food processing, manufacturing and chemical industries, paper mills, slaughter houses, sewage treatment plants and petroleum refineries. The range of wastes spans fertilizers, pesticides, organic chemicals, blood affal, urine and feces.<sup>8</sup> Many wastes are immediately toxic<sup>9</sup> and often lethal to numerous forms of life.

A typical municipal waste is domestic sewage. Industrial wastes like municipal wastes, may enter local water ways

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8 Leo F. Laporte, Encounter with the Earth: Wastes and Hazards (New York, 1975), p.3.

9 Toxicology is broadly defined as the science that deals with poisons and their effects (Webster's Third New International Dictionary, 1976, p.2419.

either directly or through local sewage treatment plants. Some industrial wastes generally include those related to burning of fossil fuels, emission of noxious gases and discharge of polluted water, and toxic and/or radioactive materials.

## 2. Solid Wastes

Materials discarded by man the world over usually range from items that easily dissolve and decompose, and soon disappear, to those essentially inert and long lasting. Leo F. Laparte has classified solid wastes into eight categories,<sup>10</sup> according to their degree of chemical stability.

(a) Organic Wastes: These are by products of animals and plants whether living or dead. These wastes generate a high biological oxygen demand when micro-organisms decompose them.

(b) Paper, wood and natural fibres: Waste material from fibres like linen and cotton is also organic, but is largely composed of cellulose, a starchy chemically resistant compound that forms the membrane of plant cells.<sup>11</sup>

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10 Leo F. Laporte, n.8, pp.36-39.

11 Ibid., p.38.

In processing cellulose for newsprint, card board, magazines, books and textiles, manufacturers add chemicals that make the end product stronger and more decay resistant. Such materials can only be broken down slowly in the natural environment by bacteria and chemical oxidation.

(c) Leather and rubber products: These are also solid wastes composed of natural or man made organic substances. These are physically and chemically resistant and consequently endure a long time.<sup>12</sup>

(d) Ashes: This kind of solid waste is produced by burning wood, coal, and paper products in homes, apartment house incinerators, power plants and open dumps. When these materials burn, carbon, hydrogen and sulphur in the organic matter are converted to carbondioxide, sulphur dioxide, and water vapour that diffuse into the atmosphere.

(e) Metals: Another key component of solid wastes is metals including scrap iron, junked cars, tin cans, aluminium containers, pipes and household appliances. Most of the solid metallic wastes end up in garbage dumps and present no special environmental problems other than finding suitable places to bury them.

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12 Ibid.



(f) Plastics and Artificial fibres: Wastes like nylon and dacron are extremely inert. Growing use of man-made textiles and plastics for containers and many other objects formerly made of paper, wood and metal is generating an everlarger volume of indestructible wastes.<sup>13</sup> The low density of some of these materials allows them to float to the surface of natural water bodies where they are often dumped.

(g) Sand, Silt and Dirt: This includes sediment dredged from harbours, washed into sewage treatment plants or swept up around homes or businesses and discarded with trash. The category also includes huge volumes of sediment produced in strip mining, metal processing and refining, and construction activities. Wastes such as these are essentially inert chemically, but easily washed into streams, rivers, ponds and lakes where they may interfere with natural systems. \*

(h) Glass, ceramics, masonry and stone: These wastes come mostly from residential trash and demolition of old buildings. They create the least problems of all because they are chemically stable and do not contaminate natural waters.<sup>14</sup>

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13 Ibid.

14 Ibid., p.39.

Thus solid waste includes any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid or contained gaseous material.<sup>15</sup>

### 3. Radio-active Wastes

As our energy demands are met more and more by nuclear power generation, radioactive by-products will accumulate in the environment. The special problems of radioactive waste centre in three areas. First, many wastes emit enough radiation to kill or seriously injure living creatures, as well as induce severe genetic damage in the offspring. Second, the extremely long period of time it takes these wastes to dissipate their radiation - from hundreds to many thousands of years - requires that we remove them far from the biosphere. Third, all organisms, including ourselves, lack a built-in warning system alerting them to the presence of radiation.<sup>16</sup>

#### Sources of Radioactive Wastes

Nuclear power plants are the chief source of radioactive

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15 Resource Conservation and Recovery Act, 42, U.S.C. (1976).

16 Leo F. Laporte, n.8, p.61.

wastes and they come in all forms<sup>17</sup> - solids, liquids, and gases - and emit varying levels of radiation. Radioactive wastes are also produced at the uranium mine and processing mill where nuclear fuel is recovered and concentrated from uranium ores. Other sources of radioactive wastes include military production of fissionable materials for nuclear weapons, as well as laboratories where radio isotopes are used for cancer therapy and as biological tracers in experiments.<sup>18</sup>

More than 37 types of wastes are considered hazardous or potentially hazardous by a number of countries.<sup>19</sup> The

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17 . Low level wastes are released directly to the environment, either as gas from smoke stacks or as contaminated liquid from reactor coolant water. Intermediate-level wastes are stored for months or years, usually on the reactor site, and then disposed of when their radiation levels have fallen to safe values. High level wastes originate mostly from fission reaction inside a nuclear reactor's fuel rods. See Laporte, n.8, p.64.

18 For a detailed discussion, see Laporte, n.8, pp.61-71.

19 The NATO Committee on the challenges of Modern Society in Report No.62 (1977) on Recommended Procedures for Hazardous Waste Management considers the following as hazardous or potentially hazardous. Aluminium containing waste, Antimony and compounds, Arsenic and compounds, Asbestos, Beryllium waste, cadmium waste, chlorine, chromium III waste, chromium VI waste, copper waste, cyanide compounds, Dye Manufacturing waste, Fluorine, Halogenated Solvents, Herbicides, Isocyanates, Laboratory waste, Lead waste, Magnesium waste, Mercury waste, Metal surface treatment waste, Nickel waste, Non-Halogenated solvents, oil refinery waste, organic peroxides, paint manufacturing waste, pesticides, pharmaceutical manufacturing waste,

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improper disposal of these wastes has caused a threat to the very existence of nature and its living beings. This can be understood in the following illustrations:

(1) In 1942, Hooker Chemical and Plastic Corporation began dumping chemical waste into the area around the city of Niagara Falls, including the Love Canal, Hyde Park through an agreement with the city of Niagara Falls. Ten years later, the Niagara Board of Education convinced Hooker to sell the site and neighbouring land so the Board could construct a school and playground. In the deed for sale, Hooker included a clause disclaiming any liability for injuries resulting from the disposal of the chemical wastes.<sup>20</sup> In 1976, 200 families of the Love Canal discovered that they were living in homes built on a chemical dump containing 80 chemicals, including deadly dioxin. Between 1942 and 1953 Hooker had dumped 21,000 tonnes of chemical waste into

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phenol containing waste, phytopharmaceutical waste, PCB's, rubber manufacturing waste, silver containing waste, sulphur containing waste, thallium waste, vanadium and compounds, white phosphorous, zinc waste. See John P. Lehman, "Hazardous Waste Definition and Recommended Procedures", in John P. Lehman, ed., Hazardous Waste Disposal (New York, 1983), p.54.

20 Catherine S. Knowles, "Who is Responsible? An Analysis of Hazardous Waste Liability", Hamline Journal of Public Law, vol.6 (1985), p.1.

the disused<sup>21</sup> canal. A study of the residents showed that they were experiencing an unusually high rate of birth defects and cancer deaths were increasingly numerous. Some residents had high white blood cell counts, which could be a precursor to leukemia and liver damage.<sup>22</sup> Of the 35 tested, 11 had chromosome damage. Ultimately the United States Federal Government had to spend US\$100 million for cleaning the area.<sup>23</sup>

(2) The Japanese have suffered cruelly from careless disposal of hazardous waste. The two incidents of the 1950s awakened the whole world. In the first, methyl mercury-laden industrial waste was indiscriminately disposed into the Minamata Bay in southern Japan from a chemical plant contaminated fish, eventually inflicting disfiguring paralysis or slow death on thousands of people,

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21 M.H. Brown, "Love Canal and the Poisoning of America" in Green M. and Massie Jr. R. eds., The Big Business Reader (New York, 1980), pp.189-207; also Deccan Herald (Bangalore), 12 October 1987.

22 Catherine S. Knowles, n.20, p.2.

23 Deccan Herald (Bangalore), 12 October 1987.

including children in the womb.<sup>24</sup> The Minamata disease, as it is popularly called, has left a legacy of suffering in Japan.<sup>25</sup> In the second, cadmium-laden industrial waste, discharged into the Jinzu river, spread the itai, itai (it hurts, it hurts) disease. Itai, itai causes gradual decalcification of the bones which results in extreme susceptibility to fracture. Victims ultimately die of physical weakness.<sup>26</sup> The deaths and devastating diseases that resulted from the ingestion of contaminated fish, rice, and water and the destruction of fisheries and the marine environment captured world wide attention.

(3) United States V. Midwest Solvent Recovery Inc.,<sup>27</sup> is an excellent example of the problems that can be created

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- 24 Minamata disease, a debilitating neurological disease caused by the ingestion of methyl mercury - contaminated fish and water, has killed over 600 people on the Southern island of Khyshu. Over 7000 people have claimed to be victims of Minamata disease. See generally Japan Environmental Agency, Quality of the Environment in Japan (1985), pp.226-27. Also Pamela S. Passman, "Japanese Hazardous Waste Policy: Signaling the Need for Global and Regional Measures to Control Land Based Sources of Pollution", Virginia Journal of International Law (Virginia), vol.26, no.4 (1985-86), pp.925-26.
- 25 For details see Boraiko A.A., "Storing up Trouble... Hazardous Waste", National Geographic, vol.167, no.3, (1985), pp.347-49.
- 26 According to the government statistics a minimum of 86 people have died from the disease while approximately 40 persons continue to suffer from it. See Japan Environment Agency, Quality of the Environment in Japan (1985), pp.230-31. Also Pamela S. Passman, n.24, p.926.

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by inadequate handling of hazardous waste. Midwest Solvent Recovery, a firm specializing in storing and disposing hazardous wastes, stored thousands of fifty-five gallon drums filled with chemical waste on a dumpsite near Gary, Indiana, a residential area. In December 1976, a huge fire broke out at the dump site, generating toxic fumes and causing many of the drums to explode and rocket 250 feet into the air. The fire ravaged the site throughout the following week. Thereafter, the director of Midwest Solvent simply relocated his waste storage operation, leaving the previous site littered with burned out drums and chemical wastes. Less than one year later, a fire erupted at the new waste site, fuelled for days by the chemicals in thousands of drums.<sup>28</sup> By January 1980, when the Environmental Protection Agency (EPA) sought injunctive relief, there were roughly 14,000 damaged drums stacked or lying on the original site and thousands of fire-damaged drums on the second site. Poisonous chemical wastes had contaminated the top soil at both sites and a drainage ditch at the second site leading into the nearby Grand

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27 484. F. Supp. 138 (N.D. Ind., 1980).

28 Ibid., pp.140-42.

Calumet River.<sup>29</sup>

(4) The incidents of pollution on coastal beaches of the north eastern USA, with hospital wastes including bandages, hypodermic needles, syringes, and plastic bags of blood products some of which apparently showed evidence of hepatitis B and AIDs virus - were cases of either illegal onshore dumping or a result of an unusual combination of winds and surface ocean currents that transported wastes on shore from some approved offshore dump site.<sup>30</sup> At the height of summer in 1987 many New Jersey beaches including the tourist Mecca of Atlantic city were closed when illegally dumped medical waste, including human body parts washed up on the sand.<sup>31</sup> In 1988, again the state of New Jersey has fined Asbury Park \$1 million.<sup>32</sup> The reason was discharges from Asbury Park's obsolete treatment plant caused seven resort communities to close their beaches at the height of their summer in 1988. The beaches were contaminated with grease balls containing faecal coliforms in excess of the state

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29 Legal issues involved in this case has been analysed by Judy A. Johnson, "Hazardous Waste Disposal: Is There Still a Role for Common Law"? Tulsa Law Journal, vol.18, no.3, (1983), pp.449-50.

30 Michael Waldichuk, "The State of Pollution in the Marine Environment", Marine Pollution Bulletin, vol.20, no.12 (1989), p.598.

31 Deccan Herald (Bangalore), 12 October 1987.

32 The largest environmental fine ever levied against a New Jersey Municipality.



standard.<sup>33</sup>

During World War II the construction of large, water cooled, plutonium producing reactors at Hanford in the State of Washington and the associated operations for extracting the plutonium from the irradiated uranium resulted in the first major possibilities for major contamination of the environment by radioactivity. When a massive dose of radiation is received, the signs and symptoms which a human body may develop include epilation, sore throat, hemorrhage, petechiae, and diarrhoea.<sup>34</sup> Radiation injury can also occur in the developing foetus.<sup>35</sup> Among the delayed effects, bone cancer,<sup>36</sup> lung cancer,<sup>37</sup> and thyroid

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33 See Marine Pollution Bulletin, vol.20, no.1, (1989), p.7.

34 Merrill Eisenbud, Environmental Radioactivity (San Diego, 1987), p.15.

35 Ibid.

36 Bone cancers among radium dial painters were first observed and diagnosed as "radium jaw" in 1924 by Theodore Blum, a New York dentist. The cases originated from a luminous-dial plant in the northern New Jersey, and by the late 1920s it was already understood that the cases of bone cancer being reported among young women who painted radium dials with radium - containing paint were due to the practice of lip pointing the brushes used to paint the numerals. (Merrill Eisenbud, n.34, pp.20-21).

37 The high incidence of lung cancer among miners in Eastern Europe has been attributed to the diffusion of radon into the mine atmosphere. An excess of lung cancers was reported even among uranium miners in the United States beginning in the 1960s. (See Merrill Eisenbud, n.34, pp.22-23).

cancer<sup>38</sup> and cataracts,<sup>39</sup> and genetic effects<sup>40</sup> stand prominent. The International Atomic Energy Agency (IAEA) is of the view that continued and unabated dumping of nuclear waste would eventually wipe out 50 million men, women and children and would seriously damage the human genetic make up.<sup>41</sup> This will affect Third World countries first of all.

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- 38 A total of 42 cases of thyroid cancer have been reported among Japanese survivors of the atomic bomb. The effect has been found to be proportional to radiation dose, and the increase in frequency has been greater in women than in men. (See Merrill Eisenbud, n.34, p.26).
- 39 Cataracts are a nonstochastic effect of exposure of the lens of the eye to relatively high doses of X-rays, Y-rays, B-particles or neutrons. Cataracts in human beings were observed among the survivors of the Japanese bombings among patients whose eyes were treated with X, Y or B rays for medical purposes and among physicists who were exposed to the radiation from cyclotrons. (See Merrill Eisenbud, n.34, p.27).
- 40 Human cells normally contain 46 chromosomes of which half are derived from the mother and the other half from the father. The inheritable characteristics are communicated by means of bits known as genes, which are strung together in bead like fashion to form tiny filaments that are the chromosomes. The genes are large molecules which may undergo structural changes as the result of action by a number of agents including heat, ionizing radiation, and mutagenic chemicals. It is estimated that about 4% of all individuals inherit characteristics that result from recessive mutations due to natural factors in the environment. (See Merrill Eisenbud, n.34, pp.28-29).
- 41 M.K. Sridharan, in Patriot (New Delhi), 22 November 1988.

In addition, many developing countries in their thermal power stations use thousands of tons of low quality (high ash content) coal per day. Tall chimneys and gigantic machines at these stations emit a cloud of dust with fly ash and smoke containing high level of acid forming oxides of sulphur and toxic fluorides and huge quantity of highly toxic cement particles which find easy foothold on plant leaves and human lungs. Effluents from thermal power stations with high stacks may affect the surrounding territory which is taken to be 20-25 km in diameter. In fact, air, water, fuel wood, fruit and timber trees, and grazing lands have deteriorated and the process of desertification has set in.<sup>42</sup>

Even climatologists worldwide acknowledge that the burning of vast quantities of fuel in internal combustion engines of vehicles and coal-fired power stations, etc., increases carbon dioxide concentrations in the atmosphere.<sup>43</sup>

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42 For a good account see Subodh K. Gupta, "Pollution by Thermal Power Stations", Yojana (New Delhi, 1989), vol.33, no.17, pp.16-19.

There are more than 50 thermal power stations in India, burning more than 28 million tonnes of coal per year. In addition coal contains 0.3 to 1.6% of sulphur. See N.C. Debnath, "Air Pollution Practices in Large Thermal Power Plants in India", Indian Journal of Environmental Protection, vol.1, no.2 (1981), pp.97-102.

43 A.L. Yanshin, "Reviving Vernadsky's Legacy: Ecological Advances in the Soviet Union", Environment, vol.30, no.10 (1988), p.8.

At present the concentration of carbon dioxide in the atmosphere is 340 Per Million by Volume (PPM) as compared to 315 PPM in 1958. Scientists now predict that atmospheric level of CO<sub>2</sub> will nearly double to 650 PPM by the year 2050 A.D.<sup>44</sup> Recent discoveries reveal that the atmospheric concentrations of CO<sub>2</sub> are continuously increasing in Antarctica - a region practically untouched by human activity. In addition, atmospheric concentration of the man-made halocarbon gases are also increasing in Antarctica. This may result in the destruction of the stratospheric ozone layer resulting in the release of large amounts of harmful ultraviolet rays to the earth's surface.<sup>45</sup>

In the developing nations, organic wastes are most frequently discharged without treatment into coastal waters and inland rivers. Although offshore waters are generally more able to assimilate these wastes than are rivers due to their higher receptive capacity, problems occur in areas of

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44 Subodh K. Gupta, n.42, p.18.

45 Tomoyuki Ito, "Antarctic Submicron Aerosoles and Long-Range Transport of Pollutants", Ambio (Sweden), vol.18, no.1 (1989), pp.34-41. A US EPA study has revealed that increased CO<sub>2</sub> levels could cause a 3-6°C increase in average temperatures across the US leading to global warming. Further, some 18,130KM<sup>2</sup> of US coastline and 26-66% of coastal wetlands could be lost with a 1 meter rise in sea level. See Marine Pollution Bulletin, vol.20, no.5 (1989), p.205.

dense population or heavy industrialization. Such problems may involve eutrophication, or may produce the effects of microbial contamination of coastal waters.<sup>46</sup> For instance, marine pollution problems in China's Zhoushan Fishing Ground have been steadily worsening since the 1970s.<sup>47</sup> In 1985 the fishing ground received  $32.67 \times 10^8$  ton of untreated industrial and domestic waste waters which constituted 52% of the total discharged into all the seas around China.<sup>48</sup> These effluents contained 714,937t of organic matter (in terms of COD), 886t of volatile phenols, 745t of sulphides, 6,552t of hydrocarbons 1.67t of mercury, 2.17t of cadmium, 338.5t of chromium, 54t of lead and 86.06t of arsenic.<sup>49</sup> These pollutants are released into the Zhoushan Fishing ground<sup>50</sup> mainly through rivers.

In the European community alone, 150 million tonnes of industrial wastes are produced annually.<sup>51</sup> Of these, 40

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46 David J.H. Phillips and Shinsuke Tanabe, "Aquatic Pollution in the Far East", Marine Pollution Bulletin, vol.20, no.7 (1989), pp.297-300.

47 Fanzhijie, "China's largest Fishing Ground in Danger", Marine Pollution Bulletin, vol.20, no.5 (1989), pp.202-3.

48 Ibid., p.203.

49 Ibid.

50 Zhoushan Fishing Ground in the East Sea is China's largest fishing ground.

51 Or it may range from about twenty or thirty million metric tons per year.

million tonnes are chemical wastes, half of which are known to be toxic.<sup>52</sup> A recent report by the U.S. Economic Development Commission estimates that the equivalent of a lorry-load of toxic waste is produced each year for each person in the State of California. As a result 2,500 Californians can expect to die each year for the next decade due to cancer caused by exposure to the toxic waste.<sup>53</sup> Similarly, it has been estimated that hazardous waste is generated in Wisconsin at the rate of 500,000 tons per year and only 20% of all hazardous waste generated in 1979 was disposed of in facilities designed to handle such wastes.<sup>54</sup> It is horrifying to know from the reports of the World Commission on Environment and Development that of 3,119 towns and cities in India only 219 had partial and only 8 had full sewage treatment facilities. On the holy river Ganges, 114 cities each with 50,000 or more people dump untreated sewage into the river everyday.<sup>55</sup>

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52 Andrew Chetley, Cleared For Export - An Examination of the European Community's Chemical and Pharmaceutical Trade (Coalition Against Dangerous Exports) CADE, 1985), pp.42-43.

53 Ibid., p.43. Also in New Scientist "Chemicals Kill Thousands of Californians", 4 July 1985, p.24.

54 Arthur J. Harrington, "The Right to a Decent Burial: Hazardous Waste and its Regulation in Wisconsin", Marquette Law Review, vol.66, no.2 (1983), p.223.

55 World Commission on Environment and Development, Our Common Future (Oxford University Press, Oxford, 1987), p.240. Also A.K. Chaturvedi, "Non-Industrial Pollution Problems in Development Countries: An Example of Urban India - A Viewpoint", Environmental Studies (London), vol.33, no.3 (1989), p:208.

From the above hard facts it is clear that man and his environment is facing a serious threat due to the improper disposal of hazardous wastes.<sup>56</sup> That is why the hazardous waste disposal has become a major environmental issue of this decade. The development of environmentally sound disposal facilities is essential to the successful implementation of the hazardous waste regulatory programme. In most of the developing countries this capacity does not exist. Even in many of the developed countries, such as the United States, the Netherlands and the Federal Republic of Germany abandoned waste dump sites are the source of major pollution problems. To tackle such problems, industrialised countries have adopted stringent laws on hazardous waste management. Moreover, the contribution of several environmental agencies in focussing the problem at the national, regional and international levels is not small. The establishment of United Nations Environment Programme<sup>57</sup>

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56 For detailed information see J. David Prince, "Compensation for Victims of Hazardous Substance Exposure", William Mitchell Law Review, vol.11, no.3, (1985), pp.658-9.

Also UNEP News (Nairobi, Kenya), January 1985, p.5. Approximately 750,000 hazardous waste generators in the United States produce nearly 150 million tons of hazardous by-products annually.

57 By GA Res.2997, 27 UN GAOR, Supp.(No.30), 43, UNDOC. A/8370 (1973). United Nations Environment Programme was established subsequent to the 1972 United Nations Conference on the Human Environment "to promote international environmental cooperation and to act as a catalyst, stimulator, and co-ordinator for the work on other agencies and programs.

(UNEP) in 1973 reflects the global concern over the problem. The UNEP is mandated "to provide early warning of significant environmental risks and opportunities, and to ensure that governments have access to the best available environmental data."<sup>58</sup>

Legislation on hazardous waste management in many countries invokes the principle of "waste generator responsibility", translated in various procedures so as to ensure "cradle to grave" management of hazardous waste, i.e., from its generation to its proper disposal.<sup>59</sup> Such legislation emphasise in specific terms that waste generators must ensure that the waste they have produced is properly transported or disposed of, even if these tasks are subcontracted. As waste treatment and disposal becomes more strictly controlled and, therefore, more costly industrialised countries and entrepreneurs may transfer hazardous wastes to countries where waste management

58 Patrick B. Seferovich, "United States Export of Banned Products: Legal and Moral Implications", Denver Journal of International Law and Policy, vol.10, no.3 (1981), p.542.

Also Alston, "International Regulation of Toxic Chemicals", Ecology Law Quarterly, vol.7 (1978), pp.397-423.

59 International Digest of Health Legislation (WHO), vol.40, no.2 (1989), pp.491-3.

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policies have yet to be developed. This in fact became a major international problem and had to be tackled by the United Nations.

Transboundary movement of waste for treatment and disposal from the country in which it is generated to another country takes place due to a variety of reasons, but are primarily the result of (1) the non-availability of suitable disposal or treatment facilities in the country where the waste is generated;<sup>60</sup> (2) relatively more convenient locations with disposal facilities and lower cost of treatment in other countries;<sup>61</sup> and (3) a desire to avoid stringent environmental regulations in the country generating the waste by exporting it to a country with less rigid environmental regulations.

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60 The United Kingdom, for example, imported more than 50,000 tonnes of hazardous waste in 1987, 55 per cent of which came from the Netherlands, 12.5 per cent from Belgium and 5 per cent from the United States and Canada. Switzerland, on the other hand, exports some 22 per cent of its hazardous waste; 32 per cent to France, 30 per cent to the Federal Republic of Germany and 18.6 per cent to the United Kingdom.

Quoted in Jacqueline Aloisi de Lardere, "How to Handle Hazardous Waste", Our Planet, no.1, March 1989, p.4.

East Germany, however, serves as Europe's dumping ground to earn hard currency. Crude pits there take foreign waste at such low rates that West Germany has limited border crossing points for waste shipments - lest "toxic tourism" grow. See n.25, p.346.

61 Mary Elizabeth Kelly, "International Regulation of Transfrontier Hazardous Waste Shipments: A New EEC Environmental Directive", Texas International Law Journal, vol.21, no.1 (1985-86), p.87.

The transboundary movements of wastes across frontiers raises political and social problems.<sup>62</sup> Many countries emphasise that the waste generator state should provide enough and proper disposal facilities for final treatment in its territory so that its environmental problem is not exported to another country. But then, there are instances wherein due to the tough ecological legislations and public protests against environmental pollution, few western corporations of the developed world had to search for places abroad to dispose of their poisonous waste. In plenty of cases, developing countries have become victims of this kind of projects.<sup>63</sup>

The serious implications of hazardous waste dumping and its growing awareness has made several Third World leaders to give a call to put an end to this "garbage imperialism".<sup>64</sup> In the past, this question was not addressed in proper perspective due to lack of adequate information about the consequences of dumping as also probably the financial gains.

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62 See, Pierre Lilben, "The OECD Programme on Hazardous Waste Management", in J.P. Lehman, ed., Hazardous Waste Disposal (New York, 1983), p.156.

63 Between 1986 and 1988, more than 3,656,000 tons of waste were shipped from developed countries to the third world. Quoted in Amrita Bazar Patrika (Calcutta), 25 November 1989.

64 "Garbage Imperialism" was the expression first used by Kenya's President, Daniel Arap Moi. See, Iwona Rummel Bulska, "The Road to Basel", Our Planet, no.1, March 1989, p.3.

## CHAPTER TWO

## CHAPTER II

### II (a) EVOLUTION OF LEGAL MECHANISMS FOR NATIONAL WASTE MANAGEMENT - THE CASE OF JAPAN AND USA

Two incidents in Japan<sup>1</sup> briefly mentioned in the preceding chapter, in the 1950s captured international attention. In one incident, hundreds of tons of mercury discharged into Minamata Bay in the 1950s by a chemical company found its way into the food chain, affecting thousands of people and causing the minamata disease. In another, cadmium, laden industrial waste discharged into the Jinzu river spread the Itai Itai disease.<sup>2</sup> The cadmium - caused disease makes bones so fragile they can be broken by a mere hand-shake. The deaths and diseases that resulted from the ingestion of contaminated fish, rice and water and the destruction of fisheries and the marine environment made the Government of Japan to quickly respond to this issue and pass legislation for the safe disposal of hazardous wastes.

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1 See n.24 and 25 of Chapter I.

2 Itai-itai disease is chronic. It mainly affects aged women, after repeated pregnancies. Calcium drawn from a woman's bones by her growing child is replaced by cadmium, and in time bones can soften that they snap at a sneeze. See Boraiko, A.A., "Storing up Trouble - Hazardous Wastes", National Geographic, vol.167, no.3 (1985), pp.347-9.

Hazardous Waste Management in Japan

The Government of Japan passed the Waste Disposal and Public Cleansing Law in 1970.<sup>3</sup> The legislation empowers the Ministry of Health and Welfare to lay down standards for the collection, transportation, treatment, storage and disposal of waste. Further the authority to determine which substances found in waste were "hazardous" were delegated by the Ministry to the Environment Agency.

The law defines hazardous substances as "substances considered harmful to human health and the environment."<sup>4</sup> Under the provisions of law these substances cannot be released into the environment unless they are below certain concentration levels or treated in such a manner that they are rendered harmless.<sup>5</sup>

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3 Law No.137 of 1970, amended by Law No.71 of 1974, No.47 and No.68 of 1976 and No.43 of 1983 (Waste Management Law).

4 Pamela S. Passman, "Japanese Hazardous Waste Policy: Signalling the Need for Global and Regional Measures to control Land Based Sources of Pollution", Virginia Journal of International Law (Virginia), vol.26, no.4, (1985-86), p.931.

5 The Environment Agency has designated the following nine chemicals as potentially hazardous - sludge, slag, waste acid, waste alkaline, dust, cinder, waste PCB, and waste containing or polluted PCB. The designated "hazardous" chemicals are mercury and mercury compounds, cadmium and cadmium compounds, lead and lead compounds, organic phosphate compounds, hexavalent chromium compounds, arsenic and arsenic compounds, cyanide compounds, and PCB. Waste containing organic chlorine compounds, fluoride, copper or zinc is considered hazardous industrial waste only when it is discharged from a ship. See Passman, n.4, pp.931-32.

Although the national government, through the Ministry of Health and Welfare makes all waste Management Programmes, the prefectural governments are responsible for implementing the law. In practice, they monitor the management and disposal of waste and call for compliance with the standards established by the Waste Management Law. Each prefecture develops an industrial Waste Disposal plan and secures facilities for all aspects of waste management.<sup>6</sup> Under the law if there are not adequate private facilities, the prefectural government can establish such facilities and charge generators of the waste for the cost incurred.<sup>7</sup> For the adequate and efficient discharge of their responsibilities the prefectural governments are provided technical and financial assistance by the national government.<sup>8</sup>

The generator of waste is responsible for its safe disposal.<sup>9</sup> The law lays down a duty on the generator of hazardous industrial waste to submit annual reports to the prefectural government specifying the waste produced and method of treatment and disposal. The generator must

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6 Pamela S. Passman, n.4, p.933.

7 Article 13(2) of the Waste Management Law.

8 Article 4(3).

9 Article 3(1), 10(1).

obtain permission from the prefectural government for disposal except in instances where the generator transports and disposes of the industrial waste without the involvement of a third party.<sup>10</sup>

An agency or establishment/business whose main function is to transport, treat, or dispose of industrial waste or hazardous industrial waste (HIW) must receive permission to conduct such a function from the prefectural government.<sup>11</sup> In the event of an agreement between the generator of HIW and an agency/business for the treatment and disposal of HIW, the generator must provide a document that specifies the type and quantity of HIW.<sup>12</sup> Any entity, either public or private, planning to construct a final waste disposal facility must first submit the plan to the prefectural governor for approval. The Ministry of Health and Welfare keeps a record of these plans and periodically publishes the number of final disposal facilities.<sup>13</sup>

In Japan there are three main methods followed for final disposal of waste. They are: (1) inland landfills, (2) coastal and offshore reclamation sites and (3) ocean dumping.

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10 Article 14.

11 Ibid.

12 Articles 6-2(2).

13 Passman, n.4, p.936.

(1) Inland Landfills

Inland landfill disposal sites are regulated exclusively by the Waste Management Law. Due to the scarcity of land and public opposition to inland landfills which uses underground space, the chances of going for such methods are limited in Japan. Hence most of the inland landfills are usually located in mountainous areas and are small in size. There are three types of inland landfill sites.

The first type must be completely shut off from public waters and underground water by an external periphery separating structure. Any type of industrial waste can be disposed of into this site, and it is the only type of site that accepts HIW.<sup>14</sup>

Type 2 facilities accept all industrial waste in a solid state and liquid wastes after they have been treated. In addition, type 2 facilities handle all domestic waste. Type 3 disposal facilities accept specified types of industrial waste. Both type 2 and type 3 facilities must have retaining walls.<sup>15</sup>

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14 Ibid., p.937.

15 Ibid., p.938.



## 2. Coastal Reclamation Disposal Facilities

Japan relies heavily on the use of coastal reclamation and offshore reclamation sites as a second method of final disposal of waste. Coastal reclamation is the use of coastal sea waters for the disposal of industrial and domestic waste, soil dredged spoils, and sand by placing large shore protection walls on the ocean floor. A box-like structure is created on the coastline, using the ocean floor as the bottom, waste as the landfill, and soil as the cover.<sup>16</sup> When waste is deposited into coastal reclamation sites it even attracts the supervisory and regulatory functions of the Ministry of Transport, and the Ministry of Health and Welfare.<sup>17</sup>

### Regional Waste Disposal Programmes: Phoenix Plan

In 1981 the Government of Japan enacted another law known as the Law for Regional Offshore Environmental Improvement Centres to facilitate regional planning for solid waste disposal. The provisions of this law permits local government and port management authorities to

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16 Ibid.

17 Ibid., p.939.

establish a centre, a public corporation, to be responsible for the planning, construction and operation of regional offshore reclamation sites. To facilitate the objective the government established the office of Regional Waste Disposal in the Ministry of Health and Welfare in 1978. The prime duty of this office was to coordinate national and local planning of the regional waste disposal programme known as the "phoenix plan"<sup>18</sup> with two goals: (1) to create land in congested port areas and, (2) to provide longterm waste disposal facilities. In furtherance of these goals the port areas of four<sup>19</sup> metropolitan areas - Tokyo, Nagoya, Osaka and Northern Kyushu - have <sup>been</sup> chosen as sites for the construction of islands from waste.

### (3) Ocean Dumping

Ocean dumping is the third method of waste disposal practiced in Japan. Usually, ocean dumping is not permitted when there are no particular problems in following the other two methods. Under this method, before the dumping of wastes in the ocean the discharger must obtain a certificate to dispose such wastes at sea and is subject to the standards laid down in the Waste Management Law, Marine Pollution Law

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18 Ibid., p.944.

19 These four metropolitan areas generate more than half of all the domestic waste and industrial waste in Japan.

and an approval from the Ministry of Transport.<sup>20</sup>

The Marine Pollution Law of Japan establishes three primary sea areas as disposal zones. Zone A and Zone B are limited areas and Zone C comprises all sea areas beyond fifty nautical miles of the Japanese coastline.<sup>21</sup> A ship discharging HIW as said earlier must not only obtain a certificate to discharge waste, but before loading the waste, must also submit an application to the Maritime Safety Agency to discharge HIW. In addition, ocean discharges must comply with the provisions of the London Dumping Convention of 1972.<sup>22</sup>

Enforcement: The prefectural governor is responsible to implement and enforce the standards established in the Waste Management Law. In a similar fashion the regional office of the Maritime Safety Agency is responsible to implement and enforce the standards laid down in the Marine Pollution Law.<sup>23</sup> But then, the implementation of standards

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20 The Waste Management Law has listed the types of wastes that can be dumped in the ocean and also the standards these wastes should meet before they are dumped in the ocean.

21 Pamela S. Passman, n.4, p.946.

22 The 1972 Convention on the Prevention of Marine Pollution by Dumping Wastes and other Matters.

23 Governed by the Law for Regional offshore Environmental Improvement Centres (1981) Law No.76 of 1981, amended by Law No.78 of 1983.

is primarily achieved through "administrative guidance", rather than through criminal sanctions. Since compliance and monitoring are delegated to local governments and the regional offices of the Maritime Safety Agency, using the investigating power of government arises in limited cases. Both the bodies have the power to order a change in the management of waste.

The prefectural governor and the Maritime Safety Agency personnel as per the provisions do not have the power to arrest an offender. In all cases the prefectural police must prosecute the offender together with the prefectural office of the public prosecutors, a regional office of the Ministry of Justice. To mention a few other weaknesses, these government bodies do not have a civil mechanism to enforce their directives; at the time of enforcement these bodies rely exclusively on the prefectural police and the weak criminal sanctions found in the Waste Management Law and the Marine Pollution Law.<sup>24</sup> The severest sanction provided are either imprisonment not exceeding six months or a fine not more than 500,000 yen.<sup>25</sup>

In spite of the tremendous effort put up by the Government of Japan to regulate the disposal of hazardous

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24 Articles 25-30 of Waste Management Law, 1970.

25 Ibid.

waste through its Waste Management Law, there has been a steady increase in illegal dumping of industrial waste. In 1983, there were 5,353 cases of infringements of Waste Management Law, which involved 316,000 tons of industrial waste.<sup>26</sup>

United States: The improper disposal of hazardous waste is a problem of mammoth proportions in the United States. Commonly referred to as "dumping", the illegal disposal of industrial waste has resulted in the pollution of air, water and soil. As one authority puts it, in 1978 alone, there were approximately 30,000 hazardous waste disposal sites in the United States.<sup>27</sup> Roughly thirty five million metric tons of hazardous waste were being generated annually, with only ten per cent of that waste being disposed of in a manner considered environmentally safe.<sup>28</sup>

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- 26 Eighty per cent of the offences were for illegal dumping and eighty-three per cent of these illegal dumpings were committed by the industries generating the waste. See for details Japan Environment Agency, Quality of the Environment in Japan (1985), p.275; also n.4, p.949.
- 27 Judy A. Johnson, "Hazardous Waste Disposal: Is There Still a Role for Common Law"? Tulsa Law Journal, vol.18, no.3 (1983), p.448.
- 28 Ibid. Of the 264 million metric tons of waste regulated in 1981, most came from the chemical and petroleum industries. For details see Boraiko, A.A., "Storing up Trouble", National Geographic, vol.167, no.3 (1985), p.325.

In an effort to combat this problem and its harsh effects congress began enacting environmental protection statutes in the late 1960s. The first legislation in this direction came in the year 1969, with the passing of the National Environmental Policy Act and was followed by legislations like the Federal Water Pollution Control Act (FWPCA),<sup>29</sup> the Comprehensive Environmental Response, Compensation and Liability Act of 1980<sup>30</sup> (CERCLA), the Refuse Act,<sup>31</sup> the Outer Continental Shelf Lands Act,<sup>32</sup> the Trans Alaska Pipeline Authorization Act,<sup>33</sup> the Deep Water Port Act, 1974,<sup>34</sup> the Resource Conservation and Recovery Act, 1976,<sup>35</sup> Toxic Substances Control Act,<sup>36</sup> Hazardous Waste Materials Transportation Act.<sup>37</sup>

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29 Federal Water Pollution Control Act or Clean Water Act, 33, U.S.C. 1215-1376 (1982).

30 The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, sometimes called the Super Fund Act), 42 U.S.C., 9601-9615, 9631-9633, 9641, 9651, 9657 (1982).

31 33 U.S.C. 40 7 (1987).

32 43 U.S.C. 1331, 1334, 1337, 1340, 1343, 1356, 1801-1802, 1811-1824, 1841-1847, 1861-1866 (1982).

33 43 U.S.C. 1651-1655 (1982).

34 33 U.S.C., 1501-1524 (1982).

35 42 U.S.C., 6901-87 (1976 & Supp. V. 1981).

36 15 U.S.C., 2601-29 (1982).

37 49 U.S.C., 1801-12 (1976 & Supp. V. 1981).

Nearly all the federal environmental statutes share one important feature i.e., the citizen suit provision. Under this provision private parties can enforce the statute against a pollutor when the government fails to act. Moreover, under this provision any citizen of U.S. may commence a suit on his own behalf against any person who is in violation of the act, including the United States or any governmental entity, to the extent sovereign immunity is waived.<sup>38</sup>

The present study will concentrate on the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act

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38 42 U.S.C., Sec. 6972 (1976); 40 C.F.R. 254 (1980).  
The section reads as follows:

...any person may commence a civil action on his own behalf

"(1) against any person (including (a) the United States, and (b) any other governmental instrumentality and agency, to the extent permitted by the eleventh amendment to the constitution) who is alleged to be in violation of any permit, standard, regulation, condition, requirement, or order which has become effective pursuant to this Act; or

(2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this Act which is not discretionary with the Administrator."

(CERCELA), since they are the major legislations dealing with hazardous wastes.

#### I. The Resource Conservation and Recovery Act

The RCRA is the federal scheme for regulating hazardous waste. As per the definition,<sup>39</sup> hazardous wastes are those solid wastes or a combination of solid wastes that may pose a present or potential hazard to human health when improperly treated. The RCRA has detailed provisions for the regulation of present and future hazardous waste disposal to avoid further contamination of the environment. The legislation ensures "cradle to grave" management of hazardous waste, i.e., from its generation to its proper disposal.

RCRA defines "hazardous waste generation" as "the act or process of producing hazardous waste".<sup>40</sup> According to the accompanying regulations a "generator is any person, whose act or process produces hazardous waste identified or listed (by the regulation) as hazardous or whose act first causes hazardous waste to become subject to regulation".

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39 See n.3 of Chapter I. The RCRA was enacted in 1976 and amended in 1978 and 1980. It is codified in Title 42 of the United States Code, beginning at Section 6901.

40 42 U.S.C. 6903 (6) (1982). The legislative history of the bill indicates that the primary concern of the authors was the prevention of future harm rather than compensation for past victims. See Catherine S. Knowles, "Who is Responsible? An Analysis of Hazardous Waste Liability", Hamline Journal of Public Law, vol.6, no.1, (1985), p.4.



The RCRA lays down the following legal obligations on generators of hazardous waste: (i) to identify and record the amount of hazardous waste they generated;<sup>41</sup> (ii) label any containers used to transport, store, or dispose of hazardous waste;<sup>42</sup> (iii) furnish information on the chemical composition of the hazardous waste to persons transporting, treating, storing or disposing of the waste;<sup>43</sup> (iv) use a manifest system to track the hazardous waste until it reaches the designed TSD facility;<sup>44</sup> and (v) submit periodic reports to the EPA administrator.<sup>45</sup> Generators can not treat, store, or dispose of hazardous waste without an identification number assigned to them by the EPA.<sup>46</sup> Further, generators can not accumulate and store hazardous waste for more than ninety days without obtaining a storage permit. A generator in order to do so is subjected to the exceedingly complex regulations governing "owners and operators" of TSD facilities.<sup>47</sup>

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41 42 U.S.C., 6922 (1).

42 42 U.S.C., 6922 (2).

43 42 U.S.C., 6922 (4).

44 42 U.S.C., 6922 (5).

45 42 U.S.C., 6922 (6).

46 42 U.S.C., 6922 (6) (A) and (B).

47 Susan M. King, "Lenders Liability for Clean up Costs", Environmental Law (Portland), vol.18, no.2 (1988), pp.245-246.

Under Section 3003 of the RCRA the Administrator of the EPA, after consultation with the Secretary of Transportation was permitted to promulgate regulations establishing standards applicable to transportation of hazardous waste.<sup>48</sup> A transporter of hazardous waste is defined as "any person engaged in the offsite transportation of hazardous waste by air, rail, highway or water."<sup>49</sup> The transporters, like generators must obtain EPA identification numbers.<sup>50</sup> A transporter who stores hazardous waste for more than ten days must obtain a storage permit.<sup>51</sup> Transporters must also abide by the extensive notice and reporting requirements in the event of a hazardous waste discharge during transportation.

The RCRA applies even to owners and operators of TSD facilities. Under the amended 1984 RCRA regulations the owners and operators of TSD facilities must (i) maintain records of all hazardous waste treated, stored or disposed;<sup>52</sup>

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48 42 U.S.C., 6923, Section 3003(a). For comments see Alan L. Roberts, "Transportation Regulations of Hazardous Waste; U.S.A. and International Developments", in John P. Lehman, ed., Hazardous Waste Disposal (1983), p.71.

49 40 C.F.R. 260, 10 (1987) (definition of transportation).

50 40 C.F.R. 263, 12 (1987).

51 40 C.F.R. 264, 265, 270 (1987).

52 42 U.S.C. Sec. 3004 (1), 6924 (1).

(ii) reporting, monitoring, inspecting and complying with manifest system;<sup>53</sup> (iii) treating, storing and disposing of hazardous waste pursuant to methods, techniques and practices satisfactory to the EPA;<sup>54</sup> locating, designing, and constructing TSD facilities;<sup>55</sup> (v) maintaining contingency plans for effective action to minimize unanticipated damage from hazardous waste;<sup>56</sup> (vi) qualifying for ownership operation, personal training, security, and financial responsibility;<sup>57</sup> and (vii) complying with all permit requirements.<sup>58</sup>

The above "minimum national standards" are actually a comprehensive scheme aimed at controlling all phases of hazardous waste management. The other important feature as said earlier, is that the RCRA provides that a citizen may

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53 42 U.S.C. 6924 (2). Transporters of hazardous waste must comply with the manifest system by refusing to accept hazardous waste unless it is accompanied by a manifest, by providing copies of the manifest to all appropriate persons, and by retaining copies of the manifest for three years. The manifest itself is a form used to identify quantity, composition, origin, routing and destination of hazardous waste. It must be prepared by the generator before any waste is transported. The generator then has the responsibility of ensuring that the wastes are properly transported and sent to facilities equipped to handle the waste. Section 6903 (12) (1976). For comments see Jane L. Wipf, "In Search of Liability for Hazardous Waste Dumping", South Dakota Law Review, vol.29, no.3, (1984), p.477.

54 42 U.S.C. 6924 (3).

55 42 U.S.C. 6924 (4).

56 42 U.S.C. 6924 (5).

57 42 U.S.C. 6924 (6).

58 42 U.S.C. 6924 (7).

bring a law suit to enforce the regulations and orders that are issued under the RCRA.<sup>59</sup> Furthermore, the Administrator of the Environmental Protection Agency may bring suit under section 7003 of RCRA in federal district court to obtain injunctive relief against any person handling or disposing of waste in a way that "may present an imminent and substantial endangerment to health or the environment."<sup>60</sup> The provision applies to "any person contributing to...(the) handling, storage, treatment, transportation or disposal" of waste. The power of the government under this section is so vast that it need not show that the EPA has identified a waste as "hazardous". Without doing that EPA can bring an action under section 7003 whenever a waste poses an imminent health or environmental hazard. In addition to seeking judicial relief, EPA may issue such administrative orders "as may be necessary to protect public health and the environment".

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59 But before filing suit, a citizen must serve notice on the agencies responsible for enforcing the RCRA thus giving them first chance to remedy the violation.

60 The Administrator of the EPA may bring suit on behalf of the United States in the appropriate district court to immediately restrain an imminent and substantial hazardous waste endangerment to health or the environment, or to take other action that may be necessary. 42 U.S.C.A. 6973 (a) (West Supp. 1981).

Wilful violations of such an order may result in a judicially imposed fine of \$5,000 for each day of violation.<sup>61</sup> Till date many cases have been filed by the Justice Department under section 7003 of RCRA.

In United States v. Midwest Solvent Recovery,<sup>62</sup> the court assessed the situations at two hazardous waste disposal sites and concluded that they presented an imminent and substantial endangerment under section 7003. The court found that one of the two sites contained over 14,000 fifty-five gallon drums containing various chemical wastes "with dangerously low flash points". Large amounts of these wastes had permeated the top soil at the site which consequently was contaminated with "inordinately high amounts of chromium, arsenic, cyanide, lead and other poisonous materials." At the same site there was an underground tank containing approximately 30,000 gallons of chemical wastes, including cyanides, arsenic, cadmium, chromium, and lead compounds; thousands of drums of chemical wastes were also present. A drainage ditch from the second site led to a nearby river which had become

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61 42 U.S.C.A. 6973 (b).

62 484F. Supp.138, 142 (N.D., Ind., 1980). Also quoted by Richard de C. Hinds, "Liability under Federal Law for Hazardous Waste Injuries", Harvard Environmental Law Review, vol.6, no.1 (1982), p.17.

contaminated with arsenic and cadmium.<sup>63</sup>

In United States v. Vertaic Chemical<sup>64</sup> the court found that an imminent hazard under both section 7003 of RCRA and section 504 of the Clean Water Act was created by the presence of dioxin in an equalization pond, a cooling pond, and the soil of a herbicide manufacturer's property, and in the sediment of a nearby river and sewage treatment plant.<sup>65</sup>

In United States v. Hardage,<sup>66</sup> the court held that allegations that the defendant was allowing dangerous chemicals to escape and that the discharges posed a direct, if not immediate, threat to human health and the environment were sufficient to state a cause of action under section 7003. The court stated:

The phrase "imminent and substantial endangerment" should be taken to mean that sort of emergency situation in which application of the general provisions of the Act

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63 Judy A. Johnson, "Hazardous Waste Disposal: Is There Still a Role for Common Law"? Tulsa Law Journal, vol.18, no.3 (1983), p.449.

64 489 F. Supp. 870 (ed. Ark. 1980).

65 Richard de C. Hinds, "Liability under Federal Law for Hazardous Waste Injuries", Harvard Environment Law Review, vol.6, no.1 (1982), p.17.

66 No.80-1031-W (W.D. Okla, December 2, 1980).

would be too time-consuming to effectively ward off the threatened harm to health or environment...However,... the imminence of a hazard does not depend on the proximity of the final effect but may be proven by the setting in motion of a chain of events which could cause serious injury.<sup>67</sup>

With all this none of these provisions delineate any public right to seek civil damages or other relief from violators.<sup>68</sup> But then, the citizen suit provision in the RCRA specifically states that the right to enforce the Act does not impair existing statutory and common law rights.<sup>69</sup> The broad language of this section, observes Stanley Edward Tracey, "evinces an unambiguous Congressional intent to leave the area of hazardous waste management free of preemption."<sup>70</sup> Citizens as noted above, therefore, may

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67 Richard de C. Hinds, n.65, p.18.

68 Stanley Edward Tracey, "Hazardous Wastes and Strict Liability: A Case for Holding the Procedures of Hazardous Wastes Responsible for Their Actions", North Dakota Law Review, vol.59, no.4 (1983), p.613.

69 42 U.S.C. 6972 (f) of RCRA, preserves in the citizenry the common law right to seek enforcement of any hazardous waste requirement or any other relief deemed necessary. See Jeff Belfiglio, "Hazardous Waste: Preserving the Nuisance Remedy", Stanford Law Review, vol.33, no.4 (1981), p.678.

70 Stanley Edward Tracey, n.68, p.614.

bring suit against any violator and demand appropriate relief. Thus under the Common Law basis, by extending the doctrine of Rylands v. Fletcher,<sup>71</sup> a case may be made for imposing strict liability<sup>72</sup> on the entrepreneur who brings hazardous wastes on to his own land. Basing this principle the court in Cities Service Company v. State,<sup>73</sup> a mining company, was held strictly liable when a phosphate slime settling pond broke and one million gallons of slime escaped.<sup>74</sup>

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71 In Rylands v. Fletcher, the defendants constructed a reservoir on their own land to collect water. This particular land was located in coal mining country and the new reservoir was built above the shaft of an abandoned coalmine. When the reservoir was partially filled with water, the shaft gave way and water broke into the abandoned mine. The water flowed into the plaintiff's mine and caused damage. (159 Eng.Rep. 737 (Ex.1865) rev'd ILR. 265 (Ex.ch.1866) aff'd, 31 LR - E&I APP 330, 332 (H.L. 1868)). The court of Exchequer rendered judgement for the defendants but the court of Exchequer chamber subsequently reversed the decision. Lord Cairns acknowledged the controlling rule of law stated by Mr. Justice Blackburn in the court of Exchequer Chamber, that a person who brings on to his own land anything likely to do mischief if it escapes, does so at his own peril. See W. Prosser, Law of Torts (4th ed., 1971), pp.505-06.

72 "Strict Liability...means liability that is imposed on an actor apart from either (1) an intent to interfere with a legally protected interest without a legal justification for doing so, or (2) a breach of a duty to exercise reasonable care, i.e., actionable negligence." (W. Prosser & Professor Keeton on the Law of Torts (5th ed., 1984), Section 75, p.534.

73 312 So. 2d 799 (Fla. Dist. ct. App.1975).

74 Ibid., p.800.



On the same analogy the doctrine of strict liability can be applied not only to generators and owner/operators of hazardous waste facilities but also to hazardous waste transporters. In Seigler v. Khulman,<sup>75</sup> the Washington Supreme Court found a gasoline hauler strictly liable when gasoline spilled on the highway, ignited and burned another driver to death. The salient factors in this finding included the highly ~~in~~ flammable, volatile, explosive character of the substance, and the great quantity and carriage at high speed in traffic. Each factor served to increase geometrically the risks involved. The court found the risks to third persons during transit were nearly incalculable.<sup>76</sup>

RCRA Penalties for Noncompliance: RCRA provides for civil penalties of upto \$25,000 a day for each day violation or an imprisonment not exceeding one year or both for non-compliance with its regulations.<sup>77</sup> There are also criminal sanctions and fines upto two years in jail and \$50,000 for intentional violations.<sup>78</sup> There are additional criminal sanctions and fines upto fifteen years in prison \$250,000 or both for intentional violations by a person

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75 81 Wash. 2d 448, 502P. 2d 1181 (1972), Cert denied, 411 U.S. 983 (1973).

76 For an elaborate account see, Jane L. Wipf, "In Search of Liability For Hazardous Waste Dumping", South Dakota Law Review, vol.29, no.3 (1984), p.487.

77 42 U.S.C. 6928 (a)(3), (g) 1982 & Supp.1985.

78 42 U.S.C. 6928 (d) (1982). Under RCRA criminal liability for one who:

(1) knowingly transports any hazardous waste identified or listed under the Hazardous Waste  
.../-

who knows such violations may place another person in imminent danger of death or serious bodily harm. For corporations, fines can be as much as \$1,000,000.<sup>79</sup>

.../-

Programme to a facility which does not have a permit;

- (2) Knowingly treats, stores or disposes of any hazardous wastes identified or listed under the Hazardous Waste Programme either:
  - (a) Without having obtained a permit; or
  - (b) In knowing violation of any material condition or condition of such permit;
- (3) Knowingly makes any false material statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained, or used for purposes of compliance with the hazardous waste programme; or
- (4) Knowingly generates, stores, treats transports disposes of, or otherwise handles any hazardous wastes (whether such activity took place before or takes place after the date of enactment of this paragraph - October 21, 1981) and who knowingly destroys, alters or **conceals** any record required to be maintained under regulations promulgated by EPA.

The criminal penalty for a violation of this section is a fine not more than \$25,000 (\$50,000 in case of a violation of paragraphs 1 or 2 noted above) for each day of violation, or imprisonment not to exceed one year (two years in the case of a violation of paragraph 1 or 2 noted above) or both. The second or subsequent conviction exposes the person to a fine of not more than \$50,000 per day or imprisonment for not more than two years or both.

79 42 U.S.C. 6928 (e) (1982 & Supp.III, 1985). The crime of "knowing endangerment" is a new crime added by Congress on October 21, 1980, as part of the Solid Waste Disposal Act Amendments (Pub. L. No. 96-482, 94 Stat 2339 (1980). Under 6928 (e)

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11. The Comprehensive Environmental Response Compensation and Liability Act<sup>80</sup> (CERCLA):

On 11 December 1980, Congress enacted the CERCLA.<sup>81</sup>

It represents Congress attempt to impose liability for damages resulting from past disposal of hazardous wastes.<sup>82</sup>

.../-

(Supp. 1981) - A person who performs certain acts and knows that by performing such actions the person is placing another in danger of death or serious bodily injury and whose conduct manifests inexcusable neglect or an extreme indifference for human life may be subject to fines of upto \$250,000 or imprisonment for not more than two years (disregard for human life) or five years (extreme indifference for human life), or both. In addition, a defendant that is an organisation may be subject to a fine of upto \$1,000,000 upon conviction. Also there are special rules for the purpose of determining whether a person's state of mind is knowing. See Sec.6928 (f) (Supp. 1981).

80 Superfund or CERCLA was enacted in 1980. It is also codified in Title 42 of the United States code, beginning at Section 6901.

81 CERCLA resulted from three years of work on a toxic waste bill, and eighteen months of debate over the Superfund. The committee reports suggest that Congress intended CERCLA to fill gaps left by RCRA, particularly with respect to inactive, abandoned, or unauthorised hazardous waste sites. Further its provisions apply to hazardous substances and not just hazardous wastes as defined under RCRA.

82 Unlike RCRA, CERCLA "focuses principally on liability for historic waste management activities...It is considered a retroactively focused statute. For details see Catherine S. Knowles, "Who is Responsible? An Analysis of Hazardous Waste Liability", Hamline Journal of Public Law, vol.6, no.1 (1985), pp.4-6.

In theory, CERCLA "was designed" to bring to order to the array of partly redundant, partly inadequate federal hazardous substances clean-up compensation laws. See David A. Bagwell, "Hazardous and Noxious Substances", Tulane Law Review, vol.62, no.2 & 3, (1988), pp.444-45.

CERCLA imposes liability on owners, operators, generators, disposers and transporters of hazardous waste for "clean up costs and damages to natural resources", as a result of seepage, spills, and other forms of releases. This is a retroactive statute and thus applies to damages that occurred in the past, "regardless of whether any problems were foreseeable, the company acted in good faith, or state-of-the-art waste management practices were used at the time materials were disposed of."<sup>83</sup>

CERCLA establishes procedures for cleaning up inactive or abandoned hazardous waste sites, provides funding for clean ups, and authorises the EPA to mandate and undertake clean ups. The CERCLA creates two trust funds. One fund, commonly known as Superfund, pays for clean up costs and damages to natural resources associated with abandoned and some operating hazardous waste sites. A second fund, exclusively covers licensed sites after closure and safety certification by the EPA. This latter fund, the post-closure Liability Trust Fund finances cleaning up waste releases and, perhaps as important, may

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83 Catherine S. Knowles, "Who is Responsible? An Analysis of Hazardous Waste Liability", Hamline Journal of Public Law, vol.6, no.1, (1985), p.5.

compensate persons injured by such releases.<sup>84</sup> Thus by creating these funds Congress sought to provide for a comprehensive compensation plan to insure against damages caused by hazardous waste facilities both during operation and after closure.<sup>85</sup> Congress originally appropriated \$1.6 billion fund for the period from 1981 to 85. Realising, however, that the amount was not enough to cover the cost of cleaning up all identified sites, in 1986, Congress enacted the Superfund Amendments<sup>86</sup> and Reauthorisation Act (SARA) which, among its many other changes<sup>87</sup> to CERCLA, increased the Superfund to \$8.5 billion.<sup>88</sup>

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84 United States Statutes at Large, vol.94, Part III (Washington, 1980), pp.2801-05.

For comments see Alfred R. Light, "The Long Tail of Liability: Hazardous Waste Disposal Insurance and the Superfund Acts Postclosure Liability Trust Fund", Virginia Journal of Natural Resources Law, vol.2, no.2 (1982), p.180.

85 Ibid.

86 Amendments to CERCLA, signed by President Reagan on 17 October 1986.

87 After the 1986 amendments, CERCLA imposes liability on the owner and operator of a vessel from which there is a release, or threatened release of hazardous substance. See 42 U.S.C.A. 9607 (a) (1).

88 Susan M. King, "Lenders Liability For Clean Up Costs", Environmental Law, vol.18, no.2 (1988), p.255.

The legislation authorises the EPA to proceed with clean up essentially one of two ways. First, the EPA itself may respond with a clean up when hazardous waste is released, or when there is a potential for release which threatens health or the environment.<sup>89</sup> Thereafter, the EPA can sue potentially responsible parties (PRPs) for reimbursement of the governments expenditure for clean up. Second, the EPA may request a district court to issue an order for injunctive relief against responsible parties if there is evidence of imminent and substantial danger to the public health or welfare or to the environment.<sup>90</sup> In addition, the EPA may also issue whatever other orders against responsible parties it deems necessary to protect the public and the environment. Even in this case, the guilty will be held responsible for environmental clean up costs.

Under CERCLA, there are four classes of PRPs who, regardless of fault and subject only to certain limited defences, can be made liable for cleanup and damages caused

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89 42 U.S.C.A. 9604 (a) (1), B (West Supp. 1987).

90 42 U.S.C.A. 9606 (a) (1982).

by the release<sup>91</sup> of hazardous material.<sup>92</sup> They are -

- (1) Current owners or operators of a vessel or facility;
- (2) Owners or operators of facilities at the time the hazardous substances were discarded;
- (3) Persons who arranged by contract, agreement or otherwise for disposal, treatment, or transport for disposal or treatment of their hazardous substances by others; and
- (4) Persons who accept or accepted hazardous substances for transport to disposal or treatment facilities of their selection.

Liability and Costs: The CERCLA covers liability for natural resource damages.<sup>93</sup> Liability under the above provisions is strict, retroactive and is also joint and several among the responsible parties.

Penalties: CERCLA under the new section 109(a) establishes a two-tiered administrative civil penalty system. The EPA may impose these penalties on any one who

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91 "release" is defined to include any "spilling, leakage, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment."

92 42 U.S.C.A. 9607 (a) (West Supp. 1987).

93 The term "natural resources" includes land, fish, wild life, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States...any state or local government, (or) any foreign government. (42 U.S.C.A. 9601 (16) (West Supp.1987) - For details see David A. Bagwell, "Hazardous and Noxious Substances", Tulane Law Review, vol.62, no.2 & 3 (1988), pp.433-34.

(i) fails to comply with the reporting requirements;<sup>94</sup>  
(ii) destroys records; (iii) violates financial responsibility agreements;<sup>95</sup> (iv) violates orders relating to settlement agreements;<sup>96</sup> and (v) violates Administrative orders, consent decrees or agreements.<sup>97</sup> Fines for this kind of violation of Administrative rules can be up to \$25,000 per violation. If the violation continues under section 109(b) the fines can be up to \$25,000 per day till the violation continues.

Defences: The legislation exempts from liability persons who can establish that actual or threatened environmental harm and resulting damages were caused by:

- (i) an act of God; or
- (ii) an act of war; or
- (iii) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly with the defendant..., if the defendant establishes that (a) he exercised due care with respect to the hazardous substance; and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or
- (iv) any combination of the foregoing paragraphs.<sup>98</sup>

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94 42 U.S.C.A. 9603.

95 42 U.S.C.A. 9608.

96 42 U.S.C.A. 9622.

97 42 U.S.C.A. 9620.

98 42 U.S.C.A. 9607 (b) (1982).



Under this clause several interesting cases have been decided by courts. In United States v. Argent Corp.,<sup>99</sup> the land owner who leased his property to the operator of a silver recovery business was found liable under CERCLA for releases of sodium cyanide at the facility. Denying the defendants motion for summary judgement, the court found that the owner of land who leases it to a facility operator and who has no further connection to the facility whatsoever is nonetheless an owner within the meaning of section 107 (a) (2).<sup>100</sup>

In New York v. Shore Realty Corp.,<sup>101</sup> the court imposed liability on the current owner of a waste site even though the current owner had never "operated" the site and had not "owned" it during the time that hazardous waste was dumped there.<sup>102</sup> This judgement was given on the simple ground that the purchaser knew of the potential for a release from the site when he bought the property.<sup>103</sup>

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99 21 Environmental Reporter Cas (BNA), 1354 (D.N.M. 1984).

100 See J.B. Ruhl, "The Third Party Defence to Hazardous Waste Liability: Narrowing the Contractual Relationship Exception", South Texas Law Review, vol.29, no.2, (1988), p.301.

101 759 F. 2d 1032 (2d cir 1985).

102 Susan M. King, n.88, p.271.

103 J.B. Ruhl, n.100, pp.303-04.

United States V. Maryland Bank & Trust Co.,<sup>104</sup> another interesting case, wherein the court has to decide and did decide the status of a mortgagee who foreclosed on contaminated property. The facts of the case were, in 1982, Maryland Bank and Trust (MBT) foreclosed a \$335,000 mortgage on a farm. At the sheriff's sale MBT bid \$381,500 and took title to the farm. Some time thereafter, the EPA notified MBT of the presence of hazardous waste on the property and instructed them to perform a clean up. MBT refused, so the EPA proceeded with its own clean up. It removed 2,000 tons of contaminated soil and 237 drums of contaminated waste at a cost of \$552,000. The EPA then sued MBT for reimbursement.

The issue central to the motions was whether MBT was an "owner or operator" under CERCLA, and thus liable as such under section 107 (a) (1).<sup>105</sup>

The court, while examining this, referred to the basic principles of the law of mortgage and said that it was only during the life of the mortgage that the mortgagee held indicia of ownership primarily to protect its security interest in land. Basing this, the court held that when MBT foreclosed on its mortgage prior to EPA's clean up,

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104 632 F Supp. 573 (D. Md. 1986).

105 For a detailed account see Susan M. King, n.88, p.270.

its security interest terminated and ripened into full title and MBT became owner of the property. More than any thing MBT had foreclosed and purchased the property "not to protect its security interest but to protect its investment."<sup>106</sup>

These are a few of the many cases decided by the American courts under CERCLA.

3. Hazardous Material Transportation Act: The American Congress enacted the Hazardous Material Transportation Act (HMTA)<sup>107</sup> to protect the public from the inherent risks to life and property when hazardous materials are transported. The office of Hazardous Materials Regulation - an office created to regulate hazardous material transportation, headed by the Director of the Materials Transportation Bureau is responsible for the development and issuance of all proposed regulations and exemptions pertaining to the transportation of hazardous materials by air, highway, rail and water.<sup>108</sup> Moreover, under the provision of this law, the Secretary is directed to establish criteria for

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106 Ibid., p.271.

107 49 U.S.C. Sections 1801-12 (1976 Supp. V. 1981).

108 For an elaborate account see Allan L. Roberts, "Transportation Regulations of Hazardous Waste: U.S.A. and International Developments", in John P. Lehman, ed., Hazardous Waste Disposal (New York, 1983), pp.69-71.

the handling hazardous waste and establish a registration system<sup>109</sup> This should conform with the manifest system of the RCRA,<sup>110</sup> and hence a record of who shipped (generated) the waste materials, who carried them and who received the hazardous waste. Further specific requirements for labelling, marking, packaging and placarding must be met by the transporter. Finally, the transporter is responsible for clean-up of any hazardous waste spills occurring during transportation and must take any action required by the government to avoid hazard to human health or the environment.<sup>111</sup>

Prior to 1976, the regulation of solid and hazardous waste was primarily left to local regulation through municipal health and safety ordinances.<sup>112</sup> But then, at present the federal members are given the option of implementing the federal minimum standards relating to hazardous waste. In case a state fails to implement the programme and establish satisfactory regulations, then RCRA authorised the EPA administrator to implement such

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109 49 U.S.C. Sect 1805 (a), (b).

110 See n.53.

111 See Jane L. Wipf, n.76, p.478.

112 Arthur J. Harrington, "The Right to a Decent Burial: Hazardous Waste and its Regulation in Wisconsin", Marquette Law Review, vol.66, no.2 (1983), p.225.

a programme in that state.<sup>113</sup> However, in practice many states have enacted laws similar to CERCLA and RCRA<sup>114</sup> and many state laws contain standards and penalties more stringent than those found in RCRA or CERCLA.<sup>115</sup>

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113 Barbara Ann White, "Economising on the Sins of our Past: Cleaning up our Hazardous Wastes", Houston Law Review, vol.25, no.4 (1988), pp.903-04.

114 EPA has approved final authorisation to 43 states to operate RCRA hazardous waste programs, and 34 states enforce their own superfund program in tandem with federal law. See Susan M. King, n.88, p.279.

115 One outstanding example is New Jersey's Environmental clean up Responsibility Act (ECRA), which provides that property that is or has been used by industries bearing certain standard Industrial Codes must receive state environmental clearance prior to sale, transfer, or closure of the property. See no.88, pp.280-88.

II (b) REGIONAL WASTE MANAGEMENT MEASURES -  
THE CASE OF EEC, OECD AND OAU

The European Economic Community<sup>1</sup> responded positively to the world-wide environmental problems of the 1970s.<sup>2</sup> This was aimed at controlling pollution and achieving better management of the Community's natural resources. More than everything, the horrifying Seveso incident of 1976 made the Community members to realise the consequences of improper treatment of hazardous substances, which in turn paved the way for stricter environmental regulations.

On 10 July 1976, an explosion occurred in Meda - a small industrial town in northern Italy - at the Icmesa plant owned by Givaudan, a subsidiary of the Swiss-

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- 1 The Treaty of Rome which established the European Economic Community in 1957, was signed on 25 March 1957. The European Community embraces 12 European countries. They are Belgium, Denmark, Federal Republic of Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, The Netherlands, Portugal and the United Kingdom.
- 2 The Stockholm Conference, a 1972 United Nations conference on the environment held at the height of the world wide environmental movement, resulted in a strong statement of concern regarding global environmental quality and the obligations of nations, individually and collectively, to take action to preserve and protect the environment. See Report of the United Nations Conference on the Human Environment. UN Doc. A/CONF. 48/14 & Corr. 1 (1972), reprinted in International Legal Materials, vol.11 (1972), p.1416. The United Nations Conference on the Human Environment, on June 16, 1972 adopted a Declaration to respect the above obligations. This Declaration consists a preamble and 26 principles.

controlled Hoffman La Roche Chemical combine. As a result of the explosion at this chemical plant a thick whitish cloud of trichlorophenol gas with a pungent, medicinal odour containing the deadly dioxin was released into the atmosphere surrounding the plant and contaminated 1800 hectares of countryside and caused serious skin diseases amongst the local population.<sup>3</sup> A medical survey of workers at the plant also indicated that many had suffered from nausea and vomiting, burns, blisters, intoxication and vertigo. The most severe biological impact was the loss of produce and domestic animals raised in the contaminated zones, which either died or destroyed.<sup>4</sup>

By the time the decontamination efforts had been largely completed, more than two tons of chemical waste containing dioxine had been removed from the 1800 hectares of land which had been contaminated by the Icmesa plant. The Icmesa executives were brought to trial and were charged with negligence leading to disaster, causing contamination of a vast inhabited area that had to be

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3 Andrew Chetley, Cleared for Export (Coalition Against Dangerous Exports and others, 1985), p.42.

4 Ved P. Nanda and Bruce C. Bailey, "Export of Hazardous Waste and Hazardous Technology: Challenge for International Environmental Law", Denver Journal of International Law and Policy, vol.17, no.1 (1988), p.163.

evacuated, and failure to have adequate safety systems.<sup>5</sup>

This and several other incidents of improper disposal of hazardous wastes<sup>6</sup> had important consequences. First, France itself adopted more stringent controls on hazardous waste shipments. An equally, if not more important was the adoption of a Directive by the European Council on Toxic and Dangerous Waste, in 1978<sup>7</sup> (the EC Directive).

The Directive on Toxic and Dangerous Waste defines, toxic and dangerous waste, "as any waste containing or contaminated by the substances or materials...(listed in table 1) ...of such a nature, in such quantities or in such concentrations as to constitute a risk to health or the environment."<sup>8</sup>

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- 5 Ibid. The plant was supposedly making ingredients for perfumes and flavourings. However, without notifying the Italian authorities, production of trichlorophenol had been started in the early 1970s. In the investigations it was found that sensible safety precautions had not been followed at the plant.
- 6 In the European Community alone, 150 million tonnes of industrial wastes are produced annually. Of these, 40 million tonnes are chemical wastes, half of which are known to be toxic. See n.51 and 52 of Chapter I. Out of which about 10 to 15 per cent, or 2 to 4.5 million metric tons, is disposed of in countries other than the country in which it was generated. See Mary Elizabeth Kelly, "International Regulation of Transfrontier Hazardous Waste Shipments: A New EEC Environmental Directive", Texas International Law Journal, vol.21, no.1 (1985-86), p.96.
- 7 On 20 March 1978, the European Council adopted this Directive. Directive No.78/319, EEC of 20 March 1978.
- 8 Article 1(b) of the Directive.



The EC Directive lays down common rules and provisions in respect of the major problems of the production and disposal of toxic and dangerous waste. An annex lists 27 most important groups of toxic and dangerous substances, which are considered to be dangerous. A provision of the EC Directive declares the prohibition of uncontrolled discharge, uncontrolled transport and uncontrolled treatment and dumping of toxic and dangerous waste. Transporters of wastes are to follow systematic rules of appropriate labelling, indicating the type, composition and quantity of waste. Furthermore, the Directive provides rules for the notification of sites at which toxic and dangerous waste is or has been dumped and identification of such waste.

The other important provisions<sup>9</sup> of the EC Directive are:

- (a) the requirement of a license for plants, installations and undertaking which store, treat and/or dump toxic and dangerous waste;
- (b) the requirement that the owners of toxic and dangerous waste who are not authorised to treat or dump such waste must hand over the waste to authorised plants, installations or undertakings for harmless disposal;

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9 For details see Benno W.K. Risch, "The Activities of the European Community on Hazardous Waste", in John P. Lehman ed., Hazardous Waste Disposal (New York, 1983), pp. 123-6.

- (c) the requirement that the relevant authorities in each country must draft and develop plans for the disposal of toxic and dangerous waste; these plans must provide for the necessary special treatment plants and suitable dumping sites; they must also be published;
- (d) the requirement that all plants, installations or undertakings which produce, own and/or dispose of toxic and dangerous waste must keep a special record of the quantity, type, physical and chemical characteristics, origin, method of disposal, dumping site and arrival and departure dates of such wastes;
- (e) the requirement that where toxic and dangerous waste is transported in the course of disposal it must be accompanied by a special identification form until its final harmless disposal; these forms must be preserved;
- (f) the requirement that every three years the Member States must draw up a report on the disposal of toxic and dangerous waste in their respective countries and forward it to the Commission.

On receiving the report the Commission circulates it with the other Member States and reports to the Council and European Parliament every three years on the application of the Directive.

The Directive has been incorporated into the national laws of many member states and has been in force since 1980.<sup>10</sup>

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<sup>10</sup> Ibid., p.125.

In addition, the Council of the European Communities in 1982 adopted another Directive known as the Council Directive on Major Accident Hazards of Certain Industrial Activities.<sup>11</sup> The goals of this directive were (1) to prevent major accidents caused by industrial activities, and (2) to limit the effects of such accidents if they did occur. This directive further provided for a system of alarm and notification procedures when incidents involving dangerous chemicals occurred and addressed process installations and included storage and transportation of chemicals within its definition of industrial activity.<sup>12</sup> The regulatory framework created under the Directive takes into account the nature and quantity of dangerous substances handled at a given plant and the type of activity conducted there.<sup>13</sup> One of the limitations of this directive is that the implementation of the mandatory provisions was by and large left to the discretion of each member state. As a result of this, as of June 1987, only six of the twelve Community members had fully implemented the directive.<sup>14</sup>

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11 Directive 82/501/EEC, 5, OJ, No.L.230, 1 (1982) as amended by Directive 87/1216 EEC, March 19, 1987. This Directive is popularly called Seveso Directive.

12 Article 1 of the Directive.

13 Article 3 of the Directive.

14 Ved P. Nanda and Bruce C. Bailey, n.4, p.185; also International Environment Rep. (BNA), 17 (January 14, 1987).

An important directive concerned with this study was adopted by the European Communities in 1984 (the Final Directive).<sup>15</sup> This directive reduces the risks posed by transfrontier shipments of hazardous waste and deals with shipments of hazardous waste into and out of the European Community. Prior to this action by the Council, the Member States<sup>16</sup> had dealt with transfrontier shipments of hazardous waste on the basis of ad hoc bilateral agreements.<sup>17</sup> But these agreements did not provide a satisfactory method of tracking and controlling transfrontier shipments of hazardous waste. To overcome these difficulties the 1984 directive provides for a compulsory notification and tracking system for hazardous waste shipments made (1) between Member States, (2) from any of the Member States to countries outside the Community (third states), and (3) from a country outside the community to a Member State.

The final Directive adopts the definition of hazardous waste found in the Directive on Toxic and Dangerous Waste.<sup>18</sup> Moreover, it is within the discretion of each

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15 Directive on the supervision and control within the European Community of the Transfrontier Shipment of Hazardous Waste, 27 O.J. Eur. Comm. (No.L 326) 31 (1984).

16 Of the European Community.

17 For example, the Federal Republic of Germany had agreed with the governments of Belgium, France and the Netherlands that the authorities in the latter three countries would certify that their country did not have sufficient capacity to dispose of the waste before Germany would consent to accept the shipments.

18 See n.8.

Member State to define specifically the "quantities" or "concentrations" of the listed substances that might pose health or environmental risks and there is no rule that such designations be uniform throughout the EEC.

#### Notification Provisions

Article 3(1) of the Final Directive requires a holder of waste that intends "to ship it or have it shipped from one Member State to another to have it routed through one or more Member States or to ship it to a Member State from a third state, (to) notify the competent authorities of the Member States concerned."<sup>19</sup> The authorities which must be notified include governmental authorities not only of the Member State to which the waste is to be shipped, but also of the Member State in which the waste originates and any Member State through which the waste shipment will pass.<sup>20</sup> When the waste is to be shipped outside of the Community, the holder of the waste is required to notify "the third state of destination and where applicable, the third state or states of transit and the competent authorities of the Member States concerned."<sup>21</sup>

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19 Final Directive Article 3(1).

20 Article 2 (1) (b).

21 Article 3 (4).

Notification is to be provided by means of a "uniform consignment note"<sup>22</sup>, and is divided into the following five parts: (1) notification information, (2) acknowledgement by Member States, (3) information on transport arrangements, (4) acknowledgement of receipt of the waste by the ultimate disposer, and (5) customs endorsement (for waste shipped outside of the Community).<sup>23</sup>

The Final Directive requires that the holder of the waste provide the Member States concerned with detailed information including inter alia, the identity of the procedures of the waste; provisions for routing;<sup>24</sup> provisions for insurance against "damage to third parties";<sup>25</sup> safety measures and compliance with Member States transport regulations; and the existence of a contractual arrangement with the consignee of the waste.<sup>26</sup> The consignee "should

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22 Article 3(2). The consignment note, is to be drawn by a Community level Technical Committee established under the Directive on Toxic and Dangerous Waste.

23 See Annex I.

24 Article 9 of the Final Directive allows Member States, after "consulting the commission", to designate border-crossing points for the shipment of waste "where necessary". The Member States, by imposing transport conditions on shipments, may begin to require that shipments follow only designated routes to their destination. The advantage of this approach, however, is that the routing of shipments away from crowded urban areas reduces the probability of accidents and of human injury resulting from accidents.

25 An interesting aspect of the Final Directives notification requirement is that the notification must identify provisions for "insurance against damage to third parties"

26 Article 3(3) of the Final Directive.

possess adequate technical capacity for the disposal of the waste...under conditions presenting no danger to human health and the environment".<sup>27</sup> If the waste is to be "stored, treated or deposited" within the community, the consignee of the waste must hold a permit issued in accordance with previous waste related directives.<sup>28</sup>

(b) Objections by Member States to Waste Shipments

Article 4(1) of the Final Directive provides that "transfrontier shipment of hazardous waste covered by the Directive may not be executed before the competent authority of the Member State...has acknowledged receipt of notification". The Member State of destination must forward to the holder of the waste an acknowledgement of receipt of notification or objections to the shipment within one month of receipt of notification.<sup>29</sup> The Member State also send a copy of the acknowledged consignment note to the ultimate disposer of the waste and to the competent authorities of the other Member States involved.<sup>30</sup> If the

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27 Ibid.

28 Article 9 of the Final Directive.

29 Article 4 (2) of the Final Directive.

30 Ibid.

holder receives an acknowledgement without objections, or an acknowledgement of satisfaction of objections,<sup>31</sup> "the holder of the Waste Must complete the note and send copies to the competent authorities of the Member States concerned and to third states before the shipment is carried out".<sup>32</sup> Within fifteen days following receipt of the waste, the consignee of the waste must forward a completed copy of the consignment note to the holder of the waste, to competent authorities of both Member States and third states concerned.<sup>33</sup>

Objections to the shipment may be made by the Member State for which the shipment is destined and by the Member State in which the waste is generated.<sup>34</sup> But objections must be "substantiated" on the basis of national environmental, safety, or health laws or regulations that are not inconsistent with the Directive or other community law.<sup>35</sup> If the holder satisfies objections made by a Member State of destination, then the Member State is obligated to forward an immediate acknowledgement that the shipment is approved.<sup>36</sup>

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31 Ibid., Article 4(4).

32 Ibid., Article 6(1).

33 Ibid., Article 6(4).

34 Ibid., Article 4(3), (6).

35 Ibid., Article 4(3).

36 Ibid., Article 4(4).



(c) Packaging and Labelling Requirements:

The Final Directive requires that transfrontier waste shipments be "properly packed".<sup>37</sup> The containers must be labeled with information on the nature, composition, and quantity of the waste, as well as the telephone numbers of persons who may be contacted for instructions or advice at all times during shipment. The shipment must also be accompanied by accident instructions.<sup>38</sup> Both the accident instructions and the labeling information must be in the "languages of the Member States concerned".<sup>39</sup>

(d) Requirement that Waste be Shifted to a Permitted Facility

The Final Directive sets up a complete "closed cycle" shipment tracking system<sup>40</sup> by combining the requirement that waste be sent to a permitted facility with the requirement that a completed copy of the consignment note be sent to appropriate governmental authorities when the shipment reaches its destination.<sup>41</sup> If this system is properly implemented

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37 Ibid., Article 8(1) (a).

38 Ibid., Article 8(1) (b) (c).

39 Ibid., Article 8(1)(d).

40 Compare the "closed-cycle" tracking system set up by the Final Directive with the more open-ended manifest system used in the United States.

41 Article 6(4) of the Final Directive.

Member States should be able to monitor transfrontier waste shipments closely to ensure that each shipment reached its permitted facility destination.<sup>42</sup>

(e) Liability Provisions

Article 11(1) of the Final Directive, dealing with liability provides that:

"Without prejudice to national provisions concerning civil liability, irrespective of the place in which the waste is disposed of, the producer of the waste shall take all necessary steps to dispose of or arrange for the disposal of the waste so as to protect the quality of the environment in accordance with (the Directive on Waste and the Directive on Toxic and Dangerous Waste) and with this Directive".<sup>43</sup>

Under Article 11(2) "Member States shall take all necessary steps to ensure that the obligations laid down in (Article 11(1) ) are carried out." The objectives of these two provisions observes, Mary Elizabeth Kelly, "is to force Member States to adopt legislation or regulations that would, at a minimum, require a producer of waste operating with in a Member State to provide an assurance that its waste is disposed of properly, regardless of the country in which it is ultimately deposited".<sup>44</sup>

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42 Mary Elizabeth Kelly, n.6, p.110.

43 Article 11(1) (emphasis added).

44 Mary Elizabeth Kelly, n.6, p.112.

Legal Basis: Most of the environmental directives are adopted by the European Community under Article 100,<sup>45</sup> and Article 235<sup>46</sup> of the Rome Treaty. Once a directive is passed by the Council, the Member States are bound to implement its provisions fully through national legislation or administrative action. In addition, at the Community level, it is the Commission's duty to examine the provisions of national laws, regulations, and administrative actions adopted by Member States, to ensure that the Community legislation is being implemented properly. The Member States must provide the Commission with the necessary information to perform this task.<sup>47</sup>

Further, Article 169 of the EEC Treaty provides:

"If the commission considers that a Member State has failed to fulfil any of its obligations under this Treaty, it shall give a reasoned opinion on the matter after requiring such state to submit its comments. If such state does not comply with the terms of such opinion within the period laid down by the Commission, the latter may refer the matter to the court of justice." 48

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- 45 Article 100 of the Rome Treaty, 1957 provides for harmonization (or approximation) of laws when disparities among the Member States "have a direct incidence on the establishment or functioning of the common market."
- 46 Article 235 provides that the Community may take actions that are "necessary to achieve, in the functioning of the Common Market, one of the aims of the community in cases where this Treaty has not provided for the requisite powers of action."
- 47 Mary Elizabeth Kelly, n.6, p.93.
- 48 Treaty of Rome Establishing the European Economic Community, March 25, 1957.

Actions may also be brought in the Court of Justice by another Member State.<sup>49</sup> "If the Court of Justice finds that a Member State has failed to fulfil any of its obligations", that state is bound to "take the measures required for the implementation of the judgement of the court"<sup>50</sup> obligations of Member States under council or Commission regulations, directives, and decisions may thus be implemented in spite of a state's resistance.<sup>51</sup>

In practice most of the Directives are implemented by Member States. In the Netherlands for example, 51 cases brought against companies which illegally dumped toxic wastes have now been decided.<sup>52</sup> In one of the leading cases a court in Zwolle found the director of Nosta chemie guilty of discharging chlorine direct into the municipal sewage system and thereby causing serious<sup>b</sup>soil<sup>A</sup> pollution. A fine of Nfl 400,000 was imposed, equivalent to the costs incurred in treating the contaminated site.<sup>53</sup>

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49 Ibid., Article 170.

50 Ibid., Article 171.

51 For an elaborate treatment on this issue see Mary Elizabeth Kelly, n.6, pp.92-94.

52 Environmental Policy and the Law, vol.18, no.1.2, 1989, p.19.

53 Ibid.

OECD<sup>54</sup> Action

The thrust of the OECD's work in regulating the export of hazardous substances has been in the area of information exchange. In 1977, the OECD Chemicals Group established a "complementary Information Exchange Procedure". In 1980, the OECD's Special Programme on the control of chemicals set up an Expert Group on Information Exchange Related to Export of Hazardous chemicals. In 1982, this Expert Group reported on the need for information on "banned or severely restricted chemicals".<sup>55</sup> The Group proposed a two-step notification process. The first step would be to alert the importing country to the export and to provide basic information on the chemical, including a summary of regulatory actions taken in the exporting country, the extent to which certain uses were restricted, the reasons for the restriction,

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- 54 Organisation for Economic Co-operation and Development. The membership of the OECD consists largely of the Western industrialised nations plus Japan, Australia and New Zealand. The OECD was established on 9 September 1961. The following States are members of OECD. Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Yugoslavia is a special member.
- 55 Karen A. Goldberg, "Efforts to Prevent Misuse of Pesticides Exported to Developing Countries: Progressing Beyond Regulation and Notification", Ecology Law Quarterly, vol.12, no.4 (1985), p.1040.

and how to obtain additional information. The second step would be to provide the additional information upon request. The Group provided guidelines for the implementation of this notification process, but essentially allowed each exporting and importing country to establish its own implementation procedures.

The other important decision and recommendation on transfrontier shipments of hazardous waste was adopted by the OECD Council in 1984.<sup>56</sup> The decision, which is binding upon member countries, requires that member countries "shall control the transfrontier movements of hazardous waste and, for this purpose shall ensure that the competent authorities of the countries are provided with adequate and timely information concerning such movements".<sup>57</sup> The general principles of the Council decision are (1) to ensure adequate management of hazardous waste within their own jurisdiction, including promoting development of appropriate disposal facilities and controlling the general, transportation, and disposal of this waste; (2) require that transportation

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56 Decision and Recommendation of the Council on Trans-frontier Movements of Hazardous Waste, OECD Document C (83), (13 February 1984), p.180. Also reprinted in International Legal Materials, vol.23 (1984), p.214.

57 OECD Action, Para 1, reprinted in ILM, vol.23 (1984), p.215.

and disposal entities be authorised; (3) take steps to ensure that entities involved in transfrontier shipments have the authorization required by the countries of origin, transit, and destination; (4) apply their laws on control of waste movements (labeling, packaging, and notification) as stringently to exports as to domestic shipments; and (5) "ensure that entities within their jurisdiction provide, directly or indirectly, the authorities of the exporting, importing and transit countries with adequate and timely information (with regard to) the origin, nature, composition, and quantities of waste...the conditions of carriage, the nature of environmental risks involved, the type of disposal and the identity of all entities concerned with the shipment".<sup>58</sup> The principles also state that a country can object to or prohibit shipments if the information provided is inadequate or if the shipment does not conform to its national legislation regarding waste shipments. Furthermore, countries should require that a waste generator "reassume responsibility for the proper management of its waste...if arrangement for safe disposal cannot be completed."<sup>59</sup>

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58 Ibid., para 5 (general principles) reprinted in ILM, vol.23 (1984), p.216.

59 Ibid., para 3 (c) (general principles) reprinted in ILM, vol.23 (1984), p.216.

The OECD Action defines "hazardous waste" as any waste "other than radioactive waste considered as hazardous or legally defined as hazardous in the country where it is situated or through or to which it is conveyed, because of the potential risk to man or the environment likely to result from an accident or from improper transport or disposal."<sup>60</sup> Thus, whether the waste is considered "hazardous" will depend upon how it is treated by the exporting, importing, and transit countries.<sup>61</sup> If this definition is compared with that of the definition given under the Final Directive,<sup>62</sup> the definition given under the directive is much narrower. The OECD had to adopt a broader definition because of its larger membership. But then, the OECD Action is consistent with the Final Directive in two important respects. First, both actions are based upon the theory that appropriate governmental authorities in the countries of final destination, transit, and origin should be notified before the shipment proceeds. Second, both recognise the rights of member countries to restrict or prohibit shipments of hazardous waste, provided that objections are made on the basis of valid national law. Further, the implementation procedure

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60 Ibid., p.217.

61 Mary Elizabeth Kelly, n.6, p.117.

62 See no.8.



for notification and objection under the EEC Final Directive are much more detailed."<sup>63</sup>

#### Defects in EEC Final Directive and OECD Action

Both the EEC Final Directive and OECD Action fail to address important issues like liability and insurance.<sup>64</sup> The OECD Action does state that the Member countries should impose obligations upon waste generators, but the action does not address the liability of generators for failure to meet these obligations.<sup>65</sup> If both the systems were to answer this aspect of the problem then it would have represented a significant step towards establishing an international liability system.

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63 For a comparative account of the EEC Final Directive and OECD Action see Mary Elizabeth Kelly, n.6, pp.115-119.

64 For details see Mary Elizabeth Kelly, n.6, pp.118-19.

65 The OECD Action States that countries should require that the generator of the waste: (a) take all practicable steps to ensure that the transport and disposal of its waste be undertaken in accordance with the laws and regulations applicable in the countries concerned (with the transfrontier shipment); (b) ...obtain assurances that all entities concerned with the transfrontier movement or the disposal of its waste have the necessary authorisations to perform their activities in accordance with the laws and regulations applicable in the countries concerned; (c) reassume responsibility for the proper management of its waste, including if necessary the re-importation of such waste, if arrangements for safe disposal cannot be completed. For details, ILM, vol.23 (1984), p.216.

In 1986, the OECD Council in its Decision<sup>66</sup> imposed obligations on its Members when they export hazardous wastes to non-Member States. As per the Decision, Member States shall (i) monitor and control exports of hazardous wastes to a final destination which is outside the OECD area; and to ensure that their competent authorities are empowered to prohibit such exports in appropriate instances; (ii) prohibit movements of hazardous wastes to a final destination in a non-Member State without the consent of that state and the prior notification to any transit states of the proposed movements; (iii) prohibit movements of hazardous wastes to a non-Member State unless the wastes are directed to an adequate disposal facility in that state and recommended for the implementation of this decision by Member States.<sup>67</sup> By another Decision the Council of OECD in 1988<sup>68</sup> called upon Member States to implement the decision, resolution and recommendation of the Council adopted in 1984,<sup>69</sup>

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66 OECD Council Decision - Recommendation on Exports of Hazardous Wastes Adopted by the Council on 5 June 1986. International Legal Materials, vol.25 (1986), p.1010.

67 International Legal Materials, vol.25 (1986), pp.1010-12.

68 OECD Council Decision on Transfrontier Movements of Hazardous Wastes adopted on 27 May 1988, at its 685 session. See International Legal Materials, vol.28, no.1 (1989), p.259.

69 The Decision and Recommendation of the Council of 1 February 1984, see n.56.

1985<sup>70</sup> and 1986.<sup>71</sup>

The Response from OAU

During the late 1970s and early 1980s incidents were documented which showed the movement of hazardous waste from the developed to the developing African continent for various reasons. According to one authority between 1986 and 1988, more than 3,656,000 tons of waste were shipped from developed countries to the third world.<sup>72</sup> Realising the apprehension, the African countries called for an end to this kind of "garbage imperialism"<sup>73</sup> and in a OAU Council Resolution,<sup>74</sup> (adopted in 1988) unequivocally declared the dumping of nuclear and industrial waste in Africa is a crime<sup>75</sup> against Africa and the African people,

- 70 Resolution of the Council of 20 June 1985 on International Cooperation concerning Transfrontier Movements of Hazardous Wastes, by which it has been decided to develop an international system for effective control of transfrontier movements of hazardous wastes.
- 71 Decision - Recommendation of the Council of 5 June 1986, on Export of Hazardous Wastes from the OECD.
- 72 Amrita Bazar Patrika (Calcutta), 25 November 1989.
- 73 Said by President of Kenya.
- 74 Organization of African Unity - Council of Ministers Resolution on Dumping of Nuclear and Industrial Waste in Africa, 23 May 1988.
- 75 See International Legal Materials, vol.28, no.2 (1989), pp.568-69.

and condemned all transnational corporations and enterprises involved in the introduction, in any form, of nuclear and industrial waste in Africa. The Resolution further demanded that such corporations and enterprises must clean up the areas which have been contaminated by them. More importantly, the resolution requested Members to put an end to all agreements which are concluded or are in the process of concluding for dumping nuclear and industrial wastes in their territories. Further, it called upon the heads of the OAU, IAEA, UNEP and others to assist African countries in establishing mechanisms to monitor and control the movement and disposal of waste in Africa.<sup>76</sup> Consequent to this resolution, Ivory Coast was the first to promulgate a law<sup>77</sup> on this subject. Article 1 of the Law on Toxic and Nuclear Waste adopted by it prohibited throughout its territory the buying, selling, importing, transiting, depositing and stocking of toxic and nuclear waste and noxious substances.<sup>78</sup> Anyone guilty of violating the Article is

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76 Ibid.

77 Cote D'Ivoire, Law on Toxic and Nuclear Waste promulgated on 7 July 1988.

78 For details see International Legal Materials, vol.28, no.2 (1989), p.391.

liable to be punished by imprisonment from 15 to <sup>20</sup> years  
and fine from 100 million to 500 million francs.<sup>79</sup> In  
the near future many more African countries are likely  
to adopt harsh legislations of this kind to prevent the  
illegal traffic in hazardous wastes.

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79 Article 2 of the Law on Toxic and Nuclear Waste  
of July 7, 1988.

## CHAPTER THREE

## CHAPTER III

### A. DUMPING OF HAZARDOUS WASTES AS AN INTERNATIONAL PHENOMENA

In recent years problems of waste disposal have become critical in all industrialised nations as these nations have been extremely active in the production of more and more newer chemicals with newer and difficult waste resulting therefrom. In most of these industrialised countries the safe disposal of waste was the required need of the hour. But then, without an adequate network of facilities and supporting infrastructure disposal can not be carried out safely. In addition, the stringent environmental regulations and the heavy expenses involved in the treatment process, in some cases, have given rise to malpractices.

Generally, eighty per cent of the waste produced goes from one developed country to another. But the remaining twenty per cent of hazardous waste generated in the industrialised countries moves from the North to the South and there is increasing evidence. Developing countries are increasingly becoming targets for projects of dubious nature. Most recently countries such as Guyana, Haiti, Panama, Venezuela, Benin, Congo, Djibouti, Guinea,

Guinea Bissau and Swaziland, just to mention a few cases known to UNEP<sup>1</sup> have been used for waste dumping. In some cases the industrialised states themselves directly have involved and, in many, industrialised countries entrepreneurs have indulged in activities of this kind. The patterns of waste dumping differed from case to case. The following few instances would illustrate the point.

(1) Without the knowledge of the military regime, about 4000 tons of highly toxic waste are reported to have been brought to Nigeria from Italy including substances containing the deadly dioxin. Later, reports confirmed the presence of radioactive substances there. As a result large tracts of land near the port of Koko in the Bendel state were poisoned. The port remained closed to all navigation and part of the population was evacuated. The Government of Nigeria arrested 15 persons involved in the transportation of the poisonous chemicals, and lodged a protest with the Italian Ambassador to Lagos. The Nigerian

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1 "Industry and Environment", (Journal of UNEP), vol.11, no.1, January-March 1988, pp.1-2; also International Digest of Health Legislation, vol.40, no.2 (1989), p.493.



Ambassador to Rome was recalled.<sup>2</sup>

(2) In the other interesting case fifteen thousand tons of ashes from the urban waste were brought by a Transnational Corporation (TNC) from Philadelphia to the Guinean island of Kassa situated only 7 kilometres away from the country's capital, Conakry. The TNC was a Norwegian - Guinean joint venture iron products company, Aluco Guinea.<sup>3</sup> Trees and vegetation on the island began dying, killed by dioxin and the mix of heavy metals. And again, the Government of Guinea was not informed about the burial of waste on the island of Kassa.<sup>4</sup> The shipment was brought in under cover of an important programme for a brick manufacturing project and the intention was to dump an eventual 85,000 tonnes.<sup>5</sup> In this connection the Consul General of Norway in Conakry and several officials of the Guinean Ministry of Trade were detained and charged with involvement in the importation of the damaging substances.

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2 M.K. Shridharan, Patriot (New Delhi), 22 November 1988. Nuclear and toxic waste disposal bring a \$12 billion a year business, some ten African countries have received or signed contracts allowing the dumping of waste from industrialised countries. See Hindustan Times (New Delhi), 26 July 1988.

3 Times of India (New Delhi), 6 June 1988.

4 M.K. Shridharan, n.2.

5 Times of India (New Delhi), 6 June 1988.

(3) There have also been several instances where certain governments made contracts with TNC's completely ignoring the health aspects. President Nguama Mbasogo of Equatorial Guinea granted a ten-year licence to a British firm to store five million tons of poisonous waste. The burial is to be effected on the volcanic island of Annobon, 640 kilometers away from the main island of Bioko and 450 kilometers to the west of Gabon. This move has threatened to poison the Atlantic and destroy all life on the west African coast.<sup>6</sup>

(4) Guinea-Bissau has signed two contracts to dump European industrial waste on a 10 square mile site, Binata, in the north. The first was concluded in October 1987 with a Swiss company, Inter Contract, provides for at least 50,000 tonnes per year over ten years.<sup>7</sup> The second, covering 1-3 million tonnes of toxic waste a year over five years, involves three companies: Hobday Ltd., of the Isle of Man, Bis Import Export of London and Lindeco of Detroit.<sup>8</sup>

(5) Benin under a recent contract with a Gibraltar Company, Sesco Ltd., has agreed to take 1.5 million tonnes

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6 M.K. Shridharan, n.2.

7 Times of India (New Delhi), 6 June 1988.

8 Hindustan Times (New Delhi), 23 May 1988.

of waste a year, and to grant SESCO a 10 year monopoly on waste. In addition, Benin has accepted two ship loads of radioactive waste from France, in exchange for a guarantee of 30 years economic assistance.<sup>9</sup>

(6) Recently one Houston Company transported barrels of Polychlorinated biphenyls (PCBs) to Mexico. Mexicans not knowing what the barrels contained, emptied the contents and used them to store drinking water!<sup>10</sup>

(7) Haiti's bitter experience with Philadelphia's garbage is a case in point. Paolino and Sons, a Philadelphia-based firm, paid the Liberian flagged *Khian Sea* to haul away 13,476 tons of toxic incinerator ash in August 1986. Samples of the ash showed it contained arsenic, barium, cadmium, lead mercury and two different types of dioxins between 0.184 and 4.7 parts per billion. Captain Konstantinos Samos signed a cargo declaration identifying the load as 'non toxic, non hazardous, non inflammable incinerator ash'. In March 1987, the ship's owner, Amalgamated Shipping, tried to cut a deal with Honduras through Honduran promoter

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9 Times of India, 6 June 1988.

10 Deccan Herald (Bangalore), 12 October 1987.

Edgardo Pacall. But Honduras refused Amalgamated's offer to sell the ash for \$22,000. Similarly the Bahamas, Bermuda, the Dominican Republic and Guinea Bissau also rejected the load. In October 1987, after 14 months on the high seas, the Haitian Commerce Department imported the toxic ash<sup>11</sup> to its territory on the ground that it was fertiliser!<sup>12</sup>

(8) In another interesting incident a ship carrying toxic incinerator ash, which was said to have changed its name described its cargo as non-toxic muddy waste suitable for land refill, and tried to off-load it in Colombo but could not do so because of stiff protests from environmentalists there who were not taken in by the deception. It was then said to have moved towards Chittagong, hoping to off-load its cargo there, but had to give up the plan because of heavy floods. The ship was, however, believed finally to have dumped its cargo in the Indian Ocean: At any rate, photographs of its holds revealed they were empty. If true, that account is certain to have caused a great deal of dismay to the neighbouring states.<sup>13</sup>

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11 This was done at the instance of Felix and Antonio Paul (the brothers of late indicted drug trafficker Col. Jean Claude Paul) who convinced the Haitian Commerce Department to allow them to import the toxic ash which they said was fertiliser.

12 Amrita Bazar Patrika (Calcutta), 25 November 1989.

13 Statesman (New Delhi), 21 June 1989.

(9) Authentic reports mention of the dumping of large quantities of poisoned waste in the South Pacific. In June 1988 about 2,400 tons of highly toxic chemicals were brought from Italy and buried on the Lebanese coast near Beirut. According to La Repubblica, an Italian newspaper, over the last two years about 7,000 tons of poisonous substances had been smuggled abroad for disposal. The figure appeared to be an understatement.<sup>14</sup> Toxic substances were secretly dumped from Western ships even in the South-Western part of the Indian Ocean in the immediate vicinity of Madagascar and Mauritius.<sup>15</sup> In cases of this kind containers carrying the waste are made of light plastic and can therefore eventually float and be taken by the currents away from the location where they were originally buried.<sup>16</sup>

In his book, Toxic Waste, Malcolm Weiss, summarising the problem, asserts that much of the waste dumping is not the work of the company that made it, but rather the "midnight haulers" they hire to move it. He said:

they load up trucks with containers of toxic poisons and head, by night, for remote or sparsely populated areas. There they dump their loads in rivers, fields or by the sides of roads. Commercial waste hauling big business and a profitable industries are willing to pay

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14 Shridharan, n.2.

15 Ibid.

16 Ibid.

handsomely to get their wastes out of the way. The commercial dumpers, disposing of hazardous substances generally in the cheapest way possible, keep their expenses to a minimum.<sup>17</sup>

The above observation is clearly evidenced in practice. The cost of burying a ton of toxic waste ranges between \$160 and \$1000 in Europe while Guinea and Guinea-Bissau agreed to store the poisonous waste in their territories for a fraction of that - \$40 per ton.<sup>18</sup>

Economic backwardness and the financial plight of the African and Latin American countries are being exploited by the industrialised world to the hilt as some corrupt civil servants, ready to sell out to the TNCs for a fees, are used to subserve these designs.

Developments of this kind made the representatives of the African and Latin American countries to accuse the industrialized world of acting in an inhuman manner and called for an end to "toxic terrorism".<sup>19</sup> President Daniel Arap Moi of Kenya condemned this sort of "garbage imperialism".<sup>20</sup> Even some of the African legislators expressed

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17 Quoted in Deccan Herald (Bangalore), n.10.

18 M.K. Shridharan, n.2; also in Amrita Bazar Patrika, 25 November 1989.

19 Iwona Rummel Bulska, "The Road to Basle", Our Planet (Nairobi), no.1, March 1989, p.3.

20 Ibid.

their unhappiness over the annual shipment of hazardous wastes to other countries and pleaded for stringent statutory restrictions. In the legislation proposed by them, exporters will have to certify that the foreign importing company will dispose of the waste in a manner that protects human health and environment. Equally, the importing countries will have to provide complete information on how they propose to handle the waste material. More important is a call given by them to end the double standards that have prevailed so far.<sup>21</sup>

In the European Community, the deals have caused a storm of protest at the European Parliament,<sup>22</sup> which in a Resolution passed in 1986, unanimously demanding a ban on the largescale export of toxic waste to the Third World and calling for stricter implementation of existing European

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21 The Statesman (New Delhi), 21 June 1989.

22 Times of India (New Delhi), 6 June 1989.

Community regulations on waste exports.<sup>23</sup> Furthermore, the Council of the European Community in a Resolution,<sup>24</sup> adopted on 21 December 1988, stressed the urgency of reaching agreement on a system at the widest possible international level to ensure effective control of transfrontier movements and disposal of hazardous waste. In addition, the resolution requested the Commission and the Member States to give information on the risks pertaining to the incorrect disposal of hazardous waste and of technical and other assistance to enable them to deal with the problems posed by hazardous waste.<sup>25</sup> In the wake of these developments, the Italian

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- 23 On 2 July 1986, the EEC Commission submitted to the Council a proposed "legislation Concerning Export from and the Import into the Community of Certain Dangerous Chemicals." This is done with the objective of establishing Common notification and information procedure for imports and exports of banned or severely restricted chemicals, the proposed council regulation would require an exporter of such chemicals, a list of which is contained in an annex, to notify the designated authority of the exporting EEC member. For the initial export of any such materials, the exporting country would then inform the commission, which would in turn notify the country of destination. The Commission would then inform the exporting country "of any relevant reaction from the country of destination". Earlier Council directives on packaging and labelling would also apply to the shipment of such chemicals. See Ved P. Nanda and Bruce C. Bailey, "Export of Hazardous Waste and Hazardous Technology: Challenge for International Environmental Law", Denver Journal of International Law and Policy, vol.17, no.1, (1988), pp.187-8.
- 24 Council Resolution No.89/C9/01 of 21 December 1988 Concerning Transfrontier Movements of Hazardous Waste to Third Countries. See (Official Journal of the European Communities, No.C9, 12 January 1989), p.1.
- 25 Ibid.



government, being a member of the EEC, enacted a law on the Transfrontier Disposal of Industrial Waste.<sup>26</sup> The law not only takes care of the transfrontier disposal of industrial waste but also regulates a variety of other issues, ranging, inter alia, from the prevention, recycling and recovery of waste to the provision for public waste disposal and treatment facilities.<sup>27</sup>

Within the African region the issue was taken up by the Council of Ministers of the Organisation of African Unity. They in a resolution adopted on 23 May 1988 declared that the dumping of nuclear and industrial wastes in Africa is a crime against Africa and the African people.<sup>28</sup> In addition, the resolution requested member states to participate in drafting the global convention on the control of Transboundary Movement of Dangerous Wastes.<sup>29</sup>

As a consequence of this resolution many African countries came forward with stringent legislations. In this respect, the law passed by the Government of Nigeria prescribes execution for individuals convicted of illegally

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26 Law on the Transfrontier Disposal of Industrial Waste, 9 November 1988. See International Legal Materials, vol.28, no.2, pp.393-5.

27 Ibid.

28 For details see Chapter II, pp.80-81.

29 International Legal Materials, vol.28, no.2, pp.567-9.

importing hazardous waste.<sup>30</sup> Other nations of the region have enacted laws imposing fines, lengthy imprisonment, and the imposition of removal costs upon individuals convicted of dumping toxic wastes.<sup>31</sup> Among them, Gambia, Guinea,<sup>32</sup> Liberia, Togo, Ivory Coast, Ghana and Cote D' Ivoire<sup>33</sup> stand prominent.

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30 Brooke, "African Nations Barring Toxic Waste", New York Times, 25 September 1988.

31 Ibid.

32 The State of Guinea on 28 May 1987 has promulgated an ordinance. (No.045/PRG/87 of 28 May 1987) which is popularly known as the Environmental code of the Republic of Guinea. Article 61 of the Code stipulates: "Whenever wastes are abandoned, dumped or treated in contravention of the provisions of this code and the regulations in force, the administration concerned shall on its own initiative undertake the elimination of these wastes at the expense of those responsible."

Under Article 65: The dumping or disposal of wastes, by any procedure whatsoever, in continental waters or marine waters under Guinean jurisdiction shall be prohibited, except under a special licence issued by the Department of the Environment and in cases of force majeure entailing a direct and definite threat to human life or the safety of a ship or aircraft." See International Digest of Health Legislation, vol.40, no.2 (1989), pp.447-60.

33 Cote D' Ivoire enacted a law on Toxic and Nuclear waste on July 7, 1988. Article 1 of the legislation promulgated by the President provides: "Throughout the whole national territory, all acts relating to the buying, selling, importing, transiting, depositing and stocking of toxic and nuclear waste and noxious substances are forbidden." Under Article 2 any one committing any of the acts mentioned in the first article shall be punished by imprisonment from 15 to 20 years and by fine from 100 million to 500 million francs.

The Latin American countries did not lag behind in this endeavour. Thirty-nine Latin American and Caribbean nations including Belize, Guatemala, Guyana, Haiti, Jamaica, Peru, Saint Lucia and Venezuela have banned waste imports. Moreover, in May 1987, the thirteen-member economic association of English speaking Caribbean countries stated its opposition to toxic waste imports by any Caribbean nation.<sup>34</sup> Similarly a legislation passed by the Government of Mexico,<sup>35</sup> under section 153, prohibited the transportation of hazardous materials or wastes for the sole purpose of final disposal, dumping, storage or containment on Mexican Territory.<sup>36</sup> In another section, the export of hazardous materials or wastes for the sole purpose of final disposal abroad may be licensed only if the receiving country has given its express consent.<sup>37</sup> Further, it contained provisions to revoke licenses to import or import hazardous materials and wastes

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34 Amrita Bazar Patrika (Calcutta), 25 November 1989.

35 General Law on Ecological Equilibrium and Environmental Protection of Mexico. This legislation came into force on 1 March 1988. See for details, International Digest of Health Legislation, vol.40, no.3 (1989), pp.678-9.

36 Section 153 (III) of General Law on Ecological Equilibrium and Environmental Protection.

37 Section 153 (V).

in some cases.<sup>38</sup> Even Great Britain, from 31 December 1988, made it illegal for ships to dump any plastic garbage into the sea.<sup>39</sup> The prohibition covered a total ban on the dumping of garbage within three miles of land.<sup>40</sup>

B. COLLECTIVE EFFORTS TO REGULATE THE DUMPING PHENOMENA,  
THE BASEL CONVENTION OF 1989

Ever since the adoption of the Stockholm Declaration 1972, the United Nations took to the onerous task of

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- 38 Section 153 (VIII) lists the following cases wherein licences to import or export hazardous materials and wastes may be revoked:
- (a) where the materials or wastes concerned are found to constitute a greater hazard to ecological equilibrium than was thought when the license was first issued;
  - (b) where the said import or export does not meet the requirements laid down in the ecological guide issued by the Secretariat;
  - (c) where the materials or wastes concerned no longer possess the characteristics on the basis of which the licence was first issued; or
  - (d) when the licence application is found to contain incorrect data or to fail to disclose information required for a correct assessment of the application. See International Digest of Health Legislation, vol.40, no.3 (1989), p.679.
- 39 Garbage included synthetic fishing nets, ropes and plastic rubbish bags.
- 40 Marine Pollution Bulletin, vol.20, no.2 (1989), p.52.

protecting the fragile ecosystem. The Declaration stated that states must ensure that activities within their control do not harm the environment of other nations.<sup>41</sup> The recommendations of the 112 nations, attending the Conference resulted in the establishment of United Nations Environment Programme with the following goals:

- (a) "to facilitate international cooperation in the environmental field;
- (b) to keep the world environmental situation under review so that problems of international significance receive appropriate consideration by Governments; and
- (c) to promote the acquisition, assessment and exchange of environmental knowledge."<sup>42</sup>

To realise these goals the UNEP established a separate programme entitled "Earth Watch", to identify global environmental issues and to gather and evaluate data necessary to provide an international base of information.<sup>43</sup> One component of Earth Watch is the International Register of Potentially Toxic Chemicals (IRPTC). The purpose of IRPTC is to "reduce the health and environmental hazards presented by chemicals by

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41 The Stockholm Declaration of the United Nations Conference on the Human Environment was adopted on June 16, 1972. The Declaration consists a preamble and 26 principles. See Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, UNDOC A/CONF. 48/14, Rev./Annex III (1973).

42 Every One's U.N. (UN Publication, E.79.I.5), p.167.

43 Ibid., p.130.

facilitating universal access to existing scientific and regulatory data."<sup>44</sup> In furtherance of its objective the IRPTC has compiled a list of all such chemicals and is currently engaged in the monitoring of UNEP's programme on provisional notification of banned and severely restricted chemicals, and its work in risk assessment operations in the use of chemicals.<sup>45</sup>

The General Assembly of the United Nations also specifically addressed the issue of hazardous exports in 1979, when it urged member states:

to exchange information on hazardous chemicals and unsafe pharmaceutical products that have been banned in their territories and to discourage, in consultation with importing countries, the exportation of such products to other countries.

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44 Karen A. Goldberg, "Efforts to Prevent Misuse of Pesticides Exported to Developing Countries: Progressing Beyond Regulation and Notification", Ecology Law Quarterly, vol.12, no.4 (1985), p.1042.

A major goal of the IRPTC is to "identify the largest possible number of chemicals of international significance and collect as much data on their health effects as possible." The work of the IRPTC is a step toward more informed and uniform decision making.

45 UNEP Group Moves from list Compilation to Monitoring Banned Chemicals Worldwide, International Env't. Rep. vol.9 (BNA, 1986), pp.357-8.

In 1982, UNEP took further action and established the ad hoc Working Group of Experts for the Exchange of Information on Potentially Harmful Chemicals in International Trade.<sup>46</sup>

Between 1982 and 1988, several developments took place to regulate the transboundary movements of hazardous wastes at the EEC, OECD and OAU levels.<sup>47</sup> But the most important resolution to this end was adopted by the General Assembly at its forty-third session. This resolution of December 1988 urged all states to take legal and technical measures to halt and prevent the international traffic in, dumping and resulting accumulation of toxic and dangerous products and wastes. It urged states to prohibit transboundary movement of wastes without the prior written consent of transit, as well as importing countries. The resolution requested states to provide the necessary information for the wastes proper management, including full disclosure of the nature of the substance involved and urged member states to treat and dispose of toxic and dangerous waste in the country of origin and environmentally sound ways.<sup>48</sup> The Expert Group set up by UNEP to prepare a global convention on this subject was asked to take the Assembly's resolution

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46 See n.44, p.1042.

47 See Chapter II, pp.60-81.

48 Our Planet, no.1, March 1989 (Nairobi), p.6.

into account.<sup>49</sup> The international community, particularly developed countries, was asked to help developing countries eliminate the adverse effects of wastes on human health and the environment.<sup>50</sup>

The drafting process of the global treaty to control Transboundary Movements of Hazardous Wastes and Their Disposal began in 1987 in the Hungarian capital, Budapest. Subsequent negotiations for almost eighteen months were held in Geneva, Caracas, and Luxembourg.<sup>51</sup> More than hundred countries including the members of the OAU and EEC attended the final negotiations and approved the Convention. A majority of 105 of the 116 countries that attended the conference signed the Final Act on 22 March 1989 at Basel.<sup>52</sup>

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal was signed by 35 States.<sup>53</sup> Half of them were developing countries and

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49 Ibid.

50 Ibid.

51 See Iowna Rummel Bulska, "The Road to Basel", Our Planet, no.1, March 1989, p.3.

52 Environment Policy and Law (Bonn), vol.19, no.2 (1989), p.40.

53 Thirty four states signed the treaty at the final session of the Conference. Later Ecuador decided to sign, making the official total 35. Those which immediately signed were: Afghanistan, Bahrain, Belgium, Bolivia, Canada, Colombia, Cyprus, Denmark, Ecuador, Finland, France, Greece, Guatemala, Haiti, Hungary, Israel, Italy, Jordan, Kuwait, Lebanon, Liechtenstein, Luxembourg, Mexico, the Netherlands, Norway, Panama, Philippines, Saudi Arabia, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, Uruguay and Venezuela.



the European Community. The 53 page document (convention) has a preamble, 29 articles and six annexes. Since radioactive wastes, which are subject to other international control systems, and international instruments, are excluded from the scope of the Convention.<sup>54</sup> Annex I to the Convention gives a detailed description of the categories of wastes to which the scope of the Convention is applied.<sup>55</sup>

While under article 3, each signatory state shall inform the Secretariat of the Convention of the wastes considered or defined as hazardous by it and the procedures

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- 54 Article 1(3) of the Basel Convention on the control of Transboundary Movements of Hazardous Wastes and Their Disposal, UNEP/IG.80/3, 22 March 1989, p.4.
- 55 Clinical wastes from medical care in hospitals, medical centres and clinics; wastes from the production and preparation of pharmaceutical products; waste pharmaceuticals, drugs and medicines; wastes from the production, formulation and use of biocides and phytopharmaceuticals; wastes from the manufacture, formulation and use of wood preserving chemicals; wastes from the production, formulation and use of organic solvents; wastes from heat treatment and tempering operations containing cyanides; waste mineral oils unfit for their originally intended use; waste oils/water, hydrocarbons/water mixtures, emulsions; waste substances and articles containing or contaminated with Polychlorinated biphenyls (PCBs) and/or Polychlorinated terphenyls (PCTs) and/or Polybrominated biphenyls (PBBs); waste tarry residues arising from refining, distillation and any Pyrolytic treatment; wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish; wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives. Under Annex II wastes collected from households and residues arising from incineration of household wastes are wastes requiring special consideration. See UNEP/IG.80/3. pp.41-42.

applicable to its transboundary movements. The general obligations of member states expressed in Article 4 are:

- (a) A signatory state cannot send hazardous waste to another signatory that bans import of it; 57
- (b) A signatory state cannot send hazardous waste to another signatory if it does not consent in writing for the import of such wastes, although it has not prohibited the import of such wastes; 58
- (c) Each signatory shall take steps to reduce the generation of hazardous wastes and other wastes to a minimum; 59
- (d) The signatory state shall provide to the extent possible adequate disposal facilities in its territory; 60
- (e) The signatory state shall take steps to ensure that persons involved in the management of hazardous wastes act carefully so that pollution arising out of such wastes is prevented; 61
- (f) Each signatory state shall ensure to reduce to the minimum the transboundary movement of hazardous wastes and conduct in such a manner that protects human health and the environment; 62
- (g) The export of hazardous waste is prohibited to an economic and/or political integration organisation particularly developing countries that prohibits its imports by legislation or where the exporting state has reason to believe that the importing state cannot dispose it in an environmentally sound manner; 63

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- 56 UNEP/IG. 80/3, p.5.
  - 57 Article 4, 1(b) of the Convention.
  - 58 Ibid., Article 4,1(c).
  - 59 Ibid., Article 4, 2(a).
  - 60 Ibid., Article 4, 2(b).
  - 61 Ibid., Article 4(2) (c).
  - 62 Ibid., Article 4 (2) (d).
  - 63 Ibid., Article 4(2)(e).

- (h) No signatory may ship hazardous wastes to another signatory state if the importing country does not have the facilities to dispose it in an environmentally sound manner.<sup>64</sup>

The Treaty states that illegal traffic in hazardous wastes is criminal.<sup>65</sup> Another important obligation is that a signatory state cannot ship hazardous waste to any country that has not signed the treaty.<sup>66</sup> Furthermore, a State party to the convention shall prohibit all persons under its national jurisdiction from transporting or disposing of hazardous wastes.<sup>67</sup> Shipment of hazardous wastes must be packaged, labelled and transported in conformity with generally accepted and recognised international rules and standards.<sup>68</sup> In addition, shipment of hazardous wastes be accompanied by a movement document from the place of commencement of voyage to the point of disposal.<sup>69</sup>

The other main features of the convention are: before an exporting country can start a shipment on its way it must have the importing country's consent in

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64 Ibid., Article 4 (2) (g).

65 Ibid., Article 4 (3).

66 Ibid., Article 4 (5).

67 Ibid., Article 4 (7) (a). But persons who are authorised to do the job are excluded.

68 Article 4 (7) (b).

69 Article 4 (7) (c).

writing.<sup>70</sup> The exporting country must first provide detailed information on the intended export to the importing country to allow it to assess the risks.<sup>71</sup> Such notification/information made to the importing country should be in accordance with Annex VA, and be written in a language acceptable to the importing state.<sup>72</sup> At the time of taking delivery of the wastes, the person who takes charge of such transboundary movement of hazardous wastes should sign the movement document and inform both the exporter and the competent authority of the state of export of the receipt of such wastes.<sup>73</sup> All transboundary movements of hazardous wastes shall be covered by insurance, bond or other guarantee.<sup>74</sup>

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70 Article 6 (4).

71 Article 6 (2) and (3) (a) (b).

72 Article 6 (1) of the Convention.

Annex V A dealing with information to be provided on notification by the exporter to the importing country has the following columns: (a) Reason for waste export; (b) Exporter of the waste; (c) Generator of the waste and site of generation; (d) Disposer of the waste and actual site of disposal; (e) Intended carriers of the waste or their agents, if known; (f) country of export of the waste; (g) Expected countries of transit; (h) country of import of the waste; (i) Means of transport envisaged (rail, road, sea, air, inland waters); (j) Information relating to insurance; (k) Designation and physical description of the waste; (h) Declaration by the generator and exporter that the information is correct etc. For details see UNEP/IG. 80/3, p.48.

73 Article 6 (9).

74 Article 6 (11) Generally this is insisted upon by the state of import or any state of transit.

An important provision enumerated in Article 8 accords protection to the developing countries. Under the provision, when an importing country proves unable to dispose of legally imported waste in an environmentally acceptable way, then the exporting state has a duty either to take it back or to find some other way of disposing it in an environmentally sound manner.<sup>75</sup> Any transboundary movement of hazardous wastes done without notification<sup>76</sup> or carried by obtaining the consent of the importing country through misrepresentation, fraud or falsification,<sup>77</sup> or in violation of the convention<sup>78</sup> shall be deemed to be illegal traffic. In all instances of this kind an obligation is placed on the exporting state, either to take back such wastes or find ways and means to dispose it in an environmentally sound manner in accordance with the provisions of the convention.<sup>79</sup>

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75 Article 8 of the Convention.

76 Ibid., Article 9 (1) (a).

77 Ibid., Article 9 (1) (c).

78 Ibid., Article 9 (1) (b).

79 Ibid., Article 9 (2) (1) and (b). The exporter must within thirty days from the date of such discovery shall make arrangements to dispose it either in his territory by taking back such wastes or in any other way which is environmentally sound and in accordance with the provisions of this convention. The time of 30 days can be extended mutually both by the exporting and importing state.

In order to achieve environmentally sound management of hazardous wastes State Parties must come closer and provide the necessary information on multilateral as well as bilateral basis. States which are technologically sound in the management of hazardous wastes must help upon request those which need it.<sup>80</sup> This is done with a view to generate less hazardous waste and to dispose it as close to its source as possible. The competent international organisations must come forward to promote public awareness along with states so that the developing countries in particular, develop technical capacity to dispose hazardous wastes in environmentally sound ways. In addition, signatory states were not only called upon to adopt appropriate national legislations to prevent and punish illegal traffic in hazardous wastes but also to cooperate with each other to realise this objective.<sup>81</sup>

To facilitate the object and purpose of the convention states may sign bilateral, multilateral or even regional agreements with member states, as well as non-member states.<sup>82</sup> On the signing of such agreements or arrangements, the parties shall notify this fact to the Secretariat

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80 Ibid., Article 10 (1) (2) and 10(5) of the Convention.

81 Ibid., Article 10 (5) of the Convention.

82 Ibid., Article 11 (1) of the Convention.

established under this convention.<sup>83</sup> In case of an accident occurring during the transboundary movement of hazardous wastes or their disposal in other states, the incident must be brought to the knowledge of such affected state at the earliest.<sup>84</sup>

Furthermore, the signatory states through the Secretariat shall inform each other the following information:

- (1) changes made in their national definition of hazardous wastes; 85
- (2) decisions taken by them to limit or ban the export of hazardous wastes; 86
- (3) the activities carried out by a state party in the previous calendar year containing information such as: 87
  - (a) the amount of hazardous wastes exported, their category, destination, and disposal method; 88
  - (b) the amount of hazardous wastes imported their category, origin and disposal methods; 89
  - (c) information on the measures adopted by them to implement this Convention; 90
  - (d) information concerning bilateral, multilateral and regional agreements and arrangements entered into by signatories; 91

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83 Ibid., Article 11 (2) of the Convention.

84 Ibid., Article 13 of the Convention.

85 Ibid., Article 13 (2) (b).

86 Ibid., Article 13 (2) (d).

87 Ibid., Article 13 (3).

88 Ibid., Article 13 (3) (b) (i).

- (e) information on accidents during the transboundary movement and disposal of hazardous wastes and the measures undertaken to deal with them; 92
- (f) information on measures undertaken for development of technologies for the reduction and/or elimination of production of hazardous wastes and other wastes. 93

### Secretariat

The Treaty sets up a secretariat to supervise and facilitate its implementation. In addition to transmitting the information received by States the secretariat has a host of other functions to fulfil. Under Article 16 the secretariat shall:

- (a) prepare reports on its activities and present them to the conference of the parties; 94
- (b) enter into administrative and contractual arrangements with relevant international bodies, for the effective discharge of its functions;
- (c) compile information concerning authorised national sites and facilities of parties available for the disposal of their hazardous wastes and to circulate this information among parties;

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89	Ibid., Article 13 (3) (b) (ii).
90	Ibid., Article 13 (3) (c).
91	Ibid., Article 13 (3) (e).
92	Ibid., Article 13 (3) (f).
93	Ibid., Article 13 (3) (h).

94 The first meeting of the Conference of the parties shall be convened by the Executive Director of UNEP within one year of the entry into force of this Convention. Thereafter, ordinary meetings of the Conference can be held at regular intervals as determined by the conference in its first meeting. See Article 15(1) of the Convention. The UNEP will carry out the Secretariat functions on an interim basis until the first meeting of the parties. See Article 16(2) of the Convention.



- (d) to receive and convey information from and to parties on sources of technical assistance and training available;
- (e) assist members upon request, in areas such as the monitoring of hazardous wastes, the assessment of disposal capabilities and sites; and environmentally sound technologies relating to hazardous wastes;
- (f) assist parties upon request in their identification of cases of illegal traffic and circulate information, if received on illegal traffic amongst members.

#### Settlement of Disputes

Any dispute arising out of the convention between the parties in relation to the interpretation or application must be resolved through negotiation or any other peaceful means of their own choice.<sup>95</sup> In the event of failing to settle their dispute through this means, the parties if they agree, can submit their dispute to the International Court of Justice or to the Court of Arbitration<sup>96</sup> for final settlement. The provisions of Article 20(3) permits a state or political organisation or economic integration to accept the compulsory jurisdiction of the International Court of Justice.<sup>97</sup>

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95 Article 20(1) of the Convention.

96 Ibid., Article 20 (2).

97 Ibid., Article 20(3).

The Convention requires only 20 ratifications to enter into force<sup>98</sup> and no reservation is permitted.<sup>99</sup> Withdrawal by a member is allowed only after three years from the date of entry into force of the convention.<sup>100</sup> An amendment to the convention can be brought about by consensus or with the support of three-fourths majority vote of the parties present at the meeting.<sup>101</sup>

C. The Question of Liability

Under Article 4(4) of the Convention, "Each party shall take appropriate legal, administrative and other measures to implement and enforce the provisions of this convention, including measures to prevent and punish conduct in contravention of the Convention."

As per this provision a signatory state is empowered to make legislation in conformity with this convention. The legislation made by a state, while concentrating on the objectives, cover first of all on-site waste treatment

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98 Ibid., Article 25 of the Convention.

99 Ibid., Article 26.

100 Ibid., Article 27.

101 Article 17 (3).

facilities with supporting infrastructure, and waste minimisation programmes to reduce the transboundary movement of hazardous waste.

Many countries have environmentally sound legislations and invoke the principle of "waste generator responsibility" translated in various procedures so as to ensure "cradle to grave" management of hazardous waste, i.e., from its generation to its proper disposal, even if these tasks are sub-contracted. Even more, all the disposal facilities under the legislation are subjected to an environmental impact assessment before being licensed. Violation of any of the rules would attract severe penalties.

A State even without a law on hazardous waste can punish the generators, transporters and disposers of hazardous waste. Traditional state nuisance<sup>102</sup> law is enough for direct citizen action and for local government action against hazardous waste disposal problems. The two basic types of state nuisance law are private and public. A cause of action may occur under private or

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102 Black's Law Dictionary defines nuisance as "that activity which arises from unreasonable, unwarranted or unlawful use by a person of his own property, working obstruction or injury to right of another, or to the public, and producing such material annoyance, inconvenience and discomfort that law will presume resulting damage." (Blacks Law Dictionary (5 ed., 1979) ).

public nuisance. "A private nuisance is a civil wrong, based on a disturbance of rights in land." The law provides a remedy for the person whose rights were disturbed.<sup>103</sup>

A public nuisance on the other hand includes criminal offences which interfere with community rights and public, interference with an individuals enjoyment of his or her land.<sup>104</sup>

It protects the general public from the dangers of private activities.<sup>105</sup> Under both types of nuisance law, the court must find a substantial, unreasonable interference with the plaintiff's interest - either the use and enjoyment of private land or the public welfare.<sup>106</sup>

The private nuisance cause of action is tied directly to the use and enjoyment of land and is generally an action brought by an individual or group of private citizens. Since private nuisance is a non-trespassory invasion of an owner's use and enjoyment of his land, many types of invasion could be actionable under this theory. For example, situations involving seepage of chemicals into ground water

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103 W. Prosser, Hand Book of the Law of Torts (5 ed., 1984), sec.85, p.678.

104 Ibid.

105 Ibid.

106 Jeff Belfiglio, "Hazardous Wastes: Preserving the Nuisance Remedy", Stanford Law Review, vol.33, no.4 (1981), p.677.

from nearby chemical dumps, toxic fumes escaping from leaking barrels on adjoining property, or pollutants discharged into the air by smokestacks of a nearby factory,<sup>107</sup> it appears can attract nuisance action.

A public nuisance cause of action unlike private nuisance action is not dependent upon ownership of property. Instead, it involves an interference with a right "common to the general public".<sup>108</sup> To claim damages the victim must prove that he has suffered physical injury or pecuniary loss due to a nuisance caused by the defendant.

In several cases American courts have granted relief to the victims on the above grounds. In Village of Wilson Ville v. SCA Services, Inc.,<sup>109</sup> the court "upheld an injunction against a sanitary landfill despite its compliance with applicable environmental permits. The site was found to be a nuisance because it emitted dust and odours, required transport of hazardous materials through town, and posed an ultimate threat to ground water."<sup>110</sup>

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107 For a learned treatment see Judy A. Johnson, "Is There Still a Role for Common Law?", Tulsa Law Journal, vol.18, no.3 (1983), pp.452-4.

108 Ibid., p.455.

109 86.111 2d 1.426 NE. 2d 824 (1981).

110 Catherine S. Knowles, "Who is Responsible? An Analysis of Hazardous Waste Liability", Hamline Journal of Public Law, vol.6, no.1 (1985), p.12.

In McCastle v. Rollins Environmental Services,<sup>111</sup> the Louisiana state court affirmed the injunction brought by the plaintiffs on behalf of themselves and 4,000 other residents of an area located adjacent to a privately-owned hazardous waste disposal facility which contained incinerators, ponds, and dumping pits. The plaintiffs alleged that the fumes from the defendants plant caused them to suffer physical ailments such as upset stomachs, sore throats, and burning eyes. In another interesting case - the City of Philadelphia v. Stephen Chem. Co.,<sup>112</sup> where public nuisance was used as a ground to recover clean up costs and consequential damages resulting from the illegal dumping of industrial waste on city property. The court, permitted the city of Philadelphia to pursue its claim for response costs under the aegis of common law theories.<sup>113</sup>

### Tresspass

Action can also be brought under tresspass against those who create hazardous waste problems. The tort of

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111 514 F. Supp. 936 (M.D. La. 1981).

112 City of Philadelphia v. Stephan Chem. Co., 544 F. Supp. 1135 (E.D. Pa 1982).

113 The court allowed the city of Philadelphia to pursue its claims under the common law theories of nuisance, tresspass, strict liability, and negligence. A claim under the CERCLA was also permitted. For details see Judy A. Johnson, n.107, p.456.

tresspass involves an intentional physical invasion of property. To claim damages under tresspass the plaintiff must prove that his present possessory interest in his land has been invaded, and that has resulted in causing damage to himself, his family or his property<sup>114</sup> so long as the tresspass continues, the action is renewed.<sup>115</sup> In Curry Cal v. Armoni<sup>116</sup> the plaintiff proved intentional tresspass by demonstrating that a sanitary landfill operator continued to dump industrial sludge even after receiving notice of the harm caused.<sup>117</sup>

Negligence:

"Negligence" under Common Law "necessarily involves a foreseeable risk, a threatened danger of injury, and conduct unreasonable in proportion to the danger".<sup>118</sup> As a cause of action, negligence has the following elements:

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- 114 See W. Prosser, Hand Book of the Law of Torts, n.103, pp.63-67.
- 115 The Law recognises a "continuing" tresspass.
- 116 Curry Coal v. Aroni, 1 Envit Rep. CAS (BNA, 1970), pp.1428-31.
- 117 See Jane L. Wipf, "In Search of Liability for Hazardous Waste Dumping", South Dakota Law Review, vol.29, no.3 (1984), p.485.
- 118 Prosser, n.103.

(1) "a duty, or obligation...requiring the person to conform to a certain standard of conduct..."; (2) breach of such duty; (3) a "causal connection between the conduct and the resulting injury...or 'proximate cause'"; and (4) "actual loss or damages resulting to the interests of another".<sup>119</sup>

Under RCRA and CERCLA,<sup>120</sup> hazardous waste generators and transporters, who fail to comply with established standards, and that failure results in injury to a person, then they are liable for their negligent conduct. To claim protection under this principle the plaintiff must prove that he or she is within the class of persons the statute was designed to protect, and hence, the generator is negligent as a matter of law.<sup>121</sup>

In a promising Louisiana decision, Ewell v. Petro Processors of Louisiana Inc.,<sup>122</sup> land owners of a tract adjacent to land on which a corporation was conducting industrial waste disposal operation were successful in

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119 Ibid.

120 See Chapter II.

121 Jane L. Wipf, n.117, p.483.

122 364 So. 2d 604 (La Ct. App. 1978).



proving the corporations negligence in allowing the toxic wastes to leak on to their property.<sup>123</sup>

In the light of these developments common law negligence action cannot be totally discounted as a viable tool in the hazardous waste law suit.

### Strict Liability

Strict Liability imposes liability without regard to fault upon those individuals who engage in abnormally dangerous activities.<sup>124</sup> The factors which a court should take into account before determining whether an activity is abnormally dangerous include the degree of risk, the quantum of risk which would result from an accident, the inability to eliminate the risk by reasonable care, uncommon usage of activity etc. In <sup>a</sup>case, all the said factors need not be present. Strict liability provisions have been incorporated in the environmental legislations of many countries. The RCRA<sup>125</sup> as we have seen, specially incorporated this doctrine.

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123 Judy A. Johnson, n.106, p.462.

124 See Jane L. Wipf, n.117, pp.486-8.

125 Chapter II.

The above discussion makes us to conclude that in the absence of a hazardous waste law the existing principles of common law is enough to deal with offences committed by generators, transporters and even the owners of disposal sites. The guilty cannot escape liability on the flimsy ground that there is no law on the subject.

The Convention in Article 4, 2(e) declares that:

Each Party shall take the appropriate measures:

"not to allow the export of hazardous wastes or other wastes to a State or group of States belonging to an economic and/or political integration organisation that are parties, particularly developing countries, which have prohibited by their legislation all imports, or if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner, according to criteria to be decided on by the parties of their first meeting."

The Article contemplates two things: (1) a state is not allowed to export hazardous waste to a state or group of states belonging to an economic or political organisation specially developing countries which have prohibited by legislation the import of such hazardous wastes. (2) the export is not allowed in a situation wherein the exporting state has reason to believe that the hazardous waste if exported cannot be disposed of in an environmentally sound manner.

The legal question that arises here is, can liability be fixed on the exporting state under general principles of international law, when the article does not provide for sanctions?

It is a well-established principle of international law that a state has the sovereign right to exercise the basic functions of a state.<sup>126</sup> But then, the exercise of sovereignty is subject to certain limitations. One limitation is that a state cannot allow certain activities to interfere with the sovereignty of other states. A state will be found liable under international law if the consequences of activities within that state's control seriously injure persons or property of the other states. This principle of state responsibility can be applied to the export of hazardous wastes because the risk of consequences posed are serious, regardless of their legality

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126 Under the Doctrine of Basic Rights and Duties of States, the basic rights are: (1) the power exclusively to control its own domestic affairs; (b) the power to admit and expel aliens; (c) the privileges of its diplomatic envoys in other countries; (d) the sole jurisdiction over crimes committed within its territory. The correlative duties are: (1) the duty not to perform acts of sovereignty on the territory of another state; (ii) the duty to abstain and prevent agents and subjects from committing acts, constituting a violation of another state's independence or territorial supremacy; (iii) the duty not to intervene in the affairs of another State. (See the Draft Declaration on the Rights and Duties of States drawn up by the International Law Commission of the United Nations in 1949).

within the individual state.<sup>127</sup> The element of fault is generally regarded as an essential ingredient before determining state liability. In addition, the United Nations Charter,<sup>128</sup> a treaty with binding effect, obligates member states to promote "solutions of international, economic, social, health and related problems and international cultural and educational co-operation".<sup>129</sup>

The emergence of this sense of international responsibility for human health and environment is a natural outgrowth of the principle established in two leading cases, the Trial Smelter Arbitration<sup>130</sup> and the Corfu Channel case.<sup>131</sup>

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- 127 For a learned treatment see Gabriel Benrubi, "State Responsibility and Hazardous Products Exports: A Solution to an International Problem", California Western International Law Journal, vol. 13, no. 1, (1983), pp. 129-38.
- 128 The Charter of the United Nations was signed on 26 June 1945, in San Francisco, at the conclusion of the United Nations Conference on International Organisation, and came into force on 24 October 1945.
- 129 Article 55 of the Charter of the United Nations stipulates: "With a view to the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, the United Nations shall promote: (a) (b) solutions of international economic, social, health and related problems; and international cultural and educational co-operation.
- 130 United States v. Canada, reprinted in American Journal of International Law, vol. 33 (1939), p. 182 and in American Journal of International Law, vol. 35 (1941), p. 684.
- 131 U.K. v. Albania, ICJ Reports (1949), p. 18.

In the Trial Smelter Arbitration case, emission of sulphur dioxide fumes from a private smelting operation in British Columbia caused harm to timber and crops in Washington state. The International Tribunal, while making Canada liable for the acts of its subjects, declared: "Under the principles of international law...no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."<sup>132</sup>

In the Corfu Channel Case,<sup>133</sup> the ICJ stated that it is "every state's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other states."<sup>134</sup> This principle finds its expression in principle 21 of the Stockholm Declaration on the Human Environment.<sup>135</sup> The principle declares: "States have in accordance with the charter of the United Nations and the

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132 This duty was held to apply in relation to the activities of private Canadian Corporation. See Ian Brownlie, Principles of Public International Law (Oxford University Press, 1979), p.285.

133 Albania was held liable for the damage to two British vessels which hit sea mines in Albania's territorial waters, despite the fact that Albania had not placed there. See Brent Carson, "Increased Risk of Disease from Hazardous Waste: A Proposal for Judicial Relief", Washington Law Review, vol.60, no.3 (1985), pp.546-9.

134 ICJ Reports (1949), p.22.

135 Stockholm 5-16 June 1972, UN Doc. A/Conf. 48/14, Rev. 1 Annex III (1973).

principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control did not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction." In the case of export of hazardous waste, this principle could be clearly construed to impose an obligation on the exporting nation, since (1) the activity that produced the waste took place there, and (2) the exporting state should be deemed to have control of exporting activity.

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The power of a State to control the exporting activity is essentially based on the principle of territoriality. On the basis of this principle, a state may exercise its authority over any activities within its jurisdiction,<sup>136</sup> including control over its exports. Since a multinational corporation is deemed to be the citizen of the incorporating state,<sup>137</sup> under international law the act of the corporation can be imputed to the state. If a multinational corporation incorporated in a state were to indulge in the transportation

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136 "Jurisdiction means internal sovereignty, exclusive control over all persons and things within its territory" - Whiteman Digest of International Law, vol.5 (1965), p.216.

137 Barcelona Traction Light and Power Co., (Belgium v. Spain), ICJ Reports (1970), p.3.

of hazardous wastes and cause damage to the environment of other states the incorporating state is answerable for such acts under international law.

Hence the existing common law provisions and the general principles of international law is enough to tackle the problems which may be caused due to the transboundary movement of hazardous wastes, even though the convention does not specify sanctions.

#### Weaknesses of the Treaty

Representatives of the developing countries criticised the Basel Convention on the ground that the convention was not drafted in the spirit of compromise. Their main grievance rests on the following four major grounds.

- (1) The Convention does not call for an outright ban on the toxic waste trade but merely regulates the trade. It only insists that the companies wishing to export wastes will have to notify the government of the country importing it;
- (2) The Convention does not say what is hazardous waste. Instead, it only mentions, "wastes" are substances or objects which are disposed of - or are intended to be disposed of or are required to be disposed of - by the provisions of national law . 138 The Convention should have defined hazardous wastes at least in broad general terms;

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138 Article 2(1) of the Basel Convention, 1989.

- (3) The Convention does not specify standards for the safe and environmentally sound disposal of toxic wastes. It only mentions that exporters should ensure that disposal sites are 'adequate' but there is no mechanism to ensure that disposal sites meet any agreed standards; 139
- (4) Another loophole, in the convention relates to waste intended for recycling which is not legally 'hazardous' in most countries such dispensations have led to 'sham recycling' and the waste is exported for re-use in the developing world as a cheaper alternative to waste treatment. 140

Based on the above facts the developing countries felt that the convention was a total disappointment and a "sell out" of their interests. Dr. Tolba, the Executive Director of UNEP in his reply to a few of the above criticisms, agreed that the Basel Convention is a compromise. But "in a sense every Treaty represents a realistic adjustment to widely divergent points of view". The important thing is to have a treaty, a legally binding international agreement. We can strengthen and improve it as we go along.<sup>141</sup>

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139 Chee Yoke Heong, "Toxic Waste Treaty Legalises Dumping in Third World", Amrita Bazar Patrika (Calcutta), 17 October 1989.

140 Ibid.

141 Quoted in Environmental Policy and the Law, vol.19, no.2 (1989), p.39.



But the merit of the Convention lies in the very fact that, it will put an end to the present lawless situation. The very signing of it has resulted in a sharp reduction of transboundary movements of hazardous wastes. The only remedy now left for states is either to find their own environmentally sound disposal facilities or cut down waste production by resorting to reuse and recycling methods.

## CHAPTER FOUR

## CHAPTER FOUR

### INDIA AND HAZARDOUS WASTE LAW

The concern of the Government of India to respond to the environmental problems of our country has been encouraging, since the creation of the Department of Environment in 1980 and the integrated Ministry of Environment and Forests, at the centre in 1985. In order to protect and improve the environment as also to prevent hazards to human beings and other living creatures, plants and property the Government has passed the Environment Protection Act (EPA) in 1986.<sup>1</sup>

Section 2(e) of the Act, defines "hazardous substance" as any substance or preparation which by reason of its chemical or physio-chemical properties or handling is liable to cause harm to human beings, other living creatures, plants, micro-organisms, property or the environment.

Under the Act the Central Government is empowered to lay down procedures and safeguards for the handling of

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1 The Environment (Protection) Act, 1986. No.29 of 1986, 23 May 1986.

hazardous substances.<sup>2</sup> While exercising this power, the government under section 6(1) of the EPA can issue a notification in the official gazette. This exhaustive power of the government extends not only to control and regulate the occupiers of hazardous substances but also the inspection of any of the premises, plant, equipment, machinery, manufacturing hazardous substances.<sup>4</sup> The person handling hazardous substances shall follow the rules, procedures and safeguards prescribed by the Government under this Act.<sup>5</sup> Moreover, a duty is imposed on the person carrying on any industry, operation or process handling hazardous substance, to assist the person engaged by the central government in implementing the rules and regulations made under the Act.<sup>6</sup> Any person who fails to cooperate with the government, or wilfully delays in helping the officer in charge, is guilty of an offence.<sup>7</sup> Under Section 15 of

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2 Section 3(2) (VII) of the Environment Protection Act, 1986.

3 Section 6(1) of the Act reads: "The Central Government may, by notification in the official Gazette, make rules in respect of the following matters: the procedures and safeguards for the handling of hazardous substances"(Section 6(2)(c)).

4 Section 3 (x) of the EPA, 1986. These rules may cover the processing, treatment, package, storage transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of such substance - section 2(d).

5 Section 8 of the Act.

6 Section 10(1) and (2).

7 Section 10(3).

the EPA each failure of compliance or contravention is punishable with a term of imprisonment up to five years or with fine up to Rs.1,00,000 or both. For each act of failure to comply or contravention, happening after the conviction for such failure or contravention, an additional fine of Rs.5,000/- per day is prescribed. Additionally, if such failure or contravention continues beyond a period of one year after conviction, the offender is liable to imprisonment for a term which may extend to seven years.

In order to consider ways for the effective implementation of the Environment Protection Act, a Meeting of Experts was convened by the Consumer Education and Research Centre (CERC) and the Indian Law Institute, New Delhi, in 1986.<sup>8</sup> The meeting of experts felt the need to have a comprehensive legislation on hazardous waste disposal as soon as possible and recommended the government accordingly.<sup>9</sup> The experts in their recommendation stressed that the proposed legislation should be based on the following principles:

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8 The expert meeting was held from 22-24 August 1986.

9 Upendra Baxi, Environment Protection Act: An Agenda for Implementation (Bombay: N.P. Tripathi, 1987), p.26.

- (a) legislation and regulation must aim at the control of waste generating process. This should result in the avoidance or minimisation of waste generation;
- (b) the producer of hazardous waste should be primarily liable for waste disposal and management of waste;
- (c) the legislation and regulation also ought to impose stringent regulation on private waste disposal enterprises, which, on the whole, would otherwise tend to maximise profit out of such operations and aggravate environmental hazards;
- (d) the proposed legislation should apply equally to state enterprises, whether statutory corporations, government companies or departments engaged in production, manufacture, distribution, handling of hazardous substances;
- (e) the legislation should also impose strict duties on the community in relation to generation of waste, its management and disposal;
- (f) finally, the legislation should aim at the cradle to grave policy of hazardous waste management and disposal.

In addition, the meeting of experts felt that five types of wastes can be considered as hazardous under section 3 (2) (vii) of the EPA: (a) chemical wastes, (b) biological wastes (hospital wastes, bacterial cultures, and hazardous micro organisms), (c) inflammable wastes, (d) explosives, (e) radioactive wastes.<sup>10</sup>

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10 Ibid., p.29.

For collection and transport the committee recommended:

- (1) compulsory registration under the EPA of all waste disposal firms, companies and associations;
- (2) licence to collect and transport hazardous wastes will be granted on sufficient evidence of safe and reliable services;
- (3) licences, therefore, may only be granted when the relevant authority is fully satisfied concerning:
  - (a) the reliability, safety and adequacy of the technical equipment for collection, and transport;
  - (b) financial situation;
  - (c) adequacy of worker safety, including trained personnel adequacy of insurance cover;
  - (d) the licence may be general covering the right to collect and transport a large number of, or even all, hazardous wastes or it may be specific;
  - (e) a licence shall be revoked if conditions thereof in any respect are breached;
  - (f) breach of conditions of licence shall also be a strict liability offence. <sup>11</sup>

Further the recommendation insisted that in the proposed legislation the producer of hazardous waste shall in all cases apply for a licence to collect and transport it, waste disposal being the primary duty of the producer.

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11 Ibid., p.30.

Transportation of Dangerous/Hazardous Substances by Road -  
Order of Transport Commissioner, Maharashtra State

In order to control and regulate the transportation of dangerous/hazardous substances by road, a model legislation was passed by the Maharashtra State in 1986.<sup>12</sup> As per the Government order "hazardous chemical" will mean any material which may pose an unreasonable risk to health and safety of the property. This will include gases, compressed liquified or dissolved under pressure, inflammable liquids, inflammable solids, oxidising substances, organic peroxides, poisonous (toxic) and infectious substances, corrosive substances, dangerous substances, radioactive substances and explosives. Every public or private carrier carrying such hazardous chemicals, before carrying them, should satisfy the following conditions.<sup>13</sup>

- (1) Fixing of special labels or notices on packages or on vehicles, bearing emblems as specified by the Transport Commissioner.
- (2) The "correct technical names" of the chemical should invariably be displayed on packages or vehicles carrying hazardous chemicals.

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12 Transportation of Dangerous/Hazardous Substances by Road - Order of Transport Commissioner, Maharashtra State. Published in the Maharashtra Government Gazette - Part I - Central Sr. No.2, dated 1 January 1985, p.5.

13 Ibid.



- (3) The drivers of all road vehicles carrying hazardous chemicals must carry with them "instruction in writing" relating to each dangerous substance or to each class of dangerous substance whether carried in packed form (i.e. in tins, drums, etc.) or in bulk road vehicles. The instructions including first aid treatment, and advise for dealing with fire, accident, spillage or leakage must be written in English, Hindi and Marathi and in the languages of the state of transit and destination. <sup>14</sup> These instructions in writing should be obtained from the firm/chemical company which load hazardous chemicals for transportation.
- (4) A summary of these instructions in writing should be carried by the driver in his cabin. Under the rules these instructions are known as "Transport Emergency Card". This card should be provided to the driver by the party or supplier of such chemical company, loading the chemical.
- (5) In addition to the above safeguards special signs or plates denoting that dangerous goods are being conveyed should be displayed on the vehicle so as to identify the substance and also reveal its hazardous properties and indicate the necessary action to be taken in emergencies.

The Maharashtra Government in another order issued in the same year<sup>15</sup> clarified elaborately a few of the provisions contained in the earlier order. Under the

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14 See Upendra Baxi, n.9, pp.68-69.

15 Transportation of Dangerous/Hazardous substances by Road Transport Commissioner, Maharashtra State, Order No.MVH3885/D-II(2) THCR/on - 1127, dated 1 July 1986.

new order<sup>16</sup> the carriers of dangerous chemicals while displaying the correct technical names of the chemicals on packages or vehicles should give the name by which those dangerous goods are referred in the third revised edition of the United Nations Committee of Experts on transport of dangerous goods. Furthermore, the label to be affixed on a vehicle carrying this information should not be less than 250mm square and should be marked on the vehicle in such a position that it does not obscure any markings. The carrier of the chemical waste in addition should affix another label not less than 50mm high carrying the name and telephone number of the emergency services to be contacted in the event of an accident or fire and also the name and telephone number of consignor of the dangerous goods or another person from whom expert information and advice may be obtained concerning the measures that should be taken in the event of an emergency, involving dangerous goods. All labels put either on the vehicle or on the bulk container shall be weather proof.<sup>17</sup>

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16 Ibid.

17 Upendra Baxi, n.9, p.66.

The Government of India Rules and Regulations

The order of the Government of Maharashtra has been in force in the state of Maharashtra since 1986 without a central legislation on this subject till 1989. The Government of India, realising the urgent need to promote the object and purpose envisaged in the EPA, laid down rules and regulations in 1989 under Section 3(1) of the EPA<sup>18</sup> for the regulation of carriers of dangerous or hazardous goods.

All carriers (vehicles) of dangerous and hazardous goods in addition to complying with any law for the time being in force in relation to any category of dangerous or hazardous goods, must under the new order,<sup>19</sup> shall display a distinct mark of the class label<sup>20</sup> on every package containing dangerous or hazardous goods. The "class label", must be displayed on the vehicle and be

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- 18 Section 3(1) of the Environment Protection Act, 1986 provides: "Subject to the provisions of this Act, the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution.
- 19 The Government Order No.287 was issued on 2 June 1989. See Gazette of India (1989), pp.142-56.
- 20 "Class label", in relation to any dangerous or hazardous goods, means the class label specified in column 3 of the Table to rule 137.

positioned at an angle of 45 degrees to the verticle and its size shall not be of less than twenty-five million meters square.<sup>21</sup> The class label shall be water proof and must be displayed both in the front and in the rear of the vehicle in a conspicuous manner.

The consigner intending to transport any dangerous or hazardous goods must supply to the owner carrying the hazardous goods, full and accurate information about such dangerous or hazardous goods so as to be aware of the risks created by such goods to the health or safety of any person.<sup>22</sup> Under rule 132 the carrier of dangerous or hazardous goods before undertaking the transportation of such goods satisfy himself about the accuracy of the information given by the consignor and then pass on to the driver. The driver must keep this information in the cabin of the vehicle during the transportation of the goods. Moreover, while carrying the goods he should act with due deligence so as to prevent the goods from fire, explosion or escape. Similarly when the carriage is not in motion the driver should park the vehicle in a place which is safe from fire, explosion and any other risk.

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21 Rule No.130.

22 Rule No.131(2).

He should keep a watch of the goods either himself or with the help of a competent person above the age of eighteen years. Under rule 134 the carriage used for transporting any dangerous or hazardous goods shall be legibly and conspicuously marked with an emergency information containing the correct technical name of the dangerous or hazardous goods, the name and telephone number of emergency services to be contracted in the event of fire or any other accident and the name and telephone number of consigner of the dangerous or hazardous goods or the address of the person from whom export information and advice can be obtained concerning the measures that should be taken in the event of an emergency involving such goods. In case of accident the driver transporting any hazardous or dangerous goods in a carriage shall report the incident to the nearest police station. The 1989 order gives a long list of the names of hazardous and toxic chemicals.<sup>23</sup>

Recent rules issued by the Ministry of Environment and Forests<sup>24</sup> ban the movement of hazardous wastes for dumping and disposal from other countries to India. As per the rules the transboundary movement of hazardous wastes

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23 See Table III, List of Hazardous and toxic chemicals, Government order of June 2, 1989, pp.149-56.

24 Indian Express (New Delhi), 10 October 1989.

can take place only after obtaining permission from the state Pollution Control Boards.<sup>25</sup> These Pollution Control Boards are empowered to issue such permission based on the technical information supplied by the exporter and importer.<sup>26</sup>

An important feature of the 1989 Gazette rules discussed above, is that the transporters of hazardous/dangerous substances or goods, in addition to observing the Gazette rules, must also comply with the provisions of other laws which are in force for the time being. Under this exhaustive provision, hazardous waste generators, transporters and disposers, in the event of causing any environmental damage to the public or private citizen, can be made liable for causing public and private nuisance.

Public nuisance<sup>27</sup> or common nuisance is an offence against the public either by doing a thing which tends

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25 In 21 states, the Central Pollution Control Board and State Pollution Control Boards are functioning. 20 States and three union territories have the Department of environment. See Maheshwar Prasad, "Environmental Problems and Action in India", in T.N. Chaturvedi, ed., The Indian Journal of Public Administration, vol.35, no.3, July-September 1989, p.635.

26 Indian Express (New Delhi), 10 October 1989.

27 A public nuisance is defined in Section 268 of the Indian Penal Code as under: "A Public nuisance is an act of illegal omission, which causes any common injury,

to the annoyance of the whole community in general, or by neglecting to do anything which the common good requires. It is an act affecting the public at large, or some considerable portion of them; and it must interfere with rights which members of the community might otherwise enjoy. It depends in a great measure upon the number of houses and the concourse of people in the vicinity; and the annoyance or neglect must be of a real and substantial nature.<sup>28</sup> Hence all acts which seriously interfere with the health, safety, comfort, or convenience of the public would attract this provision on the simple ground that the generation and improper disposal of hazardous waste in nearby residential area is a matter of great concern to the residents.

In the case of a public nuisance, the Advocate-General or two or more persons having obtained the consent in writing of the Advocate-General, may institute a suit under section 91 of the Civil Procedure Code, for a declaration and

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danger, or annoyance to the public or to the people in general who dwell or occupy property in the vicinity or which must necessarily cause injury, obstruction, danger, or annoyance to persons who may have occasion to use any public right.

28 Ratanlal and Dhirajlal, The Indian Penal Code (Wadhwa and Co., Nagpur, 26 ed., 1987). p.242.

injunction or for such other relief as may be appropriate in the circumstances of the case. A suit under this section is permissible both in the case of a public nuisance and other wrongful acts affecting or likely to affect the public.<sup>29</sup> The executive magistrate under this section can pass an order for removing public nuisance from a public place or way which is injurious to the health or physical comfort of the community.<sup>30</sup>

But then, under private nuisance<sup>31</sup> the alleged act should affect some particular individual or individuals as distinguished from the public at large and the alleged act should not amount to trespass. To claim relief, the aggrieved party may bring a civil action for damages or an injunction or both.

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29 Mullah, Code of Civil Procedure, vol.1 (Bombay: N.M. Tripathi Pvt. Ltd., 1981), p.518.

30 See section 133 (1) of Cr.PC. In cases of this kind follow up action is taken under sections 134-143 of Cr.Pc. Under Section 144 of Cr.Pc the court is empowered to pass an order to prevent any injury or danger to human life, health and safety or disturbance to public tranquility.

31 A private nuisance is defined to be anything done to the hurt or annoyance of the lands, tenements or hereditaments of another, and not amounting to trespass. It is an act affecting some particular individual or individuals as distinguished from the public at large. It is in the quantum of annoyance that private nuisance differs from public. It cannot be the subject of an indictment, but may be the ground of a civil action for damages or an injunction or both. See Ratanlal, Law of Torts (19th edition), Ch.XXI.



The Indian Penal Code, in section 269, prescribes<sup>32</sup> punishment for a term which may extend to six months or with fine, or with both to a person who unlawfully or negligently does any act which he knows or has reason to believe to be likely to spread the infection of any disease dangerous to life. This section is framed in order to prevent people from doing acts which are likely to spread infectious diseases. We have seen earlier the health hazards of improper waste dumping. If such an incident takes place or about to take place the state can prosecute such persons involved under this section.

Similarly under section 277 of the Indian Penal Code whoever voluntarily corrupts or fouls the water of any public spring or reservoir, so as to render it less fit for the purpose for which it is ordinarily used, shall be punished with imprisonment which may extend to three months, or with fine which may extend to five hundred rupees, or with both. The water of a public spring or reservoir belongs to every member of the public in common

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32 Section 269 of IPC provides: "Whoever unlawfully or negligently does any act which is, and which he knows or has reason to believe to be likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine, or with both".

and if a person voluntarily fouls it he commits a public nuisance. If generators and disposers of hazardous waste were to dispose of the waste into a public spring or reservoir, they can be prosecuted under this section.

The Constitution (42 Amendment) Act 1976, has added Article 48A to the Directive Principles<sup>33</sup> mandating the state to endeavour to protect and improve the environment and to safeguard the forests and wild life. It also cast a fundamental duty on every citizen to protect and improve the natural environment.<sup>34</sup>

In addition to the above provisions, the judgement of the Supreme Court in the Oleum Leakage case<sup>35</sup> has strengthened the chances of invoking the principles laid down in that case to cases of improper generation and disposal of hazardous wastes. The Supreme Court in that case said, "an enterprise which is engaged in a hazardous

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33 Article 48A of the Constitution of India provides: The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country.

34 Article 51A (g) (Part-IV A) dealing with Fundamental Duties of the Constitution of India is as follows: It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.

35 M.C. Mehta v. Union of India and Ors. W.P. (Civil), No.12739, of 1985.

or inherently dangerous industry which poses a threat to the health and safety of the persons working in the factory and residing in the surrounding areas owes an absolute and non-delegable duty to the community to insure that no harm results to any one on account of hazardous or inherently dangerous nature of activity it has undertaken."

Furthermore, such an enterprise, "must be held to be under an obligation to provide that the hazardous or inherently dangerous activity" undertaken by it must be conducted with the highest standard of safety and, if any harm results, the enterprise must be absolutely liable to compensate for such harm and it should be no answer for the enterprise to say that it has taken all reasonable care and that the harm occurred without any negligence on its part.

The recent trend of the Supreme Court, as has been expressed in several landmark decisions,<sup>36</sup> is to recognise the right to clean and hygienic environment as one of the Fundamental Rights, as part of the Right to Life<sup>37</sup> itself.

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36 Ratlam Municipality V. Vardichand and others, All India Reporter, 1980, SC. 1623; R.L. Kendra Dehradun v. Uttar Pradesh 1985 (1) Scale 408; M.C. Mehta v. Union of India, 20 December 1986; M.C. Mehta v. Union of India, 22 September 1987 and 12 January 1988.

37 Article 21 of the Constitution of India provides: "No person shall be deprived of his life and liberty except according to procedure established by law."

Hence, if any damage results from the generators, carriers and disposers of hazardous waste, the citizens of this country can enforce the constitutional right to get their grievances redressed.

The above discussion clearly proves that the generators, transporters and disposers, in addition to complying with the specific law on the subject, are to observe several procedural and substantive laws which are passed by the Government of India.

CHAPTER FIVE

## CHAPTER V

### CONCLUSIONS

The preceding chapters reveal that the entire branch of Waste Management Law is just a post-1970 phenomenon. A decade ago, the disposal of hazardous waste and the cost of environmental clean up concerned only a few groups - chemical manufacturers, landfill operators and environmental activists. Today, however, environmental laws swollen by new acts, amendments, and case law hold many individuals, business concerns and industries with liability for clean up costs and damages. The Waste Management laws have made the industries to change their structure and as a consequence many companies are facing the task of redesigning their products to produce less waste.

The Waste Management Law of Japan, as discussed earlier, shows that it is inhibited by the lack of citizens involvement. The legislation does not provide for "citizen suits", like the Resource Conservation and Recovery Act and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of the United States. In addition, Japan lacks an activist national environmental movement to act as a watchdog for the strict enforcement of the

environmental legislations. The existing environmental groups in Japan are fragmented and involved in specific local issues.<sup>1</sup>

The strict regulatory measures adopted by the United States under RCRA and CERCLA is a welcome step and a model to many states. The RCRA, as we have seen, is the federal scheme for regulating hazardous waste. The scheme tracks waste from the time it is generated to its final disposal. At each stage, the Act and its regulations set specific standards for preventing waste release into the environment. The recent provisions added to the RCRA regarding international shipment of hazardous waste prohibit a "person"<sup>2</sup> from exporting hazardous waste until the United States Government has been notified and the government of receiving country has consented to accept the waste. If the US and the receiving country have entered into any agreements regarding hazardous waste shipment, the shipment must conform to the terms of those agreements. The repercussion of this amendment is so much that in 1980, only 12

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1 Pamela S. Passman, "Japanese Hazardous Waste Policy: Signalling the Need for Global and Regional Measures to Control Land Based Sources of Pollution", Virginia Journal of International Law, vol.26, no.4 (1985-86), p.949.

2 A "person" is defined for the purposes of RCRA as "an individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body" - 42 U.S.C. 6903 (15) (1982).

companies notified the Environmental Protection Agency (EPA) that they intended to export hazardous waste. But then, by 1987, the number had grown to 465, with officials estimating between 550 and 575 for 1988.<sup>3</sup>

The Committee reports suggest that Congress intended CERCLA to fill gaps left by RCRA, particularly with respect to inactive abandoned, or unauthorised hazardous waste sites. CERCLA's provisions apply to hazardous substances and not just hazardous waste as defined under RCRA. CERCLA establishes procedures for cleaning up inactive or abandoned hazardous waste sites, provides funding for clean ups, and authorizes the EPA to mandate and undertake clean ups. Another important feature of CERCLA is that the comprehensive compensation plan provided under it is to insure against damages caused by hazardous waste facilities both during operation and after closure. CERCLA covers liability for natural resource damages.

The sole focus of the RCRA and CERCLA Amendments of 1984 and 1986 have been to expand the stringency and scope of the regulatory programmes to insure or stimulate demand for proper hazardous waste management.

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<sup>3</sup> Quoted in Amrita Bazar Patrika (Calcutta), 25 November 1989.



The American courts, as we have noted, did not hesitate to apply the traditional common law principles of public nuisance, private nuisance, trespass, negligence etc., on generators, transporters and disposers of hazardous wastes for the purpose of liability. In some cases, the courts even applied the principle of strict liability for the abnormally dangerous activity of hazardous waste generation and subsequent disposal combined with notions of enterprise liability. The American practice serves as a blueprint and may help many states to lay down liability rules in their Waste Management Laws.

Another noteworthy development is that since RCRA has raised disposal costs, many companies in United States have altered their operations to reduce waste to reuse it for energy and raw materials.

The RCRA provisions differ from the EEC Final Directive requirements in that (1) the party desiring to make the shipments must rely upon the United States Government to notify the receiving country of the shipment rather than notifying the receiving government itself; (2) the consent, objection, or conditional approval given by the receiving country is channelled through United States governmental agencies instead of being sent directly to the shipping party.

In addition, the EEC Final Directive does not deal with procedures to be followed by transporters or Member State authorities if an accident or spill does occur during transit. In particular, the Final Directive does not even require that accidents or spills be reported to the competent authorities. The absence of provisions for reporting and dealing with spills and accidents may be directly related to the decision to defer action on insurance liability.

The OECD Recommendation on Transfrontier Pollution is that the hazardous waste is properly handed whether it remains in the country of origin or is exported for treatment and disposal. The OECD Action is consistent with the EEC Final Directive in two important respects. First, both actions are based upon the theory that appropriate governmental authorities in the countries of final destination, transit and origination should be notified before the shipment proceeds. Second, both recognise the rights of member countries to restrict or prohibit shipments of hazardous waste, provided that objections are made on the basis of valid national law. Under the EEC Final Directive, however, the implementation procedure for notification and objection are much more detailed. The OECD Action, like the EEC Final Directive, fails to address important issues of liability and insurance.

The OAU Council Declaration that the dumping of nuclear and industrial waste in Africa is a crime against Africa and the African people significantly helped many African countries to pass legislations to this effect. Some of them have even imposed severe penalties for violators. Under the emerging norms all the developing countries desire fuller disclosure by the exporting nations on the nature and hazards of the waste. Furthermore, all the developing nations request that transit nations through which the waste will pass en route to its destination, should be permitted to prohibit transport of wastes in transit if they deem it unsafe. They also request transfer of technology to aid in the safe handling of the waste.

The Basel Convention, as noted provides for timely notification, information exchange and consultation between state parties in relation to hazardous waste. In case of dispute, parties can settle their disputes through the traditional modes or else can accept the compulsory jurisdiction of the International Court of Justice. In case of transboundary harm caused due to export of hazardous waste, the principle laid down in the Trial Smelter Arbitration and the Corfu Chennel case, can be invoked to make the state liable under international law. In addition, principle 21 of the 1972 Declaration of the UN Conference

on the Human Environment could also be the basis of an obligation, to regulate adequately activities within a nation's borders so as not to harm the environment of other nations. If a nation has no adequate way for disposing of the waste, as a producer of the waste, it should be responsible for the consequence.

The Convention's influence among the African, Asian and Latin American nations is tremendous. Recently the Antofagaste Court of Appeals in Chile has issued a writ of amparo against a US company to prevent a shipment of industrial waste from entering the country through the port of Antofagasta.<sup>4</sup> The court injunction resulted from the petition filled by the regional department of the Flora and Fauna Defence Committee (CODEFF).

Another major development which we have noted is that even in the absence of a law on hazardous waste the other provisions of law remaining in force in a country can take care of the generators, transporters and disposers for causing damage. On this pretext none can escape liability.

weakness

A glaring / of the Basel Convention is that it leaves the choice of defining hazardous waste to the respective

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<sup>4</sup> Foreign Broadcastes Information Service (FBIS),  
Washington-Latin America, 1 November 1989.

State Parties. As a result, a state willing to export hazardous waste may innocently abuse this provision by not including certain items as wastes in their national definition even though they are so in reality. When once a State Party succeeds in doing this, it can take another state's consent and export it by observing the other provisions of the Convention. This weakness of the Convention, if followed by States, may lead to a confused legal order, wherein it would be very difficult for the international community to regulate the waste trade.

But then, every international treaty in order to be effective should have the support of the highly industrialised free market, and socialist and developing countries. Hence a compromise between all the groups, at least in the beginning to regulate the present lawlessness is a necessity.

In India, the Environmental Protection Act (EPA), was the result of a felt need and was passed with a view to covering more areas of environmental hazards and to bringing in a general legislation for environmental protection. Concentration of powers with the Union Government is the predominant characterisation of the EPA. The Orders of the Transport Commissioner of Maharashtra as well as the Government of India Rules and Regulations on the Carriers

of Dangerous or Hazardous Goods impose strict observance on the consigners and transporters of dangerous or hazardous substances at every stage of their transportation.

India is among several countries that have adopted waste control and pollution curbing measures in a number of spheres to provide cleaner and safer environment. Very recently, the Ministry of Environment and Forests, Government of India, has formed three sub-groups to work for the effective utilisation of wastes in an environmental framework.<sup>5</sup> The Government of India has signed the Basel Convention and has accepted its obligations in principle.

The decisions of the courts to protect the environment and the fragile eco-system is clear from the recent decisions. In its landmark judgement in December 1986 in the Shriram Food and Fertilizer case, the Supreme Court has held that an enterprise engaged in hazardous or dangerous activity would be strictly and absolutely liable to give compensation to all those affected from an accident.

A study of the legal mechanisms at the national, regional and international levels on transboundary movements of hazardous wastes suggests the following emerging norms.

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5 Indian Express (New Delhi), 17 April 1990.

- (1) It is important that the advanced industrialized nations adopt and implement strict export controls on the transboundary transportation of hazardous wastes.
- (2) The producer or generator of hazardous waste should label the waste containers. The label should provide the producers name and address and description of the container contents.
- (3) All storage, treatment and disposal facilities for hazardous waste should be licenced.
- (4) Waste is disposed of only in designated management facility.
- (5) Facility owners must provide to government authorities a record of the types and location of hazardous waste buried within the facility.
- (6) The legislations made in this area must be supported by an effective enforcement system.
- (7) The rules and regulations give a hint that there is an urgent need for national policies to encourage waste minimisation and recycling in all countries, regardless of their stage of development. In essence, waste management should become an integral part of industrial planning in all countries.
- (8) To achieve the above goals effective treatment technology and adequate training programmes are required before unsatisfactory waste management practices can be abolished.

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