Hazardous Waste Trafficking, Human Right to Clean Environment and Environmental Social Justice ～ Tug-of-war: environmental 'injustice' vs. 'green social justice' 2 ～

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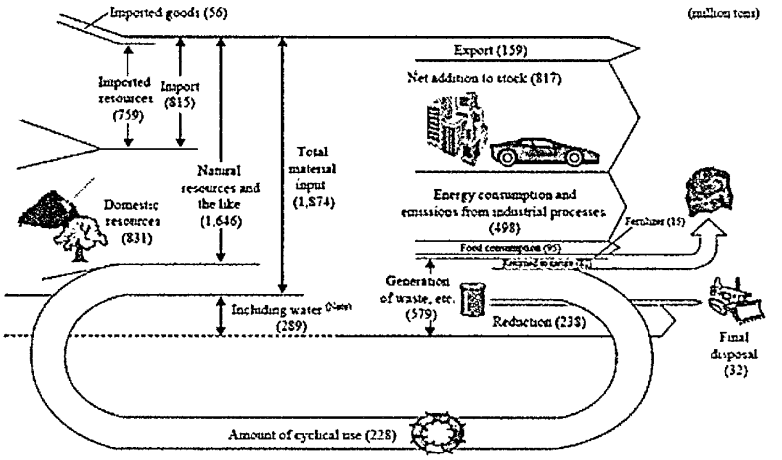
1 Introduction

The White Paper 2008 by Japanese Ministry of Environment explains that the Japanese government has created a diagrammatic illustration of material flows (Material Flow Chart) by calculating the material flows that encompass all movements of materials in an economic society and then collecting data that show how much resources were input into the Japanese economic society, how much were reserved in society, consumed as energy, or turned into waste, and how much of the generated waste was recycled or disposed of in final disposal sites (Ministry of Environment 2008, p.17).

Figure 1: Material flow in Japan (FY2005)



(Note) Including water: [illegible]
Source: Ministry of the Environment

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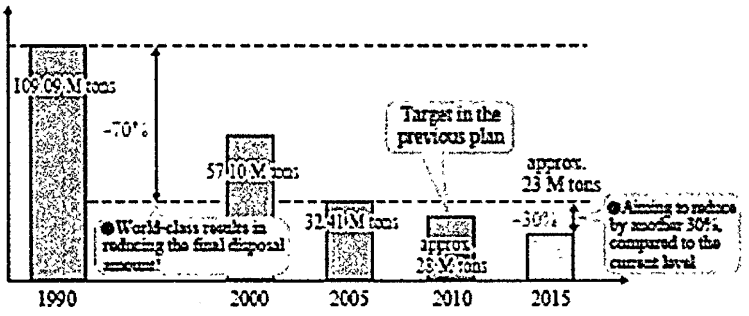
Source: Ministry of the Environment, Planning Division Waste Management and Recycling Department (2008) *The World in Transition, and Japan's Efforts to Establish a Sound Material-Cycle Society*. Tokyo: Ministry of the Environment, Government of Japan, p.17.

It continues that the target for the outlet has been set by the final disposal amount: approximately 23 million tons in FY 2015. The final disposal amount is an indicator that is directly linked to the urgent problem of a shortage of final disposal sites. Being expressed as the sum of the final disposal amount of municipal solid waste and industrial waste, this indicator should be reduced. The target figure is about 80% lower than the amount in FY 1990 (approximately 110 million tons) and about 60% lower than the amount in FY 2000 (approximately 56 million tons) (Ministry of Environment 2008, p.18).

Figure 2: Trends in the final disposal amount of waste since 1990



Source: Ministry of the Environment

Source: Ministry of the Environment, Planning Division Waste Management and Recycling Department (2008) *The World in Transition, and Japan's Efforts to Establish a Sound Material-Cycle Society*. Tokyo: Ministry of the Environment, Government of Japan, p.19.

However, it is not clear how to reduce it. In this article, focusing on the global problem of hazardous waste trafficking, its 'geopolitics and political economy' are examined, and fundamental concepts for establishing 'human rights to clean environment' and 'environmental social justice' are suggested.

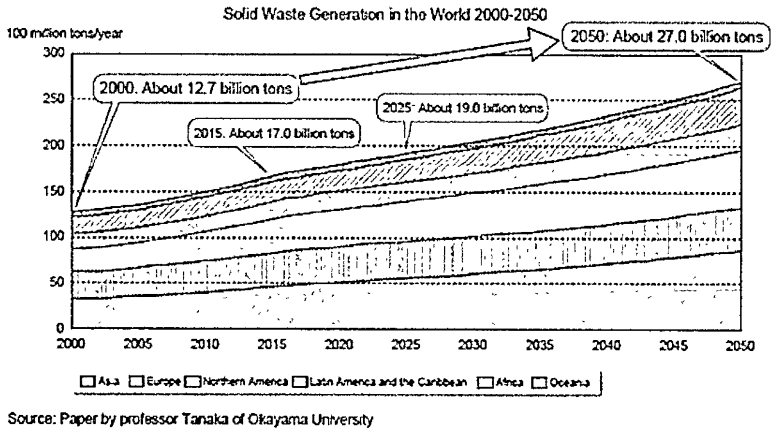
2 Geopolitics of hazardous waste trafficking

2.1 Global problem of waste and increasing waste-export to Asian countries

The White Paper 2007 by Japanese Ministry of Environment explains that at a Ministerial Conference on the 3R (reduce, reuse and recycle) Initiative held in Japan in April 2005, the participating countries stressed, as a common global task, that we are all confronted by an increasing generation of waste and non-sustainable waste management. According to further forecasts of global waste generation carried out by Okayama University, the world total volume of waste was about 12.7 billion tons in 2000, but this is predicted to rise to about 19.0

billion tons in 2025 and to about 27.0 billion tons in 2050. The predicted increase in the Asian region is particularly significant (Ministry of Environment 2007, p.3).

Figure 3: Solid Waste Generation in the World 2000-2050



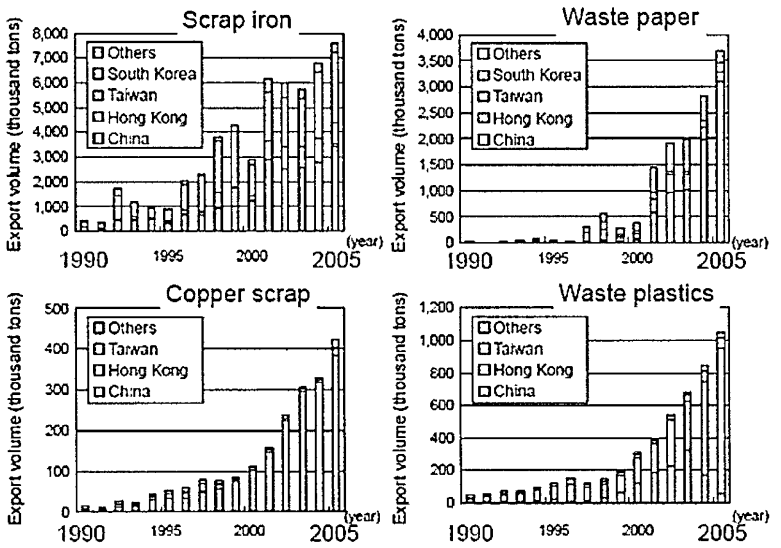
Source: Paper by professor Tanaka of Okayama University

Source: Ministry of the Environment, Planning Division Waste Management and Recycling Department (2007) *Technologies to support a Sound Material-Cycle Society: Development of 3R and Waste Management Technologies*. Tokyo: Ministry of the Environment, Government of Japan, p.3.

In recent years, meanwhile, the volume of discarded television sets, personal computers, refrigerators and other electrical and electronic products has also increased, and exports and imports of these for recycling or disposal have risen sharply. These discarded electrical and electronic products sometimes include lead and other harmful substances. These are being recycled under environmentally inappropriate practices in developing countries (Ministry of Environment 2007, p.4).

The White Paper 2007 sees a growing trend that, in Japan, recyclable resources are exported to China and other Asian countries. Trade in recyclable resources that circulate for commercial gain is now handled in the same way as other materials and products. With increased demand for resources associated with economic growth in China and other East Asian countries, the volume of exports to these countries in recent years has increased sharply. For example, exports of iron and steel scrap from Japan to China were about 330,000 tons in 1995 but about 3.46 million tons in 2005, showing that in those 10 years the volume had increased more than ten-fold. In other words, movements of recyclable resources no longer terminate within Japan but have spread internationally (Ministry of Environment 2007, pp.4-5).

Figure 4: Exports of recyclable resources



Source: Ministry of the Environment, Planning Division Waste Management and Recycling Department (2007) *Technologies to support a Sound Material-Cycle Society: Development of 3R and Waste Management Technologies.* Tokyo: Ministry of the Environment, Government of Japan, p.5.

2.2 Global overview of waste trafficking: 'Garbage imperialism' or 'waste colonialism'

Gruppo Abele-Nomos describes that over the past thirty years, several conventions and agreements have been adopted at both international and regional levels. These include: the 1989 Basel Convention on the control of cross-border shipments of hazardous wastes into various African, Caribbean and Pacific countries; and a number of regional agreements and regulations banning waste imports in Central and South America, South-East Asia and the South Pacific. Although these instruments tried to put an end to the growing flow of environmentally sensitive products from developed to developing countries, particularly in the case of illegal hazardous waste trafficking, countries in the South continued to be the recipients of growing amounts of waste produced in the North. Moreover, one side effect of increased bans on shipments of toxic substances and waste was tremendous escalation in prices for these commodities while legal avenues for disposal were dramatically decreased (UNICRI 2000, 9). During the late 1980s the average disposal cost for one ton hazardous waste in a Western country was between US$100 and US$2,000, while in Africa it was between US$2.50 and US$50 (RIIA 2002). At that time, of the around 300 million tons of waste produced each year in the developed world, some 50 million tons were shipped to Africa (United Nations 2001, 12) (Gruppo Abele-Nomos 2003, p.15).

Both the global nature of the world economy and the inability or unwillingness of some nations to stop environmental crimes and police them effectively, have facilitated the illegal

businesses of a wide range of groups and individuals who have found extremely profitable sources of illegal gain in this environment. A recent international report on the phenomenon stated: the more rigorous the regulations for toxic waste become, then the more tempting it becomes for illegal actors to venture into these businesses (UNICRI 2000, 9). In many cases, the adoption of legislative measures without proper enforcement resources and the weak support of business sectors, consumers and other constituencies have strongly encouraged the emergence of a new and highly lucrative black market whose international extent and dimensions are difficult to quantify (Gruppo Abele-Nomos 2003, p.15).

In addition, Gruppo Abele-Nomos finds the North-South trend, and see it as 'garbage imperialism'/'waste colonialism'. In 1980, almost 80% of the hazardous waste trade was between developed countries (United Nations 2001, 12). However, by the early 1980s, the increased amount of waste produced in these countries (around 300 million tons per year), together with the adoption of stricter legislation, made it clear it was becoming increasingly difficult and costly to dispose of this enormous amount of waste in a safe and environmentally sound way. In the mid-1980s, according to the United Nations, significant North-South trend emerged and the existence came to light of numerous contracts between Western companies and African countries. This sort of 'garbage imperialism' has been documented by several international reports and enquiries made by both institutional as well as non-governmental bodies. Between 1986 and 1988, at least 15 African countries were targeted by Western companies offering money for land to use as toxic waste dumps (United Nations 2001, 12) (Gruppo Abele-Nomos 2003, p.15).

It continues that although several African states responded to the threat of such 'waste colonialism' through the adoption of the Lome IV Convention and Bamako Convention, which imposed a total import ban on all hazardous wastes to African, Caribbean and Pacific countries, the threat posed by unscrupulous dumpers remained and, within a few years, shifted to other areas of the world. Both Eastern Europe and Southern Asia were discovered by waste traders following the ratification of the conventions closing off Africa to further waste disposal. Asia is currently considered one of the main destinations for illicit waste trafficking. According to Greenpeace reports, more than 100,000 tons of unauthorized waste entered India in 1998 and 1999. China is one of the biggest targets for illegally imported hazardous electronic waste, 50% of which originates in the United States that has yet to ratify the Basel Convention (Mastny and French 2002, p.18) (Gruppo Abele-Nomos 2003, pp.15-16).

3 Political economy of hazardous waste trafficking

3.1 Exporting harm: high-tech trashing of Asia

Jim Puckett and Ted Smith critically examined a crucial situation of high-tech trashing in Asia. E-waste is the most rapidly growing waste problem in the world. It is a crisis not only of quantity but also a crisis born from toxic ingredients --- such as the lead, beryllium, mercury, cadmium, and brominated flame retardants that pose both an environmental health threat. To date, however, industry, government and consumers have only taken small steps

to deal with this looming problem. Rather than having to face the problem squarely, rich economies that use most of the world's electronic products and generate most of the e-waste, have made use of a convenient, and until now, hidden escape valve --- exporting the e-waste crisis to the developing countries of Asia. Yet trade in e-waste is an export of real harm to the poor communities of Asia. The open burning, acid baths and toxic dumping pour pollution into the land, air and water and exposes the men, women, and children of Asia's poorer peoples to poison (Puckett and Smith 2002, p.1).

They describe an untenable choice between poverty and poison. The export of e-waste remains a dirty little secret of the high-tech revolution. Scrutiny has been studiously avoided by electronics industry, by government officials, and by some involved-in e-waste recycling. This often willful denial has been aided by those cynical labeling of this trade with the ever-green world 'recycling'. There are many e-waste recyclers whose recycling claims offer false solutions --- recycling via export directly or indirectly through brokers. Indeed, informed recycling industry sources estimate that between 50 to 80 percent of the e-waste collected for recycling in the western U.S. are not recycled domestically, but is very quickly placed on container ships bound for destinations like China. Even the best-intentioned recyclers have been forced, due to market realities, to participate in this failed system. Few of us realize that the obsolete computer we pay someone to take, in hopes it would be recycled, might end up China or some other far-off Asian destination. Although it has been a secret well-kept from most consumers, the export 'solution' has been a common practice for many years (Puckett and Smith 2002, pp.1-2).

Moreover, they explain that global economics and disproportionate burden. E-waste exports to Asia are motivated entirely by brute global economics. Market forces, if left unregulated, dictate that toxic waste will always run downhill on an economic path of least resistance. If left unchecked, the toxic effluent of the affluent will flood towards the world's poorest countries where labor is cheap, and environmental protections are inadequate. A free trade in hazardous wastes leaves the poorer peoples of the world with an untenable choice between poverty and poison. The principle of environmental justice asserts that no people, based on their race or economic status should be forced to bear a disproportionate burden of environmental risks. We can no longer pretend that we don't know what is happening with a large portion of our discarded electronic waste. We can no longer allow its dumping on foreign shores. The real answer lies not in exporting our problems to those least able to deal with them, but in preventing the problems at their source (Puckett and Smith 2002, pp.2-4).

3.2 Exporting environmental risks to developing countries and growth of illegal market

Gruppo Abele-Nomos analyses that with the adoption of the international and regional legislative tools, northern waste-generating firms began facing higher costs and tighter regulations regarding toxic waste disposal. Meanwhile, many countries in the developing world began to refuse toxic waste imports. However, the weakness of developing countries in exercising their right to protect themselves from unwanted waste imports resulted in a continuation of the North to South waste trade and the large growth of the illegal market. Moreover, external pressures imposed by foreign waste trading corporations often include

promises of easily acquired foreign currency, increased employment, creation of waste recycling enterprises and the transfer of new technologies (United Nations 2001, 18) (Gruppo Abele-Nomos 2003, p.16).

They insist that the illicit traffic in environmental 'goods' and the illegal management of a wide array of environment-related services have been encouraged by a number of legal, economic, political and social factors: first and foremost, the presence of weak domestic treaty enforcement. Alongside the loopholes and ambiguities existing in national legislation, the disparities in domestic regulatory mechanisms and lack of effective international control, the United Nations recently emphasized that the liberalization and deregulation of economies in developing countries have significantly encouraged the illegal export of toxic and dangerous wastes to these areas (United Nations 2001, 16). The structural position occupied by certain nations in the global political economy, and the interests of powerful industrial players, as well as the involvement of non-state actors such as organized crime and other criminal groups, should all be considered key factors in determining the geopolitics of illegal market and the routes followed by waste smugglers (Gruppo Abele-Nomos 2003, p.16).

Moreover, they analyses a roll of organized crime and other legal and illegal actor. With the development of stricter international regulations and national legislation, the criminal environment market has evolved along with its major players, adapting to new circumstances and taking on various forms and characteristics (United Nations 2001, 13). International environmental crimes seem to be committed by a wide variety of actors ranging from more traditional mafia-type organizations (such as the case of La Cosa Nostra's involvement in New York's garbage industry and, more recently, the Ecomafia in Italy) to loose networks of individuals with no criminal background belonging to various economic sectors. Between the two poles of this hypothetical continuum, the available literature emphasizes the presence of: corporate entities seeking to save money illegally; respectable people with high social status who commit crimes in the course of their careers in order to gain a competitive edge over business rivals; individuals engaged in other illicit operations who provide their services to environmental businesses; and partnerships between conventional organized crime affiliates and legitimate businessmen, government officers and other official actors (Gruppo Abele-Nomos 2003, pp.16-17).

In addition, in recent decades, richer countries have used poor countries as a 'sink' for pollution and waste. Ironically, improvements in environmental quality resulting from the enactment of stricter environmental standards in the global North sometimes have contributed to the growth of polluting industries and the dumping of toxic wastes in the South, as corporations and entire industries actively seek sites with fewer environmental regulations. While the 1992 Basel Convention on the Control of Transboundary Movements of Hazardous Waste regulates the export of waste, its 'recycling' clause has permitted toxic waste to be labeled as recyclable material and hence exportable. A similar dynamic has emerged within Europe, where companies in the more prosperous regions of the EU are outsourcing waste disposal to municipalities in poorer countries in Central and Eastern Europe. This process began in the early 1990s, when the change of political systems facilitated trade between east and west. The east-west trade in waste has accelerated with

CEE countries' accession into European Union (Steger 2007, p.17).

4 Human right to clean environment and development of environmental social justice

4.1 Human right to clean environment

Tamara Steger insists that a clean and safe environment and access to natural resources are basic human rights. The UN General Assembly Resolution 45/94 declared that, "all individuals are entitled to live in an environment adequate for their health and well-being". This was the outcome of persistent efforts by the environmental movement to establish the right to a clean environment as a universal human right. As of 2004, as many as 53 nations included the provision of such a right in their constitutions. Principle 3 of the 1994 Draft Declaration of Principles on Human Rights and the Environment establishes a foundation for environmental justice: All persons shall be free from any form of discrimination in regard to actions and decisions that affect the environment. Principle 4 states that all persons have the right to an environment adequate to meet equitably the needs of present generations and that does not impair the rights of future generations to meet equitably their needs (Steger 2007, p.16).

There is a gradually developing, strong international and national framework for human rights encompassing environmental issues and linking the protection of human rights with sustainable development. Cases of environmental injustice have to be seen in these two contexts: i) people have the right to a clean and safe environment and fair access to natural resources; and ii) sustainable development means that the needs of some people must not be met by treating others unfairly, including future generations. Research on environmental justice can contribute to understanding the human rights-sustainable development nexus. It contributes to understanding the origins, mechanisms and impacts of differentiated treatment and creates a basis for analyzing how to prevent inequality in the distribution of environmental benefits and harms at the international, country, regional or local levels (Steger 2007, p.17).

She explains that the conceptual and legal integration of environment, health and human rights in the past two decades has given rise to new forms of social activism, new constitutional protections in many countries, at least one major regional treaty, and new human rights norms at the international level. The origin of the linkages between human rights and the environment derive from four streams of thought and research: 1) research showing discrimination in the distribution of environmental risks and benefits, which has fostered the emergence of 'environmental justice' movements on behalf of marginal social groups in many countries; 2) research showing that developed countries export environmental risks to developing countries, resulting in increased attention to this problem by UN agencies; 3) the movement to establish the right to a clean environment as a universal human right, resulting in the provision of such a right in the constitutions of 53 nations as of 2004; and 4) arguments claiming that environmental protection itself is enhanced when poverty is reduced, social inclusion is stressed, and citizens are armed with civil rights that

ensure that they have access to information, participation, and justice (Steger 2007, p.15; Watkins et al.; Williams).

4.2 Environmental social justice

Concerning environmental justice, Tamara Steger mentions that the environmental justice movement came about as communities struggled against unequal treatment and discrimination in the distribution of adverse environmental effects. As a concept, it helps to unveil the relationship between environment, health and human rights, challenging environmentalists, health workers, and human rights advocates to reevaluate the traditionally delineated boundaries of their work. Environmental justice is about the distribution of environmental harms and benefits, and access to and consideration in procedures dictating their distribution. Justice is usually defined as concept involving the fair, moral, and impartial treatment of all persons, especially under the law. Distributive and procedural justice is critical to environmental justice. Distributive justice is the doctrine that a decision is just or right if all parties receive what they need or deserve. It is often contrasted with procedural justice emphasizing equal access to forums and procedures where important decisions are made about people's lives. Distributive justice concentrates on just processes (Steger 2007, p.10).

Here she offers a new definition of environmental justice. More recently, in addition to the demand for equity in the distribution of environmental harms and benefits, the movement has been characterized as a call for recognition of diversity. This means that environmental justice is not only about inequalities in how environmental goods and bads are distributed based on race or class, but also about access and participation in decision-making that affects people's lives. Thus, environmental justice is not only about who will get what, but also about the processes and procedures that govern how we decide the principles of social distribution. According to Harvey, "The coupling of the search for empowerment and personal self-respect on the one hand with environmental goals on the other means that the movements for environmental justice twins ecological with social justice goals in quite unique ways". This makes the environmental justice movement cross-sectoral and broad enough to engage groups and individuals with various backgrounds in environmental decisions (Steger 2007, p.13).

She summarize that the World Commission on Environment and Development "pleaded with governments to consider the time dimension in all their decisions and to weigh benefits in the present against losses in the future". In addition to the already famous definition of sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs, the Commission also stressed that inequality is the planet's main environmental problem. Intergenerational rights for the environment thus can be seen as an intergenerational environmental justice issue. Social needs, environmental benefits and economic opportunities must be understood within the limits imposed by life-supporting ecosystems. This approach builds on the sustainability concepts defined by Agyeman as, the need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, whilst living within the limits of supporting

ecosystem (Steger 2007, pp.13-14; Capeheart and Milovanovic).

5 Conclusions

We are now facing environmental crisis and human beings stand on the edge of a precipice of subsistence. Protecting the environment from destruction is one of the critical challenges today because there is a possibility that this situation influences upon the survival environment of not only our generation but also next generations (Beck; Guattari; Herzogenrath). Environmental crimes, especially hazardous waste trafficking, have been exerting a tremendous harmful influence on the globe and our viabilities. This harmful influence is unequally and unfairly distributed between industrialized countries and developing countries.

Tamara Steger mentions that environment-related justice consists of three main spheres. It is justice towards the future generations (or inter-generational justice), ecological justice (or justice related to non-human beings) and the social dimension of distribution within the human space (intra-generational justice) (Steger 2007, p.14). A new concept of 'environmental social justice' can be suggested in line with this threefold environmental justice. Chaos/complexity green criminology encourages us to develop this new concept not only theoretically but also practically (Takemura forthcoming, 1997a, 1997b; South and Beirne; Beirne and South; White 2005, 2008, 2007; Lynch and Stretsky; Carrabine et al.; Halsey 2004, 2006; Milovanovic 2003, 1997a, 1997b; Young 1998, 1997a, 1997b; Williams and Arrigo; Levin; Taylor).

Note:

1) This article is based on the paper titled 'Multiple Criticality of Environmental Crimes and Chaos/Complexity Green Criminology: Political Economy of Hazardous Waste Trafficking and Environmental Social Justice', and presented at the 8th annual conference of European Society of Criminology held in Edinburg, United Kingdom, 2-5 September 2008.

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