

NEWSLETTER

No. 6

March 1993

THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS

This newsletter is printed on recycled paper.

Dear Waste Management Experts

This month, the Japan Society of Waste Management Experts is observing its third anniversary. To celebrate, we are pleased to tell you that our NEWSLETTER, which has been issued twice a year since November 1990, will now be published every four months, March, July and November, beginning this month.

These days in Japan, we have a lot of grassroots and community based activities to improve waste management and to promote environmental protection. This issue introduces a JSWME symposium which explored the reasons behind the activities. It also covers some legislative and administrative attempts to respond to those citizen level activities.

Incidentally, let me express our thanks to Mr. George Crane of Chubu Recycle, who has been helping us with proofreading since issue NO. 4.

(by Hiroki HASHIZUME)

JSWME's Symposium : Solid Waste Management From a Woman's Viewpoint

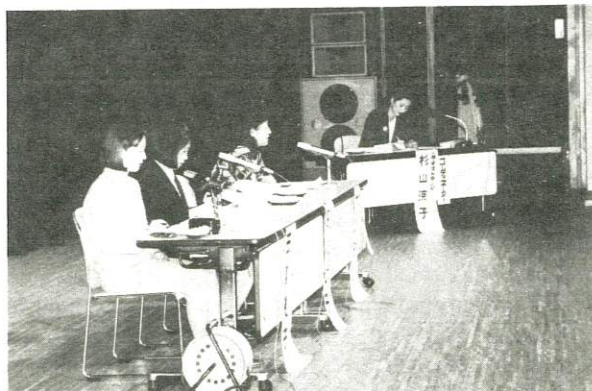
Perhaps it was the subject itself that was the most controversial in this symposium. "What is solid waste management from a woman's viewpoint? Then, how about man's viewpoint? Is there any difference in viewpoints regarding solid waste management between men and women?" As a coordinator of the symposium, I myself felt uneasy about this subject. All of the panelists, who were female, shared this uneasy feeling, and Ms. Kimata, one of the panelists, said "In order to seek a way to solve environmental problems, we need global view points as human beings, no matter if we are male or female, and no matter what nationality we are."

In this symposium, the main point of discussion was how to build better relationships between manufactures and consumers for waste management. Each panelist made a presentation. Outlines of their speeches follow;

Ms. Kimata is president of Japan's lead franchise of The Body Shop, which is an eco-conscious international skin and hair care company with operations in 41 countries. "The Body Shop has had an eco-audit carried out by a third-party organization since 1989, and we published *The Green Book* based on our environmental policies. We provide refilling service and collect used bottles for

recycling, and achieving profits is only a part of our business. We also contribute to our community, society and the earth. Who can improve society? It is neither politicians nor administrators, but citizens. The Body Shop wants to serve as a catalyst to combine and strengthen each citizen's power."

Ms. Numasaki is an active member of a non-governmental organization in Kyoto which published *Shopping Guidebook for Green Consumers*, the first guide of this kind in Japan. "*Shopping for a Better World* and *Green Consumer Guide* have had a great influence on marketing in the United States and Great Britain respectively, and eco-conscious supermarkets have increased their market shares. In Japan while such activities as collecting used paper, glass bottles and metal cans has been common, green consumerism (selecting eco-friendly goods and avoiding purchase of waste-to-be such as useless packaging) has not become firmly established yet. The purpose of issuing this shopping guidebook was to establish consumers' sovereignty by giving them information that will help them make choices based on information other than that received through advertising and promotions. We need more opportunities to talk frankly with manufacturers."



Ms. Okajima is a public relations manager for Procter & Gamble (P&G) Far East, Inc.. P&G is a worldwide multinational corporation that produces household commodities. "In order to lessen the stress on the environment, we need to reduce the total energy and resources which are consumed in the process of production, transportation, consumption and finally, discard. In other words, life-cycle analysis of products will be an effective method for evaluating the environmental impact of products. We have put an emphasis on waste reduction and recycling, thereby reducing consumption of raw materials through compact packaging, greater use of secondary materials, coding of plastics and the selection of recyclable materials.

Manufacturers should try to produce more eco-friendly products and give correct information to consumers."

Regarding my question "Who should pay for the environmental cost?", Ms. Kimata said "Who should pay is not crucial. We try our best to have customers understand through communication." Ms. Okajima answered the environmental cost is considered to be a part of the production cost. "Every body should bear the environmental cost and manufacturers should not elude the burden." said Ms. Numasaki.

(by Hideo AZUMA)

An opinion was expressed from the audience, "The most important factor is having a mandatory system and economic incentives. Voluntary efforts by each company are limited, and fundamental solutions will not be achieved until there is a fundamental change in society, I agree. However, we cannot just wait for a revolution. I believe now is the time for both manufacturers and consumers to be realistic and to take action."

(Ryoko SUGIYAMA)

Japanese Municipalities on the Move (5)

Establishment of Recycling Ordinances in Tokyo Municipalities

Solid Waste Management in Japan is continuing to move forward. "The Waste Minimization and Promotion of Recycling Law" was enacted in April 1992, and the "Waste Disposal Law" was substantially amended in October 1992, the first amendment in 15 years. Following that, most municipalities responsible for public cleansing are also amending their existing ordinances or enacting new ordinances. Citizens' consciousness has changed and community participation in such activities as collection of used papers, glass bottles and empty cans is getting more and more popular.

The Tokyo Metropolitan Government substantially amended its Public Cleansing Ordinance and introduced a Waste Disposal and Recycling Ordinance in July 1992, the first municipality in Japan to do so. This new ordinance is aimed at creating a new type of city that would promote all manner of recycling activities, not only solid waste but water and other resources. To accomplish this purpose, the ordinance makes clear the role and obligation of citizens, business enterprises and local government.

24 Municipalities in the Tama district, a suburban area of Tokyo that consists of 32 municipalities and has a population of 3.6 million, are also amending or enacting similar ordinances. In some municipalities, citizen groups prepared drafts of those ordinances by themselves. Citizen groups are so active on this issue because they feel the shortage of land for a final disposal site has come to a crisis point. The Tama district is an inland, hill and mountain area, so it is not an easy place to construct a landfill. The present landfill in the town of Hinode is the only one in the Tama district. Almost all the solid waste from Tama Municipalities is transported into the site after burning or pulverizing. However, this landfill will be full by the end of FY 1995 and the construction plan for a new site is in a deadlock because

of the strong opposition from surrounding residents. Hence the municipalities that use the site are required to reduce their volume of waste. This has also spurred greater participation in grassroots recycling activities by local citizens. (by Hideo AZUMA)

Hard Time for Recycling Industries

Japanese recycling industries are experiencing hard times due to the sluggish market. On the supply side, recycling has been promoted very actively thereby dramatically increasing the supply of recyclable materials on the market. On the demand side, however, only limited improvement has been made in establishing a reliable market. The resulting supply-demand gap has caused prices to plunge, and in some cases the generators of recyclable materials now have to pay recycling collectors instead of being paid. This situation may irreversibly damage the Japanese recycling industry whose industrial base is already quite weak. It will also discourage citizen participation in source separation of recyclable materials.

In the case of paper recycling, the amount of used paper collected is increasing because of the active participation of environmentally conscious citizens and collection of used paper in business areas. These recycling activities are promoted directly or indirectly by local authorities which are making every effort to reduce the amount of wastes, particularly in areas being faced with the imminent difficulty of land acquisition for new landfills. This over-supply of used paper has brought down the price of used newspaper to the level of 7 yen (0.05 US\$) per kilogram which is far below the break-even point for the recycling industry. In spite of the low prices paid for used paper, the price of recycled paper is still not competitive with high quality paper made from virgin pulp because the latter is enjoying not only the low price of virgin pulp but also the lower costs of production in new paper mills. In addition, the shrinking market for used paper is being invaded by cheap imported used paper, making the situation for Japanese paper recycling even more complicated.

The situation in the iron scrap market is nearly the same. A sharp decrease in the production of electrosteel industries has shrunk the demand for scrap metal. Because of the low market price, the generators of scrap metal now have to pay the recycling industries to have the scrap picked up to be recycled. This situation inevitably removes scrap metal from the recycling loop and there is no other choice but to dispose of it as waste. The collapse of local recycling industries may terminate the recycling loop forever. Promulgation and enforcement in 1991 of the law for the Promotion of Utilization of Recycled Resources gives, however, a flash of hope because paper industries are now obligated by this law to use more used paper as raw material for paper production. Japanese recycling industries and public cleansing services are closely watching the effect of this law and are looking forward to seeing the revival of local recycling industries.

(by Kunitoshi SAKURAI)

**A Brief Note on Solid Waste Disposal in Japan (6)
- Separate Collection -**

There are many types of separate collection of waste among Japanese municipalities these days. People who have moved from one city to another are often puzzled by the differences in handling their household garbage.

Separate collection of waste, except for bulky waste, is shown in the table below. The number of municipalities that collect 2 types of wastes is the largest (47.7%). The second are those that collect 3 types (28.5%). A 7.0% of all municipalities don't practice separate collection at all.

Among municipalities of which population is less than 50 thousand or more than 500 thousand, the collection of 2 types is most common. On the other hand, in the cities with populations between 50 and 500 thousand, collection of 3 types is most common.

Number of Municipalities Which Apply Separate Collection

No. of Waste Types Separated	Population of Municipalities (Thousand)				
	~50	50 ~200	200 ~500	500	total
1	206 (7.5%)	8 (2.4%)	4 (4.9%)	3 (15.0%)	221 (7.0%)
2	1398 (51.1%)	94 (28.7%)	11 (13.6%)	8 (40.0%)	1511 (47.7%)
3	741 (27.1%)	114 (34.9%)	39 (48.1%)	7 (35.0%)	901 (28.5%)
4	278 (10.2%)	82 (25.1%)	20 (24.7%)	2 (10.0%)	382 (12.1%)
5	79 (2.9%)	15 (4.6%)	4 (4.9%)	0 (0%)	98 (3.1%)
6~	34 (1.2%)	14 (4.3%)	3 (3.7%)	0 (0%)	51 (1.6%)
	2736 (100%)	327 (100%)	81 (100%)	20 (100%)	3164 (100%)

(as of June 1991)

Why is there so much diversity in collection systems among municipalities? It can be understood when looked at historically.

After World War II, and particularly during Japan's rapid economic development in the 1960's, the amount of waste increased dramatically. Municipalities, particularly big cities, had to adopt incineration in order to reduce the volume of waste. With the recognition of incineration's effectiveness in volume reduction and hygienic stabilization of waste, and also with the introduction of the national subsidy program for the construction of waste incinerators, the incineration has become No. 1 treatment method in Japan. At the same time, the separate collection of incombustible and bulky wastes was introduced in some municipalities.

In the 1970's, along with further economic development, municipalities started adopting various collection

methods reflecting their natural environment, technical capability and socio-economic conditions. Some megacities, such as Yokohama, Kawasaki, Kyoto and Osaka, kept the policy of "burn everything", which is the most effective in terms of volume reduction. At the same time, some rural municipalities continued to rely on the "everything goes to a landfill" method.

Some municipalities initiated their own collection systems, which are sometimes known as xxx-city method, named after the city, like Numazu-method, Kawaguchi-method, Matsuzaka-method, Matsudo-method, etc. These are characterized by the sophisticated classification of wastes to be separately discharged and collected. In these cities, wastes are separated into more than two kinds. For example; combustible, incombustible, bulky, valuable and hazardous waste. Naturally, the classification of wastes is different from place to place, because treatment facilities and disposal sites are different and their types and capacity limit the type of waste which can be treated. Some municipalities collect plastics as combustibles, and other municipalities as incombustibles. Some municipalities require their citizens to separate glass bottles according to their color. And some municipalities started collecting waste dry batteries, waste fluorescent lamps, etc. as hazardous waste containing mercury.

In the mid 1980's, hazardous municipal waste, such as dry cell batteries and dioxin got broad public attention. Although their toxicity to human health or environment was in dispute, many municipalities started separate collection and disposal of dry cells in order to maintain citizen support for waste management.

In the late 1980's and early 1990's, people's desire for a better life and the wide introduction of office automation caused the amount of waste to increase dramatically. With society's increasing concern about environmental protection, a new law on waste recycling was enacted and many municipalities have started separate collection and constructed resource recovery facilities for the purpose of both waste reduction and resource conservation.

(by Hiroki HASHIZUME, & Masako OGAWA)



A consumer who can say "NO"

High Moon

By courtesy of Prof. Hiroshi Takatsuki, Kyoto Univ.
(Taka-tsuki literally means High Moon.)

**Introduction of Governmental/Semi-governmental
Organizations Related to Waste Management in
Japan (4)
Japan Environmental Sanitation Center (JESC)**

ORGANIZATION:

The Environmental Sanitation Center (JESC) was established in 1954, taking over the Japan Environmental Sanitation Association. JESC is a non-profit organization authorized by the Ministry of Health and Welfare and the Environment Agency. The Center's major role is to promote environmental sanitation and to provide bridge between the national and local governments, academic societies and related industries.

STAFF:

Administrative Staff: 50
Technical Staff: 130

ACTIVITIES:

1) National Convention on Environmental Sanitation
National Conventions on Environmental Sanitation supported by Ministry of Health and Welfare, the Environment Agency and host prefecture governments are held every year. The conventions attract 200~300 participants who take part in a variety of presentations and workshops.

2) Training and Education

Various training courses are offered to improve knowledge and technology in pollution control, the maintenance and management of waste disposal plants, pest control, and sanitary inspection as well as other analytical procedures. These training courses include both national and international courses. International study courses, currently sponsored by Japan International Cooperation Agency (JICA), are as follows:

- Solid Waste Management and Night-Soil Treatment Course
- Environmental Administration Course
- Environmental Engineering (Air Pollution Control) Course

3) Publication

In order to diffuse the concepts of environmental sanitation to the general public, about 6,000 copies of "Life and Environment" (in Japanese) are published every month.

4) Sanitary Engineering

JESC conducts functional testing, performance tests, and related research regarding night-soil disposal plants, refuse disposal plants, and the industrial waste disposal plants of local governments.

5) Environmental Assessment and Investigation

In order to forecast and assess the influence of development projects and environmental sanitation plants on the environment, JESC draws up standard plan, research reports for choosing appropriate sites and environmental impact assessment studies.

6) Environmental Science

Measurement and analysis of environmental pollutants are carried out by using various chemical and experimental equipment. Activities include chemical analysis of the National Air Surveillance Network and other researches.

7) Environmental Biology

JESC also conducts efficacy testing of insecticides and toxicity testing for pharmaceutical makers and formulators. A variety of other ecological and biological researches is also carried out. For further information, please contact:

Mr. Yasuji HIMI

International Cooperation Division
Japan Environmental Sanitation Center,
10-6 Yotsuyakami-cho Kawasaki-ku, Kawasaki 210,
Kanagawa Pref., Japan
Phone: +81-44-288-4896, Fax: +81-44-299-2294

**Journal of
the Japan Society of Waste Management Experts
Vol. 3 No. 4 (October 1992) &
Vol. 4 No. 1 (January 1993)**

These two volumes contain the following technical papers. (written in Japanese with English abstract)

Vol. 3 No. 4

Continuous Measurements of Methane Emissions from a Municipal Solid Waste Landfill Site and Meteorological Parameters

by Masaaki HOSOMI, Yuji SAKAKI, Noriyoshi USUI, Gen INOUE and Mamoru KOBAYASHI

Evaluation of Effect of Seeding on the Reaction Rate of Thermophilic Composting

by Kiyohiko NAKASAKI, Atsushi WATANABE, Kenichiro SUEHARA and Hiroshi KUBOTA

A New Refuse Collection System Using Vacuum Suction Vehicle - A Study on Suction Conditions of Household Refuse

by Nobuo ISHIWARI, Eiji FUJITA, Yoshihiro HAYASHI

Vol. 4 No. 1

Development of a Waste Incinerator

by Masato HOSAKA, Jiro SUZUKI and Mari MIYATA

Study on the Nationwide Waste Statistics in Japan for Integrated Solid Waste Management

by Toshihiko MATSUTO and Nobutoshi TANAKA

Recycling of Paper Resources and Paper Waste Treatment: Development of Mathematical Model for Evaluation of Paper Resources Flow in Japan

by Shinsuke MORISAWA, Takashi SEKIGUCHI and Yoriteru INOUE

NEWSLETTER NO. 6

Published by Dr. Masakatsu HIRAOKA, President,
The Japan Society of Waste Management Experts

Edited by Dr. Sukehiro GOTO, Chairman
International Relations Committee

Shiba 5-13-11, Minato-ku, Tokyo 108, JAPAN
Tel. + 81 3 3769 5099, Fax. + 81 3 3769 1492
March 15, 1993