

NEWSLETTER

No. 9

This Newsletter is published three times a year, printed on recycled paper.

March 1994

THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS

Dear Waste Management Experts

This issue covers, among other things, two recent administrative topics; passage of the long-awaited Basic Environment Law and the newly implemented program for the control of Japan's export and import of waste. These days in Japan, the use and possible effects of economic measures for environmental protection are widely debated as passage of the Basic Environment Law indicates. A report on a Symposium at JSWME's 4th annual conference gives you a good example of the issues being debated. In our continuing series on Japan's international cooperation, we have a report from Indonesia this time.

Incidentally, Tokyo's new rule on garbage bags is quite a controversy lately. Since January 17, waste put only in special semi-transparent polyethylene bags have been collected by the Public Cleansing Bureau. In the future, we may touch upon this very interesting issue.
(by Hiroki Hashizume)

Enactment of the Basic Environment Law and Solid Waste Management

The Basic Environment Law, which was drafted by the Hosokawa Cabinet with the aim of establishing future environmental policies for Japan, was passed and came into effect on November 19, 1993. The law incorporates both the Basic Law for Environmental Pollution Control and the Law for Conservation of the Natural Environment. Its intent is to promote voluntary actions by all people thereby reducing the environmental burden generated by social, economic and other activities.

Based on this law, the Environment Agency has begun drafting the Basic Environment Plan which aims to systematize government measures to make Japanese society environmentally benign. The law also alludes to the use of economic measures such as environmental taxes, and the legislation of environmental impact assessment. Japan has been doing without an environmental impact assessment law due to the conflicting interests of various parties. Additionally, the law advocates international cooperation for global conservation.

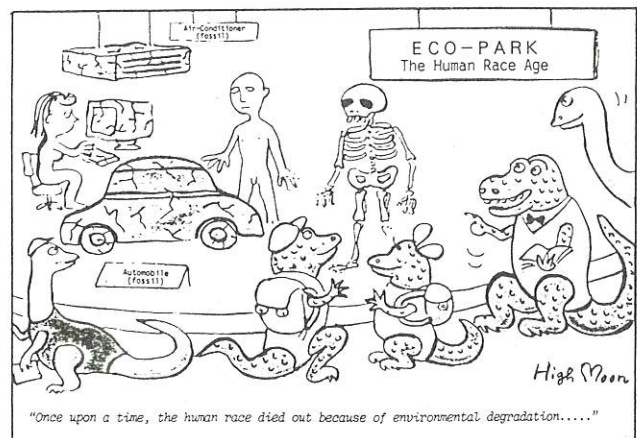
The law is expected to deeply and positively affect solid waste management in Japan. Therefore, the implications of the law for Japanese solid waste management will be discussed in the following paragraphs.

First of all, the law clarifies the respective responsibilities of the State, local governments, corporations and citizens

for environmental conservation. Corporations are responsible, among other things, for striving to reduce the environmental burden resulting from the use and discard of their products and other things related to their activities. On the other hand, citizens are responsible for reducing the environmental burden associated with their daily living so as to prevent hindrances to environmental conservation.

The State is responsible, particularly, for promoting and assisting the fulfillment of the responsibilities of corporations and citizens. For example, Article 24 of the law reads as follows: "The State shall take necessary measures such as providing corporations with technical assistance so that, in manufacturing, processing or selling products, or engaging in other business activities, they can appropriately consider the reduction of the environmental load associated with products and other goods, by voluntarily assessing in advance the environmental load generated by the use or disposal of the products and services. The State shall take necessary measures to encourage use of recyclable resources and other materials, products and services which contribute to the reduction of environmental load."

This technical assistance is complemented by economic measures that prevent hindrance to environmental conservation which are stated in Article 22. Although this Article is written in a roundabout way, it is understood that it paves the way for introducing economic measures into the Japanese solid waste management system. Although up to now only a few municipalities have been collecting user's fees for garbage collection, many other municipalities are considering introducing this system in order to create incentives for waste reduction. The law encourages this move. Introduction of a deposit system for



By Courtesy of Prof. Hiroshi Takatsuki, Kyoto Univ.

containers and durable consumer goods will also be considered seriously as a way to achieve fair burden sharing for environmental conservation.

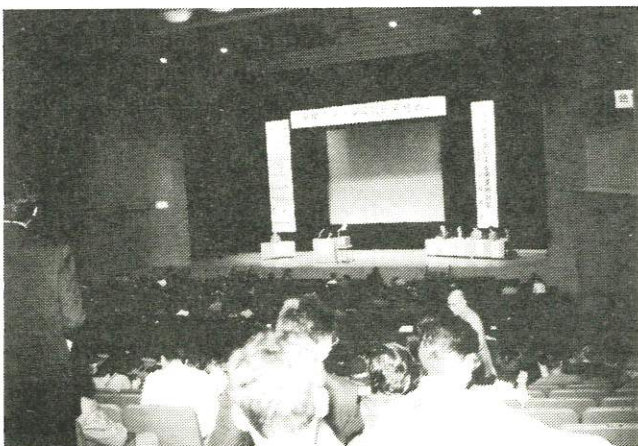
Promulgation of the law does not mean the solution of problems. It is the beginning of our endeavor to forge a truly prosperous environment and global community. We, the members of the Japan Society of Waste Management Experts, are requested to make every effort for the improvement of solid waste management, developing and using to the maximum the measures made available and/or proposed by the law.
(by Kunitoshi Sakurai)

**JSWME'S Symposium:
Economic Measures for Waste Management**

More attention has been focused on resource recovery from waste since the Waste Management and Public Cleansing Law was amended and the Resource Recovery and Recycling Promotion Law enacted in 1991. There is a lot of debate as to whether Japan should introduce economic measures such as user charges, product charges, a deposit system and so forth, in order to promote resource recovery. To help further the debate, the Japan Society of Waste Management Experts held a symposium titled "Economic Measures in Waste Management" on Oct. 13, 1993. Outlines of the panelists' speeches follow:

Gunjima (economist): "Emphasis should be placed on utilizing secondary materials recovered from waste rather than recovering resources from waste. Taxation upon virgin materials and subsidy on secondary materials could be efficient. We need to expand demand for secondary materials through procurement by the national and local governments. This would help activate environmental industries."

Tachibana (the Japan Federation of Economic Organizations): "Our members have discussed waste management issues and what industry should be responsible for from the industrial standpoint according to their types of business. As a result, we have set voluntary targets for resource recovery and made efforts in achieving them. In principle we approve volume-based charges for waste collection and disposal."



Ueno (Japan Coca-Cola Co.): "I admit that returnable containers are preferable from the environmental point of view, and because they cost less for packaging, manufacturers have an advantage by using them. However, returnable containers are actually discarded as solid waste instead of being returned to retailers. Therefore, returnable containers could not be environmentally favorable without a stable collecting system."

Sambongi (Ministry of Health and Welfare): "A report by the Ministry of Health and Welfare suggests that economic measures as well as regulatory measures be introduced, providing three main points: volume-based charges for municipal waste collection and disposal, collection and disposal (including resource recovery) of waste products by manufacturers and retailers, and obligatory recovery rates for collected waste products. The present socio-economic structure is based on a market economy, where consumers as well as manufacturers participate. Therefore economic measures could be smoothly implemented".

Besides promoting resource recovery, we should reduce waste generation itself by means of economic measures. Further discussion should be developed to establish practical methods adequate to the present situation of waste management in Japan.
(by Ryoko Sugiyama)

**A Brief Note on Solid Waste Management in
Japan (9)
- Control of Transboundary Movement of
Waste -**

From mid-December '93, the export and import of waste has been legally controlled in Japan. On Dec. 16, '93 the newly enacted "Law for the Control of Export and Import of Specified Hazardous Wastes", Japan's domestic law to implement the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, was put into effect. The Convention came into effect in Japan on the same day, 90 days after her accession on September 17, '93.

Basically, the system introduced by the new law regarding "Specified Hazardous Waste" is the same as the one proposed by the Convention and Decision C(92)39/FINAL of the OECD Council concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations. Specified hazardous wastes are; (1) wastes listed in the annexes of the Convention, (2) red tier wastes and amber tier wastes listed in the OECD Decision and (3) waste not listed on any of the OECD Decision's lists but that have hazardous characteristics as described in the Convention. In order to clarify whether a particular waste is considered to be under control of the Convention, lists of criteria have been prepared. The lists are unique in listing specific chemical substances which qualify as Basel Convention waste. Levels of chemical substances are generally set at the level of relevant Japanese domestic

environmental regulations. Otherwise the criteria is set at either 1% or 0.1% of weight.

Export and import of specified hazardous wastes can only be done with other member countries of the Convention. Export is approved by the Minister for International Trade and Industry only when Japan has neither technical capability nor facility to manage the waste in question, or when the waste is utilized for recycling or resource recovery in the importing country. And, export must be done in compliance with the Convention. In addition, export and management of the waste in the importing country must be carried out in a manner that meets Japanese and international standards.

Besides the new law, the amended Waste Management and Public Cleansing Law (WML) was put into effect on 15 Dec. '93. The amendment establishes a principle of "management in a waste discharging country". Unlike the new law, WML regulates export and import of waste (not a commodity with commercial value), either hazardous or non-hazardous. Based on this principle, export and import of waste is to be approved or checked by the Health and Welfare Minister.

When a trader wishes to export or import waste or waste-like matter, he should consult with the Ministry of Health and Welfare to see whether it is really a waste and whether it is approved under WML. And also, he must follow procedures for the new law set forth by the Ministry of International Trade and Industry, the Environment Agency and the Ministry of Health and Welfare.

(by Hiroki Hashizume)

**A Project Type Technical Cooperation by the
Japan International Cooperation Agency (JICA)
- Waster Supply & Environmental Sanitation
Training Center, Indonesia -**

One of the biggest problems of waste management in developing countries is a lack of trained personnel at every level; administration officials, planners, engineers, facility operators, supervisors of technicians, technicians, etc. In order to meet these needs, Japan has been providing various programs that promote technical transfer.

Project type technical cooperation (PTTC) is an integrated technical cooperation scheme offered by JICA consisting of three program elements: (1) invitation of trainees to Japan, (2) assignment of Japanese experts to developing countries, and (3) grant aid for equipment. Although these three programs can be implemented separately, they are combined in PTTC for better coordination and effectiveness. The Water Supply and Environmental Sanitation Training Center (WSESTC) in Bekasi, Indonesia is a good example of a waste management PTTC.

The building and facilities of WSESTC were provided by the Government of Japan through JICA as grant aid based on the request of the Government of the Republic of

Indonesia. Construction of the Center was completed in almost one year during 1989/90, and cost about 1.1 billion yen. After construction, WSESTC was started as a five year program lasting until 1995/96. WSESTC is operated by 9 Japanese experts (3 of the 9 are in charge of waste management) on long-term assignment and 8 (3 of the 8 is in charge of waste management) on short-term assignment in 1993/94. WSESTC is expected to play an important role in human resources development related to environmental sanitation and water supply in Indonesia.

Two courses in solid waste management have been prepared. The first one is "Solid Waste Management", whose purpose is to offer specialized, advanced knowledge and technology on municipal solid waste management. The course is aimed at enabling the trainees to design, operate and maintain municipal solid waste management facilities. Target trainees in the course are engineers and qualified officials concerned with design, operation and maintenance of MSW management facilities. After start-up in January 1992, the courses have been offered 10 times. The number of trainees reached 88 by the end of January 1994.

The other one is "Waste Management and Planning", which was first offered on January 31, 1994. Although the purpose of this course is the same as the other, its practical goal is to enable the trainees to formulate waste management master plans and to supervise planning work. Target trainees in the course are directors, heads and qualified officials of public cleansing services.

Training in both courses is provided through lectures, practical training in the field and laboratory, presentations and discussions. Materials for both courses have been developed in line with the proposed future strategy of solid waste management in Indonesia.

The training is first done to Indonesian counterparts by Japanese experts. Then, the counterparts, together with Japanese experts, train Indonesian trainees. In both programs, not only advanced technology, but also more applicable technology for the conversion of existing systems is being introduced.



Training for Waste Sampling for Composition Analysis

Counterpart training in Japan and grant aid equipment for course implementation have also turned out to be effective in upgrading WSESTC activities.
(by Takashi Miyagawa in Indonesia)

Introduction of Governmental/Semi-Governmental Organization Related to Waste Management in Japan (7)

Tokyo Metropolitan Research Institute for Public Cleansing

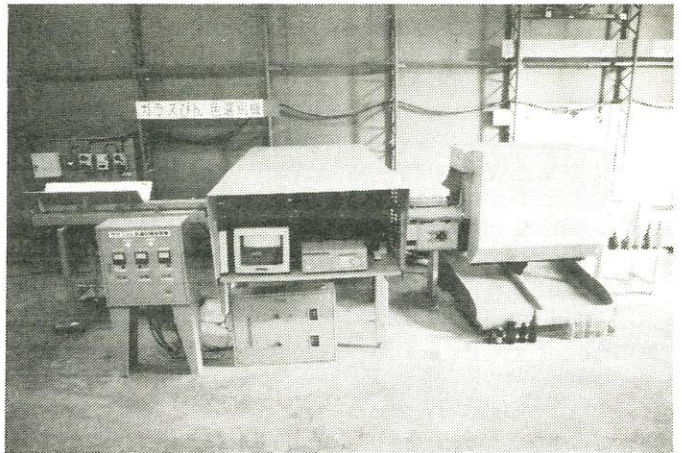
In Metropolitan Tokyo, the agency in charge of solid waste management is the Bureau of Public Cleansing of Tokyo Metropolitan Government (BPC). Tokyo Metropolitan Research Institute for Public Cleansing (TMRIPC) belongs to this bureau.

TMRIPC is unique as it is the only institute specializing in waste management established by a local government in Japan. Since its establishment in 1960, the main focus has changed along with the social and economic changes in Tokyo, which are representative of changes in most big cities in Japan. In the early period of its establishment, "night soil" was one of the main themes of TMRIPC because the public sewage system served only about 20% of the urban area of Tokyo and night soil collection was an important service of BPC. Disposal of solid waste became a main theme by the mid-60's as the amount of solid waste rapidly increased along with high economic growth.

Behavior and disposal of leachate from landfill sites has been investigated since then. Composting technology was also investigated by TMRIPC and a 50t/d plant was constructed in 1985. After that, research on incineration, including pollution control increased during and after the rush of construction of incineration plants that occurred as landfill sites in Tokyo quickly filled up. Resource recovery and waste reduction are the most important themes of TMRIPC at present because of the difficulty of land acquisition for landfills. The followings are some recent research topics at TMRIPC:

- 1) Collection of basic data on wastes
- 2) Investigation of
 - utilization of solidified slag from incinerator ash
 - resource recovery from industrial wastes
 - NOx reduction technology for incinerator emissions
 - incineration technology for high caloric value waste
 - behavior and disposal of leachate from landfill site
 - generation of flies and other insects at landfill sites
 - processing of bulky wastes which are difficult to treat with conventional facilities
 - environmentally sound garbage collection vehicles
- 3) Development of
 - resource recovery systems for separately collected wastes. The photograph shows the glass bottle color sorting system developed by TMRIPC in 1993.

TMRIPC issues an annual report on the results of its studies. Some of the papers have an English abstract.



Contact person: Yasuo Nemoto, Director, or
Dr. Takeo Urabe, Senior Researcher,
Tokyo Metropolitan Research Institute for Public
Cleansing
3-Yumenoshima, Koto-ku, Tokyo 136, Japan
Phone: +81-3-3521-4786, Fax: +81-3-3522-0684

**Journal of the Japan Society of Waste
Management Experts
Vol. 4 No.4 (October 1993)**

The volume contains the following technical papers.
(written in Japanese with English abstract)

Vol 4 No.4

Moisture Flow and Conservative Matter Transport in a Solid Waste Layer, by Namhoon Lee, Tetsuya Kusuda, Takayuki Shimaoka and Masataka Hanashima

Development of a Waste Capsule Transportation System by Fusanobu Mizogami, Akira Naito, Michihiro Maeda, Osamu Kamiya and Takeshi Yamane

An Experimental Investigation on the Incineration of Waste Containing Volatile Organic Chlorinated Compound - The Case of 1,1,1-Trichloroethane & Carbon Tetrachloride, by Shin-ichi Sakai, Haruki Simazu and Hiroshi Takatsuki.

Study on Re-refining Methods for Waste Lubricating Oils by Shunichiro Takaoka

NEWSLETTER NO. 9

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 10, 1994