



NEWSLETTER

No.41

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THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS

Dear Waste Management Experts

There is still great excitement about the 2002 World Cup Korea/Japan. The co-hosting of the event by Korea and Japan was successful beyond all expectations of both countries. So should be another Korea/Japan cooperation, the agreement between JSWME and the Korea Solid Wastes Engineering Society (KSWES), which was concluded in 1996. In accordance with the agreement, the societies have alternately held the International Session during their annual conference.

The latest International Session held during the conference at Seoul University from May 9-10, 2002 is reviewed in this issue of our NEWSLETTER. In the series of introductions to laws regarding waste management and environmental protection, this issue introduces "Countermeasures against Polluted Soil", just established last May. This law covers soil pollution in urban areas, as more than a little contaminated soil has been found there recently. The activity in Nagoya City for city-wide waste reduction is also introduced in the article entitled "Municipalities on the Move".

The new board members of JSWME were elected for the 7th term, two years from May 2002. Prof. Hiroshi

Takatsuki has succeeded Prof. Masaru Tanaka as the new president. Readers can remember his name as "High Moon". Prof. Yokota has also been reelected as the Chairman of the International Relations Committee. Under their new leadership, the Newsletter will further endeavor to be information square for waste management experts in and out of Japan.

(Hideo Azuma)

Greetings from the New President, Prof. Hiroshi Takatsuki with the Environment Preservation Center of Kyoto University

JSWME marked the 11th anniversary of its establishment this March with more than 4,000 members. It is currently one of the major academic societies in the field of the environment.



The 7th President, Prof. Hiroshi Takatsuki

The activities of JSWME have been diversified. Before considering how it should be in future, I would like to raise the fundamental questions "What is an academic society?" and "What is waste management study?"

My answer to the first question is that an academic society is an organization consisting of researchers who pursue learning which assists the researchers' activities by offering the opportunity to present their research and exchange information. Therefore, it is different from industry groups or associations in character, in that JSWME has a mission to create and support waste management study.

As for the second question, there is not a single answer. It will vary from one person to another among JSWME members. In general, learning is a process of pursuing the truth in order to explain a phenomenon or prove a principle even though it does not seem to be of immediate use for the public. However, waste management study, in my opinion, has a mission of solving waste problems. What is



By courtesy of Prof. Hiroshi Takatsuki (Taka-tsuki literally means "High Moon") (translated by JSWME, taken from Monthly "the Waste" May 2002)

Enactment of the Law Concerning Countermeasures against Soil Pollution

interesting here is that the waste problems that waste management study must confront have been changing with time. They are no longer restricted to the improvement of waste treatment but include such new issues as the minimization of environmental burden and the development of a sustainable society with close links with energy and resource problems associated with the production and consumption of goods. Considering things in this way, I have set several targets for JSWME as shown below.

1. Expansion of Members

The majority of its members are engaged in waste treatment and disposal engineering, and are mostly from universities and the private sector, particularly down-stream industries. Members from governmental organizations and the general public are a few. It is necessary to involve those specialized in other areas than waste treatment and disposal engineering, general citizens, and up-stream industries.

2. Encouragement of the Activities at Chapters

Involving many members of different backgrounds and listening to voices from the grass roots necessitate active regional organizations. Chapters will enable JSWME to involve citizens in its activities.

3. Promotion of International Cooperation

We successfully held the Pacific Basin Conference (PBC) on Hazardous Waste in Okayama thanks to the effort made by the former president, Prof. Masaru Tanaka, last year. The partnership with the Korea Society of Waste Management has been strengthened. We have also been issuing English Newsletter and English journals. We should continue to make ourselves known to the world aggressively.

4. Becoming an Opinion Leader

There is a large population who is seeking the right approach to waste problems as the status of waste issues dynamically changes. JSWME should play a role of opinion leader for the improvement of waste management.

Turning into a Juridical Person and Fostering of Young Members are also essential targets. With the understanding and cooperation of all its members, I will do my best to achieve each of the targets.

(Hiroshi Takatsuki)

1. Background and Objectives

In recent years in Japan, there have been an increasing number of cases where soil contamination by toxic substances such as heavy metals and volatile organic compounds is revealed prior to the redevelopment of land used by factories. This has caused growing concern about the health impact of soil pollution and a popular request for the establishment of countermeasures. Consequently, the Cabinet decided on a draft of the Law Concerning Countermeasures against Soil Pollution on February 15, 2002, and it was approved by the Diet on May 22, 2002.

The Law aims to define the procedures to be taken to investigate the state of soil pollution, prevent human health hazards caused by soil pollution, and protect public health.

2. Outline of the Law

The outline of the law is illustrated in the figure below. The key points are as follows.

- a. When the use of a plot of land for such purposes as the operation of a factory that uses toxic chemicals is to be terminated, the land owner shall have a survey institute designated by the Minister of the Environment investigate the soil, and should report the results to the governor.
- b. The governors designate contaminated plots of land which breach the standards, to put them on record, and disclose the records to the public.
- c. The governors can order the owner of polluted land that has potential to harm human health, or the person who caused the soil pollution, to take countermeasures of remediation.
- d. The extraction of soil or any other forms of land alteration on the plot designated according to item b. requires prior notification to the governor. The governor can order a change in the work method and process to be applied in the event that they breach the standards.
- e. The Minister of the Environment can appoint an artificial person who will assist anyone who attempts land remediation by such means as subsidization, and establish a necessary fund.

3. Date of Enforcement

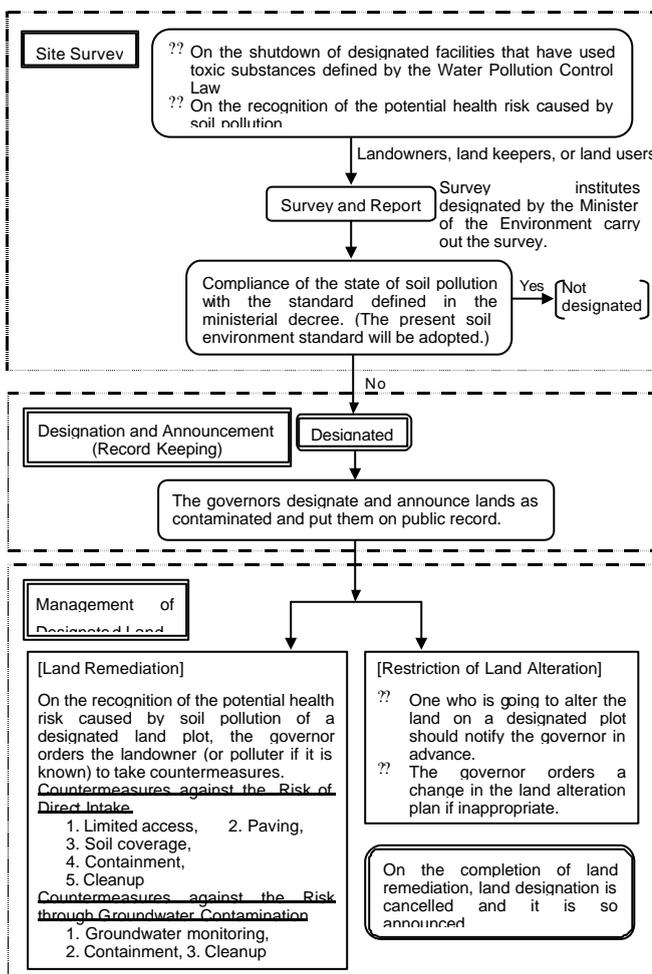
This law comes into force within nine months from the

day of proclamation, May 29, 2002.

(Kimio Matsumoto)

- ?? Heavy metals that are anticipated to remain for a substantially long time maintaining high concentrations in the soil surface layer, and others (that may be hazardous to health by direct intake (i.e. ingestion or skin-contact) of polluted soil)
- ?? Items with which a leachate test standard is set in the soil environment standard from the viewpoint of groundwater intake (that may be hazardous to health via groundwater contamination)

Box. Target Substances of the Law



An artificial person will be appointed to assist in land remediation, give advice, and inform the public for the purpose of the smooth implementation of countermeasures against soil pollution, and a fund will be established with him.

Figure. Scheme of the Law

**Japanese Municipalities on the Move
-The City of Nagoya -
From Waste Reduction to Becoming a
Leader of Recycling-based Societies**

1. Waste generation reduced by 25% - Landfill Waste reduced by more than 50%

Nagoya is located between Tokyo and Osaka and has a population of 2.17 million. As a result of a society symbolized by mass production, mass consumption and mass waste, the amount of waste generated grew steadily and exceeded 1 million tons in 1998. To cope with the ever-increasing waste, the City planned a new landfill project in the Nagoya Port, an area within the Fujimae Tidal Flats. However, the City abandoned the project after thorough examination of the harmonization between a clean and comfortable living environment and nature conservation. To resolve the critical situation of waste management, the City of Nagoya proclaimed the Emergency Announcement for Waste Reduction in February 1999 and set a challenging target to reduce the annual amount of waste generated to less than 800,000 tons.

Thereafter, the City carried out various countermeasures such as the collection of plastic and paper packaging waste for recycling purposes based on the Container and Packaging Recycling Law (CPRL). Consequently, the aforementioned target was attained: the amount of waste generated in 2001 was reduced by 25% to approximately 760,000 tons, and the amount of landfill waste dropped more than 50% to 130,000 tons. We highly appreciate the wisdom and will of the citizens and private entrepreneurs who have made waste reduction a great success.

2. Merits and Demerits of the Container and Packaging Recycling Law (CPRL)

The collection of plastic and paper packaging waste for recycling, which began in August 2000, proved to be the measure that had the greatest impact among all measures taken after the Emergency Announcement for Waste Reduction. The collection of new recyclable materials, based on CPRL, not only increased the collection ratios of materials previously collected, but also increased the citizen's awareness of the necessity of waste control at the source. However, these new policies caused a few headaches and heavy criticism from the public. The City received more than 100,000 comments from citizens stating that the definition of containers and packaging in PCRL is unclear, that it is difficult to distinguish between the types of materials used because container and packaging materials are often combined, and that most containers and packages are not designed to be separated



Nagoya Citizens Sorting Recyclable Wastes

or recycled.

In response to these comments, the City is appealing to the national government to improve the recycling systems by making materials easier to distinguish, reviewing the roles and responsibilities of local governments and enterprises, and introducing a system to facilitate material recognition. The City would also like to have manufacturers and sellers do business with due attention to the citizens, by designing and selling products that will not generate waste, are easy to re-use and easy to separate.

3. Challenges to Become a Recycling-based Society

The City of Nagoya drew up its third basic plan for general waste management in May 2002. Based on the two fundamental principals of striving to become a recycling-based society where continuous development is possible and creating environmental partnerships, this plan particularly emphasizes the importance of waste control at the source and aims at reducing the annual waste generated to 620,000 tons and landfill waste by 90%. In the process of formulating this plan, the City received over 1,000 public comments from citizens.

Building on the successful experiences to date, the City will continue to strive to become a leader of recycling-based societies through the partnership of citizens and enterprises.

(For further information, please refer to Nagoya Waste Report, July 2001 (Japanese only), at <http://www.city.nagoya.jp/06kankyozi/gomipanf/hakusyo.htm>)

(Osamu Hirabayashi, Kazuyoshi Ichihashi)

JSWME's Cooperation with KSWES
Report of the 2002 Spring Conference of the
Korea Society of Waste Management

The Korea Solid Wastes Engineering Society (KSWES) held the International Symposium on the construction of a recycling-based society and the variety of functions of landfills on May 9, 2002, along with the 2002 Spring Conference, General Assembly of the Society and the 6th Korea-Japan Joint English Session in Korea on the following day at the University of Seoul.

Investigating a variety of functions of landfills is an issue currently faced by the Metropolitan Landfill Management Public Corporation. The main purpose of landfills is waste disposal, but difficulties in locating new landfills in the populated areas in Seoul City called for a need to maximize the functions of landfill sites by yielding some space and adding other facilities such as incineration plants and sorting facilities for recycling. This topic was enthusiastically discussed throughout the symposium. Other topics discussed included the "Mechanical-biological treatment of MSW based on the dry stabilization method" presented by Dr. K.C. Shin and the "Kita-Kyusyu Eco-Town Project" by Dr. M. Hanashima.

Since 1996, the Korea-Japan Joint English Session has been held in spring and autumn of every year alternately in Korea and Japan under the Agreement of Cooperation between the JSWME and KSWES. There were a number of presentations in this session from the Japanese side consisting of members from the National Institute for Environmental Studies, universities and plant manufacturers. The board members of both countries also discussed what the International Session should be in the future to attract further attendants. As the international session is conducted in English and has no restriction on the nationality of the speakers, we hope a lot of papers and speakers from other countries beyond the Korea-Japan will be participated in the session.

(Isamu Yokota)

Introduction of Tottori University
of Environmental Sciences

Tottori University of Environmental Sciences was founded in April 2001 with the aim of fostering human resources that will work on environmental issues, the foremost concern in the 21st century. This is one of the

few universities whose name contains the term “environment”. Operated by an academic juridical person and initiated by Tottori Prefecture and Tottori City, the university bears characteristics of both public universities and private ones. The university is exploring how to make the best use of the advantages of both to promote dynamic education and research activities.

Its educational policy is to establish an academic environment that merges humanities and sciences beyond the conventional sector boundaries. The university, therefore, puts particular emphasis on the development of students’ abilities to deal with difficult tasks rationally, to come up with the best solutions, and to obtain a consensus among stakeholders using simple but convincing words. In other words, the university attempts to educate the students so that they can understand the whole picture of a problem from a comprehensive viewpoint and approach it in a multidisciplinary manner. For this purpose, front-line experts of all relevant academic fields and researchers with excellent performance in the business world have been invited as teaching staff.

Components of the University

The university has following three departments:

a. Department of Environmental Policy

The department’s approach to education and research is one that centers on social sciences while integrating natural sciences to understand the mechanisms of the natural environment. It aims to foster human resources that can design and implement a variety of environmental policies such as statutory regulations, economic tools, environmental education, and public awareness raising, in order to establish sustainable socio-economic systems. Therefore, the curriculum mainly consists of subjects essential to dealing with environmental issues, combining social sciences such



The Tottori University of Environmental Sciences

as economics, business administration and law and natural sciences.

b. Department of Environmental Design

The department studies advanced architectural technology and design seeking the creation of comfortable life-styles. The education and research deal with themes of human habitation and the environment such as the architecture of environmental symbiosis, the structure and techniques used in wooden buildings, the renovation and recovery of historical architecture, the amenity of furniture and home décor, and recycling-based community structures. The department expects its students to develop their careers in the environmental design field with due consideration to the planning and design of a living environment in harmony with the environment, its application and management, and community development.

c. Department of Information Systems

The curriculum focuses on programs of information systems, including programming, software designing, digital circuit and database designing, while combining humanities and sciences such as economics and environmental sciences. The students will build up a balanced knowledge of humanities and sciences so that they can develop an advanced information system.

It has been one year and two months since the foundation of the university. The educational concept that the university covers a broad range of subjects related to the environment and take a multidisciplinary approach by mixing humanities and sciences is brilliant, but applying the concept to real education and research is a completely different issue. Once classes start, problems arise one after another, and the teaching staff often fall into heated and prolonged arguments that remains unresolved. We, the teaching staff, try to find solutions, fail with disappointment, and then rouse ourselves to another attempt. After all this effort, we believe that the university will offer a unique and reputable education.

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(Makoto Okazaki)

**Journal of the Japan Society of
Waste Management Experts, Vol.13, No.3
(May 2002)**

The latest issues of the Journal of JSWME contain the following articles. They are written in Japanese with the abstract in English.

Waste Management Research

Preface

“Consensus Building” in Birds

Toshitaka Hidaka

Special Issues: Public Agreement and public Involvement

Public Agreement and Public Involvement for Waste Management Planning

Tomio Takahashi and Toru Furuichi

Issues Facing the Formation of Mutual Consent as it Relates to Citizens

Keiko Nakamura

Environmental Impact Assessment and Consensus Building

Sachihiko Harashina

How Nagoya Citizens Reduced Waste – Conflicts, Cooperative Efforts, Renewed Conflicts, and Consideration of New Cooperative Efforts -

Masashi Kato

The Role of the Consultant in the Consensus-Building Process

Kouhei Yamamoto

Journal of the Japan Society of Waste Management Experts

Review Papers

Analysis of Sulfate-Reducing Bacteria and Methanogens in a Landfill Site Using Molecular-Biological Techniques

Koji Mori and Kazuhiro Takamizawa

Papers

Environmental Impact Evaluation of Heavy Metals Contained in the Fly and Bottom Ash

Kentaro Aoi, Yoshiro Ono, Kenji Namiki and Aya Yamada

Environmental Load Assessment of Disposal and Utilization of MSW Incineration Ash and Waste Plastics

Susumu Sano, Makihiko Ichikawa, Takamiki Tamashige, Toshihiko Matsuto and Nobutoshi Tanaka

Study on a Dechlorination of PCBs using UV Irradiation

Naoki Tajima, Masao Kon, Katsuhi Nishizawa and

Atsuo Watanabe

Behavior of Dioxins in Treatment Processes for Landfill Leachates

Yukio Noma, Yasushi Matsufuji, Yohio Yagi, Mitsuyasu Takata, Kazuo Miyaji and Shin-ichi Sakai

Evaluation of Pyrolysis Conditions in Gasification Melting System for Municipal Solid Waste

Kazutada Miyakoshi, Takashi Miura, Toshiya Komatsu, Shuji Himeno and Kiyoshi Momono

Wanted: Associate Professor

Okayama University is looking for a non-Japanese candidate for the position of associate professor in the area of environmental engineering including waste management. Details of recruit announcement are available at <http://www.jswme.gr.jp/>, otherwise please contact Prof. Masaru Tanaka mxta@sea.plala.or.jp.

Current Members of JSWME	As of 28 June 2002 (Values in parenthesis are differences from 1 April 2002.)
Regular Members	3,580 (135)
Students	248 (28)
Non-Japanese Members	70 (10)
Public Institutions	114 (2)
Supporting Members	207 (-3)
Total	4,219 (172)

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