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NEWSLETTER

No.42 *This Newsletter is published four times a year, e-publication only.* **October 2002**

THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS

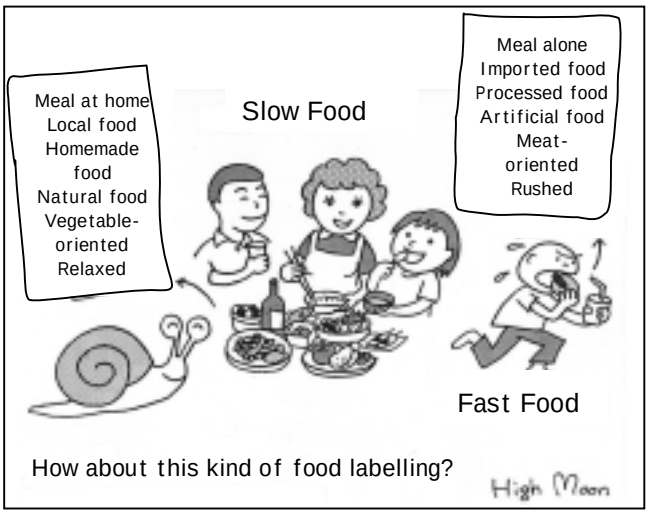
Dear Waste Management Experts

How quickly the seasons change in Japan. Soon after the record temperatures during the summer, comes the autumn rainy season and the daylight hours are getting shorter rapidly. As the saying in Japan goes: "Extremes of temperature last only until the equinox."

The top news of this issue is about the newly established national research center on waste management and recycling. The center, which succeeded the Solid Waste Management Engineering at the Institute of Public Health after the reorganization of ministries in 2001, was constructed in the National Institute for Environmental Studies, the head of the center reports.

The End-of-Life Vehicles Recycling Law is reported on in this issue as an introduction to a series of laws on waste management and recycling. The law, established in July 2002, obligates car manufactures and/or importers to recover and recycle shredded residue, CFCs used in car air-conditioners and airbags. Purchasers shall pay the recycling cost, estimated at about twenty thousands yen a car, upon purchase.

As an article on Japan's Overseas Cooperation in the area of the environment, a human resource development project in Mexico is reported on by a former long-term JICA Expert for the project.



Comments by High Moon: "A slow food campaign is one that protects food culture."

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

APLAS Seoul 2002, the second Asia Pacific Landfill Symposium, was held in Seoul from September 25-28, 2002. We will report the result in the next issue.

(Hideo Azuma)

Introduction of Research Center for Material Cycles and Waste Management, National Institute for Environmental Studies (NIES)

1. Establishment of Research Center for Material Cycles and Waste Management

The current economic and social system—so-called mass production, mass consumption, and mass disposal—is veering toward a "material cycles oriented economy and society". However, a precise map and compass for where the world is going and how it should arrive there is not yet available. Under these uncertain circumstances, NIES newly established the Waste Management Research Division in January 2001, which was reorganized from the former Department of Waste Management Engineering at the Institute of Public Health, to promote waste related studies. In April 2001, the Waste Management Research Division at NIES changed its name to the Research Center for Material Cycles and Waste Management, and energetically set out to promote the material cycles related studies. This research center intends to keep an eye on progress towards a "material cycles oriented society" by way of developing methods for processing and analyzing a wide range of information, innovative technologies, and monitoring techniques. The tools we intend to use in our research and policy development include the improvement of a legal system, the advance of high technologies, economic measures, the development of information systems, and monitoring techniques.

2. Research Topics

Many waste-related issues—from waste prevention to the recycling, treatment, and final disposal of wastes—are the targets of our research. We carry out research ranging from studies of waste characterization, hazard characterization and risk management, to practical studies of technological control methods and system development and assessment. Four topics that we mainly deal with are:

1) methods to assess sustainability and a material cycles oriented society;
2) technologies for material recycling, treatment, and

Photo: Outside of the Research Laboratory of Material Cycles and Waste Management

final disposal;

3) comprehensive risk control methods related to the material cycles; and
4) remediation technologies for the polluted environment.

We are currently focusing on research concerning methods for assessing sustainability and the preparation of basic systems for supporting the conversion to a material cycles oriented society. Various studies and policy tools are needed to tackle the many barriers to establishing the material cycles oriented society. We are developing methods to assess the current conditions of economic society and various measures to serve as a guide for directing the course of the new society. As part of these measures, we are also developing technologies and systems for waste reduction, recycling, waste treatment and final disposal, and are analyzing the behavior of hazardous substances in and after the recycling and final disposal processes. We believe that these studies will lead us toward a material cycles oriented society.

3. The Research Laboratory

Research Laboratory of Material Cycles and Waste Management was completed in March 2002 for conducting comprehensive studies on waste reduction, recycling, appropriate waste treatment, risk control, and so on. It is equipped with several experimental plants, such as resource recycling plants, a thermal treatment plant and landfill simulation plants, and the latest equipment for physical, chemical and biological analyses. NIES is using this research laboratory to conduct research on realizing a material cycles oriented society. We have seven research sections:

- Sustainable Material Cycles Management,
- Material Cycles Engineering,
- Waste Treatment Engineering,
- Final Disposal Engineering,
- Testing and Assessment Section,
- Hazardous Waste Management, and
- Bio & Eco Engineering.

Approximately 25 researchers belong to this research laboratory and are trying to access the target of material cycles by minimizing the consumption of natural resources and environmental loads.

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(Shinichi Sakai)

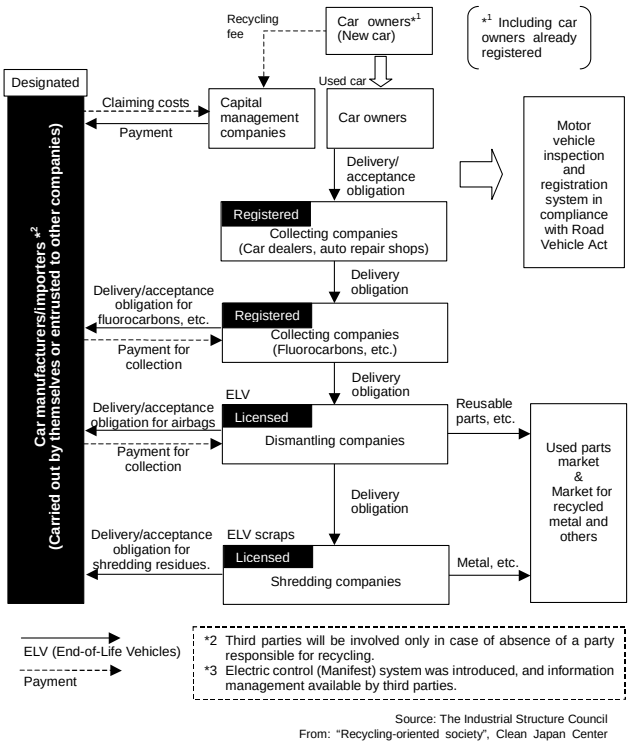
Establishment of the End-of-Life Vehicles Recycling Law

1. Background

Some five million end-of-life vehicles (ELV) are abandoned a year in Japan. Usually, recycling business enterprises purchased them and recycled parts and metals. As the price of scrap iron declined and the final disposal fee increased, however, the market value of ELV diminished and there is an increasing concern about illegal dumping or the inappropriate treatment of ELV.

Consequently, the Japanese Diet discussed the bill for the Law for ELV Recycling System, which has the stakeholders including car manufacturers share the responsibility to recycle and properly treat ELV based on the concept of extended producer's responsibility (EPR). The law was issued on July 12, 2002.

2. Outline of the Law (see Figure)



Source: The Industrial Structure Council
From: "Recycling-oriented society", Clean Japan Center

Figure. Scheme of the Law

a. Car manufacturers and car importers must accept shredding residues, fluorocarbons and the like, and airbags, and recycle and properly treat them when cars they have manufactured or imported are to be abandoned.

b. In order to make sure that the abovementioned three items of ELV are delivered to the car manufacturers and importers, ELV collecting companies (e.g. car dealers and auto repair shops) must be registered and dismantling companies and shredding companies must have licenses.

c. Car owners must bear the cost for recycling on the purchase of new cars. The recycling cost is to be announced by the car manufacturers and importers in advance.

d. The recycling cost borne by the car owners is managed by an official third-party organization. The car manufacturers and importers claim the recycling cost to the organization.

e. The law becomes effective by the beginning of the year 2005, within two and half years after its issuance. It is reported by mass media that the recycling cost that the car owners pay will be around 20,000 yen (US$ 170).

(Kimio Matsumoto)

CENICA Project in Mexico by Japanese Technical Assistance Successfully Accomplished

Solving the environmental pollution problems in the urban area of Mexico is a serious national concern. Since the North American Free Trade Association (NAFTA) became effective in January 1994, the thorough control of the environment based on an international standard has become an urgent task and the government has started to cope with the overall environmental problems. Though there were several research centers and administrative authorities engaged in environmental issues, high level engineers and administrators who can actually establish an effective environmental administration were insufficient. This had hampered the systematic cooperation among related environmental organizations and administrations.

In view of the lack of human resources for tackling environmental measures, a project to establish the National Center for Environmental Research and Training (CENICA) was initiated in July 1995 through the technical assistance of Japan International Cooperation Agency (JICA).

The Mexican side invested a total of about 1.5 million US$ for the construction of the center within the compound of the National Autonomous Metropolitan University (UAM). The budget provided by the Mexican Government for the operation of CENICA reached approximately US$ 4.5 million. JICA, during the cooperation period until June 2002, has dispatched 12 long-term experts and 32 short-term experts, and 34 counterparts were accepted for training in Japan. Equipment donated for the project reached 567 million yen.

With the aforementioned inputs from the Mexican and Japanese sides, CENICA has mainly executed the following activities.

a. contributed to the establishment and/or revision of various environmental laws and regulations done by the Ministry of Environment and Natural Resources (SEMARNAT) during the seven years.

b. organized a great number of seminar/training courses on air pollution protection, hazardous waste management and chemical analysis in order to contribute to upgrade the environmental personnel of central and local governments, universities, private companies and other organizations. Up to now, 93 courses have been organized and the total number of participants has been 3,700 persons.

c. carried out environmental research projects jointly with central and local governments and universities such as site investigations on soil contaminated with heavy metals in South Baja California and with hydrocarbons in Veracruz and Tabasco.

CENICA has also strengthened Mexico's activities with the Environmental Cooperation Commission, which consists of three member countries, namely Mexico, USA and Canada. Furthermore CENICA fostered technical cooperation with Central and South America and Caribbean countries through the dispatch of its staff and the acceptance of trainees from those countries.

The number of personnel in CENICA was increased from seven at the beginning of the project to 58 in June 2002, and the operation budget has also been increased. As a result of the great effort of the many persons concerned in

Photo: A JICA expert at CENICA giving technical instruction in incineration ash sampling to the counterpart.

Mexico and Japan, CENICA is consolidating its position as a national core center of the investigation and training for air pollution prevention, hazardous waste management and environmental analysis. It is expected to further play a key role in environmental improvement in Central and South America and Caribbean countries.

Though technical assistance by JICA was accomplished at June 2002, a follow-up project will be extended in the area of air pollution control measures, hazardous waste management and its analysis.

(Haruo Matsumura)

Journal of the Japan Society of Waste Management Experts, Vol.13, No.4 (July 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

Promotion of the Research for Realizing Material Cycles Oriented Society
Yasutaka Hamada

Special Issues: End-of-Life Vehicles

Outline of Automobile Recycling Law
Tsutomu Sakagawa

The Establishment and Problems of Automobile Recycling Act
Tadashi Otsuka

Our Approaches to Automobile Recycling and Future Tasks
Kiyoshi Masuda

Automobile Recycling in Germany
Atsuhi Terazono

Report

An Analysis of the Waste Management System in South Korea –Focusing on the National Comprehensive Waste Management Plan-
Jung-Han Park, Mikio Kasahara, Susumu Tohno and Yoshimi Iwabuchi

Journal of the Japan Society of Waste Management Experts

Papers

Lab Scale Experiment for Control of Incineration Residue Dispersion in MSW Landfill
Toshihiko Matsuto, Yasumasa Tojo, Takayuki Matsuo and Nobutoshi Tanaka

Effects of Chlorine Sources and Forms on Formation of Dioxins/Furans in the Combustion Process
Hirotoshi Kawabata, Tateo Usui, Katsukiyo Marukawa, Sigeta Hara, Hideki Ono-Nakazato and Toshihiro Tanaka

Effects of Trash Bins, Ash Trays, and Banners on Littering of Trash and Cigarette Butts in a Public Space
Kohji Hayase, Keiichiro Suzuki, Seiji Aoki and Johtaro Kohtaki

Monomer Recycling of Waste Poly (Ethylene Terephthalate) and its Life Cycle Assessment
Etsu Yamada, Kotonaga Matsui, Yasuro Fuse and Akira Oku

Porous Adsorption Materials Synthesized by Simultaneous Calcination of Inorganic and Organic Industrial Solid Wastes
Ryo Sasai, Kouji Ukai, Takashi Hirose, Takashi Kojima, Hideaki Itoh, Katsuya Shibaguchi, Hisashi Matsuba and Takuichiro Sugiyama

Simple Method for Removing Lead Iron Using Orange Juice Residue
Katsutoshi Inoue, Rinat S. Mirvaliev and Kenjiro Makino

A Simulation of the Environmental Impact of the Curbside Collection of Garbage
Maiko Okuno and Kikuo Miyokawa

Note

A Survey of Current Management Conditions for Infectious Wastes Generated from Osaka Hospitals
Katsuhito Yamaguchi, Satoshi Soda, Takefumi Kitanaka, Masafumi Tateda and Koichi Kuromoto

Current Members of JSWME	As of 30 September 2002 (Values in parenthesis are differences from 28 June 2002.)
Regular Members	3,608 (28)
Students	264 (16)
Non-Japanese Members	69 (-1)
Public Institutions	114 (0)
Supporting Members	210 (3)
Total	4,265 (46)

NEWSLETTER NO.42
Published by
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October, 2002

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