



SINCE 1990

# NEWSLETTER

No.62

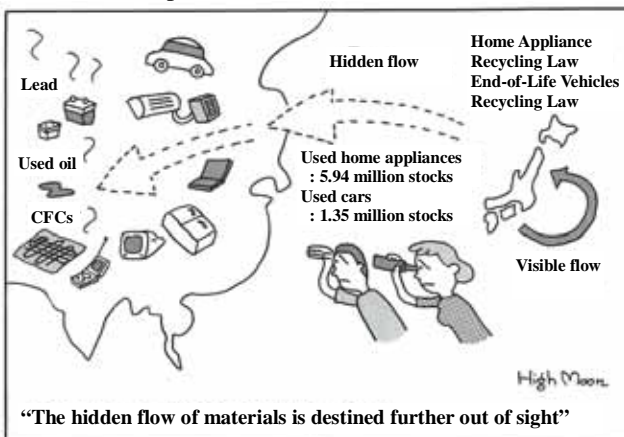
This Newsletter is published four times a year, e-publication only.

Oct 2007

**THE JAPAN SOCIETY OF WASTE MANAGEMENT EXPERTS**

## Dear Waste Management Experts

The Niigataken Chuetsu-oki Earthquake which occurred on the morning of July 16, 2007 had an estimated magnitude of 6.8, killed 11 people and injured nearly 2,000. More than 1,000 buildings collapsed completely and lifelines were heavily damaged. Among the devastation, the damage to a nuclear plant has attracted considerable attention in the global media. It was reported that a small amount of cooling water for the reactor leaked outside. After the earthquake, disaster waste management, including asbestos control, has been rekindled in Japan.



### Comments by High Moon:

I wonder if these exported secondhand goods will be disposed of appropriately.

In this issue of our newsletter are the reports by two JICA volunteers on solid waste management improvement overseas. A JOCV (Japan Overseas Cooperation Volunteers) and a SV (Senior Volunteer) introduce their results in Fiji and Sarawak respectively.

Aiming to provide an opportunity for experts for environmentally-sound SWM and the 3Rs to network together, the 3rd Experts Meeting in Asia and the Pacific Islands will be held on November 7-9 at the Okayama International Center and an international seminar will also be held. In the previous meeting held in Kitakyushu, experts who participated from 13 countries/regions named this network SWAPI (Society of Solid Waste Management Experts in Asia and Pacific Islands).

The 18th annual research conference of JSWME is going to be held on November 19-21, 2007 at Tsukuba International Congress Center located in the heart of

Tsukuba City, home to a large number of internationally renowned scientists in Japan. Access to the City has been improved since the “Tsukuba Express” train service began operation in August 2005.

<http://www.iges.or.jp/en/index.html>

<http://www.jswme.gr.jp/international/>

(Hideo Azuma)

## JOCV Activities for Waste Management for Squatter Settlements in Fiji (Japan's ODA on Solid Waste Management)

The population of Fiji is nearly 831,000. Along with economic growth and urbanization, the urban population is increasing rapidly. A shortage of housing is aggravated by the influx of people to urban centres whose agricultural leases have expired on their native lands. Other reasons for migration include people who are attracted to urban areas in search of alternative employment, education, sporting facilities and health care.

The latest survey report by the Fiji Government in 2003 shows that there are 182 squatter settlements in Fiji with an estimated population of 82,350, or 13,725 households (average family size of 6). This represents a growth of 73% over a period of seven years (1996 to 2003). It is estimated that in 2006, around the nation's capital of Suva alone there will be 15,000 squatter households (90,000 people) in informal settlements.

The Waste Management and Pollution Control Unit of Fiji's Department of Environment has been working on the Waste Minimisation and Management Project and has piloted a project in the Wailea Squatter Settlement since June 2004. A major goal of the project is to substantially minimise and manage waste by developing community responsibility for waste of those living in the Wailea settlement. Various activities, which include field surveys, house-to-house awareness sessions, recycling, and clean-up campaigns, have been undertaken.

As a part of the project, the Department has assisted the commitment shown by the Suva City Council by implementing a self-funded system using skip bins. The system aims to develop a waste collection and disposal system in the Wailea squatter settlement on a user-pays basis. The Department of Environment and Suva City Council facilitated the Wailea Committee keeping in line with a participatory approach under supervision of a coalition of the Police Post.



Skip bins and participants

The squatter issue is not new, but the absence of information for the actual conditions creates difficulty in tracking down the root cause of the issues. Therefore, the Department of Environment conducted surveys in one of the squatter areas, the Wailea Squatter Settlement, from April to December 2005 under the supervision of a JOCV (Japan Overseas Cooperation Volunteers) for the department, assisted by student volunteers from the local university.

The socio-economic survey was conducted for 307 randomly selected households using a questionnaire developed to cover the following matters: socio-economic information, waste disposal practices and relationship with the environment such as creeks and mangroves.

It is evident that most of the people in the settlement use the skip bins to dispose their household rubbish consisting of the following categories: aluminium and tin cans (80.1%), glass bottles and jars (72.6%), plastic bags (68.1%), plastic bottles (65.1%) and organic waste (53.1%). On the other hand, residents also throw a variety of rubbish (0.3-5.2%) in the creek and/or mangroves as it is near to their homes and more convenient than taking it to the bin.

The waste composition survey clearly shows that biodegradable waste (68.5%) represents the largest component of household waste, followed by paper (12.5%) and plastic (8.8%). While plastics (8.8%) are the smallest group by weight, they represent a significant volume of the total waste. The results from this study indicate that efforts should be put towards minimizing organic wastes that go to the skip bins as they occupy that largest volume and create pollutants such as emitting odour and attracting flies.

As a part of the project, the department had assisted the commitment shown by the Suva City Council in implementing a self-funded Skip Bin system. The system aims to develop waste collection and a disposal system in the Wailea Squatter Settlement on a basis of “user-pays principles”. It required the regular placement and emptying of skip bins dependant on necessity. Each



Waste collection in Wailea squatter settlement

household was required to pay \$1/week as a garbage levy for the system by the appointed committee member from Wailea residents.

The Committee collected an amount of three hundred and fifteen (F\$315.00) dollars from almost 180 households, which is approximately forty percent (40%) of the residents, within two weeks. The results for collecting subscription were better than expected even though some squatters are under the poverty line. The amount of money they were able to collect allowed for the provision of two extra skip bins at the beginning of December 2005.



Committee discussion

This success story by the Wailea Community is commendable as it sets a positive trend for the rest of the squatter settlement, as well as residents not only within Suva City but throughout Fiji. In fact, other squatter settlements such as Nanuku Settlement in Suva City have already shown interest in replicating the work done in Wailea.

(Yurie Kawabata, JOCV)

**SWM Improvement Project  
in a Rural Village in Sarawak, Malaysia  
(Japan's ODA on Solid Waste Management)**

The province of Sarawak, Malaysia is naturally blessed with generous natural resources, and large tracts of forest

make up the many attractive national parks. City waste in Sarawak province is collected door-to-door and a cleaning fee is paid according to the estimated value of each residence or building. On the other hand, there are approximately 5,000 rural areas dispersed in the forests along rivers and the coast accounting for half of the total population. Collection services do not reach these areas given the high cost of collection and the low-income of these communities. Therefore, household waste is disposed through open dumping in the sea and rivers or by open burning in backyards which not only causes issue with environmental health, but additionally, interferes with tourism.



Dumping site (drawn out by sea current)

Under these circumstances, the Sarawak provincial government called upon JICA to dispatch a Senior Volunteer (SV) to assist in introducing a low-cost collection system in these rural areas which would involve citizen participation. The target community, Bako Village, is located at the gateway to Bako National Park (*bako* is Malay for “mangrove”) with a population of 2,000, made up of 44 households. The SV was dispatched to the Natural Resource & Environment Board (NREB) under the Ministry of Environment and Public Health, and provided advice and guidance to Kuching North City Hall (KNCH).

This project was named “Bako Healthy Village” and aims to clean up the village through the sustainable efforts of the villagers with the support of Kuching North City Hall (KNCH) and the National Resources and Environment Board (NREB). The waste collection system is based on the use of typical waste collection points, whilst holding frequent discussion between NREB, KNCH and citizen representatives with the following core points of the project:

- 1) Domestic wastes generated are segregated at each house into two categories; recyclables and landfill waste.
- 2) The village is divided into 9 zones of around 50 homes each, and waste collection bins and a signboard is set up in each zone. Landfill waste is brought to the bin centre by the villagers and collected twice a week

by a contractor commissioned by KNCH.

- 3) A leader is appointed in each zone and a number of meetings are conducted to raise leader awareness.
- 4) Awareness is raised by posting photos of the deteriorated condition of certain dumping areas, etc., with follow-up until improvements are seen.
- 5) The following activities were carried out in partnership with the local primary school;
  - Awareness activities conducted to advocate waste recycling (3R) at the primary school.
  - A system put in place where recyclables are collected at the Recycle Centre at the primary school by pupils and PTA members, and collected by the waste service contractor.
  - Awareness-raising through student participation in such activities as a recycling (3R) poster contest.



Waste collection point (waste bins and signboard)



Recycle Centre in Primary School

The implementation of these activities required a great deal of time to make requests and coordinate with the relevant organizations. Publicity attempts were made to obtain the funding necessary to establish the collection points and carry out the various events in collaboration with the private sector, however with poor results, and City Hall installed the waste bins. The signboards were displayed with fees obtained from the Environment and Education section of NREB, and this section also provided funds to carry out the awareness campaign.

These activities and their outcome were broadcast through television and newspapers, receiving both domestic and overseas observation, and improved citizen awareness. The project was completed in fiscal 2005, and the following year a collaborative team of the city and NREB began conducting assessments of cleanliness in each zone every three months, and annually issues public commendations.

Still, in Malaysia responsibility for the costs of waste disposal is in principal the responsibility of its citizenry, yet, for the time being, this project has shown support from local administrations for costs of waste collection and transportation.

(Yasufumi Sato, SV)

**Journal of the Japan Society of Waste  
Management Experts, Vol. 18, No.4 (July 2007)**

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

Review Paper

***Current Status and Potential Future Development for the Application of High-pressure Fluids to Food Waste***  
Takashi Saeki and Katsuya Kawamoto

Paper

***Physical and Dynamic Properties of Soil Cement Diaphragm Walls and Seismic Performance Evaluation Using Seismic Response Analysis***

Kazuaki Hioki, Tatemasu Hirata, Makoto Nishigaki, Nobuyuki Egusa and Shinji Kushihara

***Hyperthermal Biological Hydrolysis of Municipal Solid Waste and its Use for Methanogenesis***

Jun Tsubota, Toshiaki Tsubone, Masataka Sugahara, Tatsuhide Hamasaki and Hiroshi Tsuno

***Current Status and Issues Surrounding Recycling Policies for Waste Home Appliances in Taiwan***

Rie Murakami-Suzuki

***Study on Heat Generation Characteristics in Storing RDF***

Tsukasa Kagiya, Masao Ukita and Takaya Higuchi

***An Analysis of Illegal Dumping of End-of-life Vehicles in the Kinki Region***

Yousuke Asaki

***Carbonization of Sludge Generated in Domestic Wastewater Treatment Using a Hiln-type Carbonization Plant with Continuous Feeding***

Hiroyuki Katoh, Takao Watanabe, Hideaki Ohmori, Kiyoshi Kawamura and Yoshiaki Makino

**Waste Management Research  
Vol. 18, No.4 (July, 2007)**

Preface

***Transparency of Costs of Waste and Accountability***

Eiji Hosoda

Special Issues: Accounting for Waste and Environmental Management

***Preparing Full-cost Accounting Guidelines for Municipal Solid Waste Management and Other Related Issues***

Yoshifumi Fujii

***Municipal Waste Management Accounting and Benchmarking***

Hajime Yamakawa

***Management Analysis for Industrial Waste Disposal Business and Waste Accounting***

Kiyoshi Ohnaka

***Integrating Waste Accounting and So-called Environmental Accounting***

Seiji Hashimoto

***The System of CSR Accounting***

Katsuhiko Kokubu

Research Report

***Aftermath of the Landslide at Leuwigajah FDS at Bandung, Indonesia***

Agus Rachmat, Ratno Sadinata, Takashi Mamiya and Kazuhiko Miura

Current Members of JSWME as of June 31, 2007  
(The figures in parenthesis indicate the difference from May 31, 2007)

Regular Members	3,075	(-17)
Students	325	(35)
Non-Japanese Member	30	(5)
Public Institutions	105	(-)
Supporting Members	149	(-)
Individuals of NPOs	5	(-)
Total	3,689	(23)

**NEWSLETTER NO.62, October, 2007**

Published by Prof. Nobuo Takeda, President,  
The Japan Society of Waste Management Experts

Edited by Prof. Yasushi Matsufuji, Chairman,  
International Relations Committee

Buzen-ya Bldg. Shiba 5-1-9, Minato-Ku,  
Tokyo 108-0014, Japan

Phone: (+81) 3-3769-5099, Fax: (+81) 3-3769-1492

<http://www.jswme.gr.jp/>

e-mail. [international@jswme.gr.jp](mailto:international@jswme.gr.jp)

Readers can find the latest issue of the NEWSLETTER and recent back issues at the JSWME Homepage noted above. Readers who want to subscribe to the e-NEWSLETTER can receive it by e-mail with a PDF file on request.