

## Collection of Mercury Wastes discharged from Households

### Background

#### Requirement of the Minamata Convention on Mercury

Under Article 11 of the Minamata Convention on Mercury, each Party is required to take appropriate measures so that mercury wastes are managed in an environmentally sound manner.

The Convention identifies three categories of mercury wastes:

- (1) wastes consisting of mercury or mercury compounds,
- (2) wastes containing mercury or mercury compounds and
- (3) wastes contaminated with mercury or mercury compounds.

Environmentally Sound Management (ESM) of mercury-added products (e.g., fluorescent lamps and batteries) that become waste is a common challenge for many developing countries, since mercury and its compounds are used in various products for our daily lives. Mechanisms for appropriate source separation and collection of mercury wastes discharged from households is essential for the implementation of the Convention.



Source: UNEP "Practical Sourcebook on Mercury Waste Storage and Disposal"

### Overview of the Technology

Due to increasing social concern about mercury since the outbreak of Minamata Disease, Japan has formulated and incrementally developed a collection system for wastes of mercury-added products discarded from households.

In Japan, municipalities are responsible for the collection and treatment of wastes discarded from households, including mercury waste. Mercury-added waste products are collected using existing municipal waste systems, such as collection at neighborhood waste stations, with methods adapted to local circumstances. Collection boxes of mercury-added products may also be installed at locations frequently visited by consumers. For example, collection boxes may be placed at consumer electronics retail stores for used fluorescent lamps and batteries, and at pharmacies for mercury thermometers.

#### Example of collection system of wastes of fluorescent lamps discarded from households in Japan



Source of the pictures above: Guideline for separation and collection of mercury containing wastes from households (MOE)

Wastes of mercury-added products discarded by households and subsequently collected by municipalities are recycled or disposed of in an environmentally sound manner by mercury wastes treatment companies licensed by municipalities.

### Measures to prevent breakage during transportation

Wastes of mercury-added products such as mercury thermometers and fluorescent lamps are fragile. If they break, mercury may spill or scatter, posing potential risks to human health and the environment. Therefore, measures are taken to prevent breakage during transportation, such as placing the products in dedicated containers suited to their shape, size, and material. These handling practices not only prevent adverse impacts on human health and the environment but also contribute to improving the collection rate of mercury-added waste products.

#### Awareness raising activities

Cooperation among stakeholders with a clear and common understanding is crucial to promote the effective segregation and collection of municipal mercury waste. In Japan, an effective segregation and collection system has been promoted not only by establishing institutional mechanisms but also by widely and accurately communicating the contents of new measures and raising awareness among stakeholders.

The MOEJ has developed the guidelines (Guidelines for the Segregation and Collection of Wastes of Mercury-added Products Discarded from Households) that contain examples of actual cases and good practices of waste collection by municipalities. The guidelines also list key elements for the handling of municipal wastes of mercury-added products. Further, the MOEJ developed public relations materials (e.g., posters, pamphlets) for municipalities to promote the proper collection of wastes of mercury-added products, which can be used by the municipalities, Seminars for local governments are also organized occasionally.



### Applicability

Japan has developed one of the most effective waste segregation and collection systems for wastes of mercury-added products in the world. This has been accomplished due to cooperation with and understanding of the public.

Establishing such a system would be challenging, but the Japanese experience and know-how could be a good reference to establish relevant systems in other countries. Furthermore, the Japanese experience of policy development, awareness-raising activities, and the collection system operated by municipalities could provide beneficial information to establish proper segregation and collection systems for mercury wastes in other countries.



### Further Reading

MOEJ, Collection Methods of Wastes of Mercury-added Products discarded from Households (English DVD)  
 MOEJ, Guidelines for the Separation and Collection of wastes of Mercury-added products Discarded from Households (Japanese only) ([http://www.env.go.jp/recycle/waste/mercury-disposal/h2712\\_guide1.pdf](http://www.env.go.jp/recycle/waste/mercury-disposal/h2712_guide1.pdf))

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