

Project Account Number: MC/4030-09-04

BAC: 2011-MCL-2310-2B23-1151-2202



**DEVELOPMENT OF AN AWARENESS RAISING
TOOLKIT FOR MANAGING MERCURY WASTE
AT HOUSEHOLD AND COMMUNITY LEVEL**

Summary Report

Submitted to

Division of Technology, Industry and Economics

United Nations Environment Programme

Prepared by

Foreign Economic Cooperation Office

Ministry of Environmental Protection, China

TABLE OF CONTENTS

I. Background.....	4
II. Objective	4
III. Methodology	4
IV. Activities and outputs.....	5
1. Development of toolkit (March-April, 2011).....	5
2. Assessment of toolkit dissemination effect -- pilot testing in Chongqing	8
3. Summary of toolkit effects.....	11
V. Conclusions	11
1. Necessity and urgency to carry out awareness-raising dissemination for mercury waste management and mercury pollution prevention at household and community level.....	11
2. Targeted dissemination and proper promotion approaches.....	12
3. Active development of other supporting mercury pollution prevention measures.....	12
VI. Recommendation.....	12

LIST OF ANNEXES

1. Budget and expenses
2. *A Guide for Managing Mercury Waste at Household and Community Level*
- 3-6. Awareness raising posters for mercury waste management (English) (4 pieces in total)
7. Pilot promotional logos
8. Gift sample
9. Questionnaire on mercury waste management awareness at household and community level

LIST OF FIGURES

Figure 1 Front and Back Cover of a <i>Guide for Managing Mercury Waste at Household and Community Level</i>	6
Figure 2 Posters for Raising the Awareness of Mercury Waste Management at Household and Community Level.....	7
Figure 3 Logos for Project Promotion.....	8
Figure 4 Sports Bottle -- Project Promotional Gift.....	8
Figure 5 Deputy Director of MEP FECO Fang Li Donates Recycling Bins for Used Waste Batteries	9
Figure 6 People in the Community Look at the Posters on Mercury Pollution Prevention.....	9
Figure 7 People in the Community Receive the Questionnaire, Brochures and On-site Consultation	10
Figure 8 People Sign to Practice Commitment.....	10

I. Background

Mercury and its compounds, due its persistence, long-distance transport, high bio-accumulation and high toxicity, have posed great threats to human health and eco-environment during the past decades. The international community is currently in the negotiation process for a global legally binding mercury instrument to protect human health and the environment from the toxic effects of mercury.

As a large mercury producer and consumer in the world, the Chinese government has carried forth great efforts in mercury-containing products and waste management, and mercury pollution prevention. It is also active in international cooperation and technical exchange projects on mercury pollution prevention. All activities have provided technical and management experience support for capacity building in China mercury pollution control.

The current global endeavor to control and reduce mercury pollution has confronted issues and challenges, which is represented by the weak public awareness of mercury pollution control in vast developing countries and the consequent lack of safety awareness. Under the financial support of United Nations Environment Programme (UNEP), the Foreign Economic Cooperation Office of Ministry of Environmental Protection (MEP FECO) of China undertook the project of developing an awareness raising toolkit for managing mercury waste at household and community level. The aim of the project was to disseminate and publicize knowledge in connection with mercury waste in developing countries and raise public awareness of mercury waste management.

II. Objective

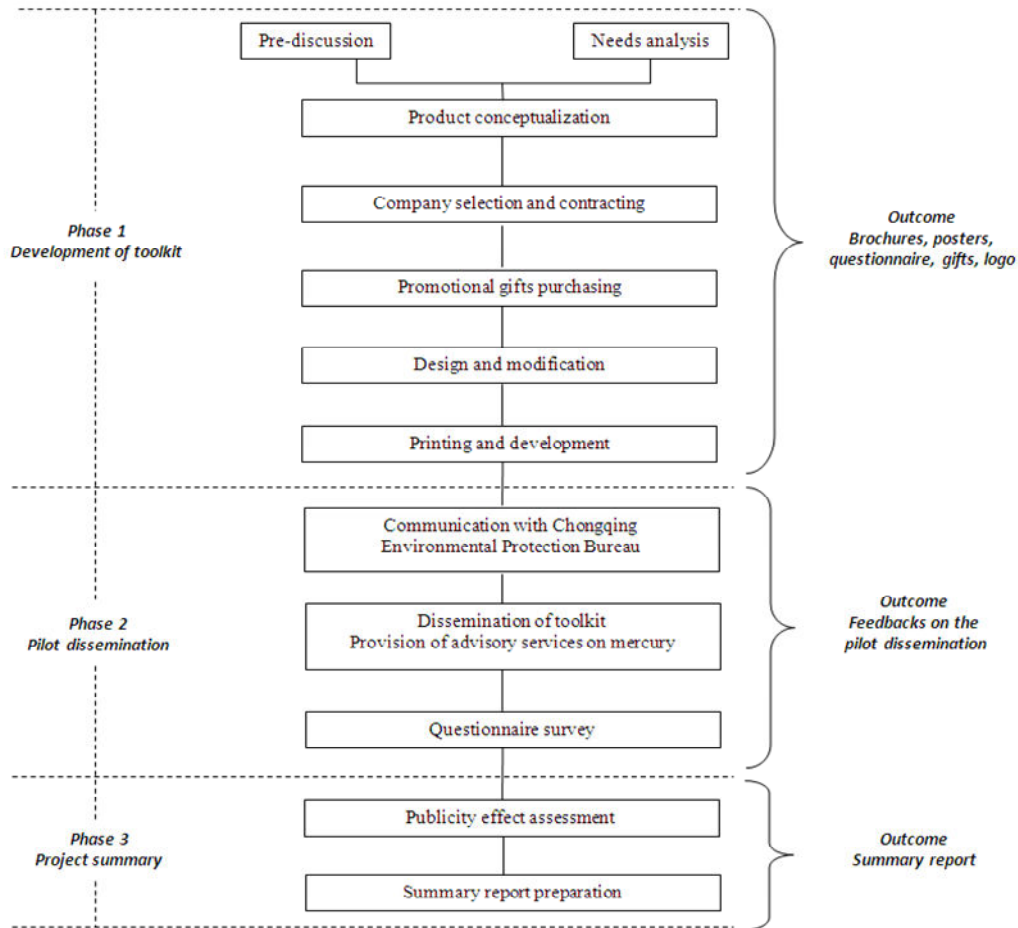
The project aims to develop an awareness raising toolkit for safely managing mercury waste generated at household and community level, and promote the awareness of mercury waste management through ordinary households and communities in developing countries . As part of the project, the toolkit was disseminated through the printed media in order to assess its effectiveness and provide insights for follow-up promotion methods.

III. Methodology

1. Development of toolkits. The conceptualization and development of toolkits include pre-discussion, needs analysis, product conceptualization, company selection, design and development. The output includes brochures (Chinese and English versions), a series of posters (Chinese and English versions), questionnaire and supporting promotional gifts.

2. Pilot dissemination - Pilot promotion of the toolkit in a selected province in China. The basic idea is to disseminate and raise the awareness of mercury hazards at household level by means of brochures, posters, questionnaires and promotional gifts in communities, organizations and squares, The questionnaires are retrieved to assess dissemination effects and to form assessment reports and recommendations on future promotion.

3. Project summary. Retrieve survey questionnaires for statistics; assess the effect of publicity; prepare a summary report and extend experience.



IV. Activities and outputs

1. Development of toolkit (March-April, 2011)

After undertaking the UNEP project of developing an awareness-raising toolkit for managing mercury waste at household and community level, the taskforce carried out the development of the toolkit in March and April, 2011. Specific work included focus group discussions, data research, price inquiry, comparison and selection, contract signing, program design, copy writing, logo

design, gift purchase, constant communication, text translation and proofreading, development of questionnaire, gifts and promotional materials such as picture booklets and posters.

Outputs of toolkit development:

1) *A Guide for Managing Mercury Waste at Household and Community Level*

The 32-cutting 20-page guide (Figure 1) introduces the historic mercury contamination event "Minamata disease" and spreads mercury knowledge. It also covers issues such as mercury pollution sources and mercury applications, daily mercury-containing items and waste disposal approaches, the collection, transportation and temporary storage of community mercury waste, and provides common mercury standards for reference. The manual is printed in English and Chinese, with 500 and 1300 copies respectively, for pilot dissemination and post promotion in this project. The electronic version of *A Guide for Managing Mercury Waste at Household and Community Level* is attached in Annex 2.



Figure 1 Front and Back Cover of *a Guide for Managing Mercury Waste at Household and Community Level*

2) Posters for raising the awareness of mercury waste management at household and community level

This series has four posters (Figure 2), with the themes of "Just one droplet is enough to make our life overshadowed", "Mercury pollution, the pain more than life can endure", "Act now, or these can be the things you will eat" and "Classifying and recycling, rejecting mercury pollution, you can do it!". From the perspectives of environment, health, food and action, the posters popularize the knowledge and publicize the damage with startling facts and figures to advocate an educated and healthy green lifestyle. The electronic version of the posters are attached in Annex 3-6.



Figure 2 Posters for Raising the Awareness of Mercury Waste Management at Household and Community Level

3) Activity logos and promotional gifts

To concisely and visually express our promotional ideas and leave a deep impression, logos respectively featuring mercury beads, green trees and clean water are designed (Figure 3), accompanied with the catchy slogan of "Less Mercury, Better Life". Meanwhile, color sports bottles with printed logos (Figure 4) are handed out to participants as gifts, which create a dynamic atmosphere, attract more people, and thereby achieve better and more enduring

promotion effects.



Figure 3 Logos for Project Promotion



Figure 4 Sports Bottle -- Project Promotional Gift

4) Questionnaire

A questionnaire was designed to assess the dissemination effect of the toolkit. Information on gender, age and educational level of the respondents were obtained. With 20 questions ranging from the physical characteristics, to the hazards and intake pathways of mercury, as well as mercury-containing products, consumer choice, waste disposal, emergency management, and nutritional supplements etc., the survey instrument collected relevant data to understand the dissemination effect. The questionnaire is attached in Annex 9.

2. Assessment of toolkit dissemination effect -- pilot testing in Chongqing

Chongqing, one of the four municipalities in China, has great importance in the compliance with and the promotion of international convention on environmental protection. Its rich experience offers the foundation and conditions for further efforts in such promotion. On the grounds of the consultation with environmental protection bureau of Chongqing municipality, the taskforce decided Chongqing to be the pilot city for awareness-raising dissemination for mercury waste management.

A series of activities for awareness-raising publicity for mercury waste management were

launched in Chongqing on April 22, 2011. Taking the opportunity of "4.22 World Environment Day", Chongqing kicked off these activities which mainly fall into two categories.

Firstly, the event of "Mercury Pollution Elimination and International Compliance Promotion", themed "Well Treat the Planet, Create National Model City" unveiled its face in Three Gorges Square in Shapingba area which has a vast basis of targeted audience and large flow of people. Various forms of campaigns have been employed, such as posters, brochures, science videos, on-site consultation, surveys, souvenirs, and special performance named "sing, read, tell and pass down". Waste battery recycling bins were also presented to the community (Figure 5). Knowledge on mercury pollution prevention and the disposal of household mercury products and waste is popularized to call for active public participation in mercury pollution prevention in their daily lives.



Figure 5 Deputy Director of MEP FECO Fang Li Donates Recycling Bins for Used Waste Batteries

The local people were active on the promotion site. They inquired the details about mercury, learned the disposal methods of mercury items, and took an active part in interactive activities and filled out the questionnaire on mercury waste management, which revealed good promotion effects (Figure 6-8).



Figure 6 People in the Community Looking at the Posters on Mercury Pollution Prevention



Figure 7 People in the Community Receiving the Questionnaire, Brochures and On-site Consultation



Figure 8 People Signing to Practice Commitment

The second event was a tour exhibition to popularize knowledge on mercury pollution.. Promotional posters, roll-ups and other publicity materials on mercury pollution were exhibited in Shapingba District, Jiangbei District and Municipal Environmental Protection Bureau in order to disseminate mercury pollution prevention knowledge among leaders of various organizations and community residents.

The event used plain language and vivid images to popularize the knowledge among people at all levels, covering mercury's physical properties, characteristics, existing forms, exposure pathways, hazards, as well as daily mercury-containing products and corresponding treatment recommendations. It advertised the correct ways of mercury waste management and the vital significance of mercury pollution prevention, and raised public awareness of mercury waste management and mercury pollution prevention.

3. Summary of toolkit effects

After toolkit development and pilot promotion in the earlier stage, the taskforce summarized the effects of the promotion, including retrieving questionnaires on mercury waste management awareness for statistics collection, summarizing the feedback from pilot community and residents, assessing toolkit's promotion effects based on the feedback and providing experiences and suggestions for future promotion.

While summarizing survey statistics and promotion effects, we found that the public has very limited basic knowledge of mercury pollution and is in urgent need of large-scale and systematic publicity and education. For example, when asked in the survey if "mercury will evaporate at room temperature", only 55% (21/38 persons) of the respondents that do not read the promotional materials know "it will". The number increases to 63% (76/120 persons) in the random survey after the pilot promotion. The example proves that development of promotional toolkits for mercury waste management and mercury pollution prevention, along with a wide range of promotion and publicity, is positive and effective to solve the problem.

V. Conclusions

Based on the toolkit development, pilot project publicity and promotion effect assessment, the taskforce has summed up the lessons learned in accordance with the specific implementation conditions, and analyzed the application prospects of the project results.

1. Necessity and urgency to carry out awareness-raising dissemination for mercury waste management and mercury pollution prevention at household and community level.

Along with the general improvement of people's living standard and quality, and the accelerating pace of industrialization in developing countries, environmental problems grow increasingly prominent, but the masses only have limited understanding of environmental pollution control and are eager to learn more to cope with environmental pollution. This requires the dissemination of environmental knowledge and addressing confusion on hot and difficult environment issues of social concern, so as to effectively lead the communities towards sound social atmosphere and environmental protection. It thereby improves public awareness of environmental protection, and meanwhile avoids incidents of mass panic that may result from lack of knowledge and understanding of the issue.

Mercury pollution has received widespread concern in the international community in recent years. In the process of project implementation, we deeply feel that the public, though very concerned about mercury pollution prevention, has weak awareness in this regard. On-site consultation services are very popular, which indicates that people are very enthusiastic to know how to dispose mercury-containing products and mercury waste. Therefore, it is of necessity and urgency

to push with awareness-raising dissemination for mercury waste management and mercury pollution prevention at household and community levels.

2. Targeted dissemination and proper promotion approaches

Publicity campaigns for enhancing mercury waste management awareness and mercury pollution prevention are closely linked to the general public's health and ecological environment, which grow to be issues of great public concern. Therefore, the publicity should echo with the priority in mercury pollution prevention, and be carried out in a user-friendly form in accordance with the characteristics of different audience. In addition, the promotion is supposed to be forward-looking and predictive and carried forth in a progressive and continuous manner. In addition to *A Guide for Managing Mercury Waste at Household and Community Level*, a series of awareness raising posters, activity logos and promotional gifts were included in the toolkit developed in this project. In accordance with the actual conditions in Chongqing, the taskforce also broadcasted science videos, donated waste battery recycling bins to the communities, and presented special performances, in an effort to popularize knowledge on mercury waste disposal and management, as well as mercury pollution prevention. To this end, it is suggested to adopt a variety of publicity forms in the follow-up promotion in accordance with the actual local conditions.

In addition, promotion on mercury and other heavy metal pollution can be carried forth more targeted towards decision-makers, engineers, general public, occupational exposure and groups at higher risks (women and children), respectively, in order to be more scientific, objective and to achieve better results.

3. Active development of other supporting mercury pollution prevention measures

Mercury waste management awareness campaign should be comprehensive. In addition to the toolkit and conventional publicity, other comprehensive and complementary measures should be taken to control mercury pollution. For example, the government could roll out preferential policies and support measures to advocate low-mercury or mercury-free products within the community and residents, actively improve mercury waste transport, recycling and disposal systems, and further TV, print media and online publicity etc. Various measures shall be carried forward hand-in-hand by means of comprehensive implementation.

VI. Recommendation

Based on the pilot promotional events, the toolkit developed in the earlier stage of the project has seen very significant positive promotion effects. Brochures, posters, gifts in the series of activities, on-site consultation, and provision of answers to questions have achieved good publicity effects. For example, results of the survey on mercury waste management awareness at household and community level showed that after reading promotional materials, 66% of the respondents are “very concerned” about the follow-up investigation on mercury pollution, 11% higher than that

before the reading the materials.

However, the toolkit developed in this project is basic and still the first step. There is still a long way ahead to achieve the desired effects. As to the prospect of application, the taskforce believes that the application should be adapted to local conditions and the existing toolkit needs to be adjusted and expanded, if necessary, for optimal effects.