



Technical Cooperation Project for Strengthening the Capacity for Solid Waste Management in Ulaanbaatar City in Mongolia

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It has been already 8 months since our project has been implemented. In the 3rd volume of our newsletter, we would like to introduce “the pilot project (PP) for waste separation and recycling” as one of our important project activities.

1. Pilot Project for Waste Separation & Recycling

Background

According to the M/P for Solid Waste Management (SWM) in the Municipality of Ulaanbaatar (MUB) which was formulated in 2007, the fundamental goal is: “To establish an environmentally sound SWM system in MUB by the target year of 2020” in which system the concept of “3Rs (Reduce, Reuse and Recycle)” is promoted and the following situation should be established.

- 1) Waste reduction is encouraged at the generation source such as households and business enterprises.
- 2) Waste generated after the attempt of waste reduction is reused or recycled as much as possible.
- 3) Waste is properly collected only after the efforts of waste reduction, reuse or recycling at the generation source, and recycled/treated, then finally disposed of in a proper manner without negative environmental impacts.
- 4) Such a SWM system will be established by requiring the government sector, private sector and general public to bear adequate responsibilities under a transparent and fair rule is achieved.

Since 2007, in the UB city, the development of infrastructure such as procurement of waste collection trucks and construction of new disposal site applying the sanitary land filling system has been achieved, while at the same time the software system such as establishment of WSF and strengthening the organization for SWM has been

improved. On the other hand, promotion of “3Rs” is still untouched but important issues to be tackled in near future. This PP aims to support MUB in selecting the most appropriate SWM system by showing several alternatives of 3Rs taking consideration of severe weather conditions and social conditions of the city.

This PP consists of the following three components;

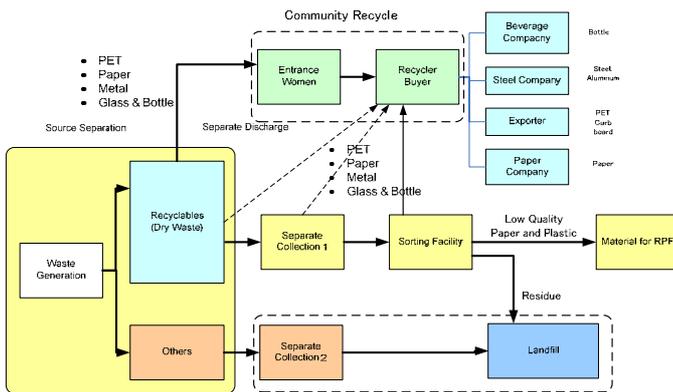
- PP1: Public cooperation PP on separate storage and discharge
- PP2: Verification PP of separate collection system
- PP3: Verification PP of separation system at the landfill site

Overall Plan

The basic policy for PP is as follows;

- 1) First priority is to reduce waste discharge at generation sources. That is to say, the waste separation for community recycling will be encouraged.
- 2) Waste will be separated into two types, recyclables and others.
- 3) Recyclables includes valuables such as PET, Glass container & bottle, can and low quality plastic and paper.
- 4) Separate collection for recyclables and others will be introduced. However, residents, watchmen, collection workers will be encouraged to sell the valuables to the recyclers in order to reduce the amount of waste transported to NEDS.
- 5) Sorting yard which is called “Narangiin Enger Recycling Complex (NERC)” will be constructed in NEDS. Those valuables (PET, Glass container & bottle, can) and RPF materials (low quality paper and plastic) will be sorted there.

The flow of separate discharge & collection according to the above basic policy is shown below.



Current Progress of 3 PPs

PP1: Public Cooperation PP on Separate Storage and Discharge

This PP aims to verify the degree of public cooperation on separate storage and discharge while at the same time developing the capacity of C/P in raising public awareness through interacting with residents in the Apartment area.

In selection of the target khoroo for PP, various conditions such as willingness to improve SWM and cooperate for PP by district governor and deputy governor and willingness to compensate additional cost for separate collection by khoroo governor were examined. As a result, four target khoroos; khoroo # 5 and #7 of SBD and khoroo #1 and #7 of BZD were selected.

At present, we are organizing weekly meeting inviting the representative of Apartment Owner's Union (AOU) in each target khoroo. We have decided that first of all we would work on 1) improvement of waste discharging manner by residents, 2) improvement of collection manner by collection service providers, and 3) improvement of waste separation at source to promote community recycling, and then the next step of separate collection will be introduced.



PP2: Verification PP of Separate Collection System

In this PP, separate collection area and mixed collection area from the Apartment area will be

selected to compare the cost (cost for separation and for collection) and the benefits (the amount of valuables collected and the amount of sale of valuables) of each collection system, so that people would understand whether or not there is the significance to introduce separate collection for the UB city.

This PP will be implemented after the source separation by residents has been successfully established to some extent in the PP1 of public cooperation on separate storage and discharge.

PP3: Verification PP of Separation System at the Landfill Site

This PP aims to compare the cost and benefit of; simple hand sorting system which is equipped only with concrete + scattering prevention fence, and simple semi-mechanical sorting system which is equipped with hopper and belt conveyor in order for Waste Pickers (WPs) to collect valuables from wastes at the landfill.

There are about 250 WPs collecting valuables now in NEDS for making their own living. They are planned to work for sorting valuables as soon as a sorting yard has been constructed. It can be helpful for WPs to work in a safer and sanitary environment and also for the NEDS itself to do sanitary land filling more efficiently. Aiming at systematization of WPs, the weekly meeting is being held now so that the recyclables sorting can be immediately started after completion of a sorting yard.



Schedule of Waste Separation & Recycling PP

Description	2009			2010								2011																
	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
Planning for PP	Preparation			Implementation Stage																								
Waste Storage and Discharge	[Implementation]																											
1.Improvement of Discharge Manner	[Implementation]																											
2.Waste Separation at Generation Source(valuables & others)	[Implementation]																											
3.Waste Separation at Generation Source(recyclables & others)	[Implementation]																											
Separate Collection of Waste	[Implementation]																											
1.Improvement of Collection Manner(point collection with fixed sched	[Implementation]																											
2.Improvement of Collection Efficiency	[Implementation]																											
3.Separate Collection of Recyclables	[Implementation]																											
Sorting Operation at NERC	[Implementation]																											
1.Construction of Sorting Facility	[Implementation]																											
2.Sorting Operation for Mixed Collection Waste	[Implementation]																											
3.Sorting Operation for Separated Collection Waste	[Implementation]																											
Monitoring	[Implementation]																											
Evaluation and Recommendation	[Implementation]																											

* Valuables: PET, Glass bottle, can, clean paper etc.
 * Recyclables: Valuables + RPF materials(low quality paper & plastic)

3. The 1st 3R Seminar

"The first 3R seminar" was held in the Ulaanbaatar hotel on April 14 for the following purposes;

- 1) To obtain the understanding and agreement on the contents of the PP from the stakeholders,
- 2) To share the important experiences of the stakeholders to promote the 3Rs activities in order to reduce disposal amount and enhance recycling,
- 3) To exchange opinions among stakeholders in order to promote the 3Rs in UB city.

About 90 persons including representatives of related ministries, EPWMD, CMPUA, WSF and PSD of district government, and AOU's director of each target khoroo for PP, NGO, and the mass media, participated in the seminar.

After presentation of opening remarks from Japanese side (JICA) and Mongolian side (MUB), EPWMD explained the details on PP for waste separation and recycling and continuously the khoroo governor of SBD 7 made a presentation about the experiences and challenges of their community recycling.



In the session of questions and answers for the presentation on the PP, the representative from Gender Centre for Sustainable Development (NGO) asked; "Is there any countermeasures to the toxic gas derived from combustion of RPFs¹ as they are produced from papers and plastics?" In reply to her questions, JET informed the participants about results of the PP conducted during the Development Study on production of RPF for the heating plant of Nalaikh district. According to the results of PP during Development Study, quality of exhausted gasses were investigated and it was within the permission



level, if RPF has been mixed few percent as replacing with coal. Actually, the RPF increases the efficiency combustion of the fuel. However, the project will not recommend for heating plants to use a fuel consisted only from RPF.

In relation to the waste separation for community recycling, the representative of the Research Institute of Public Sanitation emphasized the necessity of complete separation of wastes before collection and recommended to educate housewives, children and the public on sorting wastes at the generation sources in order to achieve good results.



In the session of workshop, at first EPWMD explained the current conditions of waste discharging manner and problems in the UB city, then the group discussion by each of the 4 target khoros has been made addressing the issues on how to improve the waste discharging manner and collection manner, and how to promote source separation for community recycling.



All of the AOU representatives took active parts in discussion and exchanged various opinions. After that, the result of the discussion was presented by the representatives of each group.



Each khoroo differs in the methods of discharging waste according to whether the apartment has a dust chute or not. Also, the collection method is different according to the collection providers and collection trucks. Moreover, there are khoros in which the source separation has been already implemented to some extent and khoros in which the problem of discharging manner of business entities is more serious than that of apartment residents. Thus, various measures have been discussed based on those current conditions by each khoroo. The contents and priority of PP which



¹ RPF is "Refused Papers & Plastics Fuel". These waste plastics and papers can be a fuel if they form a certain density and shape for feeding in Power Plant.

are to be implemented in each target khoroo will be determined respectively based on the result of the discussion and the actual condition of each khoroo.

In the last session of questions and answers, various issues and recommendations have been presented by participants.

The representative of AOU of khoroo #1 BZD recommended that the PP should involve UBS Channel #1 and #2 as the announcement of achievements of the PP in the municipal television channels would improve the public awareness as of the strongest means among those mass media in Mongolia. The channels should also broadcast cases of violation of laws or regulations related to waste management or waste discharge.



The representative of AOU of khoroo #7 BZD emphasized the importance of competition among the target AOU. He said; "competition among the AOU and households is helpful to achieve good results in implementation of the PP. Furthermore, AOU or households that obtained good results in improvement of residents' discharge manners and implementation of the project activities should be awarded by the MUB".

The JET also made a comment on the frequency of waste collection; "It is possible for the UB city to



reduce the collection frequency because the project requesting residents to keep their wastes only for 2 or 3 days and also some of the residents such as in khoroo # 7 of

BZD have already been used to keeping wastes for 2 days. Taking example of the Tokyo Japan, residents are allowed to discharge their kitchen wastes twice in a week while the other recyclable wastes are only collected once in a fortnight. Storing wastes for decided period of time relates to the improvement of the residents' awareness about SWM".

Many of the participants requested the supply of plastic bags in order for residents to put their separated waste. In response, the JET said; "if



we supply the plastic bag for residents, it would increase the amount of plastic bags to be discharged but the objective of out PP is to reduce the amount of waste. Moreover, providing residents with plastic bags is not sustainable option since the fund for financing the supply of plastic bags is difficult to secure. If supply is necessary, the financial source should be secured. One of the possible ways is the savings by collection companies resulted from the reduction of collection frequency which in turn, resulted from the decrease in waste amount after introduction of separate discharge and collection".



It seemed that through the discussion in the seminar and workshop a mutual understanding over the PP has been increased while at the same time awareness of the issues related to the waste management has been shared among those participants. It is expected that these experiences would be harnessed to our future PP activities in effective way.

4. Important Event and Activity

- AOU meeting at each PP target khoroo: on going.
- Separate collection of waste for trial at BZD1: from June 12.
- WPs meeting at NEDS: on going.
- Time & Motion survey in Ger area: Mid June.

5. Our New Mongolian Website

The Mongolian version of our web site has been set up. The URL of site is shown below.

We will try to update the web site as frequently as possible in order to show the prompt reports on our survey and provide information on events such as seminars and workshops. We hope that many of you will check our web site.

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