

4. Results of Evaluation with Five Evaluation Criteria

4.1 Relevance

It can be assessed that the Project has a high degree of relevance for technical cooperation. Results are summarized below:

1. UB City has experienced a rise in the amount of waste and illegal dumping with rapid urbanization and changes in consumption patterns. In order to deal with such SWM problems, the Project aims to strengthen the capacity for SWM in UB City through human resource development. Thus, the project components match the needs and priorities identified by “the Action Plan of the Government for 2008-2012” and “UB City Mayor’s 2009-2012 Action Plan”. The former stated a new SWM system would be introduced in cities and other settlement areas while the latter gave emphasis on improving SWM in UB City.
2. According to “Japan’s Country Assistance Program for Mongolia” (2004) (2012), strengthening UB’s urban functions is one of the three priority areas for assistance. This aid policy highlights the need for assistance to strengthen environmental management in urban areas. Japan has been consistently supporting the SWM of UB City with the Development Study (2004-2007) and the Grant Aid (2007-2008). The former was to develop the M/P on SWM for UB, whereas the latter was to construct the NEDS Landfill and to provide waste collection vehicles and other equipment. The Project is expected to develop human resources and to strengthen SWM-related organizations to implement the M/P on SWM for UB City including operation and maintenance of the NEDS Landfill and waste collection vehicles. Thus, the Project is consistent with the Japanese aid policies and the past assistance for SWM over the year, and applies the relevant knowledge and experiences.
3. Human resource development and capacity development have been undertaken by mobilizing the strength of JICA’s technical cooperation project. The Project has assisted the counterparts to gain the comprehensive knowledge and practical skills on SWM by technical transfer from the Japanese experts, various types of on-the-job training, pilot project activities, workshops and seminars, and training in Japan. These approaches were relevant in terms of human resource and capacity development of the EPWMD and the CMPUA, and their staff members.
4. Overall, the Project design was appropriate. In order to reflect changes in the circumstances surrounding the Project and to incorporate the results of various baseline surveys, the PDM was revised four times based on the discussions among the project stakeholders. However, at the time of the Terminal Evaluation, the Team found that several drawbacks still remained in the latest PDM Version 4. Since both Indicator 4-1 and Indicator 5-1 were not objectively measurable, they should have been appropriately stated. Also, the results of the Capacity Assessment conducted by the Project periodically should have been utilized as indicators of the PDM. Regarding Indicator 2-3, it should have been revised if it was not relevant to expect the CMPUA to formulate the

waste collection plan in accordance with its roles and mandate. Indicator 1 of the Overall Goal that may be affected by many other factors was too indirect to measure the effects of the Project appropriately.

4.2 Effectiveness

The effectiveness of the Project can be assessed as medium at the moment of the Terminal Evaluation.

Results are summarized below:

1. There are some variations in the level of achievement of Outputs. Capacity development of the EPWMD for policy making and planning for SWM (Output 1), capacity development of the CMPUA for proper management of NEDS (Output 3), and making recommendations for the appropriate system of waste separation and recycling (Output 6) have been achieved or almost achieved.
2. On the other hand, capacity development for operation and maintenance of SWM vehicles and heavy machineries (Output 2), capacity development of the EPWMD and DSWFs for administrative and financial management in SWM (Output 4), and capacity development of EPWMD and district officers for promoting public awareness and participation in SWM (Output 5) have been partially achieved by the time of the Terminal Evaluation, and were less likely to be completely achieved by the end of the Project mainly because of external factors. The capacity of DSWFs was not developed by the Project since the counterparts were not assigned as a result of the City Council's decision to abolish DSWFs. Because of the uncertain legal status of DSWFs which had close relationship with district offices, the district officers were unable to be actively involved in the Project (See also 3.Implementation Process).
3. The capacity of the EPWMD and the CMPUA has been considerably developed and strengthened by the Project. However, the Project Purpose has not been completely achieved. The disruption of waste collection and transportation services by private and public entities, which was beyond the control of the Project, has affected the achievement of the Project Purpose to some extent (See also 3. Implementation Process).
4. The Project has focused on development of human resources in a practical manner by providing the counterparts various opportunities of not only learning but also applying the acquired knowledge and skills in a practice. The counterparts have been directly involved in a broad range of project activities and gradually taken initiative in implementing the phase 2 of the pilot project and making a presentation on SWM-related issues at the seminars and workshops. Such an approach adopted by the Project has brought about the following positive outcomes: (1) The EPWMD has become able to play a key role of drafting laws and regulation not only at the city level but also the national level; (2) The CMPUA has become able to play a leading role in operating the first sanitary landfill site in Mongolia; (3) The operational management system of

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SWM was, not completely but to some extent established to serve as a basis for improving SWM, including the operation and maintenance of waste transportation equipment, the monitoring of final disposal sites, the estimation of appropriate waste collection fees, the standard tender procedures, the management for selecting waste collection service providers and awareness raising on SWM: (4) The stakeholders including residents, khoroos governors, and AOU members in the pilot projects and government officials in other provincial cities have become aware of the importance of SWM; (5) The staff members of EPWMD and CMPUA have become more confident and keenly aware of their responsibility to improve SWM. These outcomes have contributed to the overall effectiveness of the Project.

4.3 Efficiency

It can be said that the Project has a medium degree of efficiency as a whole. Results are summarized below:

1. The inputs from the Japanese side were smoothly made as schedule, while the counterparts of DWSFs were not assigned from the Mongolian side as mentioned before. Moreover, the counterparts of district officers were unable to be sufficiently involved in the Project since they had a close relationship with DWSFs which had uncertain legal status. This issue has not been resolved until the time of the Terminal Evaluation. The Mongolian side lost a valuable opportunity to strengthen the organizational and individual capacity related to SWM of DWSFs and district offices.
2. The training in Japan, in particular, the country-focused training course and the group training course which are directly linked with the Project activities, contributed to motivating the counterparts and the other project stakeholders to implement project activities, and smoothly producing each Output to some extent. The dispatch of the Japanese experts who were familiar with the actual situation of SWM in UB City also helped to enhance the efficiency of the Project.
3. Monitoring of the Project such as weekly meetings has been in place and well functioned. The communication and team work have been good between the Japanese experts and the counterpart personnel. This is also likely to contribute to the smooth implementation of the Project (See also 3. Implementation Process of the Project).
4. The transfers of the director of CMPUA twice and its staff members were inhibiting factors that affected the progress of project activities and caused some disruptions. The Japanese experts had to provide a brief overview of the project activities and to transfer the necessary knowledge and skills repeatedly when the frequent personnel transfer including management-level officials took place (See also 3. Implementation Process of the Project).

4.4 Impact (Prospects)

It is hard to say that the Overall Goal would be achieved due to the intervention and the effects of the Project. Particularly, Indicator 1, i.e., the level of people's satisfaction for urban environment and sanitation might be affected by many other factors. However, some positive impacts have been already observed. Regarding Indicator 2, no further illegal dumping took place in the three out of six large scale disposal sites (See also 2.4 Overall Goal).

Also, the Team confirmed that a number of unexpected and positive impacts presented below.

- (1) The EPWMD and the CMPUA prepared to procure the waste collection vehicles with the budget of MUB.
- (2) The EPWMD prepared to implement the source separation and collection in Khaa-Uul No. 2 which was one of the pilot project sites.
- (3) The CMPUA took initiative in closing the Ulaan Chuluut Disposal Site with the budget of MUC in July 2009 and planted trees there in 2011.
- (4) The CMPUA conducted pavement construction in an approach road to the NEDS and replacement construction of the road with the budget of MUB in 2010.
- (5) The CMPUA conducted improvement construction in the Morin Davaa Disposal Site with the budget of MUB in 2011 by applying the knowledge and skills on sanitary landfill obtained from the Project.
- (6) The EPWMD and the CMPUA prepared to construct the new landfill site in Tsagan Davaa.
- (7) The EPWMD began to employ the waste pickers to undertake a trial operation in the RPF facility based on the experiences of the Project.
- (8) The EPWMD took initiative in improving the weighbridge record system in the NEDS by modifying the computer program and the information management system.
- (9) The EPWMD and the CMPUA took the lead in disseminating the knowledge and technologies of sanitary landfill to other cities.
- (10) The EPWMD provided the environmental education program to the schools in UB City.

4.5 Sustainability (Prospects)

It is fair to say that the sustainability of the Project is likely to be medium to moderately high. Results are summarized below:

1. The M/P for SWM was developed by the Development Study and revised by the Project, which is likely to continue to serve as a policy framework for SWM in UB City. As solid waste problems in UB City have become a pressing issue for the MUB, the policy environment to strengthen SWM has become considerably favorable for the Project. However, the SWM system including the financial system is most likely to be affected by political influences and interventions. There

is a gap between the legal framework and the actual operation of SWM in some cases such as selecting waste service providers without tenders. The EPWMD has endeavored to amend Law on Household and Industrial Waste in collaboration with other stakeholders to strengthen the system of SWM. This will be discussed at the National Assembly in fall 2012. If it is finalized and approved, the Revision of WSF Regulation and other related regulations are also likely to be amended. Such revision of laws and regulations will influence the sustainability of the Project. However, the degree of their influences was not sufficiently prospected at the time of the Terminal Evaluation. Thus, it is fair to say that the sustainability of the policy aspect is likely to be medium.

2. It is definitely necessary for the CMPUA and the EPWMD to continue to allocate sufficient budget, in particular, for the operation and maintenance of waste collection vehicles, heavy machineries, and other equipment, and the operation of landfill sites. Considering the fact that both organizations have become able to allocate the necessary budget from the MUB, the sustainability in the financial aspect is likely to be moderately high.
5. The organizational capacity of the EPWMD and the CMPUA has been strengthened by the Project. However, there is still room for improvement in each organization. The EPWMD needs to strengthen the financial management system of SWM and promote raising public awareness and behavior changes of dischargers. The CMPUA need to strengthen operation and maintenance of collection vehicles and other heavy equipment. Particularly, they should secure a stable supply of spare parts of equipment. Also, the CMPUA should secure skilled mechanics and drivers, particularly bulldozer operators since they tended to leave the office and work at high pay in mine projects. The frequent transfer which occurred due to political considerations in some cases is also a major concern from the sustainability of the Project. Given these assessments above, the sustainability of the institutional and organizational aspect is rather medium. In the technical aspect, most of the counterparts have acquired the practical skills and knowledge of SWM enough to continue to apply them. As mentioned before, the DWSFs and the district offices lost a valuable opportunity to develop the organizational and individual capacity related to SWM. As most of the stakeholders pointed out, it is necessary to further improve their capacity related to SWM. Since most of the staff members of EPWMD and CMPUA have become more confident and keenly aware of their responsibility to improve SWM, they have adopted their knowledge and skills to their regular work and other national-level work and disseminated them to stakeholders of other cities. Considering the above, the sustainability in the technical aspect can be assessed as moderately high.



5. Conclusions

The Project has been implemented as the third stage of a series of JICA's technical assistance program for SWM in Mongolia, followed by the Development Study (2004-2007) for formulation of M/P on SWM for UB City and the Grant Aid (2007-2008) for construction of the NEDS and provision of collection vehicles and heavy machineries. The Project aims to strengthen the capacity for SWM in UB City through human resources development in order to implement the M/P including operation and maintenance of the NEDS Landfill and waste collection vehicles. The capacity of the counterpart personnel of both the EPWMD and the CMPUA has been remarkably strengthened by implementing project activities, where equipment and facility provided by the Grant Aid are fully utilized by Mongolian stakeholders. In this regard, the intended basic objective has been achieved in terms of human resource development at the time of the Terminal Evaluation.

However, there are some variations in the level of achievement of Outputs when analyzed based on the PDM. The Output 1, the Output 3 and the Output 6 have been achieved or almost achieved. On the other hand, the Output 2, Output 4 and the Output 5 have been partially achieved, and were less likely to be completely achieved by the end of the Project. Considering the above, there was still room for further improvement of the three key areas of human resources as follows: (1) comprehensive management of waste collection services in the EPWMD and the CMPUA, (2) comprehensive financial management of solid waste in the EPWMD and DWSFs/district offices, and (3) promotion of public awareness raising at the district level. Several factors prevented the Project from strengthening the above areas of human resource development such as no assignment of counterparts from DWSFs, the insufficient involvement of district officers, and the limited authority of the EPWMD and the DWSF in terms of SWM of the city. The main root cause might be delay in strengthening the legal system of SWM including amendment of relevant laws and regulations. These laws and regulations urgently need to respond to a reality of SWM issues in UB City such as the introduction of privatization of waste collection services. In order to address the above, the Project has endeavored to draft the thirteen laws and regulations including the Amendment of Law on Household and Industrial Waste under the Output 1. Although they have been already submitted to the authority concerned, it is likely to take more time to be finalized and approved, and less likely to become effect by the end of the Project.

The Project Purpose has been partially achieved in terms of strengthening the capacity of SWM in UB City, though the Project has produced significant results such as development of a number of human resources and introduction of sanitary landfill technology and management. The three indicators of the Project Purpose, i.e., "Waste collection rate in Ger areas" (Indicator 2), "waste collection rate in apartment areas" (Indicator 3), and "collection rate of waste service fee from Ger area" (Indicator 4)

have been already achieved. The remaining indicator, i.e. “people’s satisfaction level for SWM services throughout the city” which has been decreased when it was compared to the result of the baseline survey fell short of the target value of the PDM. The people’s satisfaction might be affected by not only by the intervention of the Project but also other external factors. However, there is still room for improvement in terms of effective and efficient public services, because end beneficiary of public service is people, themselves.

It is hard to say at the time of the Terminal Evaluation that the Overall Goal would be achieved since “the people’s satisfaction level for urban environment and sanitation” (Indicator 1) that may be affected by many other factors is too indirect to measure the effects of the Project appropriately. However, a number of positive impacts have been already observed. The Mongolian need sustain and expand the effects of the Project after the completion of the Project in order to achieve the Overall Goal. Also, it is imperative to improve the legal system of SWM including amendment of relevant laws and regulations without delay, and to strengthen the capacity of the three key areas by utilizing the effects of the Project.

Regarding the results of evaluation with five evaluation criteria, the Project has a high degree of relevance and a medium degree of effect and efficiency. The impact of the Project can be assessed as high since a number of positive impacts have been observed. The sustainability of the Project is likely to be medium to moderately high.



6. Recommendations

The Team made the following recommendations based on the results of evaluation.

6.1 Recommendations to be implemented during the Project period

1. Revising the indicator 1 of the Overall Goal in the PDM

The ex-post evaluation is conducted about three years after completion of a project to verify the achievement of the Overall Goal, the ripple effects, and sustainability of the effects of the project. In this regard, it will be hard to verify the achievement of the Overall Goal at the time of the ex-post evaluation by using the indicators described in the PDM Version 4. Particularly, the correlation between the Indicator 1, i.e., “the people’s satisfaction level for urban environment and sanitation” and the project intervention was not determined at the time of the Terminal Evaluation since many other factors might affect the Indicator 1. Thus, the Team recommended that the Indicator 1 be revised to more appropriate indicator such as “the people’s satisfaction level for the SWM service through the City”, and the target value should be set based on the discussions among the project stakeholders.

2. Holding an internal workshop to strengthen the capacity of interpretation of surveyed data

The Project has conducted various surveys and obtained the data of SWM. Not only collecting data but also analyzing and interpreting data are vital for the EPWMD and the CMPUA officers to grasp the actual situation of SWM and to implement effective SWM. Thus, it is recommended the Project held an internal workshop for the counterparts of the EPWMD and the CMPUA to discuss how to interpret the following data of (1) the results of people’s opinion surveys in the pilot project sites and the city, (2) the results of waste composition surveys, (3) the results of environmental monitoring, and (4) the results of financial/revenue surveys, with the facilitation of JICA experts.

3. Formulating a strategy on public awareness raising of SWM

At the time of the Terminal Evaluation, a strategy on public awareness raising of SWM that was recommended by the Mid-Term Review has yet to be formulated. The Project should review the approaches and results of the pilot project, and the results of the people’s opinion surveys conducted in the pilot project sites and the selected districts of UB City. It should also analyze the promoting and hindering, and influencing factors such as the socio-economic conditions of residents for promoting public awareness and behavior changes of SWM. Based on such detailed analysis, the EPWMD should formulate the strategy on public awareness to disseminate the good practice of the pilot project to the other areas of UB City effectively.

4. Making a recommendation paper on waste separation and recycling system

The EPWMD made a presentation of the draft policy on introduction of waste separation system at the third 3R seminar held in November 2011. However, a recommendation paper on waste separation and

recycling system, which was described in the Output 6 of the PDM, has yet to be finalized at the time of the Terminal Evaluation. Thus, the EPWMD in collaboration with the CMPUA should finalize it based on the detailed analysis of the pilot project under the Output 6.

6.2 Recommendations to be implemented after the termination of the Project

1. Strengthening the organizational and institutional capacity of the EPWMD and the CMPUA

The Amendment of Law on Household and Industrial Waste is expected to be discussed in the National Assembly in fall 2012, and become effect as early as this year. Thus, it is recommended the EPWMD and the CMPUA improve the organizational and institutional capacity in the new legal framework in order to institutionalize the effects of the Project appropriately. In other words, both organizations should put in place effective mechanism for utilizing technologies, facilities and equipment provided by the Project, and various guidelines, manuals and tools, human resources developed by the Project, as per the mandate and the authority stipulated in the Amendment of Law on Household and Industrial Waste.

2. Strengthening the three key areas of human resources of the EPWMD, the CMPUA, and DWSFs/district offices

The further capacity improvement of human resources of the EPWMD, the CMPUA and DWSFs/district offices will be the key to maximizing the effects of the Project and to accelerating the effective SWM in UB City. Therefore, these organizations should strengthen the three key areas of human resources as follows: (1) comprehensive management of waste collection services in the EPWMD and the CMPUA, (2) comprehensive financial management of solid waste in the EPWMD and DWSFs/district offices, and (3) promotion of public awareness raising in the district offices.

3. Promoting further technical transfer of the effects of the Project to other provincial cities

Since the MONET has ordered provincial cities to formulate the M/P on SWM, the Project, in collaboration with the MONET, held the workshop on formulation of M/P, in which the staff members of the EPWMD and the CMPUA shared their experiences with the stakeholders of provincial cities. Also, the CMPUA has been to other provincial cities to disseminate their knowledge and skills regarding the sanitary landfill. It is recommended that the EPWMD and the CMPUA continue to promote such technical transfer of the effects of the Project to other provincial cities.

4. Strengthening further collaboration with JICA Volunteer Program

The JICA Senior Volunteer (mechanical engineering) was dispatched to the CMPUA has played a very important role in enhancing the technical skills of its vehicle maintenance in the Project. Many staff members appreciated his technical transfer to them. Thus, it is recommended that further collaboration with JICA Senior Volunteer (solid waste management) and JOCV Volunteer (environmental education)

be strengthened for enhancing the capacity of CMPUA and EPWMD.



7. Lessons Learned

The Team identified the following lessons learned from the Project.

1. There are some real limitations to human resource development without an inadequate organizational and institutional mechanism in terms of achievement of outcomes.

Since the Project was requested by the Government of Mongolia as domestic training of SWM in order to establish the suitable SWM system in UB City, it was designed to focus on human resource development of SWM rather than institutional development of SWM based on a series of discussions among the stakeholders. It was also expected to develop human resource as the technical cooperation in order to implement the M/P formulated by the JICA Development Study (2004-2007) and to operate and maintain appropriately the waste collection vehicles and heavy machineries provided and the first sanitary landfill site in Mongolia, i.e., NEDS developed by the Japanese Grant Aid (2007-2008). As the Project has implemented various activities, the capacity of counterparts has been considerably improved. The above three technical assistance schemes of JICA have also had synergistic effects. However, the Project has sometimes faced difficulties because of the external factors, which was beyond the scope of the Project. The administrative and financial management capacity of the EPWMD, for example, has not been sufficiently improved by project interventions because of inadequate institutional and legal mechanisms of SWM. One of the lessons can be learned from the course of the Project that there are some real limitations to human resource development without an inadequate organizational and institutional mechanism in terms of achievement of outcomes.

2. Providing relevant training programs in Japan is effective in implementation of project activities

Most of the counterparts noted that the country-focused counterpart training course in Nagoya, Japan and group training programs in Japan were very useful for them to learn comprehensive ideas of the SWM system, practical skills and knowledge of the SWM employed in Japan. Not only the main counterparts of the EPWMD and the CMPUA but also some stakeholders such as the district officers and the Khoroos Governor of the pilot project site participated in the training programs, which motivated them to be actively involved in the Project activities since their design was directly linked with the Project activities. Several participants have implemented the action plan formulated during the training courses. Training in Japan, in particular, a country-focused training course which is directly linked with project activities is effective to motivate counterparts and other project stakeholders to implement project activities.

3. Conducting a weekly meeting is effective in monitoring of a progress of activities and communication among project stakeholders

The Project conducted weekly meetings more than 100 times in which the counterparts of the

EPWMD and the CMPUA, and the Japanese experts participated to share and discuss the progress of Project activities. As most of the above stakeholders pointed out, the communication and team work have been good among them through such weekly meetings. Conducting a weekly meeting is effective to monitor a progress of activities and to ensure smooth communication and close coordination with project stakeholders.

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Annexes

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- ANNEX 2 List of Counterparts
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- ANNEX 4 List of Short-term Experts
- ANNEX 5 List of Equipment
- ANNEX 6 List of Training in Japan
- ANNEX 7 Laws and Regulations relating to SWM drafted by the Project



ANNEX 1: Project Design Matrix (PDM) Version 4

Project Name: Strengthening the Capacity for Solid Waste Management in Ulaanbaatar City
Implementing Agency: EPWMD
Cooperating organizations: CMPUA, WSFs and District Governments
Project Period: October 2009 to October 2012 (3 years)
Target Group: Staff of EPWMD, CMPUA, WSFs and District Officers
Project Area: Ulaanbaatar City

Date: May, 2011

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal Deteriorated urban environment and sanitary conditions caused by uncontrolled solid waste will be improved in Ulaanbaatar City.</p>	<ol style="list-style-type: none"> 1. People's satisfaction level (more than average) for urban environment and sanitation throughout the City reaches to 50%. 2. Six large scale accumulated illegal disposal site out of 10 monitoring sites shall be eliminated. 		
<p>Project Purpose Capacity for SWM in Ulaanbaatar City is strengthened through human resource development.</p>	<ol style="list-style-type: none"> 1. People's satisfaction level (more than average) for the SWM service throughout the City reaches to 60%. 2. Waste collection rate in Ger area is increased to 90% (waste collection cover rate in population). 3. Waste collection rate in Apartment area keeps 100% in spite of population growth. 4. Collection rate of waste service fee from Ger area is increased to 30%. 	<ol style="list-style-type: none"> 1. Progress reports 2. Minutes of Meetings of JCC 3. Report from EPWMD, CMPUA, WSFs, District Governments and TUKs throughout the City 4. Report on social satisfaction level survey 5. Interview survey to each khoroo 6. Interview survey to each WSF 7. Interview Survey to Ger Khoroo residents. 	<ol style="list-style-type: none"> 1. The draft policy, draft regulation(s), draft guideline(s) on SWM is officially approved, or revised and then approved, by the Ulaanbaatar City authority. 2. Necessary budget for SWM activities is continuously allocated. 3. Continuing-existence of private sector-based recycling market.
<p>Output 1 Development of human resource in EPWMD for policy making and planning for solid waste management</p>	<ol style="list-style-type: none"> 1. Proposals of draft policy, draft regulation(s) and draft guideline(s) on SWM prepared by EPWMD. 2. Draft updated Master Plan prepared by EPWMD. 3. Action Plan for the organizational development of EPWMD. 	<ol style="list-style-type: none"> 1. Capacity Assessment sheets 2. Text(s), Manual(s), etc. 3. Record of the training, Participants list 4. Draft policy on SWM, draft regulation(s) on SWM, draft guideline(s) on SWM 5. Draft updated Master Plan 6. Action Plan 7. Progress Reports 	<ol style="list-style-type: none"> 1. The basic policy, institutional setup and responsible organization on SWM in Ulaanbaatar City are not changed. 2. Assignment of counter personnel in implementing agency and cooperating organizations is stable, which ensures the continuity of human resource developed through the Project.

Annex 1-1

ANNEX 1: Project Design Matrix (PDM) Version 4

<p>Output 2 Development of human resource in EPWMD and CMPUA for operation and maintenance of solid waste collection vehicles and heavy machineries.</p>	<ol style="list-style-type: none"> 1. Report on operation of SWM equipment (collection vehicles and heavy machineries) is submitted by CMPUA to EPWMD 4 times a year. 2. Report on maintenance of SWM equipment is submitted by CMPUA to EPWMD 4 times a year. 3. CMPUA and each district prepare and submit the waste collection plan to EPWMD once a year. 	<ol style="list-style-type: none"> 1. Capacity Assessment sheets 2. Text(s), Manual(s), etc. 3. Record of the training, Participants list 4. Report on operation of SWM equipment 5. Report on maintenance of SWM equipment 6. Report on waste collection plan 7. Record of the seminar(s) for TUKs 8. Progress Reports
<p>Output 3 Development of human resource of CMPUA for proper management of Narangiin Enger Landfill</p>	<ol style="list-style-type: none"> 1. Landfilling monitoring committee assesses landfilling operation as sanitary landfilling. 2. Report of waste composition survey is prepared by CMPUA. 3. Environmental monitoring including gas emission survey at landfill site is conducted regularly by CMPUA. 	<ol style="list-style-type: none"> 1. Capacity Assessment sheet 2. Text(s), Landfill Operation Manual(s), etc. 3. Assessment report by monitoring committee. 4. Record of the training, Participants list 5. Report on waste composition survey 6. Report on landfill gas emission survey 7. Landfill Environmental Monitoring Report 8. Progress Reports
<p>Output 4 Development of human resource in EPWMD and WSFs for administrative/financial management in SWM</p>	<ol style="list-style-type: none"> 1. Common financial management rule for all WSFs is established. 2. Financial condition of each WSFs is monitored regularly by EPWMD. 3. EPWMD strengthens understanding about administrative/financial management of SWM. 4. EPWMD can design necessary waste generation fee based on the appropriate waste collection tariff to the waste collection organizations. 5. EPWMD can prepare standard tender procedure and standard tender document for selection of waste collection organizations. 6. Control system of selected waste collection organizations will be developed. 	<ol style="list-style-type: none"> 1. Capacity Assessment sheet 2. Text(s), Financial Management Manual(s), etc. 3. Record of the training, Participants list 4. Reports on financial analysis of WSFs 5. Recommendation paper 6. Progress Reports 7. Guideline for calculation of waste generation fee based on appropriate waste collection tariff. 8. Standard tender procedure 9. Standard tender document 10. Guideline for monitoring waste collection organizations according to contract.

Annex 1-2

ANNEX 1: Project Design Matrix (PDM) Version 4

<p>Output 5 Development of human resource of EPWMD and District Officers for promoting public awareness and participation in SWM.</p>	<p>1. Personnel who are in charge of Public Awareness in EPWMD and District offices are able to conduct the public awareness activities by taking initiatives. 2. Public awareness campaign will be conducted in 4 khoroos through PP and another 4 khoroos by the C/P. 3. Awareness of residents on waste separation and discharging manner is improved at the PP sites</p>	<p>1. Capacity Assessment sheet 2. Text(s), Public Awareness Campaign Manual(s), etc. 3. Record of the training, Participant list 4. Monitoring Report on the pilot project on public awareness campaign 5. Recommendation paper 6. Progress Reports 7. Interview survey to the residents at pilot project site.</p>	
<p>Output 6 Recommendation for the appropriate system of waste separation and recycling in Ulaanbaatar City</p>	<p>1. Waste separation facility is examined in NEDS and report on necessary extra cost, efficiency, sanitary conditions of separation operation is submitted. 2. Valuable collectors (former waste pickers) will cooperate for sorting operation at sorting yard according to the manual and guidelines. 3. Recommendation paper on waste separation and recycling system is officially submitted to UB City authority.</p>	<p>1. Record of the seminar, Participant list 2. Monitoring Report of the pilot project on waste separation and recycling in the landfill 3. Recommendation paper 4. Progress Reports</p>	
<p>Activities for Output1 1-1) JET (JICA Expert Team) assesses the baseline capacity of the staff in newly established EPWMD. 1-2) JET prepares a training program (seminar, workshop, site visit, etc.) and training materials (text, manual, etc.). 1-3) The training program is implemented by JET and EPWMD. 1-4) JET advises EPWMD how to formulate policy, regulation(s) and guideline(s) of SWM. 1-5) Seminar on household hazardous waste and e-waste management involved in urban waste stream is organized by JET and EPWMD. 1-6) EPWMD conducts waste amount survey at generation source under the assistance of JET.</p>	<p>Input < Input from JICA > 1. Short-term Experts (1) Leader / Solid Waste Management (2) Operation & Maintenance of Waste Collection Vehicles & Heavy Machineries (3) Landfill Management (4) Financial Management (5) Public Awareness (6) Waste Separation and Recycling</p>	<p>Input < Input from Mongolian side > 1. Assigning C/P personnel 2. Buildings and Facilities for Project activities including the land for the waste manual separation facility in landfill site. 3. Office space for JICA experts and meetings 4. Facilities and services such as electricity, gas, water, telephone, internet access and furniture 5. Operational and recurrent cost for the project activities of the Mongolian side</p>	<p>1. EPWMD, CMPUA and W.SFs assign necessary personnel for the Project activities.</p>

Annex 1-3

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ANNEX 1: Project Design Matrix (PDM) Version 4

<p>1-7) EPWMD reviews and updates the Master Plan under the assistance of JET. 1-8) EPWMD prepares an Action Plan for the organizational development of EPWMD under the advice of JET.</p>	<p>(7) Coordinator, if necessary Equipment for waste manual separation facility in landfill site Landfill gas monitor Oversea training Local cost for JET activities Interpreters</p>
<p>Activities for Output2 2-1) JET assesses the baseline capacity on operation and maintenance of CMPUA. 2-2) JET prepares a training program and training materials. 2-3) The training program is implemented by JET, CMPUA and EPWMD. 2-4) JET organizes practical training/guidance for the technical staff of the maintenance workshop in CMPUA. 2-5) JET prepares recommendations for management system of maintenance workshop in CMPUA 2-6) CMPUA and EPWMD review and recommend the waste collection plans of Ulaanbaatar City under the cooperation of JET. 2-7) CMPUA and EPWMD organized seminar(s) for TUKs about operation and maintenance of vehicles under the advice of JET.</p>	
<p>Activities for Output3 3-1) JET assesses the baseline capacity on landfill management of CMPUA. 3-2) JET prepares a training program and training materials including Landfill Operation Manual. 3-3) The training program is implemented by JET and CMPUA. 3-4) JET organizes practical training/guidance for the CMPUA's technical staff for proper management of the Landfill. 3-5) Waste composition survey of landfill-incoming waste is conducted by CMPUA under the cooperation of JET and EPWMD. 3-6) Landfill gas emission survey is conducted by CMPUA under the cooperation of JET and EPWMD. 3-7) CMPUA summarize the environmental monitoring</p>	

Annex 1-4

ANNEX 1: Project Design Matrix (PDM) Version 4

<p>report of the Landfill under the cooperation of JET and EPWMD.</p>	<p>Activities for Output4 4-1) JET assesses the baseline capacity on control of waste collection organizations of EPWMD and financial/administrative management of WSFs. 4-2) JET prepares a training program and training materials. 4-3) The training program on financial management is implemented by JET and WSFs. 4-4) Analysis of financial situation of WSFs is conducted by JET, EPWMD and WSFs. 4-5) Recommendations for appropriate financial management system including revenue plan are summarized by JET and EPWMD. 4-6) EPWMD and WSFs conduct recommendations under the cooperation of JET. 4-7) JET conducts consultations among senior managements of EPWMD and CMPUA on comprehensive SWM in UB City. 4-8) JET assists EPWMD to formulate guideline for calculation of waste generation fee based on appropriate waste collection tariff. 4-9) JET assists EPWMD to prepare standard tender procedures to select waste collection organizations. 4-10) JET assists EPWMD to prepare standard tender document for selecting waste collection organizations. 4-11) JET assists EPWMD to prepare guideline for monitoring waste collection organizations based on the contract. 4-12) JET assists EPWMD to prepare a weighbridge data management manual.</p>	<p>Activities for Output5 5-1) JET assesses the baseline capacity of EPWMD and District Officers for promoting public awareness and participation. 5-2) JET prepares a training program and training</p>
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ANNEX 1: Project Design Matrix (PDM) Version 4

<p>materials.</p> <p>5-3) The training program is implemented by JET and District Officers.</p> <p>5-4) A pilot project on public awareness raising campaign and social satisfaction level survey is planned by EPWMD and District Officers under the assistance of JET.</p> <p>5-5) The Pilot Project is implemented and monitored by EPWMD, District Officers and JET.</p> <p>5-6) Recommendations for promoting public awareness and participation are summarized by EPWMD, District Officers and JET.</p>	<p>Activities for Output6</p> <p>6-1) Seminar and workshop on waste separation, recycling and 3R (Reduce, Reuse, Recycle) strategy is organized by JET, EPWMD and CMPUA.</p> <p>6-2) A pilot project for trial implementation of waste separation and recycling is planned by JET, EPWMD and CMPUA, and a pilot facility for waste manual separation in landfill site is constructed in Narangiin Eger Landfill.</p> <p>6-3) The Pilot Project is implemented by EPWMD, CMPUA and JET under the participation of waste pickers group.</p> <p>6-4) The Pilot Project is monitored and evaluated by JET, EPWMD and CMPUA.</p> <p>6-5) Recommendations for appropriate system of waste separation and recycling are summarized by JET, EPWMD and CMPUA on the basis of the results of the Pilot Project.</p>
	<p>Pre-conditions</p> <p>1. The EPWMD is functional as a coordinating agency among various organizations on SWM in Ulaanbaatar City.</p> <p>2. WSFs are cooperative for disclosing the financial data to the Project.</p> <p>3. Waste picker group in the landfill site is cooperative to the Pilot Project.</p>

Remarks:

- (1) The descriptions of "Objective Verifiable Indicators" and "Means of Verification" are preliminary in nature because these were defined prior to the commencement of the Project implementation. The description will be elaborated and/or incremented in the course of Project implementation based on the discussion between JET and Mongolian counterparts, which shall be approved by the JCC meeting.
- (2) Revised parts are underlined.

ANNEX 2: List of Mongolian Counterparts

No.	Name	Post/ Organization	Assignment	Period	Remarks (Current Position)
Main O/P					
1	Mr. Ch. Bat	General Manager and Head of the Mayor's Office of Ulaanbaatar City	Project Director	August 2008 - present	
2	Mr. B. Delgerbayar	Director, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Project manager	August 2008 - March 2011	Senior officer, Public Service Department of the Mayor's office, Municipality of Ulaanbaatar (March, 2011-present)
3	Mr. L. Baatarsogt	Director, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Project manager	March 1, 2011 - Present	
4	Mr. S. Ariguun	Senior Officer in charge of Collection and Transportation, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Policy making and Planning	October 26, 2009 - present	
5	Mr. O Odjargal	Officer in charge of Waste disposal site and recycling, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Waste Separation and Recycling	October 26, 2009 - present	
6	Mr. E. Batbileg	Officer in charge of Air Pollution, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Public awareness	October 26, 2009 - present	
7	Ms. Z. Mungunzul	Officer in charge of WSF, Department of Environmental Pollution and Waste Management Mayor's office of Ulaanbaatar city	Waste Service Fund	October 26, 2009-present	
8	Mr. V. Davaabaatar	Manager, "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency.	Operation of NEDS	October 2009 - April 2010	
9	Mrs. Ch. ENKHJARGAL	Director, Household and Factory waste, "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency.	Operation of NEDS	September 1, 2010 - present	
10	Mr. A. Vandanmagsar	Manager of Household and Factory waste, "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency.	Operation of NEDS	January 1, 2011 - September, 2011	Retired
11	Mr. D. Amgalan	Manager of "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency.	Operation of NEDS	September 15, 2011 - present	
12	Mr. G. Damdinsuren	Chief Engineer, City Maintenance and Public Utilities Agency	O&M of equipment	October 2009 - August 2010	Retired
13	Mr. O. LUVSANDAGVA	Head of Central Workshop, City Maintenance and Public Utilities Agency.	O&M of Equipment	January 1, 2011 - present	
Supporting O/P					
14	Mr. N. Aitangerei	Deputy Director, City Maintenance and Public Utilities Agency	Support, Policy making and Planning	October 26, 2009 - July 18, 2011	Retired
15	Mr. D. Purevdorj	Deputy Director, City Maintenance and Public Utilities Agency	Support, Policy making and Planning	July 18, 2011 - present	
16	Mr. T. Enkh-Amgalan	Officer in charge of Construction Waste and Public toilets, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Support, O&M of equipment	October 26, 2009 - present	
17	Mr. Kh. Ganbaatar	Officer in charge of Soil/ ground water pollution Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Support, Operation of NEDS	October 2009 - August 2010	Officer, of Public Service Department of the Mayor's office, Municipality of Ulaanbaatar (August, 2010 - present)
18	Ms. S. Chantsalnurmaa	Officer in charge of Soil/ water contamination and hazardous /medical waste, Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	Support, Operation of NEDS	August, 2010 - present	
19	Ms. A. Oyunchimeg	Economist of City Maintenance and Public Utilities Agency	Support, Public Awareness	December 3, 2010 - present	
20	Mr. E. Iderchuluun	Officer in charge of Hazardous waste "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency	Support, Waste Separation and Recycling	October 26, 2009 - present	

Annex 2

ANNEX 3: Cost borne by the Mongolian Side and the Japanese Side

[By Mongolian Side]

	Item	Price per unit	Quantity	Price (MNT)
1st Year	Rental Fee for Project Office (Utility cost are included)	500,000 /month	12 month	6,000,000
	Operation cost for heavy machineries on Pilot Project (hand-	35,000 /hour	18 hours	630,000
1st Year Total				6,630,000
2nd Year	Rental Fee for Project Office (Utility cost are included)	500,000 /month	12 month	6,000,000
	Operation cost for heavy machineries on Pilot Project	35,000 /hour	18 hours	630,000
2nd Year Total				6,630,000
3rd Year	Rental Fee for Project Office (Utility cost are included)	500,000 /month	7 month	3,500,000
	NEDS monthly internet payment	97,000 /month	3 month	291,000
3rd Year Total				3,791,000
Total (MNT)				10,421,000
Total (JPY)				646,102

1MNT = 0.062JPN (Exchange rate of April 2012 was adopted according to JICA's procurement rules)

[By Japanese Side]

(Japanese Yen)

Financial Category	1st Year (Oct. 2009-Aug.2010)	2nd Year (Oct.2010-Aug.2011)	3rd Year (Oct.2011-As of 26th Mar. 2012)	Total
Employee	2,351,778	2,979,369	849,581	6,180,728
Expendable	150,667	116,878	25,134	292,679
Communication and Transportation	55,612	80,803	150,075	286,490
Documentation	464,043	590,288	1,194,089	2,248,420
Rent	2,381,962	3,540,137	947,650	6,869,749
Local Training	0	436,303		436,303
Miscellaneous (Cost for Pilot Project)	11,911,056	1,296,523	129,165	13,336,744
Total	17,315,118	9,040,301	3,295,694	29,651,113

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ANNEX 4: List of Japanese Short-term Experts

As of April 30, 2012

Assignment	Name	2009			2010			2011			2012			Total	
		1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year	UB	M/M
Team Leader/SWM/ Financial Management 2 Maintenance of Equipment Collection and Transportation Sanitary Landfilling Financial Management 1 Public Education Waste Separation and Recycling Data Base Management Coordination	Ichiro KONO	5	90	15	12	70	20	83	3	25	8	11	22	19	
	Koji UZAWA		30	16	15	19	30	20	19						
	Junji ANAI		20	30	45	23	15	20	30						
	Hiroshi FUJITA	5	30	8	6	18	2	14	25	11	24	3	15	24	
	Susumu SHIMURA	10	23	14	18	19	5	14	12	25	11	23	13	52	
	Yuko AOKI	14	33	17	14	45	18	30	30	14	14	21	13	28	
	Mie NAGAYASU	3	60	13	9	23	15	25	56	2	20	21	79	8	
	Shimosuke ODA	10	15	16	14	16	48	31	30	2	13	20	25	29	3
Shimosuke ODA	15	15	75	15	41	15	15	15	30	9	47	21	23	15	
	TOTAL	53	276	115	115	233	115	233	115	115	115	115	115	115	115
Team Leader/SWM/ Financial Management 2 Maintenance of Equipment Collection and Transportation Sanitary Landfilling Financial Management 1 Public Education Waste Separation and Recycling Data Base Management Coordination	Ichiro KONO	11	60	5	24	25	30	1	25						
	Koji UZAWA		33	2	30	1	25								
	Junji ANAI		24	7	14	28	1	5	28						
	Hiroshi FUJITA	5	30	1	20	18	30	20	18	30	20	18	30	20	18
	Susumu SHIMURA	11	60	8	23	13	25	11	23	13	25	13	25	13	25
	Yuko AOKI	11	60	8	23	13	25	11	23	13	25	13	25	13	25
	Mie NAGAYASU	11	60	8	23	13	25	11	23	13	25	13	25	13	25
	Shimosuke ODA	11	60	8	23	13	25	11	23	13	25	13	25	13	25
Shimosuke ODA	11	60	8	23	13	25	11	23	13	25	13	25	13	25	
	TOTAL	53	276	115	115	233	115	233	115	115	115	115	115	115	

Annex 4

ANNEX 5: List of Equipment Provided by the Japanese Side

Year	Item	Specification, Model	Price(JPY)	Date of Delivery	Installed Place	Operation Status	Financial Category
1st Year	Projector	EPSON EB-1720	159,980	2009/09/15	Project Office	Being used for mainly weekly meeting, seminars and so on	Carrying Equipment
1st Year	Printer A4	HP2055d A4 Black-and-white, Laser	37,737	2009/10/20	Project Office	Being used for printing materials	Carrying Equipment
1st Year	Printer A3	HP7108 A3 Color, Inkjet	27,090	2009/10/29	Project Office	Being used for color printing, especially for materials for public awareness	Carrying Equipment
1st Year	Copy machine	IR3225 A4, A3, copy machine A4 black-and-white 25sheets/minute	485,065	2009/12/11	Project Office	Being used for copying documents and materials	Carrying Equipment
2nd Year	Data communication device	Internet Antenna for data distribution	24,120	2010/1/04	Narangiin Enger Disposal Site	Being used for transmission of daily information from CMPUA to EPWMD and sending documents and materials needed through internet	Other Equipment
2nd Year	For Waste Amount and Composition Survey(WACS)	Bucket, Tarpaulin, Iron basket etc,	45,180	2010/1/10 - As of 2011/4/13	Project Office, CMPUA etc	Has been used for WACS on both apartment area and ger area on winter season. They are supposed to be used on WACS on summer season.	Other Equipment
3rd Year	Radiator, Grill and Reversible Fan for Bulldozer	Spareparts for KOMATSU D66E-12 bulldozer	5,355,009	2012/03/09	Narangiin Enger Disposal Site	Being installed to Bulldozer and used everyday for proper landfill operation	Provided Equipment
Total cost for equipment provided by the Japanese side (yen)			6,134,181				

Annex 5

ANNEX 6: List of Training in Japan

Training Subject	Duration	Name	Sex	Post/Organization
JFY 2009				
Waste management administration	2009.11.29-2009.12.26	GALDAN Damdinsuren	M	A Chief Engineer, City Maintenance and Public Utilities department
		ORSOO Davaasuren	M	The Vice Governor of the Governor Administrative Office of Sukhbaatar district.
		OTGONBAATAR Odjargal	M	The Officer of the Department of Environment Pollution and Waste Management, Mayor's Office of Ulaanbaatar city
		BUDRACHAA Batdorj	M	The Officer, Department of Production Service, Governor's Office of Songinokhairkhan district, Ulaanbaatar city.
		DORJJATSAN Enkhtuya	F	Specialist of the Urban Development and Pollution, Department of Manufacture and service, Governor's Office of the Bayanzurkh district, Ulaanbaatar city.
JFY 2010				
Waste management administration	2010.11.28-2010.12.18	SETEVSUREN Enkhbold	M	Head, Central Workshop, City Maintenance and Public Utilities Agency.
		ALTANTSETSEG Erdenebat	M	Director, Waste Service Fund, Chingeltei District Governor's Office.
		YUBA Erdenechuluun	F	Head, Administration department, Governor Office of Songinokhairkhan district.
		PUREVTSEREN Baigalmaa	F	Governor, 7th khoroo, Bayanzurkh district of Ulaanbaatar city
		TUMENDEBEREL Enkh-Amgalan	M	Officer, Department of Environment Pollution and Waste Management, Mayor's Office Capital City Ulaanbaatar.
JFY 2011				
Waste management administration	2011.11.03-2011.11.30	ZANDMAA Mungunzul	F	Officer, Department of Environment Pollution and Waste Management, Mayor's Office Capital City Ulaanbaatar.
		ERDENECHULUUN Iderchulu	M	Officer in charge of Hazardous waste "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency
		TUMEN Erdene	M	Specialist in charge of landfill technology, City Maintenance Public Utilities Agency
		BYAMBADORJ Lhagvabaatar	M	Head of the Division of Manufacturing and Retail Service, Bayangol district of Ulaanbaatar City
		AMGALAN Oyunchimeg	F	Economist of City Maintenance and Puplic Utilities Agency
Group Training Course				
Waste Management and 3R (Reduce, Reuse and Recycle) Policies (A)	2010.11.16-2010.12.18	AVIRZED Vandanmagsar	M	Officer in charge of Household and Factory waste, "Narangiin Enger" Waste Disposal Site, City Maintenance and Public Utilities Agency.
Urban Solid Waste Management by Local Government	2009.08.10-2009.10.21	SARANKHUU Ariguun	M	Officer, Department of Environment Pollution and Waste Management, Mayor's Office Capital City
Urban Solid Waste Management by Local Government	2010.08.09-2009.10.20	ENKHBOLD Batbileg	M	Officer, Department of Environment Pollution and Waste Management, Mayor's Office Capital city
Waste Management and 3R (Reduce, Reuse and Recycle) Policies(A)	2011.06.12-2011.07.14	SHAGDARSUREN Chantsalnurmaa	F	Officer, Environment Pollution and Waste Management Department, Ulaanbaatar City Mayor's Office
Waste Management Technique (A)	2011.08.21-2011.10.22	JUGDERBARAM Batzolboo	M	Officer, Environmental Protection Agency of Ulaanbaatar city

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Annex 6

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ANNEX 7: Laws and Regulations relating to SWM, drafted by the Project

No	Law and Regulation relating to SWM	Category	Regulatory Agency	Status			Remarks
				DRAFTED	Comments collected	City Mayor Board Meeting	
	National level						
1	Amendment of Law on Household and Industrial Waste	Law	MONET	○			The three existing laws such as Law on Household and Industrial Waste, Law on Export and Prohibition of Import and Trans-boundary Transportation of Hazardous Waste, and Law on Prohibition of Ultra Thin Plastic Bag were integrated into the Draft Law on Solid Waste. This draft law has been already submitted to the National Assembly, and is likely to be discussed in Spring 2012. EPWMD has been engaged in drafting this law as a member of the working group.
2	Law on Eco Tax	Law	MONET	○			The EPWMD has submitted the draft of "Proposal to impose an import tax on products which can not be reused" to MONET. Based on this draft, MONET has prepared for a submission of the Draft Law on Eco Tax to the Cabinet.
3	Waste Reduction National Program	3R	MONET	○			MONET has drafted the Waste Reduction National Program. However, it has yet to be submitted to the National Government since the Law on Household and Industrial Waste will be revised. Once the Law on Household and Industrial Waste is revised and approved, the Waste Reduction National Program will be amended and submitted to the relevant organizations.
4	Amendment of Regulation on Certification of Toxic Chemicals and Hazardous Waste	Regulation	MONET				The Regulation on Certification of Toxic Chemicals and Hazardous Waste was approved by the National Assembly in 2006 and came into effect. An amendment of this regulation is coming along slowly because of the lack of human resources and the frequent personnel transfer in MONET.
	UB City level						
5	Revision of WSF Regulation	WSF	EPWMD	○	○		The Draft Revision of WSF Regulation was prepared and submitted to the City Mayor Board Meeting. Once the Law on Household and Industrial Waste is revised and approved, the Draft Revision of WSF Regulation will be amended.
6	Revision of Current Fee Tariff	Fee	EPWMD				In response to the order of the Mayor issued in January 2011, the current fee tariff was reviewed and revised.
7	Regulation of Waste Collection and Transportation	Waste	EPWMD	△			The EPWMD is currently preparing regulation on waste collection and transportation.
8	Regulation on Selection, Evaluation and Financing of Waste Collection Organizations	Waste Collection	EPWMD	△			The EPWMD plans to draft Regulation on Selection, Evaluation and Financing of Waste Collection Organizations once the revised Law on Household and Industrial Waste is approved.
9	Regulation on Waste Separation	3R	EPWMD	○	○		The EPWMD has drafted the Regulation on Waste Separation and submitted to the City Council.
10	Guidelines to inspect operation of NEDS of waste management division of CMPUA under Mayor's Office of UBC	Sanitary Landfill	EPWMD	○		○	These Guidelines drafted by the Project were approved by the Director of EPWMD and came into effect as from October 20, 2010. An approval of the City Council is not required.
11	Regulation on collection, sorting, selling and purchase of secondary raw materials	3R	EPWMD	○			The EPWMD is preparing the Regulation on collection, sorting, selling and purchase of secondary raw materials.
12	Regulation on Delivery of Construction Waste to Final Disposal Sites	Business Waste	EPWMD	○	○		The Regulation on Delivery of Construction Waste to Final Disposal Sites prepared by the EPWMD has been already submitted to the City Council.
13	Regulation on Waste Collection Fees from Ger Area Households	Fee	EPWMD	○	○	○	The regulation allows the MUB to collect waste collection fees from Ger areas tied to the electricity bills. It was issued on June 17, 2011 and took effect from July 1, 2011.

Annex 7