

ANNEXES

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Annex 1: PROJECT DESIGN MATRIX₃ (PDM₃)

Project Name: Strengthening the Capacity for Solid Waste Management in Ulaanbaatar City

Implementing Agency: EPWMD

Project Period: October 2009 to October 2012 (3 years)

Target Group: Staff of EPWMD, CMPUA, WSFs and District Officers

Project Area: Ulaanbaatar City

Cooperating organizations: CMPUA, WSFs and District Governments

Date: October, 2010

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> <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 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. 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 ##% (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 ##%. 	<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 4. Report on social satisfaction level survey throughout the City 5. Interview survey to each khoroo 6. Interview survey to each WSF 	<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.
<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 	

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<p>Output 3 Development of human resource of CMPUA for proper management of Narangjin 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 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. 	<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
<p>Output 5 Development of human resource of EPWMD and District Officers for promoting public awareness and participation in SWM.</p>	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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>Output 6 Recommendation for the appropriate system of waste separation and recycling in Ulaanbaatar City</p>	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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

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<p>Activities for Output1</p> <p>1-1) JET (JICA Expert Team) assesses the baseline capacity of the staff in newly established EPWMD.</p> <p>1-2) JET prepares a training program (seminar, workshop, site visit, etc.) and training materials (text, manual, etc.).</p> <p>1-3) The training program is implemented by JET and EPWMD.</p> <p>1-4) JET advises EPWMD how to formulate policy, regulation(s) and guideline(s) of SWM.</p> <p>1-5) Seminar on household hazardous waste and e-waste management involved in urban waste stream is organized by JET and EPWMD.</p> <p>1-6) EPWMD reviews and updates the Master Plan under the assistance of JET.</p> <p>1-7) EPWMD prepares an Action Plan for the organizational development of EPWMD under the advice of JET.</p>	<p>Input</p> <p>< Input from JICA ></p> <ol style="list-style-type: none"> Short-term Experts Leader / Solid Waste Management Operation & Maintenance of Waste Collection Vehicles & Heavy Machineries Landfill Management Financial Management Public Awareness Waste Separation and Recycling Coordinator, if necessary <p>Equipment for waste manual separation facility in landfill site</p> <ol style="list-style-type: none"> Landfill gas monitor Oversea training Local cost for JET activities Interpreters 	<p>Input</p> <p>< Input from Mongolian side ></p> <ol style="list-style-type: none"> Assigning C/P personnel Buildings and Facilities for Project activities including the land for the waste manual separation facility in landfill site. Office space for JICA experts and meetings Facilities and services such as electricity, gas, water, telephone, internet access and furniture Operational and recurrent cost for the project activities of the Mongolian side 	<p>1. EPWMD, CMPUA and WSFs assign necessary personnel for the Project activities.</p>
<p>Activities for Output2</p> <p>2-1) JET assesses the baseline capacity on operation and maintenance of CMPUA.</p> <p>2-2) JET prepares a training program and training materials.</p> <p>2-3) The training program is implemented by JET, CMPUA and EPWMD.</p> <p>2-4) JET organizes practical training/guidance for the technical staff of the maintenance workshop in CMPUA.</p> <p>2-5) JET prepares recommendations for management system of maintenance workshop in CMPUA</p> <p>2-6) CMPUA and EPWMD review and recommend the waste collection plans of Ulaanbaatar City under the cooperation of JET.</p> <p>2-7) CMPUA and EPWMD organized seminar(s) for TUKs about operation and maintenance of vehicles under the advice of JET.</p>			

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<p>Activities for Output3</p> <p>3-1) JET assesses the baseline capacity on landfill management of CMPUA.</p> <p>3-2) JET prepares a training program and training materials including Landfill Operation Manual.</p> <p>3-3) The training program is implemented by JET and CMPUA.</p> <p>3-4) JET organizes practical training/guidance for the CMPUA's technical staff for proper management of the Landfill.</p> <p>3-5) Waste composition survey of landfill-incoming waste is conducted by CMPUA under the cooperation of JET and EPWMD.</p> <p>3-6) Landfill gas emission survey is conducted by CMPUA under the cooperation of JET and EPWMD.</p> <p>3-7) CMPUA summarize the environmental monitoring report of the Landfill under the cooperation of JET and EPWMD.</p>	<p>Activities for Output4</p> <p>4-1) JET assesses the baseline capacity on financial management of WSFs.</p> <p>4-2) JET prepares a training program and training materials.</p> <p>4-3) The training program on financial management is implemented by JET and WSFs.</p> <p>4-4) Analysis of financial situation of WSFs is conducted by JET, EPWMD and WSFs.</p> <p>4-5) Recommendations for appropriate financial management system including revenue plan are summarized by JET and EPWMD.</p> <p>4-6) EPWMD and WSFs conduct recommendations under the cooperation of JET.</p>	<p>Activities for Output5</p> <p>5-1) JET assesses the baseline capacity of EPWMD and District Officers for promoting public awareness and participation.</p> <p>5-2) JET prepares a training program and training materials.</p>
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<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 Enger 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> <ol style="list-style-type: none"> 1. The EPWMD is functional as a coordinating agency among various organizations on SWM in Ulaanbaatar City. 2. WSFs are cooperative for disclosing the financial data to the Project. 3. Waste picker group in the landfill site is cooperative to the Pilot Project.

Remarks:

- (1) The parts indicated by “##” within the PDM table means a certain numerical figure as given quantitative indicator. The numerical figure will be determined based on the discussion between Mongolian project members and JET in the beginning stage of the Project.
- (2) 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.

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Annex2: PDM indicators (as approved at the First through Third JCCs)

	Indicator for PDM (Record of Discussions)	Indicator for PDM1 (1st JCC/October, 2009)	Indicator for PDM2 (2nd JCC/March, 2010)	Indicator for PDM3 (3rd JCC/October, 2010)
Overall Goal	People's satisfaction level for urban environment and sanitation throughout the City reaches to ##%.	People's satisfaction level for urban environment and sanitation throughout the City reaches to ##%	People's satisfaction level (more than average) for urban environment and sanitation throughout the City reaches to 50%.	No Change
	Amount of illegal dumping is decreased by ##%.	Amount of large scale illegal dumping is decreased by ## %	## large scale accumulated illegal disposal site out of 10 monitoring sites shall be eliminated.	Six large scale accumulated illegal disposal site out of 10 monitoring sites shall be eliminated.
Project Purpose	People's satisfaction level for the SWM service throughout the City reaches to ##%.	People's satisfaction level for the SWM service throughout the City reaches to ## %	People's satisfaction level (more than average) for the SWM service throughout the City reaches to 60%.	No Change
	Waste collection cover rate in population in Ger area is increased to ## %	Waste collection cover rate in population in Ger area is increased to ## %	No Change	No Change
	Waste collection rate in Apartment area keeps 100% in spite of population growth	Waste collection rate in Apartment area keeps 100% in spite of population growth	No Change	No Change
	Collection rate of waste service fee from ger area increased to ## %	Collection rate of waste service fee from ger area increased to ## %	No Change	No Change
Output 1	Proposals of draft policy, draft regulations(s) and draft guideline(s) on SWM prepared by EPWMD.	No Change	No Change	No Change
	Draft updated Master Plan prepared by EPWMD	No Change	No Change	No Change
	Action Plan for the organizational development of EPWMD	No Change	No Change	No Change
Output 2	Fully functional SWM equipment (collection vehicles and heavy machineries) is utilized.	Report on operation of SWM equipment (collection vehicles and heavy machineries) is submitted by CMPUA to EPWMD 4 times a year.	No Change	No Change
	Time for repair work of SWM equipment is shortened.	Report on maintenance of SWM equipment is submitted by CMPUA to EPWMD 4 times a year	No Change	No Change
	Number of trip by collection vehicles to Narangiin Enger Landfill is increased with the Revised Waste Collection Plan.	CMPUA and each district prepare and submit the waste collection plan to EPWMD once a year.	No Change	No Change
Output 3	Sanitary landfill operation can be conducted everyday by CMPUA.	Landfilling monitoring committee assesses landfilling operation as sanitary landfilling	No Change	No Change
	Report of waste composition survey is prepared by CMPUA.	Report of waste composition survey is prepared by CMPUA	No Change	No Change
	Environmental monitoring including gas emission survey at landfill site is conducted regularly by CMPUA.	Environmental monitoring including gas emission survey at landfill site is conducted regularly by CMPUA.	No Change	No Change
Output 4	Common financial management rule for all WSFs is established.	No Change	No Change	No Change
	Financial condition of each WSFs is monitored regularly by EPWMD.	No Change	No Change	No Change
Output 5	Prototypes of education materials for citizens are prepared.	No Change	Personnel who are in charge of Public Awareness in EPWMD and District offices are able to conduct the public awareness activities by taking initiatives.	No Change
	Public awareness campaign has been held ## times of UB City.	No Change	Public awareness campaign will be conducted in 4 khoroods through PP and another 4 khoroods by the C/P.	No Change
	Irregular dumping site is decreased at pilot project site.	People's satisfaction level for the public awareness raising on SWM at pilot project site increase ## %	Awareness of residents on waste reparation and discharging manner is improved at the PP sites	No Change
Output 6	Waste separation facility is established in the Narangiin Enger Landfill.	Waste separation facility is examined in NEDS and necessary extra cost, efficiency, sanitary conditions of separation operation are acknowledged.	No Change	No Change
	Manual and guideline for landfill waste pickers	aluable collectors (former waste pickers) will cooperate for sorting operation at sorting yard according to the manual and guidelines.	No Change	No Change
	Recommendation paper on waste separation and recycling system is officially submitted to UB City authority.	Recommendation paper on waste separation and recycling system is officially submitted to UBC authority.	No Change	No Change

Contract Year Calendar Year Month	2009			2010			2011			2012					
	9	10	11	12	1	2	3	4	5	6	7	8	9	10	
[OUTPUT 4] Human resource development in EPWMD and WSFs for financial management in SWM															
4-1	Conduct CA for WSF														
4-2	Preparing training program and training material														
4-3	Conduct training														
4-4	Conduct of financial analysis on WSF														
4-5	Recommendation for the stabilization of financial management system														
4-6	Realization of recommendations for the standardization of financial system														
Advise on three alternatives of revised WSF regulation															
Advise on role of each organizations after revision of WSE															
Support for preparing tender process and standard tender documents															
Support for appropriate weightbridge operation															
[OUTPUT 5] Human resource development of EPWMD and District Officers for promoting public awareness and participation in SWM															
A5.1	Conduct CA for EPWMD and District Officers														
A5.2	Preparing training program and training material														
A5.3	Conduct training														
A5.4	Planning for the Pilot Project and Social Satisfaction Level Survey														
B5.5	Implementation of Pilot Project														
① PP for Waste Storage and Discharge															
①-1. Improvement of discharge manner															
①-2. Waste separation at generation source (Valueables and others)															
①-3. Waste separation at generation source (Recyclables and others)															
B5.6	Recommendation on public education														
[OUTPUT 6] Recommendation for the appropriate system of waste separation and recycling in Umuahara City															
6-1	3R Seminar														
6-2 (1)	Planning for the Pilot Project														
6-2 (2)	Pilot project facilities and equipment construction														
6-3	Conduct the Pilot Project														
② PP for Waste Collection															
②-1. Improvement of waste collection manner															
②-2. Improvement of collection efficiency															
②-3. Experiment on separate collection of recyclables															
③ PP for Sorting Operation at NEDS															
③-1. Sorting operation for Mixed collection waste															
③-2. Sorting operation for separate collection waste															
6-4	Monitoring and evaluation on pilot project														
6-5	Recommendation on waste separation and recycling activities														

Plan at the 1st year: []
 Implemented activities: [█]

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Evaluation Items	Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results
	Broad questions	Detailed questions				
1 A 3 S S S S M E N T O F	Have the Inputs from the Japanese side delivered as planned?		Japanese expert	Record of Japanese expert dispatch	Documentary review	Implemented as planned.
			Delivery of equipment	Record of Equipment delivery	Documentary review	Implemented as planned.
3 S S S M E N T O F	Have inputs from the Mongolian side delivered as planned?		C/P training	Record of C/P training	Documentary review	Implemented as planned.
			Disbursement of local costs	Disbursement record	Documentary review	Implemented as planned.
3 S S M E N T O F	Have inputs from the Mongolian side delivered as planned?		Allocation of C/P	Mongolia side Inputs delivery record	Documentary review	C/Ps for WSF have not yet been assigned due to the problems on the UB City side (see discussions under Output 4 below). Other C/Ps have been assigned as planned, but the Heads of EPWMD, CPMUA have changed several times during the first half of the Project.
			Office space and office equipment	Mongolia side Inputs delivery record	Documentary review	Implemented as planned.
3 S S M E N T O F	Have the Project Outputs been produced as planned?		Disbursement of regular budget	Mongolia side Inputs delivery record	Documentary review	Implemented as planned.
			Indicators for Outputs in PDM3, Baseline survey report	Baseline survey report, Progress reports, JET, Target groups, Environmental monitoring report, Capacity Assessment results	Documentary review, Interviews, questionnaire	See annex 5 implemented activities and status of achievement of Outputs.
3 S S M E N T O F	Is the Project Purpose likely to be achieved?		Indicators for Project Purpose in PDM3, Baseline survey report	Baseline survey report, Progress reports, JET, POS, MUB officers	Documentary review, Interviews	With regard to Indicator 1, POS was conducted in Dec 2009 in order to establish the baseline. Based on that POS, it was found that on average 55.9% of the respondents indicated 'above average' satisfaction level on the SWM service in the City. Based on the result of this POS, the target level for Indicator 1 has been established. Likewise, the target level for Indicator 4 has been established based on the results of the baseline survey for Indicator 3. The numerical targets for indicators 2 and 4 have yet to be established.

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Evaluation Items	Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results
	Broad questions	Detailed questions				
2 A S S E S S M E N T O F I M P L E M E N T A T I O N P R O C E S S	Have the activities been implemented as planned?	Have the Activities been implemented as planned?	Implemented activities	Activities record, PO, Progress Reports, JET	Documentary review, Interviews (interview schedule)	Overall, Activities have been implemented mostly as planned, except for those under Output 4. Activities under Output 2 are being delayed due to the internal problems of CMPUA in 2010. With respect to Output 5, activities for Phase II PP are slightly delayed.
	What types of methods have been used?	① Status of technical transfer for EPWMD target groups			Documentary review	A combination of 'classroom' learning at weekly meetings (lectures and discussion) and OJT. Many EPWMD staff also participated in training programmes in Japan. The CA results do not show consistent growth due to 'over evaluation' during the first CA. But the interview results reveal steady improvement in overall staff capacity.
	Any obstacles have been experienced during implementation?	② Status of technical transfer for CMPUA target groups	Implemented activities	Activities record, PO, Progress Reports, JET, target groups, CA	Interviews (interview schedule)	Technical transfer for CMPUA staff took place primarily through OJT. With respect to human resources development in two main functions of CMPUA, its advancement may be recognized through: ① the NEDS personnel is able to apply technical and managerial skills acquired through the Project to Morindva Landfill; ② the Central Workshop has commenced maintenance of waste collection vehicles and other heavy equipment.
		③ Status of technical transfer for WSF target groups				No activity has been implemented with WSF as a target.
		④ Status of technical transfer for WSF and District Governments target groups				WSF personnel are participating in the activities at the District level, rather than District Government (e.g. PSD) staff members. The target group for this technical transfer Output is EPWMD. WSF staff are participating as an implementing body together with khoroog governors and AOU chairpersons.
Project Management	Have the monitoring been conducted in an appropriate manner? (e.g. whether they have been conducted regularly; led to problem-solving, etc.)	What was the method for monitoring activities? How often were they conducted? Has monitoring led to solution of problems?	Implemented activities	Activities record, Progress Reports, JET, C/P	Documentary review, Interviews, questionnaire	There is no basic problems (i.e. no problem in terms of project design). However, DWSF is not functioning as a target group under the present conditions.
	Is the organizational arrangement for project implementation appropriate?	Are there any issues with respect to the organizational arrangement? Has the decision-making process appropriate? Has the Project linked-up well with related organizations?	Opinions of Experts and C/Ps Record on the decision-making process Opinions of related organizations	JET, EPWMD JCC Minutes CMPUA, WSF, District Government, Related organizations for PP	Documentary review, Interviews, FGDs	3 JCCs have been held so far (October 2009, March 2010 and October 2010). JCCs discussed and approved matters related to overall operation of the Project and revisions to PDM. At the day-to-day level, weekly meetings are held between JET and C/Ps (61 meetings were held by March 2011).
	Has the communication in general appropriate?	Has the communication among the Project implementors and the C/Ps appropriate? Has the Project communicated well with external parties?	Opinions of Experts and C/Ps Opinions of Experts, C/Ps, related organizations and DPs	JET, C/Ps, MUB	Interviews (interview schedule)	Communications between the Project and related organizations with respect to PPs have been good. The Project has been influenced by political factors at the City as well as at District levels.

Evaluation Items	Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results
	Broad questions	Detailed questions				
Commitment of the Mongolian side	Commitment of the C/Ps	To what extent the C/Ps shared common understanding of the Project?	Opinions of JET, C/Ps and related organizations	JET, C/Ps, MUB	Interviews (interview schedule)	Communications within the Project, among JET and C/Ps, are generally good. There has been some concern among EPWMD staff that information provision to the newly appointed Director of EPWMD should be strengthened.
		How is the degree of commitment by the C/P described?				Project newsletters published 3 times so far and the Project homepage has been established. There is a need to develop information dissemination strategy of successful PPs.
	Commitment of Mol	Has the C/Ps been allocated in an appropriate manner?	Opinions of Experts	Experts reports, Experts	List of C/Ps	No C/P has been assigned among WSF.
		Has the necessary local costs been disbursed?	Local costs disbursement status	Mongolian side inputs record	Documentary review	Appropriate.
	Other relevant elements for project implementation	Participation and awareness of the target groups and other related organizations	What was the degree of participation and awareness of the target groups and other related organizations?	Opinions of related organizations at khoroov levels	Related organizations at khoroov levels	Field visits, FGDs
What is the situation of WSF, which is part of the cooperating organizations of the Project? How is the Project going to handle the situation?			Status of participation in PP activities	List of participants in PP activities	Documentary review	N/A
Obstructing factors with respect to Output 4		What are the facilitating and obstructing factors? Have they been handled in an appropriate manner?	Opinions of JET, C/P, WSF and MUB	JET, C/P, WSF and MUB	Interviews (interview schedule)	The decision to abolish WSF by the City Council is unlikely to be over-turned. But the present status of WSF varies widely from one District to another. The decision-making authority is outside of the Project; as such, there is nothing much that the Project is able to do at this stage.
Facilitating, obstructing factors for project implementation		Opinions of JET, C/P, WSF and MUB	JET, C/P, WSF and MUB	Documentary review, Interviews (interview schedule)	There are a number of political factors both at the City level as well as at the District level that are influencing the Project activities. In addition to the issue of WSF, frequent appointment and reassignment of C/P is negatively influencing the Project.	

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Evaluation Items	Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results
	Broad questions	Detailed questions				
Necessity	Is the needs for the Project high?	Does the Project meet the needs of the activity areas?	Opinions of the target groups (C/Ps), related organizations at PP target areas	Opinions of the target groups (C/Ps), related organizations at PP target areas	Interviews (interview schedule)	Yes, since SWM is expected to become increasingly important in the context of MUB including the PP areas.
	Alignment with higher-level policies	Does the Project meet the needs of the target groups?	Opinions of the target groups	Target groups		C/Ps at the City level are EPWMD and CMPUA, both of which are new organizations and their staff are generally young and relatively new to the subject area of SWM. Thus, the Project meets the needs of the target group.
Priority	Alignment with higher-level policies	Has there been any changes to the Japanese ODA policy and the country assistance plans since the design stages of the Project?	Relationship between priority areas under Japanese ODA and country assistance plan the Mongolian Government Plan of Action (2008-2012) and Ulaanbaatar City Mayor's Plan of Activities (2009-2012)?	ODA priority areas, country assistance plan	Documentary review, Interviews	No changes (the same 2005 country assistance plans applies)
		Have there been any changes to relevant national policies of Mongolia subsequent to the mid-term, including policies such as the Mongolian Government Plan of Action (2008-2012) and Ulaanbaatar City Mayor's Plan of Activities (2009-2012)?	Opinions of Project Appraisal Report, JET, C/Ps and other related organizations for PP	JICA Mongolia office,		No changes.
Appropriateness of the implementation methods	Has the Project approached the regional development and capacity development issues of the local governments with appropriate strategies?	Is the basic approach of the Project (i.e. capacity development through combination of weekly meetings and OJT) appropriate?	Opinions of JET, C/Ps, and other related organizations for PP	Project Appraisal Report, JET, C/Ps and other related organizations for PP		Appropriate.
		Has the selection of the pilot project implementation sites appropriate?	Opinions of JET, C/Ps, and other related organizations for PP	JET, C/Ps and other related organizations for PP	Documentary review, interviews, PP site visits	Site selection is appropriate but the Project lacks dissemination strategies.
Others	Changes in Project environment after the Project Appraisal	How the Project has been coordinating with other donors	Donor coordination-related activities record	Activities record, Experts, DPs	Interviews (interview schedule)	Korean KOICA is planning to build an RPF plant within NEDS. The Project provided information to their Appraisal mission.
	Comparative advantage for Japan	Has there been any changes in the environment surrounding the Project since the Project Appraisal, including relevant policies, economy and society?	Appraisal Report, JET	Appraisal Report, JET	Documentary review, Interviews (interview schedule)	UB City has experienced a rapid population growth as well as economic growth since the time of Project Appraisal. Thus, SWM has become even more important since then.
		Does Japan possess comparative advantage in implementing the project, based on its expertise and experience?	Appraisal Report	Appraisal Report	Documentary Review	Yes, Japan has internationally advanced technology and know-how in the SWM sector. In Mongolia, Japan has been the leading donor in this field.

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Evaluation items	Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results	
	Broad questions	Detailed questions					
4 E f f e c f i i v e n e s	Achievement status of the Project Purpose	Is the Project Purpose being achieved?	Results of the Assessment 1, above	Results of the Assessment 1, above	Results of the Assessment 1, above	Results of the Assessment 1, above	
		Are the Project Purpose and its Indicators appropriate? (What about the pending 2 Indicators, Indicator 2 and 4?)	PDM3, JET, C/Ps	PDM3, JET, C/Ps	Documentary Analysis, Interviews (interview schedule)	Indicators 2 and 4 were pending due to some questions raised by the Project Team. For Output 4, review is required for activities and Indicators.	
	Causal relationship	Effectiveness of causal relationship between Outputs and Project Purpose	Have the Outputs sufficient to achieve the Project Purpose?	PDM3, JET, C/Ps	PDM3, JET, C/Ps	Documentary review, Analysis, Interviews (interview schedule)	The causal relationship bet Outputs and Project Purpose is appropriate with respect to PDM3 (i.e. on paper). However, in reality, no activities have been implemented for Output 4).
		Influence of externalities	Are the externalities at the Output level (which leads to Project Purpose) still valid?	Opinions of Experts, Mol and C/Ps in 2 Provinces	PDM3, Mid-ter Review Report, Experts and C/Ps	Documentary review, Interviews (interview schedule)	Influence of externalities (with related to WSF Legislation) expected.
		Facilitating and obstructing factors for achieving Project Purpose	Have the Outputs been influenced by the externalities?	Opinions of Experts and C/Ps in 2 Provinces	Experts, C/Ps in 2 Provinces	Interviews (interview Schedule)	Influence of externalities (with related to WSF Legislation) materialized.
5 E f f i i e n c y	Status of production of Outputs	Based on the assessment of achievement status above, is the status of Outputs production appropriate?	Status of employment of C/Ps in 2 Provinces	C/Ps in 2 Provinces, Human resources policies in 2 Provinces	Interviews (interview Schedule)	None.	
		Is the production status of Outputs appropriate?	Indicators for Outputs in PDM3, Inputs record, Activities record	Progress reports, Inputs record, Activities record, Target groups, JET, C/Ps and JICA Mongolia Office	Documentary review, Interviews (interview schedule)	Results of the Assessment 1, above	
	Causal relationship	In the present Project producing synergies with other JICA-funded projects in the country?	Information on related projects	JET, JICA Mongolia office	JET, JICA Mongolia office	Results of the Assessment 2, above	Results of the Assessment 2, above
		Has the CD activities targeted at the 4 target groups led to CD among these target group individuals? What about the status among WSF staff?	Opinions of JET, C/Ps, CA Report	Progress reports, JET, C/Ps, Target groups, CA Reports	Progress reports, JET, C/Ps, Target groups, CA Reports	Documentary review, interviews (interview schedule)	Inputs from Japanese side has been made as planned but the Mongolian side preparations and C/P assignment did not match for Output 4. Also, activities under Output 2 has been delayed due to internal governance issues at CMPUA.
		Are the externalities at the Activities level (which leads to Outputs) still valid?	Opinions of JET, PDM3	PDM3, JET	PDM3, JET	Documentary analysis, Interviews (interview schedule)	Activities have led to CD among EPWMD and CMPUA staff. No CD activities implemented towards WSF and District Government staff members.
Inputs	Influence of externalities	Have the Activities been influenced by the externalities?				Still valid.	
	Size of inputs from Japanese side, timing	Has the allocation, quality and timing of Experts appropriate in order to implement activities? Has the provision, quality and timing of equipment appropriate in order to implement activities?	Inputs record, Equipment delivery record, JET, C/Ps	Inputs record, Progress Reports, JET, C/Ps	Documentary review, interviews (interview schedule)	In terms of WSF, there has been an influence. Yes, overall appropriate. The Project is designed with an intention that Input of JET is 'head heavy' so that the Project is gradually implemented by Mongolian C/Ps during the latter half of the Project. However, in case if a new C/P is to be appointed at the District level during the latter half, more input from JET may be required.	

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Evaluation Items	Broad questions		Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results
	Activities	Costs	Detailed questions					
Likelihood for achieving the Overall Goal	Pilot project and training activities	Have the Project activities been implemented in a timely manner by C/Ps and related organizations for PP?	PO, Activities record, C/Ps, related organizations	Documentary review, interviews (interview schedule)	Activities record, C/Ps, related organizations	PO, Activities record, C/Ps, related organizations	Documentary review, interviews (interview schedule)	Activities for Output 4 not implemented, Activities for Outputs 2 and 5 delayed/slightly delayed. Other activities have been implemented largely on schedule.
	Is the overall cost appropriate?	Has the cost been appropriate, comparing the Outputs achieved from the Inputs?	Inputs record, Outputs indicators, Opinions of Experts, MoI and C/Ps in 2 Provinces	Documentary review, Interviews (interview schedule)	Activities record, Inputs record, PO, JET, C/Ps	Activities record, Inputs record, PO, JET, C/Ps	Documentary review, Interviews (interview schedule)	Inputs of JET appropriate by due to insufficient preparedness on the part of Mongolia Outputs for 2 and 4 have not been produced properly to date.
Causal relationship	Is the Overall Goal likely to be achieved?	As an effect of the present Project, an improvement in the status of SWM expected in UB City?	Results of the Assessment 1, above	Results of the Assessment 2, above	Results of the Assessment 1, above	Results of the Assessment 1, above	Results of the Assessment 2, above	Prediction not possible as yet.
	Relationship between Project Purpose and Overall Goal	Is there a large gap between the Project Purpose and the Overall Goal?	Project Purpose and Overall Goal in PDM3	Documentary review, analysis	PDM3,	PDM3,	Documentary review, analysis	No gaps in the logic.
	Influence of the externalities	Are the externalities at the Project purpose level (which leads to Overall Goal) still valid?	Opinions of JET and C/Ps	Interviews	PDM3, JET, C/Ps	PDM3, JET, C/Ps	Interviews	Still valid.
Ripple effects	(Unintended) ripple effects other than Overall Goal	Has the Project caused any positive and negative ripple effects other than leading to the Overall Goal, such as gender, ethnic and economic impacts?	Opinions of JET and C/Ps, related organizations	Interviews (interview schedule)	JET, C/Ps and related organizations	JET, C/Ps and related organizations	Interviews (interview schedule)	Yes, likely (with respect to the new WSF Legislation)
		Have people in the Project area been impacted differently by the Project, depending on gender and social hierarchy? (e.g. among the intended beneficiaries of pilot projects)	Opinions of JET and C/Ps, related organizations	Interviews (interview schedule)	JET, C/Ps and related organizations	JET, C/Ps and related organizations	Interviews (interview schedule)	Positive ripple effects notices—NEDS staff applying the acquired technology and skills towards management of Morinva Landfill, EPWMD using the knowledge for environmental education at ... Some of the Waste Pickers benefited from construction of the manual sorting facility built by the Project in NEDS.
Policy and institutional aspects	Are supportive external conditions, including relevant national policies, likely to continue?	Are changes expected on policies on SWM in future?	National and municipal policy prospects on SWM	Interviews	JICA Mongolia Office, JET	JICA Mongolia Office, JET	Interviews	No, no change expected in any major way. SWM sector will increasingly become important in UB City and Mongolia.
	Sustainability of the results of technical transfer, such as skills and knowledge acquired through training	Are the C/P and collaborating organizations implementing any activities to ensure sustainability of technical transfer?	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Documentary review, Interviews	Overall, the technical transfer results have been well digested by the target groups. The target groups are applying the knowledge and skills to different areas.
	Financial status	What are the financial issues involved in SWM and how do they look like?	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	Opinions of JET, C/Ps and other relevant personalities, Progress Reports, CA	At the organizational level, financial status of EPWMD and CMPUA are not particularly precarious. However, the overall sound and sustainable financial management of the SWM sector requires attention.
	How is the levels of ownership of C/P?	What is the prospect of the sustainability of the public awareness-raising activities?	Employment record of the local governments in 2 Provinces, Opinions of C/Ps in 2 Provinces	Employment record of the local governments in 2 Provinces, Opinions of C/Ps in 2 Provinces	Employment record of the local governments in 2 Provinces, Opinions of C/Ps in 2 Provinces	Employment record of the local governments in 2 Provinces, Opinions of C/Ps in 2 Provinces	Employment record of the local governments in 2 Provinces, Opinions of C/Ps in 2 Provinces	EPWMD officers are not able to follow-up the sustainable implementation of PP activities in the PP areas. Involvement of the District level entities required.
Organizational, financial aspects of the local governments in the 2 Provinces	Organizational aspects, including staffing and future plans	What are the future plans of C/Ps, including the status of WSF?						There is a need to expand EPWMD in terms of its no. of staff, but there is no plans for such expansion at the moment. There is a need to identify (or establish) a Division in District Governments which is in charge of SWM in the event if WSF has been disbanded.

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7 S u s t a i n a b i l i t y	Evaluation items		Evaluation questions		Necessary data/information	Source of data/information	Data collection methods	Evaluation results
	Broad questions	Detailed questions						
	Social, cultural, environmental aspects	Prospects on social, cultural and environmental aspects	Are there any specific social, cultural and environmental factors that might obstruct sustainability in MUB? What about the sustainability of PP?	Opinions of C/Ps and other relevant personalities in 2 Provinces	C/Ps in 2 Provinces, other relevant personalities in 2 Provinces	Interviews (Interview schedule)	The SWM sector is influenced by a number of political factors. The existing PP areas are likely to continue their activities with leadership of khoroo governors and AOU heads.	
	Technical aspects	Technical aspects	Has the knowledge and skills transferred to the target group stabilized?	Information that shows the status of technical transfer to the target groups	Experts, C/Ps in 2 Provinces, target groups			It appears stabilized.
			Are the facilities and equipments operated and managed properly?	Opinions of C/Ps, JET	C/Ps, JET	Interviews	Appropriately maintained at the moment. The division of responsibilities for maintenance between CMPUA and TUK clarified recently.	
	Overall sustainability	Possible obstructing factors for sustainability and ways to handle those factors	Overall, is the prospects of sustainability high?	Comprehensive analysis of information on sustainability	Information pertaining to sustainability as collected above	Data analysis	It is difficult to predict overall sustainability at this stage. Frequent appointment and reassignment of key persons are source of concern. Need for HRD at the District level personnel.	

Annex 5: Implemented Activities and the Status of Achievement of Output

Output	PDM1			PDM3		
	Indicator for PDM1	Means of Verification	Results of Baseline Survey up to March 2010	Indicator	Progress as of March 2011	
Overall Goal	<p>People's satisfaction level for urban environment and sanitation throughout the City reaches to 80%.</p> <p>Amount of large scale illegal dumping is decreased by 80%.</p> <p>People's satisfaction level for the SWM service throughout the City reaches to 80%.</p> <p>Waste collection cover rate in population in Ger area is increased to 80%.</p> <p>Waste collection rate in Apartment area keeps 100% in spite of population growth.</p> <p>Collection rate of waste services fee from ger area increased to 80%.</p> <p>Proposals of draft policy, draft regulations(s) and draft guidelines(s) on SWM prepared by EPWMD.</p> <p>Draft updated Master Plan prepared by EPWMD.</p> <p>Action Plan for the organizational development of EPWMD.</p> <p>Report on operation of SWM equipment (collection vehicles and heavy machines) is submitted by CMPUA to EPWMD 4 times a year.</p> <p>Report on maintenance of SWM equipment is submitted by CMPUA to EPWMD 4 times a year.</p> <p>Waste collection plan from each district and CMPUA is submitted to EPWMD once a year.</p> <p>Licensing monitoring committee assesses landfilling operation as sanitary landfilling.</p> <p>Report of waste composition survey is prepared by CMPUA.</p> <p>Environmental monitoring including gate emission survey at landfill site is conducted regularly by CMPUA.</p> <p>Common financial management rule for all WSFs is established.</p> <p>Financial condition of each WSFs is monitored regularly by EPWMD.</p>	<p>Interview survey to 400 households in apartment area and 400 households in ger area through iboroo government.</p> <p>Interview survey to each district.</p> <p>Interview survey to 400 households in apartment area and 400 households in ger area through iboroo government.</p> <p>Interview survey to each iboroo.WSF.</p> <p>Interview survey to EPWMD.</p> <p>Interview survey to each iboroo. WSF.</p> <p>Draft policy, regulations and guidelines.</p> <p>Interview survey to EPWMD.</p> <p>Action Plan.</p> <p>Report on operation of SWM equipment.</p> <p>Report on maintenance of SWM equipment.</p> <p>Waste collection plan from each district and CMPUA.</p> <p>Assessment report of monitoring committee.</p> <p>Report of waste composition survey.</p> <p>Environment monitoring report.</p> <p>Regulation of WSF operation.</p> <p>Report on financial analysis of WSFs and recommendation paper.</p> <p>educational tools.</p> <p>Interview survey to EPWMD, District, iboroo.</p> <p>Interview survey to people on pilot project site.</p> <p>Report on pilot project and record of 3Rs seminar.</p> <p>Interview survey to CMPUA.</p> <p>Recommendation paper and revised Master Plan.</p>	<p>43.6% of the residents in apartment area and 40.8% in ger area and 42.1% in total considered the level of environment and sanitation condition in UB city is more than average.</p> <p>10 illegal dump sites were selected for monitoring sites.</p> <p>53.9% of the residents in apartment area and 55.1% in ger area and 55.9% in total considered the level of SWM in UB city is more than average.</p> <p>Waste Collection Rate (per population) was increased to over 90% as of Jun 2010 with interview survey to Ger Resident.</p> <p>Correct waste collection rate in apartment area is nearly 100%.</p> <p>Collection rate of waste services fee from ger area is 24% in central 6 districts from Sep. 2008 to Aug 2009.</p> <p>Confirmation of existing regulations, guidelines on SWM.</p> <p>MFP is not updated since JICA development study in 2007.</p> <p>There is no Organizational Action Plan as of 2009.</p> <p>Report on operation of SWM equipment is not prepared yet.</p> <p>Report on maintenance of SWM equipment is not prepared yet.</p> <p>Waste collection plan is not prepared yet.</p> <p>There is no assessment report yet.</p> <p>Waste composition survey has not been conducted since JICA development study in 2007.</p> <p>Environmental monitoring report is not submitted regularly.</p> <p>The financial statements that are submitted by both CWSF and DWSF are prepared neatly under a same format, but financial management activities other than accounting and the financial statements have not been regulated into a same format.</p> <p>Each DWSF has been submitting its reports to the EPWMD monthly, quarterly and annual-basis. One staff in charge of WSF is working at EPWMD.</p> <p>Based on the baseline survey, educational materials on SWM were already exist in each district.</p> <p>Public awareness campaign such as clean up campaign were conducted every year.</p> <p>POS was conducted at PP site at May 2010 before implementing PP.</p> <p>There is no official sorting activities in NEDS.</p> <p>There is no official sorting activities in NEDS.</p> <p>There is no recommendation paper and revised Master Plan.</p>	<p>People's satisfaction level for urban environment and sanitation throughout the City reaches to 30%.</p> <p>Large scale illegal dump sites should be eliminated.</p> <p>60% of the people considered the level of SWM in UB city is more than average.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p> <p>Personnel who are in charge of Public Awareness in EPWMD and District offices are able to conduct the public awareness activities by taking initiatives.</p> <p>Public awareness campaign will be conducted in 4 iboroo through PP and another 4 iboroo by the C/P.</p> <p>Awareness of residents on waste separation and discouraging manner is increased at the Pilot Project sites.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p>	<p>POS will be conducted at the end of Project. Attention should be paid that biggest problem for maintaining urban environment and sanitary conditions is air pollution according to POS.</p> <p>5 locations out of target 6 locations were cleaned by instruction of EPWMD in 2010 with budget of 180 million Tg. Monitoring conducted on November 2010 showed there is no further illegal dump except 2 locations.</p> <p>POS will be conducted at the end of project. POS at PP site conducted on Sep 2010 shows satisfaction level exceeds 60%.</p> <p>POS conducted in 2007 shows waste collection cover rate was merely 43%. After that, in 2010, this rate increased to 90% upon the procurement of equipment, change of payment system, strengthening the SWM organizations and so on.</p> <p>CMPUA staff went on strike on August and October and collection works was suspended. But generally, 100% collection at apartment area was maintained.</p> <p>WSF must be strengthened in order to improve waste fee collection rate. City council made a decision to abolish DWSF on 23rd Dec. 2009. Concession contract will be introduced after abolishing DWSF.</p> <p>Regulations on 3R, Business Waste, Waste Collection Company were and will be drafted in 2010 and 2011.</p> <p>Waste amount and composition survey in winter was conducted on Dec 2010 and that in summer will be conducted in Jun 2011 in order to revised Master Plan.</p> <p>Annual action plan was formulated in 2010 but it is individual action plan. In 2011, Organizational action plan was formulated.</p> <p>Format on report on operation of SWM equipment was prepared and disseminated to relevant organizations in March 2010.</p> <p>Ditto.</p> <p>It is not necessary for District to prepare waste collection plan after concession contract will be introduced.</p> <p>Disposal site monitoring guideline was formulated on October 2010 and 1st monitoring tour was conducted. Next monitoring will be conducted on Jun 2011.</p> <p>Waste composition survey was conducted in Aug 2010 at sorting facilities constructed at NEDS. Another survey will be conducted in Jun 2011.</p> <p>Lecture on how to use gas detector was conducted on Oct 2010 and Mar 2011. Regular monitoring will be implemented in May onwards.</p> <p>The financial statements that are submitted by both CWSF and DWSF are prepared under a same format. After abolishing of DWSF, CWSF should be strengthened.</p> <p>Each DWSF has been submitting its reports to the EPWMD monthly, quarterly and annual-basis. It must be important that who and how the monitoring of CWSF will be conducted.</p> <p>Activities on raising public awareness are planned at EPWMD 2011 action plan, and PR using media and revision of environmental brochure are planned as well.</p> <p>PP phase 2 which EPWMD is taking initiative is now implemented since Dec 2010.</p> <p>Based on the POS conducted after PP, awareness of residents on collection schedule, cooperation to waste separation at source, are increased.</p> <p>Sorting facilities are constructed at NEDS. Experiment on sorting operation was conducted on Aug 2010 and another experiment will be conducted during summer season in 2011 in order to determine sorting system in UBC.</p> <p>Sorting operation guideline was formulated and WPs were employed to work at sorting facility.</p> <p>Recommendation paper will be prepared upon the analysis of PP result.</p>	
Project Purpose	<p>Capacity for SWM in Ulaanbaatar City is strengthened through human resources development.</p>					
Output 1	<p>Development of human resources in EPWMD for policy making and planning for solid waste management.</p>					
Output 2	<p>Development of human resources in EPWMD and CMPUA for operation of heavy waste collection vehicles and heavy machines.</p>					
Output 3	<p>Development of human resources in CMPUA for operation management of Naranjin Enger Landfill.</p>					
Output 4	<p>Development of human resources in EPWMD and WSFs for financial management in SWM.</p>					
Output 5	<p>Development of human resources of EPWMD and District Officer for promoting public awareness and participation in SWM.</p>					
Output 6	<p>Recommendation for the appropriate system of waste separation and recycling in Ulaanbaatar City.</p>					

Annex 6: Inputs to the Project

(1) Assignment of Japanese Experts

As of April 30, 2011

Assignment	Name	2009												2010								2011								1st Year		2nd Year		Total																			
		9	10	11	12	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	UB	JPN	UB	JPN	UB	JPN																		
		1st Year																								2nd Year																								MM	MM	MM	MM
Team Leader/SWM/ Financial Management 2	Ichiro KONO	5	10	80	7	18	89	15	12	20	3	83	3	3	23	125	3	3	12												8.30	0.17	2.87	0.00	11.17	0.17																	
Maintenance of Equipment	Koji UZAWA						16	30	14																						1.00	0.00	1.90	0.00	2.90	0.00																	
Collection and Transportation	Junji ANAI							30	19																						2.17	0.00	0.00	0.00	2.17	0.00																	
Sanitary Landfilling	Hiroshi FUJITA																														2.87	0.17	1.33	0.00	4.80	0.17																	
Financial Management 1	Suamu SHIMURA																														2.20	0.00	0.47	0.00	2.87	0.00																	
Public Education	Yuko AOKI																														3.80	0.00	1.00	0.00	4.80	0.00																	
Waste Separation and Recycling	Mie NAGAYASU																														5.53	0.00	2.87	0.00	8.40	0.00																	
Data Base Management	Shinosuke ODA																														0.00	0.00	1.00	0.00	1.00	0.00																	
Coordination	Shinosuke ODA																														2.00	0.00	0.80	0.00	2.80	0.00																	
																															27.87	0.34	12.24	0.00	39.91	0.34																	

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(2) Assignment of Counterpart Members

No.	Name	Post/ Organization	Assignment	Period	Remarks (Current Position)
Main C/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, of 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-present	
11	Mr. G. Damdinsuren	Chief Engineer, City Maintenance and Public Utilities Agency	O&M of equipment	October 2009-August 2010	Retired
12	Mr. O. LUVSANDAGVA	Head of Central Workshop, City Maintenance and Public Utilities Agency.	O&M of Equipment	January 1, 2011-present	
Supporting C/P					
13	Mr. N. Altangerel	Deputy Director, City Maintenance and Public Utilities Agency	<u>Support</u> , Policy making and Planning	October 26, 2009-present	
14	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	<u>Support</u> , O&M of equipment	October 26, 2009-present	
15	Mr. Kh. Ganbaatar	Officer in charge of Soil/ ground water pollution Department of Environmental Pollution and Waste Management, Mayor's office of Ulaanbaatar city	<u>Support</u> , Operation of NEDS	October 2009-August 2010	Officer, of Public Service Department of the Mayor's office, Municipality of Ulaanbaatar, August, 2010-present
16	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	<u>Support</u> , Operation of NEDS	August, 2010-present	
17	Mr. E. Iderchuluun	Officer in charge of Hazardous waste at Final disposal site, City Maintenance and Public Utilities Agency	<u>Support</u> , Waste Separation and Recycling	October 26, 2009-present	

(3) Counterpart & Group Trainings

	Training Subject	Duration	Name	Sex	Post/Organization
JFY 2009					
1	Waste management administration	2009.11.29-2009.12.26	GALDAN Damdinsuren	M	A Chief Engineer, City Maintenance and Public Utilities department
2			ORSOO Davaasuren	M	The Vice Governor of the Governor Administrative Office of Sukhbaatar district.
3			OTGONBAATAR Odjargal	M	The Officer of the Department of Environment Pollution and Waste Management, Mayor's Office of Ulaanbaatar city
4			BUDRACHAA Batdorj	M	The Officer, Department of Production Service, Governor's Office of Songinokhairkhan district, Ulaanbaatar city.
5			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					
6	Waste management administration	2010.11.28-2010.12.18	SETEVSUREN Enkhbold	M	Head, Central Workshop, City Maintenance and Public Utilities Agency.
7			ALTANTSETSEG Erdenebat	M	Director, Waste Service Fund, Chingeltei District Governor's Office.
8			YUBA Erdenechuluun	F	Head, Administration department, Governor Office of Songinokhairkhan district.
9			PUREVTSEREN Baigalmaa	F	Governor, 7th khoroo, Bayanzurkh district of Ulaanbaatar city
10			TUMENDEMBEREL Enkh-Angalan	M	Officer, Department of Environment Pollution and Waste Management, Mayor's Office Capital City Ulaanbaatar.
Group Training Course					
11	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.
12	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
13	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

(4) Expenditure of Local Costs**[By Japanese Side]**

(Japanese Yen)

Financial Category	1st Year (Oct. 2009-Aug.2010)	2nd Year (Oct.2010-As of April 13)	Total
Employee	2,351,778	1,932,334	4,284,112
Expendable	150,667	40,250	190,917
Communication and Transportation	55,612	35,438	91,050
Documentation	464,043	170,731	634,774
Rent	2,381,962	1,450,509	3,832,471
Local Training	0	11,466	11,466
Miscellaneous (Cost for Pilot Project)	11,911,056	703,134	12,614,190
Total	17,315,118	4,343,861	21,658,979

[By Mongolian Side]

	Item	Price per unit (MNT)	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	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	7 month	3,500,000
	2nd Year Total			3,500,000

Total (MNT) 10,130,000**Total (JPY) 713,380**

1JPY = 14.2 MNT

(5) List of Equipments Purchased

Year	Item	Specification, Model	Price(JPY)	Date of Delivery	Installed Place	Operation Status	Financial Category
1st Year	Projector	EPSON EB-1720	159,980	2009/9/15	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	Notebook PC	FMV-BIBLO FMVMGG70W	82,667	2010/9/28	CMPUA	Being used for database management on maintenance record of vehicles and information of NEDS	Other Equipment
2nd Year	Data communication device	Internet Antenna for data distribution	24,120	2010/11/14	Narangin 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	2010/11/10 - As of 2011/4/13	Projecto 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

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Annex7: List of Interviewees

(1) Mongolian Side

[Mayor's Office of Ulaanbaatar City]

Mr. L. Baatartsogt	Project Manager / Director of Environmental Pollution and Waste Management Department (EPWMD)
Mr. S. Ariguun	Senior Officer of EPWMD
Mr. E. Batbileg	Officer of EPWMD
Mr. O. Odjargal	Officer of EPWMD
Mr. T. Enkh-Amgalan	Officer of EPWMD
Ms. Z. Mungunzul	Officer of EPWMD
Ms. S. Chantsalnurmaa	Officer of EPWMD
Mr. B. Delgerbayar	Ex-Project Manager / Senior Officer of Public Service Department

[City Maintenance and Public Utilities Agency (CMPUA)]

Mr. B. Byambadorj	Director
Mr. N. Altangerel	Deputy Director
Mr. O. Luvsandagva	Head of Central Workshop
Ms. Ch. Enkhjargal	Director of Narangiin Enger Disposal Site
Mr. A. Vandamagsar	Manager of NEDS
Mr. E. Iderchuluun	Officer of NEDS

[Waste Service Fund (WSF)]

Mr. Lkhagbasuren,	Director of Bayanzurkh Waste Service Fund (WSF)
Mr. A. Erdenebat	Director of Chingeltei WSF
Ms. T. Chimed-Ochir	General Accountant of Bayangol WSF

[TUK]

Mr. Bayanmunkh	Director of TUK Union / Member of Nature, Environment and Ecology Committee, Ulaanbaatar City Council
Mr. Batsaikhan	Director of Bayangol TUK
Mr. Batsaikhan	Chief of Collection Trucks, Khan-Uul TUK
Mr. Ganbold	Manager of Chingeltei TUK
Mr. Batdorj	Director of Nalaikh TUK
Mr. Baljinnyam	Director of Songinokhairkhan TUK

[Persons concerned Pilot Project]

Ms. Ganchimeg	Governor of Khoroo No.7, Sukhbaatar District
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Mr Nyamsuren	Director of AOU 'Tegsh', Khoroo No.7, Sukhbaatar District
Mr. Chuluunbaatar	Director of AOU 'Baiguulamj', Khoroo No.7, Sukhbaatar District
Ms Baigalmaa	Governor of Khoroo No.7, Bayanzurkh District
Ms Yangmaa	Staff in charge of Khoroo No.7, Bayanzurkh WSF
Ms. Enkh TUYA	Director of AOU 'Khantaishir', Khoroo No.7, Bayanzurkh District

(2) Japanese Side

[Japanese Expert Team]

Mr. Ichiro Kono	Chief Advisor/Solid Waste Management/Financial Management 2
Mr. Koji Uzawa	Maintenance and Equipment
Mr. Toru Shimura	Financial Management 1
Ms. Yuko Aoki	Public Awareness
Ms. Mie Nagayasu	Waste Separation and Recycling
Mr. Shinnosuke Oda	Coordinator/Database Development

[JICA Mongolia Office]

Mr. Toshinori Isogai	Chief Representative
Mr. Atsumu Iwai	Senior Representative

Annex8: Suggested PROJECT DESIGN MATRIX₄ (PDM₄)

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 4. Report on social satisfaction level survey throughout the City 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.

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<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 Narangin 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.

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<p>Output 5 Development of human resource of EPWMD and District Officers for promoting public awareness and participation in SWM.</p>	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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>Output 6 Recommendation for the appropriate system of waste separation and recycling in Ulaanbaatar City</p>	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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>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. 1-7) EPWMD reviews and updates the Master Plan under the assistance of JET.</p>	<p>Input < Input from JICA ></p> <ol style="list-style-type: none"> 1. Short-term Experts <ol style="list-style-type: none"> (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 (7) Coordinator, if necessary 2. Equipment for waste manual separation facility in landfill site 	<p>Input < Input from Mongolian side ></p> <ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. EPWMD, CMPUA and WSFs assign necessary personnel for the Project activities.

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

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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.

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 materials.
- 5-3) The training program is implemented by JET and District Officers.
- 5-4) A pilot project on public awareness raising

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<p>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 Enger 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> <ol style="list-style-type: none"> 1. The EPWMD is functional as a coordinating agency among various organizations on SWM in Ulaanbaatar City. 2. WSFs are cooperative for disclosing the financial data to the Project. 3. Waste picker group in the landfill site is cooperative to the Pilot Project. 	

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.

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