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Ministry of Urban Development
Solid Waste Management Technical Support Center
Shreemahal, Pulchowk, Lalitpur

MONITORING FRAMEWORK AND PROCESS WITH TEMPLATES FOR POKHARA SUB-METROPOLITAN CITY

Consultancy Services for Technical and Project Management Support (PMT) for OBA implementation

RFP No: OBA-SWM/S/QCBS-16

February 2016

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POKHARA SUB-METROPOLITAN CORPORATION

<u>**Document Prepared by**</u>

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Monitoring Framework and Process for Municipalities

1.   Background

Projects pursue certain objectives to define the desired effects of its action. The overall objective of the OB-A SWM Project is to "Improve access to high quality and financially sustainable solid waste management services in participating municipalities in Nepal." The project assumed three prominent and interrelated barriers of the participating municipalities— the fiscal constraints; low willingness to pay amongst beneficiaries; and the technical constraints, for qualitative service delivery in municipal Solid Waste Management. In order to address the assumed barriers the project had propose to utilize OBA subsidy to increase service quality which will affect willingness to pay and enable municipalities to gradually recover greater proportions of service delivery costs in order to sustain higher quality services as its specific objective.

The monitoring and evaluation mechanisms of the project will primarily be based on:

(i)   SWM-SIPs which will reflect baseline conditions in addition to agreed targets for improved service quality; and

(ii)   Technical scorecards used in the verification process.

Baseline conditions

Baseline conditions are the benchmarking data of each OBA Municipalities on solid waste service delivery for each expected results and KPIs. The information was collected during the preparation of Solid Waste Management Service Improvement Plan (SWM-SIP).

Technical scorecard

Central to project monitoring and evaluation is a Technical Scorecard which has been specially developed as performance management tool for the project (and potentially beyond).

The developed Technical Scorecard has following 4 sections:

1. SWM strategy and action plan indicators (which track the implementation of the SWM strategy and action plan for the municipality);

2. Performance monitoring system indicators (which track the availability of a system to capture and report key operational data);

3. Service provision indicators (which track the provision of collection and disposal services against defined targets); and

4. Financial performance indicators (which tracks the developments in collection ratio, tariffs and cost recovery)

The two first sections are prerequisites for successful implementation and monitoring of the OBA intervention whereas the two latter sections track the actual performance of the OBA intervention. It is proposed that the focus during the first year is to make sure the municipalities get the prerequisites right, whereas the focus in the remaining years is on the actual performance of the OBA intervention.

The objective of this document is to provide monitoring framework and process for systematic and continuous collecting, analysis and generation of data that can be used for project evaluations, specifically for making decision on subsidy payable to municipalities.

2.   Project Monitoring and Evaluation

A SWM committee will be responsible for the Monitoring and Evaluation of the project at the municipality level. SWMTSC and SWM committees will carry out a periodic review of the project implementation progress and the results achieved. The Monitoring and Evaluation systems at the municipality level will gather the baseline information, as well as data on project inputs, processes, outputs, and outcomes, for monitoring the project implementation progress and results achieved.

Evaluation is a periodic assessment of the efficiency, effectiveness, impact, sustainability and relevance of a project in the context of stated objectives/ objectively verifiable indicators (the Technical Scorecard). It will be undertaken as an independent examination by ITVA and IFVA with a view to drawing lessons that may guide future decision-making (subsidy payment).

3.   Monitoring Framework

Monitoring provides real-time information on ongoing programme or project implementation required by management. It is always related to pre-identified results in the development plan. In this OB-A SWM-SIP project they are driven by the need to account for the achievement of intended results (Key Performance Indicators: KPIs) and provide fact based information for corrective decision making and subsidy Payable to municipalities.

The first step in monitoring is 'Planning for monitoring' which should start along with the project design. Planning for monitoring must be done with evaluation in mind. The availability of a clearly defined results or outcome model and monitoring data, among other things, determine the 'evaluability' of the subject to be evaluated.

The Monitoring framework for the Output-Based Aid for Municipal Solid Waste Management Project has been summarized in the Planning matrices for monitoring and evaluation. This matrix has been developed by the OB-A municipalities. The Monitoring framework is composed of the two distinct components: Results framework; and Monitoring Plan. (See Annex 1 for Monitoring Framework)

3.1   Result Framework

The "Result Framework" provides the relationships between the project objectives and the indicators that will demonstrate achievement or progress toward these objectives. Following three columns are allocated for the Result Framework component of the Monitoring Framework: Expected Results, KPIs and Verifiable indicator (1); Baseline Data (2); and Target (3).

Column 1:   Expected Results, KPIs and Verifiable indicator
As specified in the Annex 2 of the Tripartite Project Implementation Agreement (TPIA) for Output-Based Aid in Municipal Solid Waste Management, this column describes expected outputs; Key Performance Indicators (KPIs); and its Verifiable indicator for the year 1 and for year 2-4.

Column 2:   Baseline Data

This column presents the benchmarking data on solid waste service delivery for each expected results and KPIs. The information was collected during the February to March 2011 while preparing Solid Waste Management Strategic Plan and Action Plan.

Column 3:   Target

Column describes the pre-identified results in the development plan as the outcome of the implementation of the OB-A SWM project.

3.2   Monitoring Plan

The "Monitoring Plan" identifies the sources of information; data collection methods and tools; and recording system. For monitoring plan four columns Means of Verification (4); Sources of Information (5); Method of Information Collection (6); and Frequency of Information Collection (7) are allocated.

Column 4:   Means of Verification

This column identifies the documents, reports and other sources providing information that makes it possible to check that the KPIs and Verifiable indicators are achieved. This will also help to test whether or not the indicators can be realistically measured at the expense of a reasonable amount of time, money and effort.

Column 5:   Sources of Information

This column indicates the data sources from where information on the status of each indicator can be obtained, who provides the information. It also state where the information is recorded or documented for reporting purpose.

Column 6:   Method of Data Collection

This column prescribes the data collection methods or tools, such as use of secondary data, regular monitoring or periodic evaluation, baseline or end line surveys, PRA, and focus group discussions. This column also indicates whether data

collection tools (questionnaires, checklists) are pre-existing or will need to be developed.

Column 7:   Frequency of Information Collection

This column states how often the data for each indicator will be collected, such as monthly, quarterly, or annually. It is often useful to list the data collection timing or schedule, such as start-up and end dates for collection. When planning for data collection timing, it is important to consider factors such as seasonal variations, holidays, and religious observances.

3.3   Critical risks / Assumptions

Following are the risks assumed in the project.

a) Willingness of municipal authorities to charge for SWM services and to gradually increase the charges as per financing plan;

b) Affordability and willingness to pay by households;

c) Failure to achieve targeted SWM collection ratios;

d) Lack of elected local representatives;

e) Low capacity at the municipality level; and

f) Sustainability after the project

Critical risks and possible measures to mitigation is given in Annex 2.

4. **Monitoring Process**

Monitoring process in Output-Based Aid for Municipal Solid Waste Management Project should create the information base required for making decision on subsidy payable to municipalities. The following steps are involved in the monitoring process:

Step 1 **Collecting data, (facts, observation and measurement) and documenting**

The first step in implementing monitoring activities will be to collect of data on the performance status of the 4 sections of the technical scorecard and its documentation. For the purpose, data collection methods and tools need to be prepared.

The following data collection methods and tools should be used in monitoring and evaluation (M&E) of the OB-A SWM implementation.

Use of Checklist Method:

Checklist is a list of items used for validating or inspecting whether procedures/steps have been followed, or the presence of examined behaviors. Checklists allow for systematic review that can be useful in setting benchmark standards and establishing periodic measures of improvement.

For monitoring purpose of the OB-A SWM-SIP, data collection is intended for verification of Key Performance Indicators (KPIs). Thus, following checklist should be used for collection KPI related information as a means of verification for the OB-A SWM-SIP Result framework (Technical Scorecard).

Checklist for KPI 1.1

a) Minute of formation of SWM Subject Committee mentions the list of members and alternatives along with the respective approved TOR;

b) Meeting minutes, monthly quarterly, semi yearly and yearly meeting approved by committee member;

c) Letter of nomination as a member of the committee if the seat is vacant, reflecting the date of vacancy and nomination; and

d)   Evidences of committee's decisions being implemented within six months.

Checklist for KPI 1.2

a)   Letter of staff deputation by the municipality for SWM-SIP along with the TOR approved by the SWMTSC;

b)   Letter staff deputation according to SWM-SIP along with the approved job descriptions if the seat is vacant, reflecting the date of vacancy and nomination.

Checklist for KPI 1.3

a)   SWM Subject Committee's meeting minute with the decision for reviewing of SWM-SIP; and

b)   Amended and updated SWM-SIP approved by SWMTSC review.

Besides, letter of staff deputed to landfill site with approved Job descriptions will be verifying document for **KPI 2.1**.

For documentation of these means of verification, separate file should be maintained and updated for each indicator.

Use of Planning documents and Manuals:

OB-A SWM-SIP implementation **for KPI 1.4** will be based on approves formal strategy/policy on and practical guideline on PPP. Similarly, OB-A SWM-SIP implementation **for KPI 2.1** will be based on OB-A Municipality specific "Environmental and Social Management Plan (ESMP)". Actual implementation will be compared / measured with the following specified conditions in the ESMP.

  (i)   Site safety;
 (ii)   Site staffing;
(iii)   Record keeping;
(iv)   Method and standards for filling;
 (v)   Compaction;
(vi)   Cover material;

(vii)   Storing of recyclable materials and compost (along with targets for each);

(viii) Environmental controls; and

 (ix)   Equipment maintenance;

Similarly, approved **"Solid Waste Management Plan"** document which reflects elaborated plan for: a) Waste Collection system adopted; b) Frequency of waste Collection in the market area; Residential area; Fringe Area; etc.; c) Schedule of waste collection; d) Provision of separate collection of segregated waste; e) Waste collection points/centers and location; f) Wards served under waste collection services; and g) Waste collection/transportation vehicles; and **"Landfill Operation Manual (LOM)"** will be further implementation status comparing documents for **KPI 2.1 and KPI 3.1**. Maintaining of separate file and its continuous updating will be required to verify the indicator.

Approved "**Communication system (Plan)**" document which reflects elaborated plan for measuring key communications related indicators of **KPI 2.2** like:

(i)   Tracking stakeholder comments received;

(ii)   Tracking resolutions / remedial actions taken to address stakeholder comments;

(iii) Tracking implementation of the municipality's SWM outreach and awareness efforts;

(iv)   Tracking which staff member or department has responsibility for managing a particular communications activity;

Use of Direct observation Method:

Another data collection method would be direct observation. An observer sees and hears at a specified site: its physical surroundings, activities or processes as a means of collecting data on behavioral patterns and physical conditions. This method will be used to verify (**KPI 2.1**) operates landfill and complementary facilities. ITVA will conduct spot checking for the auditing / evaluation purpose.

Similarly, visibly cleanliness of the public areas, main streets and secondary streets **(KPI 3.2)** will be verified by ITVA conduct spot checking method.

Use of Random Interview:

Random Interviews will be conducted to collect information on consumer satisfaction regarding SWM service provision by the municipality. Appropriate format will be developed and used by the municipality to gather information. ITVA will also conduct interview with the customers to assess their satisfaction level on the outcome of SWM service provision and outreach and communications efforts to verify **KPI 3.3**.

Use of Formats for recording data of implementation status:

Verification of the system **(KPI 2.2),** the municipality established and mobilized for managing communications with key stakeholders could be recorded using **"Format for Recording Complaints and its status"** (Annex 3.1) and **"Format for Recording Suggestions"** (Annex 3.2).

Similarly, verification of the system **(KPI 2.3),** the municipality established and mobilized for monitoring SWM service delivery could be recorded using the following formats.
a) Vehicle Log Book (Annex 4.);
b) Vehicles Fuel and Lubrication Expenses Record (Annex 5.);
c) Vehicle Maintenance and Repair Expenses (Annex 6.);
d) Reporting format for Sector-wise Solid Waste Collection (Annex 7.1);
e) Monthly Report format for Solid Waste Collection at Landfill Facility (Annex 7.2)
f) Format for Daily Recording of Waste Segregation (Annex 8.1); and
g) Format for Monthly Recording of Recyclables (Annex 8.2)

Establishment of Fiduciary monitoring system **(KPI 2.4)** in the municipality including:
(i) Budget allocation for Solid waste (Annex 9.1)
(ii) Customer billing;
(iii) Beneficiary revenue collection (Annex 9.2);

(iv) Expenditures on service delivery by different categories or major contracts (Annex 9.3);

(v) Established rate for and Solid waste (Annex 9.4)

(vi) Planned or in progress procurement methods, monetary values, and key milestones could be measured and recorded through codifies codified SWM Budget system and its progress reports submitted to the ministry and SWMTSC.

Municipalities operation of any complementary facilities like "Provision of composting for the management of organic waste" **(KPI 2.1- xi)** could develop "Follow-up visit Reporting Format" in order to record the progress made in this respect;

Data for verification of progress made in Financial **KPI 4** could be collected through simple calculation as elaborated in the Technical Scorecard as:

KPI		Calculating method
KPI 4.1	SWM fee collection efficiency	Actual collection of SWM fee (deposited in municipal accounts for SWM services) / Potential collection of SWM fee (sum of customers multiplied by service fee) is increased year on year
KPI 4.2	Increase in SWM fees charged	Minutes of Decision made bt the Municipal Council to increase in the average annual SWM fee per customer served of Year on year.
KPI 4.3	Labor efficiency	Numbers of staff years per year dedicated to SWM divided by total number of customers who paid SWM specific fees during the most recent billing period.

Step 2 Data analysis

Data analysis is a critical step in Monitoring Process. It is a continuous process throughout the project cycle to make sense of gathered data to inform ongoing and future

programming. Analysis of the data depends on the intension or the information need as set out in the project.

Information needs for 'Output-Based Aid for Municipal Solid Waste Management Project' is to determine the annual subsidy amounts for each municipality over the four year project period. Service delivery subsidies paid to municipalities will be based on based on improvements in qualities of SWM services; and improvement in financial sustainability.

Thus, data analysis in this context should focus on:
a)   Comparing the actual achievement of the project with the Baseline / Benchmarking data;
b)   It should also provide clear direction of improvements of SWM services delivery towards the target fixed in the Result Frame of the project;
c)   Analysis should highlight that changes in project environment (i.e, impact of the project); and
d)   Comparison of planned and actual mechanisms and procedures of project organization and cooperation with target groups; identification of deviations if any; and conclusions.

Step 3   Reporting

The third step in Monitoring Process will be 'Reporting' of the progress made by the project. The Tripartite Project Implementation Agreement (TPIA) for Output-Based Aid in Municipal Solid Waste Management had made participating municipalities responsible for preparing and submitting progress reports (using template mentioned in Annex 10) to SWMTSC and TDF. SWMTSC will send to TDF all ITVA reports, other project monitoring reports, and reports on technical assistance to municipalities. TDF will aggregate these with IFVA and any other project reports for submission to GPOBA.

OB-A SWM-SIP Monitoring Framework for Municipalities
(Based on Technical Scorecard)

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
Expected Results 1.: SWM strategy and action plan KPIs		
KPI 1.1 : SWM Subject Committee established		
Verifiable indicator for KPI 1.1 *Year 1:* (i) TOR drafted and approved by Executive Officer of Municipality; (ii) Committee members and alternates nominated; (iii) First meeting held and minutes of first meeting approved by committee members. NOTE: approved SWM-SIPs should include committee TOR. *Years 2-4:* (i) Approved minutes of semi-annual committee meetings evidence committee functionality; (ii) any vacant committee seats filled within 6 months of occurring. Alternates may temporarily serve in vacant posts but must have same authority of a full committee member during that time; (iii) no required committee decision remains outstanding for more than 6 months.	A SWM Committee at the political level does not exist.	**Pass**
KPI 1.2 : Section/unit of municipality tasked with overseeing SWM established		
Verifiable indicator for KPI 1.2 *Year 1:*		**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
(i) Job descriptions in place with no objections from SWMTSC; (ii) Staff allocation for SWM officially determined and included within SWM-SIP; (iii) Municipality evidences that it has fully or partially deputed staff to SWM functions according to SWM-SIP. *Years 2-4:* (i) Municipality evidences that it has made staff allocations according to SWM-SIP and job descriptions; (ii) Any vacancies in SWM-SIP planned staffing filled within 6 months. The municipality may fill vacancies temporarily / permanently with consultants working under contract	At the operational level a municipal section responsible for SWM exist, job descriptions are available and staff has been allocated.	
KPI 1.3 : SWM-SIP review and up-to-date		
Verifiable indicator for KPI 1.3 *Years 2-4*: (i) SWM-SIP amended to reflect SWM Subject Committee decisions or amended service delivery approaches; (ii) All supporting analysis also updated (e.g. budgets, revenue projections, etc.); (iii) Any major changes to SWM-SIP pass SWMTSC review.	**NA**	**Pass**
KPI 1.4 : Enabling PPP in MSW		
Verifiable indicator for KPI 1.4 *Years 1:* (i) Municipality prepares and approves formal strategy/policy on and practical guideline for involvement of private enterprises, NGOs and TLOs in waste management.	Municipality has three year contracts with two private operators, but contracts are very brief and no systematic monitoring of service provision takes place. Operator revenues are deposited in municipal account and municipality retains 20%	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
(ii) Municipality works with SWMTSC on improving existing contracts private operators. **_Years 2_**: (i) Municipality establishes byelaws on the (maximum) size of tariffs collected by private enterprises and NGOs involved in waste collection. **_Years 2-4_**: (i) System for data collection on or self-reporting by private enterprises, NGOs and TLOs involved in MSW established. (ii) Municipality establishes and implements monitoring system for private operator service delivery in accordance with contract.	municipality share before returning 80% to the operator. Tariffs are regulated by municipality and are uniform across municipal and private operators.	
Expected Results 2.: Performance monitoring KPIs		
KPI 2.1 : Landfill operations and waste reduction		
Verifiable indicator for KPI 2.1 **_Year 1:_** Municipality codifies and begins implementing an operational plan for landfill covering, at a minimum: (i) Site safety; (ii) Site staffing; (iii) Record keeping; (iv) Method and standards for filling; (v) Compaction; (vi) Cover material;	Inadequate equipment at landfill Existing operational guidelines are not utilized at landfill	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
(vii) Storing of recyclable materials and compost (along with targets for each); (viii) Environmental controls; (ix) Equipment maintenance; (x) Reporting; and (xi) Operation of any complementary facilities. SWMTSC reviews plan for technical soundness and gives 'no objection.' *Years 2-4:* (i) Municipality satisfies the Year 1 requirement and operates landfill and complementary facilities according to plan (ITVA to spot check); (ii) Municipality revises plan and keeps it's associated indicators up to date with current data; (iii) All major revisions pass SWMTSC review.		
KPI 2.2 : Communications Systems Established		
Verifiable indicator for KPI 2.2 *Year 1:* The municipality establishes and mobilizes a system for managing communications with key stakeholders. At a minimum, this system must be capable of: (i) Tracking stakeholder comments received; (ii) Tracking resolutions / remedial actions taken to address stakeholder comments; (iii) Tracking implementation of the municipality's SWM outreach and awareness efforts;	Communications with key stakeholders in the SWM sector is handled through separate public hearings. All communication including complaints is registered.	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
(iv) Tracking which staff member or department has responsibility for managing a particular communications activity; (v) Measuring key communications related indicators (e.g. average time to address complaints). SWMTSC reviews communications system and gives 'no objection.' NOTE This system could be a simple spreadsheet and does not need to be technologically sophisticated. _Years 2-4:_ (i) The municipality satisfies the Year 1 requirement and maintains the communications system with up-to-date information (ITVA to spot check); (ii) No stakeholder comment lingers unaddressed for more than 3 months (ITVA to spot check); (iii) Any major revisions to the communications system pass review by SWMTSC		
KPI 2.3 : Service Delivery Monitoring Systems Established		
Verifiable indicator for KPI 2.3 _Year 1:_ The municipality establishes and mobilizes a system for monitoring SWM service delivery. At a minimum, this system includes indicators for capturing: (i) Vehicle use metrics; (ii) Labor inputs by different tasks (e.g. street sweeping, equipment operation, etc.); (iii) Volume or weight of solid waste deposited at landfill;	A formalized system for monitoring SWM service delivery does not exist, and no formal surveys of customer satisfaction are performed, but TLOs provide feedback on service provision including SWM. Vehicle use and fuel consumption is logged. Assessed weight (based on volume) deposited at landfill is registered for each arriving vehicle.	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
(iv) Volume or weight of biodegradable waste composted; (v) Volume or weight of different recyclables segregated from the waste stream; (vi) Indicators for other segments of the waste stream with unique disposal / recycling processes (e.g. medical waste); (vii) All indicators contained within the Technical Scorecard's service provision KPIs. (NOTE: This system could be a simple spreadsheet and does not need to be technologically sophisticated.) *Year 2-4:* (i) The municipality maintains its service delivery monitoring system with up-to-date data for all indicators (ITVA to spot check); (ii) Any major changes to the system pass SWMTSC review; (iii) Data passes quality / veracity spot checks by the ITVA		
KPI 2.4 : Fiduciary monitoring system Established		
Verifiable indicator for KPI 2.4 *Year 1:* The municipality codifies a system for tracking SWM service-related financial, contractual, and procurement information including: (i) Customer billing; (ii) Beneficiary revenue collection; (iii) Expenditures on service delivery by different categories or major contracts;	SWM service-related financial data is monitored. A single account exists for SWM tariff revenues, but the account structure for costs is complex and difficult to track.	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
(iv) Planned or in progress procurement methods, monetary values, and key milestones; (iv) All financial indicators within the Technical Scorecard's Financial KPIs. SWMTSC reviews fiduciary monitoring system and gives 'no objection.' (NOTE This system could be a simple spreadsheet and does not need to be technologically sophisticated.) _Year 2-4:_ (i) The municipality maintains its fiduciary monitoring system with up-to-date information (ITVA to spot check); (ii) Any major changes to the system pass SWMTSC review; (iii) Data passes quality / veracity spot checks by the ITVA.		
Expected Results 3.: Service provision KPIs		
KPI 3.1 : Wards served		
Verifiable indicator for KPI 3.1 % of wards within a municipality's area that are receiving regular SWM services. The data source for this indicator will be the municipality's service delivery monitoring system. Target values for this indicator will equal the values agreed in SWM-SIPs. The municipality should be able to evidence that any ward claimed receives the level of service agreed in SWM-SIPs. The ITVA will revise claimed figures downward as observed evidence warrants.	Collection services are provided in the 18 urban wards (52% on average) with daily door-to-door by two private operators and bring to truck collection by PSMC. No service is provided in 10 new VDC included in Pokhara as of January 2015. In all 28 wards average service is 43% at the start of 2015	Year 1 - 45% Year 2 - 50% Year 3 - 56% Year 4 - 64%
KPI 3.2 : Visual cleanliness in public areas, main streets and secondary streets		

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
Verifiable indicator for KPI 3.2 Percentage of served wards/zones with visibly clean public areas, main streets and secondary streets following a random visual inspection by the ITVA. ITVA inspections will consider: (i) Cleanliness of paved sidewalk; (ii) Evidence that street sweepers are collecting waste and depositing it appropriately within the collection system; (iii) General absence of litter and rubbish piles. The ITVA may also interview neighborhood residents / business to gauge consistency of observed conditions.	Street sweeping is provided in wards 1, 4, 8, 9 by PSMC In other wards TLOs and business organizations arrange street cleaning No formal data is available but it is assessed that 75% of the area is clean.	Year 1 - 80% Year 2 - 85% Year 3 - 90% Year 4 - 95%
KPI 3.3 : Customer Satisfaction		
Verifiable indicator for KPI 3.3 % of sampled customers in a ward who report that waste collection and street cleaning services provided have met the standards that the municipality claims for that ward. This indicator captures both service provision and outreach and communications efforts. ITVA will use a survey instrument to measure the level of service that customers observe and will randomly sample different types of customers (e.g. rural or urban households, businesses, etc.). The ITVA will apply this instrument to a sample of wards in each municipality.	The municipality performs surveys of customer satisfaction with different services through the TLO representatives. Baseline and targets based on very satisfied + reasonable satisfied to be established.	Year 1 - 70% Year 2 - 75% Year 3 - 80% Year 4 - 85%
KPI 3.4 : Safe disposal of collected waste		
Verifiable indicator for KPI 3.4	Illegal deposits at transfer facilities of private operators	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
Criteria for passing: (i) Methods of transporting waste incorporate reasonable measures for preventing spillage in route to disposal sites; (ii) The municipality disposes of waste only in designated disposal facilities (i.e. no informal dumping); (iii) The municipality's designated disposal facility complies with GoN standards. The ITVA may use visual inspection, interviews with individuals/TLOs, and records for complaints received.	Need to site and construct new landfill / disposal facility prior to opening of new international airport adjacent to the present site	
KPI 3.5 : Waste segregation and composting at household level		
Verifiable indicator for KPI 3.5 Percentage of households practicing proper and correct waste segregation at household level based on random inspection of 10% of households provided with bins for waste segregation and/or home composting.	No source separation at household level and only limited home composting No programs to promote recycling and composting practices at household and community level.	**Pass**
KPI 3.6 : Waste recovery		
Verifiable indicator for KPI 3.6 Targets are established and actual performance is measured (by visual inspection and check records) for recovery of recyclable material and organic fraction in waste stream at	Significant segregation and recovery of collected waste at the transfer sites of the two private operators No material recovery facilities for waste collected by municipal operator	**Pass**

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
transfer stations and landfill (share of recoverable materials actually being separated and recovered/sold/reused).		
Expected Results 4.: Financial KPIs		
KPI 4.1 : SWM fee collection efficiency		
Verifiable indicator for KPI 4.1 Actual collection of SWM fee (deposited in municipal accounts for SWM services) / Potential collection of SWM fee (sum of customers multiplied by service fee) is increased year on year towards a goal of 90%.	Total tariff revenues collected in 2013/14 were NRP 149 Lakh (24 by PSMC and 125 by POs). Expectations for 2015/16 are NRP 170 Lakh. The collection ratio for baseline is 20% for PSMC and 75% and 40% for the two POs or on average 34% for the system.	Year 1 - 20% Year 2 - 25% Year 3 - 30% Year 4 - 35%
KPI 4.2 : Increase in SWM fees charged		
Verifiable indicator for KPI 4.2 Year on year increase in the average annual SWM fee per customer served. This average will apply across all customer types and different fee levels. Target values will reflect SWM-SIP envisaged service area expansion and fee structures.	Actual tariff revenues collected in 2013/14 were NRP 149 Lakh. This is equal to 44% cost recovery. Target is based on 2015/16expectations of 170 Lakh and gradual increases thereafter.	Year 1 - 170 lakh Year 2 - 202 lakh Year 3 - 227 lakh Year 4 - 255 lakh
KPI 4.3 : Labor efficiency		
Verifiable indicator for KPI 4.3 # of staff years per year dedicated to SWM divided by total number of customers who paid SWM specific fees during the most recent billing period. If billing period covers less than 1/2 of the year, than this indicator will apply to an average of periods amounting to no less than 3 months.	Around 20,400 out of 43,800 households in the urban wards covered by PSMCreceive SWM services. The total number of municipal employees in SWM is 117 comprising 2 environmental officer (supervision / monitoring), 2 engineers	Year 1 - (-5)% Year 2 - (-5)% Year 3 - (-5)% Year 4 - (-5)%

Result Framework		
Expected Results, KPIs and Verifiable indicator	**Baseline Data**	**Target**
1	**2**	**3**
	(landfill site management), 2 supervisor (monitoring service provision), 15 drivers, 18, collection and disposal workers, and 72 street sweepers. That equals 5.74 staff years per 1,000 SWM customers. No figures are available for actual paying customers. This is to be established by the municipality and an annual improvement of 5% is targeted.	

Verifiable indicator	Means of Verification	Sources of Information	Method of Data Collection	Frequency of Information Collection
		Monitoring Plan		
1	**4**	**5**	**6**	**7**
for KPI 1.1				
Year 1. i) ii)	Minute of formation of SWM Subject Committee mentions the list of members along with the respective approved TOR	Environment and SWM Section/Unit	Copy from the Meeting minute register of SWM Subject Committee	After Every quarterly meeting as per requirement
iii)	Meeting minute with the signature of the committee members			
Year 2 – 4 i)	Approved Half-yearly meeting minute of the SWM Subject Committee meeting.			After Half-yearly meeting held
ii)	Letter of nomination as a member of the committee if the seat is vacant, reflecting the date of vacancy and nomination.		Record keeping of the CC of the letter of member nomination in the committee	After member nomination in the committee
iii)	Evidences of committee's decisions being implemented within six months.		Reports of the committee's decision being implemented	After committee's decisions being implemented
for KPI 1.2				
Year 1. i) ii) iii)	Letter of staff deputation by the municipality for SWM-SIP along with the TOR approved by the SWMTSC	Environment and SWM Section/Unit	Filing of the CC of the letter of staff deputation for SWM-SIP along with the TOR	After Every staff deputation and transfer
Year 2 – 4 i)	Letter of staff deputation by the municipality for SWM-SIP along with the TOR approved by the SWMTSC		Filing of the CC of the letter of staff deputation for SWM-SIP along with the TOR	After every staff deputation and transfer

Verifiable indicator	Monitoring Plan			
	Means of Verification	**Sources of Information**	**Method of Data Collection**	**Frequency of Information Collection**
1	**4**	**5**	**6**	**7**
ii)	Letter staff deputation according to SWM-SIP along with the approved job descriptions if the seat is vacant, reflecting the date of vacancy and nomination.		Record keeping of the CC of the letter staff deputation for vacant seats for SWN-SIP	After every vacant seats being fulfilled
for KPI 1.3				
Year 2 – 4 i)	SWM Subject Committee's meeting minute with the decision for reviewing of SWM-SIP.			
ii) iii)	Amended and updated SWM-SIP approved by SWMTSC review.		Filing of Amended and updated SWM-SIP and meeting minute	After SWM-SIP updated
for KPI 1.4				
Years 1 i)	Municipal level PPP strategy/policy on and practical guideline prepared and approved.	PPP Policy/SWM tariffs Environment and SWM Section/Unit	Approved PPP strategy/policy on and practical guideline filed	After PPP strategy/policy on and practical guideline approved
ii)	Signed Contract document between the municipality and the private operators and NGOs.		Records of contract document	After contract has been signed
Year 2 i)	Approved Municipal byelaw for SWM tariffs collection by private operators and NGOs		Approved Municipal byelaw filed	After Municipal byelaw approved
Year 2 – 4 i)				

		Monitoring Plan		
Verifiable indicator	**Means of Verification**	**Sources of Information**	**Method of Data Collection**	**Frequency of Information Collection**
1	**4**	**5**	**6**	**7**
	Reports on MSW submitted regularly to the municipality by private operators, NGOs and TLOs		Filed Report	After every submission of report
ii)	Incorporation of clause on Monitoring mechanism in the contract document between the municipality and the private operators annexed by Monitoring frame Both the municipality and the private operators (submits progress reports) regularly performs SWM service monitoring.	Contract document filed in Environment and SWM Section/Unit Monitoring Reports filed in Environment and SWM Section/Unit	Records of contract document filed. Monitoring report	Every quarterly
for KPI 2.1				
Year 1. i)	Environmental safety as per the ESMP measures	Environment and SWM Section/Unit	ESMP measures	
ii)	Letter of staff deputed to landfill site with approved Job descriptions	Environment and SWM Section/Unit	Filing of CC of Letter of staff deputation at the landfill site	After every staff deputation and transfer
iii)	A. Updated plan for collection and transportation of Waste which indicates: a) Waste Collection system adopted; b) Frequency of waste Collection in the market area; Residential area; Fringe Area; etc.;	Environment and SWM Section/Unit Records maintained at the	Filing of approved solid waste management Plan document	Starting of every fiscal year

Verifiable indicator	Monitoring Plan			
	Means of Verification	Sources of Information	Method of Data Collection	Frequency of Information Collection
1	4	5	6	7
	c) Schedule of waste collection; d) Provision of separate collection of segregated waste; e) Waste collection points/centers and location; f) Wards served under waste collection services; g) Waste collection/transportation vehicles B. Records of: a) Vehicle movements b) Quantity of waste collected; c) Incoming waste in the land fill site d) Quantity of recyclables collected at MRF; e) Percentage of diversion of waste from landfill	Landfill site and municipality		
iv)	As mentioned in the Landfill Operation Manual (LOM)	Landfill Operation Manual	Verification as per LOM	Quarterly
v)	Field Verification and As mentioned in the Landfill Operation Manual	Landfill Operation Manual	Visual Observation	Quarterly
vi)	Field Verification and As mentioned in the Landfill Operation Manual	Landfill Operation Manual	Visual Observation	Quarterly
vii)	Field Verification	Landfill site	Visual Observation	Quarterly
viii)	Field Verification	Landfill site	Visual Observation	Quarterly
ix)	Conditions of collection vehicles: Maintenance status	Landfill site Office	Records of filing of Vehicle maintenance form	Forms filled before every vehicle maintenance

Verifiable indicator	Monitoring Plan			
	Means of Verification	Sources of Information	Method of Data Collection	Frequency of Information Collection
1	4	5	6	7
x)	Records of Monthly/quarterly records to CEO and SWMTSC	Environment and SWM Section/Unit	Reporting format	Monthly/quarterly
xi)	Provision of composting for the management of organic waste; Types of composting system; Quantity of compost production	Environment and SWM Section/Unit	Recording Format for follow-up visits	Monthly/quarterly
Year 2 – 4 i) ii) iii)	Updated Data Base system for SWM Revised Plan for Landfill site management and revised waste reduction plan and approved by the SWMTSC	Environment and SWM Section/Unit	Updated data inserted in the SWM-MIS system	Everyday
for KPI 2.2				
Year 1. i) ii)	Register for which records the stakeholders comments and complaints. Register for which indicates resolutions / remedial actions taken to address stakeholder comments; including time taken to address complaints.	Register maintained at the Environment and SWM Section/Unit	Comments and complaints recording format	Everyday
iii)	Budget for Communication and Record of implementation	Environment and SWM Section/Unit	Financial Record and Format for recording implementation of Outreach activities	After completion of every Outreach activities

Verifiable indicator	Monitoring Plan			
	Means of Verification	**Sources of Information**	**Method of Data Collection**	**Frequency of Information Collection**
1	**4**	**5**	**6**	**7**
iv)	Approved staff's TOR which includes responsibility for managing a particular communications activity;	Environment and SWM Section/Unit	Filing of CC of Job description of the staff responsible for managing communications activity	After staff deputation
v)	Register for which indicates resolutions / remedial actions taken to address stakeholder comments; including time taken to address complaints.		Report on indicates resolutions / remedial actions taken	After every comments has been addressed
vi)	Approved Communication system (Plan)		Filing of approved Communication Plan document	Starting of every fiscal year
Year 2 – 4 i)	Updated Data Base system for SWM – communication.	Environment and SWM Section/Unit	Updated data inserted in the SWM-MIS (Communication system	Everyday
ii)	Register for which indicates resolutions / remedial actions taken to address stakeholder comments; including time taken to address complaints (within 3 month).			
iii)	Approved revised communication system			
for KPI 2.3				
Year 1. i)	Vehicle Log Book in register		Format for Vehicle movement	Everyday

		Monitoring Plan		
Verifiable indicator	**Means of Verification**	**Sources of Information**	**Method of Data Collection**	**Frequency of Information Collection**
1	**4**	**5**	**6**	**7**
ii)	TOR of the staff deputed in the SWM works	Environment and SWM Section/Unit	ToR of the staff deputed	
iii)	Records of quantity of incoming waste at the landfill site	Office at Landfill site	Format for recording of quantity of incoming waste	Everyday
iv)	Records of quantity of waste segregated for composting		Format for waste segregation	Everyday
v)	Records of quantity of recyclable waste segregated from the waste stream			
vi)				
vii)	Data base of the SWM service delivery maintained		Updated data inserted in the SWM-MIS (service delivery)	Everyday
Year 2 – 4 i)	Updated Data Base system for SWM service delivery and its approval.			
ii)				
iii)				
for KPI 2.4				
Year 1. i)	Billing system adopted for collecting revenue in the SWM heading.	Revenue Section	Revenue collection Bills in the SWM heading.	Everyday
ii)	Approved Monthly and quarterly financial progress reports submitted to the ministry and SWMTSC.	Financial Management Section	Monthly and quarterly financial progress reports	Monthly and quarterly
iii)	Codified SWM Budget and its progress reports submitted to the ministry and SWMTSC.			

Verifiable indicator	Monitoring Plan			
	Means of Verification	Sources of Information	Method of Data Collection	Frequency of Information Collection
1	**4**	**5**	**6**	**7**
iv)	Approved procurement Plan and/or documents of in-progress procurement		Filing of procurement Plan document	Starting of every fiscal year
v)	Data base of the SWM Fiduciary monitoring system maintained		Updated data inserted in the SWM-MIS (Fiduciary monitoring)	Everyday
Year 2 – 4 i) ii) iii)	Updated data base of the SWM Fiduciary monitoring system and its approval			
for KPI 3.1				
% of wards within a municipality's area that are receiving regular SWM services.	Refer Means of verification indicated in KPI 2.3	Refer KPI 2.3	Refer KPI 2.3	Refer KPI 2.3
for KPI 3.2				
Percentage of served wards/zones with visibly clean public areas, main streets and secondary streets	Visual inspection of public areas, main streets and secondary streets for assessing its cleanliness which includes paved sidewalk; collecting waste and depositing it appropriately within the collection system and absence of litter and rubbish piles	public areas, main streets and secondary streets	Site visit	Everyday / weekly/month
for KPI 3.3				
% of sampled customers in a	Opinion of the customer during random interview based on the	the customer in the wards	Interview with the customer	

Verifiable indicator	Monitoring Plan			
	Means of Verification	Sources of Information	Method of Data Collection	Frequency of Information Collection
1	4	5	6	7
ward who report that waste collection and street cleaning services provided have met the standards that the municipality claims for that ward.	outcome of service provision and outreach and communications efforts. Report of customer satisfaction survey conducted.	Survey Report	Customer satisfaction survey	Every weekly/month Once a year
for KPI 3.4				
Criteria for passing: i) ii) iii)	Records for complaints received regarding Safe disposal of collected waste Visual inspection, and opinions of the individuals/TLOs during random interviews,	Registered Maintained at Environment and SWM Section/Unit and the customer in the wards	Visual inspection, and interview	Every weekly/month
for KPI 3.5				
Percentage of households practicing proper and correct waste segregation at household level based on random	On the spot observation of waste segregation and/or home composting.	Waste segregation at the household level	Maintaining of Registered Visual inspection	Every weekly/month After every inspection

Verifiable indicator	Monitoring Plan			
	Means of Verification	Sources of Information	Method of Data Collection	Frequency of Information Collection
1	4	5	6	7
inspection of 10% of households provided with bins for waste segregation and/or home composting.				
for KPI 3.6				
Recovery of recyclable material and organic fraction in waste stream at transfer stations and landfill	Records of recyclable material being separated and recovered at transfer stations and landfill, maintained in Register. On the spot observation of recyclable material being separated and recovered at transfer stations and landfill	Records maintained in Transfer stations and landfill	Maintaining of Registered Visual inspection	Every day
for KPI 4.1				
Actual collection of SWM fee is increased year on year towards a goal of 90%.	Approved monthly/quarterly financial report submitted to the ministry and SWMTSC	Revenue Section	Filing of the monthly/quarterly financial report	monthly/quarterly
for KPI 4.2				
Year on year increase in the average annual	Approved monthly/quarterly financial report submitted to the ministry and SWMTSC	Revenue Section	Filing of the monthly/quarterly financial report	monthly/quarterly

Verifiable indicator	Monitoring Plan			
	Means of Verification	**Sources of Information**	**Method of Data Collection**	**Frequency of Information Collection**
1	**4**	**5**	**6**	**7**
SWM fee per customer served.				
for KPI 4.3				
# of staff years per year dedicated to SWM divided by total number of customers who paid SWM specific fees during the most recent billing period.	Calculation with reference to annual SWM Fee collected and no of staff deputed at the SWM works	Revenue Section Environment and SWM Section/Unit	financial report and Staff ToR	Annually

Critical risks and possible measures to mitigation

RISK	CONTEXT / MITIGATIONS	RISK RATING
Willingness of municipal authorities to charge for SWM services and to gradually increase the charges as per financing plan	• Project requires upfront commitment by municipalities to the project's cost recovery principles. The commitment is expressed through a letter of commitment signed by the head of the municipality government. • Municipal govt resolution on tariffs required as part of the TPIA • OBA matching grant mechanism will create incentives to gradually adjust SWM fees	Substantial
Affordability and willingness to pay by households	• SWM charges to be set at levels established from WTP and ATP assessment (applied tariffs are affordable on the basis that tariffs should not exceed 1-2% of the monthly average income for households in the lowest income deciles). • Existing cross-subsidy mechanism between high waste generators – i.e. commercial establishments and households is maintained. • WTP expected to increase with improving service quality and perceived accountability and transparency in the management of the fees charged for SWM services, as per the project design. • Support to implement IEC campaign to raise awareness of the need to pay for SWM services and to keep the city clean. • Inclusion of recycling revenues in the project financial	Modest
Failure to achieve targeted SWM collection ratios	• Subsidy payment upon verified revenue collected will create stronger incentives for municipalities to increase collection. • Technical scorecard targets relating to collection rates. • New SWM ACT 201 fully empowers municipalities to deal with non- paying waste generators. • Implementation support to be provided through the project to help municipalities establish efficient SWM billing and collection systems.	High
Lack of elected local representatives	• Stakeholder assessment and engagement strategy prepared. • A wide-ranging consultation and awareness-raising effort will be undertaken by the participating municipalities. • Build on lessons learned from existing community oriented projects which have empowered communities to demand accountability and better governance (e.g. TLO experience).	High

| Low capacity at the municipality level | • Project requires that small municipalities (<50,000 people) with limited capacity must be part of the UGDP/ETP in order to benefit from a broader municipal development initiative;
• Project targets only municipalities with a basic SWM system in place.
• Project includes an implementation support component to build human capacity and systems for SWM within each municipality
• Project also benefits from parallel capacity building initiatives at the central level (ADB capacity building TA) and at the municipal level (UGDP/ETP).
• OBA subsidies to be channeled through the TDF which has sufficient technical and fiduciary capacities and will provide additional oversight. Further, use of a Tripartite Project Implementation Agreement between TDF, Implementing Municipalities and SWMTSC will enhance accountability during project implementation, and will ensure that the central sector agency (SWMTSC) plays its technical assistance role. | High |
| Sustainability after the project | • Project requires upfront commitment of municipalities to increasing SWM fees (and hence household contribution to the cost of properly managing solid waste) to ensure the financial viability of providing the services and enable their expansion over time to keep pace with the growing urban population.
• Project is expected to put solid waste operations on a reasonable financial footing at the end of four years, thereby strengthening the municipality's ability to commit resources thereafter to cover the costs that may be needed going forward, without compromising other municipal services.
• Project includes an implementation support component to build human capacity and systems for SWM within each municipality. | Modest |

Risk ratings: High (>75%), Substantial (50-75%), Modest (25-50%), Low/Negligible (<25%)

Source: Project appraisal Commitment Document, Output-Based Aid for Municipal Solid Waste Management in Nepal, December 17, 2012.

Format for Recording Complaints and its status
(Landfill / Street Cleaning Issues)

Report for the month of (……………..) Year (………….)

Date	Originator of the complaint	Description of Complaints	Location / Area	Possible impact	Expected Solution date	Expected Solution	Progress	Comment

Verified by: Section Head / Landfill Supervisor : _____

Date: _____

**Format for Recording Suggestions
(SWM Issues)**

Report for the month of (……………..) Year (………….)

Date	Name Address and Contact No.	Description of Suggestion	Action Taken	Comments / Remarks

Verified by: Section Head / Landfill Supervisor : _____
Date: _____

Vehicle Log Book

Vehicle no.:									**TYPE OF VEHICLE**	
Driver's Name:					**MONTH OF ( ) YEAR (20….)**					

DATE	DRIVER's NAME	KILOMETER		TIME		TOTAL KM	DESCRIPTION		Supervisor's SIGNATURE
		START	END	OUT	IN		DESTINATION	PURPOSE	

Vehicles Fuel and Lubrication Expenses Record

Vehicle no.:			MONTH OF ( ) YEAR	Type of Vehicle	
Driver's Name:			**(20….)**	**Type of Fuel**	

DATE	FILLING AREA	MILAGE KM	QUANTITY LITERS		AVERAGE COST PER LITER		TOTAL COST IN RS.		TOTAL COST IN RS.	CERTIFIED BY
			FUEL	OIL	FUEL	OIL	FUEL	OIL		
		TOTAL								

Verified by: Section Head / Transport Supervisor:_____

Date: _____

Vehicle Maintenance and Repair Expenses

Vehicle no.:			
Driver's Name:			

MONTH OF (   ) YEAR (20…..)

TYPE OF VEHICLE

S.N.	DATE	DRIVER NAME	DESCRIPTION: (Service /Parts)	COST		CERTIFED BY
				Unit Cost	Total Cost	
1						
3						
4						
5						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
	TOTAL					

Verified by: Section Head / Transport Supervisor : _____

Date: _____

Reporting format for Sector-wise Solid Waste Collection

| Name of the Collection Sector | |
| Address | |

| Total No. of days of waste collected | ……. days |

Date	Vehicle No.	Collection Time		Location	Road Disturbance If any		Waste Collected in		Driver's Signature
		Out	Returned		Yes	No	(Tons)	(m^3)	

Verified by: Section Head / Transport Supervisor : _____

Date: _____

Monthly Report format for Solid Waste Collection at Landfill Facility

Report for the month of (……………..) Year (………….)

Name of the Landfill Facility	
Address	
Total No. of days Open	……. days

Days	Total weight accepted (tons)	Total Volume accepted (m³)	Total SW weight segregated for disposal (tons)	Total SW volume segregated for disposal (tons)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
Total				

Format for Daily Recording of Waste Segregation
Report for the month of (……………..) Year (………….)

Name of the Landfill Facility	
Address	

Name of the Waste Segregator: …………………………….

Date	Waste Received		Waste Segregation			Signature of the Recorder
	(In tons)	(In m^3)	Materials	Unit	Weight in tons	
			1. Paper			
			2. Cardboard			
			3. Plastic			
			4. Wood			
			5. Ferrous Metals			
			6. Non-Ferrous Metals			
			7. Tires			
			8. Used Oil			
			9. Batteries			
			10. Electronics			
			11. Computers			
			12. Light Bulbs			
			13. Other waste			
			14. Waste for disposal			
			TOTAL WASTE			

Verified by: Section Head / Landfill Supervisor : _____

Date: _____

Format for Monthly Recording of Recyclables
Report for the month of (……………..) Year (………….)

Name of the Landfill Facility	
Address	

S. N.	recyclable waste	Quantity in Tons												Total Annual
		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
1.	Organics													
2.	Cardboard													
3.	Waxed Cardboard													
4.	Office Paper													
5.	Bottles & Cans													
6.	Fluorescent Lamps													
7.	Pallets													
8.	Hard Plastics													
9.	Plastic Films													
10.	Other recyclable waste													
11.	Total Recyclables													
12.	Tot. Waste Received													
13.	Non- recyclables (Row 12 - 11)													
14.	Recycling Rate (%) (Row 11/ 12) x 100													

Verified by: Section Head / Landfill Supervisor : _____

Date: _____

Solid waste Budget

Required Data/information (Rs.'000)

Particular	2069/70			2070/71			2071/72		
	Budget	Expenditure	%	Budget	Expenditure	%	Budget	Expenditure	%
Capital Budget									
Recurrent Budget									
Solid Waste Budget									
Total Budget									
Total Revenue									
Revenue from Solid Waste Collection									
Volume of Collected Waste									
Area coverage									
HH coverage									
Institutional Coverage									

Head-wise Revenue collection of Solid Waste

(estimated versus actual in Rs. '000)

Particular	2069/70			2070/71			2071/72		
	Budget	Expenditure	%	Budget	Expenditure	%	Budget	Expenditure	%
Households									
Hotels									
Restaurants									
Hospitals/clinic									
Shops									
Schools/College									
NGOs									
Government Offices									
Private Offices									
Others									

Head-wise Budget and Expenditure of Solid Waste

Particular	2069/70			2070/71			2071/72		
	Budget	Expenditure	%	Budget	Expenditure	%	Budget	Expenditure	%
Salary/wage									
Allowance									
Dress									
Safety Tools									
Collection tools									
Machinery/equipment									
Materials									
Fuel/lubricants									
R & M (vehicle)									
R & M (equipment)									
Other									

Solid Waste Rate

Particular	2069/70			2070/71			2071/72		
	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Households									
Hotels									
Restaurants									
Hospitals/clinic									
Shops									
Schools/College									
NGOs									
Government Offices									
Private Offices									
Others									

Solid Waste Rate (Volume of waste)

Particular	2069/70			2070/71			2071/72		
	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Collection									
Transfer									
Landfill									
Segregated recycle waste									
Compost									
Revenue Generation (Rs. '000)									
Transfer									
Landfill									
Segregated recycle waste									
Compost									
Expenditure (Rs. '000)									
Collection									
Transfer									
Landfill									
Segregated recycle waste									
Compost									

(Monthly / Quarterly)
Reporting Format for Status of OB-A SWM-SIP Implementation:

Municipality: ………………………………………..
Report of the progress: From …………………. to ……………………. 2015

1. SWM Strategy and Action Plan:

A. Formation of SWM Subject committee

Year 1:

S.N.	Activities	Status/Result	Remarks
1.	Preparation of ToR of Municipal SWM Subject Committee and approval from Executive Officer (EO)		
2.	Nomination of committee members		
3.	Meetings of SWM committee		

B. Establishment of SWM Section/Unit:

S.N.	Activities	Status/Result		Remarks
		Yes	No	
1.	Establishment of SWM Section/Unit			
2.	Preparation of Job description of concerned municipal staffs			
3.	Received no objection on Job description from SWMTSC			
4.	Staff allocated according to SWM-SIP			
5.	Preparation of Occupational Health & Safety (OH&S) plan for SWM related activity			
6.	Status of OH&S related activity			
	6.1	Insurance			
	6.2	Regular health check up			
	6.3	Arrangements of facility to reduce risks & hazard			
	6.4	Use of protective equipments			

Year 2-4:

S.N.	Activities	Status/Result	Remarks
1.	SWMOC committee meeting and its minutes		
2.	Nomination of vacant committee members, if any		

C. SWM-SIP review and update:

Year 2-4:

S.N.	Activities	Status/Result	Remarks
1.	Amendment in SWM-SIP (service delivery approaches) as per SWM committee decisions		
2.	Review of amended SWM-SIP from SWMTSC and approval		

2.   Performance Monitoring:
        Communication & Complaint Handling

S.N.	Activities	Status	
	Trainings & Awareness	Nos. of waste management related awareness campaign organized by municipality annually	
		Nos. of waste recovery training/workshop organized by municipality annually.	
	Establishment of complain registration mechanism	Dedicated unit & accountable person for complain handling	
		Dissemination of information to stakeholder on complain handling	
		Recording arrangement for complain registration and remedial action taken	
	Reporting arrangement to CEO		

A. Source segregation and waste minimization:

S.N.	Activities	Status/Result	Remarks
	Nos. of segregation bucket/bins distributed		
2.	Source segregation of waste (at least into two/three categories)		
3.	Total HH practicing source segregation (in %ge)		

4.	Nos. of compost bins distributed to households:
	    i) Home Compost Bin
	    ii) Vermi Kit		

5.	Total HH practicing composting at HH level (in %ge)		

B. Collection and transportation of solid waste:

S.N.	Activities	Status			
	Existence of 'Waste collection routes and schedules'				
	Dissemination of information on 'Waste collection route & schedule' to HHs				
1.	Waste Collection system adopted	Door to Door		Block	Kerb Side
2.	Frequency of waste collection	Core Urban	Semi Urban	Residential Area	Fringe Area
4.	Provision of separate collection of segregated waste	2 types collected separately		3 types collected separately	
	Nos. of waste collection points/centers and location				
4.	Number of Wards served with waste collection services				
	Nos. HHs served with waste collection services				
	Frequency of cleaning/sweeping public places including main streets.				
5.	Nos. of waste collection/transportation vehicles and types	Tractors	Trippers / Trucks	Compactors	Others
6.	Precaution against spillage & nuisance during collection & transportation	Cleaning collection points with phenol/lime powder	Proper covering		Others
7.	Status of vehicle logbook maintenance				
8.	Vehicle & equipment maintenance	Routine Maintenance		Maintenance as per requirement	
9.	Quantity of waste collected/day				
	Customer Satisfaction (in %ge)	Very Satisfied	Reasonably Satisfied		Not Satisfied
10.	Municipal staffs engaged in waste collection and transportation	Supervisor	Driver	Sweeper	Collector

C. Waste processing and treatment:

S.N.	Activities	Status			
1	Available waste recovery options before disposal	Segregation	Composting	Recyclable	Others
1.1	Quantity of waste recovered/day	Composting		Recyclable	Others
1.2	Availability of recyclables storage facility				
2	Percentage of diversion of waste from landfill	(1-total landfilled/total generation)*100			
10.4	Employees engaged in waste recovery	Supervisor	Operator	Separator	Others
10.5	Environmental controls at recovery center	Fencing	Leachate	Smell	Vector, Vermin & Bird

D. Operation and Maintenance of Landfill site:

S.N.	Activities	Status			
4.	Total quantity of waste landfilled/day				
5.	Landfill facility features	Gate & fencing			
		Waste inspection & recording			
		Office building			
		Leachate treatment			
		Gas vent			
		Base lining			
		Utilities (WS/Electricity/Phone)			
		Landfill equipment (Tripper/Dozer/loader)			
		Others			
		On site waste recovery facility			
6.	Nos. of employees engaged in landfill site	Er/Jr.Er	Supervisor	Drivers/ Operator	Others

S.N.		Status			
9.	Compaction arrangement				
11.	Environmental controls	Regular covering			
		Leachate treatment			
		Gas vent			
		Vector/vermin control			
		Bird control			
		Odor control			
		Fire extinguisher			
		Vehicle washing			
12.	On-site segregation				
13.	Waste burning at disposal				
14.	Existence of Operation Manual and consistent operation of landfill				
	Reporting arrangement				

E. Fiduciary Monitoring System

S.N.	Activities	Status			
4.	Mode of Waste Management	Municipality	Private	Community	Others
5.	Revenue collection & management	Existence of approved SWM tariff			
		Collection System			
		Billing Arrangement			
6.	Expenditure Management& Procurement	Council approved budget title for SWM related expenditures			
		Records of expenditures in fuel for SWM			
		Records of expenditures in employees for SWM			
		Records of expenditures in maintenance for SWM			
		Records of expenditures in capital investment for SWM			
		Existence of annual procurement plan related to SWM			

F. Financial

S.N.	Activities	Status
4.	SWM fee collection Efficiency	
	Annual Increase in SWM fee Charged	

	Labor Efficiency	

Prepared by: Section Head : _____   Date: _____