WEDC

Success and sustainability indicators
for primary collection of solid waste

Success and sustainability indicators – why do we need them?

This list of indicators has been developed in an attempt to assist the field worker in assessing the performance of primary solid waste collection schemes. It consists of a list of indicators that draw attention to the various aspects of each project which contribute in some way to the project's success or sustainability. It is intended that they be used as a check list against which to perform a detailed analysis of the project and provide a way of comparing the success and sustainability of different schemes.

The indicators are arranged in lists according to the group whose perspective is sought on each issue. If the indicators are considered from the perspective of one stakeholder only, they may disadvantage another group so it is important that the views of all major stakeholders in each scheme are considered carefully. This will also help each of the groups of major stakeholders to evaluate the present scheme and develop ways to improve it.

It is important to realise that these indicators are country and area specific and priorities of certain indicators may be stronger in some places and at some times than others.

Primary collection schemes

In most low-income countries door-to-door collection of solid waste is not provided by the municipality. It is the householders responsibility to convey waste from the point of generation to transfer points located throughout residential areas. The waste is then collected from these points by the municipality. However, the municipality is frequently under-staffed and under-financed resulting in a poor service. Transfer points are often sparse, resulting in the build up of waste in local areas, on streets and open plots presenting a hazard to the local residents. In many cities in low-income countries primary solid waste collection schemes have been developed by NGOs, community groups, micro-contractors and local politicians to address this problem. They provide door-to-door collection of waste and convey it to the nearest municipal transfer point. Typically a service charge is collected from the users of this service.

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Users' perspective

Indicator	Description	Means to measure
Area improvement	Is the area cleaner than before the scheme was in place?	1. Brief questionnaire to users. 2. Number of waste piles before and after the scheme.
Convenience	Is the scheme convenient to use? i.e. times of collection, placement of waste for collection.	1. Brief questionnaire to users. 2. Study of responsibilities of users regarding scheme.
Affordability	Is the scheme affordable to all? Does the service represent good value for money?	1. Questionnaire to users. 2. How many people actually pay for the service on a regular basis? 3. Survey of income levels of community.
Frequency and reliability	Is the service of reasonable frequency and reliability?	1. Brief survey of users regarding satisfaction with frequency and reliability of service. 2. Number of missing days or breakdowns when service was not available. 3. Survey of times at which waste is collected from house holders (say over 1 month).
Extra waste	Is there a system available to take care of extra waste generated during festivals etc.?	1. Brief questionnaire to users if this service is provided and how well it is provided. 2. Check with the service provider. 3. Survey of un-collected piles of extra waste in the area.
Complaints system	Is there a service to remove construction debris? Is there an efficient complaints procedure in place? What is the response system and are people prepared to complain if they feel it is necessary?	1. Research complaints and response systems. 2. Ask users whether they know how to make complaints and whether they would/do complain.
Sustainability	Is the scheme sustainable?	1. Survey the payments/costs of the scheme. 2. Survey of any problems experienced so far, can these be overcome?

Municipality's perspective

Indicator	Description	Means to measure
Area improvement	Is the area cleaner than before the scheme was in place?	1. Brief questionnaire to users. 2. Number of waste piles before and after the scheme.
Municipal support	How much support does the municipality have to give the scheme? Do the results represent good value from these inputs?	1. Questionnaire to municipality on quantity and nature of inputs and value of results.
Impact on municipal services	Are municipal workers diverted from their proper jobs? Does the scheme take pressure off the municipal services? Has the scheme assisted the municipality to increase its capacity in solid waste activities?	1. Survey of municipal workers on activities done in their work time. 2. Survey of effects on secondary collection stage (Is there enhanced pressure to ensure this service is provided frequently? Is there more waste for transportation?). 3. Survey of any new developments that have taken place since the inception of the scheme. 4. Questionnaire to municipality regarding capacity building.
Staff satisfaction	Are municipal staff satisfied with the scheme?	1. Question municipal staff regarding satisfaction. 2. Monitor complaints about the scheme from municipal staff.
Complaints	Has the scheme resulted in a reduction in the number of complaints received by the municipality regarding waste collection?	1. Survey of number, intensity and nature of complaints.

NGO's perspective

In this case considering an NGO who is involved in promoting primary solid waste collection schemes, may include supplying equipment, micro-credit etc.

Indicator	Description	Means to measure
Replicability	Does the scheme provide a replicable model for further projects?	1. Brief questionnaire to NGO regarding replicability of the scheme. 2. Survey of pertinent aspects of the scheme and the scheme area that affect replicability.
Sustainability	Will the scheme be sustained once all assistance from the NGO is withdrawn? Is there a well-defined withdrawal plan?	1. Survey the payments/costs of the scheme. 2. Survey of any problems experienced so far, can these be overcome? 3. Survey of the amount and nature of support presently supplied by the NGO. 4. Investigate the plans for support withdrawal.
Area improvement	Is the area cleaner than before the scheme was in place?	1. Brief questionnaire to users. 2. Number of waste piles before and after the scheme.
Fulfillment of specific aims	Has the scheme fulfilled other aims, for example, creation of livelihoods, improvement in health etc?	1. Questionnaire to NGO regarding aims of scheme. 2. Surveys based on evaluating achievement of aims.

Community based organisation's (CBO) perspective

In this case, considering a CBO who acts as initiator to the inception of primary collection scheme.

Indicator	Description	Means to measure
User satisfaction	Are the users satisfied with the scheme?	1. Survey of number, intensity and nature of complaints.
Area improvement	Is the area cleaner than before the scheme was in place?	1. Brief questionnaire to users. 2. Number of waste piles before and after the scheme.
Sustainability	Will the scheme be sustained?	1. Survey the payments/costs of the scheme. 2. Survey of any problems experienced so far, can these be overcome?
Recognition	Do the users recognize that the system is in place due to the efforts of the CBO?	1. Questionnaire to users to see if they believe the CBO plays an essential role in the successful scheme.

Local politician's perspective

Indicator	Description	Means to measure
Area improvement	Is the area cleaner than before the scheme was in place?	1. Brief questionnaire to users. 2. Number of waste piles before and after the scheme.
Replicability	Does the scheme provide a replicable model for further projects?	1. Brief questionnaire to operator regarding replicability of the scheme. 2. Survey of pertinent aspects of the scheme and the scheme area that affect replicability.
Recognition	Do the users recognize that the system is in place due to the efforts of the local politicians?	1. Questionnaire to users to see if they believe the local politician plays an essential role in the successful scheme. 2. Questionnaire to users to see if the project has increased the popularity of the local politician.

Workers' perspective

Indicator	Description	Means to Measure
Job satisfaction	Are they satisfied with the job? Would they like to continue to do it?	1. Questionnaire to workers. 2. Records of resignations from workers.
Remuneration	Are they satisfied with the payment that they receive?	1. Questionnaire to workers.
Problems	What problems do they face in their job?	1. Questionnaire to workers. 2. Survey of working practises/problems encountered.
Perks	What extra perks do they receive?	1. Questionnaire to workers. 2. Survey of working practises.
Sustainability	Do they feel that the scheme is sustainable in the long term?	1. Questionnaire to workers.

Small contractor's perspective

In this case, considering small contractors who use their entrepreneurial initiative to undertake to provide a primary collection scheme.

| Indicator	Description	Means to measure
Sustainability	Will the scheme be sustained?	1. Survey the payments/costs of the scheme. 2. Survey of any problems experienced so far, can these be overcome?
Sustainable livelihood	Has the scheme resulted in the creation of a sustainable livelihood for the small contractor?	1. Measure income of small contractor compared to before the scheme.
User satisfaction	Does the small contractor receive lots of complaints from the users of the service?	1. Survey of number, intensity and nature of complaints.
Recognition	Do the users recognise that the system is in place due to the efforts of the small contractors?	1. Questionnaire to users to see if they believe the small contractors play an essential role in the successful scheme.

Sweepers' perspective

In this case, considering municipally employed sweepers who also undertake primary collection as part of a supplementary scheme.

Indicator	Description	Means to measure
Increased income	Has the scheme resulted in an increased income for the sweeper?	1. Assess the sweepers income before and after the inception of the project.
Recognition	Do the users of the scheme realise that it is in place due to the efforts of the sweepers? Has this increased their respect for sweepers?	1. Questionnaire to users on whether they know that the scheme is in place due to the efforts of sweepers and whether this has changed their opinion of sweepers.
Problems with the municipality	Has participation in the scheme resulted in problems between the sweeper and the municipality?	1. Question sweepers and their municipal supervisors.

Guidelines for using these indicators

These indicators provide a checklist for the field worker who is assessing primary collection schemes. However, the final choice of methods and other details are left to the field workers who must choose it on the basis of local knowledge. In some cases it may be appropriate to develop questionnaires or interviews with the various stakeholders. In this case they can be developed around the indicator list. In other circumstances it may be possible to formulate focus group meetings or conduct work surveys. In each case it is intended that the indicators can provide guidance on the main issues that must be addressed.
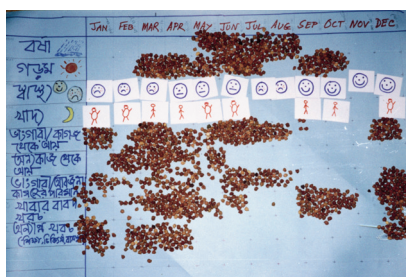
Other considerations

- **Size of sample group.** The groups used to gather information must be of a representative size to the total population involved in the scheme. It may be aimed to find out the views of a sample group which constitute 5% of the total population but the group should not consist of less than 30 people.

- **Selection of sample group.** The sample group should be representative of the population and be gathered from a cross-section of socio-economic groups present in the area. The indicators help to ensure that each main group of stakeholders is considered but each group will have many sub-sections. For example, the users may be from both high income areas and low income areas. It is also important to think about how the individual participants are chosen. For example, in many cases the easiest way to find willing participants is with the help of the organisation who runs the primary collection scheme. However, the people chosen will, most likely, be previously known to the organisation and hence be more likely to know about and support the scheme.

- **The research method used.** There are many different methods that can be used to gather information such as independent interviews, group discussion, focus groups, work surveys etc. The method used should be selected carefully by the field worker depending on the local situation, the time and resources available etc. Although questionnaires/interviews have been suggested as the 'means to measure' for many of these indicators they do not always yield the most accurate results. Often more meaningful data can be gathered by group discussion, focus groups etc. In each case special consideration must be given to the wording of questions etc. The 'description' of each indicator is not intended to be a question for use in interview but merely an aid for the reader.

- **Qualitative information.** The above information must be triangulated by qualitative surveys, open ended discussions, observations etc. in order to cross check the findings and reach definite conclusions.

A Working Document

The original indicators were tested in assessing a primary collection scheme in operation in Khulna, Bangladesh. This resulted in a few changes to the indicator list. In this way it is likely that the indicators can be changed and improved by further use and adaptation. Each primary collection scheme will be different and different aspects will be crucial for the success and sustainability of the project. It is intended that the field worker will adapt the indicators as a result of the circumstances and experience.

These indicators were developed by the project team as part of the Knowledge and Research (KAR) research project *Capacity Building for Primary Collection of Solid Waste* and was field tested in Khulna, Bangladesh.

The research project aims to build capacities of government and non-government organisations in the primary collection of solid waste. This note is written for organisations and individuals who in one way or another support the development of primary collection systems in low-income countries.
For a full document plan contact WEDC.

Other titles in this series include:

■ **The role of micro-enterprises in solid waste management**
■ **Vehicles for primary collection of solid waste**
■ **The role of community based organisations (CBOs) in solid waste management**
■ **Recognising livelihoods from urban waste**
■ **Recognising gender issues in the management of urban waste**

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SYNTHESIS NOTE

No.6