

Monitoring and Evaluation Plan Clean Energy for Cooking Programme



LPG use in the camp, smoke-free un-blackened surfaces



Overview

This document provides guidance on the monitoring and evaluation activities to be carried out for the LPG programme across Cox's Bazar region. It provides detailed information on each M&E activity, lists of indicators and suggested resources required in each case.

Monitoring and evaluating 400 households is adequate to represent the entire target population.

This will cover approximately .025% of the target population under the M&E programme, which provides 95% confidence level with a population of 200,000HH.

Organisations may carry out their own M&E activities, however, it may also be possible to benefit from existing M&E activities which could reduce the need for separate M&E programs by each organisation. For those doing their own M&E, it is advised to use the same primary indicators listed below, and also, to share results for common reporting across all areas.

Organisations planning LPG distributions are requested to review this document and discuss with IOM/UNHCR/EETWG coordinator.

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- 1) Activities to monitor and evaluate
- 2) Outcomes / Objectives
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Area denuded of vegetation – to be restored following fuel distribution

I. Activities to be Monitored and Evaluated

- 1) Household needs, usage & feedback - Beneficiary Surveys
- 2) Delivery of Training & Distribution of Cooking Sets
- 3) Ongoing Supplier performance
- 4) Physical Measurement of household gas consumption (first 3 months)
- 5) Quantities of LPG used - frequency of refills
- 6) Safety – regular checks on LPG cooking sets across all areas

II. Outcomes / Objectives of Programme

- Prevention of deforestation and wildlife habitat
- Reduce risk of SGBV incidents related to firewood collection
- Improve health by dramatically reducing smoke inhalation
- Refugee have safe access to adequate fuel to cook their food without risks to their health or well-being
- Increases access to clean energy for local population
- Allows reforestation, habitat restoration and associated livelihoods activities to begin
- Empower women who would have less drudgery and greater time available for more productive and enjoyable activities
- Increase time available for education and livelihood development
- Lower risk of burns than open fires
- Improve cooperation with host communities
- Provide employment in the refilling, distribution and maintenance of fuel systems
- Increase local infrastructure for clean cooking with LPG

III. Indicators to prove outcomes have been achieved

Primary Indicators

- % of population who no longer use any firewood / % who cook with LPG only
- Reduction in time spent collecting fuel per month
- % reduction in missed meals due to shortage of cooking fuel
- % hh/total population provided with access to cooking with LPG
- Kgs of LPG used per household per month/year
- Time saved in cooking by using LPG instead of firewood

Secondary Indicators

Cooking fuel for overall population

- % hh/total population cooking with LPG
- % hh/total population cooking with firewood
- % hh/total population cooking with CRH
- % hh/total population cooking with biogas

Adoption and continued use of LPG

- # hh & % of population who received LPG cooking set
- % hh who received LPG cooking set who continue to use it to cook all meals
- % HH who try to exchange or sell refills/cooking systems

Quantity of Fuel used (can select multiple fuels – biogas users will select at least one other)

- Kg/hh/day – LPG
- Kg/hh/day - firewood
- Kg/hh/day – CRH

Cooking fuels used in each household (can select multiple fuels)

- % of total energy needs through cooking with LPG
- % of total energy needs through cooking with Firewood
- % of total energy needs through cooking with CRH
- % of total energy needs through cooking with Biogas

Quantity of fuel received per day (kg/hh/day) (distributed by agency/NGO to hh)

- LPG
- Firewood
- CRH
- Biogas

Expenditure per day /month (Taka)

- Firewood
- LPG
- CRH

Firewood collections

- Average number of trips per week to collect firewood
- Average time spent per trip
- Average amount of wood collected per trip (kg estimate or how many days it lasts)

Distribution information and process

- Communication effectiveness on distribution date & place
- Average time taken to travel from household to depot
- Average time taken to exchange cylinder at depot
- Issues with collection and transportation of fuel
- Numbers of transactions per depot/day

Safety & Satisfaction

- % families who experienced gas leak
- % families express satisfaction with using LPG

Self-evident outcomes which do not require indicators/cannot be measured – once families are provided with adequate LPG

- Improvements in health (fewer respiratory illnesses cannot be measured or directly attributed to clean cooking – too many other possible factors)
- Lower risk of assault / reduced SGBV issues reported (too many possible factors which affect SGBV – proxy indicator : if people are no longer collecting firewood, then there is reduced risk)
- Fuel for cooking food is no longer a need for refugees

IV. Information required for indicators & actions to obtain this information

Information required:

The information needed to demonstrate or calculate indicators will be obtained through voucher systems and surveys to be carried out using tablets, or on paper, by staff/workers/volunteers. “Kobo” is the software system used to set up and process the information collected from the tablets.

Survey size

Estimate numbers of households which will be surveyed in your M&E programme. Use this on-line tool to estimate the required survey size for your target population... <https://www.surveysystem.com/sscalc.htm>

To cover the entire population of the camp, a sample size of only 400HH is required so that you may not need to carry out detailed M&E for your project. You could use the overall M&E programme from IOM or UNHCR.

Workers/enumerators

- Identify potential enumerators, perform rapid assessment of their ability to carry out the work.
- Provide selected workers with training for M&E activities.
- Arrange schedule for training & M&E work.
- Sign contract with workers/volunteers.
- Coordinate payments to enumerators/inspectors. – cash for work.

Activity 1: Household needs, usage & feedback - Beneficiary Surveys

Note : UNHCR has already carried out this baseline survey using this questionnaire for 846 households (July 2018). This will be adequate to represent the entire population.

UNHCR will use this questionnaire which other organisations are also welcome to use. The survey is in .xls format & used with Kobo so that enumerators carry out the surveys using tablets.

It is intended to complete a full survey at baseline, after 3 refills and each 6 months thereafter up to 18 months.

Actions & Resources

- 1) Identify how many households to be surveyed and time period for surveys to be done. A well trained enumerator can complete 12 surveys per day, therefore it can be calculated how many enumerators are required. (e.g. 100 households to be done in 5 days : 20 per day (100/5) : 2 enumerators required – 2 enumerators x 12 surveys per day each = 24 surveys per day)
- 2) Appoint supervisor for enumerators. Train supervisor and enumerators on how to carry out the survey, arrange contract, provide transport and payment.

Households can be selected at random across the target population. Mid-line and end-line surveys will need to be carried out on the same household.

The following should be explained to enumerators:

Q. 2.4 on legal status: check “asylum seeker” Do not ask this question to the household.

Q 2.7 Collect the Family Counting Number (FCN) and Ration Card Number (RCN).

Activity 2: Delivery of Training & Distribution of Cooking Sets

Activities during the initial distribution

The objective of this activity is to evaluate the following:

1. If the trainings given at the depot have been properly delivered
2. How well people understand the training. It also will assess how well people report understanding of assembly of their cooking sets.
3. Effectiveness of distribution of cooking sets

Information required

- Numbers of households at each training session, numbers of sessions per depot per day
- Was the complete training module delivered?
- Ask those participating how well they understood the training
- Do people understand how to assemble stoves?
- Check all families are accurately recorded & receive their kits only after training is complete.
- Was the equipment provided the same model/manufacturer as per contract?
- Were there any issues at training or distribution? (delays, confusion about use of LPG or assembly of equipment, difficulties understanding next dates to collect refills, people coming to training session who are not on the list, families who were on the list did not attend training etc.)

Actions & Resources

For the pilot phase, there will be a higher level of M&E to identify any issues which need to be addressed to improve the program. After the first sets of trainings carried out by each supplier in each depot, M&E will be carried out at random across training sessions.

For the pilot, appoint one person per depot to attend the first three training sessions. This person should be familiar with the proposed content of the training sessions and the correct use of LPG equipment. This person may require some training before carrying out this work at the depots.

Once the training program cooking set distribution is improved following feedback from the first training sessions, one person would attend 2 sessions per week at random times at each depot.

Form:

<https://docs.google.com/forms/d/1E2qlxDJP4v1h6EiqPO0sQoVa02-PwyQi7z-mkXzQG5E/edit>

Post-distribution survey

Please use the following Post-distribution monitoring tool for families coming for a refill (D-questions only), which is being used by the sector: https://drive.google.com/open?id=1LazUG3-WrBHsTMASOA1ar6_RxkuMHA-h

[Activity 3: Ongoing Supplier performance](#)

Activities during the initial distribution

The objective of this activity is to evaluate the following:

1. Distribution and refills are done in an efficient and effective manner, where refugee HH are treated like customers
2. LPG suppliers are continuously operating according to the agreed standards.
3. The supplier has created a healthy working environment for its staff

Information required

- Weights of full cylinders are correct (empty cylinder weight +12kg)
- Depots maintain adequate cylinders to supply people each day to meet demand
- Time taken to exchange empty cylinder for full one, from time arrival to time of departure – time to wait to be served, time taken for transaction
- Staff working in depot are well treated & paid in line with recommended daily wage
- Staff are courteous to families getting refills
- Numbers of employees in depot, average time they work per day, average length of contract
- Deliveries per week/cylinders per day, issues with road access, deliveries
- Issues at depot between supplier & customer?

Actions & Resources

Appoint & train one volunteer per camp to record this information on each depot, one day per week. This work continues for as long as people are provided with LPG.

Form: https://docs.google.com/forms/d/1S4dZWGIX19xC-HFUp4yIEmfJCo3SR9YVSggBZyoduUs/viewform?edit_requested=true

Activity 4: Physical Measurement of household gas consumption (first 3 months)

Activities during the initial distribution

The objective of this activity is to evaluate the following:

1. Measure the exact gas consumption for each HH size which will provide us with the average needs of various family sizes.
2. Determine if there is a change in usage patterns during the first stage, i.e. if HH learn to be more efficient. After the initial 3 months, we can monitor through the voucher system how often families refill.

Information required

Weigh the LPG cylinder of selected families for seven consecutive days. This shall be repeated each month for the first 3 months. After the first 3 months, LPG usage shall be recorded using the voucher system and recorded electronically.

For the initial 3 months, this information will be recorded on paper forms. The enumerator shall be given a pre-populated form with the following information: RCN/FCN, Dates weighing will take place, HH size.

The enumerator will enter the weight of the cylinder each day on each form. The enumerator should attempt to visit the same family at the same time every day, in order to correctly measure the amount of gas that is consumed every day.

If appropriate, advise household that they are exceeding recommended use

- household size 1,2,3 to use 265g per day
- household size 4/5 to use 340g/day
- household size 6/7 to use 400g/day
- household size 8+ to use 460g/day

If they are using less, then they will have more gas left at the end of each 6 months cycle to use as they wish.

Actions & Resources

- 1) 400HH to be surveyed in total to cover entire population. 200HH to be surveyed on w1 and 200HH to be surveyed on w2, and then the same HH again on w5 & w6, and on w9 and w10. It is estimated that a well-trained enumerator can complete 10 measurements per day, therefore to cover 200 households per day, we need 20 enumerators split across agencies.
- 2) Identify enumerators and supervisor. Train supervisor and enumerators on how to conduct the measurements, arrange contract, provide transport and payment.
- 3) Provide each pair of enumerators with a weighing scales and wood/bamboo pole from which to hang the scale and cylinder. It is recommended that weighing scales can weigh up to 30kg with accuracy of 50g.
- 4) At the beginning of this weighting campaign, each enumerator will check that equipment is properly assembled & functions correctly for each HH. The enumerator will also look for gas leaks, on each extremity of the hose, once a month with soapy water & bubbles.



How to weight the cylinder: with a 1-m pole, a weighting scale and a bit of rope. Wedge the pole in the against a solid support (e.g. a wall) and push gently it to weight the cylinder until the cylinder do not touch the ground anymore.

Form:

https://docs.google.com/forms/d/1bgE2Oc3MbV7m3RYmXaCfDQhqipJNc80t_BSBi2mDHbQ/edit

Activity 5: Quantities of LPG used - frequency of refills (after initial 3 months)

The information required will be collected from the voucher system, recorded electronically & used to evaluate the following

- Numbers of households who have received cooking set across all areas
- Numbers of households who received cooking sets from each specific depot
- Records of which specific households have received cooking sets & from what depot
- Frequency of refills per family
(number of days between refills for each specific family) (used to identify problem cases & variance in frequency for given family/family size)
- Frequency of refills per family size (4 family size categories)
(average number of days between refills for each of the 4 family sizes) (kgs of LPG needed per year per family size)
- Numbers of refills in each depot each day
- Average numbers of refills per depot per day
- Average number of refills across all areas per day

A focal point should be appointed to collect and collate this information for reporting

Activity 6: Safety & continued use– regular checks on LPG cooking sets across all areas

Continued activities

The objective of this activity is to evaluate the following:

1. LPG is used by families in safe manner with minimal risk of fire
2. The LPG programme fulfils its goal of providing an alternative to fuelwood and CRH

Information required

- Safety checks for leaks – soapy water & bubbles, check hose connections, check for abrasions, kinks,
- Space between flammable materials and stoves
- Numbers of families who experience leaks or fires

Actions & Resources

Two volunteers per camp to be employed 5-days per week, full time to carry out house visits (~ 10 per day) to check equipment is functioning, there are no leaks and to complete brief questionnaire on household uses & perception of cooking with LPG.

Form: https://docs.google.com/forms/d/1K-h7hF63sEBfvYNah6_M4RPKUDj9hmD5J9X1IEfkxhw/edit

V. Sharing results & coordinated Reporting

While each organisation will want to report on its own activity & outcomes of its programme, it is intended also to report on the complete programme across all areas, involving all organisations who are involved.

A single report would be produced to reflect both the results over the entire population, in addition to potentially different results in specific areas. This overall report would highlight the areas in which each organisation works, numbers of households reached and the outcomes.

Since each organisation will use the same primary indicators, results will be easy to share and lessons learned easy to address.

This combined report would be compiled by the EETWG coordinator with support from the Shelter & Site Planning working group.