FRAME TOOLKIT

# FRamework for Assessing, Monitoring and Evaluating the environment in refugee-related operations

## Module V
## Environmental Indicator Framework


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# 1. INTRODUCTION

As UNHCR increasingly focused on environment-related impacts issues in refugee and returnee situations, a clear need emerged for a system through which it could adequately gauge the effectiveness of its environmental support programmes.

Particular issues identified included the need to:

- identify strengths and weaknesses in the formulation and implementation of its environmental programmes, and in particular how to respond to identified needs;
- obtain reliable data for identifying warning signs of deteriorating environmental conditions;
- promote sustainable environmental management practices;
- strengthen UNHCR's approach to helping government and local communities achieve sustainable management of local natural resources in refugee-affected areas; and
- assist refugees and local communities and national/local organisations to develop appropriate and relevant systems for monitoring and evaluation.

The need for a simple, yet comprehensive, system of monitoring and evaluation has been recognised by UNHCR operations in the field as well as at Headquarters, but has also been requested by many implementing partners.

In response, a series of environmental impact and performance indicators have been developed by UNHCR through trials in several refugee-hosting countries. These indicators are intended to provide the basis for systematic data gathering, analysis and evaluation in the field, which will, in turn, contribute to better performance management and coordination.

In a separate exercise, in 2006 UNHCR released a second edition of "Practical Guide to the Systematic use of Standards and Indicators in UNHCR Operations", which identified specific indicators for camp-based refugee situations, urban settings and re-integration operations. Included in this manual is an overarching environmental indicator – "Environmental Action Plan created/reviewed". All of the tools described in this Toolkit support the development, monitoring and evaluation of such action plans.

The indicator framework outlined in the following pages is a more comprehensive, overarching structure which recognises many important principles that UNHCR seeks to uphold, in that it supports:

- a rights-based approach;
- is intended towards improved mainstreaming of environmental issues;
- is a fully participatory process, requiring extensive dialogue and consultations; and
- supports livelihood recovery and strengthening.

Use of this framework or specific detailed indicators outlined below can be expected to enhance both planned and ongoing project and programme management. Ultimately, systematically collected indicators will enable UNHCR to report more convincingly to governments and donors both on project performance (efficiency) and programme impact (effectiveness).

# 2. OVERVIEW

Environmental concerns related to refugee influxes are increasingly becoming part of political agendas. The sudden arrival of large numbers of people in host countries and the lengthy periods that they are sometimes obliged to spend there, has given rise to concerns over socio-economic impacts and the capacity of local environments to withstand the increased pressures placed upon them. The occurrence of many refugee influxes in sensitive ecological zones is also the topic of much debate, with governments emphasising the loss of natural resources and threats to the welfare of local communities. Particular attention therefore needs to be given to monitoring local environmental conditions, where refugees are present, so that steps can be taken to ensure that environmental support work is carried out by the most effective means possible.

Since the mid-1990s, UNHCR has supported numerous environmental projects in Africa, Asia and Latin America. Of the many lessons learned from evaluations of these interventions[1], one of the most consistent has been the realisation that environmental monitoring and evaluation have been insufficient. This weakness in project management not only hinders the monitoring of individual projects, but also hampers UNHCR's ability to report credibly to governments and donors. For this reason, the environment-related indicators presented in this draft User Guide are proposed to fulfil monitoring needs.

## 2.1 WHAT IS THE ENVIRONMENT?

Environment can be defined as "a set of physical, chemical and biological aspects and social factors that impact, directly or indirectly, upon living things and human activities in the short and long term".[2]

Renewable natural resources in many developing countries have come under considerable pressure in recent decades. Increasing population pressure, including more focused grouping of people – and often livestock, is one of the main factors attributable to the rate of degradation and depletion of these resources and has been accelerated in proportion to increasing population pressures.

Refugee-related activities contribute to environmental change on a local, regional or global level. The World Commission on Environment and Development[3] defined sustainable development as development that 'meets the needs of the present generations without compromising the ability of future generations to meet their own needs'. It is important that UNHCR monitors the environmental impacts of operations associated refugees and returnees to ensure that the natural resource stocks for future generations are not jeopardised.

The indirect effects of environmental degradation often extend far into social, ecological, economical and socio-political areas of concern. For example, deforestation, desertification, soil erosion and salinisation impact significantly on food security and economic development in many countries/regions. For this reason, it is important that we monitor the effects of our operations to ensure that direct and indirect environmental impacts are controlled to the extent possible.

[1] Including the 1997-1998 TSEMPRAA — Towards Sustainable Environmental Management Practices in Refugee-Affected Areas – activity. More information can be found in (UNHCR, 1998) *Selected Lessons Learned – Refugee Operations and Environmental Management*. UNHCR, Geneva.
[2] Applied Environmental Geoscience Masters. 2000. University of Tubingen, Germany.
[3] World Commission on Environment and Development. (1987). *Our Common Future*. Oxford University Press.

## 2.2 TOWARDS IMPROVED MONITORING

This Handbook is designed to help field staff and managers working in refugee and related situations to apply a basic system of monitoring and evaluation to environment-related activities through the use of indicators.

**Box 1. What is an Indicator?**

An indicator is **a measurable sign of change towards the achievement of results.** Two levels are recognised:

1. "Impact Indicators", set at the objective level, are signs of behavioural change in, and impact on, beneficiaries and their welfare, systems, institutions or processes of concern to UNHCR; and
2. "Performance Indicators", set at the output level, are measures of performance towards the achievement of planned outputs that can be quantified and/or qualified and readily revisited within a foreseen timeframe. (UNHCR OMS, 2001[4])

The system promotes the use of selected indicators as its basis (Box 1). When monitored on a systematic basis, indicators can be useful project management and decision-making tools. In this Handbook, a series of performance and impact environmental indicators have been developed adhering to the four principles outlined in UNHCR's **Environmental Guidelines**[5] – an integrated approach; prevention before cure; local participation in decision-making and actions taken; and cost-effectiveness.

**Introducing a Score Card Methodology**

Having reviewed a large number of monitoring systems, including those based on diverse indicators, UNHCR has developed a specific template, based on a format known as "Score Cards". This Score Card system measures both impact and performance indicators and is categorised into sectoral activities commonly recognised by UNHCR.

Score Cards are a convenient and standard approach to data collection and analysis that will allow UNHCR to demonstrate strengths and weaknesses to itself as well as to partner organisations, governments, donors and others, and to identify areas requiring further input or attention. In this application, each Score Card is designed to assist with response, planning and implementation of UNHCR-supported environmental activities. Suggestions of monitoring procedures and methodologies for each Score Card are included to facilitate the assessment of project performances and impacts.

The collection and regular analysis of performance indicator data can give useful insight into trends in project results, mitigating factors and methods to improve performance. Analysis of impact indicator results can help in identifying positive and negative impacts of UNHCR programmes on the surrounding environment and beneficiaries' welfare. This environmental indicator framework can also help to identify impact and performance indicators while designing projects (see section 3.3 Choosing the Appropriate Indicators). Overall, through this analysis, UNHCR will be in a better position to maximise the benefits of its human and financial resources in the field.

Users are encouraged to use the monitoring capabilities of the Score Cards and maximise the benefits which can be gained from regular analysis of monitoring data and improved programme management. Assistance in trend analysis and data collection methodologies is

[4] UNHCR. (2001). *Project Planning in UNHCR – A practical guide on the use of objectives, outputs and indicators*. UNHCR Division of Operational Support, Geneva.
[5] UNHCR. (1996, 2005). *UNHCR Environmental Guidelines*. UNHCR Geneva.

available from UNHCR's Technical Support Section (TSS) upon request. Feedback on the use of this Handbook and its contents are most welcome.

## 2.3 INDICATORS ARE A DYNAMIC TOOL

The indicators presented in this Handbook include only very broad definitions of specific and targeted environmental interventions. Those who are responsible for measuring these indicators may need to modify the scope or focus of specific indicators, according to their operational context. In this way, the Score Card and indicator framework is a flexible tool which can be adapted and modified to meet environmental monitoring requirements in diverse situations.

It should be acknowledged that while some of the indicators presented in this Handbook have been tested and accepted as standards, others are still evolving and need further definition and field-testing. Feedback on this list is always welcome, along with suggestions for adding other indicators and revising those already developed.

## 2.4 WHO ARE THE END-USERS OF ENVIRONMENTAL INDICATORS?

Within UNHCR, the Score Card methodology is intended for three levels of users:

1. Field officers and other related personnel responsible for day-to-day execution and monitoring of environment projects;
2. Managers – Field-Office, Sub-Office and Branch Office levels – for whom Score Cards can: a) assist in the development and implementation of appropriate environment-related programmes and projects; and b) assist in the systematic collection of data for monitoring programme change; and
3. Headquarters staff interested in reviewing progress at individual camp/settlements and time series development of country programme performance.

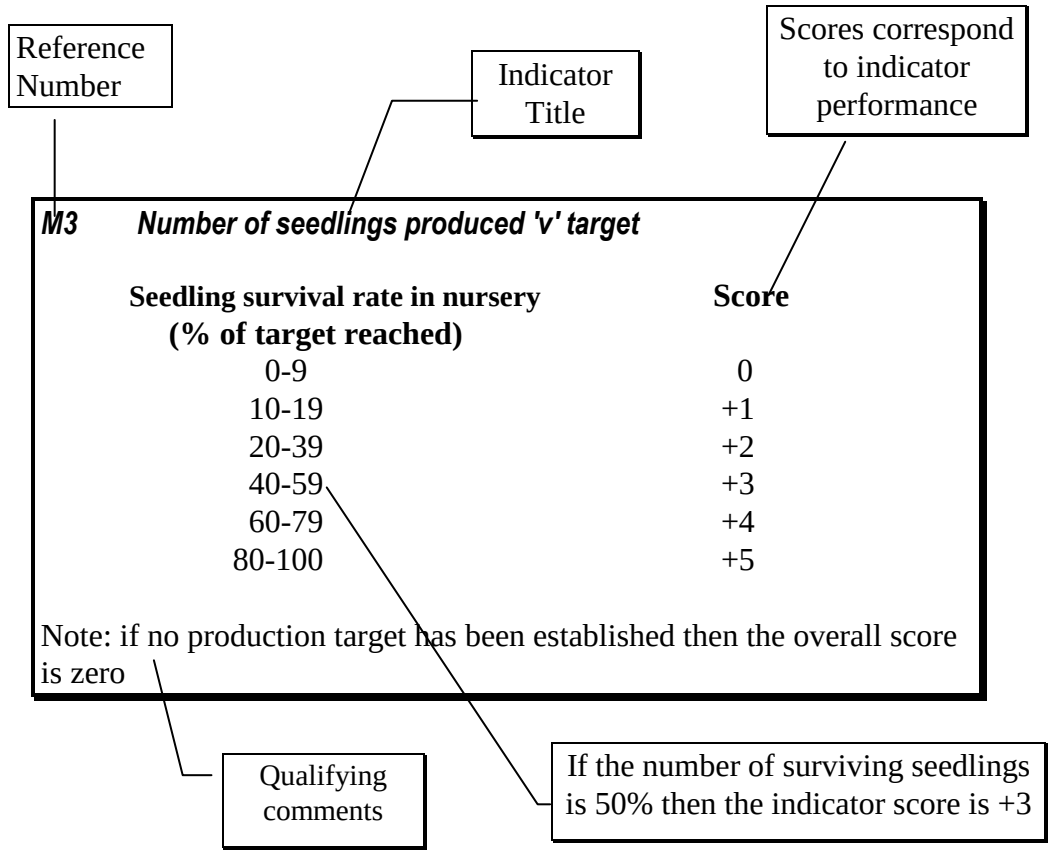
Likewise, the environmental monitoring programmes will benefit stakeholders through building capacities in monitoring procedures and systems, increased knowledge of environmental project performances and impacts, and improved targeting of environmental interventions. All those involved in the management of natural resources will benefit from the environmental indicators framework including host governments (central and local), their technical departments/agencies, local communities and Implementing Partners.

# 3. IMPLEMENTATION

## 3.1 HOW TO INTERPRET THE SCORE CARDS

Each indicator is described in detail through a Score Card, which is made up of several components:

| | |
|---|---|
| **Reference Number** | Corresponds to specific Score Cards: A1, A2, B1… |
| **Indicator Title** | Issue to be examined in the Score Card |
| **Indicator Type** | Impact 'v' Performance |
| **Rationale and Objectives** | Justification |
| **Guidelines** | Key issues to consider in connection with each indicator and some optional issues that might be taken into account during practical implementation |
| **Methods to be Applied** | Suggestions on recording and managing data |
| **Data Interpretation** | Suggested means of examining data |
| **Data Analysis** | Methodology for scoring each indicator – as shown in the example below |



Please note that **Score Cards can be measured through quantitative and qualitative means**. The example above, in which a score is assigned as a percentage of the target reached, is a typical example of a quantitative Score Card. Qualitative Score Cards are normally measured through a series of yes/no questions in which each answer are assigned a score. An example of a qualitative Score Card is shown below.

***G2 Erosion resulting from Camps (development and use)***

| | | **Score** |
|---|---|---|
| Have areas prone to soil erosion been identified? | Yes (+1) | No (0) |
| Has a drainage pattern for the whole camp been established? | Yes (+1) | No (0) |
| Has a drainage network been constructed? | Yes (+1) | No (0) |
| Are gullies increasing over time? | Yes (0) | No (+1) |
| Have measures to mitigate erosion been developed? | Yes (+1) | No (0) |
| Have measures to mitigate erosion been implemented? | Yes (+1) | No (0) |

**Definition of Key Environmental Terms**

Given the differences in climate, natural resources and socio-political factors from one region to another, the definition of key environmental terms can differ greatly between locations. For example, the definition of "vegetation cover" can differ substantially between tropical and arid conditions. For this reason, Environmental Co-ordinators/ Focal Points should define basic concepts as they see appropriate for each location while adhering to two key concepts:

- maintain one single definition for each location, throughout each Score Card data collection period; and
- use the same set of definitions when comparisons are made over time.

## 3.2 DIFFERENT TYPES OF INDICATORS

### 3.2.1 Core Indicators

While the environment-related indicators presented in this guide cover a variety of issues and UNHCR sectors, there are a number of recurring and key, priority issues which are central to UNHCR's environmental programmes. These key issues are designated as "Core Indicators" – see Table 1 (Core Indicators) – and should be measured in every environmental activity supported by UNHCR.

## Table 1 - Core Indicators

| Sector | Reference Number | Indicator Name | Page Number |
|---|---|---|---|
| Food | A1 | Energy saving cooking habits practised | 19 |
| Domestic Needs | C4 | Increase in families consistently using fuel-saving devices and practices | 30 |
| Shelter | G3 | Increased use of environmentally-friendly construction technologies | 43 |
| Education | I2 | Improved general environmental awareness due to informal environmental education projects | 50 |
| Crop Production | J1 | Sustainable agricultural activities practised | 55 |
| Forestry | M1 | Change in vegetation cover | 65 |
| Forestry | M2 | Area of degraded land | 66 |
| Forestry | M3 | Number of seedlings produced 'v' target | 67 |
| Forestry | M5 | Number of surviving seedlings at end of first growing season | 69 |

UNHCR Environmental Co-ordinators and Focal Points are requested to co-ordinate the collection of such information and report on all nine of these core indicators to TSS on a regular basis. These data will form the basis of an operational database and allow for more in-depth analysis of UNHCR-assisted environmental programmes.

### 3.2.1 Optional Indicators

A range of indicators has been developed to assist in monitoring the impacts and performance of refugees and others of concern to UNHCR, as well as associated operations, on the environment. These indicators are provided to users as a list of optional indicators that they can use to measure additional aspects of their programmes. Users are encouraged to select and utilise those that are relevant and appropriate to their projects and working conditions. The developed Score cards, both core and optional, can be found at the end of this document in Annex 1.

## Table 2 - Optional Score Cards

## FOOD - SECTOR A

| *Reference* | *Impact* | *Page* |
|---|---|---|
| A1 (CORE) | Energy saving cooking habits practised | 19 |
| A2 | Food quality and components do not contribute to environmental degradation | 20 |

## TRANSPORT / LOGISTICS - SECTOR B


| *Reference* | *Performance* | *Page* |
|---|---|---|
| B1 | Environmentally-friendlier procurement strategies practised | 21 |
| B2 | Environmentally-friendly operational waste disposal practised | 22 |
| B3 | Environmentally-friendly hazardous waste disposal practised | 23 |
| B4 | Environmentally-friendly pesticide waste disposal practised | 24 |
| B5 | Environmentally-friendly fuel storage procedures practised | 25 |


## DOMESTIC NEEDS / HOUSEHOLD SUPPORT - SECTOR C


| *Reference* | *Impact* | *Page* |
|---|---|---|
| C1 | Domestic energy best practices employed | 27 |
| *Reference* | *Performance* | *Page* |
| C2 | Energy needs and options identified | 28 |
| C3 | Reduction in fuel consumption | 29 |
| C4 (CORE) | Increase in families consistently using fuel-saving devices and practices | 30 |
| C5 | Fuel requirements met by organised energy supply | 31 |


## WATER - SECTOR D


| *Reference* | *Performance* | *Page* |
|---|---|---|
| D1 | Safe water quality | 33 |
| D2 | Water collection maximised and water extraction sustainable | 34 |


## SANITATION - SECTOR E


| *Reference* | *Impact* | *Page* |
|---|---|---|
| E1 | Improved environmental health of refugee communities | 35 |
| *Reference* | *Performance* | *Page* |
| E2 | Reduction of vector borne diseases | 36 |
| E3 | Proper disposal of human excreta practised | 37 |


## HEALTH / NUTRITION - SECTOR F


| *Reference* | *Impact* | *Page* |
|---|---|---|
| F1 | Improved general health and nutrition | 39 |


## SHELTER / OTHER INFRASTRUCTURE - SECTOR G


| *Reference* | *Impact* | *Page* |
|---|---|---|
| G1 | Encroachment in sensitive areas | 41 |
| G2 | Erosion resulting from refugee operations | 42 |
| *Reference* | *Performance* | *Page* |
| G3 (CORE) | Increased use of environmentally-friendly construction technologies | 43 |

## COMMUNITY SERVICES - SECTOR H


| *Reference* | *Impact* | *Page* |
|---|---|---|
| H1 | Refugee involvement in environmental activities increased | 45 |
| H2 | Communities are mobilised and take ownership of environmental activities | 46 |
| *Reference* | *Performance* | *Page* |
| H3 | Increased community participation in environmental awareness raising activities | 47 |


## EDUCATION - SECTOR I


| *Reference* | *Impact* | *Page* |
|---|---|---|
| I1 | Increased application of school-based environmental education | 49 |
| *Reference* | *Performance* | *Page* |
| I2 (CORE) | Improved general environmental awareness due to informal environmental education projects | 50 |
| I3 | Decreased environmental damage due to environmental education | 51 |
| I4 | Increased water conservation management due to environmental education | 52 |
| I5 | Improved animal husbandry practices due to environmental education | 53 |
| I6 | Decreased deforestation due to environmental education | 54 |


## CROP PRODUCTION - SECTOR J


| *Reference* | *Impact* | *Page* |
|---|---|---|
| J1 (CORE) | Sustainable agricultural activities practised | 55 |
| J2 | Agricultural activities contribute to soil improvement | 56 |
| J3 | Agricultural practices do not lead to poor water quality | 57 |
| *Reference* | *Performance* | *Page* |
| J4 | Adequate support provided for agricultural activities | 58 |
| J5 | Number of trees in home gardens increased | 59 |


## LIVESTOCK - SECTOR K


| *Reference* | *Impact* | *Page* |
|---|---|---|
| K1 | Livestock numbers are at a sustainable level | 61 |
| K2 | Livestock contribute to refugee and local community's well-being | 62 |
| *Reference* | *Performance* | *Page* |
| K3 | Sufficient livestock extension services | 63 |

## FORESTRY - SECTOR M


| *Reference* | *Impact* | *Page* |
|---|---|---|
| M1 (CORE) | Change in vegetation cover | 65 |
| M2 (CORE) | Area of degraded land | 66 |
| *Reference* | *Performance* | *Page* |
| M3 (CORE) | Number of seedlings produced 'v' target | 67 |
| M4 | Tree nursery best practices introduced and followed | 68 |
| M5 (CORE) | Number of surviving seedlings at end of first growing season | 69 |
| M6 | Increased refugee involvement in planning/managing forest resources and tree nurseries | 70 |
| M7 | Land set aside for fallow/regeneration | 71 |


## INCOME GENERATION - SECTOR N


| *Reference* | *Impact* | *Page* |
|---|---|---|
| N1 | Home gardens contribute to income generation | 73 |
| N2 | Income generation activities are environmentally-friendly | 74 |


## LEGAL ASSISTANCE / PROTECTION - SECTOR O


| *Reference* | *Impact* | *Page* |
|---|---|---|
| O1 | Refugees have usage rights to natural resources | 75 |
| *Reference* | *Performance* | *Page* |
| O2 | Prevention/reduction of sexual gender based violence | 76 |


## AGENCY OPERATIONAL SUPPORT - SECTOR P


| *Reference* | *Performance* | *Page* |
|---|---|---|
| P1 | Inter-agency co-ordination promoted | 77 |


### 3.3 CHOOSING THE APPROPRIATE INDICATORS

The selection of appropriate indicators will depend upon thorough problem analysis and definition of programme and project objectives. It is not expected that a project or programme need to incorporate all of the indicators and sectors included in this guide. The recommendation is to choose those indicators that most closely correspond to the goals of a programme or project, based on cultural, environmental, and/or agro-ecological contexts.

It is also useful for users to look for indicators of impact beyond the sector most directly related to the project's interventions. By monitoring the wider impact of a project, the extent of desirable and undesirable impacts can be monitored throughout the life of a project.

### 3.4 HOW TO INTERPRET SCORE CARDS

Score Cards are intended to serve as an unbiased system of monitoring. To the extent possible, scores should be assigned only on the basis of available or measured facts, to ensure objectivity.

The purpose of the Score Card system is not to determine who is responsible for a low performance, but rather to establish a means of quantifying and monitoring priority environmental activities within a given camp/settlement or country. Most importantly, Score Card results serve as a foundation for improving performance trends. Score Cards are not intended to evaluate individual staff, team or country programme performance.

During the introduction of the Score Card methodology, there is a risk that people might misunderstand the nature of the scores achieved. It is therefore important that this process is properly communicated to all those involved. Final scores should not be interpreted as an exact measurement of performance. The purpose of the Score Cards is not to seek fault with the manner in which a particular project or programme has been implemented, but rather to serve as a platform for improvement – improvement in terms of project conception and planning, as well as in overall management and evaluation. For this to work it is essential that a basic monitoring and evaluation structure is in place and that data are regularly gathered on a selected number of criteria, as represented by the Score Card system.

As a monitoring tool, it is necessary that a baseline exists against which progress can be measured. If score card results decline over time, this suggests factors which are negatively impacting the programme and/or project performance. Similarly, if higher scores are recorded in each reporting period it signifies that conditions (actions) are improving. **Determining and questioning the reasons for these changes – or even if there are no changes at all – is probably the most important aspect of this work**.

## 3.5 MONITORING INDICATORS

### 3.5.1 Who Collects and Interprets the Data?

UNHCR **Programme Staff, in particular Environmental Co-ordinators and Environmental Focal Points, are key resource persons for environmental monitoring**. They are responsible for determining which indicators are relevant to their operations, for introducing the Score Card system to Implementing Partners, local authorities, communities and other institutions and co-ordinating related activities, including data compilation and analysis, and for final reporting to UNHCR HQ using a Camp/Settlement Score Card Report (Box 4). A crucial aspect is to train implementing partners on how to implement the monitoring framework including: data collection methodologies, interpretation of score cards, inclusion of refugee and local communities and the design and use of data recording systems.

Once training has been provided, UNHCR implementing partners will be responsible for mobilising refugee and local communities to collect the required information to complete the Score Cards on a systematic basis. Partners are also asked to compile the Score Card data and transmit it to the UNHCR Environmental Co-ordinator/Focal Point on a monthly basis. In some instances it may be necessary, in co-ordination with partner agencies/committees, to establish basic questionnaires and record sheets for data collection. TSS can provide additional assistance in establishing efficient data collection methods where requested.

In keeping with UNHCR's Environmental Guidelines, clear communication between UNHCR and refugees/returnees, local populations, implementing partners and local authorities should be a priority. It is essential that refugees themselves be in some way involved in data collection for selected indicators. Where this is not already happening as a matter of routine, there are ample opportunities through which refugee participation in environment-related activities can be introduced. This issue is being addressed in more detail in the TSS-led "Framework for

Assessing, Monitoring and Evaluating the Environment in Refugee-related operations" – the FRAME Project.[6]

### 3.5.2 Data Availability and Data Quality

Reliable, accurate data on the environment is often not readily available during refugee operations. However, the importance of collecting baseline data for planning environmental activities is increasingly apparent, even in emergency situations. A lack of baseline data seriously hampers future monitoring. If environmental issues are not addressed from the outset, there is considerable risk that the impacts of refugee camps will result in a loss of natural resources and will require large amounts of funds to reverse the damage caused. Every effort should therefore be made to ensure that relevant environmental data is gathered and analysed as early as possible in a refugee operation.

A number of tools can be used to determine baselines and collect monitoring data. Field surveys are the logical first step to collecting information. Depending on available information, field surveys will be either extensive or short. Assessment can be based on counting items (such as the number of trees and remaining stems around the camps) to obtain an estimate of ecological status. Likewise, comparing historical data mainly from the local leaders, national staff, refugees and the land use maps with the current status of the ground cover indicates the overall ecological change for an area. In certain situations, satellite imagery can be purchased and aerial photos taken and used to compare the current situation with that when camps/settlements were established.

Many environmental projects, especially at the beginning of an emergency operation, will require an environmental assessment to be carried out. Such an exercise can generate considerable information on local environmental conditions and the availability and distribution of natural resources, which can subsequently be used as baseline data for monitoring purposes.

Although the availability and quality of data may be poor and inconsistent, rather than excluding camps/settlements for these reasons, it will be more beneficial to try and make the best analysis possible using available information. This is likely to result in a number of issues initially receiving lower scores than normal had good quality, relevant information been available.

[6] Until such time as additional guidelines are available, please contact TSS for assistance with this aspect.

# 4. PRESENTATION OF RESULTS

Once the information described on a specific Score Card has been completed **for each location**, the results should be transferred to a "Camp/Settlement Score Card Report" (Box 3). This form summarises the core and optional indicator results and comments on factors that have influenced the indicator performance.

The following steps should be taken to report on camp/settlement and national indicator results:

## 4.1 CAMP/SETTLEMENT SCORE CARD REPORT

### STEP 1

For each camp location, complete the necessary background information contained in the "Summary" section of the camp/settlement Score Card report template as shown.

**Box 3. Camp/Settlement Score Card Report**

*N.B. <u>This section should be completed for each camp/settlement</u>*

**SUMMARY**

| | |
|---|---|
| Country: | [*enter name]* |
| Name of Camp/Settlement: | *[enter name]* |
| Location: | *[province/district or nearest town; grid references]* |
| GPS Co-ordinates: | *[E/W degrees minutes seconds, N/S degrees minutes seconds]* |
| Refugee Population: | *[number of people]* |
| Reporting Period: | *[dates during which analysis was carried out]* |
| Focal Point: | *[name of UNHCR Focal Point]* |

**Box 3 *(continued)***
**Camp/Settlement Score Card Report**

*N.B. This section should be completed for each camp/settlement*

## CORE SCORE CARD RESULTS

| Reference | Indicators | Max Score | Actual Score | Comments |
|---|---|---|---|---|
| A1 | Energy saving cooking habits practised | 5 | | |
| C4 | Increase in families consistently using fuel-saving devices and practices | 5 | | |
| G3 | Increased use of environmentally-friendly construction technologies | 5 | | |
| I2 | Improved general environmental awareness due to informal environmental education projects | 5 | | |
| J1 | Increased application of school-based environmental education | 6 | | |
| M1 | Change in vegetation cover | 5 | | |
| M2 | Area of degraded land | 4 | | |
| M3 | Number of seedlings produced ‘v’ target | 5 | | |
| M5 | Number of surviving seedlings | 5 | | |

**Box 3 *(continued)***
**Camp/Settlement Score Card Report**

*N.B. This section should be completed for each camp/settlement*

## OPTIONAL SCORE CARD RESULTS

*(to be completed for each optional indicator monitored - examples below)*

**Sanitation - Sector E**

| Reference | Indicators | Max Score | Actual Score | Comments |
|---|---|---|---|---|
| | | | | |

**Education - Sector I**

| Reference | Indicators | Max Score | Actual Score | Comments |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

**Forestry - Sector M**

| Reference | Indicators | Max Score | Actual Score | Comments |
|---|---|---|---|---|
| | | | | |

[…]

## GENERAL COMMENTS

- <text>
- <text>
- <text>

## STEP 2

Determine the score for each Score Card - core and optional - and indicate the score and relevant comments in the "Results" section of the camp/settlement Score Card template.

In order to compile trends and analyse factors that influence project performance, it is imperative that comments are included explaining indicator results. Without comments, field offices, branch offices and headquarters cannot effectively evaluate strengths and weaknesses in project design and management.

### EXAMPLE CORE SCORE CARD RESULTS

| Reference | Indicators | Max Score | Actual Score | Comments |
|---|---|---|---|---|
| C4 | Number of Families consistently using Fuel-saving Devices and Practices | 5 | 2 | • 25% of target population (300 families) continued fuel saving practices after 4 months<br>• discussions show that more follow-up support is needed in repairing fuel efficient stoves |
| M3 | Number of Seedlings Produced 'v' Target | 5 | 5 | • Target for seedlings to be raised was 70,000 seedlings<br>• 62,361 seedlings were raised, of which 58,758 (84%) were surviving at the beginning of the planting season. |

### OPTIONAL SCORE CARD RESULTS

**Sanitation - Sector E**

| Reference | Indicators | Max Score | Actual Score | Comments |
|---|---|---|---|---|
| E2 | Reduction of Vector Borne Diseases | 4 | 3 | Typhus rates increasing - OXFAM to investigate |

## 4.2 DATA RECORDING - DATABASES

Proper data recording procedures will be necessary to ensure the monitoring system contributes to improved project accountability and programme management. There are a number of layers of data which are relevant to effective long-term monitoring systems, such as:

- individual score card results;
- data collected to answer the questions on the score card; and
- detailed information about the data collected.

For example, when monitoring Core Indicator M3 – *Number of Seedlings Produced 'v' Target* – in the example shown on the previous page, the three levels of information would be:

1. Score Card score = 5

2. Data collected to answer the questions on the score cards are as follows:

| Target seedlings | Seedlings raised | Seedlings surviving at the beginning of the planting season | % surviving seedlings compared to original target |
|---|---|---|---|
| 70,000 | 62,361 | 58,758 | 84% of target |

3. Detailed information about the data collected is as shown below:

| Target seedlings | Seedlings raised | Seedlings surviving at the beginning of the planting season | % surviving seedlings compared to original target |
|---|---|---|---|
| 70,000 total | 62,361 total | 58,758 total | 84% total |
| 10,000 mango | 8,453 mango | 8,008 mango | 80% mango |
| 10,000 papaya | 6,284 papaya | 5,986 papaya | 60% papaya |
| 30,000 acacia | 28,194 acacia | 26,109 acacia | 87% acacia |
| 20,000 neem | 19,430 neem | 18,655 neem | 93% neem |

The easiest and most efficient method to record information collected in the environmental indicators framework is through the use an electronic database. A simple database example has been developed by TSS to assist in collecting and analysing monitoring data, however any existing database system - such as a country operational or Geographical Information System (GIS) database (see Module VI of this Toolkit) - can be adapted to include the monitoring results. Please contact TSS for additional information on data recording methodologies if needed.

# ANNEX 1 - SCORE CARDS

| | |
|---|---|
| **Reference #** | **A1** |
| **Indicator Title** | **ENERGY SAVING COOKING HABITS PRACTISED** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Environmentally harmful traditional cooking habits are not always easy to modify. Changing them remains, however, one of the most efficient means to reduce fuel consumption levels in a refugee-situation. As fuel needs are reduced, the impact on the surrounding environment also decreases, thereby benefiting both the refugees and local communities. |
| **Guidelines** | Some energy saving techniques that can be practised include:<br>• Pre-soak hard foods (e.g. beans) and mill or pound grains<br>• Cut food into small pieces (e.g. meat or hard vegetables)<br>• Use tenderisers (e.g. pawpaw juice, lime juice, bicarbonate, ash)<br>• Cut, split and dry firewood<br>• Shield or enclose the fire and control the air supply<br>• Share cooking with other people (large pots help)<br>• Use an appropriate pot (e.g. iron or clay for slow cooking, aluminium for fast)<br>• Use a lid and weigh it down (e.g. with a stone)<br>• 'Double Cook' with one pot on top of another<br>• Add water during cooking, rather than all at once<br>• Simmer food gently, without over-boiling<br>• Keep pots black, but not encrusted<br>• Put out the fire promptly (e.g. using sand; needs matches) |
| **Methods to be Applied** | • Survey should encompass a pre-determined number of households and use a standardised questionnaire familiar to enumerators and others conducting surveys. Regular follow-up on a random basis to monitor changes.<br>• Local and refugee communities should be included in surveys. |
| **Data Interpretation** | • Acceptance by local and refugee populations of fuel saving techniques.<br>• Reduction in the volume of wood resources required. |

***A1 Energy saving cooking habits practised***

| | ***Score*** | |
|---|---|---|
| Energy-saving techniques taught to refugee and local communities | Yes (+1) | No (0) |
| After energy saving technique is introduced more than 50% of trainees continue to use the new technique regularly | Yes (+2) | No (0) |
| Energy-saving techniques are adapted to local conditions | Yes (+1) | No (0) |
| Refugees are responsible for enforcing fuel saving techniques | Yes (+1) | No (0) |

| Reference # | **A2** |
|---|---|
| **Indicator Title** | **FOOD QUALITY AND COMPONENTS DO NOT CONTRIBUTE TO ENVIRONMENTAL DEGRADATION** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | The make up of the food aid basket can determine refugee energy consumption, influencing firewood demands and hence the scale of environmental impacts. Certain foods, particularly unmilled cereals, beans and some lentils, require longer cooking time. In addition to the cost and nutritional and cultural acceptability of food rations, it is important, for environmental reasons, to assess the fuel required to cook it. According to the joint UNHCR/WFP Memorandum of Understanding (2001), this should be a prerequisite for food supply. |
| **Guidelines** | • Milling cereals prior to distribution is recommended from an environmental point of view. Due to reductions in bulk, and thus lowered transportation costs, it may proved cheaper to mills a portion of the maize prior to transporting it to the camps.<br>• By monitoring refugee coping strategies, potential environmental impacts associated with changes in assistance can be estimated. A reduced food aid basket, due to logistics or resource constraints, will lead to the need for increased coping mechanisms. Alternative income-generating activities are likely to increase as the scope for sale or exchange of distributed food is diminished. This may lead to additional environmental impacts such as charcoal making or firewood cutting. |
| **Methods to be Applied** | • Surveys (random or standardised) of average cooking time in refugee households will provide information on fuel wood required for different type of distributed food assistance.<br>• Surveys of firewood and charcoal sellers in the markets will give information on increased/decreased demand in cooking fuel.<br>• Surveys of refugee coping strategies will provide information on potential income generating activities that lead to environmental degradation.<br>• Surveys of refugees' socio-economic standing will lead to information the need for additional income generating activities. |
| **Data Interpretation** | Environmental degradation resulting from distributed food aid. |

| ***A2 Food quality and components do not contribute to environmental degradation*** | ***Score*** |
|---|---|
| Does distributed food aid require less than 60 minutes to cook? | Yes (+2) No (0) |
| Are refugees aware of fuel saving techniques in food preparation? (see Indicator A1) | Yes (+2) No (0) |

| | |
|---|---|
| **Reference #** | **B1** |
| **Indicator Title** | **ENVIRONMENTALLY-FRIENDLIER PROCUREMENT STRATEGIES PRACTISED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | "UNHCR's environmentally friendlier policy is to strive to purchase products and services which have low impact on the environment. Environmental considerations form part of the evaluation and selection criteria, which could cover, depending on goods and services to be purchased, their manufacture, transport, packaging, use and disposal".[7] |
| **Guidelines** | • Compliance with UNHCR Environmentally-Friendlier Procurement Guidelines.<br>• Broadly speaking, UNCHR favours goods which: make the best use of resources, require low maintenance and a minimum of spare parts, are recyclable or otherwise easily disposed of after use, and do not cause unnecessary damage to the environment during the use and where considered relevant during their manufacture.<br>• Ozone depleting substances are found in a wide variety of goods and should be avoided. The most common applications in terms of UNHCR purchases are refrigeration and air-conditioning, firefighting equipment, aerosols and goods containing foams.<br>• Recycled paper produced with environmentally friendly bleaching methods, and environmentally-friendly computer equipment should be purchased and used wherever possible.<br>• Crocidolite (blue in colour and found in fire proofing, decorative materials, paper and sheeting, pipe or boiler insulation) or amosite (brown in colour and found in heat insulating materials) asbestos are highly dangerous materials which WHO and ILO recommend be discontinued – UNHCR should not purchase or use these products.<br>• Procurement strategies should favour items which are packaged without metal banding, because they are disposable (biodegradable, combustible). |
| **Methods to be Applied** | • Comparison of purchased materials with those suggested in the UNHCR Environmentally-Friendlier Procurement Guidelines.<br>• Examination of office paper purchasing and recycling procedures.<br>• Examination of pesticide purchasing and handling procedures. |
| **Data Interpretation** | Procurement actions favour the purchase of environmentally friendlier products. |

***B1 Environmentally-friendlier procurement strategies practised***

| | ***Score*** | |
|---|---|---|
| The purchase and use of chemical pesticides classified by WHO as being in toxicity classes 1A and 1B[8] are discontinued in refugee-situations | Yes (+1) | No (0) |
| Goods with less ozone-depleting potential are identified and preferred | Yes (+1) | No (0) |
| Office paper is recycled | Yes (+1) | No (0) |
| Purchase of crocidolite or amosite asbestos in any form is discontinued | Yes (+1) | No (0) |

[7] UNHCR. Environmentally-Friendlier Procurement Guidelines. UNHCR Geneva, April 1997

[8] See "Dirty Dozen" list published by the Pesticides Action Network.

| Reference # | **B2** |
|---|---|
| **Indicator Title** | **ENVIRONMENTALLY-FRIENDLY OPERATIONAL WASTE DISPOSAL PRACTISED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Waste is disposed of through dumping and burning in most UNHCR operations. Although this waste originates from many different origins, it can be summarised into three main categories: items which have passed their expiry date, packaging, and polluting or hazardous materials.<br>Each country in which UNHCR operates has its own rules and regulations concerning waste disposal and these should be adhered to at all times. It is, however, advised that waste disposal strategies be made as environmentally friendly as possible. |
| **Guidelines** | • Potentially dangerous/hazardous materials should be incinerated.<br>• Packaging – metal banding, plastic and cardboard – accumulate over time and need to be disposed of. All cardboard and paper products are biodegradable and should be composted in landfills or recycled.<br>• Plastic made of poly-ethylene (most bags found in Europe) can be burned whereas other types of plastic can release hazardous fumes when combusted.<br>• Procurement strategies should favour items that are packaged without metal banding, because they are disposable. When metal banding is used, bands could be given to local artisans/youth.<br>• Some foods which have passed their expiry dates do not necessarily have to be destroyed (i.e. incinerated) but can be recycled as animal fodder, compost, fertilisers, etc. |
| **Methods to be Applied** | • Surveys of waste disposal methods for items that have passed their expiry date, packaging materials and polluting materials. |
| **Data Interpretation** | Waste disposal strategies are as environmentally friendly as possible. |

***B2 Environmentally-friendly operational waste disposal practised***

| | ***Score*** | |
|---|---|---|
| Are incinerators used for disposal of hazardous materials? | Yes (+1) | No (0) |
| Do procurement strategies favour packaging without metal bands? | Yes (+1) | No (0) |
| Is metal banding recycled within the community? | Yes (+1) | No (0) |
| Are cardboard/paper materials either recycled or composted? | Yes (+2) | No (0) |

| | |
|---|---|
| **Reference #** | **B3** |
| **Indicator Title** | **ENVIRONMENTALLY-FRIENDLY HAZARDOUS WASTE DISPOSAL PRACTISED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Environmentally sound management of toxic chemicals requires proper management of a chemical from when it is first manufactured to when it is disposed (often referred to as life-cycle management).[9] Hazardous waste, such as toxic chemicals, can be harmful to humans, animals and ecosystems if not disposed of properly. Each country in which UNHCR operates has its own rules and regulations concerning hazardous waste disposal and these should be adhered to at all times. It is however advised that waste disposal strategies be made as environmentally friendly as possible following the guidelines below. |
| **Guidelines** | • The strategy for sound management of hazardous chemicals is first and foremost that of anticipating and preventing the release of toxic chemicals into the environment rather than relying on an "after-the-fact" approach of remediation and treatment.[11]<br>• It is incorrect to believe that "the solution to pollution is dilution". The dilution effect might not result in a safe concentration of the contaminant.[11]<br>• Items which have passed their expiry dates and are potentially hazardous (such as chemicals, specialised foods and medicine) should be incinerated when possible. These items should not be dumped because their chemical components can leach into the ground water and soil posing health hazards.<br>• The disposal of polluting materials such as motor oils should be done through designated drop off points at governmental environmental agencies. If this service is not available, hazardous waste landfills must have an impermeable liner/membrane and leachate collection systems to prevent contamination of the ground water under the landfill. Once the landfills stop receiving waste they should be closed by putting an impermeable cover over them to prevent rainwater from entering. |
| **Methods to be Applied** | Follow the above guidelines. |
| **Data Interpretation** | Hazardous waste disposal strategies are as environmentally friendly as possible. |

***B3 Environmentally-friendly hazardous waste disposal practised***

| | Score | |
|---|---|---|
| Are incinerators available? | Yes (+1) | No (0) |
| Are incinerators used to burn potentially hazardous materials? | Yes (+1) | No (0) |
| Are motor oils disposed of at local government offices if possible? | Yes (+1) | No (0) |
| Are office plans in place to cope with toxic spills? | Yes (+1) | No (0) |

[9] Hazardous chemicals in human and environmental health. International Programme on Chemical Safety, World Health Organization, 1211 Geneva 27, Switzerland Fax: +41 22 791 48 48; E-mail: ipcsmail@who.ch

| | |
|---|---|
| **Reference #** | **B4** |
| **Indicator Title** | **ENVIRONMENTALLY-FRIENDLY PESTICIDE WASTE DISPOSAL PRACTISED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | The safe disposal of unwanted pesticides and containers requires the guidance of an expert. Appropriate methods used include returning the material safely to the supplier and burning pesticides in their containers in approved incinerators. |
| **Guidelines** | • Pesticide-related waste should not be buried. Buried pesticides can leak from their containers into the surrounding soil and spread to contaminate large areas. Leaking pesticides can leach into water to contaminate underground aquifers, rivers, lakes and even the sea. Pesticides in water can damage or destroy aquatic life and affect people and livestock if the water is used for drinking, irrigation or washing.<br>• The burning of waste pesticides, empty containers and contaminated materials is another inappropriate practice unless carried out in an approved incinerator. When burned, many pesticides release highly toxic fumes that can harm the people and animals that inhale or come into contact with them.<br>• Another unacceptable disposal method is the dumping of waste pesticides, empty containers and contaminated materials in landfills. Most waste disposal sites are not designed to prevent toxic materials from leaking into the ground or from being washed out by rain into water bodies.<br>• Pesticides should never be poured down drains or emptied into rivers, streams, lakes, drainage channels or any other water body. Even a few millilitres of pesticide can kill fish and other aquatic organisms and contaminate large volumes of drinking or irrigation water.<br>• Safe disposal of pesticide waste can only be carried out through the facilities which manufacturers and distributors of pesticides are required to provide for the disposal of pesticide related waste.[10] |
| **Methods to be Applied** | Follow the above guidelines. |
| **Data Interpretation** | Hazardous waste disposal strategies are as environmentally friendly as possible. |

| ***B4 Environmentally-friendly pesticide waste disposal practised*** | **Score** | |
|---|---|---|
| Are agreements in place with pesticide manufacturers/distributors for the safe disposal of excess pesticides? | Yes (+2) | No (0) |
| Are facilities available and accessible for the safe disposal of pesticides? | Yes (+1) | No (0) |
| Are pesticide buried in the ground? | Yes (0) | No (+1) |
| Are pesticides dumped on water sources (rivers, wells, ground water)? | Yes (0) | No (+1) |
| Are pesticides burned outside of incinerators? | Yes (0) | No (+1) |

[10] No 7. Guidelines for the management of small quantities of unwanted and obsolete pesticides. FAO Pesticide Prevention and Disposal - Plant Production and Protection Division

| | |
|---|---|
| **Reference #** | **B5** |
| **Indicator Title** | **ENVIRONMENTALLY-FRIENDLY FUEL STORAGE PROCEDURES PRACTISED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Improper fuel storage can be a potential ground and surface water hazard and can be a costly problem and raise increasing environmental, safety, legal and economic concerns in development contexts. Environmental concerns can include oil leaks and soil or water contamination while economic issues include costs of testing, tank removal, site cleanup. |
| **Guidelines** | • The tank exterior should be sound, without leaking seams or excessive rust, with the tank piping tight, leak-free and all tank plugs and piping tightly in place.<br>• Tanks should be vented to outside properly. During filling, improper venting can place excessive stress on tank seams and piping.<br>• Vent lines should be properly capped with a screened weather-resistant cap to prevent water entry or clogging by mud and insects.<br>• The tank support legs should be sound and on firm footing. If required by local ordnance, is other tank support should be in place. If placed on wood or dirt, the tank is likely to tip and spill.<br>• The tank should be kept relatively full in spring and fall. The extra weight helps prevent tank shifting and related piping leaks, and will reduce water in the fuel (can cause loss of heat and engine damage) from condensation.<br>• Impermeable surfaces under the storage tanks will ensure that when leakage does occur, that as little fuel as possible will enter the ground. The two most common types of impermeable surfaces are plastic membranes either on top or buried under the top layer of soil. |
| **Methods to be Applied** | Visual inspection of storage tanks against above guidelines. |
| **Data Interpretation** | Fuel storage procedures are environmentally friendlier |

***B5 Environmentally-friendly fuel storage procedures practised***

| | ***Score*** | |
|---|---|---|
| Does a visual inspection of the storage facilities take place every quarter? | Yes (+1) | No (0) |
| Does the storage tank leak | Yes (0) | No (+2) |
| Is the tank vented properly? (see above) | Yes (+1) | No (0) |
| Is the tank placed on an impermeable surface to avoid leaks entering the ground water and soil? | Yes (+1) | No (0) |

| | |
|---|---|
| **Reference #** | **C1** |
| **Indicator Title** | **DOMESTIC ENERGY BEST PRACTICES EMPLOYED** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | The promotion of energy-saving practices is as effective, if not more so, than using improved stoves in reducing energy consumption. Many different practices exist, the most important of which are to dry and cut wood into small pieces, to pre-soak hard foods, to use lids on pots, and to ensure that fuel-efficient stoves are being made and used correctly. |
| **Guidelines** | • Compliance with UNHCR guidelines on Energy Conservation and Alternative Fuels.[11]<br>• Ownership of domestic energy programmes should rest with Implementing Partners, refugees and local communities.<br>• Those responsible for introducing and promoting best practices should themselves be well practised in different methodologies and should be capable of ensuring effective follow-up with refugees and local communities.<br>• To prevent excessive exploitation of natural resources such as vegetation, it is important that value is added. Inputs such as stoves and firewood should not be provided without some substantive commitment in return. |
| **Methods to be Applied** | • Monitor training programmes by implementing partners to ensure correct use of stoves and a combination of best practices are taught.<br>• On-site random and pre-determined household visits.<br>• Promotion and follow-up of best practices should be equally shared between community members and refugees.<br>• Camp enumerators should be trained and provided with appropriate data recording sheets. |
| **Data Interpretation** | Promotion, acceptance and adoption rate of fuel saving techniques. |

***C1 Domestic energy best practices employed***

| **Indicator** | **Score** | |
|---|---|---|
| Improved stove technology tested & developed locally before introduction | Yes (+1) | No (0) |
| Training provided on how to build and use fuel-efficient stoves | Yes (+1) | No (0) |
| Demonstration & training provided on energy-saving practices | Yes (+1) | No (0) |
| Value added to fuelwood and other fuel supplies | Yes (+1) | No (0) |
| Energy efficiency promoted in conjunction with other environmental protection/management activities | Yes (+1) | No (0) |

[11] UNHCR. (2001). Cooking Options in Refugee Situations: A handbook of experiences in energy conservation and alternative fuels. UNCHR, Geneva.

| | |
|---|---|
| **Reference #** | **C2** |
| **Indicator Title** | **ENERGY NEEDS AND OPTIONS IDENTIFIED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | While local populations may have developed energy supply systems that are, to some extent, sustainable given existing requirements and resources, refugees bring with them extraordinarily high energy demands and often have limited knowledge of local supplies and sustainable yields. Their high per capita rates of energy consumption tend to exceed those of local communities, at least initially, and are more likely to cause environmental damage. Under certain conditions, organised supplies of fuel may be necessary and/or appropriate. There are, however, a number of important considerations that must be met if supplies are to be part of an effective solution and further pressure on the environment contained. |
| **Guidelines** | • Field Surveys need to consider the following: Fuel consumption by households, institutions, small businesses and agencies; refugee fuel collection patterns; refugee fuel consumption rates; cooking habits; area available for fuel harvesting; annual growth rate of wood in the area; economic value of the resource being degraded.<br>• Give equal attention to local communities and refugees.<br>• In certain cases, the delegation of fuel distribution to refugees may cut down on losses and reduce conflicts.<br>• Where circumstances dictate, organised energy supplies should be extended to local communities in addition to refugees. |
| **Methods to be Applied** | • Survey should encompass a pre-determined number of households and use a standardised questionnaire familiar to enumerators and others conducting surveys.<br>• Regular household surveys to determine amount of fuel being collected and used.<br>• Market surveys to determine volume of wood and/or charcoal being sold.<br>• Regular follow-up on a random basis to monitor changes. |
| **Data Interpretation** | Volume of wood resources is best expressed in terms of weight of wood and the number of sacks of charcoal. Record should be made of the type of wood – green or dry – and point(s) of origin of charcoal. |

***C2 Energy needs and options identified***

| | ***Score*** | |
|---|---|---|
| Energy demand and consumption patterns determined | Yes (+2) | No (0) |
| Environmental impact of energy demand assessed | Yes (+1) | No (0) |
| Inventories carried out to access the status of local (<10km from camp) forest resources & other possible sources of fuel | Yes (+1) | No (0) |
| Longer-term energy supply (including alternatives) determined | Yes (+1) | No (0) |

| Reference # | C3 |
|---|---|
| **Indicator Title** | **REDUCTION IN FUEL CONSUMPTION** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | The overall goal of domestic energy-related programmes should be to reduce the amount of fuel used. Solutions promoted through the use of fuel-efficient stoves and energy saving practices are designed to reduce pressure on the environment and improve the well-being of refugees by relieving them of a high burden of fuel collection. It is important to try and encourage the maximum possible number of people to use fuel-efficient practices and devices, and ensure that those who are doing so are satisfied with the process. |
| **Guidelines** | • Clear measurable targets must be set at the outset regarding the number of families (refugees and villagers) the project intends to reach – for a given timeframe.<br>• Baseline data on the quantity of fuel consumed (i.e. per household per month, per person per week, per camp block per month, etc.) must be collected in order to measure % reduction of fuel consumption.<br>• Emphasis should be on reaching a maximum number of people AND ensuring that those interested in the techniques and principles are convinced of their worth and continue to use them over a long period of time. Follow-up support is essential.<br>• Special attention should be given to disadvantaged groups, such as single-headed households, the elderly and the disabled.<br>• Particular attention should also be given to families that start to use fuel-efficient stoves and practices, but which later abandon them. |
| **Methods to be Applied** | • Spontaneous, random sampling by camp enumerators, project teams and outreach officers.<br>• Wood intake surveys at camp level – frequency and time spent gathering wood; weight of wood collected; type of wood, etc.<br>• Regular fuelwood weighing at household level – pre-selected homes and random sampling. |
| **Data Interpretation** | • Changes in the number of households using fuel-efficient stoves and practices.<br>• Alterations in the amount of fuel used at household and camp level, over time. |

***C3 Reduction in fuel consumption***

**% Reduction in Average Fuel Consumption**

| Levels of Project Target Group | Score |
|---|---|
| 0-4 | 0 |
| 5-9 | +1 |
| 10-19 | +2 |
| 20-34 | +3 |
| 35-50 | +4 |
| >50 | +5 |

Note: if no target group objective has been established, the overall score is zero.

| Reference # | C4 |
|---|---|
| **Indicator Title** | **INCREASE IN FAMILIES CONSISTENTLY USING FUEL-SAVING DEVICES AND PRACTICES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | While it is important to encourage the maximum number of people to use fuel-efficient practices and devices, it is perhaps more important to ensure that those who are doing so are doing so consistently and are satisfied with the process. |
| **Guidelines** | • Clear measurable targets must be set at the outset regarding the number of families (refugees and villagers) the project intends to reach – for a given timeframe.<br>• Emphasis should not be on reaching a maximum number of people, but on ensuring that those interested in the techniques and principles are convinced of their worth and continue to use them over a long period of time. Follow-up support is therefore essential.<br>• Special attention should be given to disadvantaged groups, such as the elderly and disabled.<br>• Particular attention should also be given to families that started to use fuel-efficient stoves and practices, but which later abandoned them. |
| **Methods to be Applied** | • Spontaneous, random sampling by camp enumerators, project teams and outreach officers.<br>• Restrict investigations to pre-determined areas, and targeted households and institutions. |
| **Data Interpretation** | Changes in the number of households using fuel-efficient stoves and practices. |

***C4 Increase in families consistently using fuel-saving devices and practices***

| **% of Target Population using Fuel-efficient Techniques Continuously for at least Four Months** | **Score** |
|---|---|
| 0 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100 | +5 |

Note: if no outreach target has been established, the overall score is zero.

| | |
|---|---|
| **Reference #** | **C5** |
| **Indicator Title** | **FUEL REQUIREMENTS MET BY ORGANISED ENERGY SUPPLY** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Under certain conditions, organised supplies of fuel may be necessary and/or appropriate. There are, however, a number of important considerations that must be met if supplies are to be part of an effective solution and pressure on the environment contained. A tendency may, for example, be to continue collecting firewood for sale, even though household supplies are partly or wholly satisfied. |
| **Guidelines** | • Supplying firewood free of charge does not necessarily reduce environmental damage.<br>• Organised fuel supplies will be effective only if the fuel has low value locally and if it has the long-term commitment of a donor.<br>• Maximum sustainable harvest yields must be determined to avoid over-harvesting. Frequent monitoring of harvest areas is necessary to avoid over-exploitation.<br>• Delegation of fuel distribution to refugees may cut down on losses and reduce conflicts.<br>• Where circumstances dictate, organised energy supplies should be extended to local communities in addition to refugees. |
| **Methods to be Applied** | • Surveys should include a pre-determined number of households and use a standardised questionnaire familiar to enumerators and others conducting surveys.<br>• Regular household surveys to determine amount of fuel being collected and used.<br>• Market surveys to determine volume of wood and/or charcoal being sold.<br>• Regular follow-up on a random basis to monitor changes. |
| **Data Interpretation** | Interpretation will rely on a series of samples among refugees to determine the degree of familiarity and appropriateness of the fuel. Other aspects relate to institutional arrangements. |

***C5 Fuel requirements met by organised energy supply***

| | **Score** | |
|---|---|---|
| When unfamiliar energy supplies are introduced, are they accompanied by introductory and follow-up training? | Yes (+1) | No (0) |
| Deterrents introduced to prevent over-consumption or to minimise the continuation of commercial wood cutting | Yes (+1) | No (0) |
| Refugees made responsible for managing fuel distribution | Yes (+1) | No (0) |
| Supplied fuels (wood, peat…) harvested in sustainable manner | Yes (+1) | No (0) |
| Energy guaranteed with long-term support from donors? | Yes (+3) | No (0) |

| Reference # | **D1** |
|---|---|
| **Indicator Title** | **SAFE WATER QUALITY MAINTAINED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Water supplies of a consistent and high quality should be a priority. If the water quality is poor, in addition to water-borne diseases, indirect effects can range from malnutrition and skin disease to contaminated agricultural products. Water quality is always difficult to assess, and in an emergency situation, it is best to assume that all water supplies, especially surface water bodies, are, or may quickly become, contaminated. Immediate measures will be required to protect the water sources from contamination. In some circumstances treatment will be needed to make it safe for drinking. |
| **Guidelines** | • Compliance with WHO/UNHCR standards[12]<br>• Protect natural springs.<br>• Fences around water sources keep animals out.<br>• Livestock watering should be downstream from camp/settlement.<br>• If water treatment facilities are used, proper disposal techniques should be used for chemicals.<br>• Latrines and fenced livestock should be located downstream of water sources.<br>• Increased incidence of skin diseases and water borne diseases indicate decreasing water quality. |
| **Methods to be Applied** | • Regular, random sampling by camp enumerators, project teams and outreach officers to obtain information on disease incidence related to poor water quality.<br>• Discussions with water technicians on water quality test results.<br>• Discussions with refugee and local communities on water quality perceptions. |
| **Data Interpretation** | Refugee community does not negatively affect water quality. |

***D1 Safe water quality maintained***

| | **Score** | |
|---|---|---|
| Separate water points for humans and livestock | Yes (+1) | No (0) |
| Dirty water disposal separate from clean water supplies | Yes (+1) | No (0) |
| Incidence of water borne diseases such as diarrhoea, pneumonia, and typhoid is decreasing | Yes (+2) | No (0) |
| Incidence of skin disease is decreasing | Yes (+2) | No (0) |
| Latrines and fenced livestock located downstream from water sources | Yes (+1) | No (0) |

[12] UNHCR. (1992). *Water Manual for Refugee Situations*. UNHCR Geneva, Switzerland.
UNHCR. (2000) *Handbook for Emergencies*, UNHCR Geneva, Switzerland.

| Reference # | D2 |
|---|---|
| **Indicator Title** | **WATER COLLECTION MAXIMISED AND WATER EXTRACTION SUSTAINABLE** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | At little additional cost, rainwater can be stored and later used by refugees for tree planting and in kitchen gardens. Construction budgets should, therefore, include appropriate provisions for collecting and storage systems – often nothing more than the inclusion of guttering and tanks. In some refugee-situations, it may be necessary to make special arrangements for the identification and development of new water sources, water extraction, storage and distribution. This should be a last resort only used when there are no other options available. |
| **Guidelines** | • Compliance with WHO/UNHCR standards[13]<br>• When water is extracted from local water supplies (i.e. underground reservoirs) professional water technicians should monitor extraction and replenishment rates to ensure sustainable water use.<br>• All available local water resources should be explored and, if appropriate, exploited before resorting to providing water from external sources.<br>• In arid climates, water should be collected and stored by refugees. |
| **Methods to be Applied** | • Discussions with technical water experts on availability of local water supplies, sustainable extraction rates, and any need for provision of water from outside sources.<br>• Observations of the below topics |
| **Data Interpretation** | Water provision is done in a sustainable manner. |

***D2 Water collection maximised and water extraction sustainable***

| | **Score** | |
|---|---|---|
| Are the majority of households collecting rainwater? | Yes (+1) | No (0) |
| Are the majority of households re-using grey water? | Yes (+1) | No (0) |
| Have assessments determined ground water storage capacity? | Yes (+1) | No (0) |
| Have assessments determined ground water recharge rates? | Yes (+1) | No (0) |

[13] UNHCR. (1992). *Water Manual for Refugee Situations*. UNHCR Geneva, Switzerland. UNHCR. (2000). *Handbook for Emergencies*, UNHCR Geneva, Switzerland.

| | |
|---|---|
| **Reference #** | **E1** |
| **Indicator Title** | **IMPROVED ENVIRONMENTAL HEALTH OF REFUGEE COMMUNITIES** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Many environmental interventions and awareness raising campaigns require little time and resources but can have a substantial impact on the health conditions of refugee and local communities. Poor cooking habits and human interaction with livestock are two of the most prominent areas where environmental awareness can reduce health concerns. |
| **Guidelines** | • Strategies employed to prevent the transmission of zoonotic diseases from animals to humans: monitoring and screening of livestock diseases; location of abattoirs away from human settlements; proper disposal of abattoir waste; and location of animal watering locations downstream from camp/settlement.<br>• Prevention of smoke-related health problems due to fuel combustion through proper ventilation or avoiding fuels that burn inefficiently (poorly dried firewood, coal, poorly processed charcoal, etc.)<br>• Reduction of vectors through proper environmental sanitation procedures including hygiene and use of pesticides.<br>• Improved nutrition rates due to clean water supplies.<br>• Proper disposal of waste is essential in the reduction of sanitation related illnesses. |
| **Methods to be Applied** | • Monitoring environmental sanitation training and awareness raising campaigns by implementing partners to ensure environmental best practices.<br>• Regular random and pre-determined household visits.<br>• Promotion and follow-up of best practices through routine campaigns and publicity should be equally shared between community members and refugees.<br>• Camp enumerators trained and provided with appropriate data recording sheets. |
| **Data Interpretation** | Reduction in environment-related health problems/concerns. |

***E1 Improved environmental health of refugee communities***

| | **Score** | |
|---|---|---|
| Environmental awareness activities on health and sanitation reaching most vulnerable | Yes (+2) | No (0) |
| Incidence of smoke-related health problems decreasing | Yes (+1) | No (0) |
| Reduction in transmission of zoonotic disease | Yes (+1) | No (0) |
| Advice on how to improve environmental health transmitted and put into practice | Yes (+1) | No (0) |

| | |
|---|---|
| **Reference #** | **E2** |
| **Indicator Title** | **REDUCTION OF VECTOR BORNE DISEASES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Refugee camps are often set up in locations where shade and drinking water are available. Unfortunately, disease-carrying vectors also prefer these sites. To reduce diseases borne by insects and rodents, any vector control programme will be directed towards control of the environment first (sanitation and hygiene) and second through chemical treatment. |
| **Guidelines** | • Needs and resource assessment should be carried out to identify vectors and target areas as well as proper control methods.<br>• Compliance with WHO/UNHCR standards[14] and with environmental standards listed in the UNHCR handbook for emergencies[15].<br>• Clearing of weeds and brush around shelters will reduce the opportunities for mosquitoes to find resting places.<br>• Health education can raise awareness of measures such as waste collection, cleaning of dwellings, correct use of toilets, etc.<br>• The use of impregnated bed nets has proven to be very effective.<br>• Vector control through spraying must be weighed against potential ecological damage and development of resistance to pesticides. Routine and indiscriminate insecticide spraying should be resisted firmly. Pesticides should be used only as a last resort and their usage, dosage and application carefully adjusted so as to produce localised and specific effects on the target pests. Pesticide use must be accompanied by adequate storage facilities, concrete area for cleaning equipment, showers for workers. |
| **Methods to be Applied** | • Absolute change in vector borne diseases can be determined by comparing the situation in the local community before the refugees arrived (i.e. frequency of diseases) with the situation after the refugees arrived.<br>• Data on change in vector borne diseases can be collected through hospital statistics.<br>• Administering a questionnaire to a sample of the refugee population through community and refugee leaders. |
| **Data Interpretation** | Reduction in vector incidence will result in reduction of vector-borne diseases. |

***E2 Reduction of vector borne diseases***

| **Has there been a decrease in the following diseases since the last reporting period?** | **Score** | |
|---|---|---|
| Morbidity rates from vector borne diseases (i.e. malaria)? | Yes (+1) | No (0) |
| Mortality rates from vector borne diseases (i.e. malaria)? | Yes (+1) | No (0) |
| Incidence of diahorrea or dysentery? | Yes (+1) | No (0) |
| Incidence of typhus and cholera? | Yes (+1) | No (0) |

[14] UNHCR. (1997). *Vector and Pest Control in Refugee Situations*. UNHCR Geneva, Switzerland.
[15] UNHCR. (2000) *Handbook for Emergencies*, UNHCR Geneva, Switzerland.

| Reference # | **E3** |
|---|---|
| **Indicator Title** | **PROPER DISPOSAL OF HUMAN EXCRETA PRACTISED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | The safe disposal of human excreta prevents the spread of disease and promotes a safe environment, which ultimately benefits both the refugee and local communities. It is essential that basic sanitation standards are reached and maintained in refugee camps and settlements. |
| **Guidelines** | • Compliance with environmental standards listed in the UNHCR handbook for emergencies.[16]<br>• The ratio of seats to users should be at least 1:20<br>• The latrine to groundwater source distance should minimum 30 meters<br>• Family/individual units are preferred to communal units<br>• Latrines should be properly maintained and regularly cleaned (inside and outside) to avoid problems caused by smells, flies, etc.<br>• Community initiatives and environmental education programmes can teach individuals to care for latrines. |
| **Methods to be Applied** | • Random survey of facilities.<br>• Full survey of section/area of camp.<br>• Household questionnaire to assess refugee opinion and perception of sanitation facilities.<br>• Discussions with refugee leaders and environmental task force.<br>• Discussions with health centres. |
| **Data Interpretation** | Disposal methodologies of human excreta will improve and incidence of disease will decrease. |

***E3 Proper disposal of human excreta practised***

| | **Score** | |
|---|---|---|
| Are human excreta disposal methods technically appropriate? | Yes (+1) | No (0) |
| Are the methods socially and culturally acceptable? | Yes (+1) | No (0) |
| Is there at least one seat per 20 persons? | Yes (+1) | No (0) |
| Are toilets cleaned and maintained (i.e. no human excreta on floors)? | Yes (+1) | No (0) |
| Has a programme of family latrines been implemented? | Yes (+1) | No (0) |
| Are latrines located at least 30 metres from water courses? | Yes (+1) | No (0) |

[16] UNHCR. (2000) *Handbook for Emergencies*, UNHCR Geneva, Switzerland.

| | |
|---|---|
| **Reference #** | **F1** |
| **Indicator Title** | **IMPROVED GENERAL HEALTH AND NUTRITION** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | The state of the environmental directly affects the health and nutrition status of refugee and local communities. Every year deforestation leads to contamination of soil and water which undermines food production and safety. Desertification threatens irrigated land which impact agricultural products and range land degradation leads to decreased livestock numbers.<br>Physical and biological environments have major impact on health, and nutritional status. Sustainable policies are required to address the major environmental conditions affecting food and health situation. |
| **Guidelines** | • Environmentally friendly policies in shelter and general sanitation, soil degradation, erosion, deforestation, overgrazing, unsuitable land-practice use, conservation of fuel and energy sources and protection of the habitat impact positively upon health and nutrition conditions.<br>• Urbanisation, pollution and water quality have direct and immediate impacts on human nutrition status.<br>• Measures should be taken to alleviate any health hazards, especially related to food quality problems and water-borne diseases. |
| **Methods to be Applied** | • Regular sampling of refugees to ask them the questions below.<br>• Discussions with health and nutrition officials.<br>• Discussions with water and sanitation officials. |
| **Data Interpretation** | A healthy environment contributes to good nutritional status of refugees and local communities. |

***F1 Improved general health and nutrition***

| | **Score** | |
|---|---|---|
| Are health infrastructure and facilities available to the vulnerable? | Yes (+1) | No (0) |
| Are all needed services performed in these facilities? | Yes (+1) | No (0) |
| Is there consistent and reliable access to clean water? | Yes (+1) | No (0) |
| Are there sufficient sanitation facilities close to vulnerable households? | Yes (+1) | No (0) |
| Are communities educated on the links between environment and nutrition? | Yes (+1) | No (0) |

| | |
|---|---|
| **Reference #** | **G1** |
| **Indicator Title** | **ENCROACHMENT IN SENSITIVE AREAS** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Some refugee camps and settlements may be situated in, or close to, protected areas, nature reserves or other ecologically sensitive areas. Refugees are not always aware of the purpose of such areas and are often tempted to trespass to gather firewood, construction materials and wild foods or start farming and poaching. Such activities are detrimental to the ecological nature of such areas. Local and refugee communities should respect such protected areas. |
| **Guidelines** | • Refugee camps should be at least 15 km from sensitive areas (or a one-day return walk on foot) such as protected parks, game reserves, forest reserves, wetlands, etc.<br>• Are protected area / reserve boundaries known and are guards, sign posts, etc. in place?<br>• Have local and refugee communities been sensitised?<br>• Are laws restricting entry / movement in protected areas / reserves communicated and enforced?<br>• Are refugees abiding by regulations pertaining to entry / movements in the protected areas / reserves? |
| **Methods to be Applied** | • Discussions with local authorities illegal entry into ecologically sensitive areas (protected, reserves, etc).<br>• Define areas to be considered sensitive. Examination of maps and field surveys to determine boundaries of sensitive areas.<br>• Field observations on human movements in sensitive areas.<br>• Field surveys to determine type, extent and impact of refugee (as well as local community) activities in sensitive areas.<br>• Ensure clear demarcation of sensitive area boundaries.<br>• Ensure local and refugee communities are aware of the existence of the sensitive area. |
| **Data Interpretation** | Type and extent of encroachment in sensitive areas expressed against key human activities. |

***G1 Encroachment in sensitive areas***

| **After the arrival of refugees, have any of the activities listed below increased in the sensitive areas:** | **Score** | |
|---|---|---|
| wood extraction | Yes (0) | No (+1) |
| agricultural activities | Yes (0) | No (+1) |
| wildlife poaching | Yes (0) | No (+1) |
| refugee movement in the sensitive areas | Yes (0) | No (+1) |
| local community encroachment in the sensitive areas | Yes (0) | No (+1) |

| | |
|---|---|
| **Reference #** | **G2** |
| **Indicator Title** | **EROSION RESULTING FROM REFUGEE OPERATIONS** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Camp development activities – site clearing, infrastructure layout, road construction, etc. – often causes soil erosion. The reduction of vegetation cover, construction activities and use of heavy machinery decreases water infiltration into the soil. This leads to faster water run-off, which easily results in various types of erosion. Loss of vegetation combined with built-up areas also changes wind impact and can lead to wind erosion on exposed camp areas. |
| **Guidelines** | • Camps must be planned according to a drainage pattern. This in return must be determined according to the topography of the site. Failure to comply will in most cases result in soil erosion.<br>• Roads should be aligned across slopes, not up and down them, to avoid gully erosion. Gullies are a danger to people and livestock and can be costly to repair.<br>• Projects designed to mitigate soil erosion (i.e. planting of certain grass species on exposed soil) can be complemented with other programmes aimed at reducing the effects of environmental degradation by reforestation and nursery activities and using agroforestry to maximise crop yield while protecting the soil.<br>• Drainage systems should be established for the entire camp. |
| **Methods to be Applied** | • Identification of areas prone to soil erosion followed by regular monitoring.<br>• Surveys of gullies to determine if they are increasing. |
| **Data Interpretation** | Overview of current and future soil erosion patterns. |

***G2 Erosion resulting from refugee operations***

| | | **Score** |
|---|---|---|
| Have areas prone to soil erosion been identified? | Yes (+1) | No (0) |
| Has a drainage pattern for the whole camp been established? | Yes (+1) | No (0) |
| Has a drainage network been constructed? | Yes (+1) | No (0) |
| Are gullies increasing over time? | Yes (0) | No (+1) |
| Have measures to mitigate erosion been developed? | Yes (+1) | No (0) |
| Have measures to mitigate erosion been implemented? | Yes (+1) | No (0) |

| Reference # | G3 |
|---|---|
| **Indicator Title** | **INCREASED USE OF ENVIRONMENTALLY-FRIENDLY CONSTRUCTION TECHNOLOGIES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Shelter, and other constructions, account for a small but significant proportion of wood use in refugee camps, especially in the early stages of refugee situations. Shelter construction requires straight poles that are neither too thick nor too thin. Such poles are almost always cut from young, live trees - exactly the point in time where trees grow the most. Design and construction of refugee shelters using materials and techniques, such as packed earth, adobe and stone-block technologies, as well as cement blocks may be appropriate and feasible solutions. |
| **Guidelines** | • Formal and non-formal awareness raising campaigns can be effective in making people aware of environmental impacts of shelter construction.<br>• Demonstration sites help refugees appreciate the uses of environmentally friendly construction technologies.<br>• Skills training programmes (formal or more often non-formal) should accompany the introduction of environmentally friendly construction technologies.<br>• Engage extension workers to provide technical guidance and on-site training.<br>• All agency construction should make use of environmentally friendly construction materials and techniques.<br>• Production of environmentally friendly construction materials, such as mud bricks, can be facilitated through incentive programmes such as food for work, financial payments, etc. or even become part of income generation schemes.<br>• Rules and regulations for cutting trees must be in place. |
| **Methods to be Applied** | • Define environmentally friendly materials and techniques according to ecological situation.<br>• Set target for number of shelters and count the number of shelters built environmentally friendly and compare to target figure.<br>• Survey shelters being constructed and ask why they are being built with the material they are using. |
| **Data Interpretation** | Number of shelters constructed with environmentally friendly technologies. |

***G3 Increased use of environmentally-friendly construction technologies***

| **% of Target Shelters using Environmentally Friendly Construction Materials and Techniques** | **Score** |
|---|---|
| 0 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100 | +5 |

Note: if no target has been established, the overall score is zero.

| | |
|---|---|
| **Reference #** | **H1** |
| **Indicator Title** | **REFUGEE INVOLVEMENT IN ENVIRONMENTAL ACTIVITIES INCREASED** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | The principle that guides all community services work with refugees is that refugees should be seen as resources and partners in seeking desirable solutions so that they can meet their own needs. The main responsibility for meeting needs of refugees is understood to be with refugees themselves and the role of governments, UNHCR and other organisations is to facilitate the process. Refugee participation is fundamental to ensuring the long-term sustainability of environmental projects. |
| **Guidelines** | • To the extent possible, refugees should be involved in assessments, planning, implementation and managing services.<br>• A community-based approach is always preferred in refugee cycles.<br>• Refugee participation and self-management can counter the patterns of dependence that impede durable solutions.<br>• Refugees have resources within their communities such as: technical and practical knowledge and abilities, motivation, cultural understanding, language abilities and traditional natural resource protection strategies.<br>• Appoint local NGOs as community services implementing partners so that the facilitators can understand and meet community needs.<br>• Definition/identification of the community's roles and responsibilities.<br>• Practical and concrete training on daily tasks may be necessary. |
| **Methods to be Applied** | • Community service workers should survey the refugee population on the topics below through random sampling or organised questionnaires/surveys.<br>• Consult with refugee leaders and environmental task forces to ask the questions below |
| **Data Interpretation** | Increased involvement of refugee communities in environmental activities. |

***H1 Refugee involvement in environmental activities increased***

| | | **Score** |
|---|---|---|
| Have need identification, resource analysis and goal setting been conducted? | Yes (+1) | No (0) |
| Have the refugees identified their needs, resources and goals? | Yes (+1) | No (0) |
| Have the refugees mobilised their own resources? | Yes (+1) | No (0) |
| Are the refugees making use of outside resources? | Yes (+1) | No (0) |
| Have refugees developed their own system on leadership and operation? | Yes (+2) | No (0) |

| Reference # | **H2** |
|---|---|
| **Indicator Title** | **COMMUNITIES ARE MOBILISED AND TAKE OWNERSHIP OF ENVIRONMENTAL ACTIVITIES** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Community participation involves information dissemination, consultation and collaboration to support empowerment or the control of community groups over decisions and resources. The objective should be to respond to local, priority needs, build problem-solving skills, and promote ownership and care of local assets. Participatory processes are the key building block for achieving these objectives. In community-driven projects, participation implies that communities are in control of initiation, planning, implementation, operation, maintenance and evaluation of environment-related projects. Ownership is essential to sustainability and success of programmes. |
| **Guidelines** | • The key to a successful and sustainable environmental intervention is the demonstration of ownership and control by the local and refugee communities which they have over the process. If a community does not value the project, then it will cease as soon as outside assistance is stopped.<br>• Mobilising leaders of the refugee and local communities will reinforce the idea that projects are not imposed but rather they are jointly decided and of value.<br>• Involve environmental task forces (with refugee and local community representation) in the planning, decision-making and implementation stages of environment-related activities.<br>• Build upon traditional activities, skills and expertise.<br>• Pay attention to local knowledge and resources available.<br>• Employ local workers. |
| **Methods to be Applied** | • Community service surveys of the refugee population regarding their knowledge, uses and needs in terms of natural resources.<br>• Consultations with refugee leaders and environmental task forces can provide answers to some of the questions.<br>• Random sampling of refugees will give an indication of refugee's perception of environmental activities. |
| **Data Interpretation** | Refugee and local community's level of initiative and interest in environment-related activities. |

***H2 Communities are mobilised and take ownership of environmental activities***

| | **Score** | |
|---|---|---|
| Does a working Environmental Management Group exist including both refugees and local representatives? | Yes (+1) | No (0) |
| Do refugees informally discuss/promote environment activities among their peers? | Yes (+1) | No (0) |
| Do refugee leaders publicly support environmental interventions? | Yes (+1) | No (0) |
| Are refugees willing to assist in environmental activities without payment and/or compensation? | Yes (+2) | No (0) |

| | |
|---|---|
| **Reference #** | **H3** |
| **Indicator Title** | **INCREASED COMMUNITY PARTICIPATION IN ENVIRONMENTAL AWARENESS RAISING ACTIVITIES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | The arrival of a refugee influx greatly intensifies existing environmental problems in the areas of settlement. Unless they are aware of their responsibility to conserve the local environment, preventive measures without their involvement are unlike to succeed. Genuine mutual respect must be fostered for: (a) the traditional environmental knowledge; and (b) coping mechanisms. In managing the environment of refugee-effected areas, both are vital. |
| **Guidelines** | • Participation in decision making helps create environmental awareness.<br>• Fostering participation is the most cost-effective environmental measures that can be introduced. With very little money, the success of many technical measures can be greatly enhanced.<br>• Incentives to participation must be handled with consistency and sensitivity.<br>• Encourage the creation of an environmental task force, which can lead to community participation through representation. |
| **Methods to be Applied** | • Local land tenure arrangements, including usufruct rights to common land, must be considered in consultations over the environment.<br>• Community service workers should survey the refugee population on the topics below through random sampling or organised questionnaires/surveys.<br>• Consult with refugee leaders and environmental task forces to ask the questions below. |
| **Data Interpretation** | Refugee and local communities have input into planning, decision-making and implementation of environmental activities. |

***H3 Increased community participation in environmental awareness raising activities***

| | **Score** |
|---|---|
| Are refugee efforts to establish community social structures supported? | Yes (+1) No (0) |
| Are refugees participating in project planning and implementation? | Yes (+1) No (0) |
| Are refugees and local representatives included in the environmental task force? | Yes (+2) No (0) |
| Are environmental activities building on traditional environmental knowledge of refugees and local communities? | Yes (+2) No (0) |

| Reference # | **I1** |
|---|---|
| **Indicator Title** | **INCREASED APPLICATION OF SCHOOL-BASED ENVIRONMENTAL EDUCATION** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Environmental Education has been defined as: "… a permanent process in which individuals gain awareness of their environment and acquire the knowledge, values, skills, experiences and also the determination which will enable them to act individually and collectively to solve present and future environmental problems"[17] Environmental education, as such, can:<br>1. empower and equip refugees to take action to solve the environmental problems they face;<br>2. facilitate the community-building process; and<br>3. contribute to rehabilitation and sustainable development of the territory occupied by refugees. |
| **Guidelines** | • Refugees informed on the main environment-related topics: energy conservation, sustainable shelter, conservation of trees and other vegetation, soil conservation, water conservation, environmental health, local laws and traditions on natural resource use.<br>• Refugees apply environmental knowledge to daily activities<br>• Vulnerable groups such as elders, women and children prioritised. |
| **Methods to be Applied** | • Integrate environmental education within existing refugee school based projects, UNHCR and implementing partner school based environmental education initiatives.<br>• Respect the cultural norms, concepts and values of the refugee and local communities in school based activities.<br>• Involve refugees in determining objectives, initiating, implementing and managing school-based environmental projects.<br>• Involve country authorities in defining and implementing education projects. |
| **Data Interpretation** | Percentage of refugees practising environmentally-friendly techniques which have been taught in the schools. |

***I1 Increased application of school-based environmental education***

**Standing in the middle of the school compound – is there any evidence of the following environmental activities?**

| | **Score** |
|---|---|
| Are there environmental initiatives evident in the school compound? | Yes (+1) No (0) |
| Are measures in place to save fuel? (e.g. fuel-saving stoves, drying wood Using lids on cooking pots, etc.) | Yes (+1) No (0) |
| Are trees/plants protected? (e.g. fenced or protected from animals) | Yes (+1) No (0) |
| If water is stored in the compound, is it stored safely? (e.g. lids on Containers, kept away from latrines/garbage, etc.) | Yes (+1) No (0) |
| If there are latrines in the compound, are they kept clean? | Yes (+1) No (0) |
| Is waste collected in containers on the school compound? | Yes (+1) No (0) |

[17] UNEP / UNESCO / OECD, Paris, 1992, quoted in Refugee Environmental Education – a concept paper. UNHCR Geneva, July 1995.

| Reference # | I2 |
|---|---|
| **Indicator Title** | **IMPROVED GENERAL ENVIRONMENTAL AWARENESS DUE TO INFORMAL ENVIRONMENTAL EDUCATION PROJECTS** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | School-based environmental education does not stand alone. Awareness raising should form a crucial part of UNHCR's environmental strategy. A low level of refugee environmental awareness may be the root cause for environmental degradation and become a source of conflict with surrounding local communities. In order to modify refugee's behaviour into more environmentally-friendly actions, awareness raising is essential in addressing all age-, social-, and economic-groups. |
| **Guidelines** | • Promoting awareness for environmentally sound activities should be an important, if not integral, part of UNHCR's support.<br>• Awareness can be created through poster campaigns, drama skits, door to door information campaigns, informal discussions, etc.<br>• Cultural backgrounds and traditions, as well as gender specific roles, must be taken into account. |
| **Methods to be Applied** | • Interviews with random refugee groups to ask them the question below – in their answer do they name any of the key issues listed below?<br>• Periodic assessment of refugee participation.<br>• Baseline surveys to determine the level of refugee participation in environmental campaigns.<br>• Examination of existing records/literature. |
| **Data Interpretation** | Refugee's behaviour becomes more environmentally-friendly and actions less environmentally damaging. |

***I2 Improved general environmental awareness due to informal environmental education projects***

**Ask a refugee/group of refugee "What do you expect to find in a good and healthy environment?" DO NOT GIVE THEM THE ANSWERS but see if they mention any of these key issues:**

- ❑ Vegetation cover
- ❑ Clean water sources
- ❑ Good sanitation i.e. clean – well maintained latrines
- ❑ Proper methods of garbage disposal
- ❑ Controlled / well managed livestock
- ❑ Appropriate agricultural practices
- ❑ Healthy people i.e. limited occurrence of epidemic diseases
- ❑ No erosion
- ❑ Environmentally friendly construction techniques
- ❑ Any other specific issues to the area

| Responses | Score |
|---|---|
| Mentions none | 0 |
| Mentions 1 | +1 |
| Mentions 2 | +2 |
| Mentions 3 | +3 |
| Mentions 4 | +4 |
| Mentions 5+ | +5 |

| | |
|---|---|
| **Reference #** | **I3** |
| **Indicator Title** | **DECREASED ENVIRONMENTAL DAMAGE DUE TO ENVIRONMENTAL EDUCATION** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | A healthy environment helps assure the well-being and protection of the refugee population. Education should concentrate on long-term impacts and short-term public information messages on environmental protection to ensure that environmental damage is avoided. A widely-disseminated environmental awareness raising programme can directly impact all aspects of the environment from deforestation levels to water and sanitation programmes. |
| **Guidelines** | • Integrate environmental education awareness raising into existing refugee, UNHCR and implementing partner initiatives.<br>• Respect the cultural norms, concepts and values of the refugee and local communities.<br>• Motivate refugees to invest time and energy in their surroundings<br>• Involve refugees in determining objectives, initiating, implementing and managing environmental projects.<br>• Involve country authorities in awareness campaigns<br>• Awareness can be created through poster campaigns, drama skits, door to door information campaigns, informal discussions, etc. |
| **Methods to be Applied** | • Interviews with random refugee groups to ask them the question below – in their answer do they name any of the key issues listed below?<br>• Periodic assessment of refugee participation<br>• Baseline surveys to determine the level of refugee participation in environmental campaigns<br>• Interviews, using structured questionnaires, and assessment/surveys |
| **Data Interpretation** | Refugee's behaviour becomes more environmentally-friendly and incidence of environmental damage decreases. |

***I3 Decreased environmental damage due to environmental education***

**Ask a refugee/group of refugee "What things do you expect to find in a damaged and unhealthy environment?" DO NOT GIVE THEM THE ANSWERS but see if they mention any of these key issues:**

- ❑ Total loss of trees and other vegetation
- ❑ Contaminated / polluted / dirty water
- ❑ Decline in agricultural productivity / reduced yields
- ❑ Dirty and poorly maintained latrines
- ❑ Waste littered all over the compound
- ❑ Erosion leading to gullies
- ❑ Reduced livestock population
- ❑ Any other specific issues to the area

| Responses | Score |
|---|---|
| Mentions none | 0 |
| Mentions 1 | +1 |
| Mentions 2 | +2 |
| Mentions 3 | +3 |
| Mentions 4 | +4 |
| Mentions 5+ | +5 |

| Reference # | **I4** |
|---|---|
| **Indicator Title** | **INCREASED WATER CONSERVATION MANAGEMENT DUE TO ENVIRONMENTAL EDUCATION** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | In arid and semi-arid lands, access to water is the environmental factor which most affects refugee health and nutrition. One of the most crucial concepts to be conveyed through environmental education is the control of water losses by physical and biological measures and protection of water sources. |
| **Guidelines** | • Integrate environmental education awareness raising into existing refugee, UNHCR and implementing partner initiatives.<br>• Respect the cultural norms, concepts and values of the refugee and local communities.<br>• Motivate refugees to invest time and energy in their surroundings.<br>• Involve refugees in determining objectives, initiating, implementing and managing environmental projects.<br>• Involve country authorities and water conservation experts in awareness raising activities.<br>• Awareness can be created through poster campaigns, drama skits, door to door information campaigns, informal discussions, etc. |
| **Methods to be Applied** | • Interviews with random refugee groups to ask them the question below. Do they name any of the key issues listed below?<br>• Periodic assessment of refugee participation<br>• Baseline surveys to determine the level of refugee participation in environmental campaigns<br>• Interviews, using structured questionnaires, and assessment/surveys |
| **Data Interpretation** | Refugee's behaviour becomes more environmentally-friendly in the sector of water management. |

***I4 Increased water conservation management due to environmental education***

**Ask a refugee/group of refugee "What must we do to protect water from becoming dirty and unsafe?" DO NOT GIVE THEM THE ANSWERS but see if they mention any of these key issues:**

- ❑ Proper care / maintenance of water points
- ❑ Appropriate collection and water handling methods
- ❑ Rehabilitation of water sources (ponds, reservoirs and rivers)
- ❑ Proper storage methods at home and schools
- ❑ Livestock watering points separate from drinking sources
- ❑ Any other specific issues to the area

| Responses | Score |
|---|---|
| Mentions none | 0 |
| Mentions 1 | +1 |
| Mentions 2 | +2 |
| Mentions 3 | +3 |
| Mentions 4+ | +4 |

| | |
|---|---|
| **Reference #** | **I5** |
| **Indicator Title** | **IMPROVED ANIMAL HUSBANDRY PRACTICES DUE TO ENVIRONMENTAL EDUCATION** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | A massive influx of refugees with livestock will result in increased competition with local wildlife for rangeland and water resources. The results can range from conflict with surrounding communities to loss of vegetation and soil quality. |
| **Guidelines** | • Integrate environmental education awareness raising into existing refugee, UNHCR and implementing partner initiatives.<br>• Respect the cultural norms, concepts and values of the refugee and local communities.<br>• Motivate refugees to invest time and energy into their surroundings<br>• Involve refugees in determining objectives, initiating, implementing and managing environmental projects.<br>• Involve country authorities and animal husbandry experts.<br>• Awareness can be created through poster campaigns, drama skits, door to door information campaigns, informal discussions, etc. |
| **Methods to be Applied** | • Interviews with random refugee groups to ask them the question below. Do they name any of the key issues listed below?<br>• Periodic assessment of refugee participation.<br>• Baseline surveys to determine the level of refugee participation in environmental campaigns.<br>• Interviews, using structured questionnaires, and assessment/surveys. |
| **Data Interpretation** | Refugee's behaviour becomes less environmentally damaging in the sector of animal husbandry. |

***I5 Improved animal husbandry practices due to environmental education***

**Ask a refugee/group of refugee "What can owners of animals do to prevent possible negative effects of keeping large numbers of animals?" DO NOT GIVE THEM THE ANSWERS but see if they mention any of these key issues:**

- ❑ Flexible stocking methods
- ❑ Vaccinations campaigns
- ❑ Paddocking
- ❑ Construction of specific water points i.e. designating separate water points for animals and human beings
- ❑ Any other specific issues to the area

| Responses | Score |
|---|---|
| Mentions none | 0 |
| Mentions 1 | +1 |
| Mentions 2 | +2 |
| Mentions 3 | +3 |
| Mentions 4+ | +4 |

| | |
|---|---|
| **Reference #** | **I6** |
| **Indicator Title** | **DECREASED DEFORESTATION DUE TO ENVIRONMENTAL EDUCATION** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Deforestation is one of the highest-profile environmental concerns raised by host governments in refugee situations. Escalating deforestation rates are often addressed through tree planting and fuel saving stove projects, however these activities do not always reach the cause of the problem. Environmental education programmes to inform refugees and local communities of the detrimental effects of deforestation can potentially change their behaviour and reduce tree cutting before it occurs. |
| **Guidelines** | • Integrate environmental education awareness raising into existing refugee, UNHCR and implementing partner initiatives.<br>• Respect the cultural norms, concepts and values of the refugee and local communities.<br>• Motivate refugees to invest time in their surroundings.<br>• Involve refugees in determining objectives, initiating, implementing and managing environmental projects.<br>• Involve authorities and forestry experts in awareness raising.<br>• Awareness can be created through poster campaigns, drama skits, door to door information campaigns, informal discussions, etc. |
| **Methods to be Applied** | • Interviews with random refugee groups to ask them the question below – in their answer do they name any of the key issues listed below?<br>• Periodic assessment of refugee participation.<br>• Baseline surveys to determine the level of refugee participation in environmental campaigns.<br>• Interviews, using structured questionnaires, and assessment/surveys. |
| **Data Interpretation** | Refugee's behaviour becomes more environmentally-friendly and incidence of deforestation decreases. |

***I6 Decreased deforestation due to environmental education***

**Ask a refugee/group of refugee "What can we do to ensure that we always have enough trees for our needs?" DO NOT GIVE THEM THE ANSWERS but see if they mention any of these key issues:**

- ❑ Planting and managing trees that are adapted to the local environment
- ❑ Sustainable harvesting - knowing where and where not to cut trees
- ❑ Tree marking
- ❑ The use of energy saving practices and techniques
- ❑ Correct use of improved energy saving stoves
- ❑ Using alternative construction materials
- ❑ Any other specific issues to the area

| **Responses** | **Score** |
|---|---|
| Mentions none | 0 |
| Mentions 1 | +1 |
| Mentions 2 | +2 |
| Mentions 3 | +3 |
| Mentions 4 | +4 |
| Mentions 5+ | +5 |

| | |
|---|---|
| **Reference #** | **J1** |
| **Indicator Title** | **SUSTAINABLE AGRICULTURAL ACTIVITIES PRACTISED** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | The objective of farming is to harvest produce from the land, but in doing so, organic materials will be removed from the soil. If soils are to be able to sustain repeated cropping, nutrients and minerals must be replaced. With good husbandry, agricultural systems can be kept in balance over a long period. |
| **Guidelines** | <u>The principles of good husbandry are:</u><br>• respect land capability, conserve soil<br>• manage rainwater<br>• reduce runoff before attempting to control its flow<br>• maintain plant cover<br>• promote cooperation between technical staff and local communities<br>• adopt practices that will both increase yields and conserve water and soil.<br><u>Refugee agriculture can be considered sustainable when it:</u><br>• conserves ecological life-support systems and biodiversity<br>• ensures that uses of renewable resources are sustainable and minimises the depletion of non-renewable resources<br>• keeps within the carrying capacity of supporting systems. |
| **Methods to be Applied** | • Observation and discussions with relevant refugee committees/NGOs can help to obtain measures of the condition of the ecosystem: are agricultural production levels increasing or decreasing? Is water quality increasing or decreasing? Is the amount of vegetation cover increasing or decreasing?<br>• Measures of unsustainable agricultural practices can be viewed by the human impact: if water quality is decreasing then the incidence of disease will increase, if agricultural outputs are decreasing then the incidence of malnutrition may increase, etc. |
| **Data Interpretation** | Agricultural activities are within the land's carrying capacity. |

***J1 Sustainable agricultural activities practised***

| | | **Score** |
|---|---|---|
| Are agricultural activities taking place on slopes steeper then 20° | Yes (0) | No (+1) |
| Are refugees maintaining vegetation cover in agricultural areas? | Yes (+1) | No (0) |
| Is rainwater/irrigation water runoff controlled? | Yes (+1) | No (0) |
| Is animal manure recycled for use as fertiliser or fuel? | Yes (+2) | No (0) |
| Are land use plans developed and available? | Yes (+1) | No (0) |

| Reference # | **J2** |
|---|---|
| **Indicator Title** | **AGRICULTURAL ACTIVITIES CONTRIBUTE TO SOIL IMPROVEMENT** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Soil erosion is one of the main environmental problems resulting from refugee agriculture. Harvesting crops removes essential nutrients from the soil. As nutrients are taken from the soil, the results can include soil degradation, increased vulnerability of soils to erosion and decrease in soil fertility. Furthermore, the clearance of forest and savannah areas and the draining of wetlands for conversion to agricultural uses have detrimental effects on the soil structure. It is, therefore, important to encourage sustainable agricultural practices where possible. |
| **Guidelines** | • Compliance with UNHCR Agricultural Environmental Handbook[18]<br>• Clearing land for cultivation exposes soil to the battering effects of rain which results in diminished percolation of rainwater and increased runoff. When water runs off rapidly, it can carry soil away.<br>• Training on sustainable agriculture including protection of water points, terracing on steep slopes, irrigation systems, seed harvest and storage, vegetation clearance and organic farming.<br>• Cultivation on steep hillsides should be avoided.<br>• When the surface of the soil is dry and unprotected by vegetation wind erosion is often the result. Bare land should be covered in mulch – cut grass or other vegetable refuse such as straw and maize stalks – to conserve moisture, increase water filtration and reduce evaporation. |
| **Methods to be Applied** | • Soil degradation can be measured by visual observations against baselines such as: profile, texture, permeability, depth, stoniness, presence of rock under subsoil, etc.<br>• Visual estimation of increased agricultural activities on steep slopes.<br>• Mapping sensitive areas for baseline data and ongoing monitoring and evaluation |
| **Data Interpretation** | Data analysis should indicate if soil quality is decreasing in areas characterised by agricultural activities. |

***J2 Agricultural activities contribute to soil improvement***

| | | **Score** |
|---|---|---|
| Are crops rotated regularly? | Yes (+1) | No (0) |
| Are organic inputs such as manure used in agriculture? | Yes (+1) | No (0) |
| Do home gardens have a diversity of crops? | Yes (+1) | No (0) |
| Is agricultural land allowed to lay fallow? | Yes (+1) | No (0) |
| When land is cleared for agriculture is some vegetation cover left such as trees or plants? | Yes (+1) | No (0) |

[18] UNHCR. (2002). A Handbook for Promoting Sound Agricultural Practise in Refugee-Related Operations, UNHCR, Geneva.

| | |
|---|---|
| **Reference #** | **J3** |
| **Indicator Title** | **AGRICULTURAL PRACTICES DO NOT LEAD TO POOR WATER QUALITY** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Intensive agriculture can reduce water quality substantially if water runoff, leaching and water extraction levels are not monitored and maintained as a stable and sustainable level. As a general rule, the less external and synthetic inputs which are added to agricultural areas, the less risk there is of harming the water quality. |
| **Guidelines** | • Excessive irrigation wastes large quantities of water, leaches out soil nutrients and creates problems of secondary salinisation and alkalinisation.<br>• Over-exploitation of groundwater for irrigation can lead to the depletion of groundwater resources in arid areas.<br>• Inadequately designed and operated irrigation systems can create favourable ecological conditions for water-borne diseases.<br>• Unless the use of water that is of marginal quality is carefully managed and monitored, it could lead to salinization, deterioration of the quality of groundwater, or outbreaks of cholera, typhoid and other diseases.<br>• Pesticides and fertilisers are often leached into drainage water causing pollution of surface and coastal waters into which drainage water is discharged. |
| **Methods to be Applied** | • Evidence of poor water quality – incidence of water borne diseases<br>• Analysis of project reports<br>• On site investigation of water characteristics.<br>• Discussions with water refugee groups and/or NGOs on technician's water quality estimations. |
| **Data Interpretation** | Data analysis should indicate if agricultural activities are resulting in poor water quality. |

***J3 Agricultural practices do not lead to poor water quality***

| | | **Score** |
|---|---|---|
| Are incidences of water borne diseases increasing in agricultural areas? | Yes (0) | No (+2) |
| Are inorganic fertilisers used? | Yes (0) | No (+1) |
| Is there evidence of pesticide/fertilizer runoff into water supplies? | Yes (0) | No (+1) |
| Is water availability decreasing over time? | Yes (0) | No (+1) |

| | |
|---|---|
| **Reference #** | **J4** |
| **Indicator Title** | **ADEQUATE SUPPORT PROVIDED FOR AGRICULTURAL ACTIVITIES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | When authorities allow refugees to engage in sustainable agricultural practices it may be necessary, on occasion, to provide initial and follow-up training to familiarise them with local soil and climatic conditions, as well as seed varieties, so that their they might extract maximum benefits and not degrade the local environment. UNHCR might be able to provide some basic assistance but it is preferable that support comes from local institutions – government and non-governmental. This may involve capacity building measures for local counterparts and partner agencies. |
| **Guidelines** | • Refugees should be made familiar with the local conditions in which they find themselves.<br>• The most appropriate forms of agricultural support for refugees in given conditions should be identified.<br>• Inputs must given at the appropriate time to ensure maximum growing time and benefits from rainy seasons.<br>• Local agencies should assisting and/or manage training and provision of basic tools and/or seeds.<br>• Refugee agriculture should be integrated with local communities as much as possible? |
| **Methods to be Applied** | Field surveys and interviews with refugees, local communities, village and refugee committees, local agencies and authorities, and extension services. |
| **Data Interpretation** | Agricultural activities benefit from support and extension services provided by the international community and local authorities. |

***J4 Adequate support provided for agricultural activities***

| | **Score** | |
|---|---|---|
| Is training and support provided to the refugees by local groups or institutions? | Yes (+2) | No (0) |
| Are local traditional agricultural activities practised? | Yes (+1) | No (0) |
| Are agricultural capacity building programmes taking place linking refugee and local groups? | Yes (+1) | No (0) |
| Is participation of vulnerable groups encouraged? | Yes (+1) | No (0) |

| | |
|---|---|
| **Reference #** | **J5** |
| **Indicator Title** | **NUMBER OF TREES IN HOME GARDENS INCREASED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | People will cut trees and remove regenerating stumps from the land surrounding their homes to make available land for agricultural expansion. With environmental education, people will start to grow crops between trees, thereby benefiting from agroforestry techniques and supporting natural regeneration. In this way, they will continue to receive forest products from home gardens and the performance of agricultural crops will improve with the introduction of shade, nitrogen-fixing trees and soil cover. |
| **Guidelines** | • Number of trees and stumps in the area before establishment of home gardens<br>• Number and types of trees grown in conjunction with home gardens.<br>• Size/area under home gardening per household<br>• Types of trees and crops being grown should compliment each other not conflict. |
| **Methods to be Applied** | • Visual comparisons<br>• Surveys and inventories of oral accounts – how many trees were there: (1) before the refugee camp was erected; (2) after people started to retain trees; and (3) now?<br>• Baseline data to be determined through examination of available data, including maps, aerial photos, land use plans, etc. |
| **Data Interpretation** | Percentage of existing trees and stumps compared with status of land at baseline (to be determined on case-by-case basis). |

***J5 Number of trees in home gardens increased***

| **% of trees/stumps compared with baseline** | **Score** |
|---|---|
| 0-9 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100 | +5 |
| >100 | +6 |

Note: if no baseline data has been established, the overall score is zero.

| | |
|---|---|
| **Reference #** | **K1** |
| **Indicator Title** | **LIVESTOCK NUMBERS ARE AT A SUSTAINABLE LEVEL** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Refugees can derive many advantages from small-scale livestock keeping, but this should remain at an acceptable level for local situations. While pastoral livestock production is seen as an appropriate and sustainable form of land use in arid and semi-arid zones, a sudden increase in stock numbers and/or prolonged period of grazing can prove highly damaging to the local environment. The number (and type) of refugee livestock which can be kept depends on the grazing areas made available. Special attention needs to be given to the risk of overgrazing, which leads to degradation of the vegetation cover, soil compaction and conflicts with local livestock owners. |
| **Guidelines** | • Determine the local carrying capacity with respect to the number of livestock (cattle, sheep, goats and camels, in particular) kept by refugee and local communities.<br>• Check that traditional local knowledge has been sought to determine the most effective stocking regimes, grazing patterns, and range management improvement procedures.<br>• Ensure that crop protection measures are in place. |
| **Methods to be Applied** | • Occasional local surveys to determine carrying capacity, livestock numbers, ownership and movement patterns within the area around the refugee camp/settlement.<br>• Interviews with all stock-holders from local villages and refugee communities. |
| **Data Interpretation** | Data from the above-mentioned surveys should provide the necessary information for the following analysis. |

***K1 Livestock numbers are at a sustainable level***

| | **Score** | |
|---|---|---|
| Local carrying capacity determined | Yes (+1) | No (0) |
| Access to grazing areas controlled | Yes (+1) | No (0) |
| Rotational grazing practised | Yes (+1) | No (0) |
| Mixed stocking practised | Yes (+1) | No (0) |
| Adequate amounts of fodder available in the area in order to feed livestock. | Yes (+2) | No (0) |

| | |
|---|---|
| **Reference #** | **K2** |
| **Indicator Title** | **LIVESTOCK CONTRIBUTE TO REFUGEE AND LOCAL COMMUNITY'S WELL-BEING** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Traditional knowledge systems used by local pastoral groups to evaluate the carrying capacity of rangelands are based on subjective monitoring of environmental indicators such as plant composition, quantity and quality of forage, degradation of the rangeland, behaviour of wildlife, etc. Interventions such as the development of grazing strategies, pasture improvement, water harvesting projects etc., should draw upon this local knowledge. |
| **Guidelines** | • The presence of refugee's livestock should not give rise to conflict with local communities over resource access and allocation. In order to mitigate conflicts on resources between refugee livestock owners and local farmers or pastoralists, responsible and trustful persons from the refugee and local population should be brought together to promote mutual understanding of the problems.<br>• By-products of agricultural production can be used as animal fodder.<br>• Crop, tree and livestock production systems should be integrated to maximise nutrient recycling.<br>• In countries with sugar-processing industries, Urea-Molasses Mineral Blocks (UMMB) can be produced.<br>• Female breeding stock is needed to ensure self-sufficiency upon repatriation. |
| **Methods to be Applied** | • Systematic structured interviews with stock-holders from local villages and refugee communities<br>• Promotion of income generation activities through small animal keeping (i.e. goats milk, poultry eggs, fish, etc.) |
| **Data Interpretation** | • Refugee and local communities becoming more economically independent, allowing them to purchase more and be less reliant of outside assistance; or<br>• Livestock keeping helps improve surrounding natural resources, thereby contributing to success in other sectors (i.e. nutrition, agriculture, etc.). |

***K2 Livestock contribute to refugee and local community's well-being***

| | | **Score** |
|---|---|---|
| Traditional systems of pasture improvement used by local pastoralist groups practised | Yes (+1) | No (0) |
| Agricultural by-products used as animal fodder or fertiliser | Yes (+1) | No (0) |
| Livestock contribute to income generation activities | Yes (+2) | No (0) |
| Livestock contributes to the refugee food basket | Yes (+1) | No (0) |

| Reference # | K3 |
|---|---|
| **Indicator Title** | **SUFFICIENT LIVESTOCK EXTENSION SERVICES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | All extension activities related to environmentally adapted livestock production must be accompanied by training and public information campaigns to be sustained in the longer-term. Such efforts to disseminate information should convey messages on proper resource utilisation, livestock husbandry, diseases (including zoonoses), food hygiene and other related topics. |
| **Guidelines** | • Animal waste should be recycled for agricultural purposes or fuel.<br>• Outsiders or preferably local experts should provide community animal health care. Topics covered should include livestock disease prevalence and proper use of veterinary drugs taught to refugee and local communities? |
| **Methods to be Applied** | • Vaccination campaigns carried out for refugee and local populations<br>• Assessment of alternative strategies for disease control carried out with refugee and local populations.<br>• Systematic monitoring and screening of livestock diseases<br>• Extension services focused on training local veterinary specialists |
| **Data Interpretation** | Extension services have provided refugee and local communities with livestock-related knowledge, which they can then apply to daily situations. |

***K3 Sufficient livestock extension services***

| | **Score** | |
|---|---|---|
| Support provided to animal husbandry sector | Yes (+1) | No (0) |
| Disease control strategies taught to refugees | Yes (+1) | No (0) |
| Disease prevention activities carried out | Yes (+1) | No (0) |
| Livestock water holes protected and separated from human use | Yes (+1) | No (0) |
| Livestock income generation activities explored | Yes (+1) | No (0) |
| Faecal material removed/recycled for agricultural purposes | Yes (+1) | No (0) |

| Reference # | **M1** |
|---|---|
| **Indicator Title** | **CHANGE IN VEGETATION COVER** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Change in local vegetation cover is often the most direct impact associated with an influx and the establishment of refugee camps/settlements. The negative impacts of fuelwood gathering, wood harvesting for building materials and the collection of forage materials for livestock is most often experienced within a one-day walk (approx. 10km) from camps/settlements. Comparing historical data (descriptions from local elders, maps, drawings, etc) with the current status of ground cover within a 10-km radius of camps/settlements would indicate overall change. Continued monitoring should provide an indication of clearance trends as well as an indication of the effectiveness of remedial actions being taken. |
| **Guidelines** | • Area and density of vegetation cover prior to arrival of refugees. If not known, the most complete, recent data should be used.<br>• Determine the current extent of ground cover ($m^3$ of woody biomass per hectare) within a 10-kilometre radius of camp/settlement.<br>• Identify the main causes of local vegetation removal.<br>• Check and review what actions have been implemented to control vegetation clearance. |
| **Methods to be Applied** | • Examination of historical aerial photos, satellite images, maps, etc., prior to the arrival of refugees.<br>• Up-to-date aerial photos or satellite images, supported with ground truthing, to determine present status of vegetation cover within the defined area.<br>• Community-based rural appraisals. |
| **Data Interpretation** | Extent of ground cover compared with pre-refugee status. Area to be a percentage of "original" – prior to the arrival of refugees – cover. |

***M1 Change in vegetation cover***

| Current area of cover as a % of former status | Score |
|---|---|
| 0-9 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100+ | +5 |

Note: In this instance "former status" refers to the situation before the arrival of refugees. Historical records should therefore be consulted. "Vegetation cover" to be defined by Focal Points.

| | |
|---|---|
| **Reference #** | **M2** |
| **Indicator Title** | **AREA OF DEGRADED LAND** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Land degradation, while not exclusively associated with the presence of refugees in a particular region, is often exacerbated by the increased pressure on fragile land resources brought about by displaced people needing to satisfy their basic needs. Resulting land degradation can, however, be quite extensive — following removal of vegetation cover, overgrazing and inappropriate agriculture — and can often influence a government's attitude towards asylum. This indicator will assess the extent of current land degradation, realise the underlying reasons for such problems, and evaluate measures being taken, or needed, to rectify the situation. |
| **Guidelines** | • Area of degraded lands within a 10-kilometre radius around camps/settlements.<br>• Discuss and record remedial actions that have been taken locally.<br>• Training and assistance should be provided to assist local communities and refugees in mitigating land degradation. |
| **Methods to be Applied** | • Field surveys to measure extent of degradation, especially extent and rate of gully formation.<br>• Comparison of data with historical records —rural community participation assessment results, aerial photographs, ground maps.<br>• Local surveys to determine causes of degradation.<br>• Meetings with local authorities, and refugee and local councils to discuss problems and identify solutions and action programmes.<br>• Soil samples. |
| **Data Interpretation** | Data could be represented as a measure of the area adversely affected by complete removal of ground cover, the extent of erosion and the area affected by gullies. The cumulative area affected per camp/settlement would serve as the indicator. |

***M2 Area of degraded land***

| **Percentage of degraded land within 10-km radius compared to former status** | **Score** |
|---|---|
| >20% | 0 |
| 15-20% | +1 |
| 10-14% | +2 |
| 5-9% | +3 |
| <5% | +4 |

Note: "Degraded land" should be defined by focal points based on the concept of land where agricultural activities are no longer possible.

| | |
|---|---|
| **Reference #** | **M3** |
| **Indicator Title** | **NUMBER OF SEEDLINGS PRODUCED 'V' TARGET** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | This component covers two vital elements of support: first, in terms of establishing a pre-determined target for annual production; second, in ensuring that adequate maintenance is provided to ensure high germination and survival rates in tree nurseries. |
| **Guidelines** | • Clear objectives should be established each year regarding the number of seedlings to be produced.<br>• At the outset of planting, consideration should be given to the desired end result – are trees required for agroforestry, fuel, and fruit? The ratio of seeds planted, and different species used, should reflect local, identified needs.<br>• If no target was set for nursery production at the outset, then the final score for that nursery in 0. |
| **Methods to be Applied** | • Need assessment records of refugee and local communities.<br>• Physical count of the number of each species when cutting roots prior to final planting.<br>• Nursery log book records. |
| **Data Interpretation** | Data might be interpreted in the following manner:<br>• Percentage of surviving seedlings compared with initial seed germination after singling in polythene bags.<br>• Percentage of surviving seedlings compared with initial planting of seeds.<br>• Percentage of surviving seedlings compared with target set at outset of planting season.<br>• Survival rates of different species. This will help lead to more selective planting of species adapted to specific climatic conditions.<br>• Particular attention should be given to the survival rates of indigenous 'v' non-native species. |

***M3 Number of seedlings produced 'v' target***

| **Seedling survival rate in nursery (% of target reached)** | **Score** |
|---|---|
| 0-9 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100 | +5 |

Note: if no production target has been established then the overall score is zero.

| | |
|---|---|
| **Reference #** | **M4** |
| **Indicator Title** | **TREE NURSERY BEST PRACTICES INTRODUCED AND FOLLOWED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Managing tree nurseries includes three vital elements: first, in terms of establishing a pre-determined target for annual production; second, in ensuring that adequate maintenance is provided to ensure high germination and survival rates at the nursery level; third, instilling a commitment to sustainability in the beneficiary group. This will help to ensure that seedling survival rates are not only high, but continued by the target population after outside assistance has finished. |
| **Guidelines** | • Clear objectives should be established each year regarding the number of seedlings to be produced.<br>• At the outset of planting, consideration should be given to the desired end result – are trees required for agroforestry, fuel, and fruit? The ratio of seeds planted, and different species used, should reflect local, identified needs.<br>• It is better to exchange a portion of the seeds for a contribution from the beneficiaries (i.e. cash, labour, commitment) to reinforce development approach and commitment to sustainability.<br>• Dissemination of seedlings should be based on an assessment of interest and skills-capacity within the target group not on an equitable basis.<br>• Seedlings must be distributed when water is most readily available – not year round or at the end of a rainy season. |
| **Methods to be Applied** | • Physical counts of each species when cutting roots prior to final planting.<br>• Nursery log book records. |
| **Data Interpretation** | Survival rates of different species under the care of different beneficiaries. This will help lead to more selective planting of species adapted to specific climatic conditions. Particular attention should be given to the survival rates of indigenous 'v' non-native species. |

***M4 Tree nursery best practices introduced and followed***

| | Score | |
|---|---|---|
| Have 75% of the target* seedlings survived in the nursery? | Yes (+2) | No (0) |
| Were a portion of seedlings exchanged for a contribution from the target group? | Yes (+1) | No (0) |
| Were seeds disseminated according to skill and interest assessments? | Yes (+1) | No (0) |
| Were seedlings disseminated at proper the planting time? | Yes (+1) | No (0) |

*Note: if no production target has been established then the overall score is zero

| Reference # | **M5** |
|---|---|
| **Indicator Title** | **NUMBER OF SURVIVING SEEDLINGS AT END OF FIRST GROWING SEASON** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | As nursery production rates may present a biased account of the efficiency of reforestation programmes, it is necessary to determine the survival rate of seedlings, both on common ground and in and around homesteads and other establishments. Separate records should be kept of each zone as a higher/lower performance in one might reflect some meaningful difference in management and aftercare. |
| **Guidelines** | • Depending on local conditions, aftercare and maintenance may be required following planting out.<br>• Some degree of replanting may be required. (According to UNHCR's Forestry Guidelines "*If more than 10 per cent of the planted trees have died, one would normally consider to replant those empty spaces*".) |
| **Methods to be Applied** | Survival rates should be measured at the end of the first growing season. Methods might vary from one situation to another, depending on topography and existing vegetation (seasonal growth of long grasses might, for example, make line-of-sight or direct transects difficult). The following should be considered in the first instance:<br>• Field transects recording the number of surviving seedlings. If the area is too large to cover on a regular system, samples should be taken along, for example, every fifth row, with the number of surviving plants being recorded as a percentage of the area sampled.<br>• Number of seedlings replanted.<br>• Individual counts in smaller areas such as gardens, schools, and homesteads. |
| **Data Interpretation** | • Number of surviving seedlings after first season.<br>• Approximate numbers of different species surviving (optional).<br>• Survival rates in different settings (e.g. in and around homesteads, school grounds, and common ground). |

***M5 Number of surviving seedlings in current year***

| **Seedling survival rate at end of first growing season (% of total transplanted/camp)** | **Score** |
|---|---|
| 0-9 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100 | +5 |

| Reference # | **M6** |
|---|---|
| **Indicator Title** | **INCREASED REFUGEE INVOLVEMENT IN PLANNING/MANAGING FOREST RESOURCES AND TREE NURSERIES** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Experience has shown that refugees (and local communities) are more likely to care for natural resources, such as trees, if they are involved with planning and managing forest resources from which they might receive direct benefits, particularly wood resources, fruits, etc. Establishment of tree nurseries, one of the most visible elements of UNHCR's environmental activities, requires adequate training for refugees and local people involved. |
| **Guidelines** | • What is the extent of refugee participation in forest-related activities? The ratio of refugees employed should **at least** equal that of local people.<br>• Is refugee involvement in forestry activities having a positive impact on the local environment?<br>• In tree nurseries: employees should receive minimum basic training in nursery establishment, and care and management; clear targets should be set for production of all species, as reflected within the nursery management plan; and responsibility should be assigned to a nursery manager for maintaining accurate records of labour time and production figures.<br>• Special efforts should be made to ensure equitable participation of women |
| **Methods to be Applied** | • Enumeration of refugees working in forest-related activities.<br>• On-site interviews, recordings, investigations, examination of nursery records. |
| **Data Interpretation** | Data from the above considerations should be self-explanatory in addressing the topics featured below |

***M6 Increased refugee involvement in planning/managing forest resources and tree nurseries***

| | **Score** | |
|---|---|---|
| Management plan developed and implemented with local and refugee leaders | Yes (+1) | No (0) |
| Basic training provided to workers | Yes (+1) | No (0) |
| Refugee participation in nursery work | Yes (+1) | No (0) |
| Seedling preferences predetermined | Yes (+1) | No (0) |
| Equitable participation of vulnerable groups | Yes (+1) | No (0) |

| | |
|---|---|
| **Reference #** | **M7** |
| **Indicator Title** | **LAND SET ASIDE FOR FALLOW/REGENERATION** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Loss of ground vegetation cover and concomitant over-exploitation of soils for grazing and/or agriculture are among the main reasons for soil erosion. Area closures can be effective for regeneration of depleted natural resources. Indigenous vegetation often regenerates fairly quickly under a proper system of management and, thus, may be cheaper and more effective than replanting. Area enclosures do, however, depend on support from the local population, so it is essential that local people are included in discussions relating to selecting land to set aside, and that they contribute in some way to ensuring that management decisions are respected and upheld. |
| **Guidelines** | • Area of land (ha) set aside for regeneration.<br>• Number of people (local communities and refugees) involved in programme.<br>• Resultant changes in ground vegetation cover. |
| **Methods to be Applied** | • Ground surveys and (where required) aerial photographs.<br>• Current data comparison with historical information – pre-refugee status. |
| **Data Interpretation** | The accumulated data will provide information on the following:<br>• Area of land (ha) set aside for natural regeneration.<br>• Change in local vegetation cover as a direct result of set aside.<br>• Number of people willing to participate in such projects. |

***M7 Land set aside for fallow/regeneration***

| **Land set aside for fallow/regeneration as % of total camp/settlement surface area** | **Score** |
|---|---|
| 0 | 0 |
| 1-9 | +1 |
| 10-19 | +2 |
| 20-29 | +3 |
| 30-39 | +4 |
| >40 | +5 |

Note: Total land area set aside may be expressed as the cumulative total for each camp/settlement. Definition of "Land Set Aside" to be determined by Focal Points.

| | |
|---|---|
| **Reference #** | **N1** |
| **Indicator Title** | **HOME GARDENS CONTRIBUTE TO INCOME GENERATION** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Refugees generally leave the majority of their possessions behind when fleeing. Relief organisations rarely provide all required materials to satisfy individual needs and camp situations don't usually provide much income generation opportunities. Given that many refugees have a rich agricultural background, home gardening and agriculture can provide opportunities for refugees generating income through sales of agricultural products. Government policy normally allows home gardening and in-camp agriculture, refugees should be assisted to raise their standards of living through this activity. |
| **Guidelines** | • Launch awareness raising campaigns.<br>• Provide small scale credit opportunities.<br>• Provide initial agricultural inputs such as seeds and tools.<br>• Identify markets for agricultural products.<br>• Provide extension services to farmers. |
| **Methods to be Applied** | • Field observations in changes to standard of living.<br>• Analysis of production trends.<br>• Analysis of market sales.<br>• Household interviews. |
| **Data Interpretation** | Change in refugees' standard of living. |

***N1 Home gardens contribute to income generation***

| **% household income increase of target group active in agriculture and/or home gardens** | **Score** |
|---|---|
| 0-9 | 0 |
| 10-19 | +1 |
| 20-39 | +2 |
| 40-59 | +3 |
| 60-79 | +4 |
| 80-100 | +5 |

Note: if no target has been established then the overall score is zero.

| | |
|---|---|
| **Reference #** | **N2** |
| **Indicator Title** | **INCOME GENERATION ACTIVITIES ARE ENVIRONMENTALLY-FRIENDLY** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | Refugee settlements provide new skills, labour and markets and can stimulate new opportunities for income-generating activities which may have environmental impacts. A variety of new or expanded income-generation activities are likely to develop, including firewood, expansion of agriculture, stone crushing, lime burning or charcoal making. Many of these activities have environmental implications as they directly depend on local natural resources. |
| **Guidelines** | • *Income-generating activities should have broad objectives and include more than paid labour*. Refugees are often employed on a short term basis to carry out environmental tasks, for example as nursery attendants, forest guards or extension workers. Other initiatives should be put in place that promote longer-term and more sustainable income generating opportunities.<br>• *Income-generating activities can include the sustainable use of natural resources*. Adding value to natural resources can help in their protection. It may also provide a variety of income-generating possibilities for refugees and local people, such as honey collection, tapping for gums and incense, or collection and sale of animal fodder.<br>• *Disincentives can minimise adverse environmental impacts*. Income-generating activities which are environmentally damaging are often difficult to control through regulation. Disincentives such as levies/licences or the promotion of alternatives are more likely to lead people away from activities which may have negative environmental impacts. |
| **Methods to be Applied** | • Field observations in changes to standard of living<br>• Household interviews<br>• Analysis of market sales |
| **Data Interpretation** | Increase in refugees' standard of living with no decrease in environmental state. |

***N2 Income generation activities are environmentally-friendly***

| | Score | |
|---|---|---|
| Are natural resources exploited sustainably? | Yes (+2) | No (0) |
| Do plans for natural resource use extend past one growing season? | Yes (+1) | No (0) |
| Are energy efficient techniques used in income generation activities? | Yes (+1) | No (0) |
| Are refugees encouraged to replace what they take from nature? | Yes (+1) | No (0) |
| Are environmentally friendly income generation projects promoted and/or supported within camps and local communities? | Yes (+1) | No (0) |

| Reference # | O1 |
|---|---|
| **Indicator Title** | **REFUGEES HAVE USAGE RIGHTS TO NATURAL RESOURCES** |
| **Indicator Type** | Impact |
| **Rationale and Objectives** | It is not realistic to expect refugees, or indeed any community, to care for their local environment without addressing user rights to the area's natural resources. It is not always practical to expect host governments to designate land for the exclusive use of refugees, particularly in the short-term, outside the actual limits of their settlement. Nevertheless, the adverse environmental implications off limiting refugee user rights should be made clear to governments in order that they might make considered decisions relating to access and usufruct. |
| **Guidelines** | • Compliance with UNHCR Environmental Guidelines[19].<br>• Access to land is of fundamental importance in areas of refugee origin and is part of the process of building sustainable livelihoods based on the fundamentals of security of residence and tenure.<br>• Attempts to promote sustainable resource management are far more likely to succeed where people who use land have some form of security of tenure or usufruct. This applies as much to refugees as to any rural community.<br>• Where land access is banned or restricted, refugees are more likely to undertake unsustainable practices.<br>• The least desirable option is for refugee access to be banned by national decree and then tolerated at the local level. Under these conditions, refugees exploit natural resources showing no long-term interest in conservation.[20] |
| **Methods to be Applied** | • Assessment of usage rights for refugees and local communities.<br>• Discussions with refugee and local community leaders.<br>• Discussions with local authorities |
| **Data Interpretation** | Refugee usage rights to natural resources are adequate to encourage environmentally-friendly practices. |

***O1 Refugees have usage rights to natural resources***

| | Score | |
|---|---|---|
| Do refugee and local communities have equal usage rights to natural resources? | Yes (+2) | No (0) |
| Have refugees' rights to natural resources been determined in consultation with local communities | Yes (+1) | No (0) |
| Are national usage rights enforced at the local level? | Yes (+1) | No (0) |
| Is land access denied to refugees? | Yes (+0) | No (+1) |

[19] UNHCR. (1996). *UNHCR Environmental Guidelines*. UNHCR Geneva.
[20] UNHCR. (1998). *Refugee Operations and Environmental Management - Selected Lessons Learned*. UNHCR Geneva, Switzerland.

| | |
|---|---|
| **Reference #** | **O2** |
| **Indicator Title** | **PREVENTION/REDUCTION OF SEXUAL GENDER BASED VIOLENCE** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | A key activity in the prevention of sexual gender based violence is to identify high-risk circumstances. It is well known that females moving in isolated areas are at great risk of assault. Collecting wood for fuel, gathering good or water or walking long distances for trading are all high-risk activities. Many refugees, as well as the poorer and more vulnerable families, do not have the financial resources to purchase firewood: many collect wood for sale because they lack alternative income sources. |
| **Guidelines** | • Empower community leaders and the refugee guard networks in camp settings.<br>• Sensitise and increase the capacity of the local police to discharge its responsibilities effectively.<br>• Set minimum standards for security.<br>• Design camps in a way that reduces women's exposure to attacks.<br>• Ensure that a number of female security personnel are among the police or other law enforcement agencies in or near the camps.<br>• Establish community guard units, which are from the refugee community itself.<br>• Provide refugee women with escorts when they leave the area to collect firewood or water or to trade or engage in other forms of income generating activities. |
| **Methods to be Applied** | • Rape statistics from local health centres.<br>• Random surveys of households which collect firewood to determine who collects wood, how much time is spent on a weekly/monthly basis collecting wood, any concerns/dangers associated with fuel collection, etc.<br>• Discussions with community leaders, community services personnel and women-headed households. |
| **Data Interpretation** | Reduction in violence towards women when they are along (collecting natural resources, performing agricultural activities, etc) |

***O2 Prevention/reduction of sexual gender based violence***

| | | **Score** |
|---|---|---|
| Are women required to walk further each month for resources? | Yes (+1) | No (0) |
| Do women feel safe when leaving the camp? | Yes (+1) | No (0) |
| If free firewood is provided, is it targeted at the most vulnerable? | Yes (+1) | No (0) |
| Are perpetrators of rape identified and brought to justice? | Yes (+1) | No (0) |
| Are public awareness campaigns for the protection of women and girls being carried out? | Yes (+1) | No (0) |

| | |
|---|---|
| **Reference #** | **P1** |
| **Indicator Title** | **INTER-AGENCY CO-ORDINATION PROMOTED** |
| **Indicator Type** | Performance |
| **Rationale and Objectives** | Conflict may arise over the need to act quickly to address environmental concerns, and attempts to ensure proper co-ordination, efficiency, technical competence and monitoring.<br>The emergency phase demands the fielding of appropriate environmental expertise, leading to the development of a coherent environmental action plan based on problem analysis. Yet at the same time, co-ordination, co-operation and integration with other activities remain essential. A balance is needed between rapid technical response and broader and more careful integration. For this reason, the establishment of environmental forums at an early stage is considered essential. |
| **Guidelines** | • Working forums should be established and/or strengthened – including environmental working groups, task forces, and roundtables - for all environmental stakeholders.<br>• The role and composition of environmental forums is site-specific and will not always include decision making responsibilities. Local and refugees communities should always be represented.<br>• Responsibility for environmental co-ordination should be clearly defined, noting that the role of an environmental co-ordinator is as much managerial as technical.<br>• Responsibility for implementing environmental activities should normally be assigned to a qualified lead agency.<br>• Conflicts of interest often arise if one agency seeks to co-ordinate and implement projects.<br>• Management of environmental activities should be gradually handed over to camp authorities, local institutions and local communities.<br>• If refugee and community oriented environmental programmes are to be run concurrently, there is a risk of a clash in approach between relief and development philosophies. |
| **Methods to be Applied** | • Environmental co-ordination should be progressively handed over to permanent institutions<br>• The establishment of an inter-agency Environmental Management Group with representation from refugee and local communities is essential |
| **Data Interpretation** | Environmental issues addressed through an inter-agency forum. |

***P1 Inter-agency co-ordination promoted***

| | Score | |
|---|---|---|
| Is a multi-stakeholder Environmental Management Group established? | Yes (+2) | No (0) |
| Are local NGOs, international NGOs, refugees, local communities and UN agencies represented in the Environment Management Group? | Yes (+1) | No (0) |
| Has an environmental coordinator been identified? | Yes (+1) | No (0) |
| Has a lead agency been identified for environmental activities? | Yes (+1) | No (0) |

# FRAME Toolkit

**This toolkit comprises the following modules:**

1. **Introduction to the FRAME Toolkit**
2. **Environmental Assessment**
3. **Rapid Environmental Assessment**
4. **Community Environmental Action Planning**
5. **Environmental Indicator Framework**
6. **Geographical Information System**
7. **Evaluation**

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