Indicators of Sustainability: Reflecting environmental concerns in indicators

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Why should environmental issues be included in program M&E frameworks?

1. **To ensure better effectiveness of interventions**
   - ***Well-designed programs that consider environmental impacts, will be more sustainable.***

2. **To reduce harm through the mitigation of negative environmental impacts.**
   - ***Communities rely heavily on the physical environment for their health and livelihoods.***

Aims:

The environmental sessions provide participants with an opportunity to contribute to the way in which environmental management is to be integrated into MYAPs and how practical environmental indicators can be used.

Objectives:

By the end of the Wednesday and Saturday environmental sessions, you will have:

- Explored potential environmental challenges associated with MYAPs.
- Heard about environmental and sustainability frameworks already in use internationally.
- Suggested ways to improve existing environmental indicators within the Indicator Performance and Tracking Table (IPTT).

What is the environment?

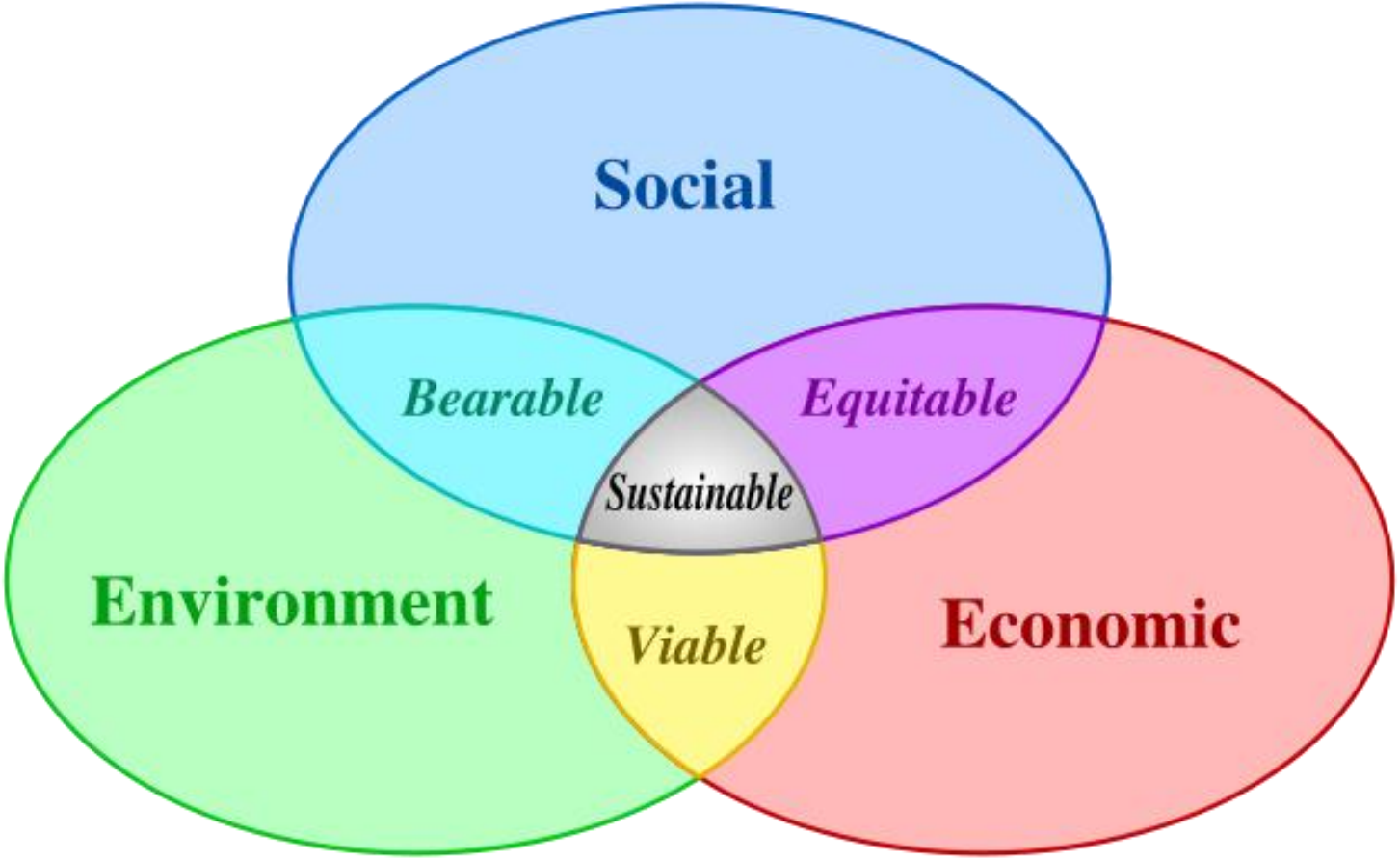
"The physical, chemical and biological surroundings in which disaster-affected and local communities live and develop their livelihoods. It provides the natural resources that sustain individuals and determines the quality of the surroundings in which they live. It needs protection if these essential functions are to be maintained."

Sphere Standards

What is the environment?

- Water
- Soil
- Geology
- Life
- Biodiversity
- Atmosphere
- Global climate

What is sustainable development?



Examples of links between the environment and vulnerable people

- Water quality → Human health
- Soil fertility → Agricultural production
- Biodiversity → Livestock
- Any others?

Env. Impacts / Mitigation / Monitoring

- **Environmental impacts can be:**
  - **Positive or negative**
  - **Reversible**
  - **Continue in the short / medium / long term**
  - **Occur across large or small geographic areas**
  - **Occur at single points, or in a line**
  - **Cumulative**
- **Mitigation measures aim to avoid, minimize or remedy (compensate) negative environmental impacts**
- **Monitoring aims to perform a check upon the effectiveness of mitigation measures used**
- **Indicators are used to gather specific data associated with change**

Making the best use of indicators

What's happening now	What has happened
	
• % of hazardous waste being delivered to an ‘approved’ incinerator • % of people from a settlement population regularly using ‘approved’ latrines • % change in traffic upon a rehabilitated road	• # of people trained in waste management • # of latrines constructed at a settlement population • Total km of road rehabilitated
Leading	**Lagging**

Typical Title II Food Security Activities…

1. Road infrastructure
2. Improving agricultural production
3. Agroforestry & tree planting
4. Rehabilitation of water supplies / sanitation
5. Direct Distribution

1. Road infrastructure

- **Impacts:** increased soil erosion / habitat modification and impacts to biodiversity / entry of people into new locations
- **Mitigation:** consider seasonality of habitat modification / restore nearby degraded habitats / minimize soil erosion through drainage design
- **MYAP General Performance Indicators:**
- # km of road with year-round access at end of program
- #km of road covered by effective local maintenance committees
- **Environmental Indicators:**
- Change in soil erosion rates
- m^2 of protected area / sensitive habitat modified

4. Rehabilitation of water supplies

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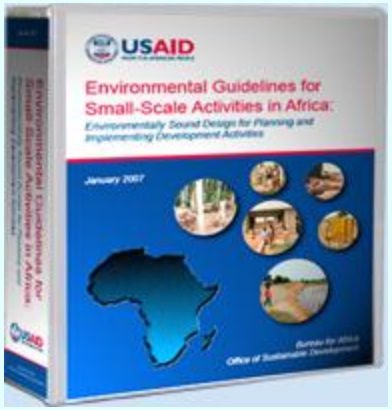
- **Impacts:** over exploitation of groundwater supplies and/or surface water / contamination of aquifers through inappropriate borehole construction
- **Mitigation:** appropriate siting of boreholes / design
- **MYAP General Performance Indicators:**
- # of water supplies rehabilitated
- % of people with access to safe drinking water
- **Environmental Indicators:**
- Changes in the elevation of groundwater
- % of boreholes meeting water quality standards
- % of surface water resources meeting water quality standards

4. Rehabilitation of sanitation infrastructure

- **Impacts:** contamination of aquifers and/or surface water resources / soil quality
- **Mitigation:** appropriate siting of latrines / design in accordance with USAID EGSSAA
- **MYAP General Performance Indicators:**
- # of beneficiaries satisfied with latrine function
- % of people using a latrine within settlement population
- **Environmental Indicators:**
- % of latrines that are designed and operated in accordance with EGSSAA
- % of boreholes meeting water quality standards

Mitigation by design - Environmental Guidelines for Small-Scale Activities in Africa (EGSSAA)



Environmental Guidelines for Small-Scale Activities in Africa

Directives environnementales pour des activités à petite échelle en Afrique,

Each chapter presents mitigation options by Sector matched to impacts.

Available on the ENCAP website at www.encapafrica.org

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5. Direct Distribution

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How much firewood[1] does a typical FFP program use?

~3 kg firewood/person/day* x 70,000 beneficiaries x 365 d

~VERY LARGE NUMBER / year

Improved Cook Stoves

5. Direct Distribution

- **Impacts:** increase in use of wood used for cooking / increased water consumption
- **Mitigation:** improved efficiency of wood used (short sticks, pre-soaking, improved ovens, etc.)
- **MYAP General Performance Indicators:**
- # of HH using improved cooking stoves
- **Environmental Indicators:**
- Volume of fuel wood collected per year
- Changes in sroundwater quality to check overexploitation and suitability for consumption

Types of environmental/sustainability indicator frameworks

- **UNHCR / CARE International FRAME Prpoject**
- **SPHERE**
- **GRI – G3 Guidelines**

FRAME PROJECT

- Recognised gaps in available tools
- Needed innovative and appropriate approaches
- Needed an approach which addressed the whole cycle of programme management
- Needed a system which could reach across all sectors
- Wanted a product that could be used by different stakeholders and is capable of being adapted for different situations

WHAT TYPE OF INDICATOR?

CORE INDICATOR

- Increase in families consistently using fue-efficient stoves

OPTIONAL INDICATORS

- Reduction in fuel consumption
- Fuel requirements met by organised energy supply.

EXAMPLE OF A SCORE CARD

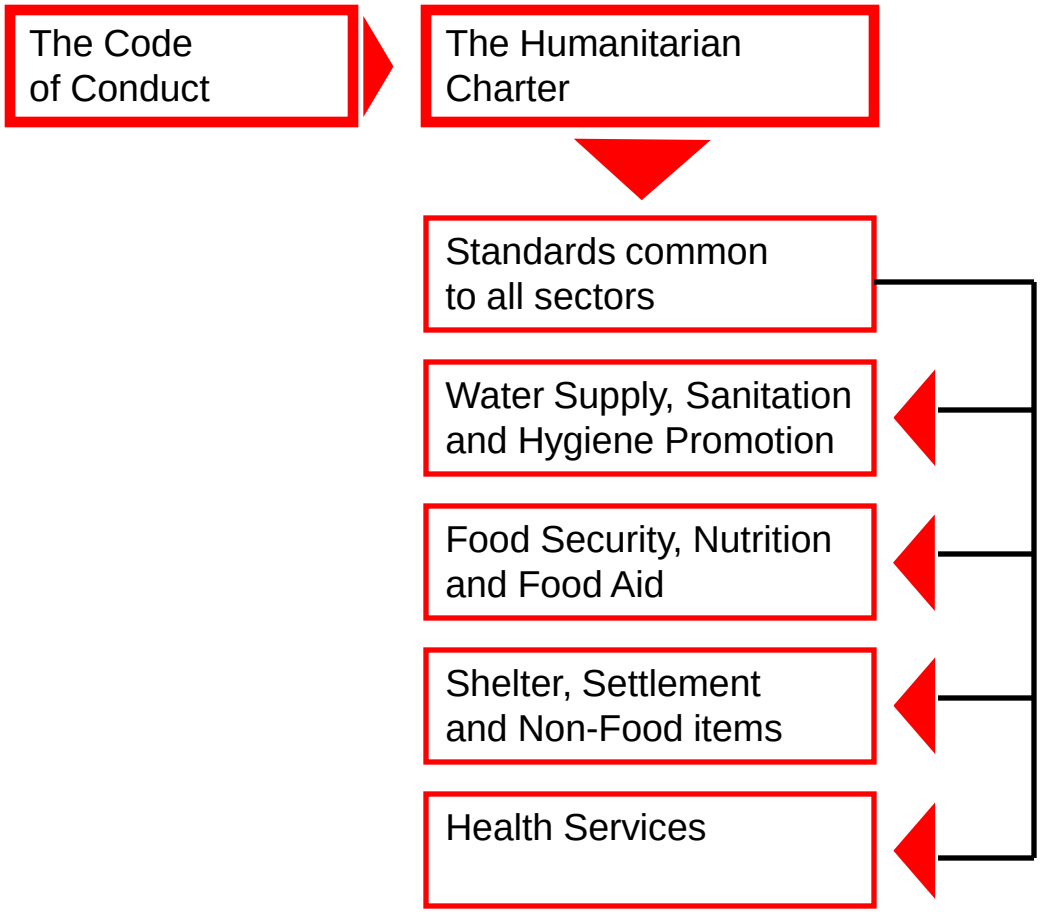
Reference #	**D2**
Indicator Title	**WATER COLLECTION MAXIMISED AND WATER EXTRACTION SUSTAINABLE**
Indicator Type	Performance
Rationale and Objectives	At little additional cost, rainwater can be stored and later used by refugees for tree planting and in kitchen gardens. Construction budgets should, therefore, 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[53] • 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. • All available local water resources should be explored and, if appropriate, exploited before resorting to providing water from external sources. • 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. • 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)

HIERARCHY OF INDICATORS

- Community-based indicators.
- Project management based indicators.
- Programme management based indicators.
- Senior decision-making baes indicators.

SPHERE



2004 Edition

- **Minimum standards**
- **Key indicators**
- **Guidance notes**

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Example – Water Supply

Water supply standard 1: access and water quantity

All people have safe and equitable access to a sufficient quantity of water for drinking, cooking and personal and domestic hygiene. Public water points are sufficiently close to households to enable use of the minimum water requirement.

Key indicators (to be read in conjunction with the guidance notes)

- Average water use for drinking, cooking and personal hygiene in any household is at least 15 litres per person per day (see guidance notes 1-8).
- The maximum distance from any household to the nearest water point is 500 metres (see guidance notes 1, 2, 5 and 8).
- Queuing time at a water source is no more than 15 minutes (see guidance note 7).
- It takes no more than three minutes to fill a 20-litre container (see guidance notes 7-8).
- Water sources and systems are maintained such that appropriate quantities of water are available consistently or on a regular basis (see guidance notes 2 and 8).

GRI – G3 Guidelines

- **Global reporting framework designed for any activity across any country:**
  - **Oil installation / hotel resort / car manufacturer, etc.**

- **Uses a hierarchy (core and additional) indicators that are grouped under the following headings:**
  - **Economic**
  - **Environmental**
  - **Social Performance: Labor Practices & Decent Work**
  - **Social Performance: Human Rights**
  - **Social Performance: Society**
  - **Social Performance: Product Responsibility**

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G3 Example – Environmental Indicator: Water

Aspect: Water

CORE	**EN8**	Total water withdrawal by source.
ADD	**EN9**	Water sources significantly affected by withdrawal of water.
ADD	**EN10**	Percentage and total volume of water recycled and reused.

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Summary

- **The overall performance of the MYAP is linked in various ways to environmental impacts**
- **Many links relate to water quality and human health**
- **Environmental indicators used within the IPTT should, where possible, be:**
  - **Leading and not lagging**
  - **Linked to key environmental issues associated with (1) MYAP activities; and (2) existing environmental conditions within the project areas.**