

## **Non-Food Item Potential Environmental Impact Scorecard – Pilot Version**

### **Introduction**

The humanitarian shelter sector needs a way to quickly assess the anticipated environmental impacts of non-food items (NFI) as part of the decisioning whether to source NFIs locally or from external suppliers. The assessment process needs to consider the possible carbon footprint associated with the NFIs, the number persons who might benefit from the use of the item, the impacts of the use of the item and disposal of the item when no longer usable.

The table below provides a list of nine indicators of possible NFI environmental impacts, based on a review of a range of factors which could be considered. The nine factors are considered *good enough* to understand significant environment-related differences between different NFIs and provide input into decision making at the field level.

The NFI scorecard is not intended to be a highly complex assessment but to use information available to field personnel when considering different NFI designs and material and source and supply options. Where technical questions do arise, they should be referred to experts as part of a broader review of the possible negative environmental impacts of an NFI.

### **Using the Scorecard**

The scorecard rating process is expected to be done by three to five persons who are familiar with the NFIs being assessed. Before the rating process (most likely done in a group setting) it may be necessary to share information on the NFI to ensure that each factor is clearly understood.

Using the scorecard involves 9 steps:

1. Review the factors and ensure they are clear to all participants.
2. Remove any factors which may not be appropriate for the NFIs being assessed, for instance, Factor 9 if no packaging is provided when distributing items.
3. Agree on the definitions of each of the scales in the scoring process for each factor. For instance, for Factor 5, the group doing the assessment needs to agree on what is short term, medium term and long term.
4. Identify a CO<sup>2</sup> eq. calculator for Factor 1.
5. Calculate the CO<sup>2</sup> eq. value for Factor 1.
6. Score the 9 factors, based on the agreed scales.
7. Use Excel to plot the scores using a Spider plot.
8. The points which are closest to “0” are factors indicating where the greatest negative environmental impacts can be expected. Note that “0 – no data”, presumes a significant negative impact until there is information available on which to base a different score.
9. Calculate the area of each of the seven triangles formed by lines in the Spider plot to produce a number indicating relative significance of each factor. The greater the area the less the expected impact.
10. Add all the area calculation numbers to establish an overall score for the NFI item.

### **Understanding and Using the Results**

A lower number for any factor indicates a greater expected negative environmental impact due to that factor. A lower combined number for the areas in the Spider plot indicates a greater expected overall impact for that item when compared to higher scores for other items.

The scorecard process can be used to compare the same NFI composed of different materials or being procured locally or from suppliers located at a distance. This comparison can contribute to the procurement decision making process, e.g., whether one source of an NFI is expected to have less negative environmental impacts than another source.

The Spider plots can be used to identify which factors have a greater (lower score) or lesser potential negative environmental impacts (higher scores). This scoring identifies the factors related to a specific item which can be improved (raising the score) to reduce expected negative environmental impacts. For instance, this can be done by changing specifications to extend the usable life of an NFI or reduce packaging.

Additional factors can be added to the scorecard list as long as there is information available to assign the factor a number on a 0 to 3 scale. The steps in the 1, 2 and 3 rating scale should be clear, relevant to the factor under consideration and correspond to the information on the factor which is available to those doing the assessment.

### **FNI Score Card Factors and Scoring**

<b>#</b>	<b>Factors</b>	<b>Scoring</b>
1	CO <sup>2</sup> Eq # for transport from point of manufacture/purchase to distribution for all the NFI items being delivered as calculated using an openly available online CO2 calculator <sup>1</sup> .	0 = no data; 1= high, 2 = medium 3 = low
2	Possibility of environmentally sound disposal.	0=no data, 1 = not likely, 2 = possible, 3 = certain
3	Physical potential to recycle the NFI item.	0=no data, 1 = not likely, 2 = possible, 3 = certain
5	Length of possible use of NFI item.	0=no data, 1 = short, 2 = medium term, 3 = long
4	Options for sustainable energy for use of item. (If no energy is required, remove the item from the scoring.)	0=no data, 1 = not likely, 2 = possible, 3 = certain
5	Number of individuals who could benefit from use for the individual item provided.	0=no data, 1 = few, 2 = some, 3 = many
6	Demand on local natural resources to use a single NFI item (fuel, water for cleaning, etc.), except electrical energy, for using the item.	0=no data, 1 = high, 2 = medium, 3 = low to none.
7	Volume of packaging, for each item.	0=no data, 1 = limited, 2 = some, 3 = large amount
8	Volume of packaging, for external packaging of items (e.g., a carton of the items).	0=no data, 1 = limited, 2 = some, 3 = large amount
9	Packaging for distribution (what type of packaging is used when the items are given to the users).	0 = no data, 1 = plastic bag or container, 2 = paper or cardboard container, 3 = paper or cardboard container composed of recycled materials.

<sup>1</sup> Possible calculators: [https://geodis.com/geodis\\_carbon\\_calculator/form#](https://geodis.com/geodis_carbon_calculator/form#), <https://www.ecotransit.org/en/emissioncalculator/>, <https://www.freightos.com/freight-resources/emissions-calculator/>. Note that separate ocean, air, rail, truck and other vehicle transport CO<sup>2</sup> eq numbers may be generated for a single item depending on the transport modes used.