

LOCAL FOOD SYSTEMS ASSESSMENT TOOL

OVERVIEW

The tool consists of an Excel-based semi-quantitative indicator framework for evaluating potential sustainability outcomes associated with local food asset development scenarios. This guide provides an overview of the structure, functionality, and editable components of the Excel file. Users enter the number of units for the local food assets they wish to include in their local food system development scenario. The tool then calculates potential sustainability outcomes based on predefined indicators, scoring criteria, and weighting factors. Scoring values and weights may be adjusted according to user criteria, project priorities, and/or expert judgment.

The Excel spreadsheet consists of five tabs: **List of Tables**, **Results**, **Scoring & Indicators**, **Cap Mechanism** and **Vocabulary**.

Tab 1. List of Tables

This tab lists and describes the eight tables included in the Excel file. For editable tables, the description includes details on the types of edits and the cells where changes can be made. Throughout the Excel file, editable cells are highlighted in bright yellow. This tab also includes a navigation column with hyperlinks to each table for quick access to the tables.

Tab 2. Results

This tab presents the potential sustainability outcomes associated with the local food assets included in a scenario. The table includes the following columns, rows, and fields:

- a. **Community asset / element category:** This column identifies the main categories of the local food and community asset or landscape elements that can be included in scenarios. The categories are:
 - Food Forest
 - Community Agriculture
 - Controlled Environment Agriculture
 - Food Access
 - Large-Scale Agricultural Facilities
 - Green Infrastructure
 - Transportation Facilities
 - Other Buildings.
- b. **Assets or elements:** This column identifies the individual assets or landscape elements that are available for scenario building. The assets are:
 - Tree-layer, Shrub-layer, and Herb-layer
 - Vertical Farming, Modular Farming, Soil-based Farming, and Bee Apiary
 - Large Container, Small Container, Large Greenhouse, and Small Greenhouse
 - Food Market and Food Bank
 - Cell Salmon Farm, Food Warehouse, Vertical Farm, and Mushroom Farm
 - Lawn, Flowers, Shrubs, and Trees
 - Pedestrian Paving and Parking
 - Mixed-use Building and Coffee Shop

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- c. **Area of 1 unit of the asset (m²):** This column refers to the area occupied by one unit of each asset or landscape element, with the area measure in square metres.
- d. **Total area per *n* units of asset (m²):** This column indicates the total area occupied by a specified number of units of each asset or landscape element in a scenario.
- e. **# units of asset/element (editable):** This column specifies the total number of units of each asset that the user wishes to include in a scenario.
- f. **Maximum possible units of asset:** This column identifies the maximum number of units of each asset that can be included in a scenario in terms of its contributions to sustainability indicators. The maximum is based on an understanding that non-linear relationships exist between the number of assets or elements established in a community and the sustainability benefits received from these assets/elements. For example, ten units of grass does not necessarily provide double the benefits of five units of grass (see **Tab 4. Cap Mechanism**).
- g. **Outcomes category:** This row presents the main categories for the sustainability outcomes and indicators. The outcomes scores for each asset/element are presented in these columns.
- h. **Total per indicator:** This row presents the overall score for each sustainability outcome, based on the scores of all assets and elements included in the scenario.
- i. **Weight of category (editable):** This row defines the relative importance (i.e., weight) of each sustainability category, based on the user's preferences and priorities.
- j. **Total available area (editable):** This cell indicates the total area of the site on which the scenario is being developed/built.
- k. **Remaining area:** This cell indicates the remaining available area for a scenario, and the value is automatically updated when assets or landscape elements are added.

Tab 3. Scoring & Indicators

This tab contains the calculations used in the tool. The **Methods table** presents the procedures and calculations for scoring assets, calculating assets' individual and aggregated contributions to sustainability outcomes, determining proportional impacts, and applying the model equations. **Table 2 (Scoring of Assets/Elements)** is editable, and the scores assigned to each asset or element (highlighted cells in bright yellow) may be changed according to user criteria and/or knowledge. **Row 44 (Weight of Indicator)** in **Table 3 (Normalization of Scored Assets)** can be modified to assign different levels of importance or prioritization (i.e., weights) to the indicators in the sustainability outcomes categories.

Tab 4. Cap Mechanism

This tab describes the assumptions and methodology used to establish the maximum allowable number of units for each asset or landscape element in terms of their ability to contribute to indicators and sustainability outcomes. The assumptions and justifications for the maximums are provided for each asset/element, and users can adjust these numbers based on their own assumptions and place-based knowledge. The editable cells in this tab are in the **Maximum Possible Units of Asset** column.

Tab 5. Vocabulary

This tab provides definitions of the terms used in the tool. It also includes references and links to additional information related the terms.