Overview of the Five Farm-based SDG Indicators

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Outline

Farm Based SDG Indicators under FAO custodianship

2.3.1 Productivity of small-scale producers
2.3.2 Income of small-scale producers
2.4.1 Agricultural sustainability
5.a.1 Women’s ownership of agricultural land
12.3.1.a Global food loss index

➢ Main aspects of the methodology; data sources, key challenges and opportunities for data collection
➢ Proposed recommendations
2.3.1 “Productivity of small-scale food producers”
2.3.2 “Income of small-scale food producers”

- **Indicator 2.3.1** monitors productivity as “The volume of production per labour unit by classes of farming, pastoral, forestry enterprise size.”

- **Indicator 2.3.2** refers to “the average income of small-scale food producers, by sex and indigenous status.”

Using a relative approach, the proposed statistical definition by FAO defines small-scale food producers using two criteria: Physical size (land & livestock) and Economic size (total revenue) of the farm:

**Definition:** lowest 40 % of cumulative distribution of land size (ha) and livestock heads (TLU) and total annual economic revenues ($PPP) from agricultural activities
Small-scale food producers are those included in the intersection of these three criterion variables:

- Producers in the bottom 40% of the distribution of physical size
- Producers in the bottom 40% of the distribution of total revenues
- All Producers
### Summary of data items required to calculate SDG indicators 2.3.1 and 2.3.2

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Land size (Ha)</td>
</tr>
<tr>
<td>2.</td>
<td>Livestock herds (TLUs)</td>
</tr>
<tr>
<td>3.</td>
<td>Revenues of agricultural production ($PPP)</td>
</tr>
<tr>
<td>4.</td>
<td>Costs of agricultural production ($PPP)</td>
</tr>
<tr>
<td>5.</td>
<td>Labour input (hours/days worked)</td>
</tr>
</tbody>
</table>
Key challenges and Opportunities

- **Challenges**: Current data sources seldom collect all these data items at once.

- As a rule of thumb, all information required should come from a single data source, to avoid confusion between production units and ensure measurement method consistency.

- **Opportunities**: Therefore, existing surveys need to be upgraded in a way that they collect required with reference to individual production units.
Indicator 2.4.1: Proportion of agricultural area under productive and sustainable agriculture

- It reflects the multiple dimensions of sustainability

\[ SDG2.4.1 = \frac{\text{Area under productive and sustainable agriculture}}{\text{Agricultural land area}} \]

- The denominator “Agricultural Land” corresponds to Land Use Classes 1-5 under the WCA classification

- The numerator is measured through 11 sub-indicators, each with its own set of criteria that determine whether a farm is “sustainable”, “acceptable” or “not sustainable”.
## Methodology: sub-indicators

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-indicators</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land productivity</td>
<td>Farm output value per hectare</td>
<td>Outcome</td>
</tr>
<tr>
<td>Economic sustainability</td>
<td>Net farm income</td>
<td>Outcome</td>
</tr>
<tr>
<td>Resilience</td>
<td>Risk mitigation mechanisms</td>
<td>Mix</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil health</td>
<td>Prevalence of soil degradation</td>
<td>Outcome</td>
</tr>
<tr>
<td>Water use</td>
<td>Variation in water availability</td>
<td>Mix</td>
</tr>
<tr>
<td>Fertilizer pollution risk</td>
<td>Management of fertilizers</td>
<td>Practice</td>
</tr>
<tr>
<td>Pesticide risk</td>
<td>Management of pesticides</td>
<td>Practice</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>Use of agro-biodiversity-supportive practices</td>
<td>Practice</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decent employment</td>
<td>Wage rate in agriculture</td>
<td>Outcome</td>
</tr>
<tr>
<td>Food security</td>
<td>Food insecurity experience scale (FIES)</td>
<td>Outcome</td>
</tr>
<tr>
<td>Land tenure</td>
<td>Secure tenure rights to land</td>
<td>Outcome</td>
</tr>
</tbody>
</table>
Dashboard approach

Aggregate indicator: Most limiting theme – at least 40% of the country agricultural area is unsustainable

Note: This dashboard is only a simulation and is not from real data
Key challenges and Opportunities

- **Challenges:** Current data sources do not collect all these data items at once

- **Opportunities:** Therefore, existing surveys need to be upgraded in a way that they collect required with reference to individual production units

- Given the magnitude of the data items to be collected, a standalone survey may also be considered (FAO has prepared a sample questionnaire for this purpose)
SDG indicator 5.a.1: Women’s ownership of agricultural land

**SUB-INDICATOR 5.a.1 (a)**
Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex;

measures how prevalent ownership / tenure rights over ag land is in the reference population (ag households), by sex

**SUB-INDICATOR 5.a.1 (b)**
Share of women among owners or rights-bearers of agricultural land, by type of tenure

allows to monitor the share of women in ag households with ownership or tenure rights over agricultural land over the total individuals with ownership / tenure rights
5.a.1: Definition of Agricultural Population

A household is considered **agricultural** if:

- It has operated land for agricultural purposes or held/tended livestock over the past 12 months, regardless of the final purpose.

In view of this, in the context of indicator 5.a.1, an **individual** is part of the reference population if the following **two conditions** are met:

- The individual is an adult (>=18 years).
- The individual belongs to a household that has operated land for agricultural purposes or held/tended livestock over the past 12 months, regardless of the final purpose.
# 5.a.1: Assessment of ownership and/or secure rights

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Do you hold any agricultural land, either alone or jointly with someone else? (Y/N)</td>
<td>respondent’s self-perception</td>
</tr>
<tr>
<td>Q2. Is there a formal document issued by or registered at the Land Registry / Cadastral Agency for any of the agricultural land you hold? [tick all that apply]</td>
<td>Presence of legally recognized document</td>
</tr>
<tr>
<td>Q3. Is your name is listed as an owner or use right holder on any of the legally recognized document? (Y/N)</td>
<td>Respondent has the tenure rights in law over the land in virtue of his / her name being on the document</td>
</tr>
<tr>
<td>Q4. Do you have the right to sell any of the agricultural land you own or hold, either alone or jointly with someone else? (Y/N)</td>
<td>Respondent has alienation rights</td>
</tr>
<tr>
<td>Q5. Do you have the right to bequeath any of the agricultural land you own or hold, either alone or jointly with someone else? (Y/N)</td>
<td>Respondent has alienation rights</td>
</tr>
</tbody>
</table>
Key challenges and Opportunities

- **Challenges:** Current data sources seldom collect all these data items at once. Therefore, existing surveys need to be upgraded in a way that they collect required with reference to individual production units.

- **Opportunities:** This indicator can also be collected through national household surveys that identify agriculture households, which also enables calculation of SDG indicator 1.4.2 (secure tenure rights to land).
SDG Indicator 12.3.1.a: Global Food loss index

- Extreme Events
  - SDG 1.5

- Pre-harvest/Pre-slaughter
- Harvest/Slaughter
- On-farm Post-harvest/Slaughter Operations
- Transport Storage Distribution
- Processing & Packaging
- Retail
- Public & Household Consumption

- Food Loss Index
  - SDG 12.3.1.a
  - Food Losses Index at the national level
  - SDG 12.3.1.a

- Food Waste Index
  - SDG 12.3.1.b

- Losses in the FBS

- Harvest losses
  - can be added to the index coverage and measured with crop-cutting surveys
Methodology

- Indicator 12.3.1.a – Food Loss Index: measures changes over time in the percentage of food production that it is lost up to the retail stage at the country, regional and global levels.

- Indicator 12.3.1.a covers the 2 key commodities for each of the 5 major food groups (10 in total), selected on the basis of their share on total value of production.

Five major commodity groups
1. Cereals & Pulses;
2. Fruits & Vegetables;
3. Roots, Tubers & Oil-Bearing Crops;
4. Animals products;
5. Fish & fish products
Key challenges and Opportunities

- **Challenges:** Farm surveys are not enough to collect food loss percentages for the top 10 commodities along all the required stages of the value chain – they could in principle only collect post-harvest losses
  - The Transport, Distribution, Storage, Processing and Packaging stages each have different recommended data sources

- **Opportunities:** FAO’s Guidelines for the Measurement of Harvest and Post-harvest Losses provide recommendations on the measurement of percentage losses for the various stages of the food supply chain, the main commodity groups, and the selection of the critical loss points
Proposed Recommendations for discussion

The Commission recommends that:

• FAO provide technical assistance to countries in developing a road map, action plan and time frame for production of farm-based indicators.

• Countries designate a national focal person for the set of farm-based indicators; and develop a road-map, action plan and time frame for their production.
Thank you!

For more detailed information on SDG Indicators under FAO custodianship, please visit