SDG Indicator 2.4.1 – Proportion of agricultural area under productive and sustainable agriculture

Interagency and Experts Collaboration to Improve the Production and Dissemination of SDG Indicators from Official National Sources

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Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

Indicator 2.4.1 (Tier II): Proportion of agricultural area under productive and sustainable agriculture.

INDICATOR’S FORMULA

Formula:

\[ SDG \ 2.4.1 = \frac{\text{Area under productive and sustainable agriculture}}{\text{Agricultural land area}} \]

Where:

- The **denominator** *agricultural land area* is arable land + permanent crops + permanent meadows and pastures.
- The **numerator** captures the three dimensions of sustainable agriculture: environmental, economic and social.

Scope

Within scope:
Holdings with primary activities:
• Crop and livestock production systems
• Secondary activities:
  • Aquaculture, to the extent if it takes place within the agricultural area as a secondary activity e.g. rice-fish and similar systems
  • Agro-forestry i.e. trees on the agricultural land area of the farm

Out of scope:
• Holding focused exclusively on aquaculture and/or agro-forestry
• Production from gardens, backyards and hobby farms
• Food harvested from the wild
• Common land not exclusively used by agriculture holding
• Nomadic pastoralism
PERIODICITY

• Recommended periodicity of reporting is every 3-years
  o For many sub-indicators, it is likely that changes will be limited from one year to another
  o The 3-year periodicity will enable countries to have three data points on the indicator before 2030
  o Minimize data collection and reporting burden
Recommended disaggregation:

- Different holdings types at national level:
  - Household/non-household
  - Crops/livestock/mixed
  - Irrigate/non-irrigated

- Other stratification variables:
  - Sub-national level
  - Size of farm
  - Gender of the holder etc.
## Indicator's Framework

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Theme</th>
<th>Sub-indicator</th>
<th>Farm type</th>
<th>Reference period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>1. Land productivity</td>
<td>Farm output value per hectare</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td>Economic</td>
<td>2. Profitability</td>
<td>Net farm income</td>
<td>All types</td>
<td>Last 3 calendar yrs.</td>
</tr>
<tr>
<td>Economic</td>
<td>3. Resilience</td>
<td>Risk mitigation mechanisms</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td>Environmental</td>
<td>4. Soil health</td>
<td>Prevalence of soil degradation</td>
<td>All types</td>
<td>Last 3 calendar yrs.</td>
</tr>
<tr>
<td>Environmental</td>
<td>5. Water use</td>
<td>Variation in water availability</td>
<td>All types</td>
<td>Last 3 calendar yrs.</td>
</tr>
<tr>
<td>Environmental</td>
<td>6. Fertilizer risk</td>
<td>Management of fertilizers</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td>Environmental</td>
<td>7. Pesticide risk</td>
<td>Management of pesticides</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td>Environmental</td>
<td>8. Biodiversity</td>
<td>Use of agro-biodiversity supportive practices</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td>Social</td>
<td>9. Decent employment</td>
<td>Wage rate in agriculture</td>
<td>Farms hiring unskilled labour</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td>Social</td>
<td>10. Food security</td>
<td>Food Insecurity Experience Scale (FIES)</td>
<td>Household farms</td>
<td>Last 12 months</td>
</tr>
<tr>
<td>Social</td>
<td>11. Land tenure</td>
<td>Secure tenure rights to land</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
</tbody>
</table>
INDICATOR LIMITATIONS

• The indicator covers only selected key aspects related to sustainable agriculture at farm level.
  • Not covered for farm:
    • Labour productivity
    • Pollution from pesticides
    • Energy use
    • GHG emissions
    • Burning
    • Gender equality
    • Occupational health and safety
    • Food waste
  • Not covered beyond farm:
    • Diversification of the national agriculture as a whole
    • Food security
    • Land concentration
    • Land-use changes
    • Quality of the agricultural outputs
    • Nutrition
    • Transportation, storage, processing, distribution and marketing
    • Sustainability of supply chain
    • Foreign trade
ASSESSING SUSTAINABILITY LEVELS

**Thresholds:** A cutoff point, reference value, benchmark, target or baseline value or range for each sub-indicators.

**Traffic light approach:**

1. **Green:** ‘desirable’
2. **Yellow:** ‘acceptable’
3. **Red:** ‘unsustainable’

- Criteria established by thematic experts, and have been fine tuned in light of results of the tests conducted in selected countries.
REPORTING: DASHBOARD AND AGGREGATE INDICATOR

Example of results for country X in year Y

Most limiting theme: at least 40% of the country’s agricultural area is unsustainable.

Note: This dashboard is only a simulation and is not from real data.
AGGREGATION (AT NATIONAL OR OTHER LEVELS)

\[ SDG241_{a+d} = \min_{n:1-11} (SI_d + SI_a)_n \]

\[ SDG241_u = \max_{n:1-11} (SI_u)_n \]

SDG241_{a+d} = \text{proportion of agricultural land area that have achieved at least the ‘acceptable’ level}

SDG241_u = \text{proportion of agricultural area that is ‘unsustainable’}
THANK YOU

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