SDG Indicator 2.4.1 – Measuring and Monitoring Sustainable Agriculture

02 December, 2019 – Muscat (Oman)

Arbab Asfandiyar Khan
ESS Division (FAO)
• Introduction

• Process for development of methodology

• Methodology: scope, coverage, themes

• Reporting the indicator

• Data collection instruments

• FAO data collection and reporting strategy
GOAL 2: END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

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
• Introduction

• Process for development of methodology
  • Methodology: scope, coverage, themes
  • Reporting the indicator
  • Data collection instruments
  • FAO data collection and reporting strategy
## MILESTONES

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>SDG process for Indicator 2.4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2015</strong></td>
<td>October</td>
<td>2nd meeting of IAEG-SDG: definition of sustainable agriculture and ways to measure it</td>
</tr>
<tr>
<td><strong>2016</strong></td>
<td>March</td>
<td><strong>47th UN-SC endorsed SDG 2.4.1 as: ‘Proportion of agricultural area under productive and sustainable agriculture’ (Tier III)</strong></td>
</tr>
<tr>
<td></td>
<td>March-Dec</td>
<td>Literature review: building on exiting frameworks</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>Technical expert meeting (FAO) – First draft methodology</td>
</tr>
<tr>
<td><strong>2017</strong></td>
<td>February</td>
<td>First proposal submitted to GS-SAC – refinement the methodology</td>
</tr>
<tr>
<td></td>
<td>April</td>
<td>Multi-stakeholder Expert Group Meeting at FAO: Drafting detailed methodology</td>
</tr>
<tr>
<td></td>
<td>September</td>
<td><strong>First Global consultation</strong> (online) with NSOs</td>
</tr>
<tr>
<td></td>
<td>Oct-Dec</td>
<td>Desk tests (Kyrgyz Republic, Bangladesh, Rwanda, Ecuador, Belgium)</td>
</tr>
<tr>
<td></td>
<td>November</td>
<td>6th meeting of IAEG-SDG. Requested finalizing country pilot</td>
</tr>
</tbody>
</table>
# MILESTONES

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>SDG process for Indicator 2.4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>Jan-Nov</td>
<td>Preparation of revised methodology</td>
</tr>
<tr>
<td></td>
<td>April</td>
<td>Technical workshop on learning from country desk tests</td>
</tr>
<tr>
<td></td>
<td>May</td>
<td><strong>Second online consultation</strong> - Webinar with IAEG-SDG members.</td>
</tr>
<tr>
<td></td>
<td>May-October</td>
<td>Country cognitive tests in Mexico, Kenya and Bangladesh</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>Presented to FAO Committee on Agriculture</td>
</tr>
<tr>
<td></td>
<td>November</td>
<td>8th meeting of IAEG-SDG – Upgraded as Tier II</td>
</tr>
<tr>
<td>2019</td>
<td>Jan-June</td>
<td>Data collection strategy and capacity development plan submitted to UNSD</td>
</tr>
<tr>
<td></td>
<td>Jan-Sept</td>
<td>Extended pilot tests completed in Bangladesh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toolkit for 2.4.1 (survey questionnaire, enumerator manual, data entry manual and scripts,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>calculation procedure, sampling design, e-learning etc.)</td>
</tr>
<tr>
<td></td>
<td>Jan-Oct</td>
<td>Refinements in bio-diversity sub-indicator carried out with informal group of countries –</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revised proposal submitted to IAEG-SDG in Oct for endorsement, where it was accepted</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>FAO Data collection questionnaire will be sent to countries</td>
</tr>
<tr>
<td>2020</td>
<td>Jan-Feb</td>
<td>Countries send back the filled in questionnaire</td>
</tr>
<tr>
<td></td>
<td>Mar-July</td>
<td>Data is validated and then reported at the global level</td>
</tr>
<tr>
<td>2020-2030</td>
<td></td>
<td>Repeat annual data collection, analysis and dissemination cycle</td>
</tr>
</tbody>
</table>
• Introduction

• Process for development of methodology

• **Methodology: scope, coverage, themes**

• Reporting the indicator

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**INDICATOR’S FORMULA**

Formula:

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

Where:

- The **denominator** **agricultural area** arable land + permanent crops + permanent meadows and pastures.

- The **numerator** captures the three dimensions of sustainable production: economic social and environmental

STEPS TO DEVELOP THE INDICATOR

1) Choosing the scale: Agriculture holding level
2) Determining the scope: Crops and livestock
3) Dimensions to be covered: Economic, social and environmental
4) Selecting the themes to be covered: Specific areas/aspects within a dimension (e.g. land productivity, biodiversity, decent employment). Total 11 themes
5) Choosing a sub-indicator to measure performance of the farm in a given theme. 11 sub-indicator (3 Economic, 3 social and 5 environment)
6) Developing the criteria to assess sustainability performance of farms on each sub-indicator to classify the them green, yellow and red
7) Developing modality of reporting the indicator: Dashboard and aggregate indicator
8) Selecting the data collection instrument(s): Farm survey
9) Deciding the periodicity of monitoring the indicator: 3 Years
METHODOLOGICAL PRINCIPALS

Key principles applied in developing the indicator:

- Policy relevance and “action-ability”
- Universality
- Comparability
- Measurability and cost effectiveness
- Minimum cross correlation

Impacts upon:

- Choice of sub-indicators for different dimensions
- Choice of sustainability criteria for each sub-indicator
- Level of sophistication in data collection
## SCOPE

<table>
<thead>
<tr>
<th><strong>Within scope:</strong></th>
<th><strong>Out of scope:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Intensive and extensive crop and livestock production systems</td>
<td>• Common land not exclusively used by agriculture holding</td>
</tr>
<tr>
<td>• Subsistence agriculture</td>
<td>• Nomadic pastoralism</td>
</tr>
<tr>
<td>• Food and non-food crops and livestock products (e.g., tobacco, cotton, sheep wool). Crops grown for fodder or for energy purposes</td>
<td>• Production from gardens, backyards and hobby farms</td>
</tr>
<tr>
<td>• Aquaculture, to the extent if it takes place within the agricultural area as a secondary activity e.g. rice-fish and similar systems</td>
<td>• Holding focused exclusively on aquaculture and/or agro-forestry</td>
</tr>
<tr>
<td>• Agro-forestry i.e. trees on the agricultural land area of the farm</td>
<td>• Food harvested from the wild</td>
</tr>
<tr>
<td>• Common land when exclusively used and managed by the farm holding</td>
<td>• Forest and other wooded lands</td>
</tr>
</tbody>
</table>
## 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></td>
<td>2. Profitability</td>
<td>Net farm income</td>
<td>All types</td>
<td>Last 3 calendar yrs.</td>
</tr>
<tr>
<td></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></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></td>
<td>6. Fertilizer risk</td>
<td>Management of fertilizers</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td></td>
<td>7. Pesticide risk</td>
<td>Management of pesticides</td>
<td>All types</td>
<td>Last calendar yr.</td>
</tr>
<tr>
<td></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></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></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>
ASSESSING SUSTAINABILITY LEVELS

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

- Criteria for each of the 11 sub-indicators were established by thematic experts, and have been fine tuned in light of results of the tests conducted in selected countries.
- Two thresholds were established for each sub-indicator.

**Traffic light approach:**

1. **Green:** ‘desirable’
2. **Yellow:** ‘acceptable’
3. **Red:** ‘unsustainable’
SUMMARY OF STEPS FOR ESTIMATION OF AREAS BY SUSTAINABILITY STATUS

1. Estimate the sub-indicator value at the farm level

2. Classification of the farm and agricultural area it manages as sustainable (green), acceptable (yellow) and unsustainable (red) for each sub-indicator using the respective sustainability criteria.

3. At the national or sub-national level, add up the agricultural areas of the farms by sustainability status.

4. For each sub-indicator, calculate the proportion of agricultural area as a percentage of total agricultural area by sustainability status at the national or sub-national level and present as a dashboard.
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Example of results for country X in year Y

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

\[ SDG241_d = \min_{n:1-11} (SI_d n) \]

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

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

SDG241\textsubscript{d} = proportion of agricultural land area that have achieved the ‘desirable’ level

SDG241\textsubscript{a+d} = proportion of agricultural land area that have achieved at least the ‘acceptable’ level

SDG241\textsubscript{u} = proportion of agricultural area that is ‘unsustainable’
REPORTING: 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
DISSAGREGATION

The dashboard offers a response in terms of measuring sustainability at farm level and aggregating and reporting it by:

- National/sub-national level

- Different holdings types:
  - Household/non-household
  - Crops/livestock/mixed
  - Irrigate/non-irrigated
PERIODICITY

- Recommended periodicity of reporting is every 3-years
  - For many sub-indicators, it is unlikely that its value will change from one year to another
  - The 3-year periodicity will enable countries to have three data points on the indicator before 2030, assuming that they begin reporting in the early 2021
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• **Data collection instruments**

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DATA COLLECTION INSTRUMENTS

1. Farm survey questionnaire

2. AGRISurvey programme and 50x2030 initiative

3. Alternative or existing data sources
OPTION 1: STANDALONE SURVEY QUESTIONNAIRE

• Standalone survey questionnaire designed as a module that contain the minimum set of questions needed to assess 2.4.1.

• It can be administered in various ways; i) independently; ii) attached as a separate module; iii) integrated at appropriate places within existing farm surveys.

• FAO has developed Statistical Toolkit to accompany the survey questionnaire which is comprised of guidelines on:
  • Sampling design for 2.4.1
  • Enumerator’s manual
  • Data entry operations
  • Data analysis “From raw data to computation of the indicator”
  • Code book, tabulation plan, and STATA scripts to support data analysis and reporting
Hello, my name is --------------. I work for the ---------------. We collect data that the Government and other stakeholders use for planning purposes. I am vising you to collect data on your farm. This is part of a worldwide exercise to measure progress in agriculture organised together with the Food and Agriculture Organization of the United Nations. The information you provide will be treated confidentially. It will only be used for statistical purposes and will be put together with responses from other farmers for use in the formulation of programmes and policies to promote more productive and sustainable agriculture. This interview should take approximately one hour. We appreciate your participation in answering these questions.

If you have any questions regarding this survey, you are welcome to telephone the number indicated on the visiting card of our organization that I leave for you here.

I express my gratitude for your participation in this survey in advance.

Section I: INTRODUCTION TO THE SURVEY MODULE AND IDENTIFICATION OF THE HOLDING AND HOLDER

1.1 Record the following information about the respondent

1.1.1 First name

1.1.2 Surname
OPTION 1: SUPPORTING DOCUMENTS

SDG Indicator 2.4.1
PROPORTION OF AGRICULTURAL AREA
UNDER PRODUCTIVE AND SUSTAINABLE AGRICULTURE

METHODOLOGICAL NOTE

Fourth revision

31 May 2019

Note: this enumerators manual was prepared in support to the farm survey on SDG indicator 2.4.1. During the test phase users are invited to communicate for any noted error, omission or suggestions for clarification so as to improve the quality of the document. The enumerators manual has been revised in light of the cognitive tests conducted in Mexico, Kenya and Bangladesh in year 2018-19.
OPTION 1: SUPPORTING DOCUMENTS

SDG Indicator 2.4.1
Guidelines for Data Entry Operations and Data Analysis
10/09/2019

SDG Indicator 2.4.1
Sampling guidance
11/06/2019

Indicator 2.4.1
From Raw Data to computation of the Indicator
10/09/2019
OPTION 2: AGRISURVEY PROGRAMME

Leverage and capitalize on the AGRISurvey programme which is farm based, high-quality and cost-efficient modular survey over a ten years cycle to generate the data on farms for policy making and cover several SDGs and the MSCD:

AGRIS survey system:
OPTION 2: 50X2030 INITIATIVE

AGRISurvey programme will soon be scaled up into the 50X2030 initiative that aims to support 50 L/LMICs with a survey program by 2030 under the GRAInS partnership.

50X2030 initiative:

The Partners

- BMGF
- FAO
- IFAD
- Partner Nations
- USAID
- USDA
- World Bank
OPTION 2: EFFORTS TO ENHANCE NATIONAL DATA PRODUCTION

2.4.1 integration with the AGRISurvey programme:

- **Core module**: Allowing for 2.4.1 data collection in one single year.

- **Economy & PME modules**: Allowing for 2.4.1 data collection in two consecutive years. Questions for sub-indicators in the social and economic dimensions are integrated in the core module, while questions on environmental sub-indicators are integrated with the Production Methods and Environment Module (PME).

2.4.1 integration with the 50X2030 initiative:

- **PME module with 2.4.1. questions**: Allowing for 2.4.1 data collection in one single year.
OPTION 2: SUPPORTING DOCUMENTS

AGRIS Handbook on the Agricultural Integrated Survey

Draft Technical Note

Mainstreaming
SDG Indicator 2.4.1 in AGRIS & 50x2030

What is AGRIS?
new modular 10-year survey programme to generate better and less costly data on farms exposed to countries for further customization and national implementation

AGRIS
The Agricultural Integrated Survey
Producing cost-efficient data on farms for policymaking

WHAT IS NEW?
## OPTION 3: USE OF ALTERNATIVE DATA SOURCES

<table>
<thead>
<tr>
<th>No.</th>
<th>Sub-indicators</th>
<th>Admin data</th>
<th>Ag/livestock census</th>
<th>Ag surveys</th>
<th>Env. monitoring systems</th>
<th>GIS/remote sensing</th>
<th>Household surveys</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farm output value per hectare</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Net farm income</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Risk mitigation mechanisms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>Prevalence of soil degradation</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Variation in water availability</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>6</td>
<td>Management of fertilizers</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Management of pesticides</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>Use of biodiversity-supportive practices</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Wage rate in agriculture</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>10</td>
<td>Food insecurity experience scale (FIES)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>11</td>
<td>Secure tenure rights to land</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Environmental monitoring systems include soil sampling, river flows records, and groundwater abstraction records. GIS/RS includes models.
OPTION 3: CONDITIONS FOR USING ALTERNATIVE DATA SOURCES

- Can be reflected in or attributed to agricultural land area in the country and is nationally representative;

- Can be associated with the country’s agricultural productions systems, particularly crops, livestock and the combinations in between; Captures the same phenomenon and should give the same result as proposed by the farm survey for international comparability;

- Data are available at the same level of territorial disaggregation as the farm survey and respects the recommended stratification (farm type i.e. sector, production system, etc.);

- Compliant with international/national standards and classifications systems to be internationally comparable;

- Reference year and periodicity is homogenous with farm survey across the sub-indicators.
COMPLEMENTING FARM SURVEY DATA

- Replace farm survey questions, when alternative sources of information are available and respond to the criteria.

- Complement farm survey questions, by providing additional contextual information helpful to interpret the results.
  - This can be done ex-ante or during the data collection by providing contextual information to the enumerators before going to the field.

- Crosschecking the farm survey results to identify any inconsistencies and to ensure its robustness
  - Ex-post information to triangulate and validate survey data after the data collection and analysis has been completed.
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DATA COLLECTION AND REPORTING

• Short-term: FAO to collect available national data by sub-indicator through a FAOSTAT-style questionnaire
  ➢ **Nov 2019 – Jan 2020**: Questionnaire sent to countries’ focal points and data collected
  ➢ **Jan-Feb 2020**: data analysis, gap filling, QA/QC processes
  ➢ **Feb 2020**: Data is validated and if possible, reported at the global level
  ➢ **2020-2030**: Repeat annual data collection, analysis and dissemination cycle

• Medium-Long Term:
  ➢ **2020-2030**: Implementation of farm-based surveys in countries supported by capacity development activities, including dedicated projects (e.g., AGRISurvey Programme, 50X2030 Initiative).
INDICATOR REPORTING: FAO DATA COLLECTION QUESTIONNAIRE

2.4.1 - PROPORTION OF AGRICULTURE AREA UNDER PRODUCTIVE AND SUSTAINABLE AGRICULTURE - INSTRUCTIONS

General Instructions

This questionnaire reflects SDG indicator 2.4.1 Methodology (http://www.fao.org/sustainable-development-goals/indicators/241/en/). Definitions and classifications are aligned with the System of Environmental-Economic Accounting (SEEA) (https://unstats.un.org/unsd/envaccounting/seea/) and also use some definitions of the World Census of Agriculture 2020, Volume 1 (WCA) (http://www.fao.org/world-census-agriculture). Kindly refer, where possible, to the classification of temporary and permanent crops provided by these classifications.

Calendar year

Kindly report your data with reference to the calendar year (January to December) indicated by column. If data are available for year(s) different from those specified, enter data but include an explanation under the “Notes” Column.

Units

Data are to be expressed in hectares. If data are reported in a different unit of measurement, please indicate it in the “Notes” column.

Notation keys

- **IE**: Included elsewhere. Please specify in ‘Notes’ under which category or cell these data are included.
- **NA**: No data available.
- **NC**: Non-applicable. Data category cannot exist in your country (e.g., name sub-indicator)

Comments and additional information

Please include any relevant information in the notes column available in each section. Relevant information may refer to differences in, among others, land use classification, definitions and methodologies, reference year, units used for data collection, status of reported data (e.g., preliminary, forecast), etc.

Electronic version

This questionnaire is provided in JotForm format. The preferred option is to have it completed in this electronic version and returned by email.

Structure of the questionnaire

1. **Cover**
   - Collects the contact details of the national focal point responsible for SDGs and provides the FAO contact details for sending the completed questionnaire or requesting information.

2. **Instructions**
   - Provides general instructions on how to complete the questionnaire as well as an overview of its structure (this page).
   - Users are kindly asked to read these instructions before filling in the questionnaire.

3. **Definitions**
   - Provides definitions of the categories used in the questionnaire and their correspondence with other international standards.

4. **1. Economic Dimension**
   - Collects data on 3 sub-indicators in the economic dimension (Farm output value per hectare; Net Farm Income, and Risk mitigation mechanism).

5. **2. Environmental Dimension**
   - Collects data on 5 sub-indicators in the environmental dimension (Prevalence of soil degradation, Variation in water availability, Management of fertilizers, Use of biodiversity-supportive practices).

6. **3. Social Dimension**
   - Collects data on 3 sub-indicators in the social dimension (Wage rate in agriculture, Food insecurity Experience Scale, Secure tenure rights to land).

4. **Metadata**
   - Collects metadata on completeness (country coverage), source of the data, original unit of measurement, frequency of data collection and dissemination media.
THANK YOU

Contact us:
Arbab.khan@fao.org – Arbab Asfandiyar Khan
Francesco.Tubiello@fao.org – Francesco Nicola Tubiello
Amy.heyman@fao.org – Amy Heyman
IMPORTANCE OF AGRICULTURE!

Over the coming 35 years, agriculture will face an unprecedented confluence of pressures:

• Including a 30 percent increase in the global population - projected to grow from 7.2 billion to reach 9.3 billion in 2050 (United Nations, 2013a).

• Support changing dietary patterns, estimates are that food production will need to increase from the current 8.4 billion tonnes to almost 13.5 billion tonnes a year. (Agriculture will need to produce 60 percent more food globally, and 100 percent more in developing countries, if it is to meet demand at current levels of consumption).

• Achieving that level of production from an already seriously depleted natural resource base will be impossible without profound changes in our food and agriculture systems.

As a result:

• A holistic approach is required to expand and accelerate the transition to sustainable food and agriculture which ensures world food security, provides economic and social opportunities, and protects the ecosystem services on which agriculture depends.
WHAT IS SUSTAINABLE AGRICULTURE?

• Unlike a traditional approach where the economic consideration is the single major factor; Agriculture sustainability also involves social and environmental factors.

• In fact it is defined by 3 integral aspects which are: agriculture needs to be economically viable, environmentally friendly/non degrading and socially responsible/acceptable. The integrated economic, environmental, and social principles are incorporated into a “triple bottom line” (TBL); profit, people and the planet.

• Sustainability in the context of 2.4.1. strive to capture 3 dimensions by focusing on practices of a farmer on the farm, rather than on a specific agricultural product or activity.
TYPE OF SUB-INDICATORS SELECTED

• **Impact/outcome** indicators that record what the state or change in state of factors and associated flows of benefits or costs.

• **Practice** indicators that record the type of agricultural practices and processes that a farm is undertaking.

• **Awareness** indicators record the level of awareness and knowledge in relation with a given sustainability issue.

• **Behavior** indicators capture the attitude of a given stakeholder in relation with a given sustainability issue.

• **Perception** indicators that record views of various stakeholders about different aspects of sustainability.