Definitions & Terminologies

Indicator 2.4.1:

- Definition: “Percentage of agricultural area under productive and sustainable agriculture”
- Formula:

$$= \frac{Area\ under\ Productive\ and\ Sustainable\ Agriculture}{Agricultural\ Area}$$

Where denominator of indicator agricultural area – arable land + permanent crops + permanent meadows and pastures (FAOSTAT)

Tier System:

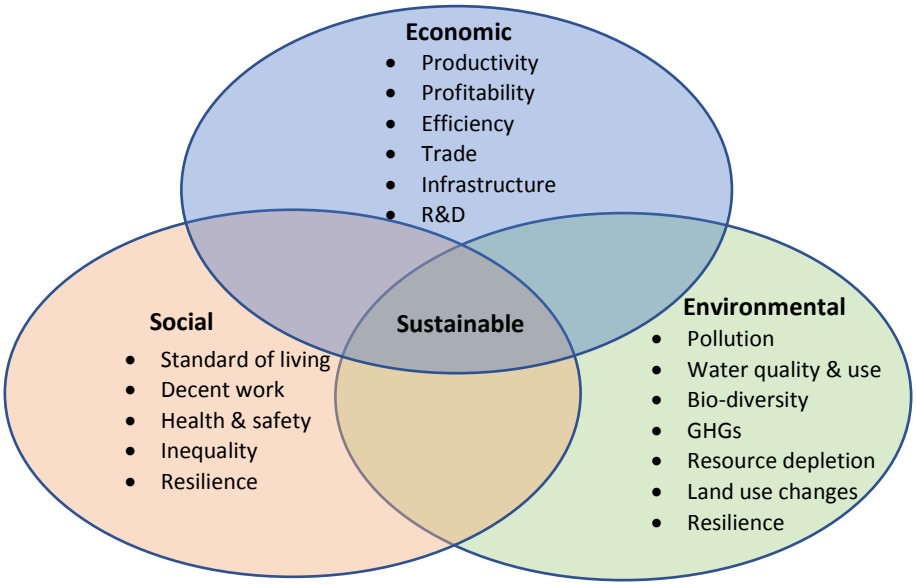
Tier	Established & Tested Methodology & Standards	Data Availability
1	Yes	Yes
2	Yes	Sporadic
3	No, work in progress	No

Key Aspects:

Assessment type	Ex-post measurement of outcomes
Assessment level	Farm
Unit of Measurement	Agricultural Area
Scope	Crops & Livestock
Reporting mechanism	Dashboard
Measurement logic	Un-sustainability
Data collection vehicles	Predominantly farm survey

Hierarchical Levels of Indicator:

- **Dimensions:**
  - A dimension is a pillar of sustainability and is the highest and most general level in the structure of a frameworks.
  - Example: Economic, Social and Environmental

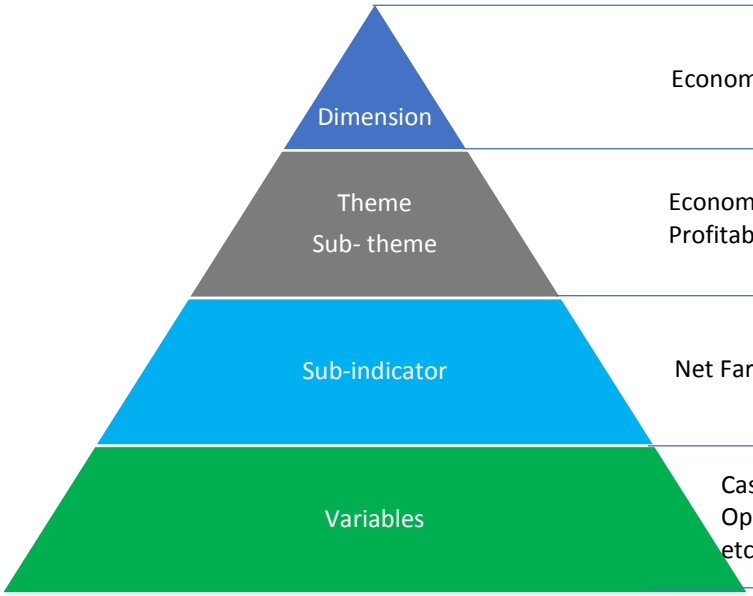


- **Themes / Sub-themes**:
  - Themes are topics related to a subject made more explicit within each dimension.
  - Sub-themes are specific topics within a given theme. It shares the same central organizing concept as the theme, but focuses on one notable specific element.
  - Example Theme: Economic viability and productivity are themes in economic dimension.
  - Example Sub-theme: Profitability is sub-theme within economic viability.

- **Sub-indicators**:
  - Combination of elements/metrics/measureable variables used to evaluate sustainability performance of a specific theme.
  - Example: Net Farm Income

- **Variables:**
  - Any characteristics, number, or quantity that can be measured or counted.
  - Example: Total farm cash receipts, total operating expenses, income in kind, depreciation and inventory change

- **Metrics:**
  - System/ unit of measurement by which efficiency, performance, progress, process can be assessed.
  - Example: Net farm income in currency units

Indicator 2.4.1.	Used	Other Terminologies
	Economic	Aspect (Van calker *et al.,* 2007) Domain (Bausch *et al.,* 2014) Pillar (Van Cauwenbergh *et al.,* 2007)
	Economic viability Profitability	Component (Belanger *et al.,* 2012) Issue (De Boer & Comelissen, 2002) Attribute (Van calker *et al.,* 2007) Principle (Van Cauwenbergh, 2007) Impact category (Haas et al., 2000)
	Net Farm Income	Parameter (Guerci *et al.,* 2013)
	Cash receipts, Operating expenses etc.	Factors / Elements

Thresholds:

Definition: A cutoff point for sub-indicator specific reference values. Threshold delimit, if the observed evolution in the indicator is fully, partially and not corresponding to the desired evolution (resulting in its positive, neutral and negative qualification). To evaluate the indicator value, a desired level for each indicator is described by means of a reference value (absolute or relative).

- Example: The net farm income use of a threshold that is zero

Criteria for Constructing the Indicator:

- Assessment of sustainability at farm level against threshold for each sub-indicator. Overall assessment of farm based on all sub-indicators.
  - Example: Net farm income consistently greater than zero can be considered sustainable.
- **Aggregation:** Aggregated results for a country compiled by taking into account different strata i.e. farm size, location, type of output and farm scale of operations.
- **Disaggregation:** Level of disaggregation by; geographical area, type of activity, size of the farm, gender, education and age etc. This will depends on the sample design and sample size in each specific country.
- **Dashboards:** Provide snapshots of performance at a given point in time and track real-time changes to tactical information often displayed as charts, graphs, and gauges. The dashboard has the ability to drill through top-level information into supporting data.
- **Composite indicator** is created when individual indicators with different units of measurement are combined into a single measure. Composite indicators are often used to measure multidimensional and in many cases abstract concepts which cannot be captured by basic components.

Criteria for Selection and Ranking of Sub-indicators:

Sub-indicators (Economic)	Policy relevance and 'action-ability'	Universality	Comparability	Measurability and cost effectiveness	Overlap / correlation between indicators	Overall Rank
…						

Ranking could be based on likert scale from 1 to 5 (1 Very Low, 2 Low, 3 Fair, 4 High, 5 Very High)

Explanation:

- **Policy relevance and 'action-ability':** The sub-indicator must be relevant for policy-making. Policy-makers must understand easily the implication of failure to pass sustainability test, and the action that needs to be taken to address this.
- **Universality:** The indicator must be of universal value, i.e. not depending on bio-physical, socio-economic or political conditions. Existing conventions, international agreements or well-established standards must guide the choice of the indicator.
- **Comparability:** The indicator must be comparable across countries, which means that the measurement methods, the standards used and the thresholds must be the same for all countries. While the measurement method must be developed in a way that ensure comparability, there might be opportunities for single countries to use several levels of thresholds: one for international reporting, and one for nationally-established targets, either more or less stringent than the international ones.
- **Measurability and cost effectiveness:** The indicator must be measurable at a reasonable cost. Trade-off between the quality of the information captured through the indicator and the cost of measurement must be taken into consideration. Several levels of sophistication in the measurement of the indicator can be considered and proposed in order to offer countries options commensurate with their capacity to monitor, while respecting the other criteria.
- **Overlap and correlation between indicators:** Finally, an overview of all sub-indicators will need to be performed to look for high levels of correlation which would indicate excessive overlap between the different indicators, in which case one or more indicators may be removed from the list.