Food and Agriculture Organization of the United Nations

SUSTAINABLE DEVELOPMENT GOALS

Defining and identifying Small-scale food producers to monitor indicators 2.3.1 and 2.3.2

Regional Stock Taking Conference
on the Sustainable Development Goals (SDG)
Farm based indicators

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INTRODUCTION

Outline

- Target 2.3 and its indicators
- Brief overview of **frequently adopted criteria** to define small-scale food producers
- **Absolute** vs **relative** approaches
- The **definition proposed by FAO** and its implementation
- Main **concepts and definitions**
- **Data** items for the definition

Goal 2: Zero Hunger

Target 2.3: **"By 2030, double the agricultural productivity and incomes of small-scale food producers**, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment"

- **Indicator 2.3.1:** The volume of production per labour unit by classes of farming/pastoral/forestry enterprise size (Tier II)
- **Indicator 2.3.2:** The average income of small-scale food producers, by sex and indigenous status (Tier II)

Goal 2: Zero Hunger (2)

- Both indicators were initially classified in **Tier III**: "*No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested*"
- Lack of a methodology mainly linked to the lack of a **common and clear international definition of** the target population – i.e. the **small-scale food producers**
- Methodology proposed by the FAO covers 3 areas:
  - **Identification of the target population**
  - Computation of indicator 2.3.1
  - Computation of indicator 2.3.2

A Global Consultation on the definition of "small scale food producers"

- Proposed definition first **submitted to the IAEG-SDG in May 2017**.
- In August 2017 the definition was **endorsed by the Chairs of the IAEG-SDG**.
- Fall 2017: FAO called **Member Countries for a Global Consultation** receiving feedback from 58 national and regional institutions.
- Additional refinements of the definition were implemented, based on feedback from member countries and testing on national data.
- At the 7th IAEG-SDG (March 2019), the **methodologies for the two indicators were endorsed**, yet a group of countries requested more time to work on two key points of particular concern to developed countries:
  - How to exclude non-professional farms from the targeted population;
  - How to adapt the definition in countries with relatively homogeneous farm scale – where large-size farmers might end-up being considered "small scale'.

A Global Consultation on the definition of "small scale food producers"

- Following in-depth discussions and additional tests between May and July 2018, it was agreed that small-scale food producers would be identified by:

  1. Using the approach proposed by the FAO – next slides;
  2. Excluding "hobby" farms based on national diversity using a minimum threshold;
  3. Applying a maximum cap to exclude farms above 25,000 EUR adjusted using Price level indices ($PPP 34,387).

- These adjustments do not alter the FAO methodology, insofar as:
  1. The maximum threshold of $PPP 34,387 merely adds a condition that could be applied to all countries, yet also be especially relevant to certain countries where agricultural revenues are high;
  2. The exclusion of 'hobby' farms is already embedded in data sources of several countries by excluding a large number of very small farms that would be too costly to survey.

- **The IAEG-SDG approved the methodology on 6 September 2018**

ALTERNATIVE APPROACHES TO DEFINE SMALL-SCALE FOOD PRODUCERS

Common characteristics of small-scale food producers

Challenge to reach a consensus on who the small-scale food producers are: the group has been defined in various ways depending on the context and the country.

It can include: farmers, pastoralists, artisans, fishers, and forest dependent communities.

Some of the presumed common characteristics are:

- **Type of production units**
  - Cultivate small volumes;
  - Own or use small plots of land;
  - Use little or no technology;
  - Rely mainly on family labour.
- **Economic situation**
  - Partly belong to the informal economy;
  - Are vulnerable in supply chains, with relatively low returns;
  - Have often varied resource distribution between food and cash crops/livestock and off-farm activities.

Definitions of small-scale food producers available in the literature

Numerous ways to identify small-scale food producers are available in the literature. **Criteria frequently used include:**

- Criteria based on the **amount of factors of production** (e.g. land, labour);
- Criteria based on the **share of family workers** in the holding;
- Criteria based on concepts referring to the **connection between the holding and the market** (e.g. own-consumption, subsistence, market orientation);
- Criteria based on the **economic size of the holding** (e.g. revenues).

Land size is the most commonly used criterion, as the vast majority of national definitions of "small-scale food producers" are based on the physical size of the farm and the number of livestock heads.

Absolute vs relative approaches to set a threshold for "small"

Any of the criteria previously mentioned must be **quantitative**, so that it can be set as a **threshold** that will then allow separating small-scale food producers from other producers.

Thresholds can be set either in **absolute** or **relative** terms

	ABSOLUTE	RELATIVE
Definition	an absolute threshold is established as a fixed and unique value.	a relative threshold varies depending on the reference system, i.e. the context.
Within SDG 2.3	the threshold would be the same for all countries, regardless of agri-ecological and socio-economic conditions.	the thresholds would correspond to a specific percentile of the selected criterion variable in each country.
Example	e.g. all production units whose operated land is under 2 hectares are considered as part of the group.	e.g. all production units falling below the 25th percentile of the land distribution are considered to be part of the group.

Source: FAO e-learning on SDG Indicators 2.3.1 and 2.3.2

Absolute vs relative approaches to set a threshold for "small" (2)

Absolute Thresholds

Pros: **Enhance comparability** across countries.

Cons: **Disregards differences among national contexts.** Plus, over time it will generate an **adverse selection bias,** which would lead to monitor the productivity/income of the worst performers (the best performers will leave the group of small-scale producers).

Relative thresholds

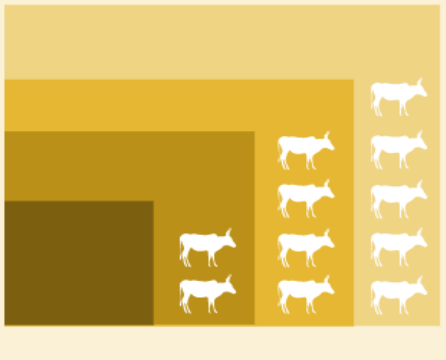
Pros: **Identifies in each country producers** who are relatively disadvantaged in terms of the selected criteria. Thus, this approach reflects more **effectively the country-specific differences** among food producers.

Cons: The use of different thresholds **reduce the comparability** across countries.

THE FAO DEFINITION OF SMALL-SCALE FOOD PRODUCERS

Adopted criteria

FAO opted for the combination of two criteria:



Physical size of the farm

- Land size
- Herd size

Economic size of the farm

- Total revenue

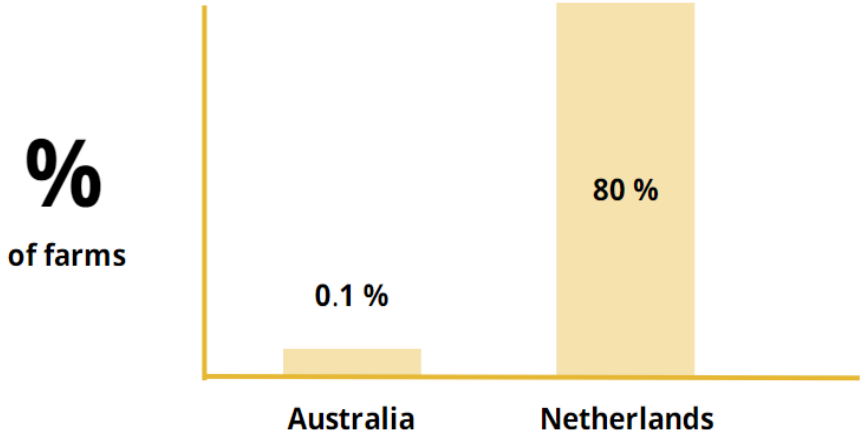
Source: FAO e-learning on SDG Indicators 2.3.1 and 2.3.2

A relative approach

- To identify producers who are, in each country, **relatively disadvantaged in terms of access to land, availability of livestock, and economic revenues** with homogeneous criteria

- A hypothetical unique worldwide threshold – **absolute approach** – would ensure strict comparability, but would also disregard national differences.

Example of results with an absolute approach – small-scale food producers defined as those operating less than 5 ha of land



FAO proposal to define small-scale food producers

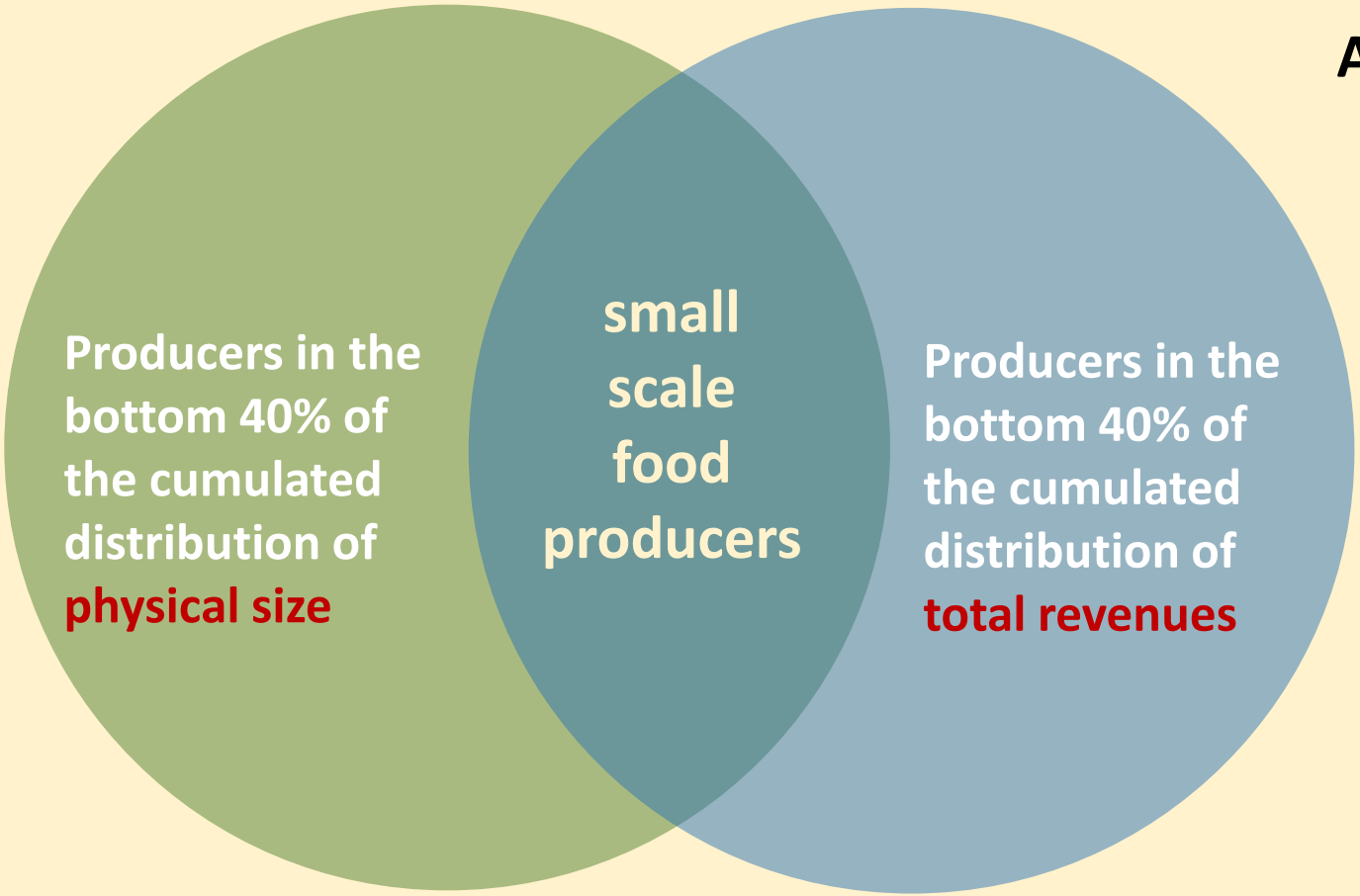
Using a **relative approach**, the proposed statistical definition by FAO defines small-scale food producers using the intersection of two criteria:

1. **Physical size of the farm**, as expressed by:
   a. **Land size:** producers falling in the bottom 40 percent of the cumulated distribution of land size, in hectares;
   b. **Livestock:** producers falling in the bottom 40 percent of the cumulated distribution of total livestock heads

2. **Economic size of the farm**, as expressed by the bottom 40 percent of the distribution of total revenues measured in **PPP**, with a cap at $PPP 34,387

Need to satisfy all conditions (1.a, 1.b, and 2+absolute cap) to be classified as small-scale.

FAO proposal to define small-scale food producers



IMPORTANT CONCEPTS AND DEFINITIONS

Three components to be defined

In order to operationalize the proposed definition, **three components need to be measured and defined**:

Physical size of the farm

- Land size - which types of plot are either included in or excluded from the physical size (operated land) calculation.
- Herd size - how to count livestock heads in order to evaluate and compare the relative physical size of a herd.

Economic size of the farm

- Total revenue - a numerical formula to calculate the revenue, based on the volume of production and the constant selling price.

Source: FAO e-learning on SDG Indicators 2.3.1 and 2.3.2

Land size

Land size defined in terms of **operated land** – includes only plots that are actually used for agricultural activities

Includes	Excludes
Land cultivated with permanent crops (including the land rented in)	Land rented out
Land cultivated with temporary crops (including the land rented in)	Forest land
Fallow land (land left uncropped and not dedicated to grazing)	land abandoned prior to the reference period

Herd size

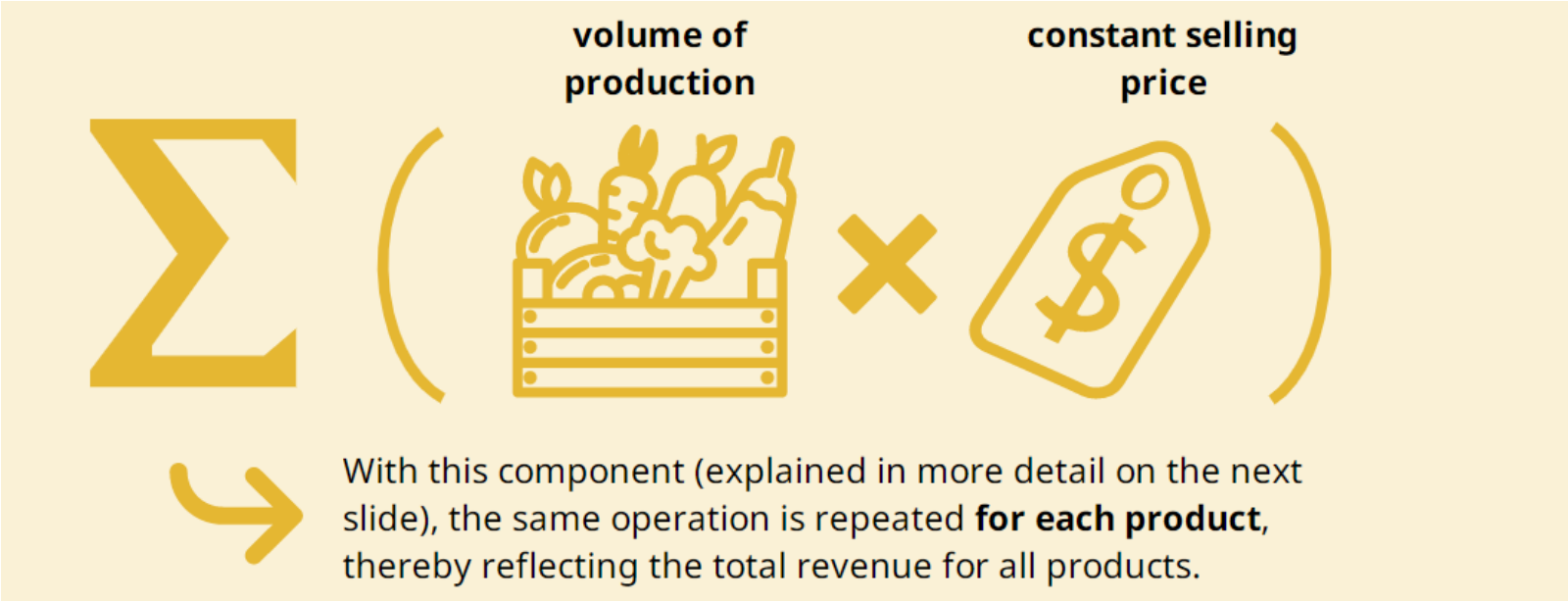
The **number of livestock** available to a producer must be considered in terms of **Tropical Livestock Units (TLU).** This unit of measurement standardizes different livestock types in a single measure through conversion factors valid for specific livestock varieties in each region of the world.

Table of TLU conversion factors:

Region	Cattle	Buffalo	Sheep	Goat	Pig	Ass	Horse	Mule	Camel	Chicken
Near East North Africa	0.7	0.7	0.1	0.1	0.2	0.5	0.4	0.6	0.75	0.01
North America	1		0.15	0.1	0.25	0.5	0.8	0.6		
Africa South of Sahara	0.5		0.1	0.1	0.2	0.5	0.5	0.6	0.7	0.01
Central America	0.7		0.1	0.1	0.25	0.5	0.5	0.6		0.01
South America	0.7		0.1	0.1	0.25	0.5	0.65	0.6		0.01
South Africa	0.7		0.1	0.1	0.2	0.5	0.65	0.6		0.01
OECD	0.9	0.7	0.1	0.1	0.25	0.5	0.65	0.6	0.9	0.01
East and South East Asia	**0.65**	**0.7**	**0.1**	**0.1**	**0.25**	**0.5**	**0.65**	**0.6**	**0.8**	**0.01**
South Asia	0.5	0.5	0.1	0.1	0.2	0.5	0.65	0.6		0.01
Transition Markets	0.6	0.7	0.1	0.1	0.25	0.5	0.65	0.6		0.01
Caribbean	0.6	0.6	0.1	0.1	0.2	0.5	0.65	0.6		0.01
Near East	0.55	0.6	0.1	0.1	0.25	0.5	0.65	0.6	0.7	0.01
Other	0.6	0.6	0.1	0.1	0.25	0.5	0.65	0.6		0.01

Total revenues

The economic size of a farm is expressed as total revenues of agricultural production



Source: FAO e-learning on SDG Indicators 2.3.1 and 2.3.2

Total revenues (2)

- Revenues generated by: crop, livestock, fisheries, aquaculture and forestry.

Given i agricultural activities, including crops, livestock, fisheries and forestry activities, for each producer k, revenues can be written as

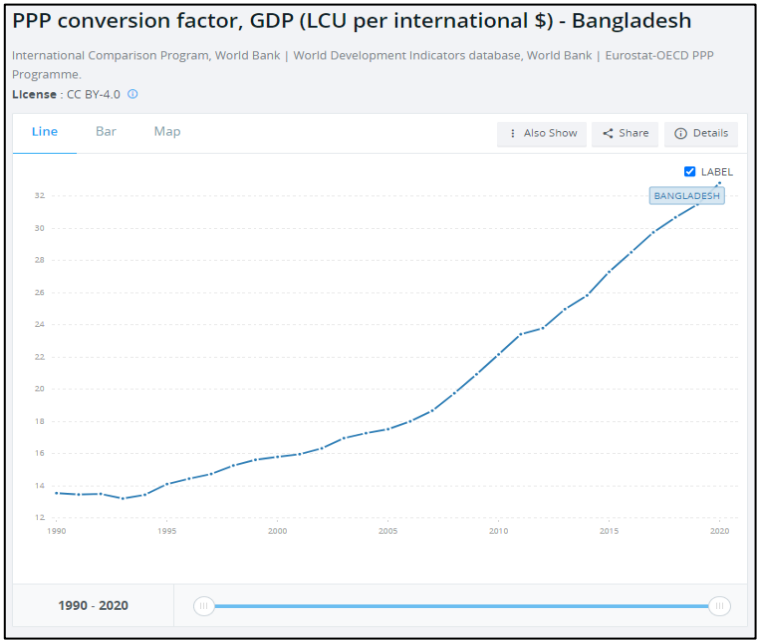
$$R_k^t = \sum_k V_{ik}^t p_{ik}^t$$

- $\mathbf{V_{ik}^t}$ is the physical volume of **agricultural product** i of **producer k** during **year t**.
- $\mathbf{p_{ik}^t}$ is the constant selling price received by the small-scale food producer **k** for the agricultural product **i** during the same year **t**.

Total revenues (3)

Revenues adjustments: to obtain comparable results across countries, total revenues are expressed in **Purchasing Power Parity (PPP)** US Dollars

- PPP is an indicator that allows a comparison of two countries respective purchasing power by using not only the exchange rate, but also the market price of a basket of goods, if it were paid for in dollars.



Conversion factors:

- Are provided by the **World Bank International Comparison Project**
- Can be downloaded from: https://data.worldbank.org/indicator/PA.NUS.PPP?locations=BD

Crop revenues

Main components

- Crop sold
- Crop for own consumption
- Crop used for feed
- Crop stored
- Crop used for byproducts
- Crop given as gift
- Crop used for paying labour
- Crop used for paying rent and/or inputs
- Crop exchanged in sharecropping agreement

Livestock revenues

Main components

- Livestock sold (live)
- Livestock given as gift
- Livestock products (e.g. meat) and by-products (e.g. dung) sold
- Livestock products used for own-consumption
- Livestock products and by-products used as pay for inputs, labour or as loan repayment
- Livestock by-product self-used (also used as cost under crops, e.g. dung used as fertilizer)

Fishery revenues

Main components

- Captured fresh fish sold
- Captured processed fish sold
- Captured fresh fish for own consumption
- Captured processed fish for own consumption
- Traded fresh fish sold
- Traded processed fish sold

Forestry revenues

Main components

- Products sold
- Forestry products for own consumption
- Forestry products stored
- Forestry products used for paying labor
- Forestry products used for paying rent
- Forestry products used for paying inputs
- Forestry products given out in sharecropping agreement

Thank you

For more detailed information on Indicator 2.3.1 and 2.3.2

https://www.fao.org/sustainable-development-goals-data-portal/data/indicators/indicator-231-volume-of-production-per-labour-unit-by-classes-of-farming-pastoral-forestry-enterprise-size/en

https://www.fao.org/sustainable-development-goals-data-portal/data/indicators/average-income-of-small-scale-food-producers-by-sex-and-indigenous-status/en

Online course

https://elearning.fao.org/course/view.php?id=483