Food Security Measurement in the context of the SDG monitoring framework
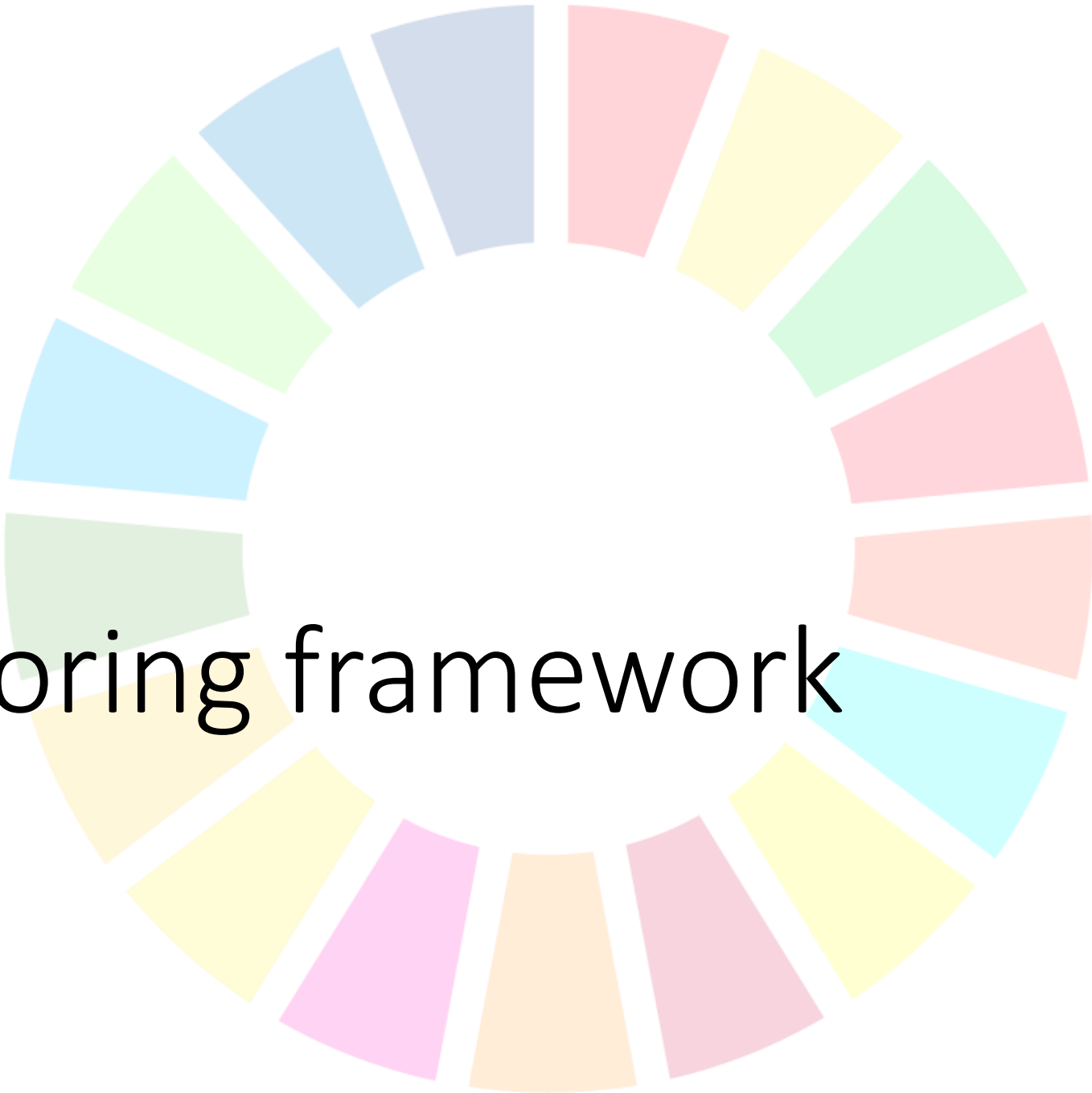
A strong call for increased coordination

Outline

- The SDG monitoring framework
  - Need to ensure relevance, reliability, comparability and consistency of indicators used at national regional and global level
- Indicators for food security
  - 2.1.1 Prevalence of Undernourishment
  - 2.1.2 Prevalence of food moderate and/or severe food insecurity using the FIES
- FAO activities and technical support
  - Global level
  - Regional level
  - National level

The SDG monitoring framework

From the MDGs to the SDGs

- MDGs:
- "To address the problems of extreme poverty in its many dimensions – income poverty, hunger, disease, lack of adequate shelter, and exclusion, while promoting gender equality, education, and environmental sustainability" (UN Millennium Project, 2005)
- SDGs:
- Universal agenda for People, Planet, Prosperity, Peace, Partnership
  - "Leave no one behind"
  - "Every country is a developing country" (D. Nabarro)
  - "The agenda is one and indivisible"

The SDG monitoring framework

- After adoption of the 2030 Agenda for Sustainable Development, the UN Statistical Commission was requested to define a global monitoring framework to allow timely and consistent monitoring of progress towards the 17 Goals and Targets

- UNSC established an Interagency and Expert Group on SDG indicators (IAEG-SDG) to complete the task, where 28 elected members take deliberations, representing all countries in their regions.

The SDG monitoring framework

- After a series of meetings, a proposal listing about 230 indicators was presented to the UNSC and endorsed in March 2016 as a suitable starting point for global monitoring, with a view to be revised in five years

- Indicators included in the list are meant to be of universal validity and should be applied to monitor relevant goals and targets in all countries in the world.

- Whenever relevant, indicators should be disaggregated to the maximum possible extent, to capture differences among geographic locations and population groups within countries.

The challenges

- SDG indicators will drive the international statistical agenda for the next 15 years and beyond

- Monitoring the SDG agenda will be a demanding task for all countries in the world
  - 169 targets, 230 global indicators: many new areas, not covered by traditional statistical systems
  - SDG-2 alone with 5 Targets and 3 M.o.i
  - Some indicators are new: methods still to be developed (Tier III)
  - Indicators must be relevant for both developing and developed countries
  - Indicators must be disaggregated to capture inequalities within countries
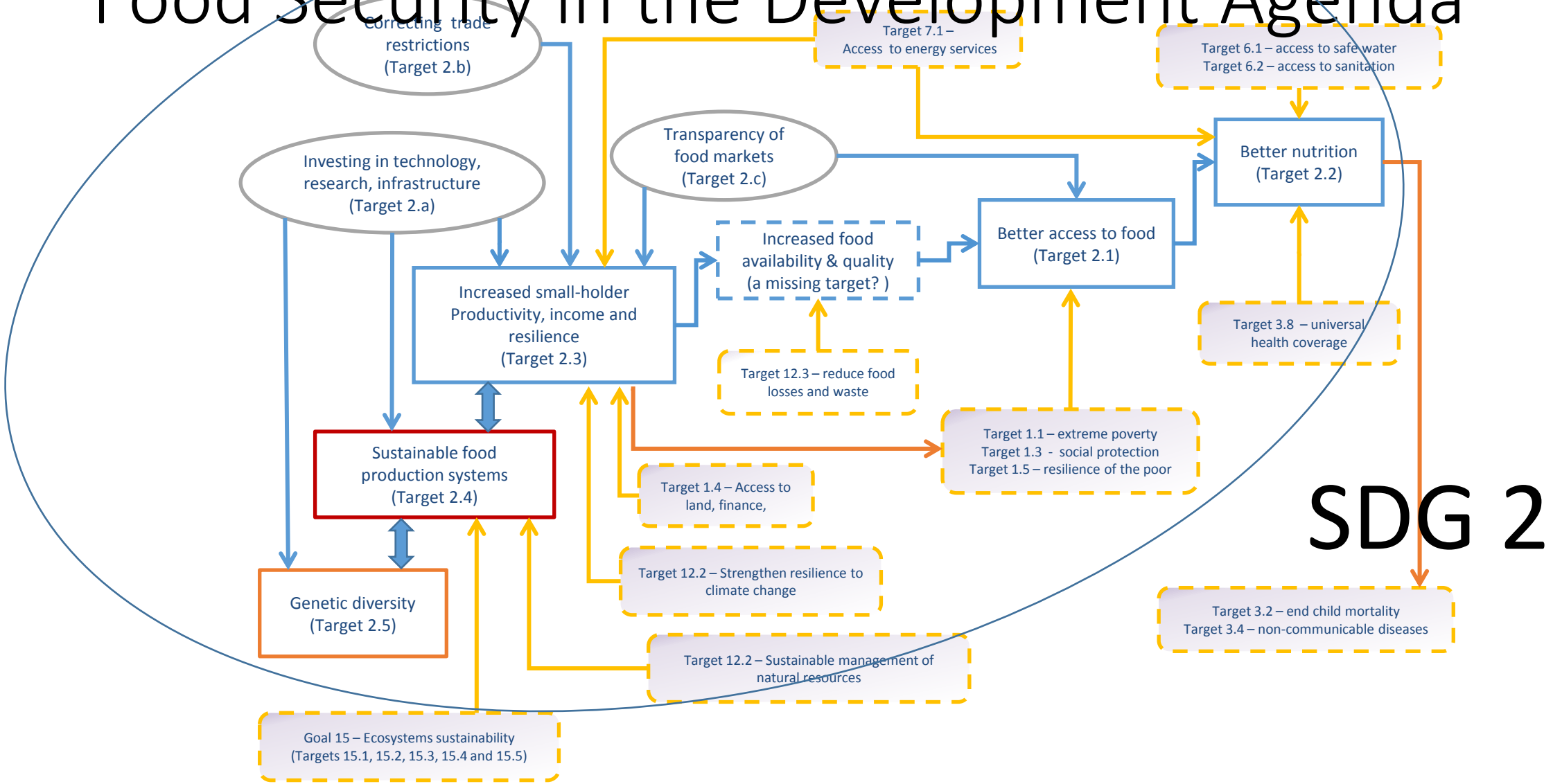
The role of specialized agencies

- Each indicator is assigned a "custodian" agency that holds the responsibility to:
  - Maintain the methodology,
  - Collect and validate estimates from countries, computing regional and global aggregates and reporting them to the UN Statistical Division to inform the annual global SDG report
  - Provide capacity development and technical support to countries to ensure that indicators are produced and reported regularly
- FAO has been identified as the custodian agency for 21 SDG global indicators, covering Targets under several goals. This presentation focuses on the indicators for Target 2.1
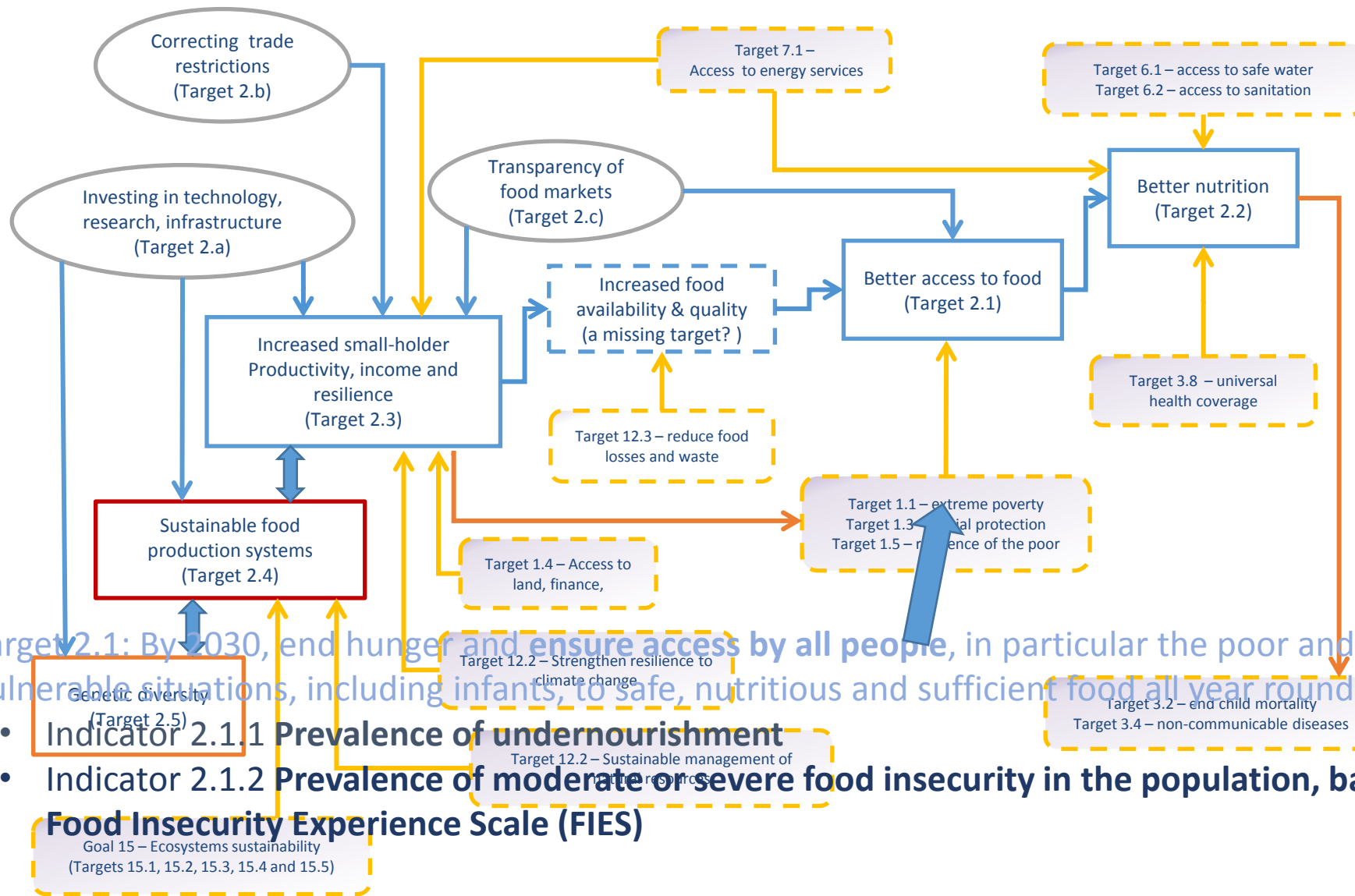
SDG food security indicators

Food Security in the Development Agenda

SDG 2

Correcting trade restrictions
(Target 2.b)

Target 7.1 –
Access to energy services

Target 6.1 – access to safe water
Target 6.2 – access to sanitation

Investing in technology, research, infrastructure
(Target 2.a)

Transparency of food markets
(Target 2.c)

Better nutrition
(Target 2.2)

Increased food availability & quality
(a missing target?)

Better access to food
(Target 2.1)

Increased small-holder
Productivity, income and resilience
(Target 2.3)

Target 3.8 – universal health coverage

Target 12.3 – reduce food losses and waste

Sustainable food production systems
(Target 2.4)

Target 1.1 – extreme poverty
Target 1.3 - social protection
Target 1.5 – resilience of the poor

Target 1.4 – Access to land, finance,

Genetic diversity
(Target 2.5)

Target 12.2 – Strengthen resilience to climate change

Target 3.2 – end child mortality
Target 3.4 – non-communicable diseases

Target 12.2 – Sustainable management of natural resources

Goal 15 – Ecosystems sustainability
(Targets 15.1, 15.2, 15.3, 15.4 and 15.5)

Correcting trade restrictions (Target 2.b)

Investing in technology, research, infrastructure (Target 2.a)

Transparency of food markets (Target 2.c)

Target 7.1 – Access to energy services

Target 6.1 – access to safe water
Target 6.2 – access to sanitation

Better nutrition (Target 2.2)

Increased food availability & quality (a missing target?)

Better access to food (Target 2.1)

Increased small-holder Productivity, income and resilience (Target 2.3)

Target 3.8 – universal health coverage

Target 12.3 – reduce food losses and waste

Sustainable food production systems (Target 2.4)

Target 1.4 – Access to land, finance,

Target 1.1 – extreme poverty
Target 1.3 – social protection
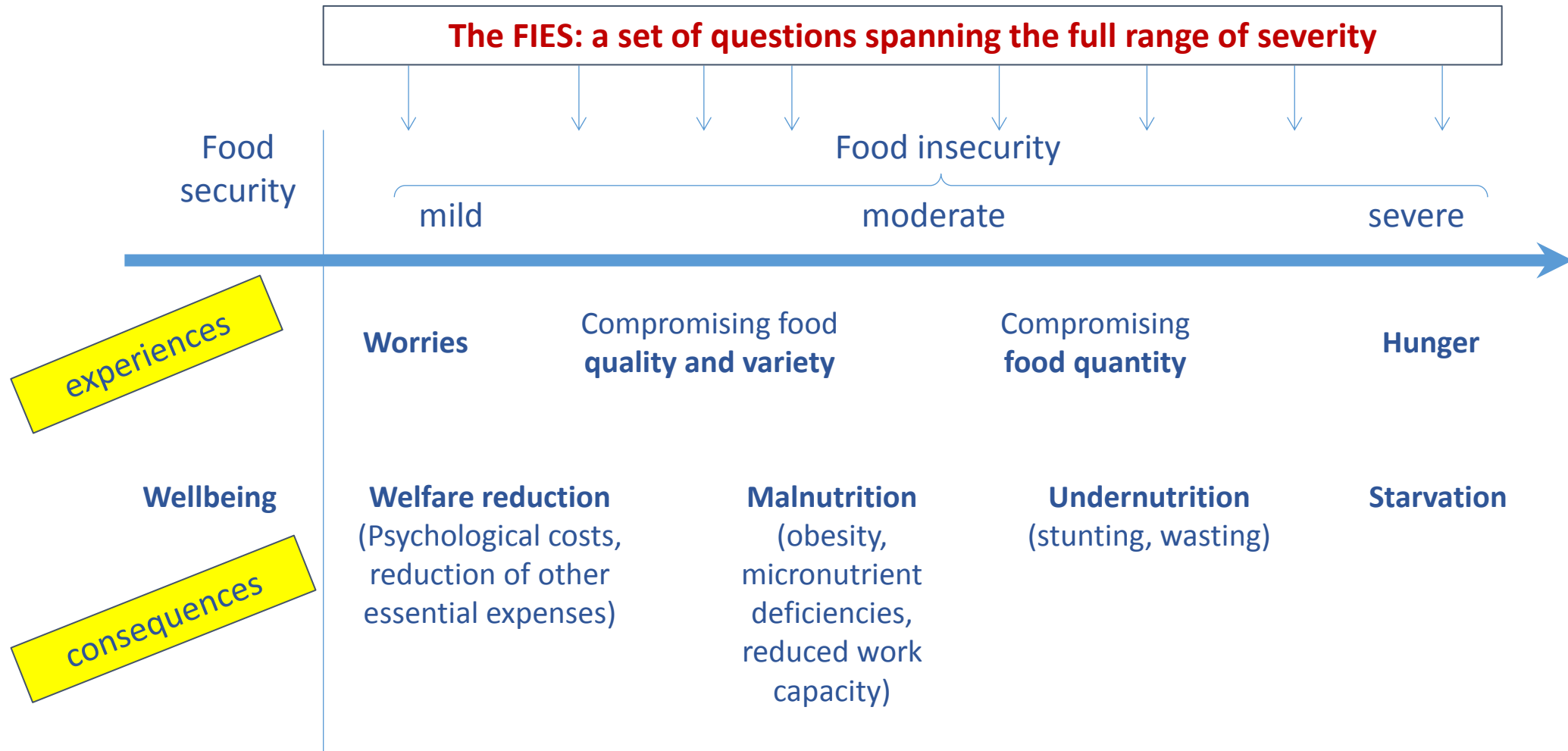Target 1.5 – resilience of the poor

- Target 2.1: By 2030, end hunger and **ensure access by all people**, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

Target 12.2 – Strengthen resilience to climate change

Genetic diversity (Target 2.5)

Target 3.2 – end child mortality
Target 3.4 – non-communicable diseases

- Indicator 2.1.1 **Prevalence of undernourishment**

Target 12.2 – Sustainable management of natural resources

- Indicator 2.1.2 **Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)**

Goal 15 – Ecosystems sustainability (Targets 15.1, 15.2, 15.3, 15.4 and 15.5)

The Food Insecurity Experience Scale

The concept:

1. Food insecurity is seen **from the perspective of the people** who struggle every day to get the food they need
2. It focuses on **access to food**, not on outcomes such as quantity and quality of food intake or nutritional status
3. The severity of the condition of a household or individual is treated as a **"latent" trait** (i.e., it cannot be observed directly, but its magnitude can be inferred from observable facts)
4. Use of advanced **statistical methods** makes it possible to produce proper measures, whose **validity and reliability can be formally assessed**
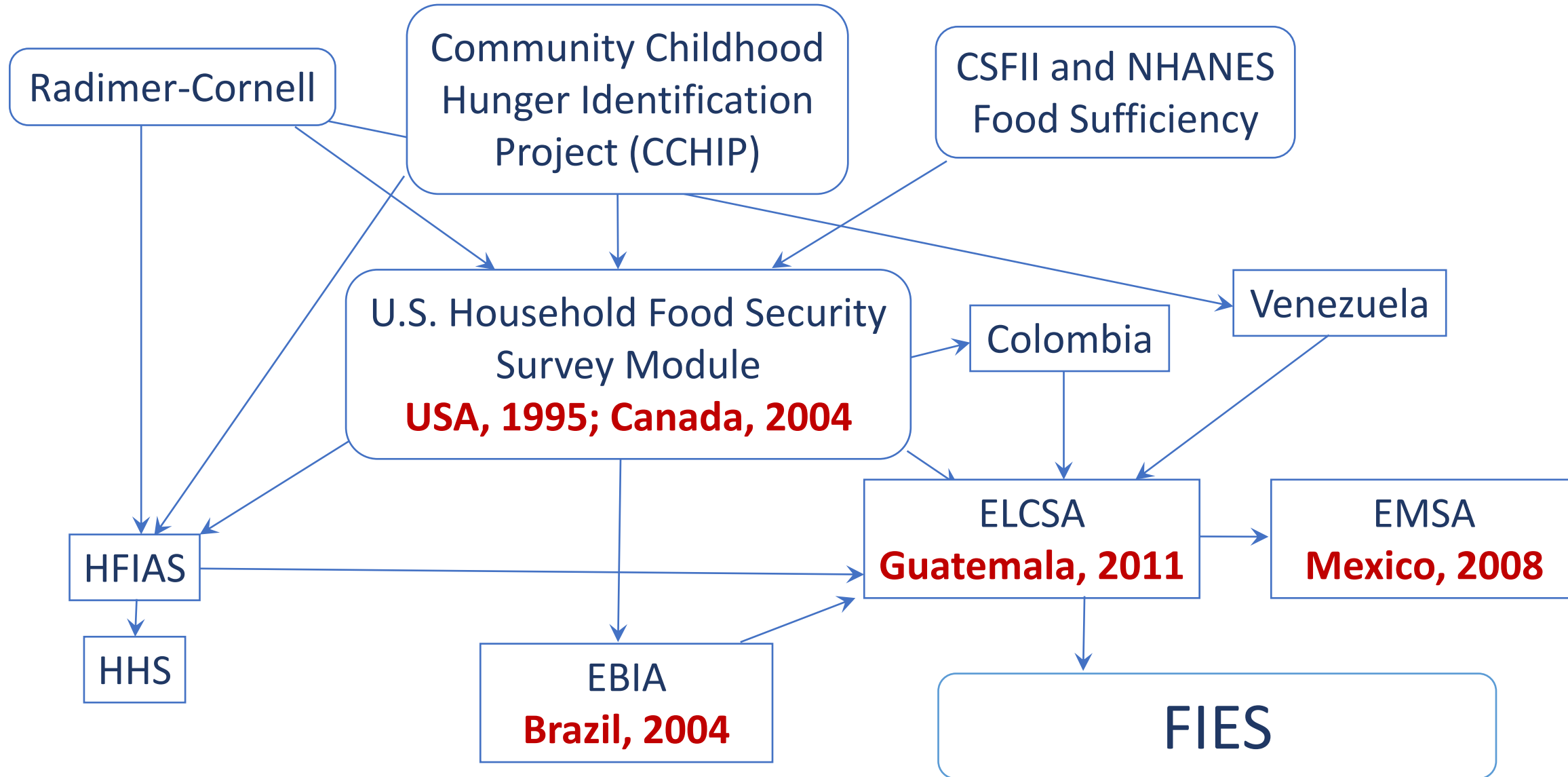
The Food Insecurity Experience Scale

The FIES: a set of questions spanning the full range of severity

Food security | Food insecurity

mild | moderate | severe

experiences

Worries | Compromising food **quality and variety** | Compromising **food quantity** | Hunger

consequences

Wellbeing | **Welfare reduction** (Psychological costs, reduction of other essential expenses) | **Malnutrition** (obesity, micronutrient deficiencies, reduced work capacity) | **Undernutrition** (stunting, wasting) | **Starvation**

The Food Insecurity Experience Scale

During the last 12 MONTHS, was there a time when:

1. You were **worried you would run out of food** *because of a lack of money or other resources?*

2. You were **unable to eat healthy and nutritious food** *because of a lack of money or other resources?*

3. You **ate only a few kinds of foods** *because of a lack of money or other resources?*

4. You **had to skip a meal** *because there was not enough money or other resources to get food?*

5. You **ate less than you thought you should** *because of a lack of money or other resources?*

6. Your **household ran out of food** *because of a lack of money or other resources?*

7. You **were hungry but did not eat** *because there was not enough money or other resources for food?*

8. You **went without eating for a whole day** *because of a lack of money or other resources?*

FIES Genealogy

The innovations from Voices of the Hungry

- **Cross country comparability**
  - The FAO project has established a **Global FIES reference standard,** against which all Experience-based food security scales (EBFSS) can be calibrated
  - Possible **differences in people's perceptions or in food related habits** across different cultures **are taken into consideration** when calibrating the measures, so that they do not affect the measure of severity
- **Possibility to use household or individual frames**
  - Gender disparities can be captured using the individually framed version
- **Possibility to use different reference periods**
  - The FIES does not confound severity with frequency
  - Can be used to analyze **seasonal differences** in the severity of food insecurity

The merits

- **The validity and reliability of the measures can be formally assessed**
  - Statistical tests on the data, to confirm they yield **proper measures** of a single underlying latent trait
  - Sampling **and non-sampling (!)** errors can be computed
- **It is easy to implement**
  - FAO provides FIES questionnaires in **200 different languages**
  - Flexibly adapted, it can be included in **virtually any population survey**.
  - It requires an average of **3 minutes of survey time** to apply
  - Can be **easily programmed in CAPI** applications

The merits

- **It generates disaggregated information**
  - When included in large scale representative surveys, results can be disaggregated at the level of any **population group** for which the survey is representative
- **The information it produces can be used to guide policy and intervention**
  - Can be **quickly** analyzed to generate **real-time results**
  - The food insecurity condition of household and individuals is one of the most effective **predictors of malnutrition**
  - In the US, the prevalence of food insecurity among housholds has been found to be particularly **sensitive to general macroeconomic conditions** (e.g., economic crises, unemployment rates)

The successes thus far

- Indicators based on the FIES, compiled by FAO at regional and global level, **are already featured in the UN SDG progress report 2016**
    - "More than half of the adult population in Sub Saharan Africa has experienced food insecurity at moderate or severe levels"
    - "Although differences are small Food Insecurity is more prevalent among adult women than among adult men almost everywhere in the world"
- The FIES has already been included in **official population surveys** in **Burkina Faso**, **Kenya**, **Pakistan**, **El Salvador**, **The Dominican Republic**, **St. Lucia**, **The Seychelles**; its inclusion has been announced in **Indonesia** and **Rwanda**, and it is being piloted in several other countries
    - Technical support has been provided for data analysis to Burkina Faso, Pakistan, The Seychelles and St. Lucia.

The successes thus far

- The FIES is included in the indicators framework for **M&E of projects** supported by the **Global Agriculture and Food Security Program** (**GAFSP**) and by the **German Agency for International Development** (**GIZ**)

- **Research** is being conducted using FIES data by independent researchers who have been awarded a license to access the full GWP dataset (see http://www.fao.org/3/a-bl331e.pdf)
  - Results of their work has already been presented in international meetings (e.g., the 2016 Association for Public Policy Analysis & Management – APPAM - Conference in London) (https://appam.confex.com/appam/int16/webprogram/Session6578.html)

The challenges ahead

- **Still limited application worldwide**
  - Although FAO has applied it **since 2014 in more than 150 countries** every year, this has only been through the Gallup World Poll on relatively **small samples**, which are only representative at national level
  - The full potential of the FIES will be expressed when it is included in large-scale population **surveys that also collect data on other determinants and outcomes** of food insecurity
- Advocate for **inclusion of the FIES** in more large scale households surveys
  - Partnerships: World Bank LSMS, WFP VAM, UNICEF India
- Provide **capacity development**, to increase statistical and analytic capacities in the field of food security

The challenges

- **Communication**
  - Over the past 20 years, there has been a proliferation of proposed household "food security" indicators, often without sufficient attention given to the analytic soundness of the methods proposed.
  - There is still a lack of sufficient widespread statistical literacy to appreciate the advantages of the FIES.
- Give **more visibility to results** on the prevalence of food insecurity measured with the FIES, while making sure they **are properly interpreted** and the difference with the PoU or Poverty rates is understood
  - See a set of Frequently Asked Questions on the Voices of the Hungry webpage (http://www.fao.org/in-action/voices-of-the-hungry/faq/en/)
- Help governments **make use of the information** generated by the FIES **from an inter-sectoral perspective**, to address causes and consequences of food insecurity

References

- Voices of the Hungry project web page
  (www.fao.org/in-action/voices-of-the-hungry/)

- USDA Economic Research Service, Food Security topic
  (http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us.aspx)

- Cafiero *et al.* 2014, Annals of the New York Academy of Science,
  (available at: http://onlinelibrary.wiley.com/doi/10.1111/nyas.12594/pdf)

- "Methods for estimating comparable prevalence rates of food insecurity experienced by adults throughout the world" VoH Technical Report No 1. (www.fao.org/3/a-i48302.pdf)

FAO role in support of SDG monitoring

FAO actions so far

- FAO traditionally **very active in statistical capacity development** (WCA, Global Strategy, AMIS, CountrySTAT, …)
- Particularly active in the area of **food security statistics**,
  - To **develop methods and tools**
    - Development of guidelines for **improved food consumption measurement in household surveys** (with the WB)
    - Analysis of food consumption data collected with household surveys (**ADePT-FSM**)
    - The **Voices of the Hungry** project (FIES)
  - To **provide technical assistance** for promoting their adoption
    - Food Security Statistical Capacity Development in the Sahel

The road ahead

- Engage with national institutions, contributing to the processes leading to the definition of national SDG monitoring mechanisms
  - Make sure national and global SDG indicators are aligned
  - Strong FAO presence in countries to support governments in national monitoring and reporting (on the 21 FAO indicators)
- Review existing data collection efforts in the areas of food security & nutrition, to verify their ability to generate the data needed to inform SDG-2 indicators
  - Direct technical support in the design and implementation of household surveys
    - Assess the suitability of existing food consumption data to estimate the PoU at subnational level
    - Identify planned surveys as potential vehicles for the FIES
  - Partnerships with other UN agencies

The road ahead

- Train national professionals on the principles and methods for agricultural, food security and nutrition statistics
  - E-learning and other supporting training materials (manuals, user guides, etc.) on the PoU and on the FIES
  - Training workshops at regional and national level
  - South-to-South cooperation
  - Technical assistance from FAO
- Build capacities of national institutions to analyze food security data from different sources and sectors in an integrated way and use it to guide policy
  - Inclusion of SDG indicators 2.1.1 and 2.1.2 in the reference tables of the chronic Integrated Food Security Phase Classification (IPC)