Strengthening Food-based Approaches To Reduce Iron Deficiency:
The FAO/WHO Global Individual Food consumption data Tool (FAO/WHO GIFT)
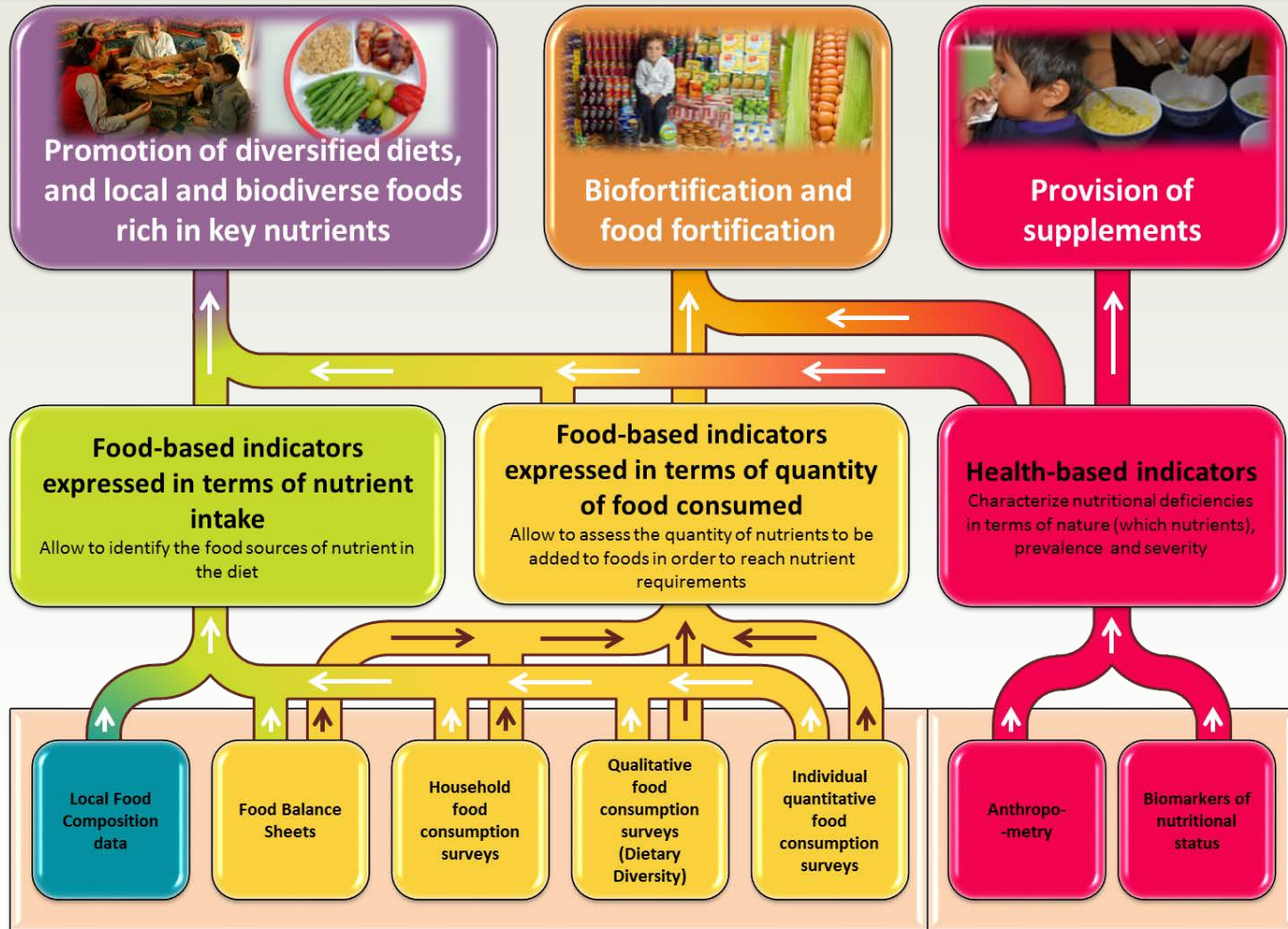
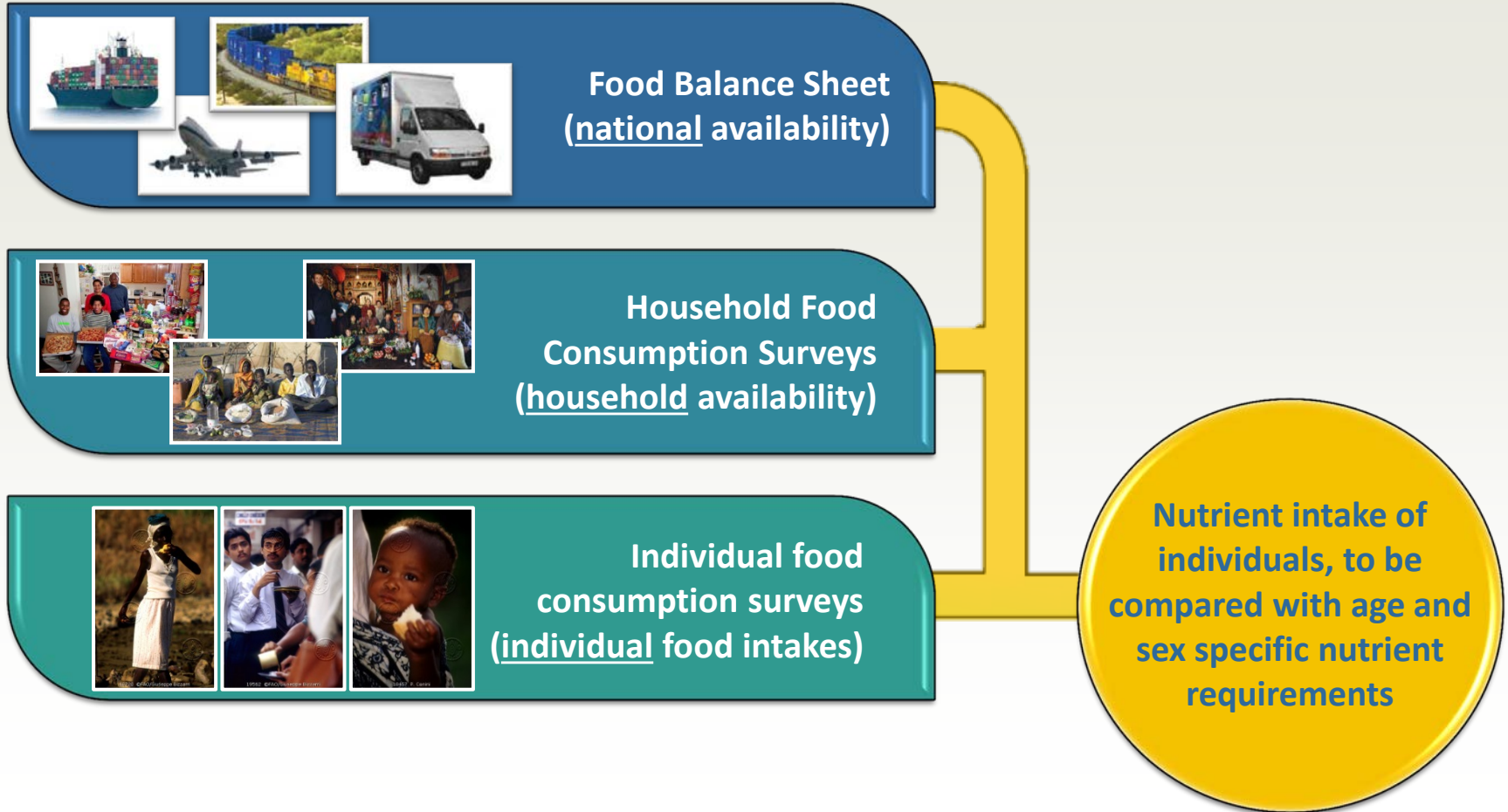CATHERINE LECLERCQ AND VICTORIA PADULA DE QUADROS

DECEMBER 5TH, 2017

Food and Agriculture Organization of the United Nations

The theory of change: providing the data that are needed to implement food-based approaches to combat iron deficiency

Data that can be used to assess the nutritional adequacy of the diet

Food Balance Sheet (national availability)

Household Food Consumption Surveys (household availability)

Individual food consumption surveys (individual food intakes)

Nutrient intake of individuals, to be compared with age and sex specific nutrient requirements

Dietary assessment methods allowing a **multipurpose** use of quantitative data on food intakes

Quantitative Dietary record

Qualitative Food Frequency Questionnaire

Quantitative 24-hours recall

Semi-quantitative Food Frequency Questionnaire

Qualitative 24-hours recall

Qualitative 24-hours recall through food list questionnaire

Dietary assessment methods allowing a multipurpose use of quantitative data on food intakes

Quantitative Dietary record

Quantitative Food Frequency Questionnaire ✗

Quantitative 24-hours recall

Semi-quantitative Food Frequency Questionnaire ✗

Qualitative 24-hours recall ✗

Qualitative 24-hours recall through food list questionnaire ✗

FAO/WHO GIFT Dissemination platform

FAO/WHO GIFT Dissemination platform – www.fao.org/gift-individual-food-consumption/en/

Contact: fao-who-gift@fao.org

The platform provides an inventory of existing quantitative individual food consumption datasets worldwide
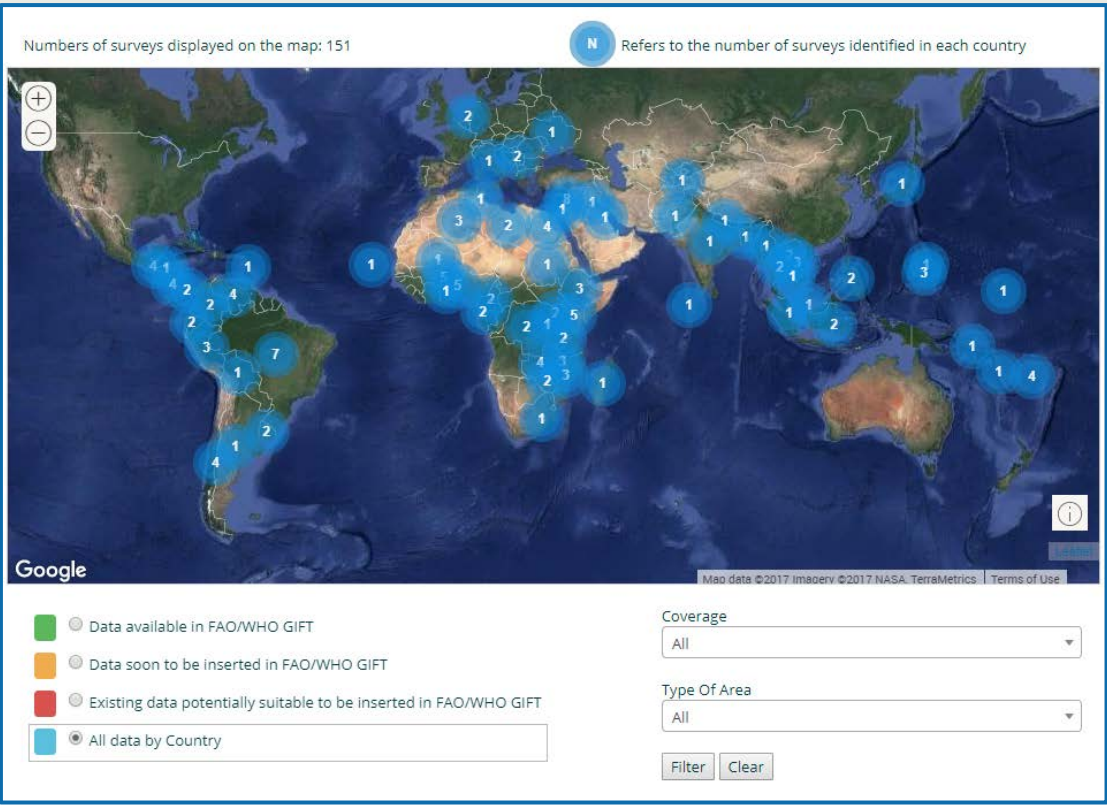
Each survey contains a metadata that indicates if the information on iron intake was collected

The end user can select the population group that is at risk of iron deficiency

Food consumption and iron status survey in two provinces of rural Burkina Faso

META Collected by FAO/WHO GIFT Team, developed by FENIX

Back to results

Gender
- Only male
- Only female
- All

Special Condition
- Pregnant
- Lactating
- Pregnant and lactating
- Non pregnant and non lactating

Age Granularity
- Year
- Month

Age

0   15   49   120

0   30   60   90   120
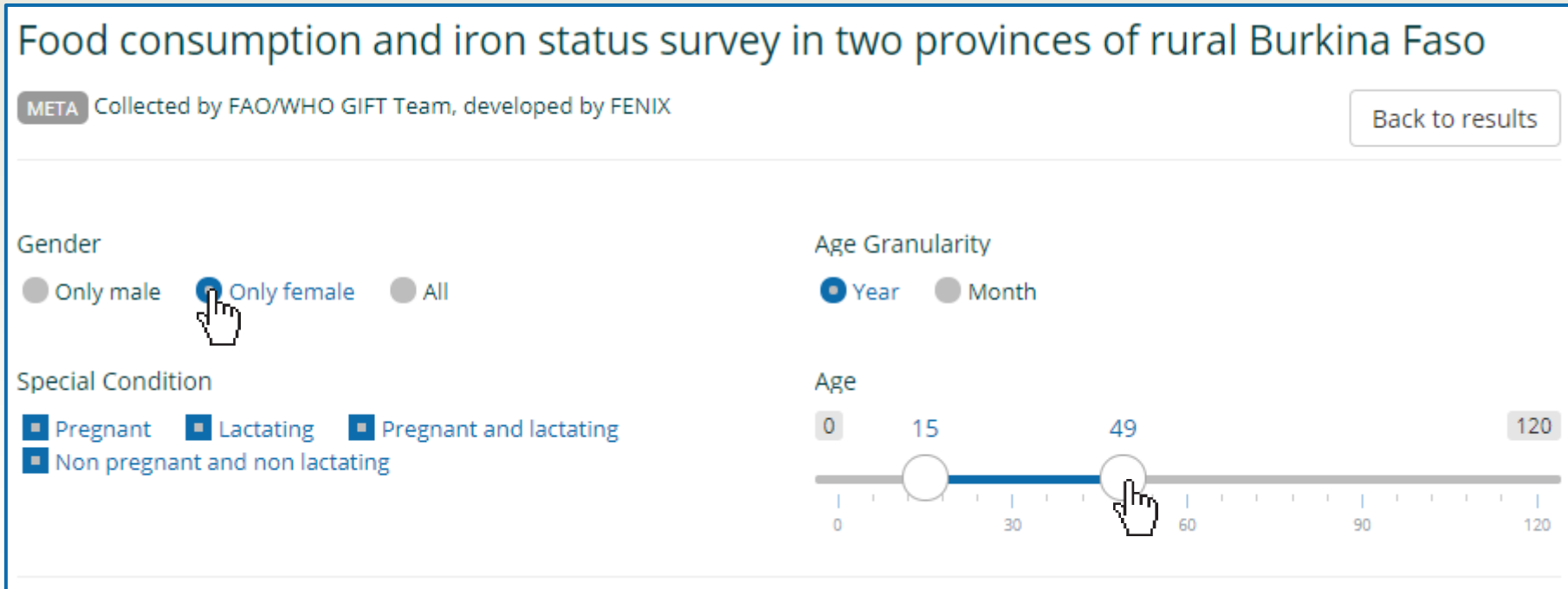
Food consumption patterns are described through average food consumption
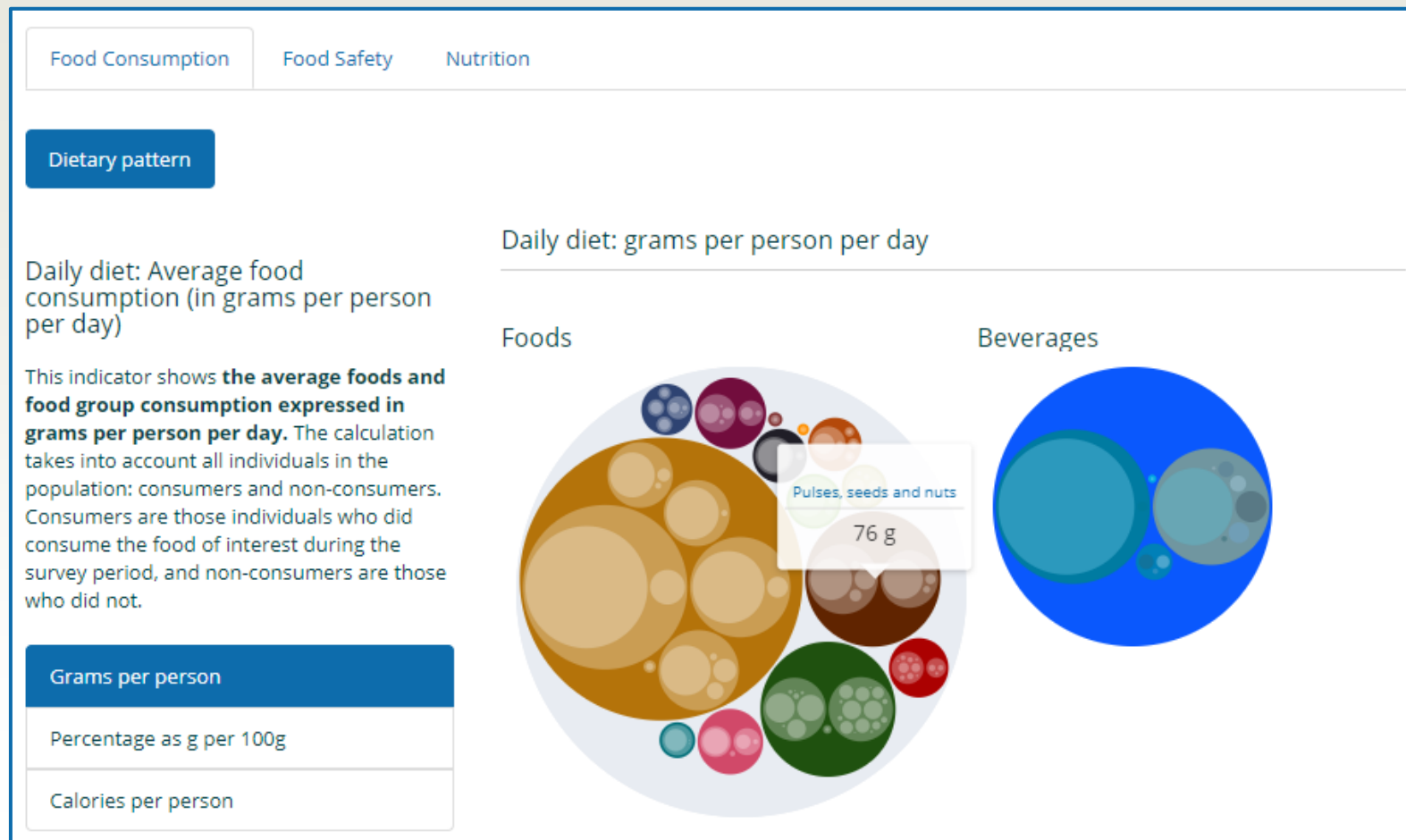
The main sources of iron and other key micronutrients are identified

Food and Agriculture Organization of the United Nations
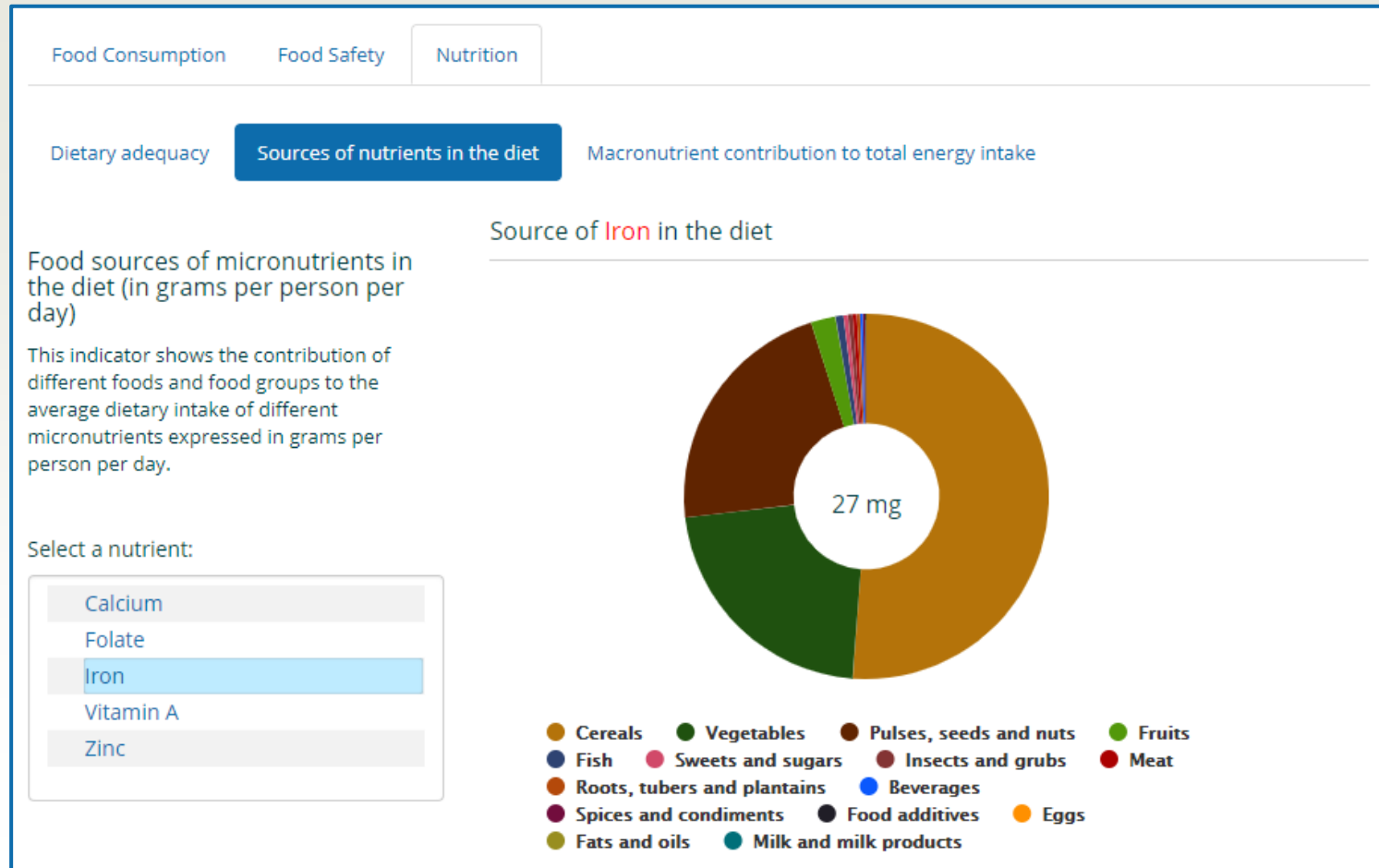
The overall adequacy of the diet is assessed through macronutrient contribution to total energy intake

Food Consumption   Food Safety   Nutrition

Dietary adequacy   Sources of Nutrients in the Diet   Macronutrient contribution to total energy intake

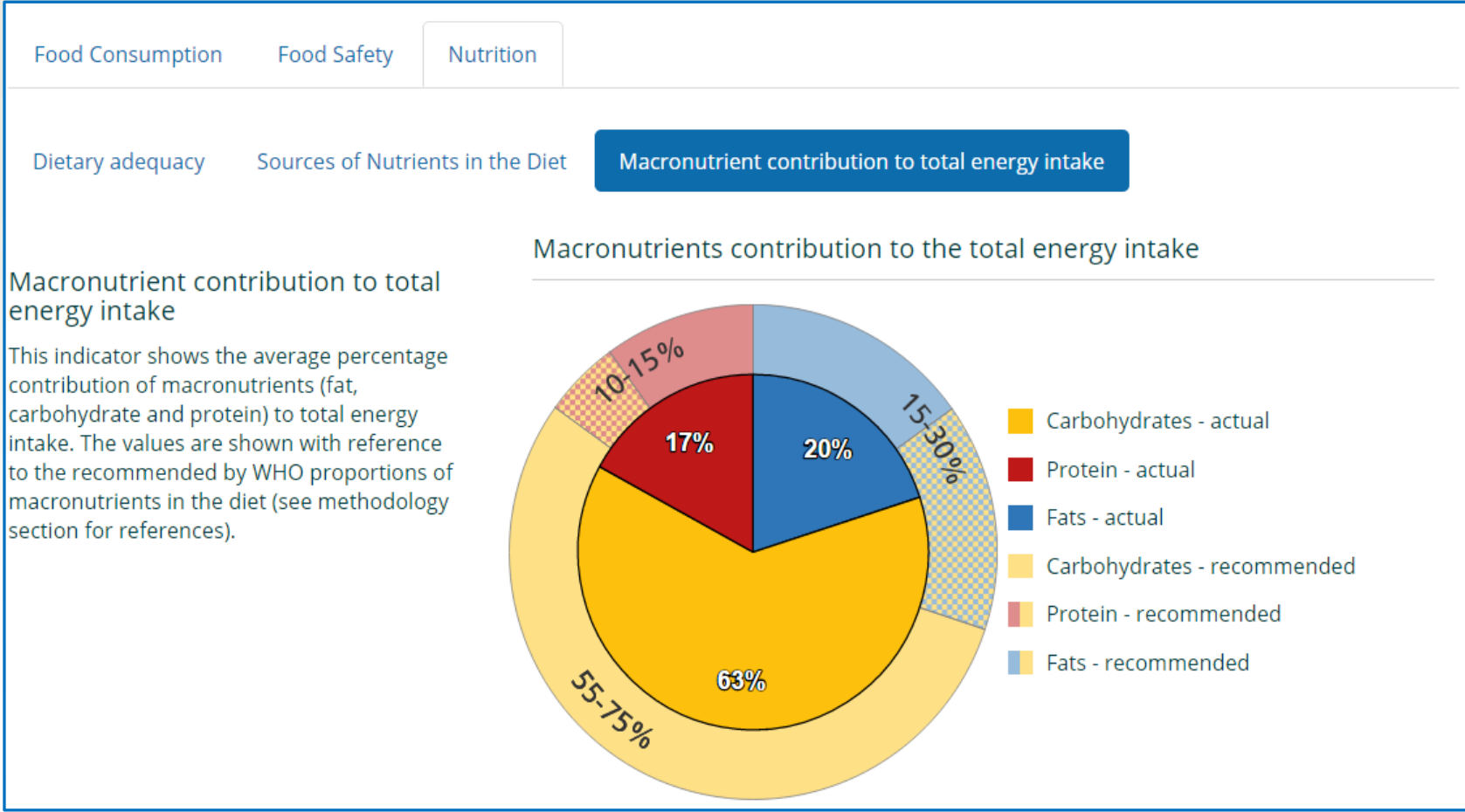**Macronutrient contribution to total energy intake**

This indicator shows the average percentage contribution of macronutrients (fat, carbohydrate and protein) to total energy intake. The values are shown with reference to the recommended by WHO proportions of macronutrients in the diet (see methodology section for references).

Macronutrients contribution to the total energy intake

- 10-15%
- 15-30%
- 17%
- 20%
- 63%
- 55-75%

- Carbohydrates - actual
- Protein - actual
- Fats - actual
- Carbohydrates - recommended
- Protein - recommended
- Fats - recommended

Food and Agriculture Organization of the United Nations

The proportion of the population at risk of micronutrient deficiency is estimated

Food Consumption   Food Safety   Nutrition

Dietary adequacy   Sources of Nutrients in the Diet   Macronutrient contribution to total energy intake

Percentage of individuals at risk of nutrient inadequacy)

This indicator shows the percentage of individuals in the population who are at risk of having an average dietary intake of different nutrients below their requirements for these nutrients. The indicator shows the estimates of population at risk of Vitamin A inadequacy, and in the future it will include iron, calcium, zinc and possibly folic acid. The nutrient reference values used for vitamin A are taken from the HMD (2016) (see methodology section for references).

Vitamin A
Iron
Calcium
Zinc
Fola

Percentage of the population at risk of VITAMINA A Inadequacy

60% of the population is AT RISK of VITAMINA A inadequacy

High consumption of specific foods allows the assessment of dietary exposure to food chemicals
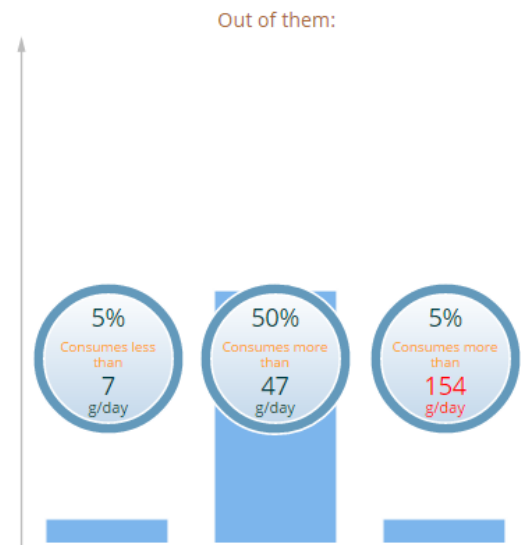
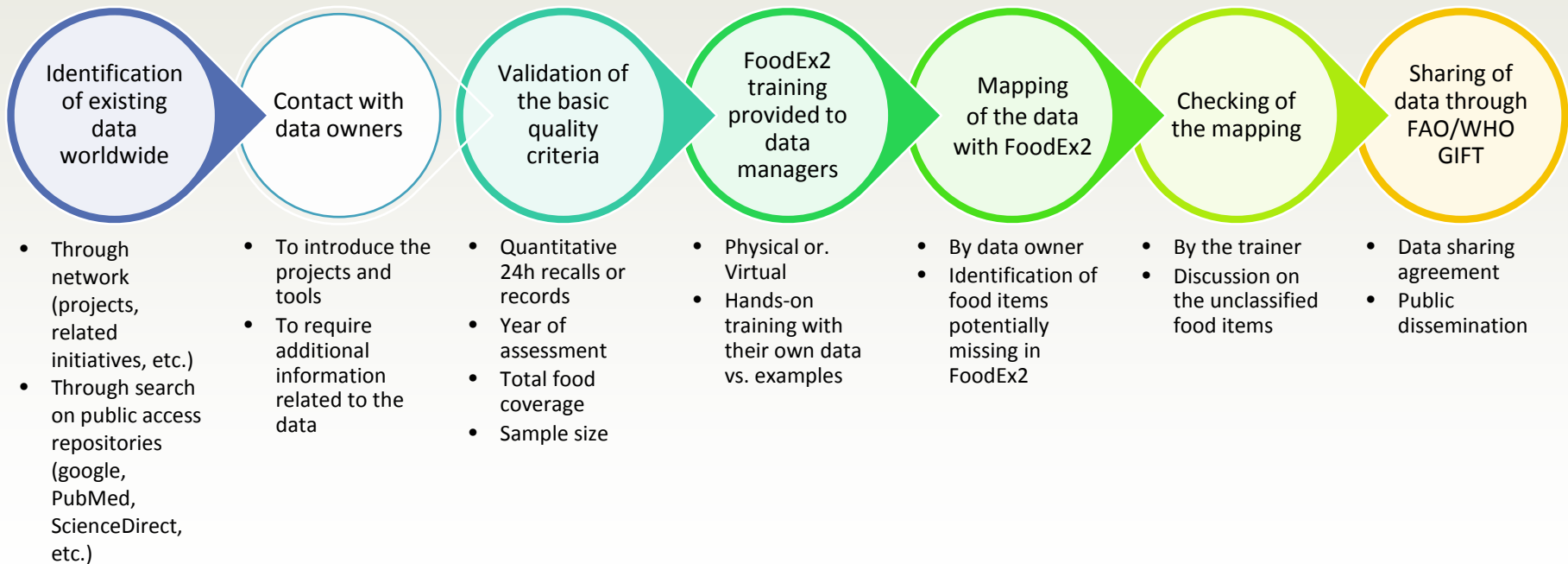# Microdata and metadata describing the datasets can be downloaded by the end user

Results

Title	Sample Size	Region	Year	
HarvestPlus Reaching End Users (REU) Orange-Fleshed Sweet Potato (OFSP) Project	452	Uganda	2007	Download Metadata
HarvestPlus Bangladesh Bio-fortified Rice Project - Baseline Dietary Survey	475	Bangladesh	2007	Download Metadata
Philippines - 2003 - FNRI/HarvestPlus	1205	Philippines	2003	Download Metadata
Food consumption and iron status survey in two provinces of rural Burkina Faso	960	Burkina Faso	2010	Download Metadata

Showing 1 to 4 of 4 rows

Harmonisation of individual food consumption data at global level

Identification of existing data worldwide

- Through network (projects, related initiatives, etc.)
- Through search on public access repositories (google, PubMed, ScienceDirect, etc.)

Contact with data owners

- To introduce the projects and tools
- To require additional information related to the data

Validation of the basic quality criteria

- Quantitative 24h recalls or records
- Year of assessment
- Total food coverage
- Sample size

FoodEx2 training provided to data managers

- Physical or. Virtual
- Hands-on training with their own data vs. examples

Mapping of the data with FoodEx2

- By data owner
- Identification of food items potentially missing in FoodEx2

Checking of the mapping

- By the trainer
- Discussion on the unclassified food items

Sharing of data through FAO/WHO GIFT

- Data sharing agreement
- Public dissemination

What is FoodEx2?

FoodEx2 is a comprehensive system allowing classification <u>and</u> description of foods at the same time

developed by the European Food Safety Authority (EFSA)

- The same food item can be referred to in different ways
- FoodEx2 is a concrete proposal for a common language across databases worldwide

UK: "16-382 – Pangasius"

ASEAN: "AAG217 - Striped catfish"

FoodEx2:

=
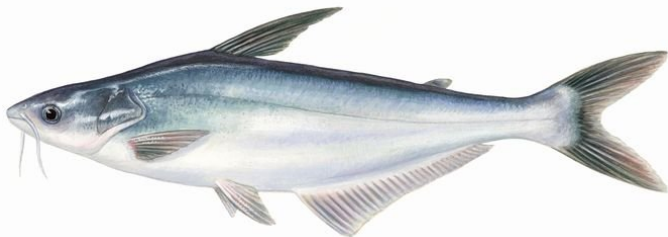
A0F8N
(Pangas catfishes)
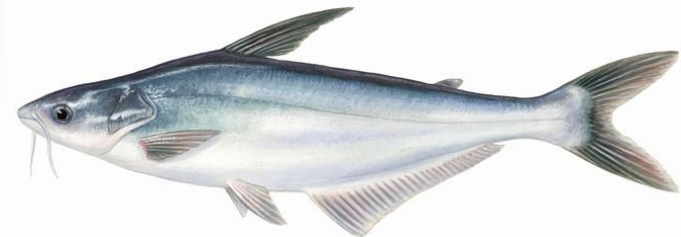
Food description with FoodEx2

♦ FoodEx2 allows us to precisely describe the food as consumed through facets

UK: "16-382 – Pangasius"

ASEAN: "AAG217 - Striped catfish"

FoodEx2:

=

A0F8N
(Pangas catfishes)

BUT

≠

A0F8N#F20.A07QV

Pangas catfishes, PART=With skin

A0F8N#F20.A07QR

Pangas catfishes, PART=Without skin

Upgrade of FoodEx2 at global level

- Initiated in 2014 in collaboration between EFSA, FAO and WHO
- Addition of food items not consumed in Europe

Insects	Flowers
Ants (Uganda)	Banana flower (Bangladesh)
Termites (Uganda)	Kapok flower (Burkina Faso)
Mayflies (Burkina Faso)	Roselle flower (Burkina Faso)

Matching with food composition data

When different coding systems are used food matching has to be done manually:

Food **consumption** data:

Food **composition** data:

Rice → Rice

Amaranth → Amaranth

Banana → Banana

Beef → Beef

Soy sprouts → Soy sprouts
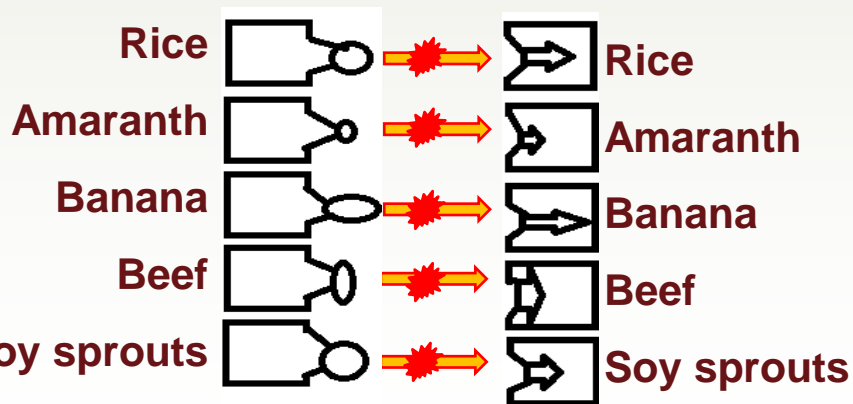
When one coding system is used, large part of the matching can be automatized:

Food **consumption** data:

Food **composition** data:

Rice → Rice

Amaranth → Amaranth

Banana → Banana

Beef → Beef

Soy sprouts → Soy sprouts

FoodEx2 Browser

Food and Agriculture Organization of the United Nations

Achievements

- ♦ **Identifying information needs: webinars with potential users**
  - ♦ December 2016: 16 webinars involving 83 potential end users
  - ♦ January to March 2017: 11 webinars involving 90 end users

- ♦ **Harmonizing information:**
  - ♦ Upgrade of the FoodEx2 food categorization and description system to global level
  - ♦ Support to data owners to harmonise their datasets with FoodEx2 (physical and on line trainings)

- ♦ **Sharing data:**
  - ♦ development and publication of the FAO/WHO GIFT dissemination platform

FAO/WHO GIFT official launch to data providers and users

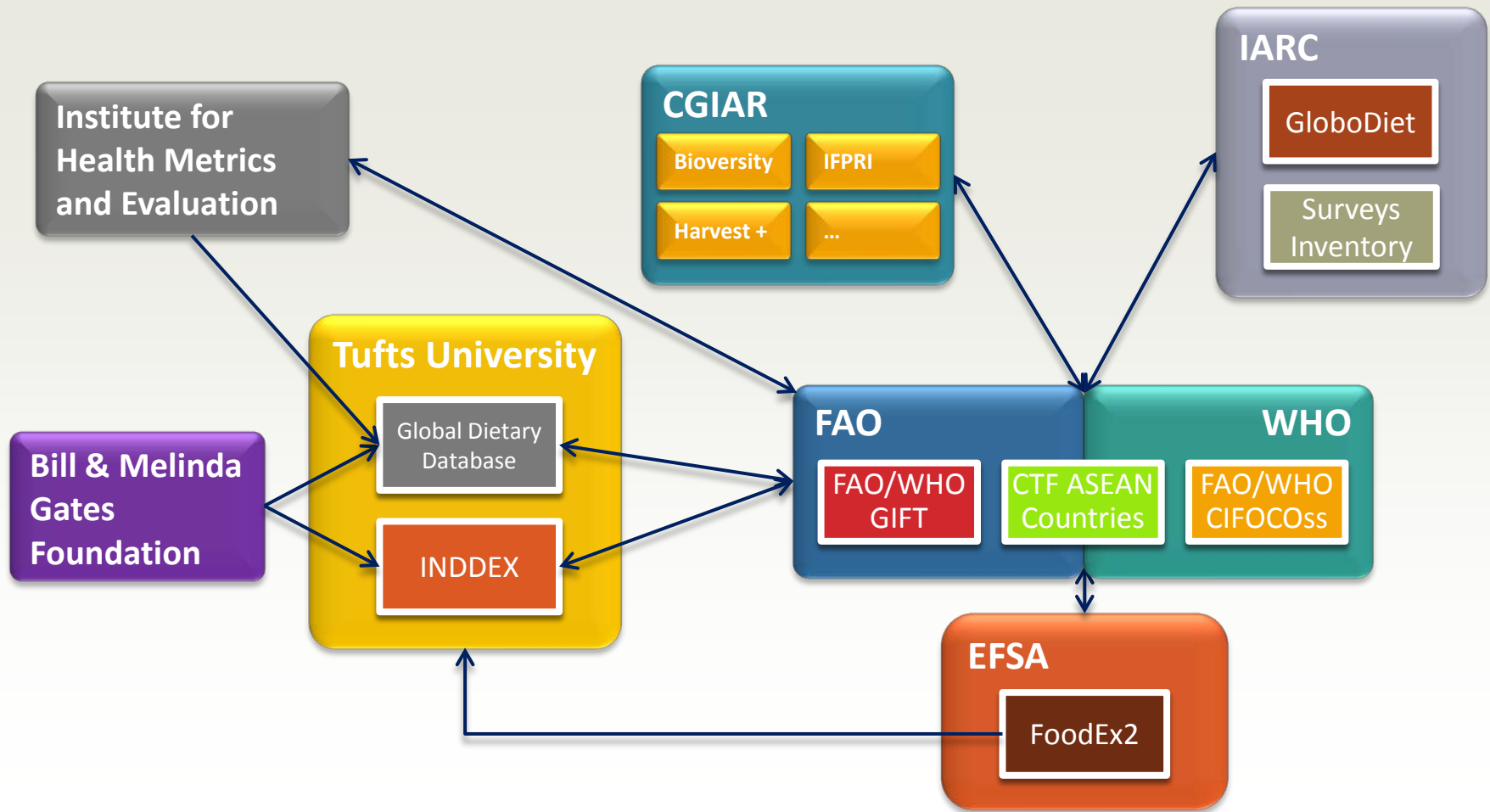# The FAO/WHO inter-agency team currently developing FAO/WHO GIFT

FAO:

♦ Nutrition and Food Systems Division (ESN)

♦ Information Technology Division (CIO)

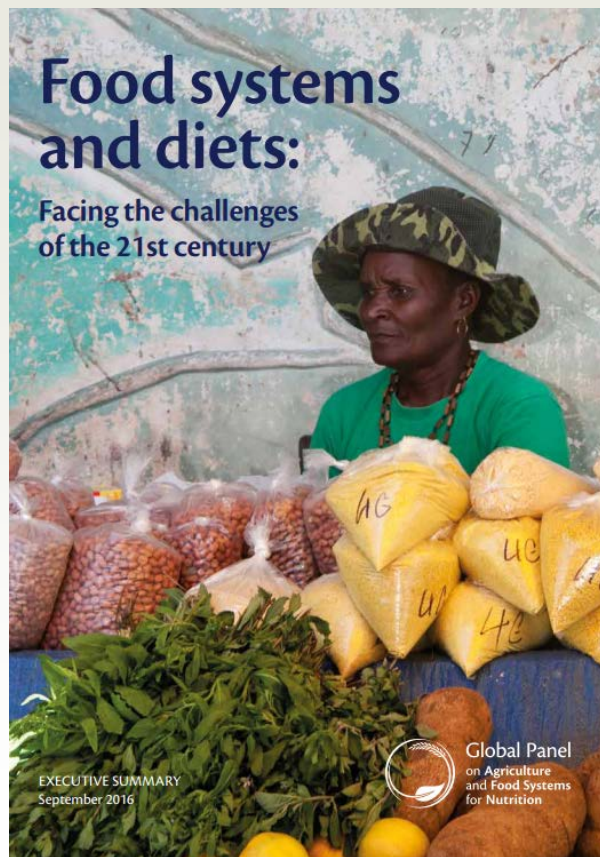♦ Statistics Division (ESS)

♦ Food Safety and Quality Unit (AGFF)

WHO:

♦ Department of Food Safety and Zoonoses (FOS)

♦ Department of Nutrition for Health and Development (NHD)

Projects and collaborations overview

They feel the need for FAO/WHO GIFT !

Food systems and diets:

Facing the challenges of the 21st century

EXECUTIVE SUMMARY
September 2016

Global Panel
on Agriculture
and Food Systems
for Nutrition

Box 3: Research priorities

Research on food, agriculture and nutrition must be refocused on achievement of healthy diets
The international and national agricultural research communities should play a strong leadership role in promoting research that addresses productivity, profitability, sustainability and nutritional goals at the same time. A 'high-quality diet' lens must guide a rebalancing of funding allocations across the food system.

Metrics for diet quality and the food system need to be modernized
They are also needed to enable policy makers to monitor the implications of dietary choices for the future of the environment.

More and better data
Effort is urgently needed to substantially improve the quantity and quality of dietary data. Few national governments collect the data required to inform decision makers about what people actually eat and the UN has no functioning global dietary database. Recent efforts to gather data such as the Global Dietary Database (GDD) and FAO/WHO GIFT (FAO/WHO Global Individual Food Consumption data Tool), being developed by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), should be built upon.

Many other indicators for the food system also need to be collected, for example on food quality and safety to help policy makers understand the links between food systems and actual nutritional outcomes.

More and better evaluation
Policy makers need to be able to assess the effect that specific interventions and policy actions have on diet quality and to determine how they could be improved. For example, recent work to track changes in the purchases of sugar-sweetened beverages in Mexico following imposition of a new tax, sheds important light on consumer choices in a changing food environment.

They feel the need for FAO/WHO GIFT !

One of the 10 priorities: "**Make more data on diets widely available.** It is currently difficult to compare diets across cultures, geographies and time. This has hampered a global consensus on what constitutes a healthy diet. **A pilot project — the FAO/WHO Global Individual Food consumption data Tool (FAO/WHO GIFT; see go.nature.com/faogift) — aims to answer some elements, but has too few resources to be truly effective.** The project needs a larger team to collate many more national surveys and develop guidelines for future surveys. "

Haddad, L. *et al. Nature*, 2016

In the area of individual food consumption data we are working towards....

Harmonizing

Sharing

How to reach these two goals?

through a snowball effect…

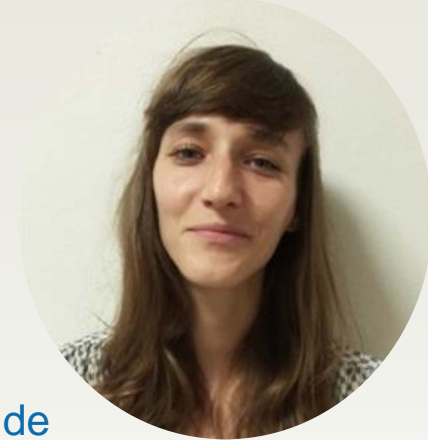# Our team in the Nutrition and Food System Division at FAO Head Quarters

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