

Processing food data from Household Consumption and Expenditure Surveys

Update from Workshop in Rome 10-14 October

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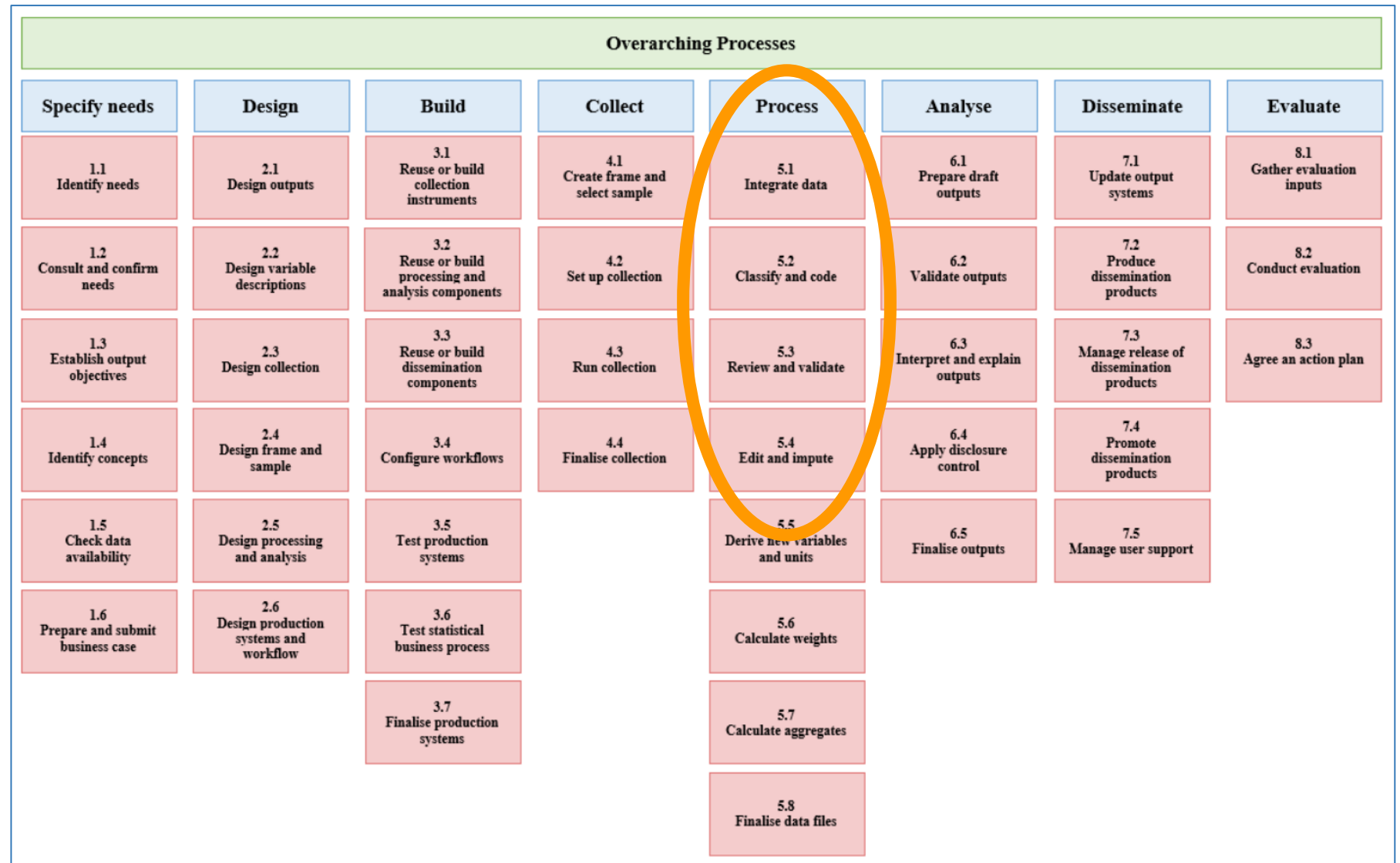
UN-CEAG task team on food security and consumption statistics
Norad-funded food security project coordinated by Statistics Norway

A piece in a very big puzzle



Generic statistical business process model (GSBPM)

- Incomplete processing is a bottleneck
- Creates inconsistent results
- Inefficient use of time and money



The «end product» of processing at household,
source and product level



EXPENDITURE



QUANTITY IN GRAMS

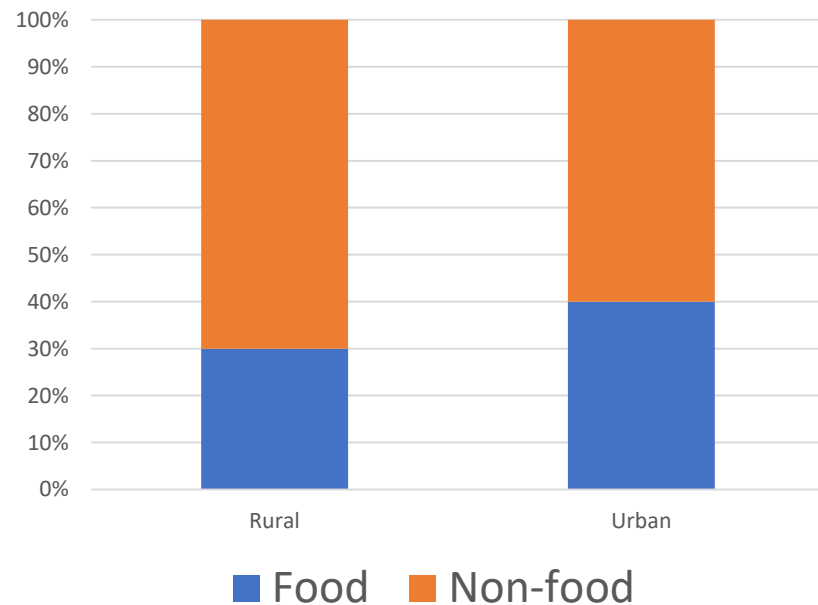


DIETARY ENERGY

Consistency of core indicators from the survey

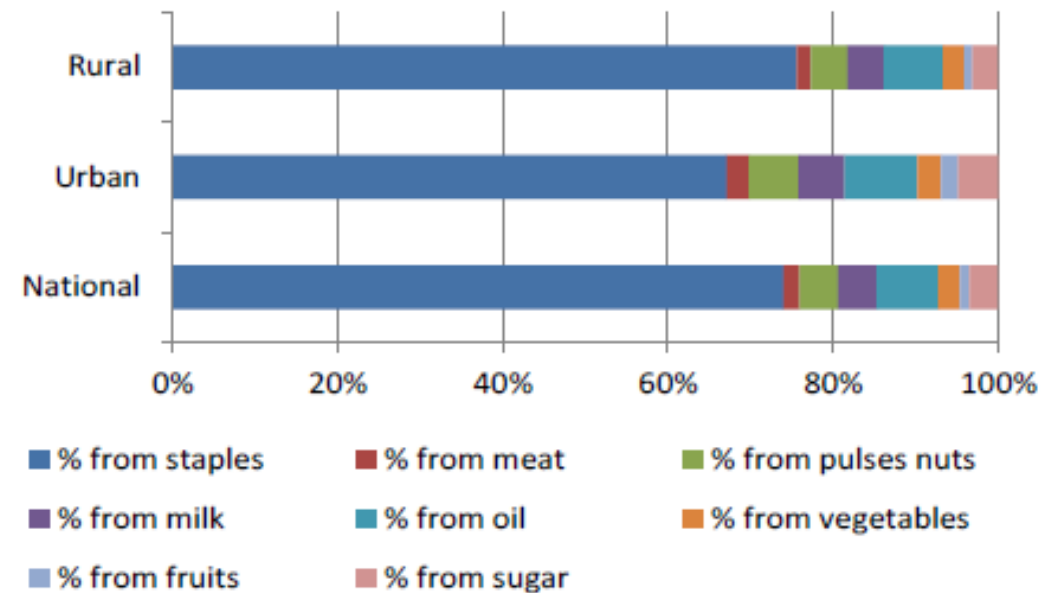
Consistency of value

Food share of total consumption, expenditure



Consistency of quantity and energy

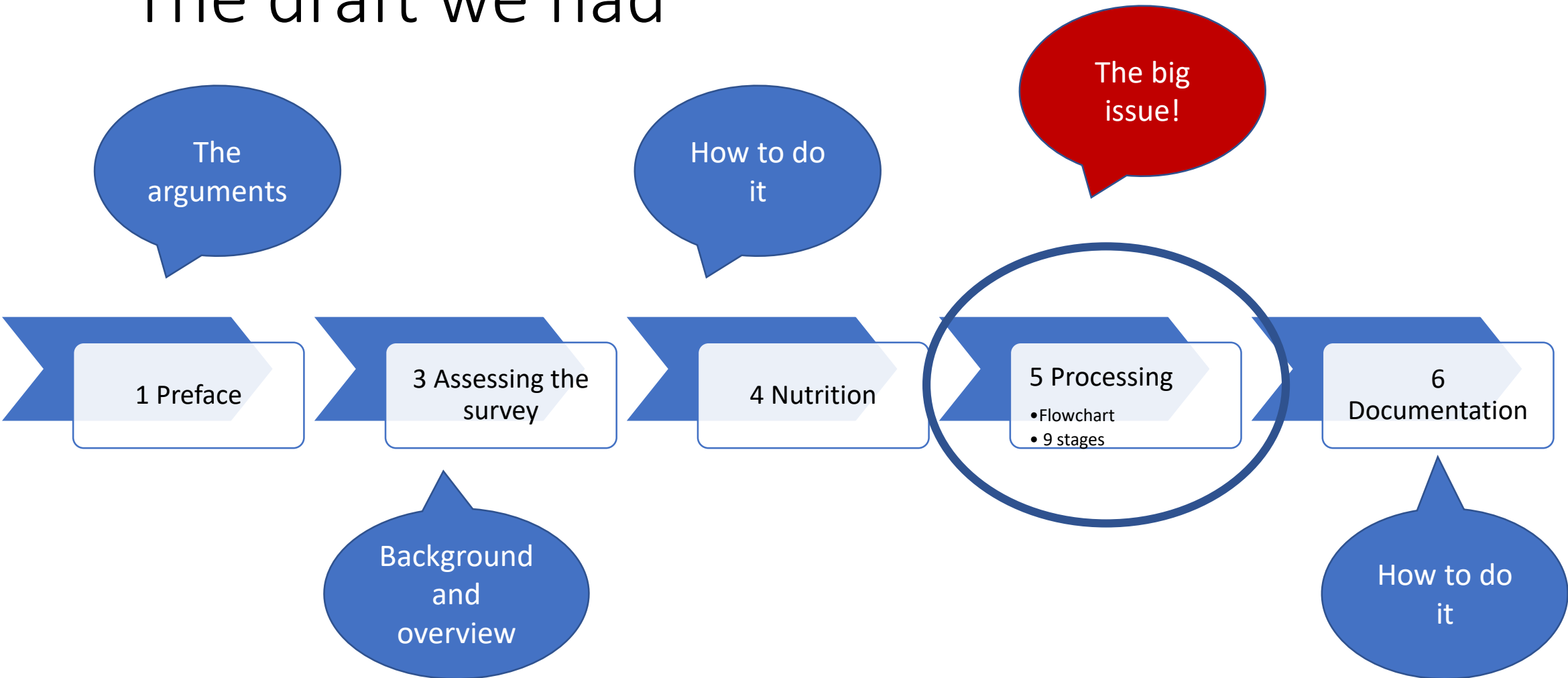
Figure 24. % of calories consumed from varying food groups, urban and rural, 2010/11



Consistency between surveys

- Encourage transparent and better documentation
- Avoid consultants' preferences leading to inconsistency
- A reference document in the dialogue between those involved

The draft we had



Guidelines versus manual

Guidelines

- Introduction: The principles underlying the guidelines
- The processing steps

Manual

- Context
- The UNSC endorsed guidelines on data collection
- How to make the Nutrient Conversion Table
- How to document
- A suggestion for outlier detection method
- Checklists and examples

The introduction – Why we are doing this

Process the data once and document it properly!

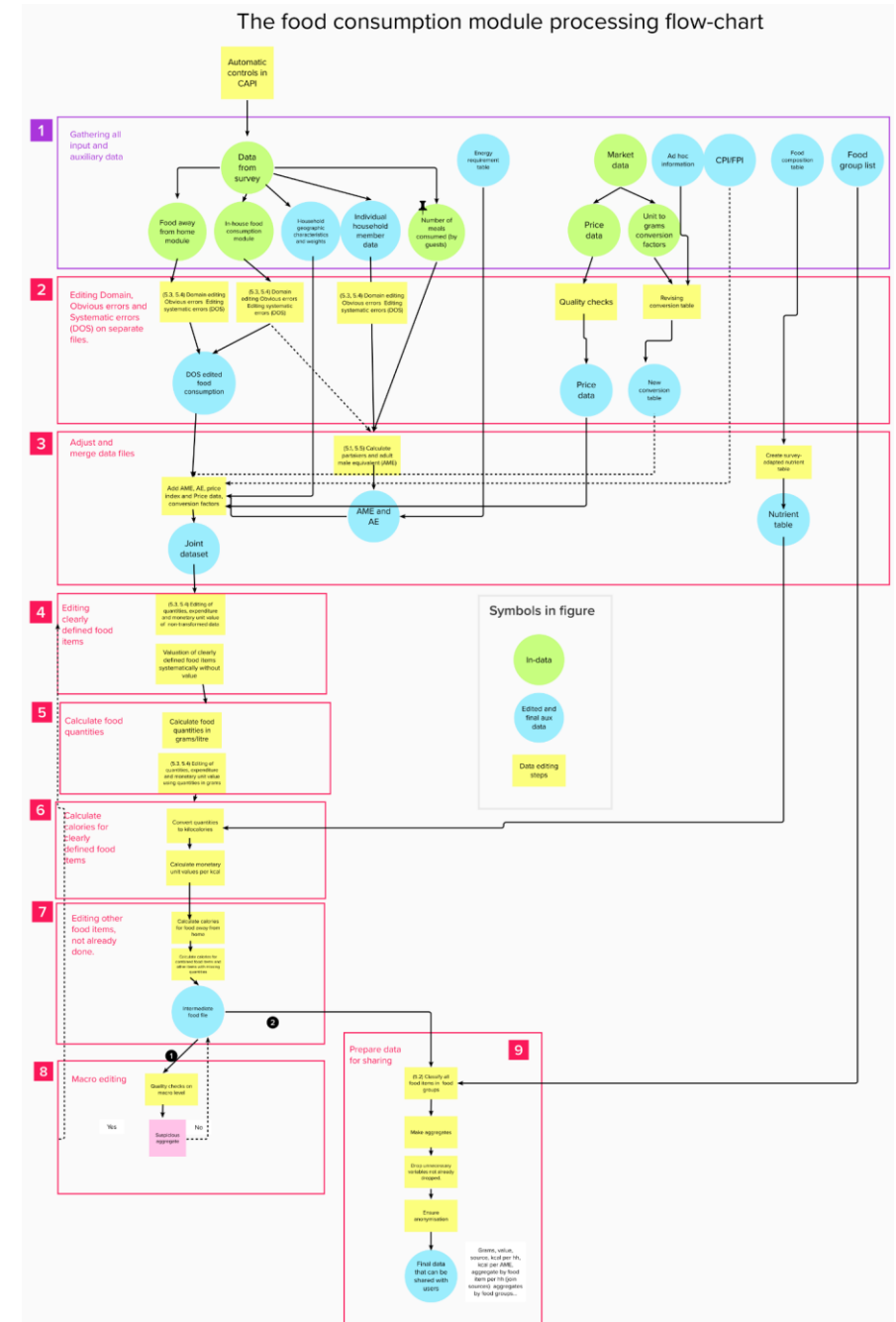
- **JOINT PROCESSING OF FOOD CONSUMPTION DATA**
- **FULL PROCESSING OF FOOD CONSUMPTION DATA**
- **CONSISTENCY IN DATA PROCESSING BETWEEN SURVEYS**
- **DOCUMENTATION**
- **GENERATE SURVEY SPECIFIC NUTRIENT CONVERSION TABLES**
- **USING STANDARDS**
- **SHARE THE METHODS**

The sources of methods

- Poverty analysis – mainly World Bank work
 - Manuals and training materials
- Food security analysis – mainly FAO work
 - Manuals and training materials
- CPI-baskets and National Accounts
 - So far not found any conflicts

The processing chapter

- Nine steps towards the goal
 - Flowchart to give an overview
 - Document describes each step
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- The nine steps are more or less used by all analysts – the difference is in the details.
 - The «new» is the combination of detailed needs from different users

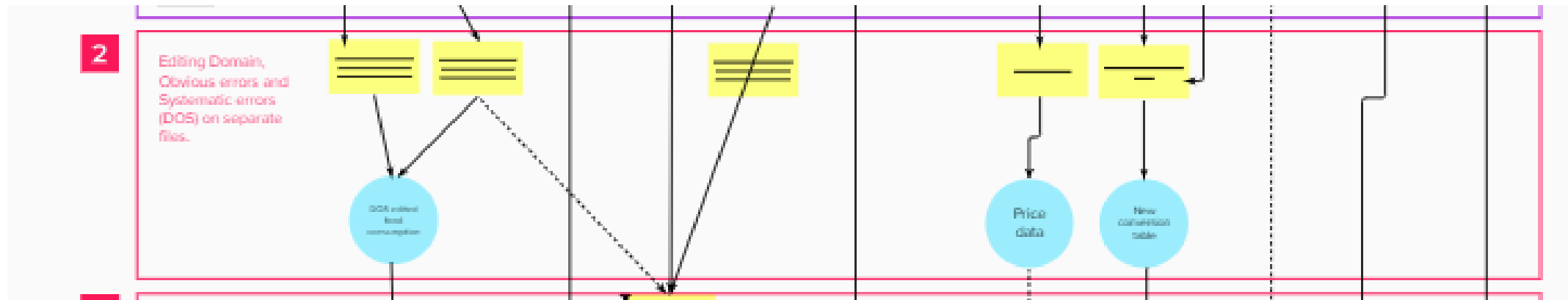


STAGE 1 GATHERING ALL INPUT AND AUXILIARY DATA



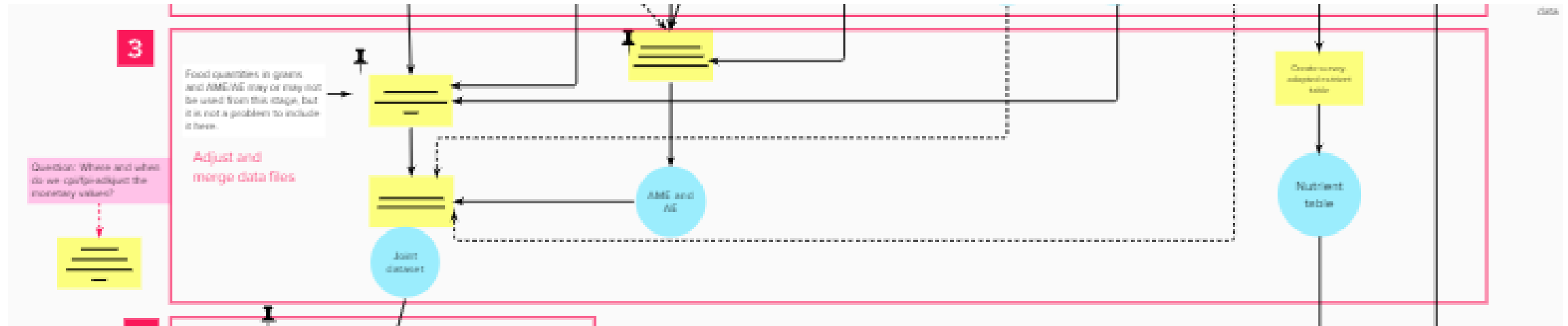
- The «assessing the survey data»- chapter presents all the sources. Needs new framing.
- Based on using the UNSC-approved recommendations, but open for other formats

STAGE 2 EDITING DOMAIN OBVIOUS ERRORS AND SYSTEMATIC ERRORS (DOS)

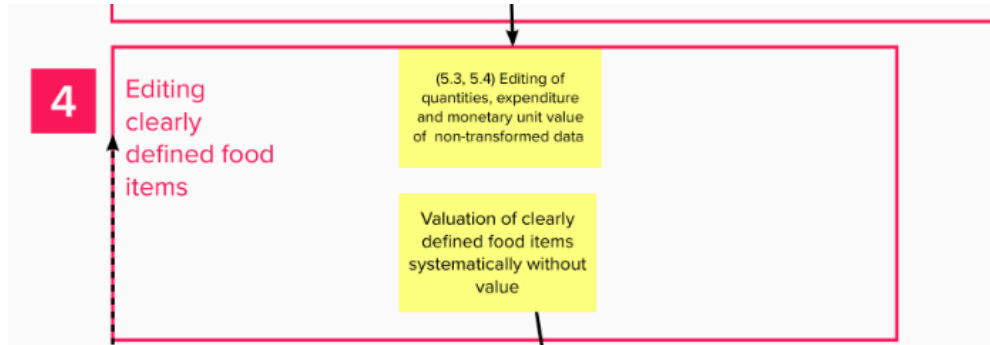


- Depends on methods of data collection – especially use of digital data capture which has automatic controls at data entry
- Systems in place for the whole survey

STAGE 3 ADJUST AND MERGE DATA FILES

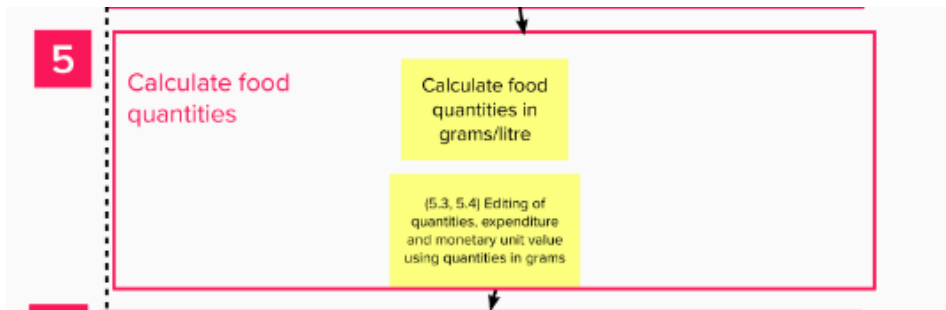


STAGE 4. DETECTING OUTLIERS FOR EACH COMBINATION FOOD PRODUCT/UNIT OF MEASUREMENT



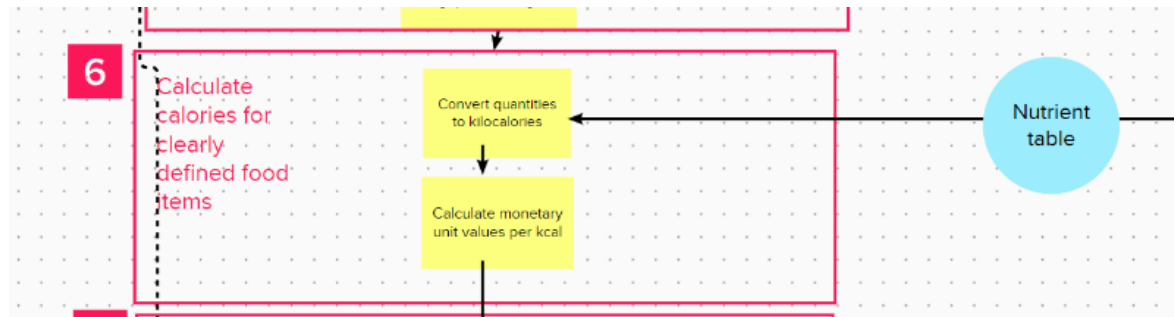
- First step in the cleaning process
- On unit level (not gram yet)
- Consistency between value and quantity
- Estimate value for items without it (own production/gifts etc if not collected)

STAGE 5 CONVERT FOOD QUANTITIES INTO GRAM AND EDIT EXTREME QUANTITIES IN GRAM



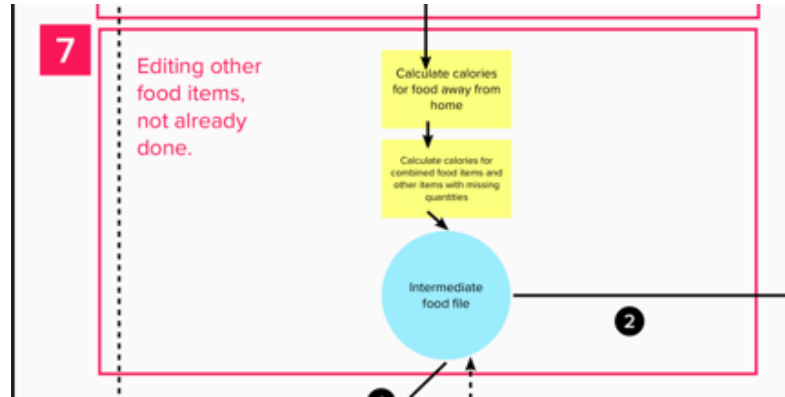
- Conversion from non-standard units
- Second step in editing: Extreme quantities in gram per person

STAGE 6 CALCULATE DIETARY ENERGY FOR FOOD ITEMS REPORTED IN GRAMS AND WITH CALORIC FACTORS



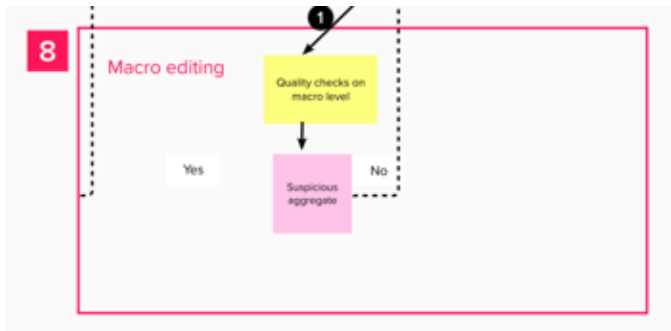
- Matching with the Nutrient Conversion Table
- Importance of choice of Food Composition Table

STAGE 7 IMPUTING CALORIES FOR REMAINING FOOD ITEMS AND EDIT



- Dietary energy (Kcal) for items that are not possible to define in the NCT
- Food away from home module

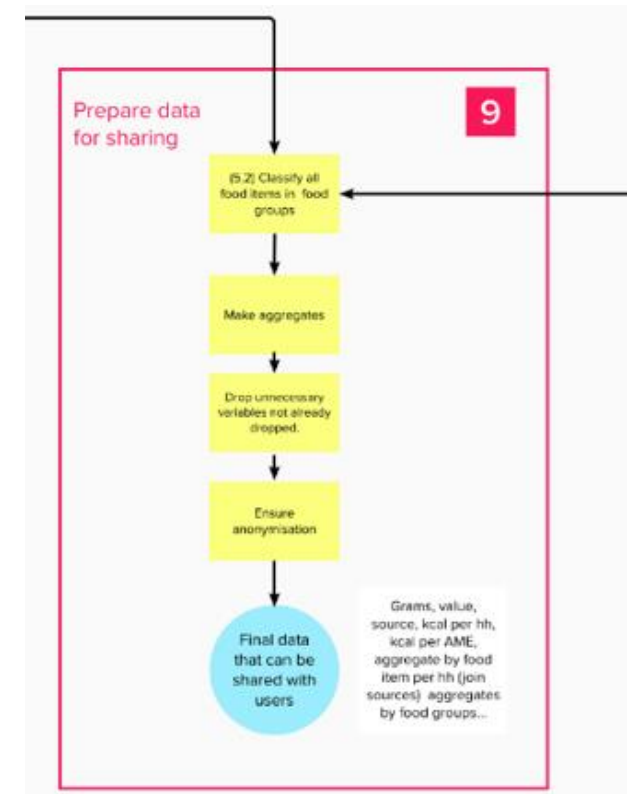
STAGE 8 AGGREGATES, MACRO EDITING



- Third step in editing: Abnormal dietary energy values at household level

Step 9 Prepare data for sharing

- May be a manual step and not processing step
- Important to document properly



The main discussion issues for the guidelines

- Outlier detection
 - Present practices focus either on value or quantity (mostly).
 - We will put together a small group who suggest how to operationalise the detection steps that covers both
- Imputation
 - The methods being used today
- Vocabulary
 - Choice of terms used.

Plans forward for the guidelines

- Edit the draft
 - Circulate it amongst experts and contacts – feedback this year
 - Submit an updated draft to UN CEAG annual meeting 2023
 - If approved, circulate pre- UNSC
 - Submit to UNSC 2024
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- Make manual
 - Make learning materials

What we want from you when we circulate the draft

- Feedback on the process itself (Are we missing something?)
- Feedback on how it is described
- Feedback on terminology
- Feedback on other guides or tools we should be aware of
- Feedback on whether it will miss other user groups
 - We come from poverty and food security analysis side, so primarily asking CPI and economic statistics