



The Foundations of CountrySTAT E-Learning

EAC/FAO Advanced Training Workshop of CountrySTAT

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Background information

What is E-Learning?

E-learning is the computer and network-enabled transfer of skills and knowledge.

How it works?

- E-learning applications and processes include Web-based learning, computer-based learning, virtual education opportunities and digital collaboration.
- The content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio.

Why should we use E-Learning ?

The goal is to help our audience use effectively the key information included in the manual.

The course is learner-centered:

- The learning materials is relevant to the activities carried out by the audience
- Examples, self-assessments and interactive exercises play a key role
- All information is contextualized and put in relation to the task to be performed.

Background information

The course covers the statistical project topic areas:

- 1.The process of data collection, harmonization, standardization and validation
- 2.Data structure (main and sub-domains, main data set, connections between national and sub national)
- 3.Concepts and definitions common to CountrySTAT and FAOSTAT
- 4.The importance of adding metadata and how to build them.

A task analysis has been carried out in order to:

- 1.Analyze the features of the target audience
- 2.Identify the tasks that the user should be able to carry out
- 3.Identify the knowledge needed to carry out the identified tasks.

Main Objectives of the course

- Enhance users awareness of the CountrySTAT objectives and rationale
- Publish data that meet international standards and quality criteria
- Improve users capability in standardize local data so that it can fit into an international format
- Recognize the importance of accurate metadata and of inputting metadata into the system
- Enhance users knowledge of the international nomenclature, to develop/improve the local nomenclature
- Speed up the process of publication of official national data on the website.

Main Users of the course

All users who participate and contribute to the publication of statistics on agriculture and food on the CountrySTAT website, and in particular:

- Members of the Secretariat
- The National Coordinator
- Members of the Technical Working Group
- Members of Regional Organizations.

Content structure

Module I: CountrySTAT knowledge base

All the “need-to-know” information to support the effective implementation of the CountrySTAT system at a national level. It includes strong motivational elements:

- 1.1: Discovering CountrySTAT
- 1.2: The CountrySTAT website and the people who make it happen.
- 1.3: The CountrySTAT framework for data quality

Module II: The data dissemination process

Practical information to support the key activities to ensure a successful publication process:

- 2.1: Phase 1: data and metadata collection.
- 2.2: Phase 2: harmonization and validation of national data.
- 2.3: Phase 3: the standardization of data.

Learning Objectives: Lesson 1

Discovering CountrySTAT

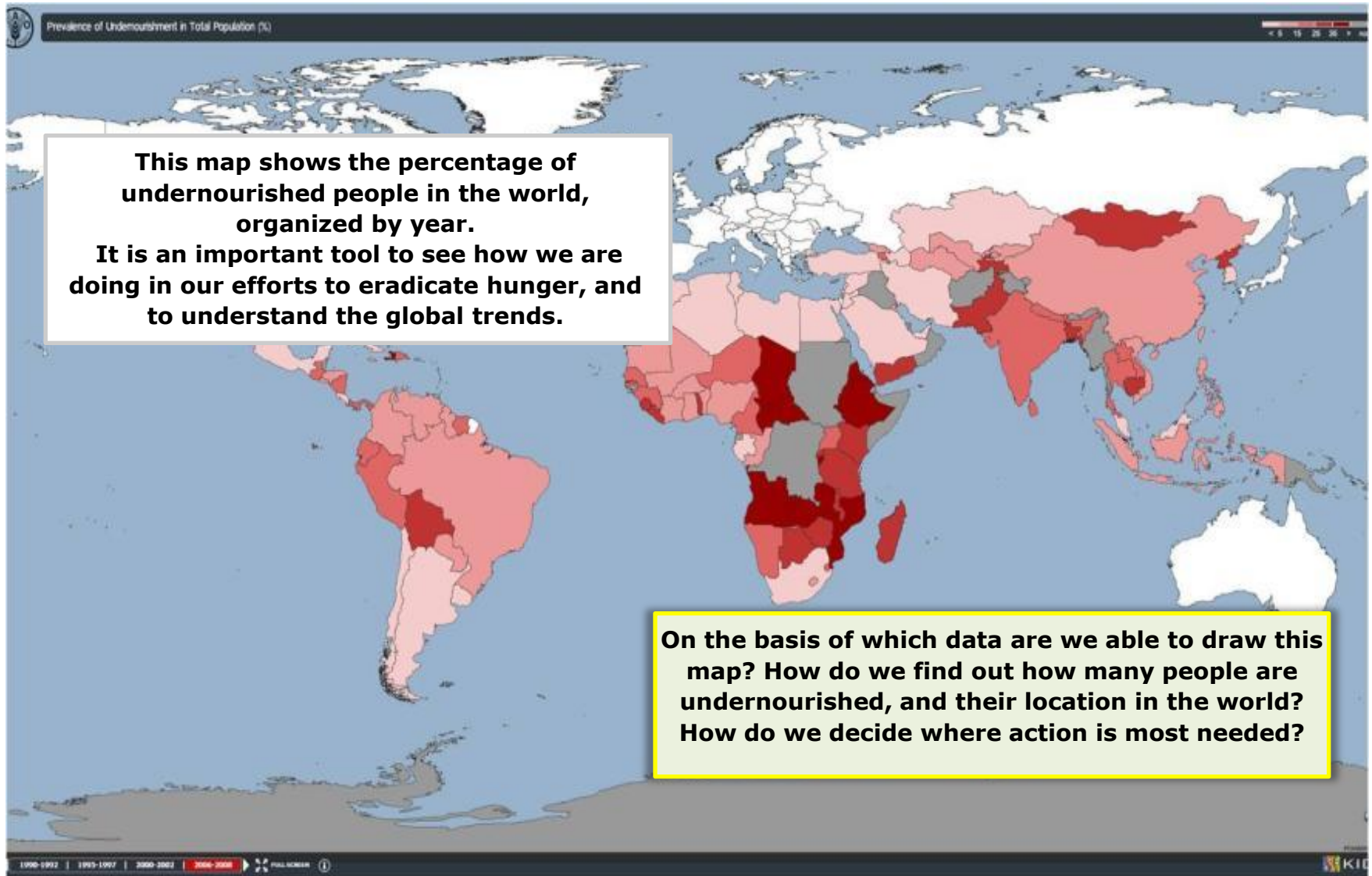
Would you like to use a one-stop-centre for national statistics on food and agriculture?

Would you like to provide reliable and timely data on your country, through a system that is easy to manage?

- Discover what is CountrySTAT, its purpose and benefits
- Find out how it can be useful to you.



Introduction



Introduction

The answer is: through reliable statistical data. In fact, in order to eradicate hunger in all countries and reduce the number of undernourished people, it is vital to design and implement:



Policies on agriculture development that are appropriate and efficient.

Efficient policies must be grounded into factual evidence about the sector, through a systematic and rigorous use of statistics for:

- issue recognition;
- informing policy choice and design;
- forecast the future;
- monitor policy implementation;
- evaluate policy impact and make the adjustments needed.

Agricultural investment projects that are sustainable and effective.

Effective decisions on these investment must be based on sound information about elements such as:

- population characteristics;
- land and input use;
- productivity;
- prices;
- prevailing economic and social situations faced by producers.



The users of CountrySTAT

Who are the main users of CountrySTAT?

End users

Those who need reliable data to make analysis on the Agricultural sector to make informed decisions. For example, policy and decision-makers, researchers, economists, analysts, national farmers associations.

The end users connect to the CountrySTAT website and search the information they need.

I need reliable data as soon as possible, 'cause the clock is ticking!



Example of how the end user accesses information provided by CountrySTAT

Data providers

Those who gather the data about their country, and carry out the publication process of the data on the CountrySTAT website.

The data providers have a dedicated section on the website, where they can input the data in the system.



I need data to be precise, accurate and punctual, to provide a truthful picture of my country

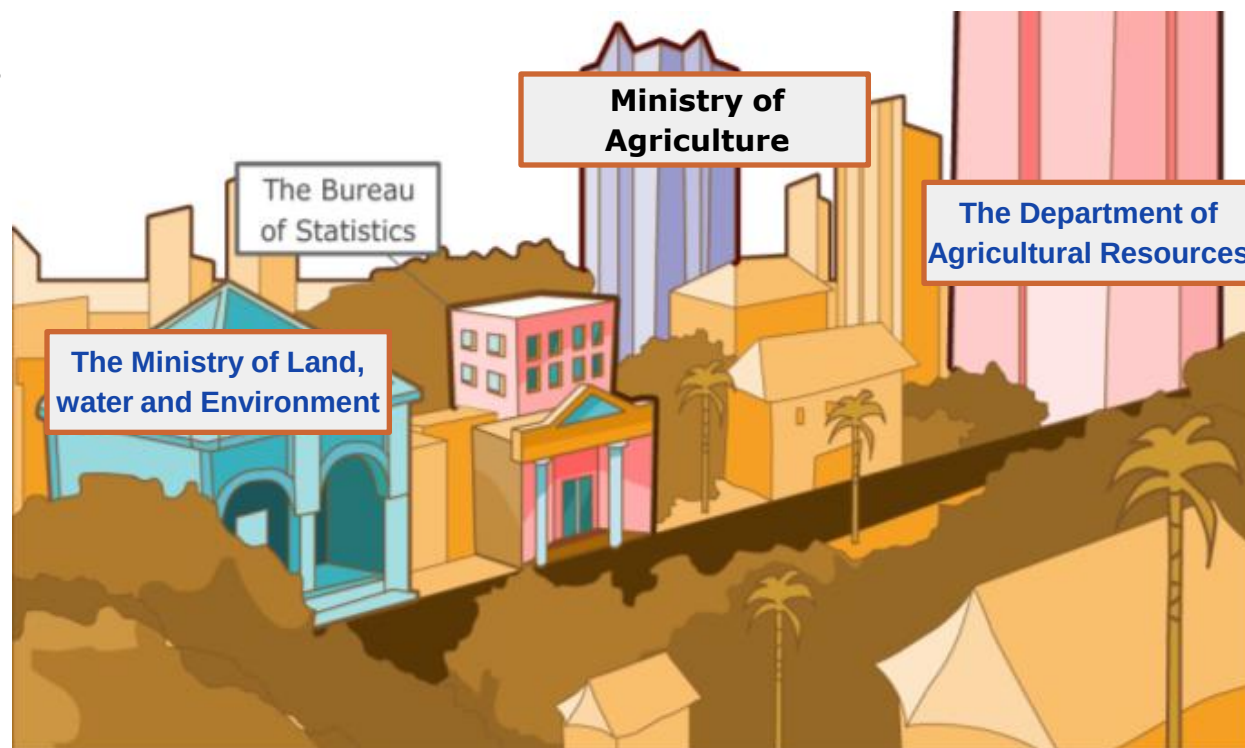


Example of how the data provider uses the CountrySTAT website

Life before CountrySTAT for the end user

What different does CountrySTAT make for you, as an end user?

Imagine that you are working for a national farmers association, and wish to improve the production of cereals in a certain area. You need as soon as possible the latest statistics on production and available land, but you are not using CountrySTAT. Where would you go to get your data?



It could take you the entire day to access just some of the data you need!

Life before CountrySTAT for the data provider



Once, I needed to provide trends in Cereal Production Estimates. I had to compare data from different agencies which produced surveys with different results . As you can see, the difference between the two data for 2005 was as high as 67.1%! How could I harmonize them? What was the right decision?

System	1996	2002	2003	2005	2006
Agency A (<i>early warning</i>)	1,377	1,767	1,811	1,900	2,098
Agency B (production survey)	1,459	1,454	1,509	1,137	1,700
Difference	+5.6%	-21.5%	-20.0%	-67.1%	-23.4%

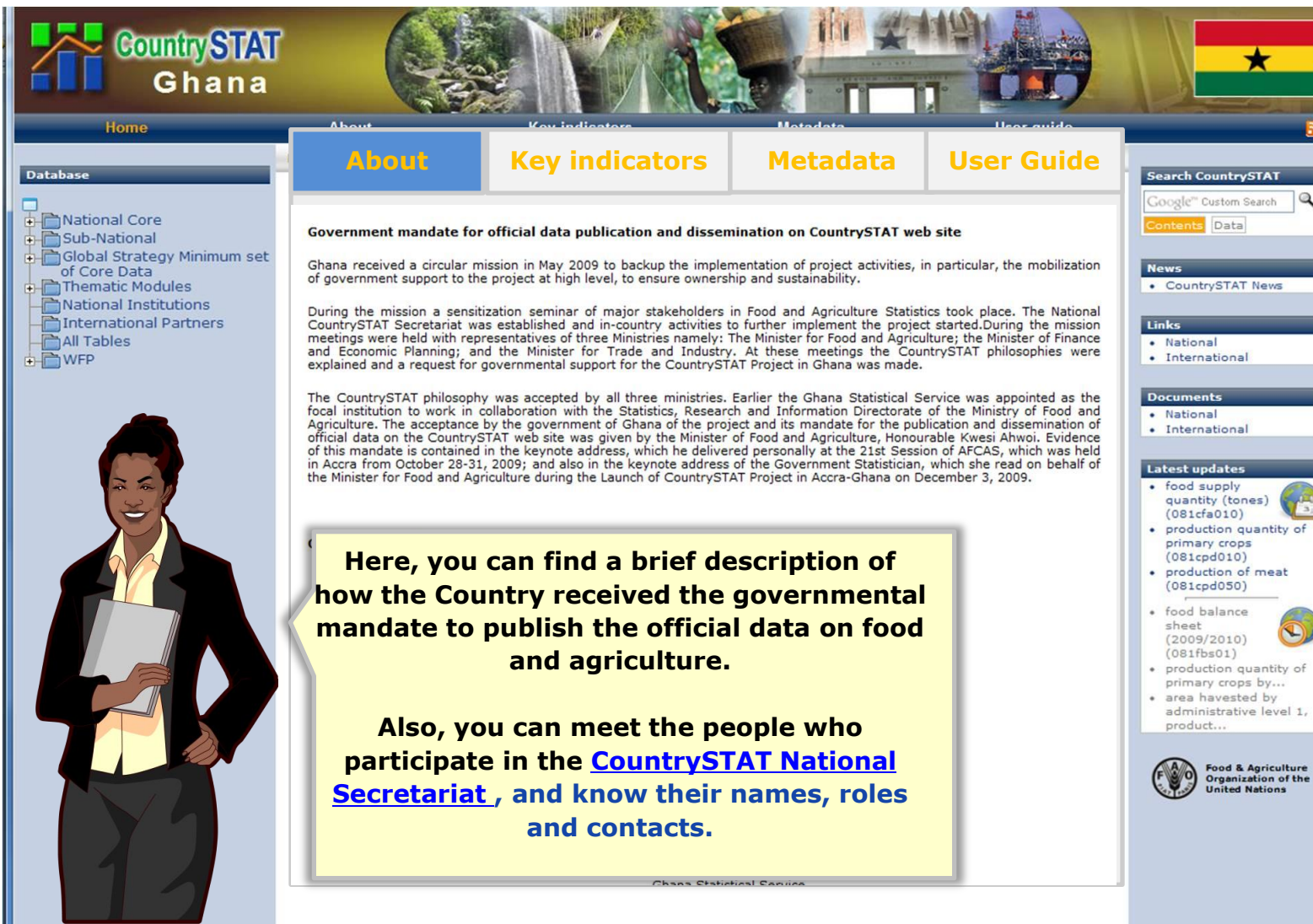
Learning Objectives: Lesson 1.2

The CountrySTAT website, and the people who make it happen

- identify the key features of the CountrySTAT website;
- recognize specific roles and responsibilities in the CountrySTAT institutional framework;
- describe the interaction among the different groups of people involved in CountrySTAT.



The CountrySTAT website: the homepage of the participating countries



CountrySTAT Ghana

Home About Key indicators Metadata User guide

About Key indicators Metadata User Guide

Database

- National Core
- Sub-National
- Global Strategy Minimum set of Core Data
- Thematic Modules
- National Institutions
- International Partners
- All Tables
- WFP

Government mandate for official data publication and dissemination on CountrySTAT web site

Ghana received a circular mission in May 2009 to backup the implementation of project activities, in particular, the mobilization of government support to the project at high level, to ensure ownership and sustainability.

During the mission a sensitization seminar of major stakeholders in Food and Agriculture Statistics took place. The National CountrySTAT Secretariat was established and in-country activities to further implement the project started. During the mission meetings were held with representatives of three Ministries namely: The Minister for Food and Agriculture; the Minister of Finance and Economic Planning; and the Minister for Trade and Industry. At these meetings the CountrySTAT philosophies were explained and a request for governmental support for the CountrySTAT Project in Ghana was made.

The CountrySTAT philosophy was accepted by all three ministries. Earlier the Ghana Statistical Service was appointed as the focal institution to work in collaboration with the Statistics, Research and Information Directorate of the Ministry of Food and Agriculture. The acceptance by the government of Ghana of the project and its mandate for the publication and dissemination of official data on the CountrySTAT web site was given by the Minister of Food and Agriculture, Honourable Kwesi Ahwoi. Evidence of this mandate is contained in the keynote address, which he delivered personally at the 21st Session of AFCAS, which was held in Accra from October 28-31, 2009; and also in the keynote address of the Government Statistician, which she read on behalf of the Minister for Food and Agriculture during the Launch of CountrySTAT Project in Accra-Ghana on December 3, 2009.

Here, you can find a brief description of how the Country received the governmental mandate to publish the official data on food and agriculture.

Also, you can meet the people who participate in the [CountrySTAT National Secretariat](#), and know their names, roles and contacts.

Search CountrySTAT

Google Custom Search

[Contents](#) [Data](#)

News

- CountrySTAT News

Links

- National
- International

Documents

- National
- International

Latest updates

- food supply quantity (tones) (081cfa010)
- production quantity of primary crops (081cpd010)
- production of meat (081cpd050)
- food balance sheet (2009/2010) (081fbs01)
- production quantity of primary crops by...
- area harvested by administrative level 1, product...

Food & Agriculture Organization of the United Nations

The people behind CountrySTAT



The people who ensure the implementation of CountrySTAT are part of CountrySTAT bodies, at three levels:

- Country,
- Regional, and
- Global.

Click on each tab to learn more about each level

The interaction among CountrySTAT members

There is a dynamic process between these CountrySTAT bodies, facilitating national and institutional capacity development.



Dialogue and collaboration between [CountrySTAT champions](#), participating Institutions and National organizations is critical to guarantee a successful implementation of CountrySTAT.

Roll the mouse on the groups of people to read some significant examples

The Regional team develops capacity building at regional level

The members the TWG work together to validate the data and find consensus, especially on issues of statistical data reliability.

The team at FAO communicates regularly with the National Secretariat, and provides support on the implementation of activities

Works in close collaboration with the Regional Organizations and the Team at FAO.S/he also coordinates the TWG meetings and is in close touch with all stakeholders, for advocacy purposes.

CountrySTAT team in FAO HQ

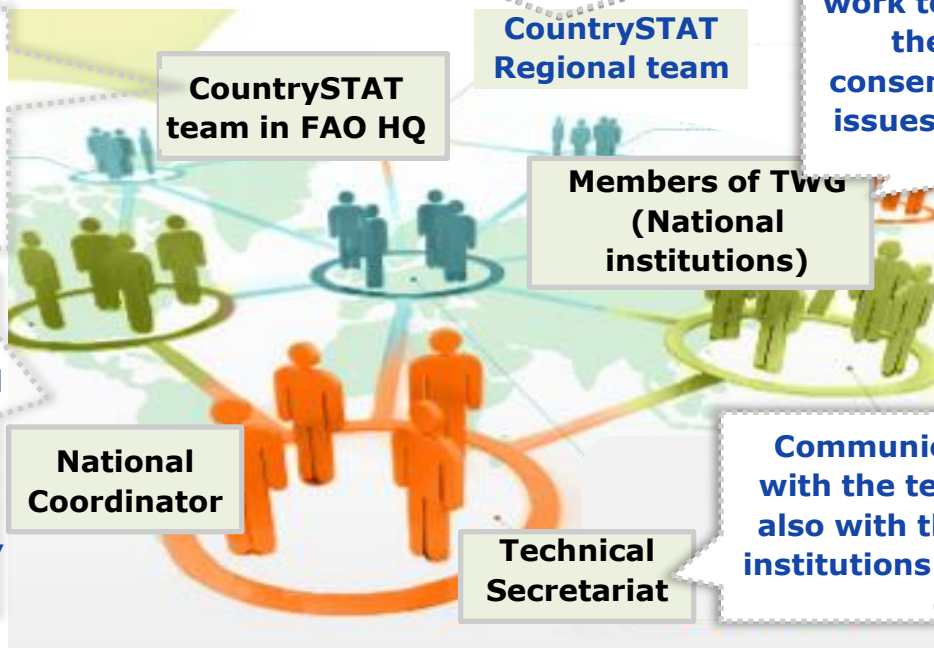
CountrySTAT Regional team

Members of TWG (National institutions)

National Coordinator

Technical Secretariat

Communicates regularly with the team at FAO, and also with the participating institutions that provide the data.



Learning Objectives: Lesson 1.3

Promoting quality: international concepts, definitions and classification

- Recognize how the CountrySTAT quality framework addresses the needs of the users
- Describe how the CountrySTAT process unfolds, and who does what
- Recognize why international standards are important, and what is their use
- Know how to use the FAOSTAT product classification and definitions for comparability purposes.



Introduction

Comparable data is possible because the CountrySTAT process uses *FAO standards and concepts*, which are adopted by all those who implement CountrySTAT around the world.



We will discover how the people who implement CountrySTAT are able to make the local information understandable to all users, no matter where they are in the world.

In this lesson, we will learn more about this process, and in particular, we will consider:

How the CountrySTAT quality framework fulfils the user's needs in terms of data reliability

How the CountrySTAT process unfolds, and who is involved

What are the international standards and concepts on which the process is based

What is the format for organizing the data (the standard data structure) used by data providers

How to apply these standards, by using some real life examples.

What would happen without standards?



What are the FAO international standards, concepts and definitions

Without standards



Konshu

"Big" beans

Azuki

Each country reports the data on their local varieties using different names.

With standards



Beans

All countries report the data on local varieties using the same name (product category: Beans).

We just mentioned that CountrySTAT is based on FAO [international Standards, Concepts and Definitions](#).

Why are these standards so important?

The CountrySTAT framework takes into account the existing national systems for food and agricultural statistics: however, national standards differ from country to country. Therefore, the data collected using national standards must be converted and harmonized with the international standards. This facilitates comparison and integration of data, both within the country and across countries.



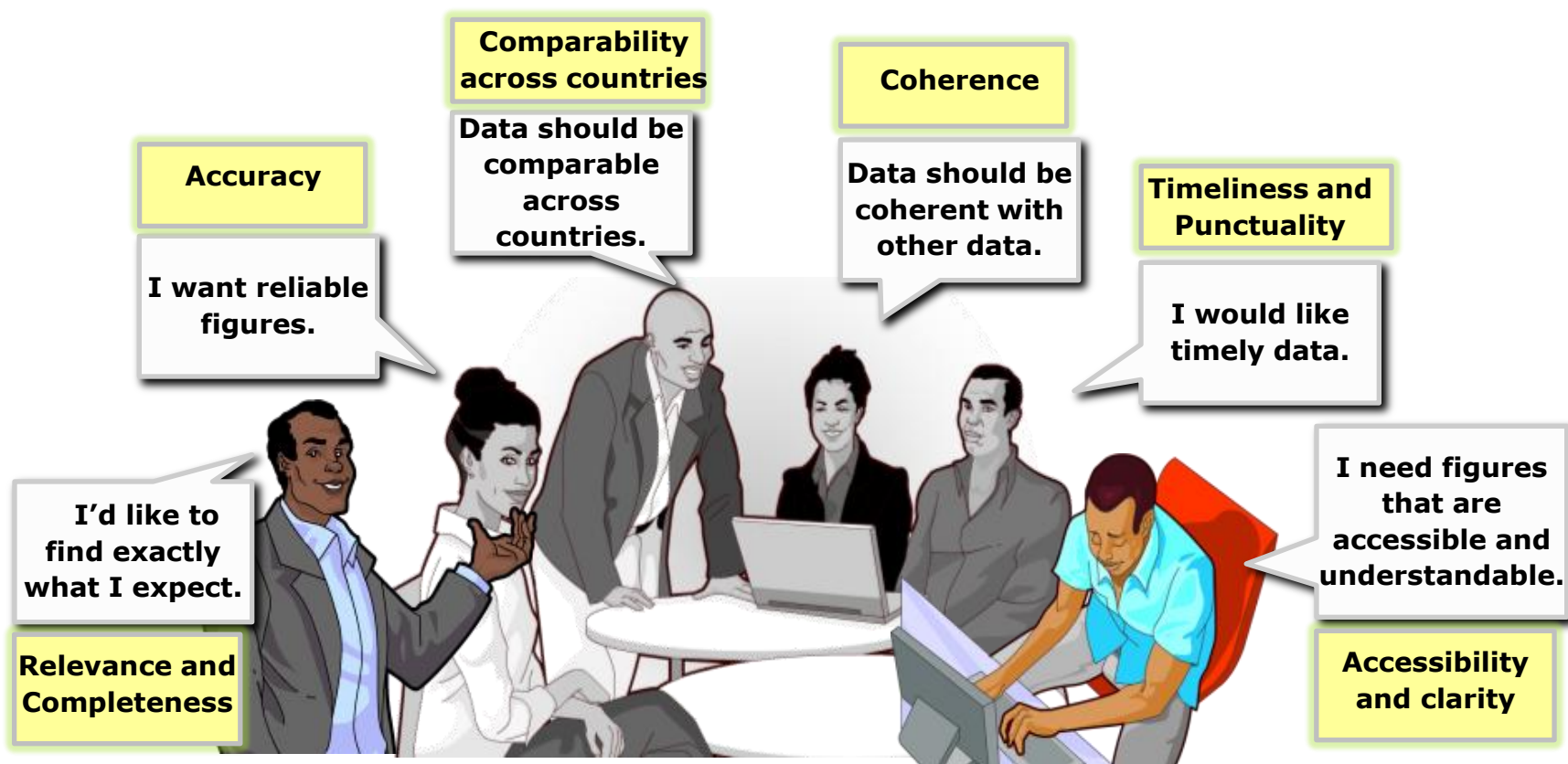
Example: **comparability** within the country



Example: comparability across countries

The CountrySTAT framework for Data Quality

Each of these identified needs clearly calls for specific characteristics, or dimensions that quality data must have:



These specific dimensions/characteristics are reported in data quality assessment common with Eurostat, IMF, and African Union.



Click to learn more

Promoting reliability during data collection

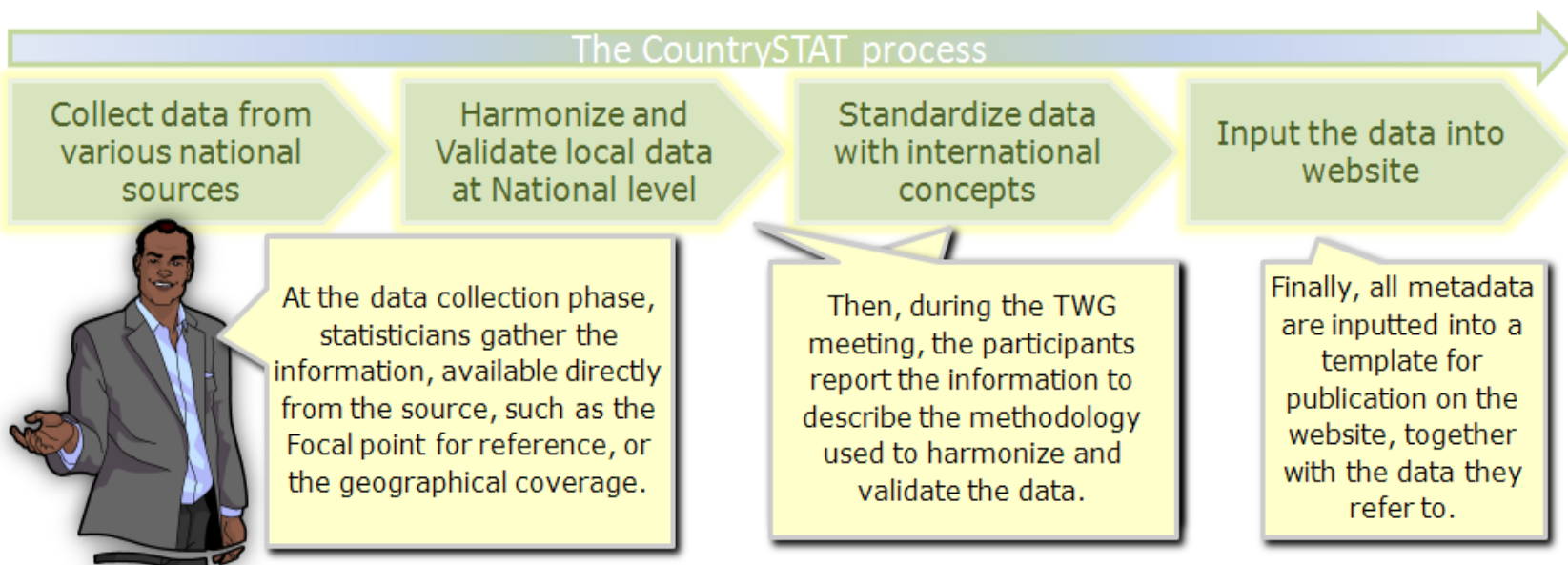
- Recognize the features of a reliable primary data source
- Understand the use and importance of metadata
- Know how to create a Correspondence Table while collecting the data.



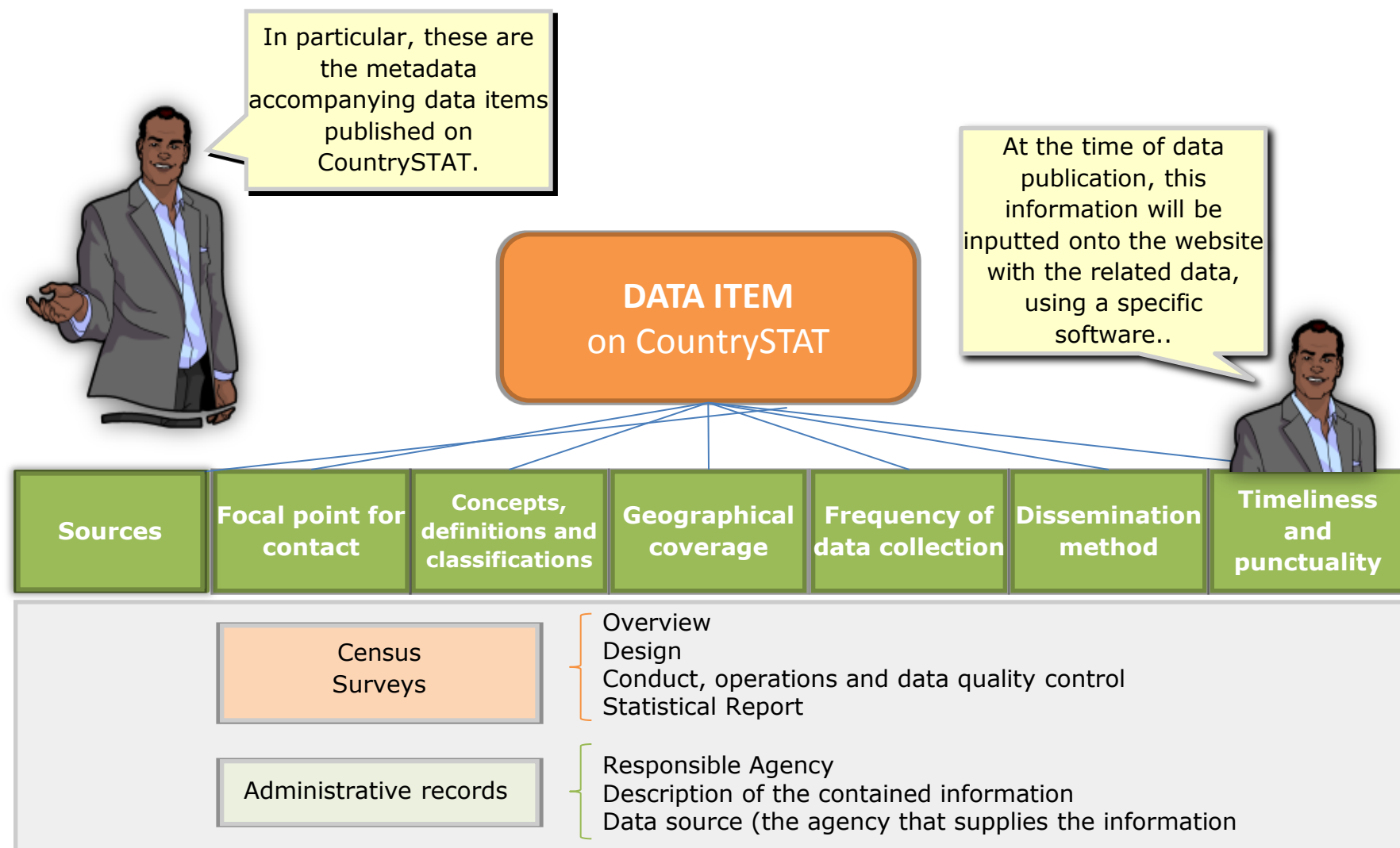
Identifying the appropriate source: use of metadata in CountrySTAT

We just considered the importance of metadata for the national statistical system. But how are metadata used in the CountrySTAT process? CountrySTAT uses metadata as:

- 
1. Information **on the original primary data item** (e.g. its data source, focal point, geographical coverage, methodology), collected by the statisticians while gathering the primary data,
 2. Information **describing the data processing, analysis and data revision methodology**, recorded by the TWG participants.



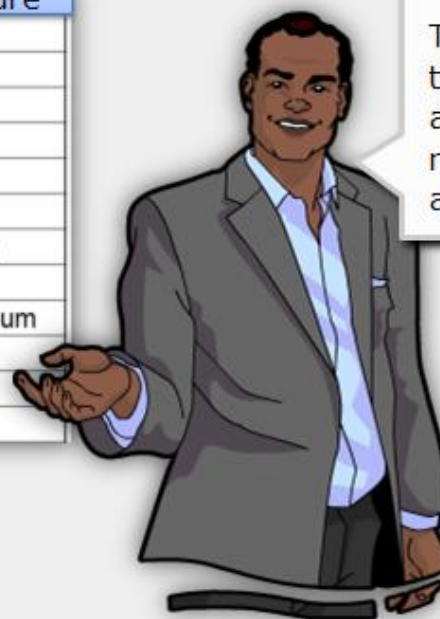
Identifying the appropriate source: use of metadata in CountrySTAT



Click each metadata to read what is the related information

Creating a Correspondence Table between national and international classification

FLC Item Code	FAOSTAT nomenclature	Local code	Local nomenclature
71	Rye		
72	Flour of Rye		
75	Oats		
76	Oats Rolled		
79	Millet		
80	Flour of Millet		
83	Sorghum	008301	White Sorghum
		008302	Red Sorghum
		008303	Improved Sorghum
84	Flour of Sorghum		
89	Buckwheat		
90	Flour of Buckwheat		



Then we write down the new local codes and the local nomenclature, in the appropriate columns.



What if you believe that your local product does not belong to a category or you cannot find its category?

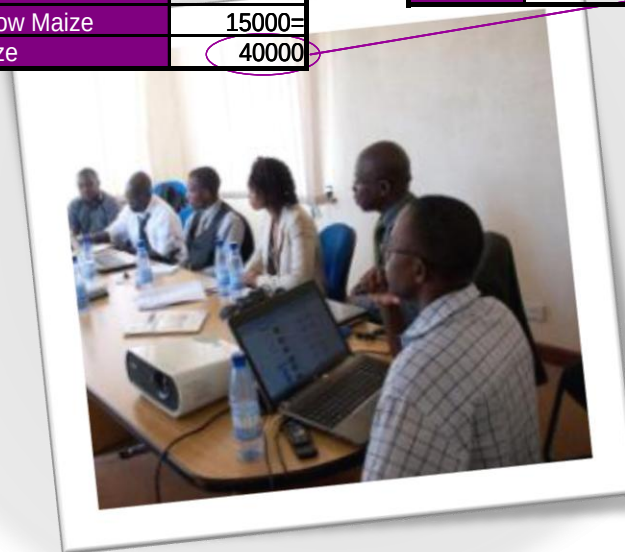
Learning Objectives: Lesson 2.2

Harmonizing and Validating the data: the TWG meeting

- Know how to standardize data according to the variables product, time, geographical levels and measurement units
- Identify seven different types of data analysis, to promote data coherence and reliability
- Know how to validate the data during the TWG meeting
- Identify some key activities of the TWG meeting.

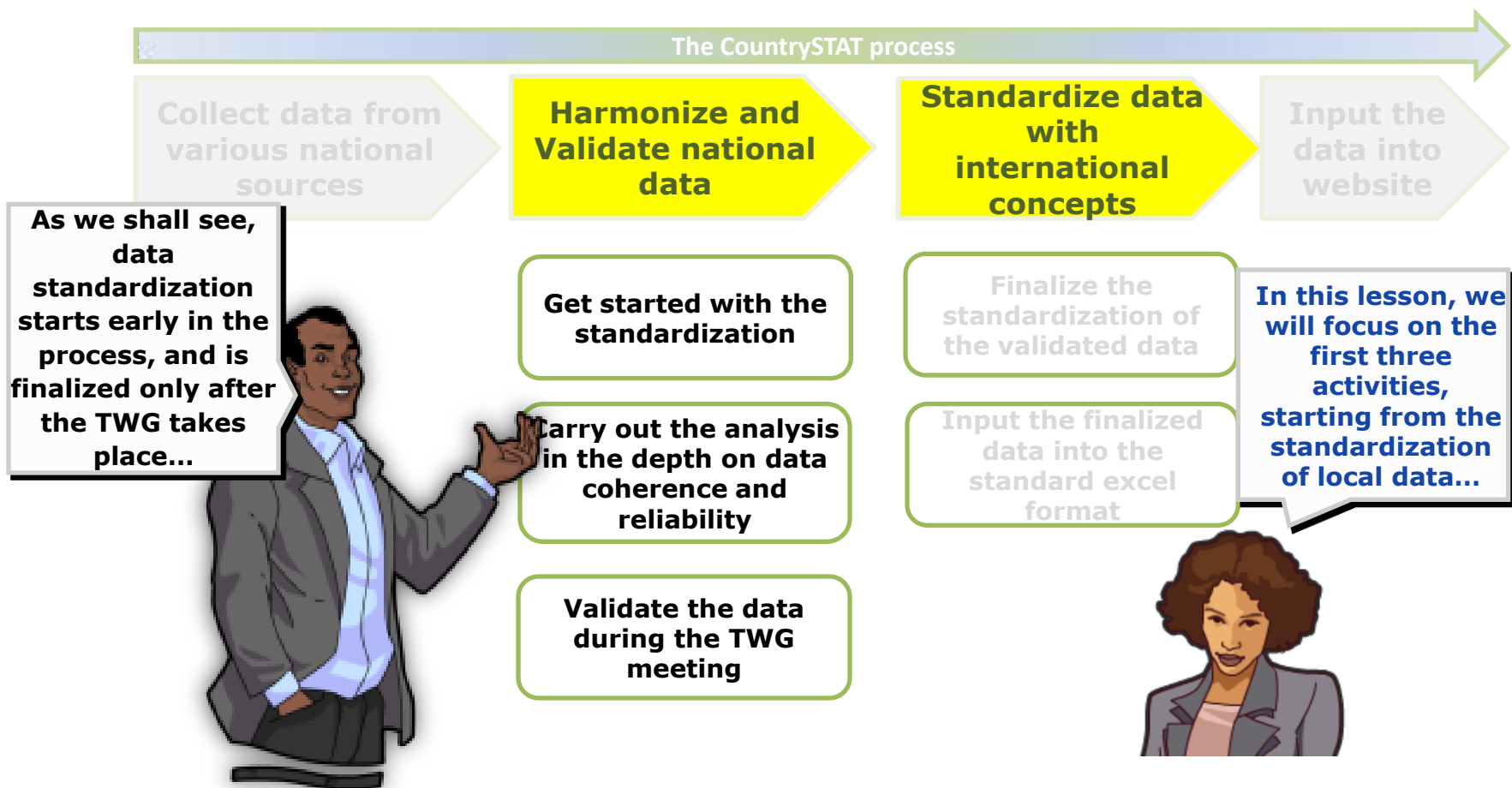
Sub-National data	
Production quantity of primary crops by local product (tonnes)	
Product	Quantity
White Maize	25000+
Yellow Maize	15000=
Maize	40000

Core data	
Production quantity of primary crops (tonnes)	
Product	Quantity
Maize	40000



Introduction

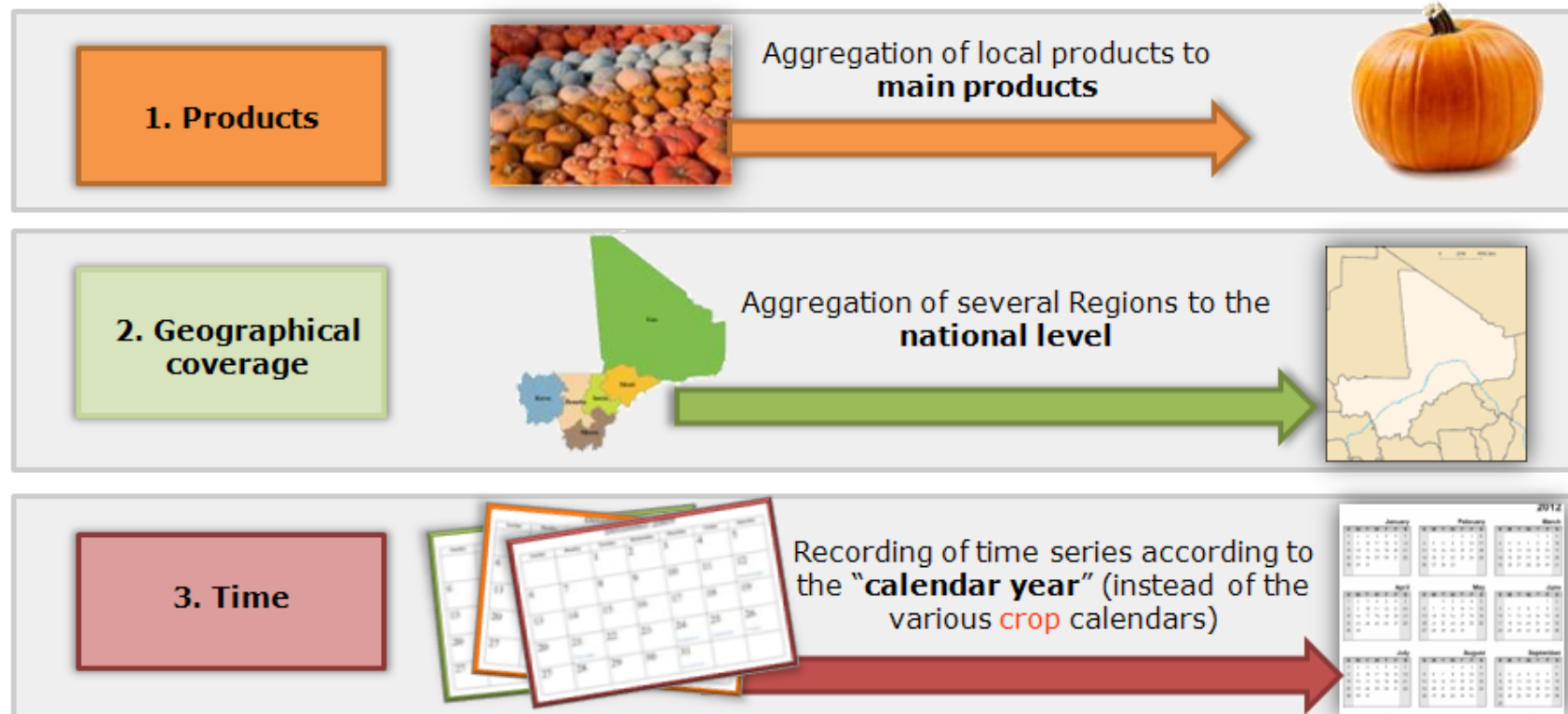
Here are the next steps, which are at the heart of the CountrySTAT process. Amir and Paula, statisticians in their country's National Secretariat, will tell us more about these activities as the lesson unfolds:



The first activities in the standardization phase

The standardization activities are usually started out by the statisticians in the National Secretariat and then validated during the TWG meeting.

When standardizing local data, **three variables** are taken into account, plus the standard **measurement units**:



Data must also be aligned to the **standard international measurement units**, as we shall see later in this lesson.

Data analysis for data reliability

We shall now consider seven types of analysis:

1. Coherence between national sources

2. Missing and completeness data

3. Anomalies in the historical trends

4. Incoherence between related indicators

5. Coherence between Core and Sub-national data

6. Consistency between the local and international concepts and definitions

7. Correspondence between national and international classification



For each type of analysis, we will also consider possible ways to address the problematic data.

The preparation of a TWG meeting

Amir and Paula have just organized a successful TWG meeting in their country.
To start, let's ask them some key questions:

The National Secretariat, and appointed representatives of **all** the national participating institutions. In addition, there is at least one representative of the FAO HQ CountrySTAT team, and sometimes other UN agencies (such as WFP).



The National Coordinator has a key role in the TWG meeting. Her/his activities include: preparing the documentation and the data issues for the meeting (including the agenda and the introductory document); coordinating the meeting activities and organizing the tasks to be carried out; preparing the final report.

Who should participate in the TWG?

What is the role of the National Coordinator?

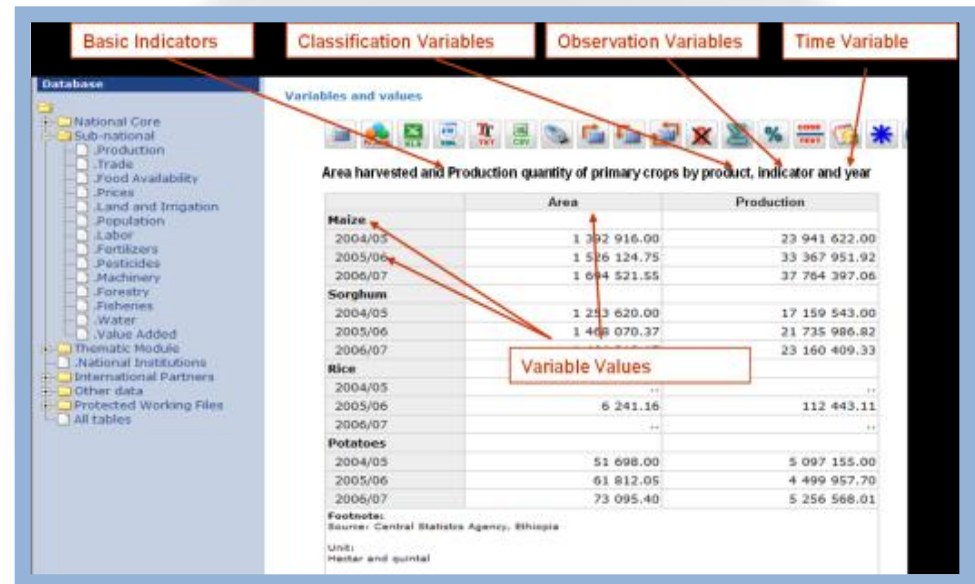
How many days should the TWG last?

Click the text boxes above to ask the questions

Learning Objectives: Lesson 2.3

Finalizing the data for the CountrySTAT website

- Recognize the requirements of the statistical tables used to publish data on the CountrySTAT website,
- Identify the difference between the tables used in the CORE and those in the Sub-national modules,
- Recognize the key elements of a table title,
- Identify the structure of the matrix codes in the CountrySTAT statistical tables.



Basic Indicators **Classification Variables** **Observation Variables** **Time Variable**

Database

- National Core
 - Sub-national
 - Production
 - Trade
 - Food Availability
 - Prices
 - Land and Irrigation
 - Population
 - Labor
 - Fertilizers
 - Pesticides
 - Machinery
 - Forestry
 - Fisheries
 - Water
 - Value Added
- Thematic Module
 - National Institutions
 - International Partners
 - Other data
 - Protected Working Files
 - All tables

Variables and values

Area harvested and Production quantity of primary crops by product, indicator and year

	Area	Production
Maize		
2004/05	1 392 916.09	23 941 622.00
2005/06	1 526 124.75	33 367 951.92
2006/07	1 694 521.55	37 764 397.06
Sorghum		
2004/05	1 253 620.00	17 159 543.00
2005/06	1 469 070.37	21 735 986.82
2006/07		23 160 409.33
Rice		
2004/05		
2005/06	6 241.16	112 443.11
2006/07		
Potatoes		
2004/05	51 698.00	5 097 155.00
2005/06	61 812.05	4 499 957.70
2006/07	73 095.40	5 256 568.01

Footnote:
Source: Central Statistics Agency, Ethiopia
Unit:
Hectar and quintal

Introduction



When we make the national data available on the CountrySTAT website, we reach a very vast audience: access to information must be simple and immediate.

How to organize these data in a way that is compatible with all the national data management systems? CountrySTAT uses a standard data structure in order to make the system easy to use, and to allow national and international users to get information in a meaningful, synthetic, simple and consistent way.

In this last lesson, we will learn about the CountrySTAT standard data structure and the rules for the publication of statistical data on the web, according to the International Standards.

This is the last step we take to finalize our work and see the tangible results on the CountrySTAT website!

Requirements of a statistical table: the structure

Title		time variable	
1	Production Primaire des cultures alimentaires (tonnes)		
2	Année	2005	2006
3	Produit		
4	15	Blé	
5	27	Riz, Paddy	
6	56	Maïs	
7	79	Mil	
8	83	Sorgho	
9	94	Fonio	
10	108	Céréales, nda	
Products variable			

Example of table with two variables: products and time.



Click to read the related section on the manual



The statistical tables are the basic units of the database, and are organized into separate files (for example, a table for data on pesticides, one for land use, etc.)

A statistical table is represented by a multidimensional matrix called **cube**. Each dimension is a variable. A simple table represents one indicator, while a complex table can have one or more indicators.

When statisticians in the National Secretariat organize the data for the National CORE or Sub national sections, they can use as templates the tables available on the CountrySTAT website.

They all include the variable Time.

On the other hand, when we publish data in the Thematic Modules, we could build our own statistical tables, as we shall see later.

The final published table with the essential information

Requête pour matrice: 053cpd070 Visualise les métadonnées de référence :

Methodological Metadata

Title of table, including indicator and variables (in this case the variable time includes the reference time)

Production des Œufs de poule et d'autres volatiles par Produits et Année

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Œuf de Volailles	58 248	30 611	43 940	9 451	9 513	9 588	11 104	9 850	10 664

Note de bas de page:
L'apparition de la grippe aviaire au Nigéria, au Togo et au niveau mondial a fait chuté les effectifs au niveau de la volaille moderne à partir de 2006 ; période pendant laquelle, le pays a connu son premier foyer.

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SOURCE:
CeRPA & Direction de l'Elevage (DE)

Contact:
BP : 2041 Cotonou Tél : 21 33 02 85 E-mail : delevage@intnet.bj Service Suivi-Evaluation Division Statistique et Documentation

Copyright:Oui

Unité:
tonnes

Matrix:
053CPD070

Description of variable values
 Footnotes highlighting additional information on the data
 Last update
 Source of data (agency compiling the data)
 Copyright information
 Matrix code
 Unit of measurement
 Contacts for additional information

SUMMARY

The Basics of CountrySTAT e-Learning is a tool to describe the statistical process to disseminate data on line, to be easily used and widespread to the statistical users.

The subjects deals with are:

1. Why we need CountrySTAT

2. The CountrySTAT framework for data quality improvement:

- Institutional and Organizational components: roles and responsibilities, and the relation among different actors in the data analysis and dissemination process

- The CountrySTAT methodology: presentation of international standard data quality requirements with concepts, definitions, and classifications

- The CountrySTAT methodology: standard structure of the data

3. The process of data quality analysis and the application of the standards for data dissemination