Retrieving and Preparing Data for Mapping in Excel

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POLS 7387 Global Governance
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Spring 2022

Northeastern University
NULab for Texts, Maps, and Networks

Feel free to ask questions at any point during the presentation!

Workshop Agenda

- Collecting and understanding data
- Collecting and preparing data from UN Sustainable Development Goals
- Preparing data for GIS mapping using Excel

Slides, handouts, and data available at **https://bit.ly/diti-sp22-garcia-data**

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Collecting Data

- A dataset is a collection of several pieces of information called variables (usually arranged by columns and rows).
- A variable can have one or several values (information for one or several cases).
- Qualitative data is textual while quantitative data is numerical (Excel can help sort and analyze both).

Country	Year	GDP
USA	2015	19.39

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Where Can You Get Data to Map?

https://unstats.un.org/sdgs/UNSDG/IndDatabasePage > data that needs to be processed before geospatial mapping. These data are more globally focused.

https://unstats.un.org/sdgs/metadata > data about datasets. Metadata is essential in order to understand what the dataset shows, and what it *does not show*

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Understanding Your Data

- Where does this data come from? Who collected it? For what purpose?
- Metadata for your data – use the metadata to understand what the particular variables represent.
    - For example, you can use metadata to understand how each column is being defined
- Important data for mapping: *geocoordinates* (latitude and longitude) are necessary to produce any maps; just the names of countries and cities won't be sufficient.

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Excel

Excel is a program that is used to create and edit tabular data (spreadsheets). In Excel, data are organized into rows and columns; data can be presented and analyzed using Excel's functions, such as pivot tables, charts, formulas, and more.

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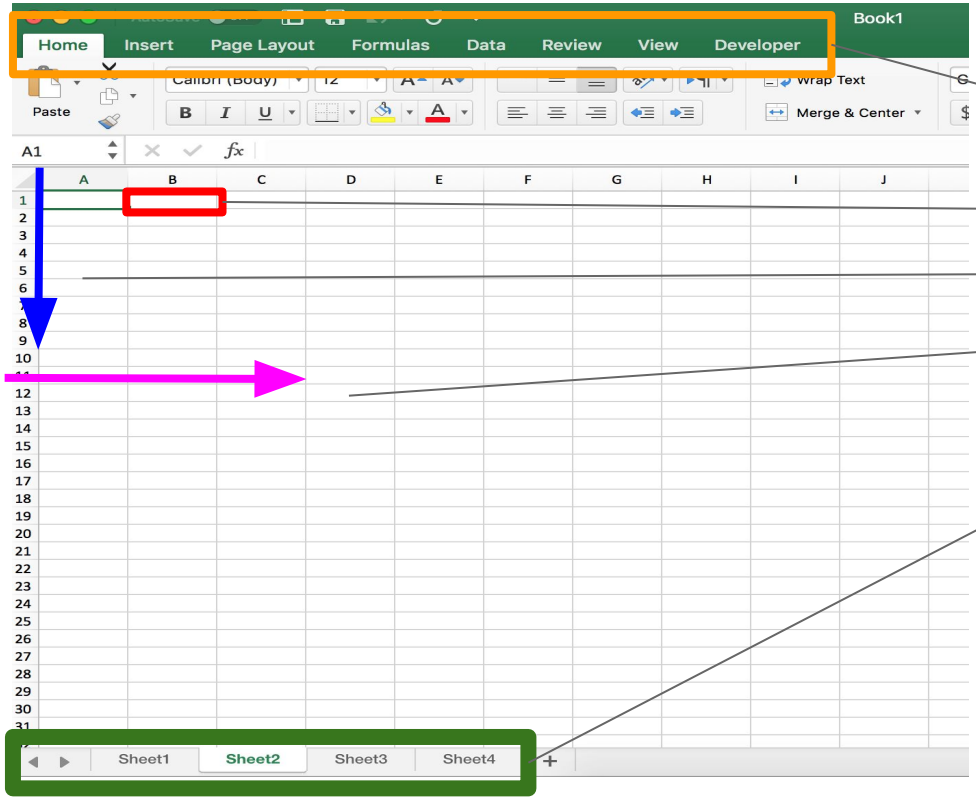
Anatomy of Excel



TOOLBAR

CELL

COLUMN

ROW

SHEET

Feel free to ask questions at any point during the presentation!

Hands on activity: Download and prepare data

Follow the instructions from the handout to prepare your data

1. **Collect data for SDG goal:**
   Select Goal 1, Target 1.1, indicator 1.1.1 “Employed population below international poverty line, by sex and age (%)”
2. **Prepare/Sort data and save it as a .CSV file:**
   a. Both sexes
   b. Over 25 years of age
   c. Year 2010

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Collecting & Preparing Data

Follow the instructions on handout-data_prep_excel:

1. Go to https://unstats.un.org/sdgs/UNSDG/IndDatabasePage
2. Select Data
   a. Goal 1, Target 1.1, indicator 1.1.1, called “Employed population below international poverty line, by sex and age (%)”
   b. Countries: Bolivia, Chile, Colombia, Costa Rica, Ecuador, Panama, and other specific countries (not regions like “West Asia” or “World”)
   c. Year 2010
3. Download this file

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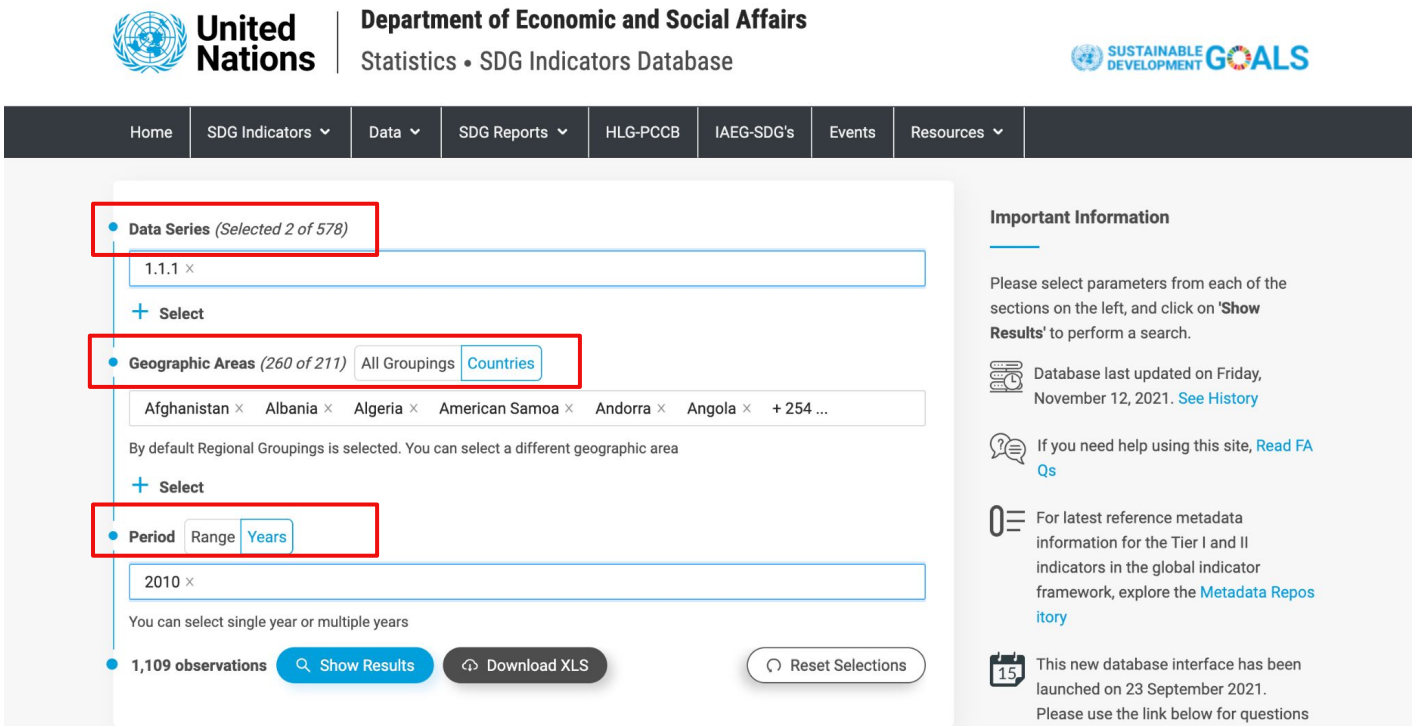
Select and Download SDG Data



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Collecting & Preparing Data

Follow the instructions on handout-data_prep_excel:

1. Open in Excel → Save as Excel document (.xlsx)
2. Select all cases (control + a/command + a)
3. Insert → Table
4. Clean/Filter the data:
   a. Select both sexes
   b. Select age 25+
5. Delete all columns except: GeoAreaCode, GeoAreaName, Value, Year Indicator
6. If there are formatting issues with the columns → select all again (control + a/command + a) and "wrap text"
7. Copy and paste your data into a new spreadsheet and save it as a .csv

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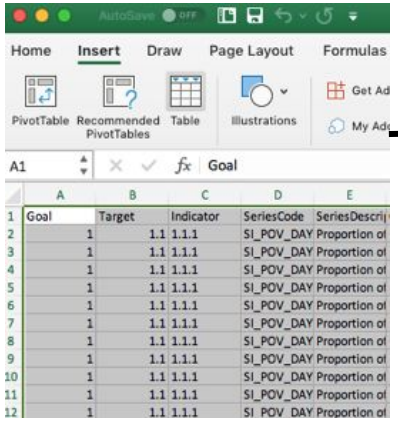
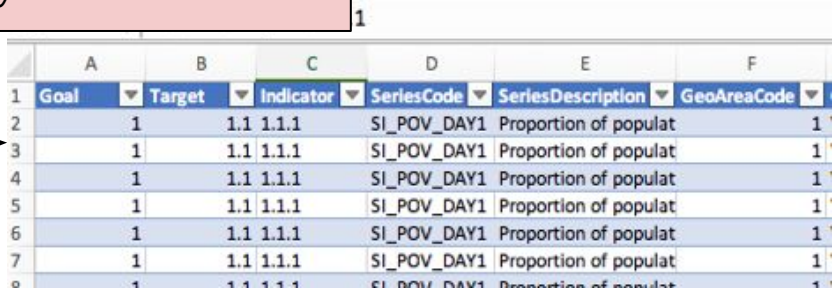
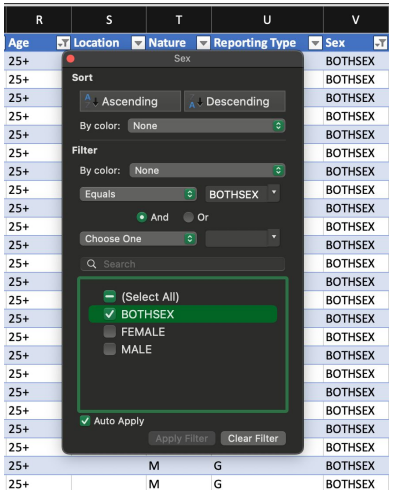
Data Preparation in Excel

(1) Insert → Table → Okay

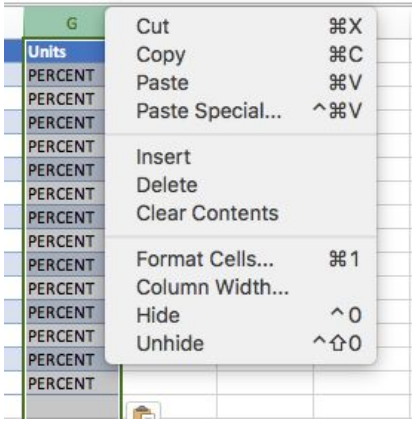




(2) Clean/Filter



(3) Delete Variables columns not needed for Mapping



(4) File → Save as → CSV UTF-8 (.csv)

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Next...Mapping using ArcGIS Online

- How to add geo coordinates to your dataset
- How to make a map out of a dataset

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Thank you!

If you have any questions, contact us at: nulab.info@gmail.com

Schedule a meeting: https://calendly.com/diti-nu

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