Retrieving and Preparing Data for Mapping in Excel

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POLS 7387 Global Governance
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Spring 2024

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 on UN Sustainable Development Goals, Targets, Indicators
- Preparing SDG data for GIS mapping using Excel

Slides, handouts, and data available at https://bit.ly/sp24-garcia-pols7387-data

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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 SDG Data to Map?

https://unstats.un.org/sdgs/dataportal > indicator 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.
  - *geocode/GeoAreaCode/M49code* are unique identifiers

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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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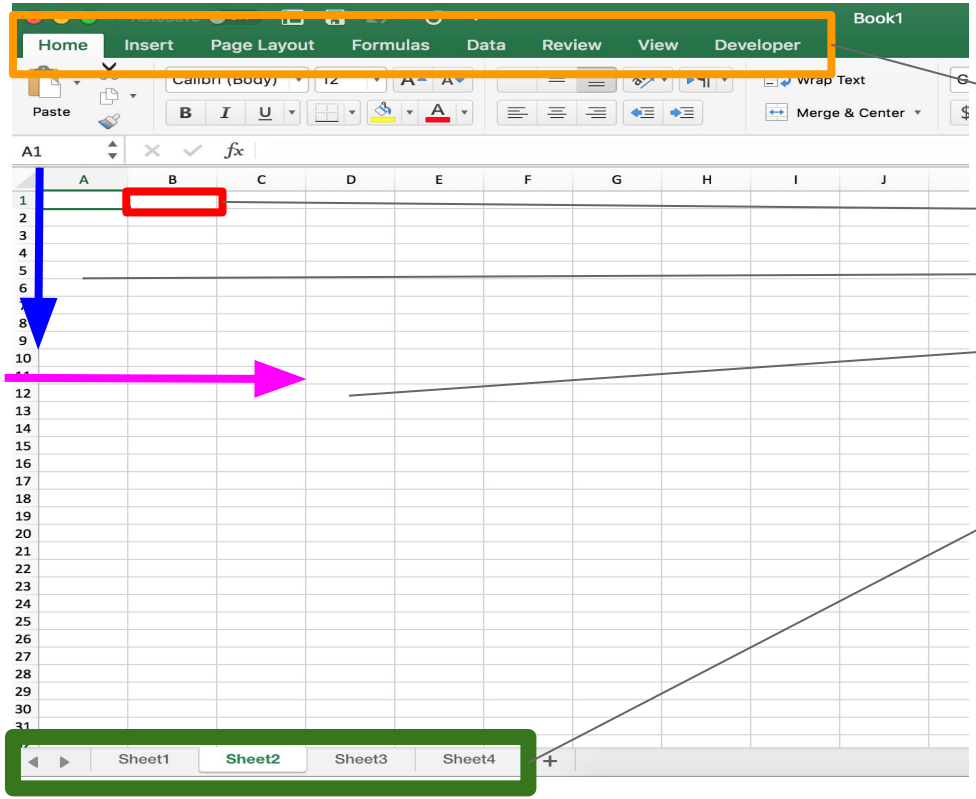
Anatomy of Excel



TOOLBAR

CELL

COLUMN

ROW

SHEET

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Hands on activity: Collect and Prepare SDG Data

Follow the instructions from the handout/slides to prepare your data

1. **Objective 1: Collect data for SDG goal**
   Select Goal 1, Target 1.1, indicator 1.1.1 “Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)”
2. **Objective 2: Prepare/Sort data and save it as a .CSV file**
   a. Both sexes
   b. Under 15 years of age
   c. Year 2015

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Collecting Data

Follow the instructions on handout-data_prep_excel:

1. Go to https://unstats.un.org/sdgs/dataportal
2. Select Data
   a. Goal 1, Target 1.1, indicator 1.1.1, called “Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)”
   b. All Countries
   c. Year 2015
3. Download this file

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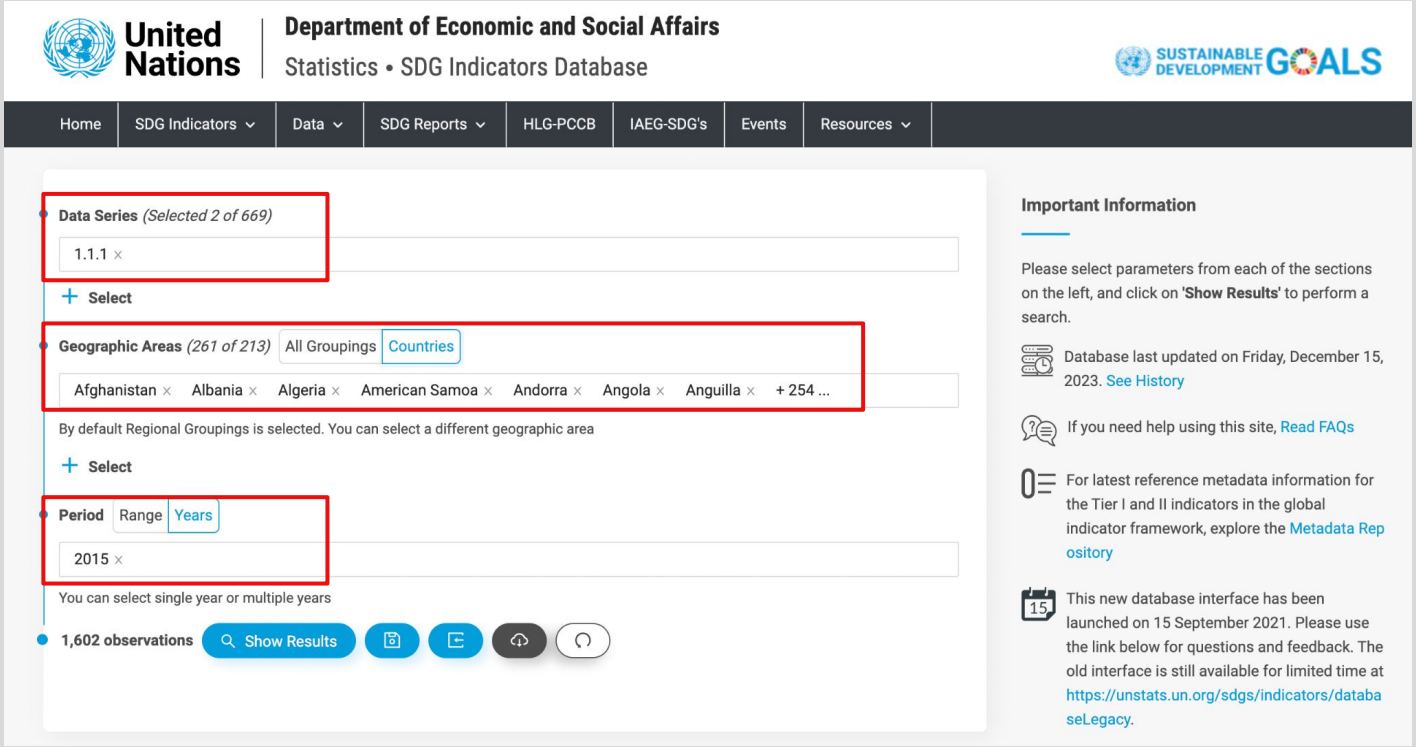
Collecting Data



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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 <15Y
5. Delete all columns except: GeoAreaCode, GeoAreaName, TimePeriod, Value, Age
6. Copy and paste your data into a new spreadsheet and delete age column
7. If there are formatting issues with the columns → select all again (control + a/command + a) and "wrap text"
8. Save it as a .csv

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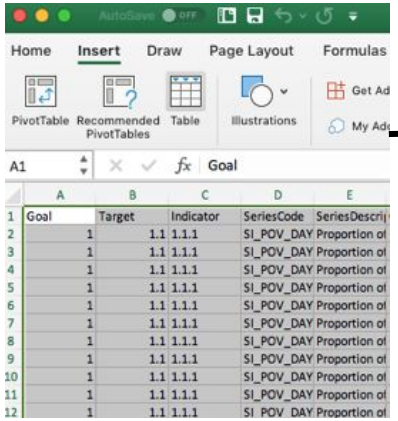
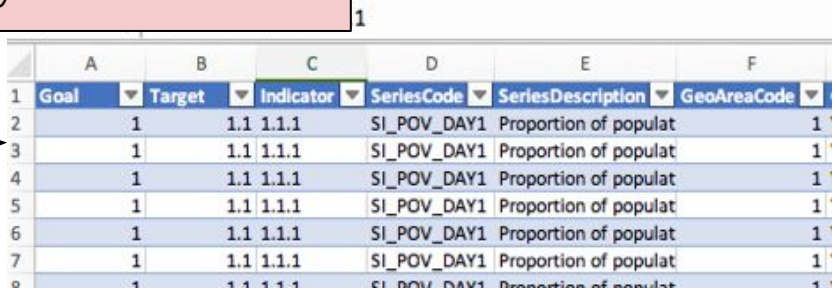
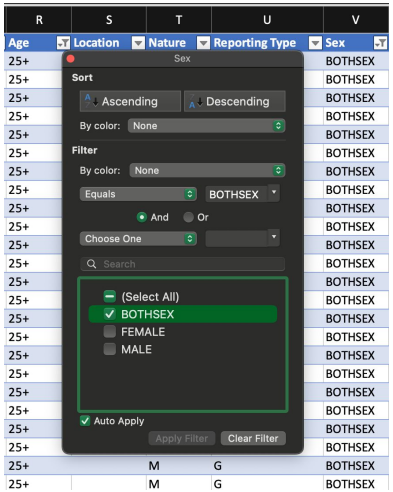
Preparing Data

(1) Insert → Table → Okay

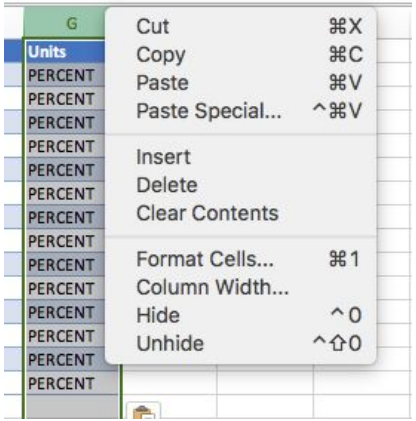




(2) Clean/Filter



(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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