Retrieving and Preparing Data for Mapping in Excel

POLS 7387 Global Governance
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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 mapping using Excel

Slides, handouts, and data available at

https://bit.ly/diti-fall2020-garcia

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

Workshop Objectives

- Know places where you can collect data
- Understand how to collect, store, and clean data in Excel
- Apply these methods to the UN Sustainable Development Goals data
- Prepare the UN SDG data for GIS mapping

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Collecting Data

- A dataset is a collection of several pieces of information called variables (usually arranged by columns).
- A variable can have one or several values (information for one or several cases).
- Qualitative (textual, interpretable) data vs quantitative (numerical) data

Country	Year	GDP
USA	2015	19.39

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Where Can You Get Data to Map?

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

https://unstats.un.org/sdgs/metadata/ > data about datasets. Unavoidable in order to understand what the dataset does show, 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 might see unclear column names. Some data will have metadata attached, which may explain what the columns mean.
- Important data for mapping: *geo coordinates* (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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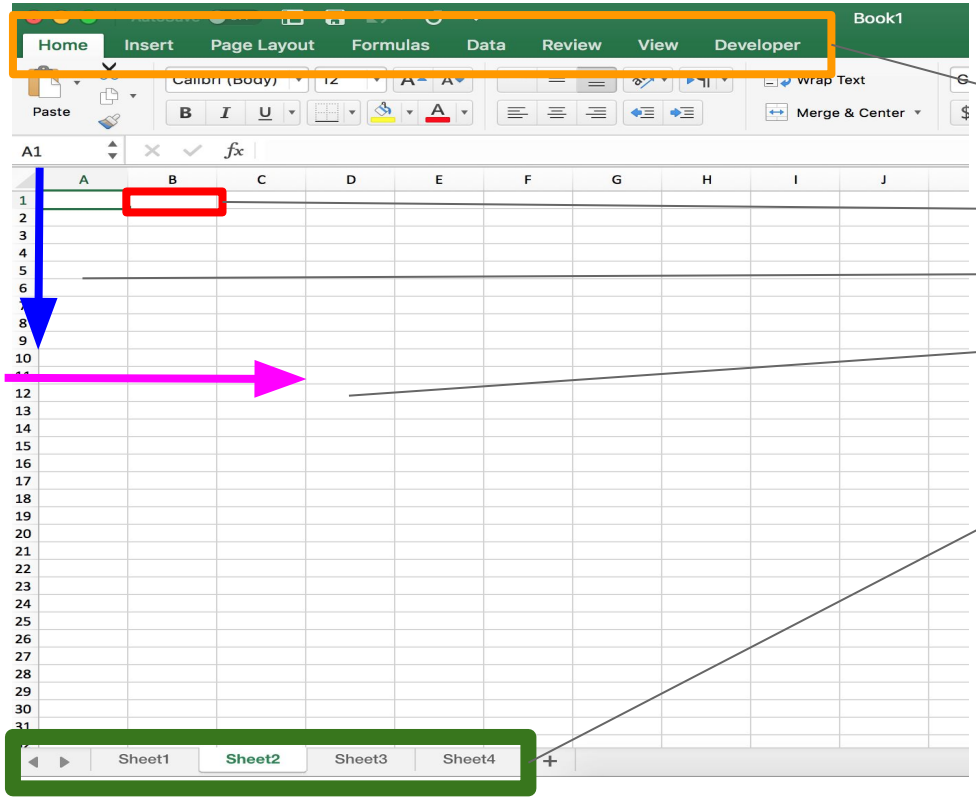
Anatomy of Excel



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 when preparing your data

Example in the handout: Collect data from this goal:
Select **Goal 1, Target 1.1, indicator 1.1.1** "Employed population below international poverty line, by sex and age (%)"

Prepare this data and save it as a .CSV file:
Both sexes over 25 years of age in 2010

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Collecting & Preparing Data

Follow the instructions on handout-data_prep_excel:

- Go to https://unstats.un.org/sdgs/indicators/database
- Select the first goal: **Goal 1, Target 1.1, indicator 1.1.1** "Employed population below international poverty line, by sex and age (%)"
- Create a table from your Excel data
- Clean your data: choose the columns and variables to be mapped; make sure there are only **one** set of variables for each country
    - Select "2010" in year
    - Select only *countries* in the country variable (ignore "World," "North America", etc). We want *countries* because they have geocoordinates
    - Select both sexes
    - Select age 25+
- Copy and paste into a new Excel document. Save that document as .CSV

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In the next episode...

- 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:

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