Geospatial Data Work

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Data Exploration Application

In our Data Exploration Application, we would like to make countries/areas choice thanks to a click on a world map. We would like to be able to visualize all countries that are in International MIGRANT Stock Data (UN | Population Division). We will need World Administrative Boundaries to build a world map. World Administrative Boundaries are available from various sources (UN | Geospatial Hub, WHO, FAO, Global Administrative Areas (GADM), Natural Earth, World Bank Official Boundaries). We would like to have most accurate one with a reasonable size for our Data Exploration Application (DEA).

Goals

- Visualize all countries (235) in International MIGRANT Stock Data
- Complete Geospatial Data $\Rightarrow$ 249 Alpha-2/Alpha-3/Numeric Codes (ISO)
- Geometries as accurate as possible
- Reasonable size in R (5-10MB) $\Rightarrow$ FLUIDITY in DEA
- Geospatial Data as neutral as possible in Geopolitical Terms
- Reproducible/Traceable (Sources)

ACCURACY and SIZE are linked, and this influences FLUIDITY in DEA. More ACCURACY increases SIZE and vice-versa. We need Geometries as accurate as possible, since we will use Geospatial Data to retrieve Climate Data.

Build Our Geospatial Data

1. Choice between Geospatial Data
2. Check that all countries in MIGRANT Stock Data are in selected Geospatial Data
3. Check that all countries in not selected Geospatial Data are in selected Geospatial Data
4. Combine information from all sources
5. Retrieve information for our Data Exploration Application from UNSD and World Bank

For countries/territories not included in selected Geospatial Data :
1. Choose Geometrie(s) from all sources (Correct ACCURACY and Reasonable SIZE)
2. Create our own Geometries (Conditions: Small Areas | Simple Boundaries)

For claimed areas between countries, we create our own Geometries and at least entire boundaries between these countries.

We also create our own Geometries to reduce Geospatial Data SIZE in R and increase chances of climate data to be located within Geometries (More Climate Data Observations).