Hello,

I am a new DHS data user and I am not familiar with programming languages. Therefore, for my analysis, I am using ArcGIS Pro. My apologies for any inconvenience this may cause.

I am conducting a social vulnerability assessment to climate change impacts using DHS data for Kenya. I am encountering some difficulties in calculating DHS indicators. The following DHS datasets are being utilized for the analysis: KEHR8BSD.zip, KEGC8AFL.zip, and sdr_subnational_boundaries.shp.

I attempted to calculate the percentage of various indicators, such as the percentage of female-headed households (HHs), households with a population aged 65 and over, households with a population aged 13 to 18 years, literate households, households with access to improved water and sanitation, and the wealth index.

It's worth noting that the Humanitarian Data Exchange (HDE) contains the percentage of a range of demographic and socioeconomic indicators at the subnational administrative level 1 for Kenya, derived from DHS 2022 data.

However, upon completing the calculations, I noticed discrepancies between the results obtained from GIS analysis and the percentages provided on the HDE website. I am unsure why these differences exist. I did not apply any weight to my dataset because the process was confusing to me. Despite watching videos and reading resources from the DHS website, I still lack clarity on this matter.

Therefore, I have several questions:

--Why am I getting different results?
--Do I need to apply weight to calculate the percentage of households with access to improved water and sanitation?
--If weight application is necessary, how can I accomplish this in GIS software?

I would greatly appreciate your assistance with this matter. I have attached a document outlining the steps I followed to join DHS Census Data with DHS Spatial Data, aggregate at the subnational administrative level 1, and calculate two indicators as examples (i.e., the percentage of households with access to improved water and the percentage of households with access to improved sanitation). This document also includes results obtained from ArcGIS Pro and the HDE website. I have also attached excel files data downloaded from HDE website for the year 2022 for your convenience.

Any help will be highly appreciated. I need it urgently. Please let me know if you need any other clarification.

Thank you.

File Attachments

1) Results.xlsx, downloaded 195 times
2) Spatial join and calculation steps.docx, downloaded 172 times
3) Toilet Facility_subnational Ken_2022_HDE.xlsx, downloaded 169 times
4) Water_Subnational_Kenya_2022_HDE.xlsx, downloaded 148 times