*Lab 04: Making static maps*

*NAME:* ***KIDUS BERHE***

Questions:

1. Describe your choices in making map 1
2. Describe your choices in making map 2. Include why you chose the problem and where you obtained your data. Finally, your map is a communication piece. What was the intent of your communication and do you feel as though you achieved your goal?
3. What did you learn?

**Answers:**

1. **For Map1 I followed a similar templet to the group work from class:**
   1. **I calculated my variable of choice; population of 20-29 year olds in Nebraska and percent of total population that would make up. Then I merged the required data and created my map out of this join. This map showed the percent 20-29 yr olds across all Nebraska’s counties. This would be the inset map. Note I tried to change the colour scheme however only the default seemed to be accepted.**
   2. **I then made the second map including the raster and municipalities’ data, selecting to place the legend outside the map as it needed more space.**
   3. **I then combined the two maps using a print command after calling up the first map. This print statement had to have the position and size I wanted the map to be. The chosen size represents the map and its borders without overlaying too much.**
2. **For the second map (my map);**
   1. **I chose the problem as I wanted to see Hokkaido’s railway distribution in relation to the sub regions and water ways. I wanted to see how much these water ways affected the construction of railways and in many areas, the railways follow along a major river. This maybe for aesthetic or efficiency reasons.**
   2. **Most of this data was acquired from OCHA while the DEM was acquired from Harvard’s database.** 
      1. [**https://data.humdata.org/dataset/japan-administrative-level-0-2-boundaries**](https://data.humdata.org/dataset/japan-administrative-level-0-2-boundaries)
      2. [**https://data.humdata.org/dataset/hotosm\_jpn\_north\_railways**](https://data.humdata.org/dataset/hotosm_jpn_north_railways)
      3. [**https://data.humdata.org/dataset/hotosm\_jpn\_north\_waterways**](https://data.humdata.org/dataset/hotosm_jpn_north_waterways)
      4. [**https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/28762**](https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/28762)
   3. **My intent was to show Hokkaido’s railway distribution in comparison to the water ways of the province and elevation. I feel this is demonstrated well, however the DEM was unable to show up in the map and so it lacked an integral part of information I was trying to convey. This being said, it still shows the other distributions.**
   4. **For the map, is tried to create it all within one code block. I wanted to the boundaries to show sub provincial territories with the DEM in the background showing the regions elevation. I chose shades of black/grey for the raster as I didn’t want it affecting the colours of the other features. I also added a background to the map to mimic the ocean, and added legends to show what the map was representing. I chose the bottom right corner for the map items (scale and legend) as this had sufficient space for the items.**
3. **I learned how to stack maps on each other but also how to balance the features in order to represent them all sufficiently. I learned how to directly input legends and change the positions they would occupy in the maps.** 
   1. **A challenge was getting the DEM/raster to show on my second map, I tried finding documentation for this but everything I tried seemed to fail, though the map would plot when placed on its own.**