

Hi! Welcome to module 2 part 2. In this video I'm going to talk about how to effectively use color in maps.

So, choropleth maps are one of the most common types of thematic maps and journalists use them all the time. In these maps, places such as states, counties, or census tracts are assigned a color value based on data.

There's only one rule, the data must be normalized or standardized to a rate or ratio. You can't map raw data or counts. So, number of people is a raw number and that's not okay to use in a choropleth map.

The share of population is seen here on a New York Times map is a ratio, and it's acceptable for choropleth. The one thing to remember here is that not every country is the same size. That means it's hard to make a direct comparison between two areas on choropleth maps.

Larger areas are always going to stand out more. That's why the colors you choose are really important.

So how do we choose which color to use? First, the color scheme you choose should play well with how people perceive the relationships between colors. For example, let's say this is a map of air temperature. It uses a rainbow color scheme to show order temperature data from low to high, but the problem is we don't perceive the order of hues very well.

So for instance, say I told you this red region here is the maximum temperature shown on the map. Can you read the rest of this map? Can you say where the highest temperatures are and where the lowest temperatures are? If I asked you if this pink was a higher temperature or if there's a green was a higher temperature, would you know? It's kind of hard to say right because our brains don't really perceive an easy ordering among hues like this.

Let's compare it to something more like this, which is also showing temperature, but it's using basically one color, blue and just changing the darkness. Our eyes perceive a more clear obvious order as the colors get darker or lighter. That's the minimum and that's the maximum.

You want to choose colors that reflect the nature of the data. A color scheme that goes from light to dark has a clear perceptible ordering to the eye, you can easily tell what order these colors are. This type of color makes sense for quantitative or otherwise ordered data, like this.

This color scheme is similar in that it uses darkness for ordering, but it goes in two separate directions from one hue to another. So these colors make sense when you have ordered data that you want to show ranging between two different endpoints, like this elections results map.

This is a lot easier in the US where there's only two major political parties. I know those of you living in countries with more than two parties have a harder time choosing election map colors than we do some times.

This color scheme is made up of different hues with similar darkness and saturation. So there's no perceptible hierarchy ordering among them. These colors make sense for categorical data, like this.

So now that we have a sense of how to use colors, we're going to try it out in QGIS. In the next video, Chris will walk you through how to add data to maps and style it effectively. Thanks.