Transcripts - Intro to Mapping and GIS Editing data in QGIS

What's up everybody? Welcome to the fourth video in module 2. We just got done creating a choropleth map in QGIS. We're going to kind of move away from the data for a second and just kind of focus on a couple of simple things you can do in QGIS to start editing the actual shapes and removing things.

So for this, what we did in module 2, you can go ahead and set aside and save. For now, just go ahead and just open up the country shapefile, don't have the color shaded based on a fertility rates, you don't need any data joined, don't either fertility data at all, really, so just have the country's shapefiles pulled up.

Your map should look kind of like this, kind of the default map whenever you open a shapefile, yours might have a different color, but it should look basically like this.

So the first thing we're going to do when it comes to editing in QGIS is we're going to remove a country. So in order to do this, we're going to have to remove, so we've been using the pan map button control for a while which basically allows you to pan the map like I am here, we're going to need to change that cursor.

Go ahead and click on the little white mouse with a yellow square on the top right corner. Go ahead and click on that. You'll see the mouse changes, its now black, you got a little square around it as well.

So this allows you to actually select countries, so if you start clicking around you will see countries turn yellow. That means they are being selected if you might have guessed. So we're going to remove a country first, so in order to do that, we need to select one first and then there's this toggle editing button over in the top left corner on the second menu panel.

It looks like a little pencil, go ahead and click on that. You'll now see our country that we've selected here which in this case is Brazil. It now has this red border around it. It's kind of ugly looking but this means we're in editing mode and we've got this country selected. So if we want to remove it just go and hit delete and boom, it's gone.

The other thing you can do is let's say you want to remove multiple countries you can kind of do the same thing instead of individually selecting a country, you can actually drag a box around several countries, select them all at the same time and then delete, so I'm going to go ahead and do that.

So I'm just using that same mouse that I was using before and this time I'm dragging and creating a big box and I'm selecting all the countries in South America and then I can go ahead and delete and they are gone. So in order to save that, so we've got it deleted, but we if we want to save it we need to go out of editing mode which we do by hitting the toggle edit button again,

so go ahead and hit that pencil again, be very careful here, if you hit save here, it will save over the original shape file that you downloaded from Natural Earth, which may or may not be what you want. In this case, we like South America, we don't want to say goodbye to it, so we're going to go ahead and hit "don't save".

I'll show you a way in the next step to show you how to sort of create a new shapefile and so if you hit save or you won't save over your original data source, so for now just hit don't save, and voila South America is back, which is good news.

Next step is going to basically do the inverse of that. So instead of removing one country or countries at a time, we're actually going to do the inverse which is remove all countries but one, so what we're going to do is we're going to select a country and then we're going to select the inverse of that and then remove everything and we're going to be left with one country.

So for this one, I'm going to use San Marino, which you may not have heard of. It's a small little country Republic in Italy. It has a population of about 30,000 people. I'm going to use this country in the next exercise and the reason I'm using it is because it has a small population about 30,000, like I said, which would be a good number for the next exercise we do in module 3.

I'm not going to explain it to much further now, but you feel free to follow along. If you want to choose a different country feel free, just try to use choose something with a fairly small population, you'll see why in the next exercise.

But like I said, I'm going to go ahead and pick San Marino as my country and to do that, I'm going to go ahead and zoom in on Italy and I'm actually going to get the pan map button clicked as well so I can kind of pan up here and I'm gonna zoom in on this tiny little circular country, takes up such a small part of the globe here, but I'm going to go ahead and select it, and so in order to do that is going to be exactly what we did before make sure you have the select features by area selected, go ahead and click on it and then go ahead and click on the country.

You'll see it turns this like bright yellow. In order to select the inverse of this which is all other countries in the world, except San Marino, hit the little button right next to it.

This inverse feature selection, this one that's got the the yellow and white triangles on top of each other go ahead and hit that and if you zoom out you will notice that we now have all the countries in the world selected except San Marino, so go ahead and hit toggle editing mode again.

You'll now see all the countries are selected except San Marino and now you can hit delete and it's going to ask you "would you like to continue?" we would, so it's good to remove everything but this tiny little country that still on the map that you may not even be able to see unless you zoom in like I'm doing here. There it is, everything's there except San Marino. So again, in order

to save you are going to want to go out of the toggle editing mode and it's going to ask you do you want to save? Again this is going to right over our countries that we have.

So we're actually going to hit "don't save again", but we're going to do an extra step. We're going to sort of do that over, but we're going to do an extra step at the beginning so we don't right over the original countries and you will as we go through it, you'll see why we're doing it a little bit different way this time. So you can do it the original way like I just showed you but just know that you're going to save over the country shapefile that we downloaded from Natural Earth. This way we'll create a new shapefile just for San Marino and we'll leave the original data source alone.

So to start out go ahead and right-click on this, the country shapefile, hit export, save features as and we're going to call this San Marino and then go ahead and make sure you have it saved in some sort of directory, and go ahead type in San Marino at the top here. I have it already saved from an old version, but I'm just going to write this over for now. You obviously won't have an old version of so just type in what San Marino or whatever country you have up here at the top hit "save" and then hit "OK."

And you will see a new layer show up in your panel called San Marino. At the moment, it's all of the countries in the world, but once we do that process over and we remove all the countries and we hit "save" then we will actually save to that San Marino shapefile, which is new and we won't worry about touching the original data source from Natural Earth, which is all the countries in the world.

So let's go ahead and do what we just did which is zoom back into San Marino. Go ahead and hit that little arrow button again, select on it to the inverse selecting, so select all of them all the countries except San Marino, toggle editing, hit "delete", i'll ask you if you are sure, of course, you're sure and now you'll see all those countries removed.

Now, you will still see the other countries from that other layer in there. So don't get confused. The San Marino is this purplish color, and then this other country shapefile is this sort of yellowish color. They're going to probably be different colors on your program, but do know that they are representing two different layers.

So it can kind of look a little confusing those, so let's go ahead and toggle off the original countries, which is click this little arrow button right over there, and now we're just showing San Marino shapefile, and we're just showing the actual San Marino country. No other countries in the world on here, which is what we want and then go ahead and hit toggle editing again.

It will ask you if you want to save and this time we do, so we went through the process of creating a new layer just for San Marino, so this time we do actually want to save, and so if you go to your file system your directory where you save this you'll see you have a new creative file.

It's actually four files because remember shapefiles are four files and it will just be the shape of San Marino, which is perfect for what we want in the next module.

So that's that for now. Again, we'll get into more of the data later one other quick thing I want to show you before we are done with module 2, is let's say we have a hypothetical situation where we actually need to change the data itself. Let's say that the Natural Earth for whatever reason has the wrong population for San Marino.

It's off by a few thousand people and we want to make sure that the right population is shown in the next project again or the next module again, we'll talk about why this is population in particular is important, but let's just say hypothetically it's a little off, you can actually do that in QGIS. You can actually change the population and I'll show you how to do that now.

So go ahead and right click on San Marino, go into open attribute table, and then go over to the column that actually says "population estimate" so you might have been a little confused, like what do you mean population? We haven't talked about population.

So this obviously is going to vary depending on what shapefile you find, and download, and use, but Natural Earth if they have all the countries in one shapefile, they also include the population for each one of those countries in that shapefile, which is really nice and we're going to use that like I said next week.

This week we're just going to be editing, but next we're going to be diving hole deeper, but that's really nice little feature here. It's a nice little piece of data added on to it. So whenever you download it definitely download a shapefile, definitely look through it and see what else is in there, if hey have some sort of data dictionary or metadata like this does, look at it and see what else is in there.

It might be useful for what you're working on in this case it is. So but for this exercise we're just going to Simply change that population number. So let's say hypothetically San Marino is actually a 40,000 not 33,000. I don't know how they could get that wrong, but there's 40,000 people there.

So go ahead and click on that little cell and we're going to click on the toggle editing mode just like we did before, the icon still looks exactly the same which is nice. So go ahead and click on that and now you can actually double click on this little cell and you can actually start typing things in, and I'm going to go ahead and type in 40,000 because that's how many people are there.

Go ahead and click away from it, and it should say you can change any of these cells, so if the GDP is a little off as another data piece that was added in there by Natural Earth automatically as the GDP, which is also really nice. Let's say the GDP is a little off you can double-click on

that population rank. You can click on that, but for this hypothetical example, we're just worried about the population as the estimate.

So you typed in 40,000, again just like we did with the shapes in order to save that, we need to get out of editing mode, so we need to hit that toggle editing mode button again, go ahead and click on it. It's going to ask you once again if you want to save. For this example, we're just going to say "don't save" because 40,000 is totally made up and it's not based on anything real, so that's not the real population.

So "don't save" and you'll see it reverts back to the original which is nice. Go ahead and close out of that, so that's all for this week. Again, make sure you have the San Marino shapefile ready to go for next module. We'll be touching on that population data and actually making a DOT density map, which will explain what it is next week.

That's it for module 2, you learned from Darla how to put multiples types of data on a map, you also learn about color, and then with me, obviously you put dots on a map as well as create a choropleth map which took some fertility data joined and created a map, and then we added some data at the very end as well.

Next week we're going to start talking about different ways you can analyze data and we're going to dive deeper into the data and cool things you can do with different types of data sets, so we're going to be working with the San Marino again and I'm going to download some new data sets as well. So tune in! See, you next week.