Lesson 4.2: NDVI Calculation

Data Source: dataset5.zip

NDVI is used to quantify vegetation greenness and is useful in understanding vegetation density and assessing changes in plant health.

- 1. Open ArcGIS Pro and add *Dataset5* to your folder connections. Add all the files in *Dataset5* to your map.
- 2. Search **Polygon to Raster.** Convert Field20_boundary into a raster.

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- 3. Search Raster Calculator (Spatial Analysis).
- 4. In the parameters tab, input "RED.TIF" * "Boundary_raster".
- 5. In the environments tab, select **Minimum Inputs** under **Cell Size.** Hit **Run**.

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- 6. Repeat steps 3-5 for *NIR.TIF*.
- 7. Your resultant maps should look like the two below. Change the colors in **Symbology**.



8. The equation for calculation NDVI is as follows:

$$NDVI = \frac{(NIR - RED)}{(NIR + RED)}$$

- 9. Search Raster Calculator.
- Input the equation, the same as the one above: (Float("NIR_c")- Float("RED_c"))/(Float("NIR_c") + Float("RED_c")) and name your new raster NDVI.
- 11. Save you map.



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Output raster NDVI] 🚘