Assignment 9: QGIS Graphical Modeler

(60 Points Total)

Data available under Resources>UK Data.

The provided **uk_data.gpkg** GeoPackage contains a variety of data layers for the United Kingdom, including the following that you will use in this assignment:

district_bound: boundaries of districts of the United Kingdom

geo_dykes: polygons of geologic dyke extents.

The geology data are from the British Geological Survey. The political boundaries are from the United Kingdom Data Service.

Description of Problem

Use the **Graphical Modeler** to create a model that will allow a user to do the following:

"Count the number of **geologic dykes** that have their **centroid** in each **district**. A user should be able to build an **expression** to subset or extract dykes that meet certain criteria."

The model should:

1. Allow a user in input layers representing the **geologic dykes** and **districts**. **(6 Points)**
2. Specify the attribute column name that provides a unique identifier for each **district**. I used the "name" attribute. **(6 Points)**
3. Build an expression to **extract** a subset of the **dykes**. **(6 Points)**
4. Perform all operations needed to return the correct result. **(6 Points)**
5. Generate a table that contains the **district name** and the **count of geologic dykes** that **met the defined criteria**. **(6 Points)**
6. Only return the **summary table**. All intermediate outputs should now be returned. **(6 Points)**
7. Have well formatted **help documentation** so that a user can figure out how to use your tool. **(12 Points)**
8. Have meaningful and helpful **parameter names** as displayed in the tool window. **(6 Points)**

Q1: Which district has the largest number of **dykes** that are of the type "FELSIC-ROCK" (Hint: use the "RSC_D" attribute from the **geologic dyke** layer). (6 Points) Highland

Deliverables

- Answer to the question, image of graphic model in PNG format, screen capture of model window set up to answer Q1, model as a .model3 file.

Geo Dykes | Districts | District Name | Subset Expression

In

Extract by expression
Out

In
Join attributes by locat...
Out

In
String concatenation
Out

In
Centroids
Out

Statistics by categories
Out

Summary

Extract by Attribute

Parameters | Log

District Name
name

Districts
district_bound [EPSG:27700]

Geo Dykes
geo_dykes [EPSG:27700]

Subset Expression
RCS_D = 'FELSIC-ROCK'

Summary
Summary_Table

☒ Open output file after running algorithm

0%

Run as Batch Process...   Run   Close