Documentation Samples - Transerve

Table of Contents

API Documentation **2**
Tools Usage Manuals **2**
Spatial Interpolate Tool 2
Spatial Filter Tool 7
Spatial Intersection Tool 10

API Documentation

https://apiuat.transerve.com/api-docs/#/
After rounds of discussion where the APIs and their use cases where explained to me, I was in charge of their documentation. Please note that the link I have provided might have been updated after I left but for reference, I was responsible for the documentation contained in the *Layers* and *Forms* sections.

Tools Usage Manuals

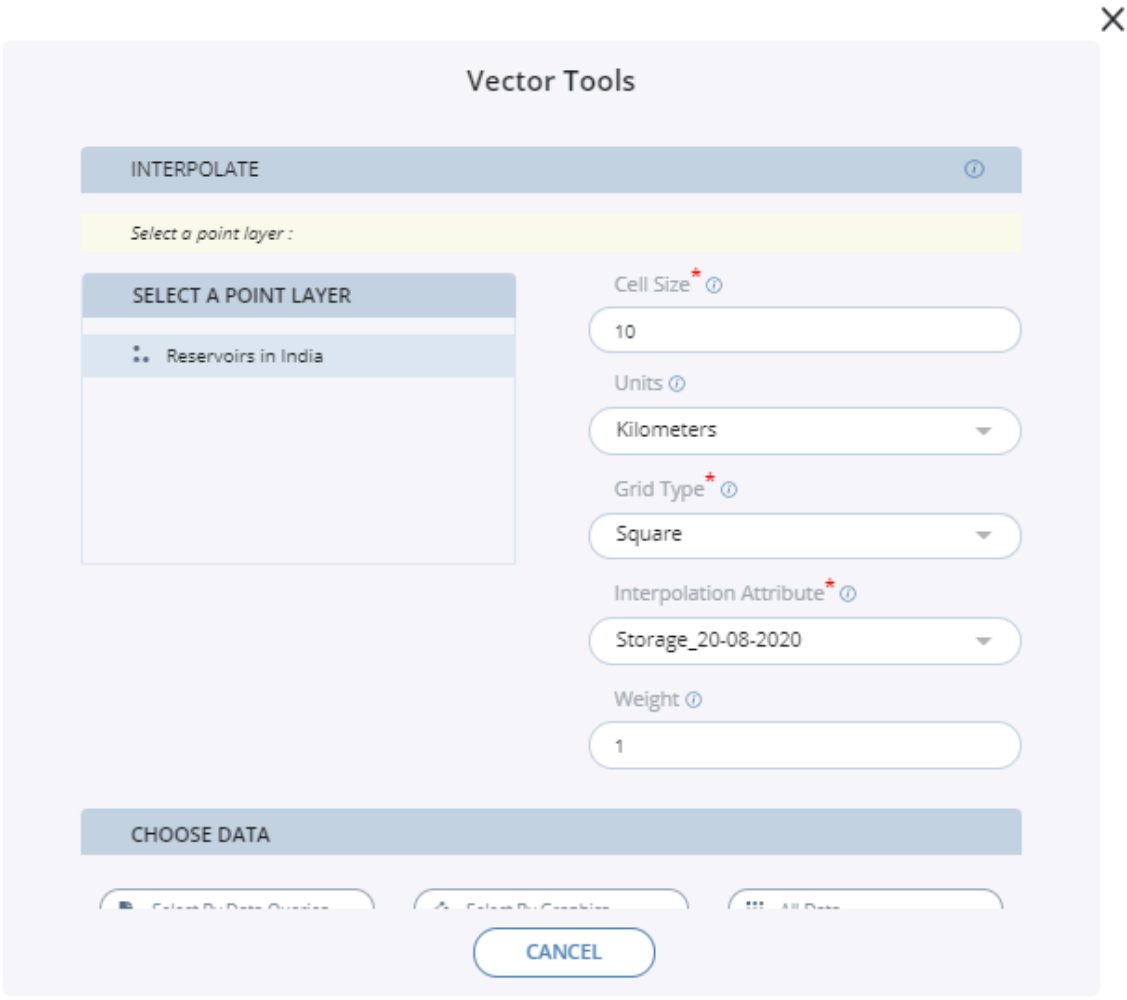
Spatial Interpolate Tool

Vector Processing Tools
Spatial Analysis - Interpolate

This feature requires at least one point in the layer to be implemented. It makes use of the Inverse Distance Weighing method to interpolate points in a grid pattern based on the parameters provided by the user. The Inverse Distance Weighting method is implemented to determine the values at unknown points using the weighted average of the known points. This process is known as interpolation.

The interpolate option can be selected by going to
Tools -> Vector Processing Tools -> Spatial Analysis -> Interpolate

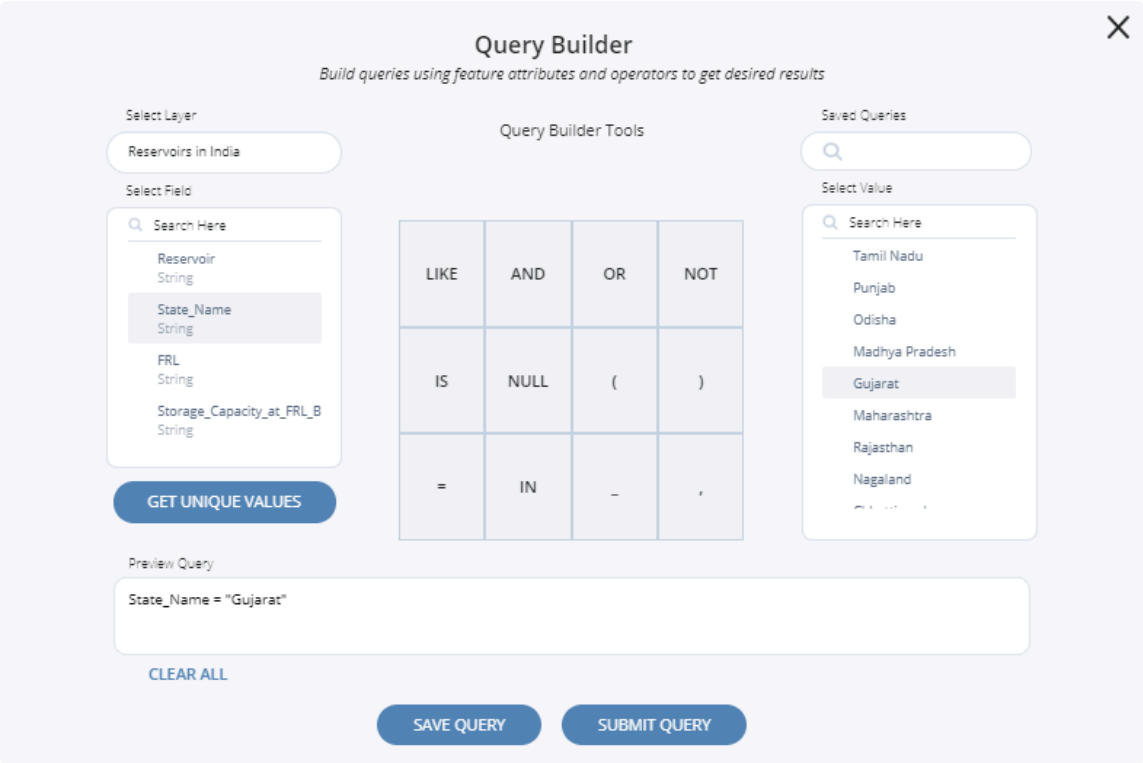
Once the interpolate option is selected, a window is displayed where the user gets to select the data layers and the deciding factors for the interpolation.



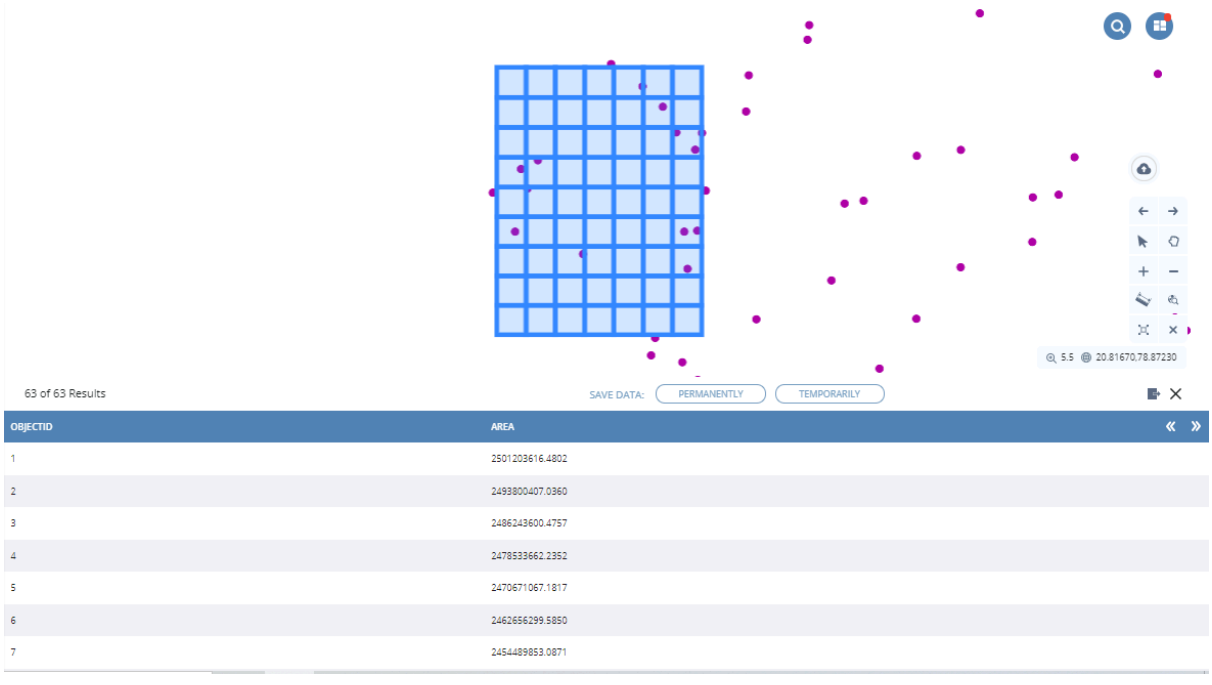
1. Cell Size - Calculates the input size of every cell.
2. Units - Determines the measurement of the cell size
3. Grid Type - Determines the grid geometry between a square, point, triangle and hexagonal cell.
4. Interpolation Attribute - A numeric attribute to be used as the interpolation parameter. This option is enabled only if the dataset contains a numeric attribute to be used as the interpolation attribute.
5. Weight - With a default value of 1, this parameter determines the impact of the input values.

Select By Data Queries

This option redirects the user to the Query Builder. The interpolate operation is carried out on the output of the query created. More information about the query builder and how to create custom queries can be found here.



Output for square grid type -



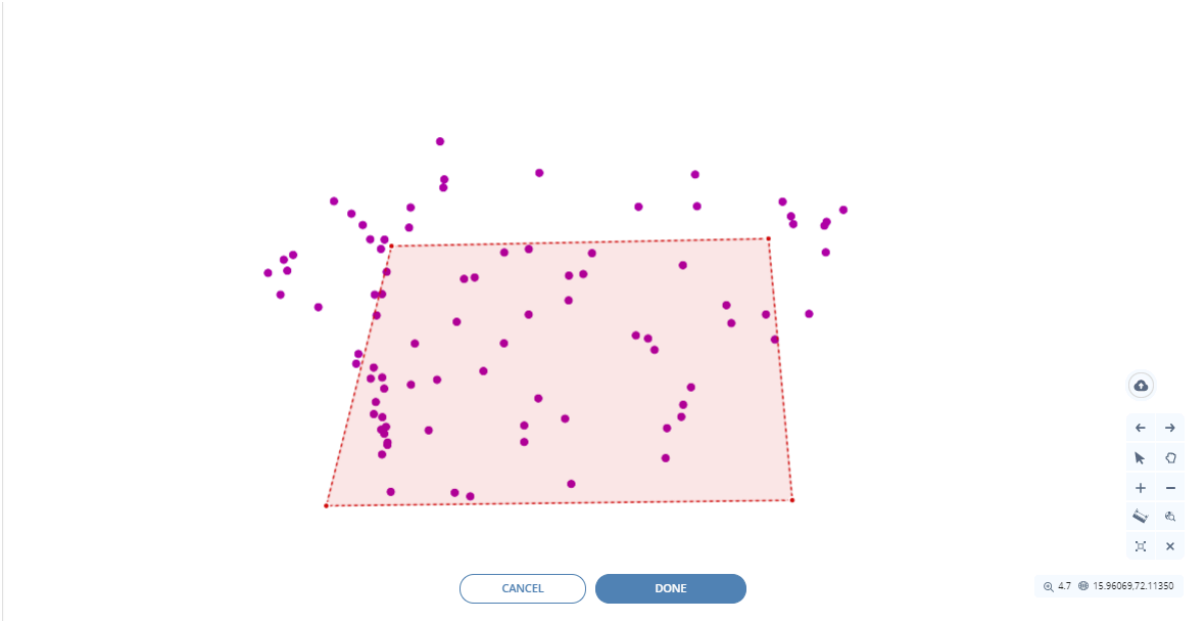
Select By Graphics

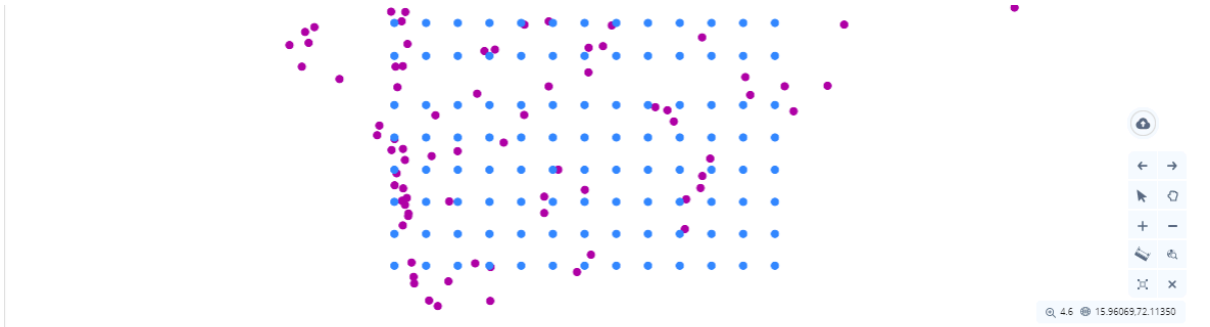
This option gives the user the choice to manually select the region around which the operation should be applied. There are three ways of selection.

1. Point Selection
   The interpolate operation does not produce an output for a single point selection.

2. Polyline Selection
   The interpolate operation does not produce an output for polyline selection as the selection of multiple points without enclosing a region is considered as invalid geometry.

3. Polygon Selection
   This tool produces the overlapping region between the enclosed area selected by the user and the other polygon layers.
   Output for point grid type -





416 of 416 Results

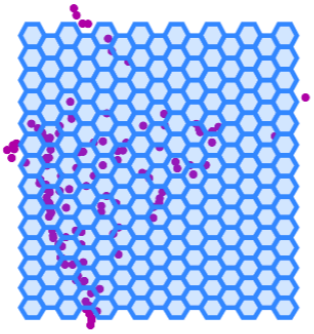
SAVE DATA: PERMANENTLY TEMPORARILY

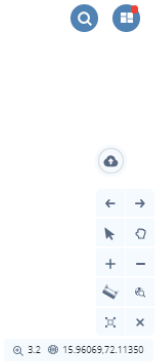
OBJECTID
1
2
3
4
5
6
7

All Data

Implements the interpolate operation on the entire map session layers selected by the user.

Output for hex grid type -





203 of 203 Results

SAVE DATA: PERMANENTLY TEMPORARILY

OBJECTID	AREA
1	27364385602.4492
2	27218589738.4337
3	27052677777.6919
4	26866772338.6651
5	26661010816.1206
6	26435545279.6077
7	26190542361.0716

The output polygon represents the intersection using a highlighted region. A table including the area is also produced. The user has the option to save the data permanently by creating a new session map with the output layer. Similarly, the option to save the data temporarily uses the output to create a new layer within the same map session.

Spatial Filter Tool

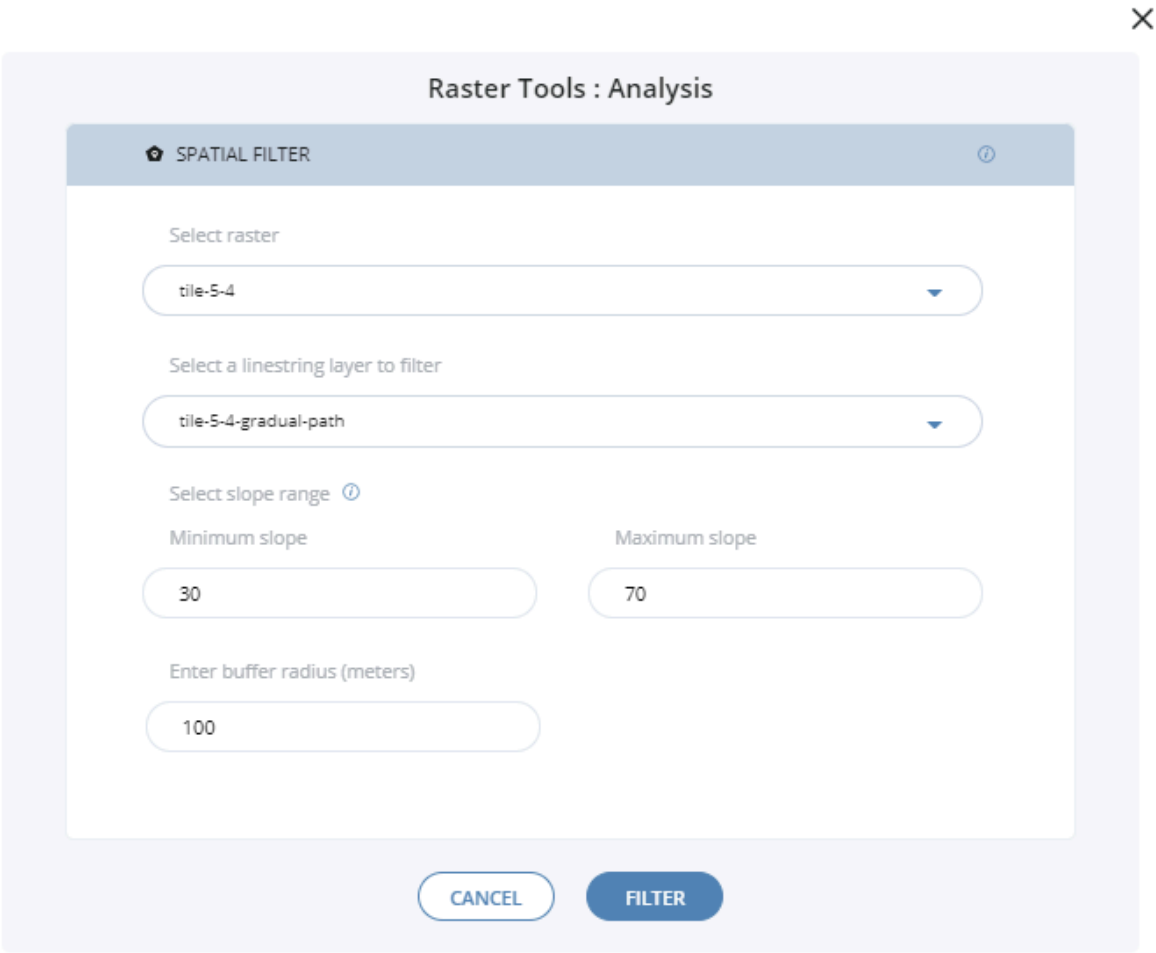
Raster Processing Tools

Analysis - Spatial Filter

This tool implements spatial filtering on a line string elevation dataset using a specific slope range as a filtering condition.

The Spatial Filter can be selected by going to
Tools -> Raster Processing Tools -> Analysis -> Spatial Filter

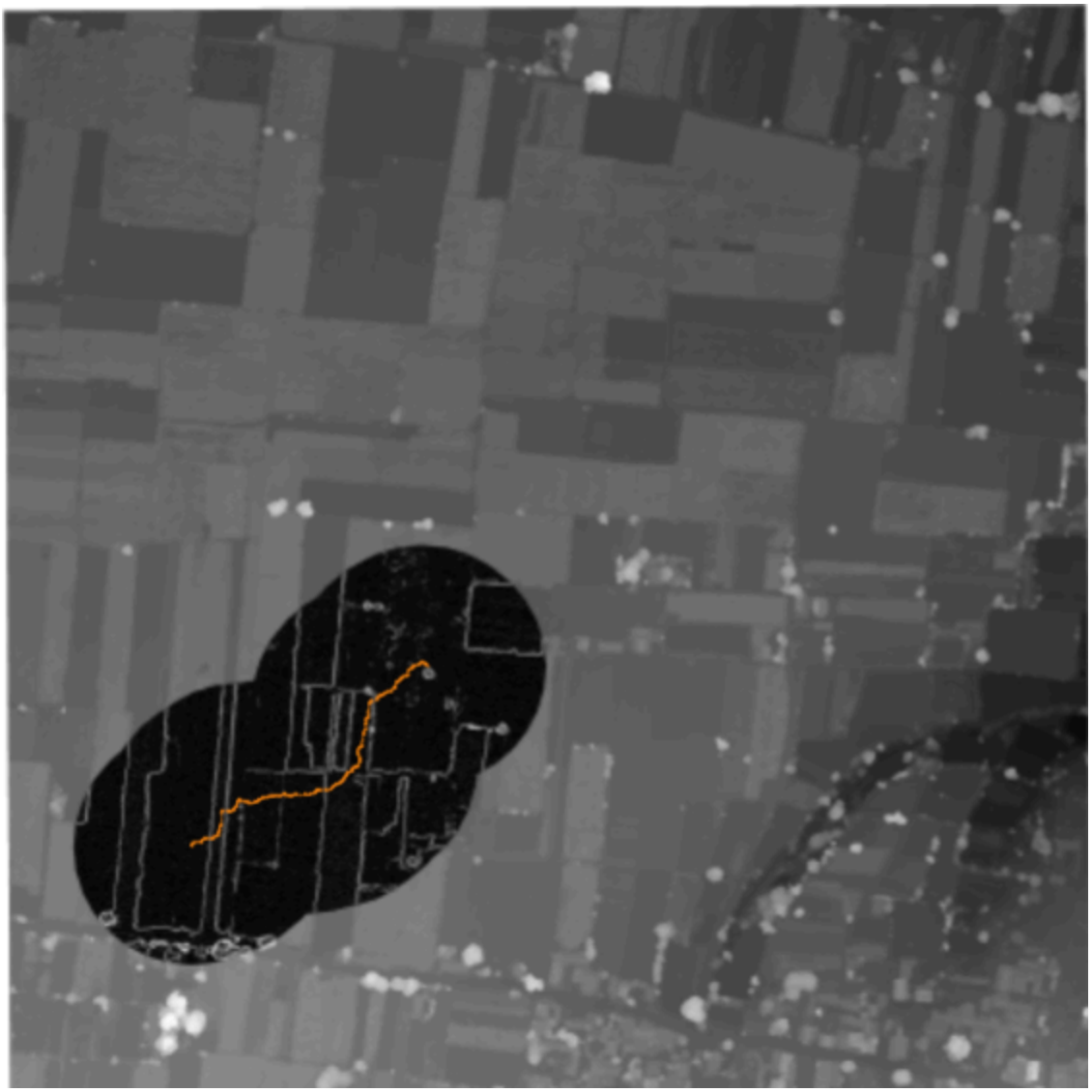
This option redirects the user to a window where they can select the layers and fill in the values for the parameters required for this operation. This tool requires both a raster and a line string layer for its execution.



1. Slope Range - Determines the minimum and maximum elevation value between which the layer should be filtered.

2. Buffer Radius - The spatial filter is applied to the area of the buffer radius for every point in the line string.

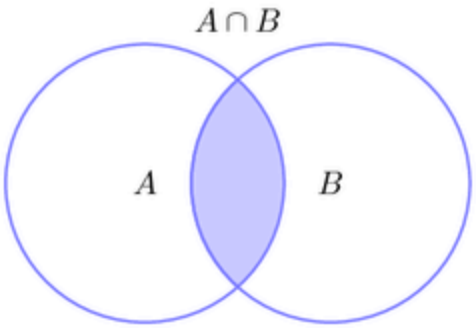
Once the values are finalized, the ‘Filter’ option can be selected to produce an output layer containing the filtered raster file. This layer is added to the user’s data library and map session as soon as it’s processed.



Spatial Intersection Tool

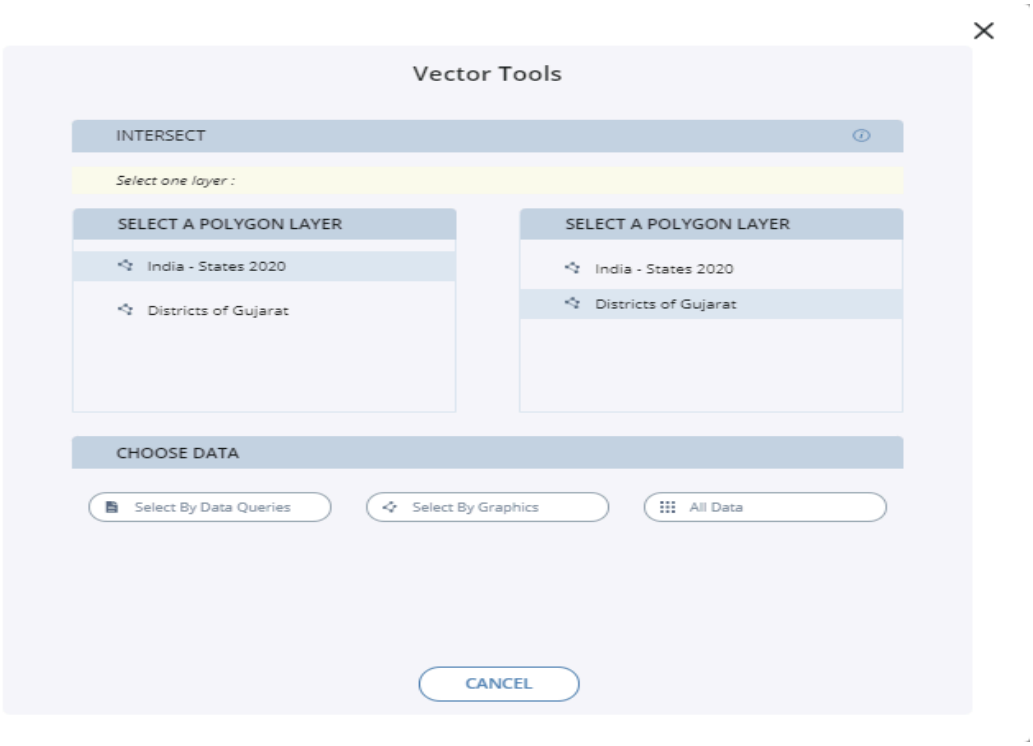
Vector Processing Tools
Spatial Analysis - Intersection

This tool makes use of two layers from which the output produced gives the overlapping region between the two layers.



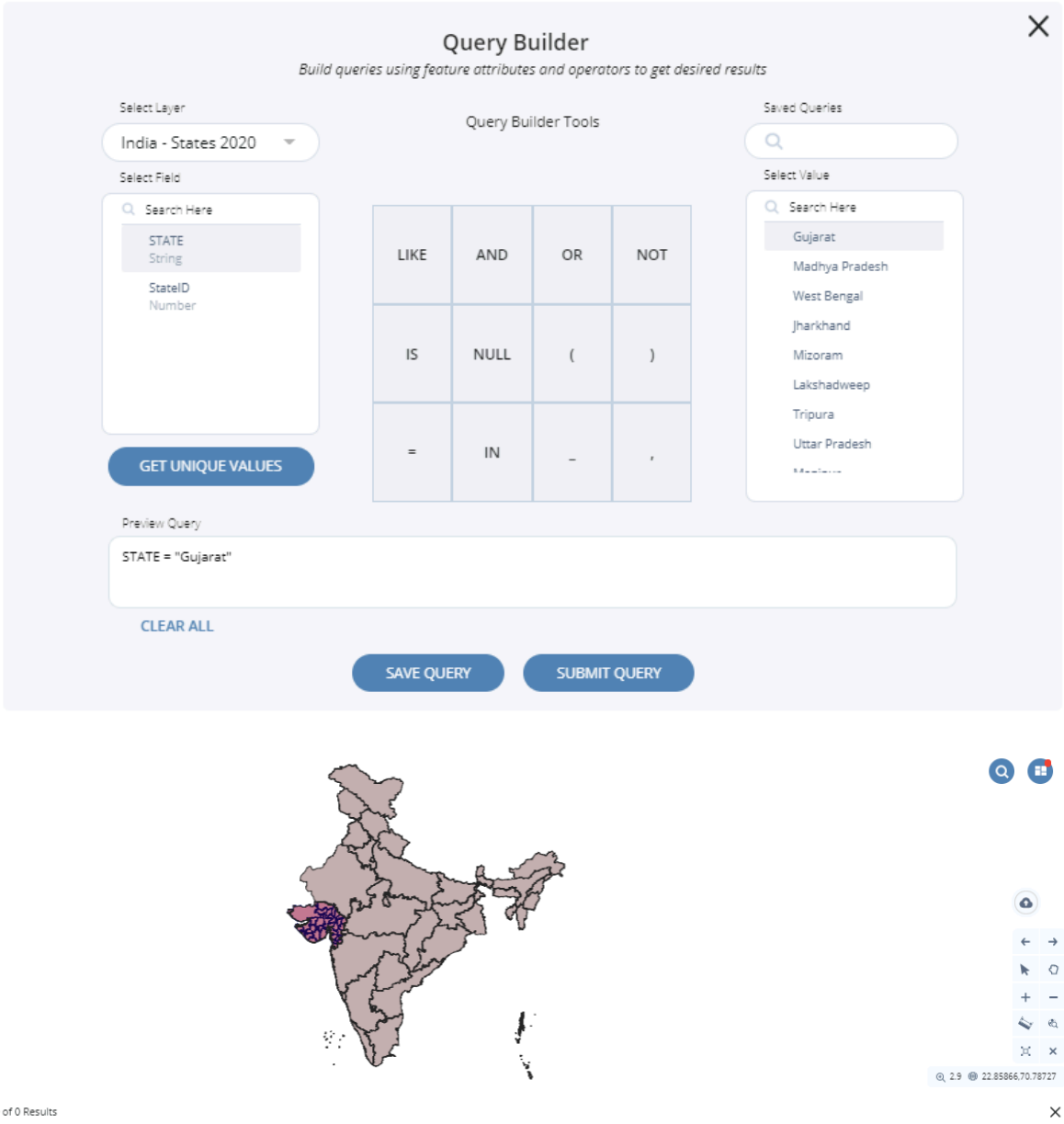
The intersection option can be selected by going to
Tools -> Vector Processing Tools -> Spatial Analysis -> Intersect

The selection of the intersect option displays a window where the user gets to select the two layers required for the operation. Once the data is selected, the option to determine the range of data is produced.



Select By Data Queries

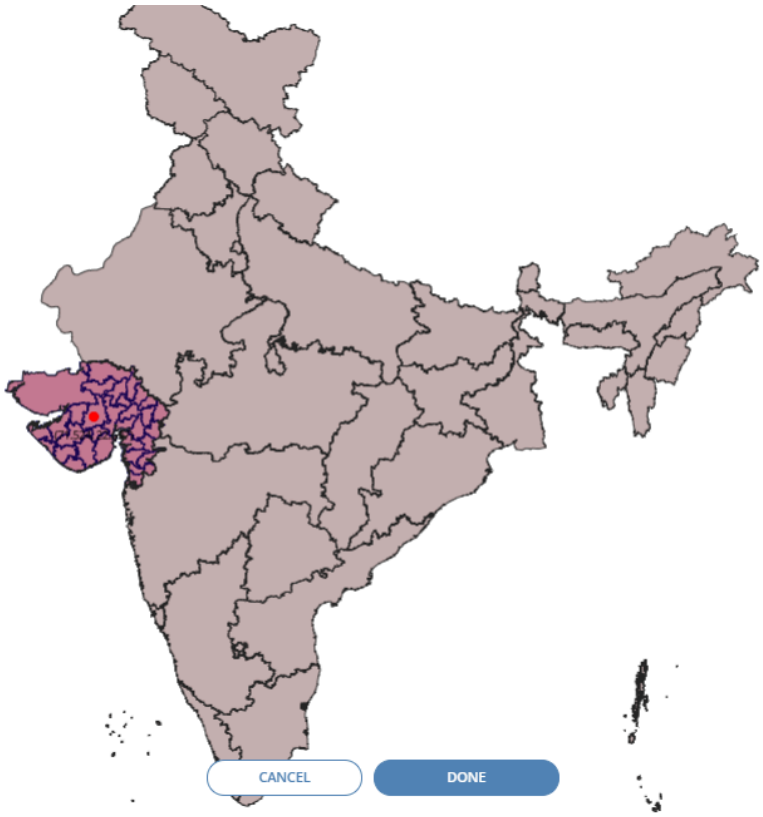
This option redirects the user to the Query Builder. The Bounding Box operation is carried out on the output of the query created. More information about the query builder and how to create custom queries can be found here.

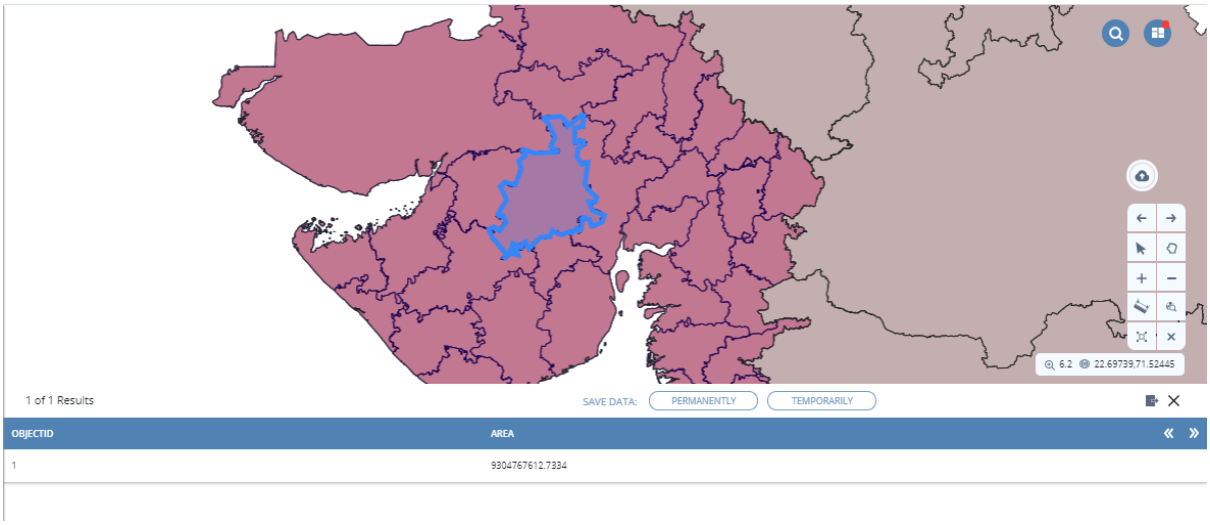


Select By Graphics

This option gives the user the choice to manually select the region around which the operation should be applied. There are three ways of selection.

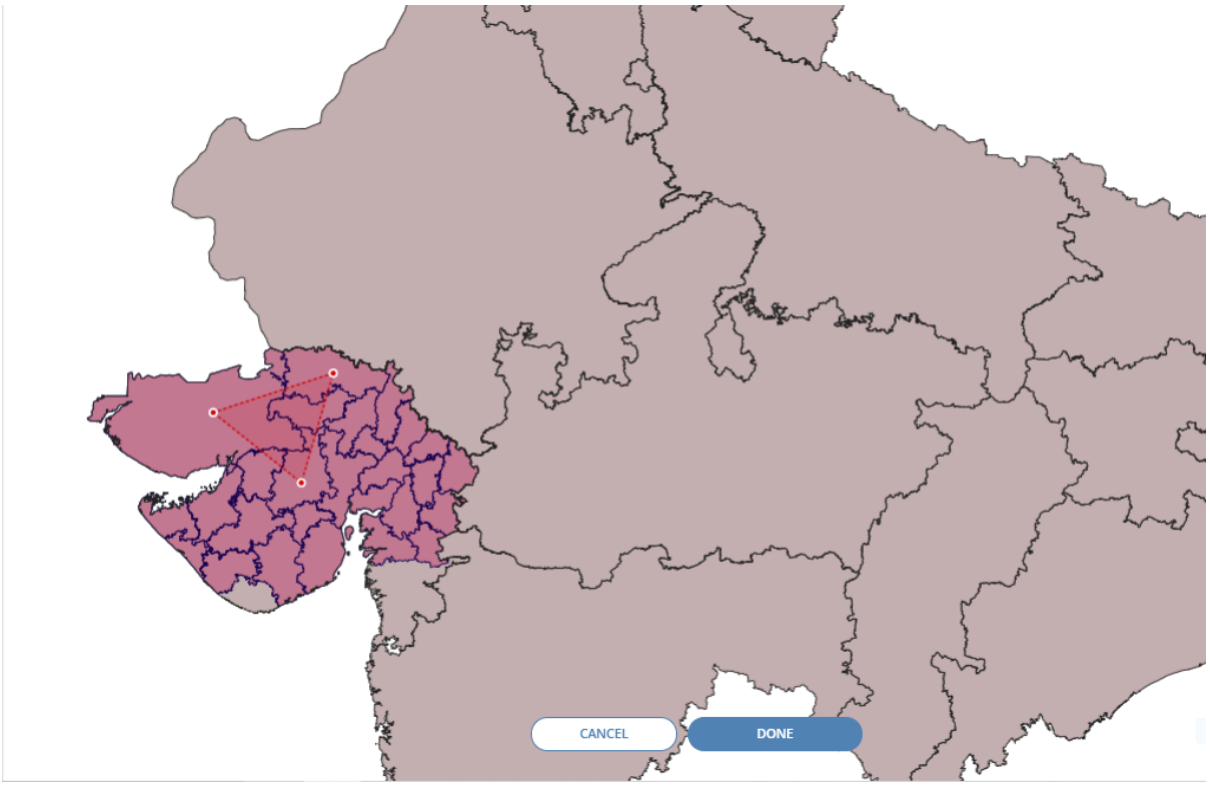
1. Point Selection
   The intersection operation includes the overlap of the region surrounding the point and the other polygon layers.

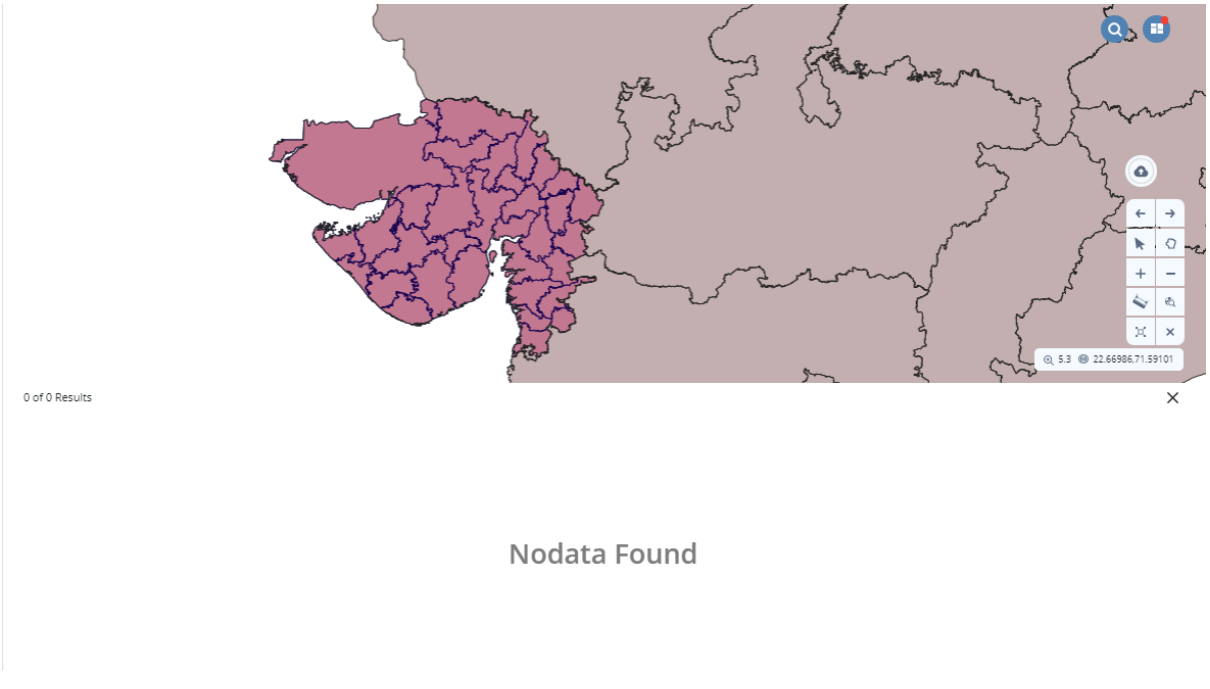




2. Polyline Selection
   The intersection operation does not produce an output for polyline selection as the selection of multiple points without enclosing a region is considered as invalid geometry.

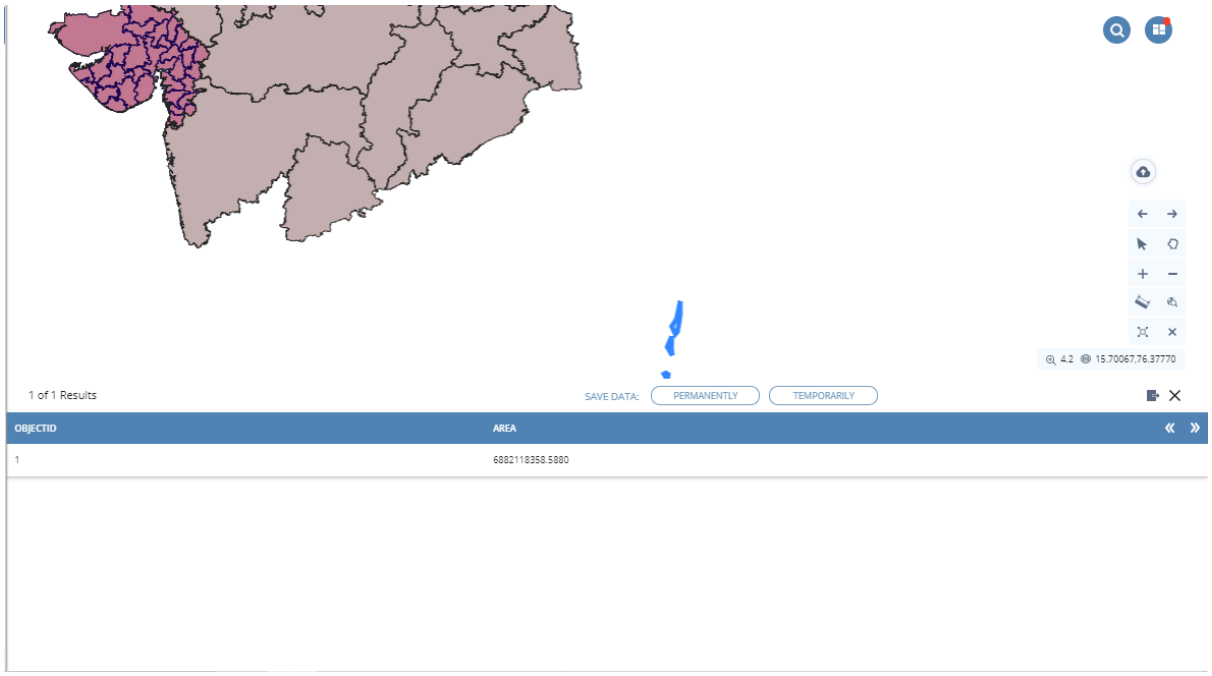
3. Polygon Selection
   This tool produces the overlapping region between the enclosed area selected by the user and the other polygon layers.





All Data

Implements the intersect operation on the entire map session layers selected by the user.



The output polygon represents the intersection using a highlighted region. A table including the area is also produced. The user has the option to save the data permanently by creating a new session map with the output layer. Similarly, the option to save the data temporarily uses the output to create a new layer within the same map session.