



حكومهتی هه‌ریمی كوردستانی - عێراق
وهزارهتی خویندنی بالاو توێژینه‌وهی زانستی
زانكۆی هه‌ل‌ب‌ج‌ه - كۆلیژی زانسته‌مرۆفایه‌تیه‌كان
به‌شی جوگرافیا - قۆناغی سییه‌م

چۆنیه‌تی کارکردن له‌سه‌ر نه‌خشه‌ی Raster نمونه‌سازی modeling

ئاماده‌کردنی :

شاگۆل خلیل

به‌سه‌ر په‌رشتی :

م . گه‌یلان رسول

2022 - 2021

Modeling نمونه سازی :

ئەگەر پرۆژەيەكمان ھەبىت بۇ نمونه بنىات نانى قوتابخانەيەك يان باشتىن شوين بۇ

تاقەى شەمسى

ئەوا مۇدىلىنگ ﴿نمونه سازی﴾ بەكار دەھىنين , سەرەتا پىويستە كۆمەلىك داتامان

لابىت كەتايبەت بىت بە دامەزراندنى ئەو پرۆژەيەى كە ھەمانە .

لیرەدا پرۆژەكەمان بنىاتنانى قوتابخانەيە , ۋە پىويستە باشتىن شوين ھەلبىرىن .

بەم ھەنگاوانە دەست پىئەكەين :

مۆدېلىنىڭ كارئاسانى بۆمان كىرىدوۋە لەۋەى يەك جار ھەموو ئەو كىردارانەى كە ئەنجامى ئەدەين لە يەك شوين بۆمان سەيف ئەكات .

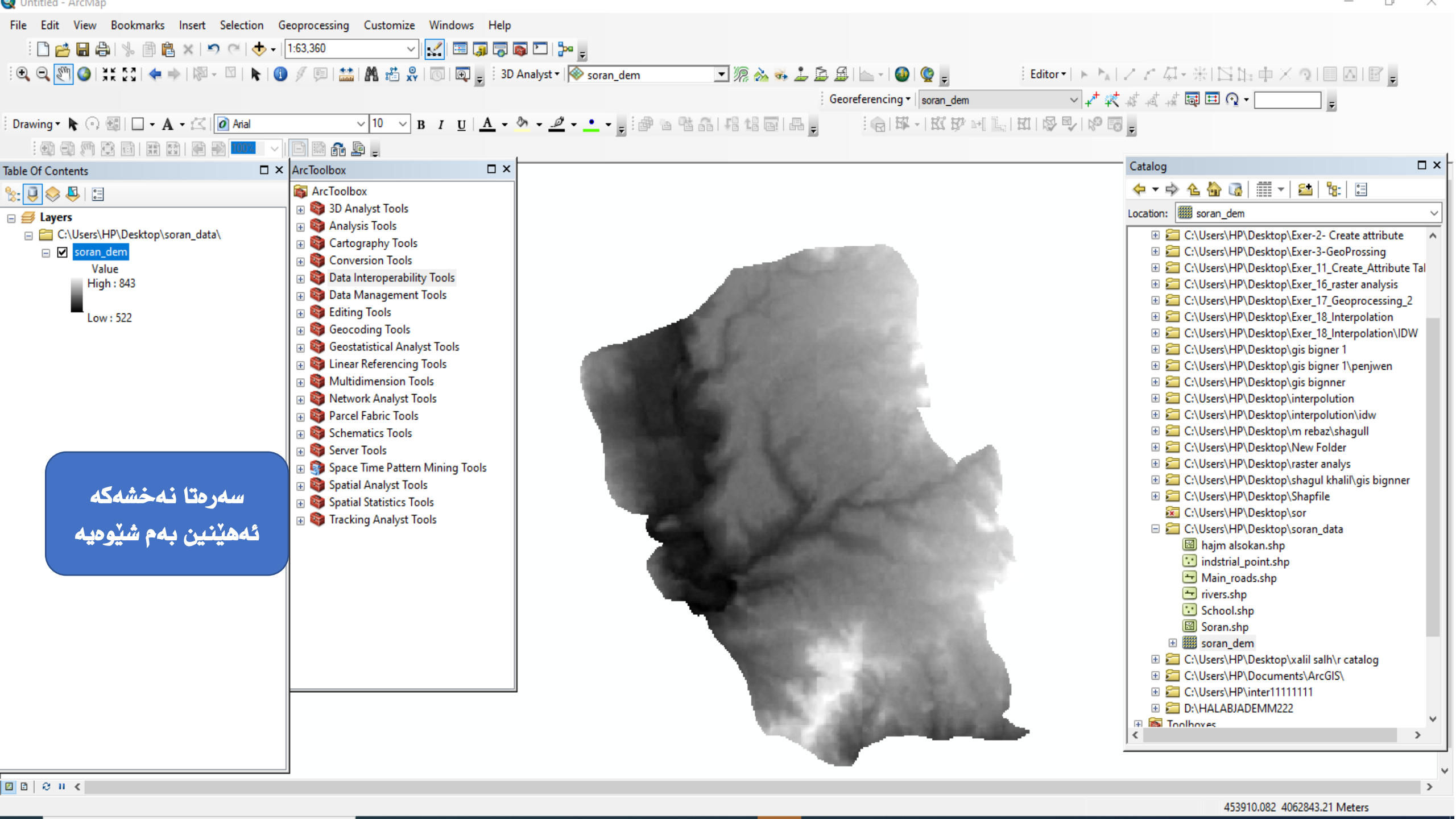
پىۋىستە ھەندىك تول ئاكتىف بىت :

لە customize كلىك لە extensions ئەكەين ئەۋەى ئەكتىف نەبوو ئاكتىفى ئەكەين

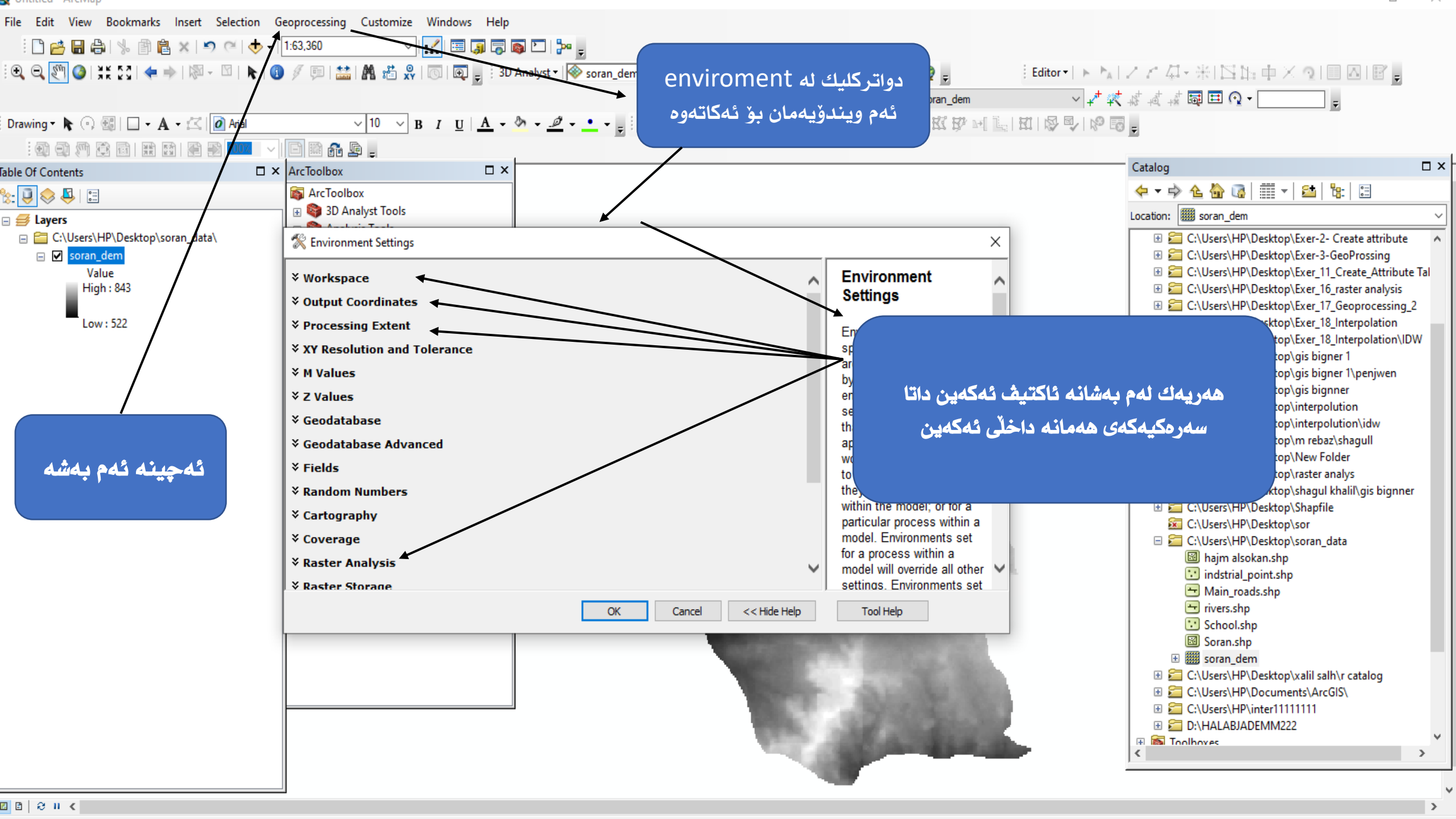
سەرەتا ئەچىنە بەشى geoprocessing بۇ ئەۋەى شوئىنى سەيف

ديارى بکەين بۇ ئەۋەى ھەموو جار شوئىنىکديارى نەکەين خۆى يەک

شوئىنى سابتى ئەبىت .



سهرتا نه خشه که
نه هینین بهم شیویه



enviroment له دواتر كليك له نهم ويندويه مان بو نهكات هوه

ههريك لهم بهشانه ئاكتيف نهكەين داتا سهركيهكەي ههمانه داخلى نهكەين

نهچينه نهم بهشه

Environment Settings

- Workspace
- Output Coordinates
- Processing Extent
- XY Resolution and Tolerance
- M Values
- Z Values
- Geodatabase
- Geodatabase Advanced
- Fields
- Random Numbers
- Cartography
- Coverage
- Raster Analysis
- Raster Storage

Environment Settings

Environments set for a particular process within a model. Environments set for a process within a model will override all other settings. Environments set

OK Cancel << Hide Help Tool Help

Table Of Contents

Layers

- C:\Users\HP\Desktop\soran_data\
 - soran_dem
 - Value High : 843
 - Low : 522

Catalog

Location: soran_dem

- C:\Users\HP\Desktop\Exer-2- Create attribute
- C:\Users\HP\Desktop\Exer-3-GeoPressing
- C:\Users\HP\Desktop\Exer_11_Create_Attribute Tal
- C:\Users\HP\Desktop\Exer_16_raster analysis
- C:\Users\HP\Desktop\Exer_17_Geoprocessing_2
- C:\Users\HP\Desktop\Exer_18_Interpolation
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\gis bigner 1
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\gis bigner 1\penjwen
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\gis bigner
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\interpolation
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\interpolation\idw
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\m rebaz\shagull
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\New Folder
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\raster analys
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW_top\shagul khalil\gis bigner
- C:\Users\HP\Desktop\Shapfile
- C:\Users\HP\Desktop\soran_data
- hajm alsokan.shp
- industrial_point.shp
- Main_roads.shp
- rivers.shp
- School.shp
- Soran.shp
- soran_dem
- C:\Users\HP\Desktop\xalil salh\r catalog
- C:\Users\HP\Documents\ArcGIS\
- C:\Users\HP\inter11111111
- D:\HALABJADEMM222
- Toolboxes



Workspace

Current Workspace

C:\Users\HP\Desktop\soran_data



Scratch Workspace

C:\Users\HP\Desktop\soran_data



- Output Coordinates
- Processing Extent
- XY Resolution and Tolerance
- M Values
- Z Values
- Geodatabase
- Geodatabase Advanced
- Fields
- Random Numbers

Scratch Workspace

Tools that honor the Scratch Workspace environment use the specified location as the default workspace for output datasets. The Scratch Workspace is intended for output data

وهك باسماڻ كرد داتاي سهرهكي داخل
نهكهين لهم شويناڻه

OK

Cancel

<< Hide Help

Tool Help



Output Coordinates

Output Coordinate System

Same as Layer "soran_dem"



WGS_1984_UTM_Zone_38N



Geographic Transformations



Geographic Transformations Names



به هه مان شیوه دوباره داتا داخل نه کهین



Output Coordinate System

Tools that honor the Output Coordinate System environment will create output geodatasets with the specified coordinate system.

Processing (calculation of geometric relationships and modification of geometries) occurs in the same coordinate system as the output geodataset. This environment overrides the default coordinate system on output geodatasets created by

Processing Extent

OK

Cancel

<< Hide Help

Tool Help

Output Coordinates

Processing Extent

Extent

Same as layer soran_dem



Top

4062411.747867

Left

453143.286179

Right

461483.286179

Bottom

4053261.747867

Snap Raster

soran_dem



XY Resolution and Tolerance

M Values

Z Values

Geodatabase

Snap Raster

دوباره داخل کردنی داتا

the cell alignment of the specified snap raster.

Usage notes:

- Specifying a snap raster does not change the values in the output extent control immediately; however, the extent is adjusted during execution.

OK

Cancel

<< Hide Help

Tool Help

Cartography

Coverage

Raster Analysis

Cell Size

Same as layer soran_dem

30

Cell Size Projection Method

CONVERT_UNITS

Mask

soran_dem

Raster Storage

Geostatistical Analysis

Parallel Processing

Remote Processing Server

Terrain Dataset

Mask

For the Mask will only the cells that fall within the analysis mask in the operation.

Usage notes:

- Setting an analysis mask means that processing will only occur on locations that fall within the mask, and all locations outside of it will be assigned NoData in the output.

همان ههنگاو

له کوتای OK نه کهین

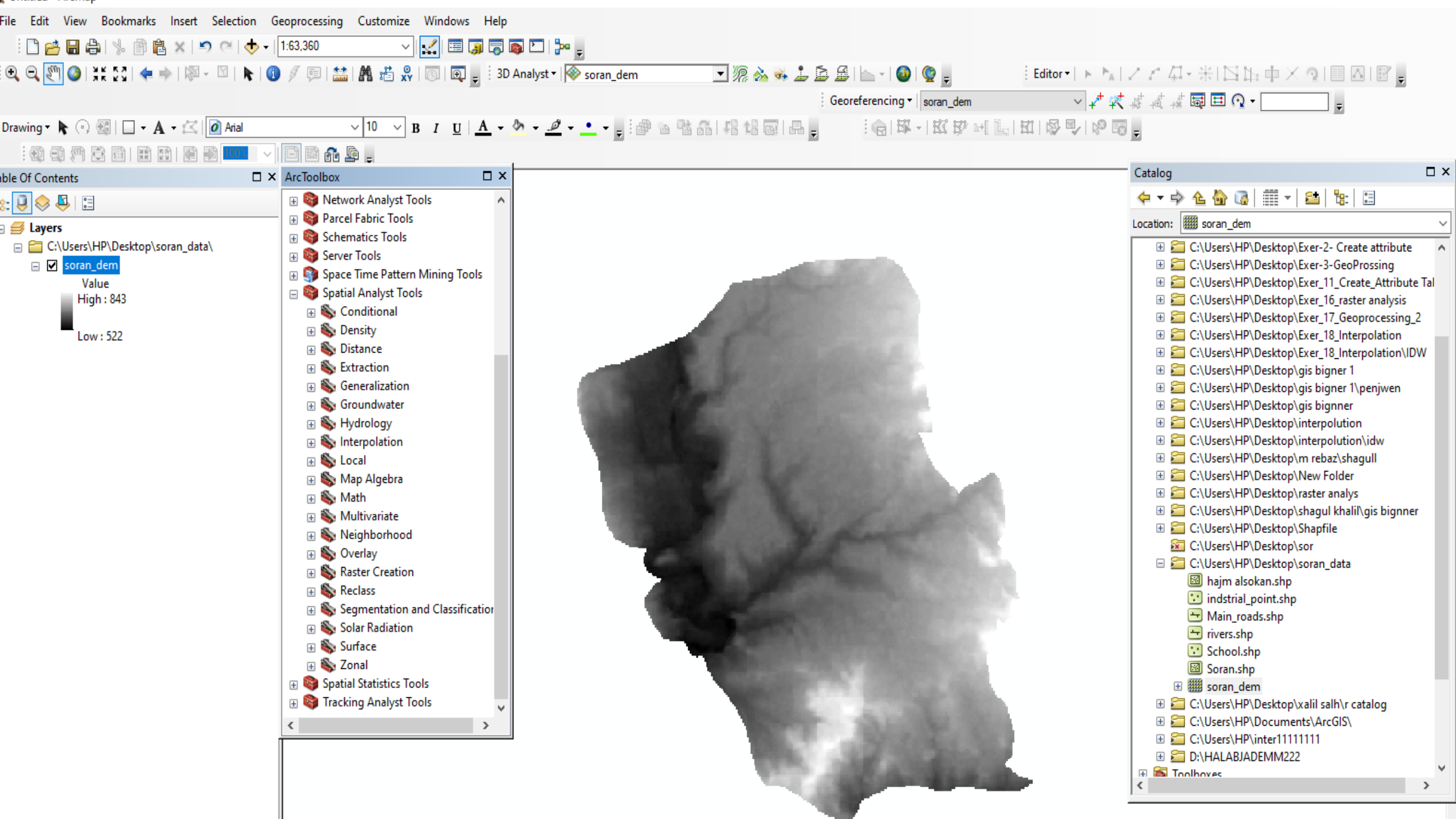
OK

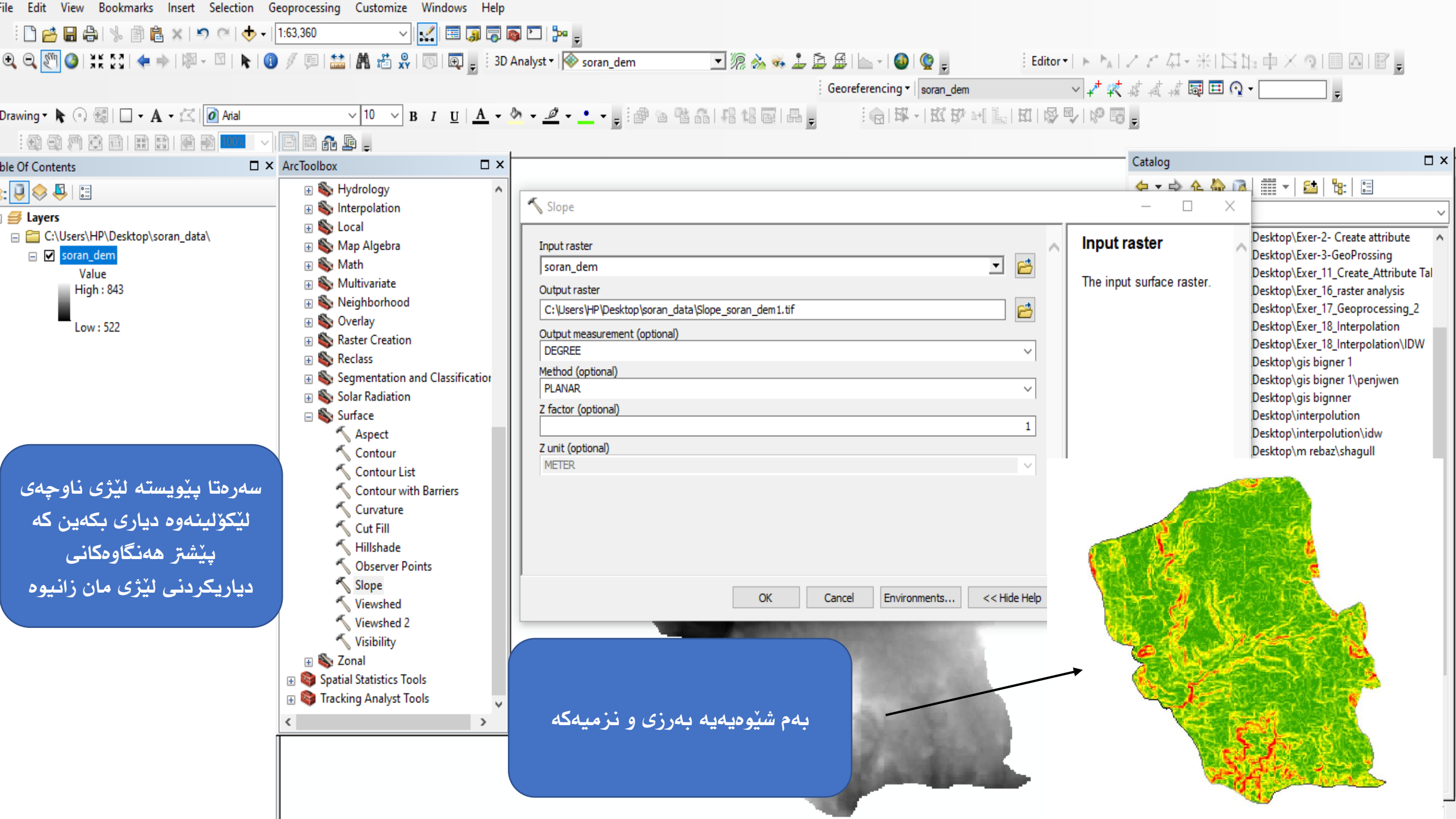
Cancel

<< Hide Help

Tool Help

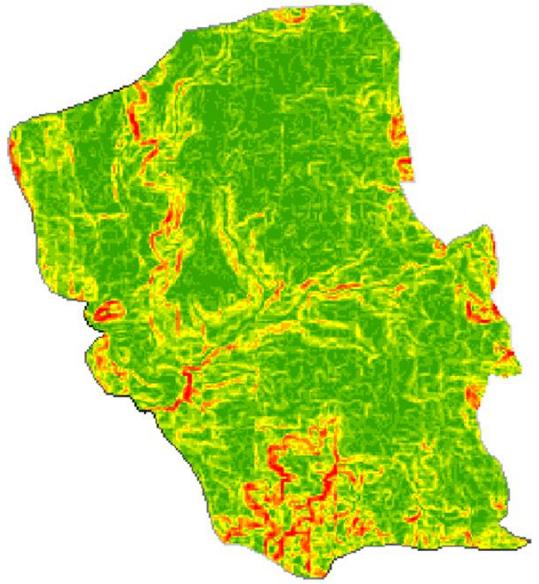
دوای ئەوهی ئەم ههنگاوانه مان ئەجامدا ، دەست ئەکهین به ریکخستنی
نهخشه که و ههلبژاردنی باشترین شوین بو قوتابخانه که .





سهرتا پئویسته لیژی ناوچهی
لیكۆلینهوه دیاری بکهین که
پیشتر ههنگاوهکانی
دیاریکردنی لیژی مان زانیوه

بهه شیوهیهیه بهرزی و نرمیهکه



پاشان پیویسته ریکلاسیفای بو
 لیژی بکین به مه بهستی
 هه لباردنی باشترین شوین
 spatial analys له
 reclass بهشی
 هه لده برترین

- 17.62895198 - 21.95303452
- 21.95303453 - 27.44129316
- 27.44129317 - 42.40927124
- ☑ soran_dem
- Value
- High : 843
- Low : 522

ArcToolbox

- Spatial Analyst Tools
 - Conditional
 - Density
 - Distance
 - Extraction
 - Generalization
 - Groundwater
 - Hydrology
 - Interpolation
 - Local
 - Map Algebra
 - Math
 - Multivariate
 - Neighborhood
 - Overlay
 - Raster Creation
 - Reclass
 - Lookup
 - Reclass by ASCII File
 - Reclass by Table
 - Reclassify
 - Rescale by Function
 - Slice
 - Segmentation and Classification
 - Solar Radiation
 - Surface
 - Aspect
 - Contour

Reclassify

Input raster

Reclass field

Reclassification

Old values	New values

Classify...
Unique
Add Entry
Delete Entries

Load... Save... Reverse New Values Precision...

Output raster

OK Cancel Environments... << Hide Help Tool Help

Reclassify

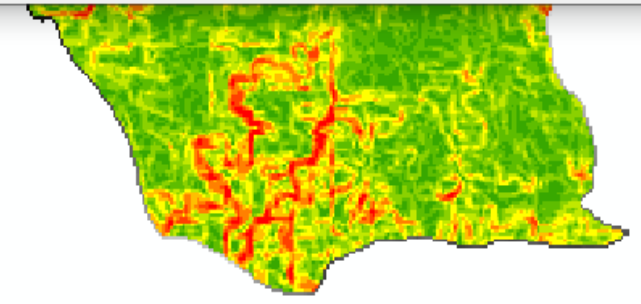
Reclassifies (or changes) the values in a raster.

دواتر له م به شه دوو کار نه انجام نه دهین :
 1. داخل کردنی سلوپ له به شه .

Catalog

Desktop\soran_data

- Desktop\Exer-2- Create attribute
- Desktop\Exer-3-GeoProssing
- Desktop\Exer_11_Create_Attribute Tal
- Desktop\Exer_16_raster analysis
- Desktop\Exer_17_Geoprocessing_2
- Desktop\Exer_18_Interpolation
- Desktop\Exer_18_Interpolation\IDW
- Desktop\gis bigner 1
- Desktop\shapme
- Desktop\sor
- Desktop\soran_data
- kan.shp
- point.shp
- ds.shp
- rivers.shp
- School.shp
- Slope_soran_dem1.tif
- Soran.shp
- soran_dem
- C:\Users\HP\Desktop\xalil salh\r catalog
- C:\Users\HP\Documents\ArcGIS\
- C:\Users\HP\inter11111111
- D:\HAI ΔRIΔDFMM???



Reclassify

Input raster: Slope_soran_dem1.tif

Redass field: Value

Reclassification

Old values	New values
0 - 2.783021	1
2.783021 - 4.857533	2
4.857533 - 6.926249	3
6.926249 - 9.33363	4
9.33363 - 12.106073	5
12.106073 - 15.503409	6
15.503409 - 19.890371	7
19.890371 - 25.895819	8

Buttons: Classify..., Unique, Add Entry, Delete Entries, Load..., Save..., Reverse New Values, Precision...

Output raster: C:\Users\HP\Desktop\soran_data\Reclass_Slope_s1.tif

Reclassification text: A remap table that defines how the values will be reclassified. Old values—The ranges of values of cells in the input raster. Acceptable settings are a single value, a range of values, a string, or NoData. A list of single values can be specified by separating each with a semicolon (;). A range of values can be

Classification

Classification Method: Equal Interval

Classes: 10

Data Exclusion: Exclusion..., Sampling...

Classification Statistics

Count:	52477
Minimum:	0
Maximum:	42.409271
Sum:	356587.630173
Mean:	6.795122
Standard Deviation:	5.188961

Columns: 100

Break Values

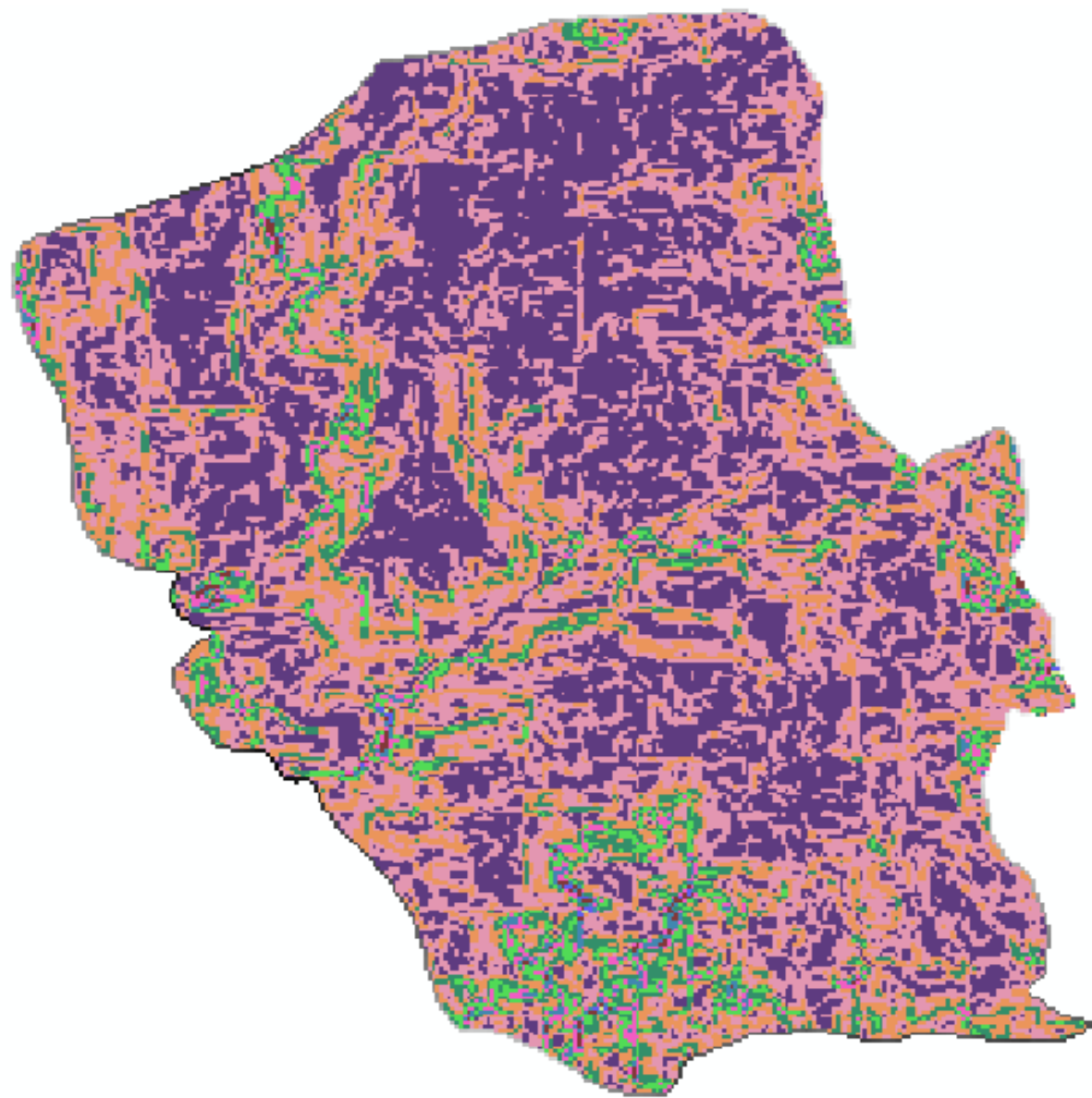
Break Values	%
4.240927	
8.481854	
12.722781	
16.963708	
21.204636	
25.445563	
29.68649	
33.927417	
38.168344	
42.409271	

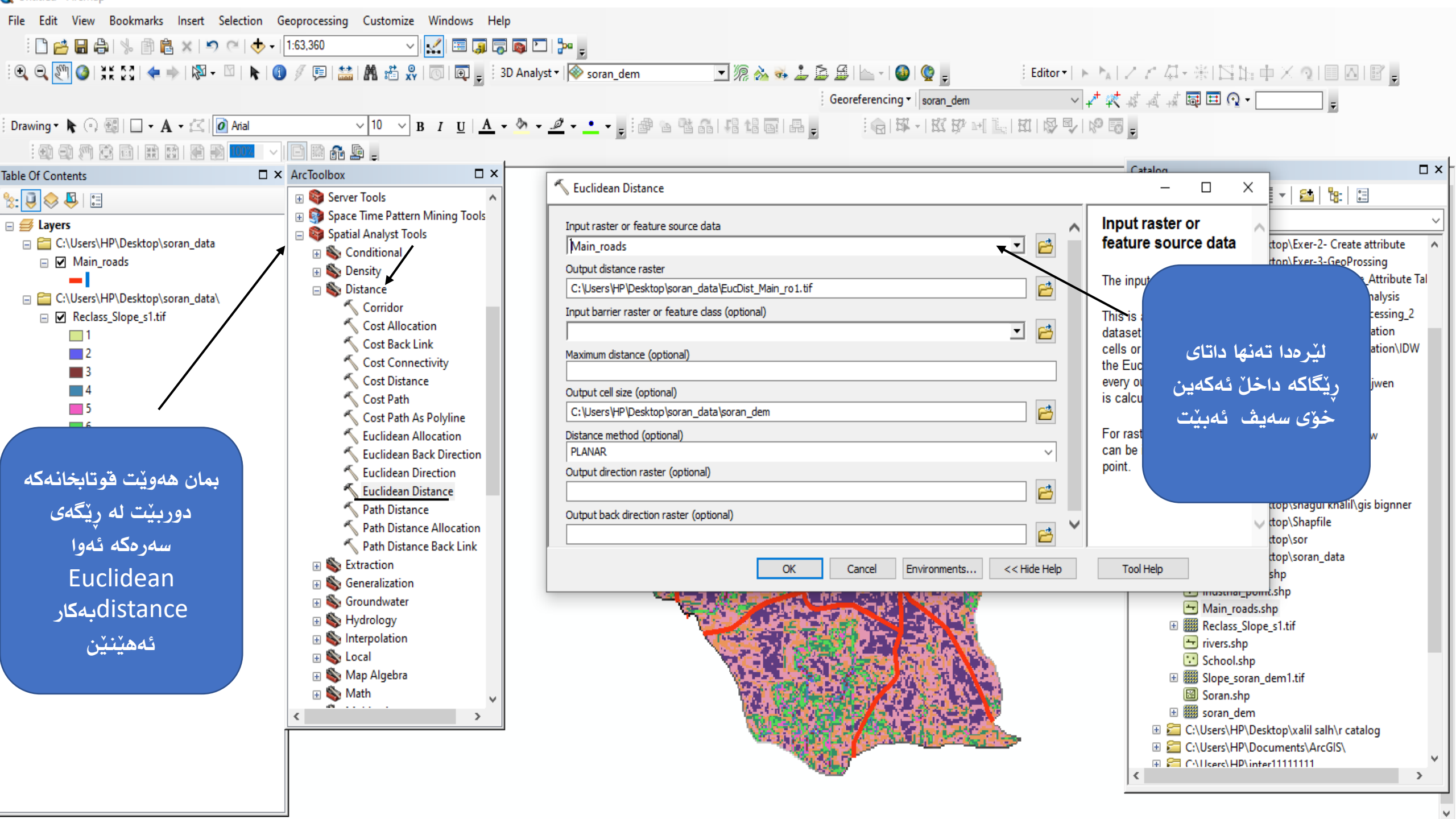
Buttons: OK, Cancel

2. ههنگاوی دووم کلاسهکان دا
 نهئین لیهدا به 10 کلاس
 دایهئین، وه له classification
 method نهو بهشه نهکهین به
 equal interval نهکهین

دواتر لیهدا ژماره 1 تا
 10 مان ههیه ژماره 10
 باشترین شوین دا نهئین
 ژماره 1 نههئین
 شوینیکی خرابه

ئەنجامى رېكلاسىفا بەم
شىۋەيە

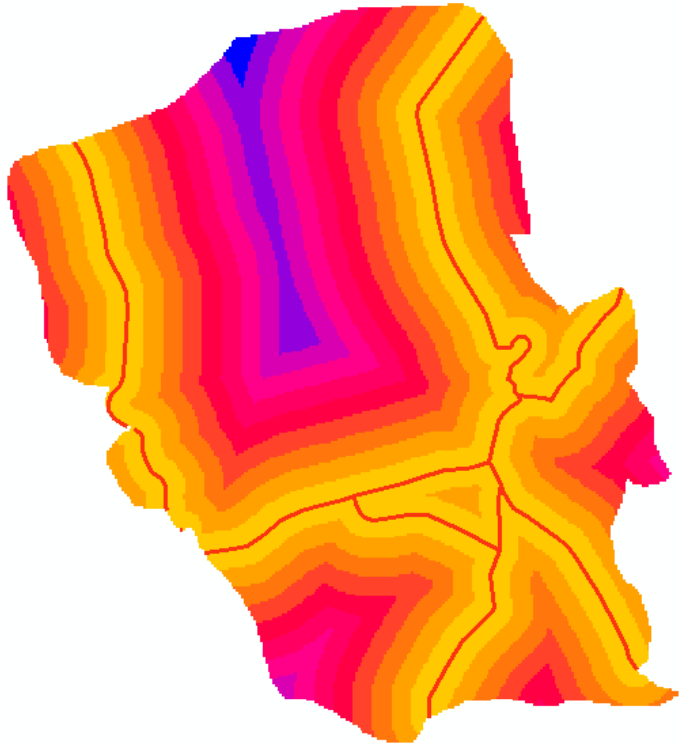




بمان ههویت قوتابخانهکه
دوربیت له ریگه
سه‌رهکه نه‌وا
Euclidean
distance
نه‌هینین

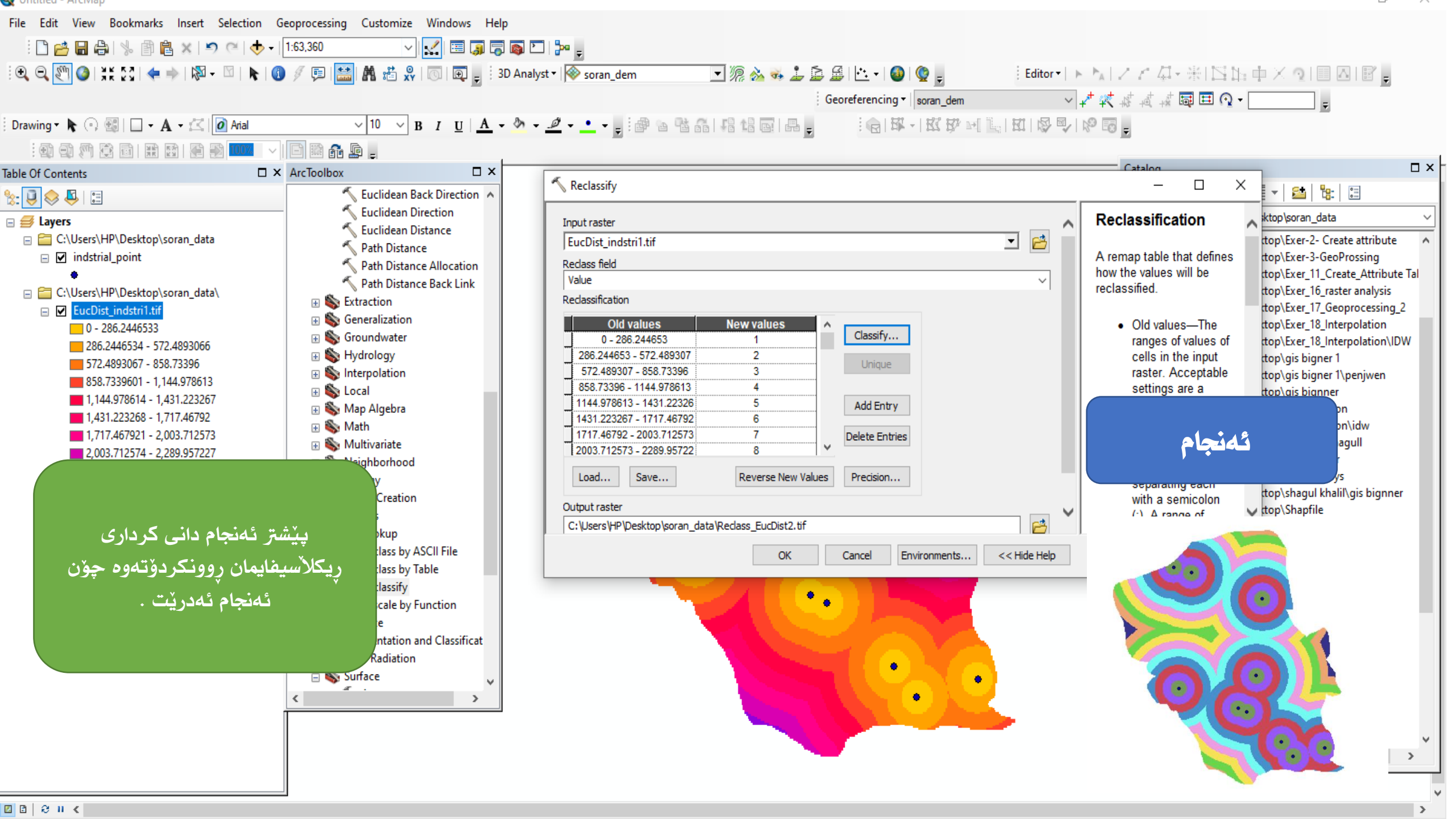
لی‌ره‌دا ته‌نها داتای
ریگه‌که داخل نه‌که‌مین
خوی سه‌یف نه‌بیت

ئەوھش ئەنجامى euclidean
distance ە واتا دوورییەكە .



ئەوھش ئەنجامى reclassify یە , كە پیشتەر چۆنییەتی
ئەنجام دانى ئەمكردارەمان ئاماژە پیداو .





پیشتر نه‌نجام دانی کرداری
ریکلاسیفایمان روونکردۆته‌وه چون
نه‌نجام نه‌درییت .

Reclassify

Input raster: EucDist_indstri1.tif

Redass field: Value

Reclassification

Old values	New values
0 - 286.244653	1
286.244653 - 572.489307	2
572.489307 - 858.73396	3
858.73396 - 1144.978613	4
1144.978613 - 1431.22326	5
1431.223267 - 1717.46792	6
1717.46792 - 2003.712573	7
2003.712573 - 2289.95722	8

Buttons: Classify..., Unique, Add Entry, Delete Entries, Load..., Save..., Reverse New Values, Precision...

Output raster: C:\Users\HP\Desktop\soran_data\Reclass_EucDist2.tif

Buttons: OK, Cancel, Environments..., << Hide Help

Reclassification

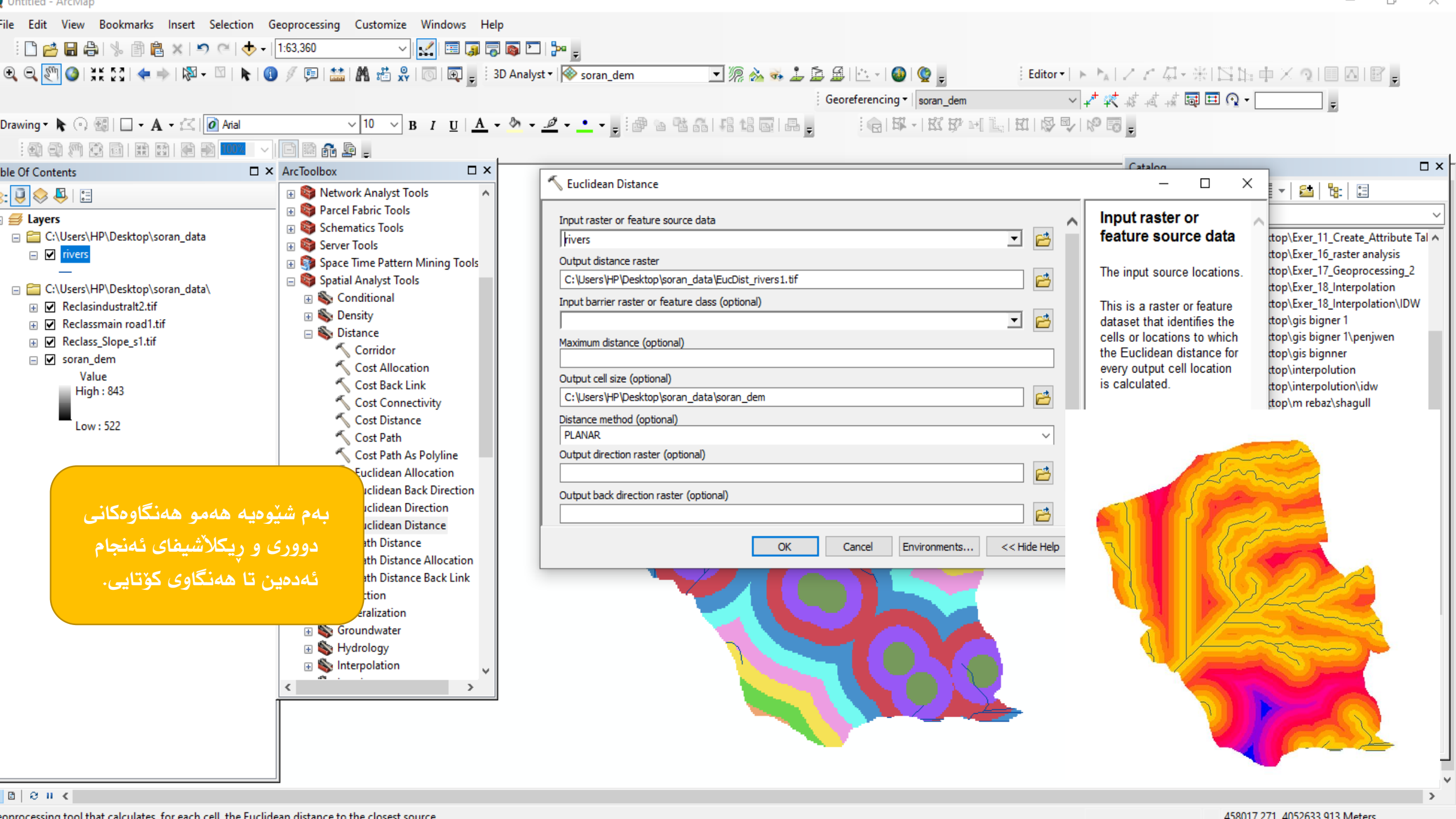
A remap table that defines how the values will be reclassified.

- Old values—The ranges of values of cells in the input raster. Acceptable settings are a

Buttons: OK, Cancel, Environments..., << Hide Help

نه‌نجام





Layers

- C:\Users\HP\Desktop\soran_data
 - rivers
- C:\Users\HP\Desktop\soran_data\
 - Reclasindustralt2.tif
 - Reclasmain road1.tif
 - Reclas_Slope_s1.tif
 - soran_dem
 - Value
 - High : 843
 - Low : 522

- Network Analyst Tools
- Parcel Fabric Tools
- Schematics Tools
- Server Tools
- Space Time Pattern Mining Tools
- Spatial Analyst Tools
 - Conditional
 - Density
 - Distance
 - Corridor
 - Cost Allocation
 - Cost Back Link
 - Cost Connectivity
 - Cost Distance
 - Cost Path
 - Cost Path As Polyline
 - Euclidean Allocation
 - Euclidean Back Direction
 - Euclidean Direction
 - Euclidean Distance
 - Euclidean Distance Allocation
 - Euclidean Distance Back Link
 - Generalization
 - Groundwater
 - Hydrology
 - Interpolation

Euclidean Distance

Input raster or feature source data
rivers

Output distance raster
C:\Users\HP\Desktop\soran_data\EucDist_rivers1.tif

Input barrier raster or feature class (optional)

Maximum distance (optional)

Output cell size (optional)
C:\Users\HP\Desktop\soran_data\soran_dem

Distance method (optional)
PLANAR

Output direction raster (optional)

Output back direction raster (optional)

OK Cancel Environments... << Hide Help

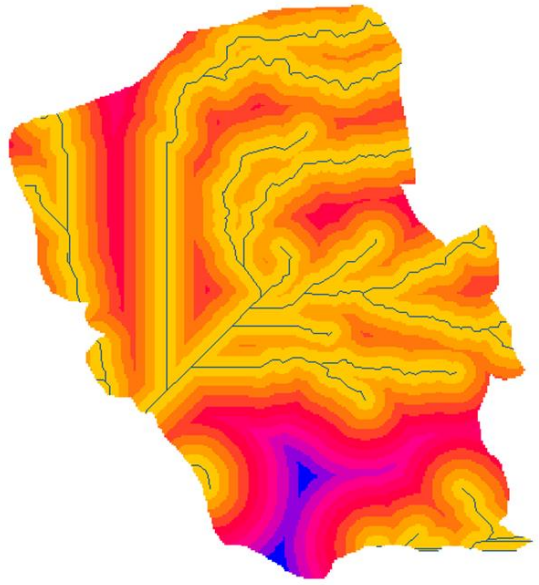
Input raster or feature source data

The input source locations.

This is a raster or feature dataset that identifies the cells or locations to which the Euclidean distance for every output cell location is calculated.

- top\Exer_11_Create_Attribute Tal
- top\Exer_16_raster analysis
- top\Exer_17_Geoprocessing_2
- top\Exer_18_Interpolation
- top\Exer_18_Interpolation\IDW
- top\gis bigner 1
- top\gis bigner 1\penjwen
- top\gis bigner
- top\interpolation
- top\interpolation\idw
- top\m rebaz\shagull

به م شیویه هه مو ههنگاوهکانی
دووری و ریکلاسیفای نهنجام
نهدهین تا ههنگاوی کوّتایی.



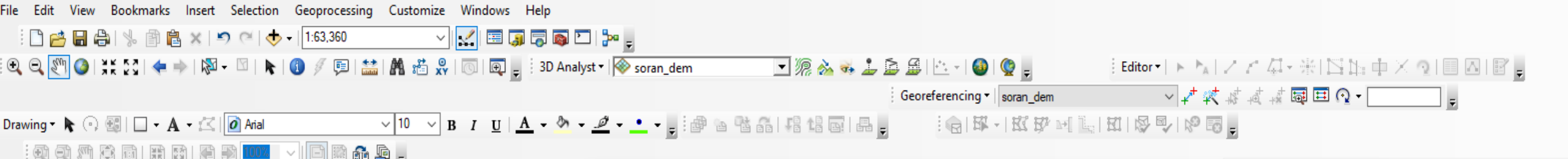


Table of Contents

Layers

- C:\Users\HP\Desktop\soran_data
 - ✓ rivers
- C:\Users\HP\Desktop\soran_data\
 - ✓ EucDist_rivers1.tif
 - 0 - 158.3192993
 - 158.3192994 - 316.6385986
 - 316.6385987 - 474.9578979
 - 474.957898 - 633.2771973
 - 633.2771974 - 791.5964966
 - 791.5964967 - 949.9157959
 - 949.915796 - 1,108.235095
 - 1,108.235096 - 1,266.554395
 - 1,266.554396 - 1,424.873694
 - 1,424.873695 - 1,583.192993
 - ✓ Reclasindustrialt2.tif
 - ✓ Reclasmain road1.tif
 - ✓ Reclas_Slope_s1.tif
 - ✓ soran_dem
 - Value
 - High : 843
 - Low : 522

ArcToolbox

- Euclidean Direction
- Euclidean Distance
- Path Distance
- Path Distance Allocation
- Path Distance Back Link
- Extraction
- Generalization
- Groundwater
- Hydrology
- Interpolation
- Local
- Map Algebra
- Math
- Multivariate
- Neighborhood
- Overlay
- Raster Creation
- Reclass
 - Lookup
 - Reclass by ASCII File
 - Reclass by Table
 - Reclassify
 - Rescale by Function
 - Slice
- Segmentation and Classificat
- Solar Radiation
- Surface
- Aspect

Reclassify

Input raster: EucDist_rivers1.tif

Reclass field: Value

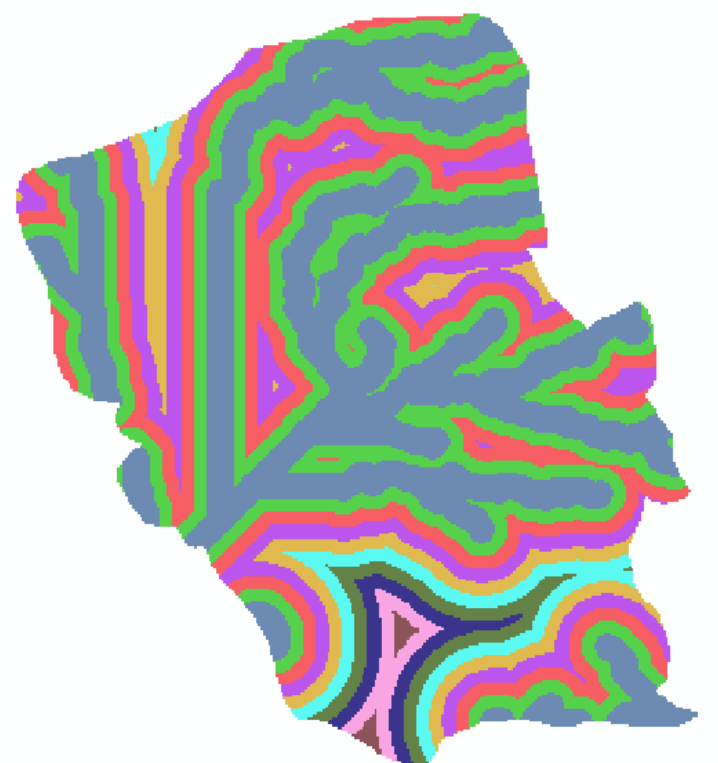
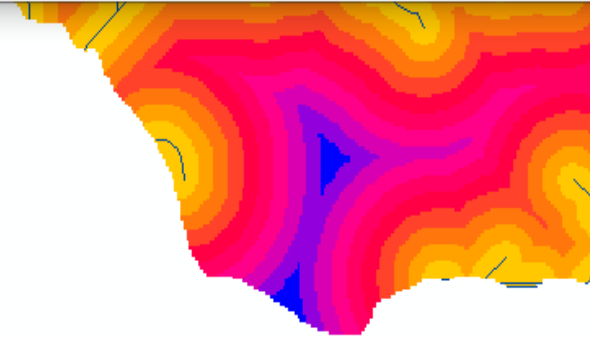
Reclassification

Old values	New values
633.277197 - 791.596497	5
791.596497 - 949.915796	6
949.915796 - 1108.235095	7
1108.235095 - 1266.55439	8
1266.554395 - 1424.87369	9
1424.873694 - 1583.19299	10
NoData	NoData

Buttons: Classify..., Unique, Add Entry, Delete Entries, Load..., Save..., Reverse New Values, Precision...

Output raster: C:\Users\HP\Desktop\soran_data\Reclass_EucDist3.tif

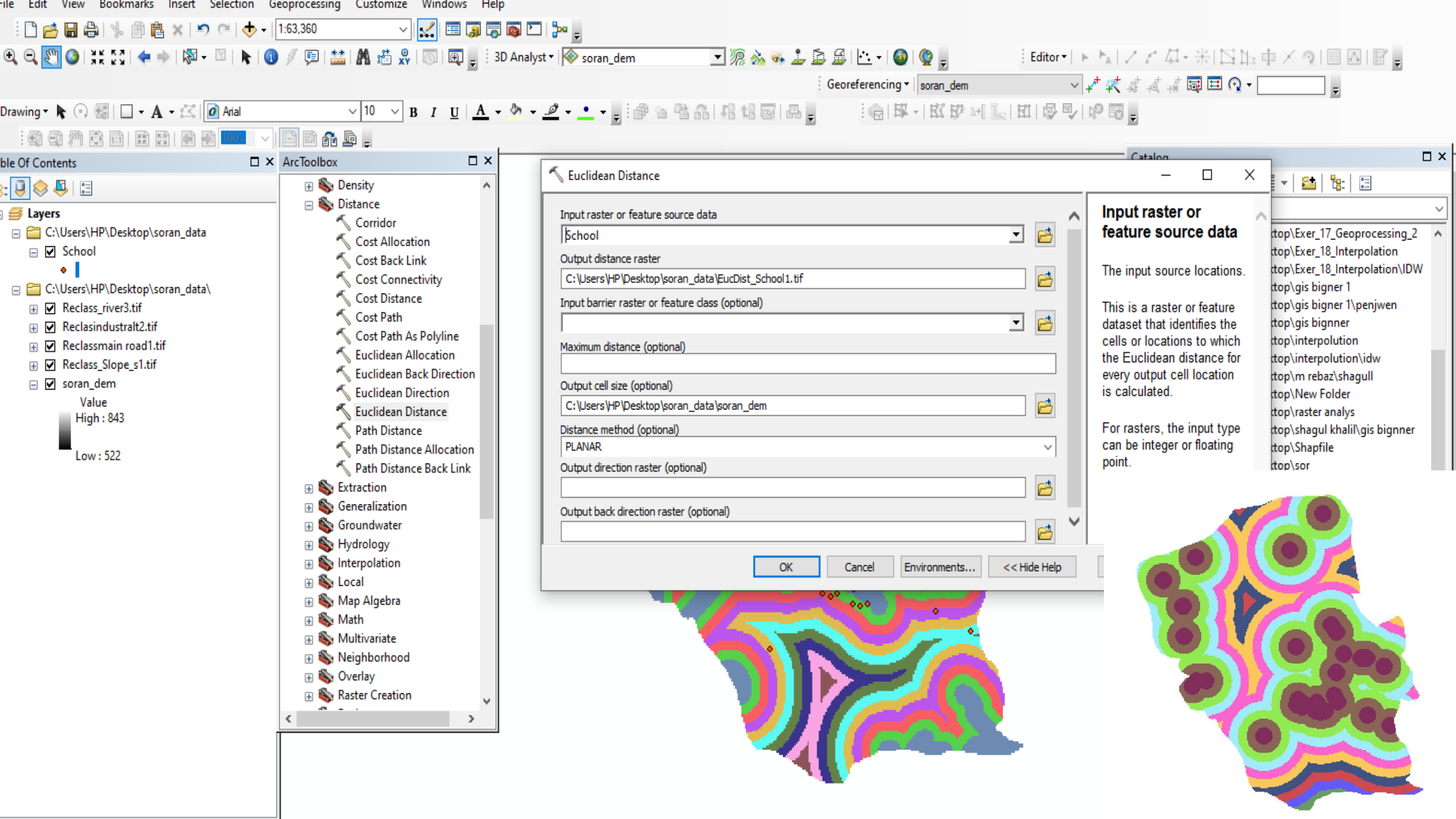
Buttons: OK, Cancel, Environments...

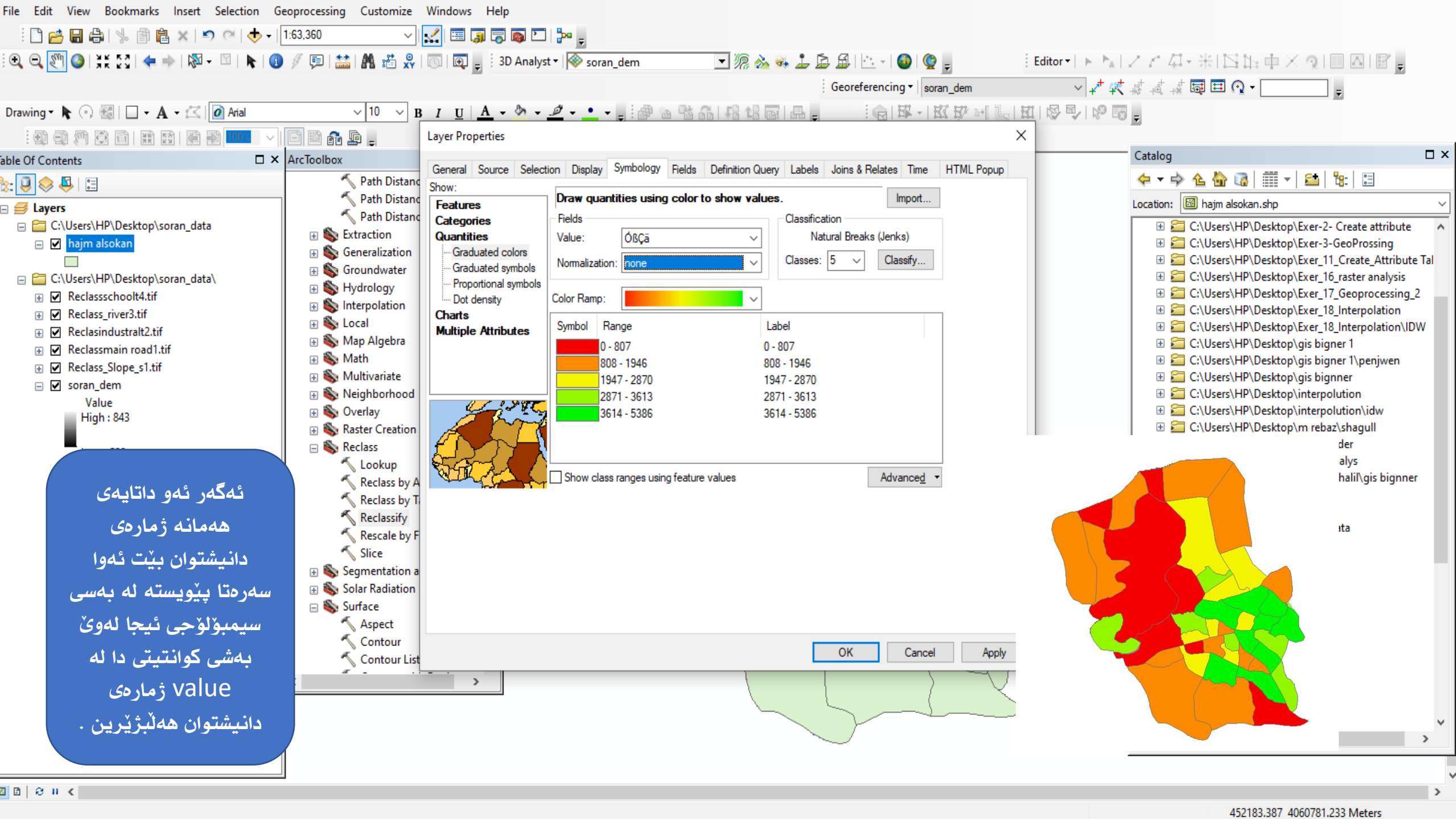


Reclassification

A remap table that defines how the values will be reclassified.

- Old values—The ranges of values of cells in the input raster. Acceptable





Layer Properties

General Source Selection Display Symbology Fields Definition Query Labels Joins & Relates Time HTML Popup

Show:

Features

Categories

Quantities

- Graduated colors
- Graduated symbols
- Proportional symbols
- Dot density

Charts

Multiple Attributes

Draw quantities using color to show values. Import...

Fields

Value:

Normalization:

Classification

Natural Breaks (Jenks)

Classes: Classify...

Color Ramp:

Symbol	Range	Label
	0 - 807	0 - 807
	808 - 1946	808 - 1946
	1947 - 2870	1947 - 2870
	2871 - 3613	2871 - 3613
	3614 - 5386	3614 - 5386

Show class ranges using feature values

Advanced

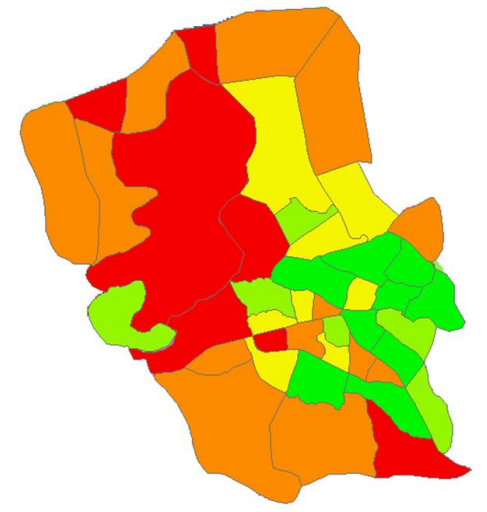
OK Cancel Apply

ئەگەر ئەو داتایە
 هەمانە ژمارە
 دانیشتون بێت ئەو
 سەرەتا پێویستە لە بەسی
 سیمبۆلۆجی ئیجا لەوی
 بەشی کوانتیتی دا لە
 value ژمارە
 دانیشتون هەلبژێرین .

Catalog

Location: hajm alsokan.shp

- C:\Users\HP\Desktop\Exer-2- Create attribute
- C:\Users\HP\Desktop\Exer-3-GeoProssing
- C:\Users\HP\Desktop\Exer_11_Create_Attribute Tal
- C:\Users\HP\Desktop\Exer_16_raster analysis
- C:\Users\HP\Desktop\Exer_17_Geoprocessing_2
- C:\Users\HP\Desktop\Exer_18_Interpolation
- C:\Users\HP\Desktop\Exer_18_Interpolation\IDW
- C:\Users\HP\Desktop\gis bigner 1
- C:\Users\HP\Desktop\gis bigner 1\penjwen
- C:\Users\HP\Desktop\gis bigner
- C:\Users\HP\Desktop\interpolation
- C:\Users\HP\Desktop\interpolation\idw
- C:\Users\HP\Desktop\m rebaz\shagull



ئەو داتايەى دانىشتوان كە ھەمانە بە شىۋەى پۆلىگۆنە واتا داتاي فىكتۆرە , لىرەدا پىۋىستە بىگۆرپىن بۇ راستەر بەم ھەنگاوانە :

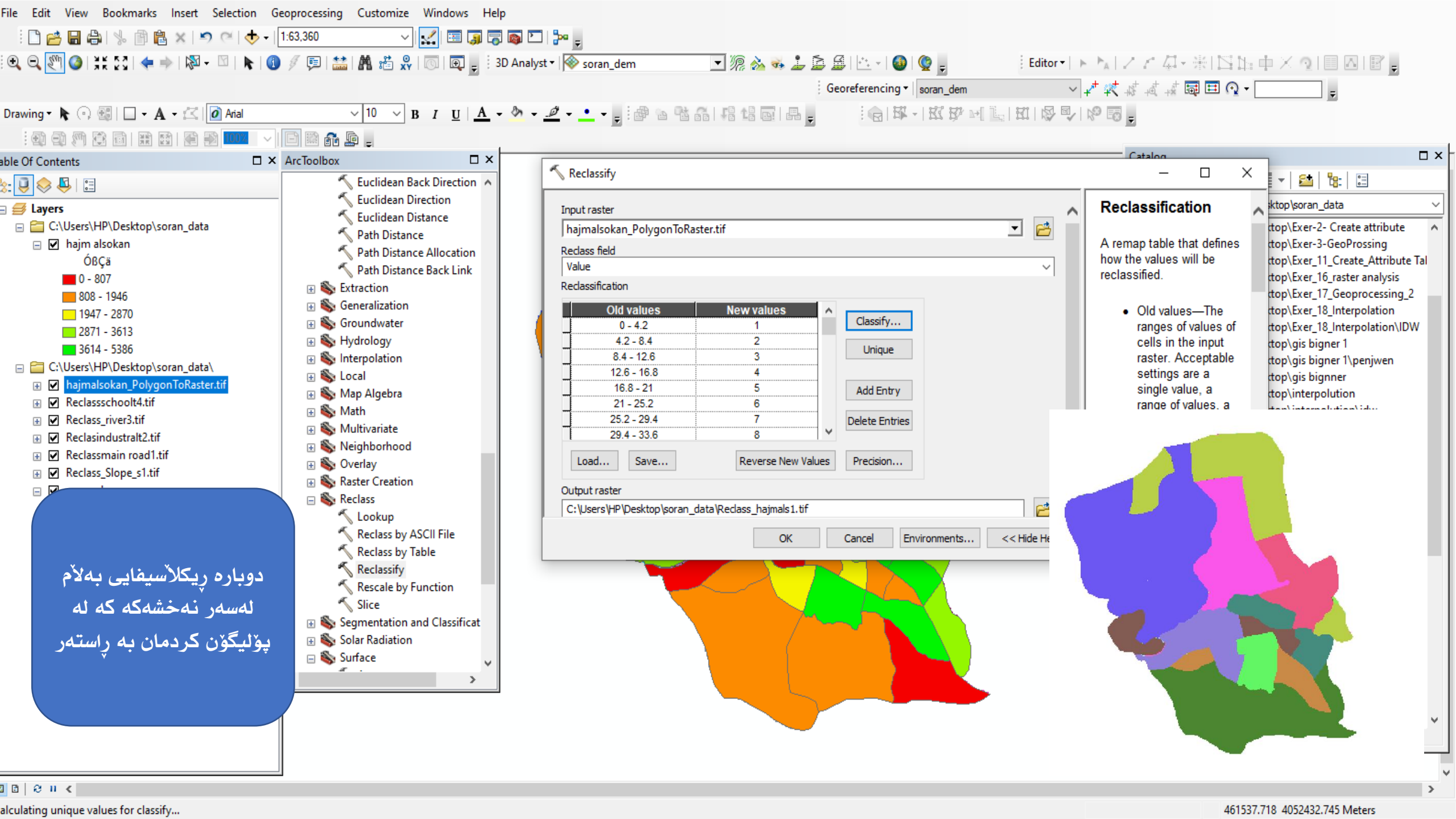
ئە arc tool box

كلىك ئە conversion tools دەكەين

پاشان to raster

دواتر polygon to raster ھەل دەبژىرىن .

بەم شىۋەىيە نەخشەكە ئەبىت بە راستەر .



Reclassify

Input raster: hajmalsokan_PolygonToRaster.tif

Reclass field: Value

Reclassification

Old values	New values
0 - 4.2	1
4.2 - 8.4	2
8.4 - 12.6	3
12.6 - 16.8	4
16.8 - 21	5
21 - 25.2	6
25.2 - 29.4	7
29.4 - 33.6	8

Buttons: Classify..., Unique, Add Entry, Delete Entries, Load..., Save..., Reverse New Values, Precision...

Output raster: C:\Users\HP\Desktop\soran_data\Reclass_hajmals1.tif

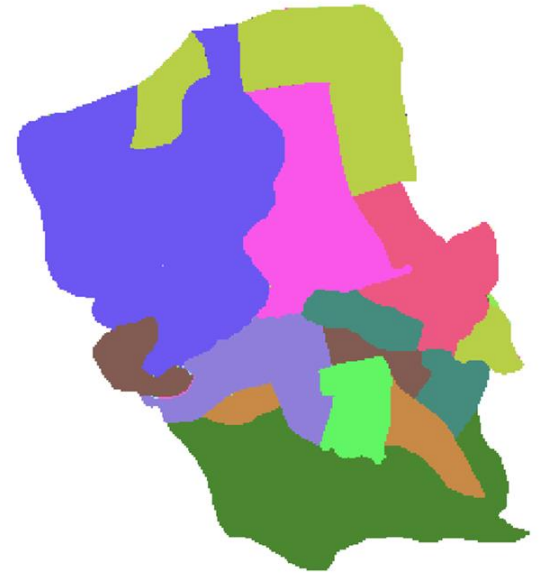
Buttons: OK, Cancel, Environments..., << Hide H...

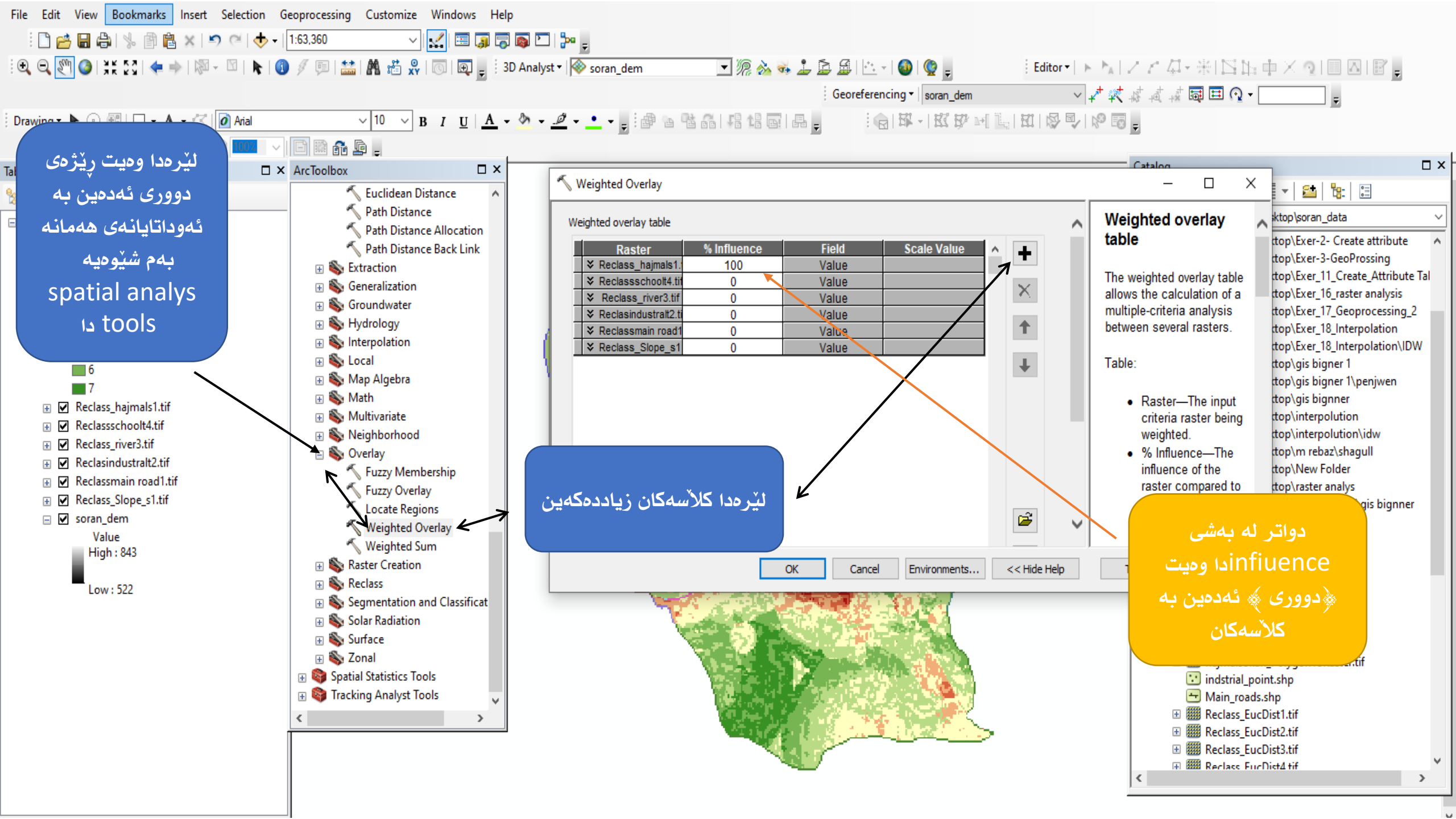
Reclassification

A remap table that defines how the values will be reclassified.

- Old values—The ranges of values of cells in the input raster. Acceptable settings are a single value, a range of values, a

دوباره ریکلاسیفای به لام لهسه نه خشه که له پولیگون کردمان به راسته





لیبردا وهیت ریژری
دووری نهدهین به
نهوداتیانهی ههمانه
به م شیویه
spatial analys
دا tools

لیبردا کلاسهکان زیادهکهین

دواتر له بهشی
influence
دووری نهدهین به
کلاسهکان

Weighted Overlay

Weighted overlay table

Raster	% Influence	Field	Scale Value
Reclass_hajmals1.tif	100	Value	
Reclassschool4.tif	0	Value	
Reclass_river3.tif	0	Value	
Reclasindustralt2.tif	0	Value	
Reclassmain road1.tif	0	Value	
Reclass_Slope_s1.tif	0	Value	

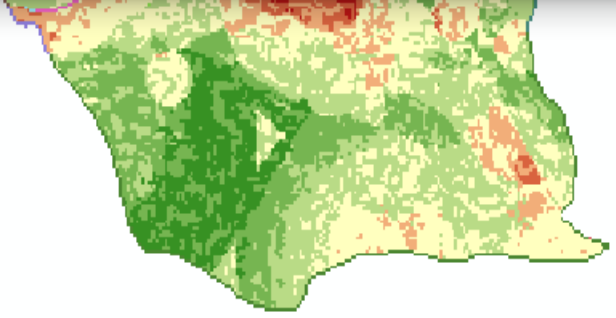
Weighted overlay table

The weighted overlay table allows the calculation of a multiple-criteria analysis between several rasters.

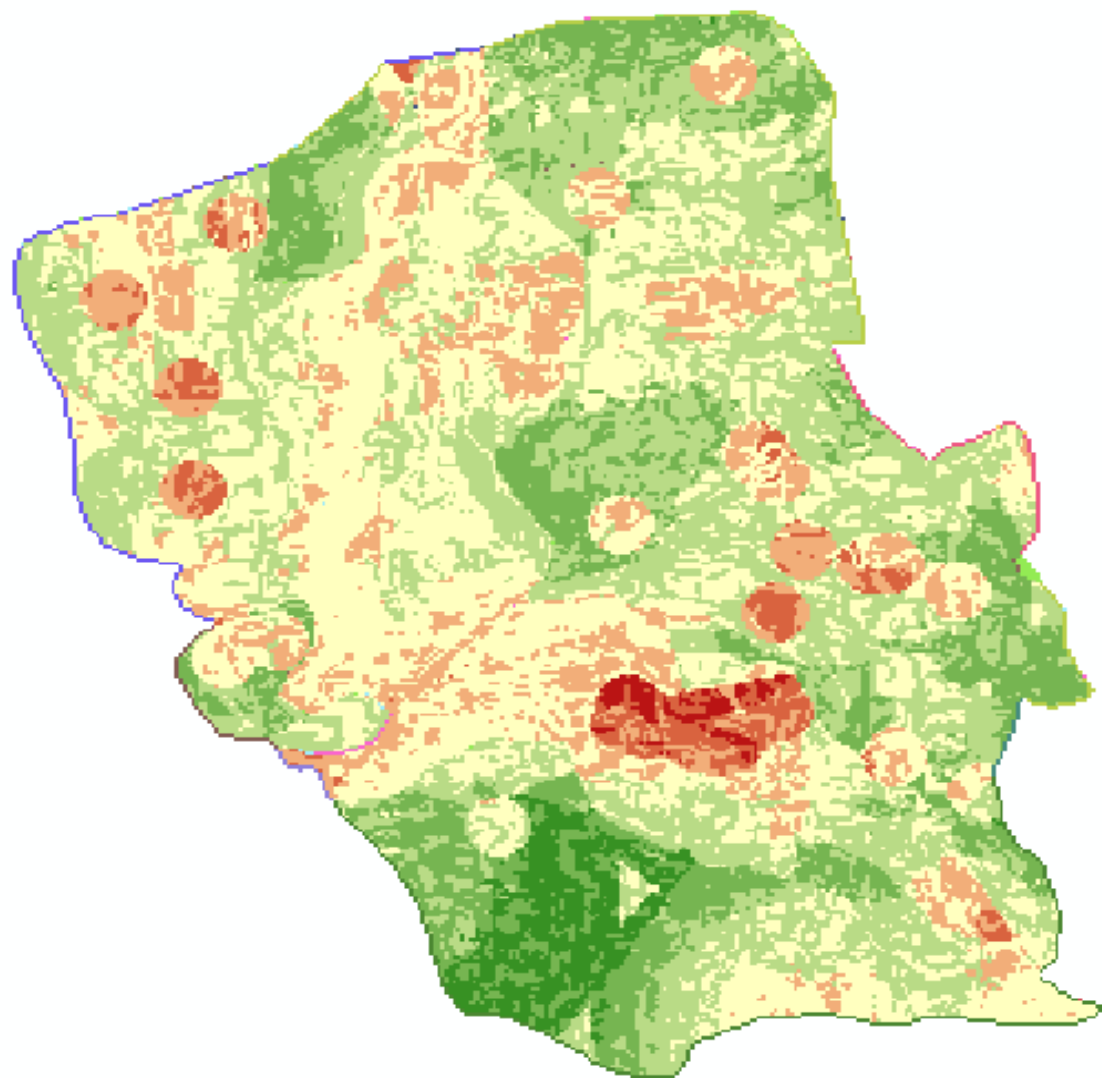
Table:

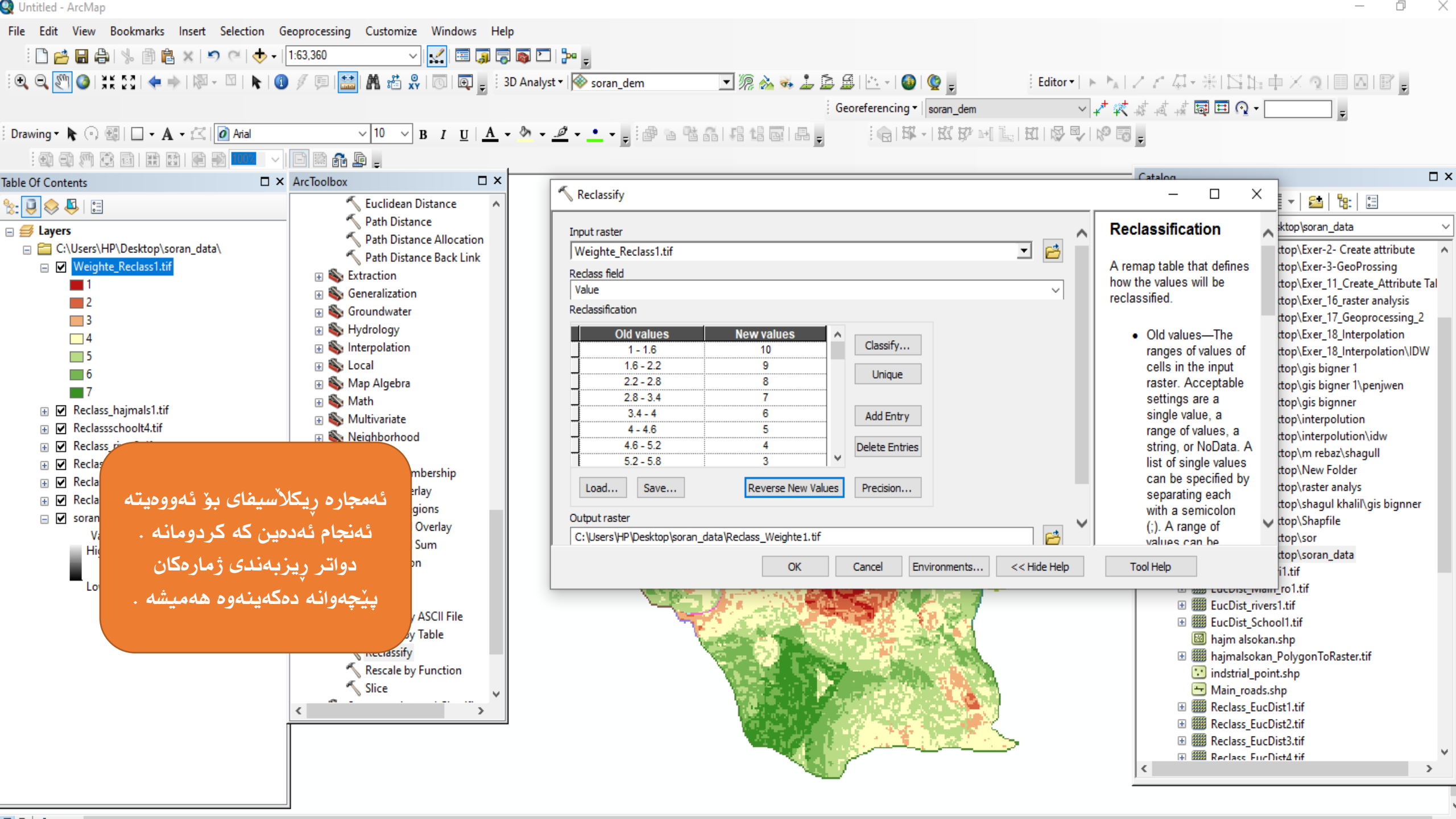
- Raster—The input criteria raster being weighted.
- % Influence—The influence of the raster compared to

- 6
- 7
- Reclass_hajmals1.tif
- Reclassschool4.tif
- Reclass_river3.tif
- Reclasindustralt2.tif
- Reclassmain road1.tif
- Reclass_Slope_s1.tif
- soran_dem
- Value
- High : 843
- Low : 522



ئەنجامى ۋەيتەكە
بەم شيوەيەيە





ئەمجارە رېكلاسیفای بۆ ئەو وەیتە
ئەنجام ئەدەین کە کردومانە .
دواتر ریزبەندی ژمارەکان
پێچەوانە دەکەینەووە هەمیشە .

Reclassify

Input raster: Weigte_Reclass1.tif

Reclass field: Value

Reclassification

Old values	New values
1 - 1.6	10
1.6 - 2.2	9
2.2 - 2.8	8
2.8 - 3.4	7
3.4 - 4	6
4 - 4.6	5
4.6 - 5.2	4
5.2 - 5.8	3

Buttons: Load..., Save..., Reverse New Values, Precision...

Output raster: C:\Users\HP\Desktop\soran_data\Reclass_Weigte1.tif

Buttons: OK, Cancel, Environments..., << Hide Help, Tool Help

Reclassification

A remap table that defines how the values will be reclassified.

- Old values—The ranges of values of cells in the input raster. Acceptable settings are a single value, a range of values, a string, or NoData. A list of single values can be specified by separating each with a semicolon (;). A range of values can be

Catalog

ktop\soran_data

- ktop\Exer-2- Create attribute
- ktop\Exer-3-GeoProssing
- ktop\Exer_11_Create_Attribute Tal
- ktop\Exer_16_raster analysis
- ktop\Exer_17_Geoprocessing_2
- ktop\Exer_18_Interpolation
- ktop\Exer_18_Interpolation\IDW
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- ktop\interpolation\idw
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- ktop\Shapfile
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- i1.tif
- EucDist_main_ro1.tif
- EucDist_rivers1.tif
- EucDist_School1.tif
- hajm alsokan.shp
- hajmalsokan_PolygonToRaster.tif
- indtrial_point.shp
- Main_roads.shp
- Reclass_EucDist1.tif
- Reclass_EucDist2.tif
- Reclass_EucDist3.tif
- Reclass_EucDist4.tif

ئەنجامى كۆتايى بۇ
ھەلبۇزاردى باشترىن
شويىن بۇ بىياتنانى
قوتابخانەكە بەم
شيۆەيەيە

