Prostorska in krajinska arheologija-Vaje
4

Domača naloga

https://ge.tt/7IRIIRQ/v/0?c

Archaeological resource modelling in temperate river valleys: a case study from the Trent Valley, UK

A.J. Howard[1], A.G. Brown[2], C.J. Carey[3], K. Challis[3], L.P. Cooper[4], M. Kincey[3] & P. Toms[5]

Methods for mapping and determining the condition of archaeological resources while they are still underground have been in development for nearly half a century. The authors here offer an example from the frontiers of the art: the application of a package of remote sensing procedures not only designed to locate sites but to model the valley deposits which contain and cover them. The variation in success of different methods in different deposits offers a guide to the design of evaluation projects on sand and gravel terrain everywhere.

Keywords: Britain, Trent, prehistory, alluvial, floodplain, confluence, lidar, ERGI, geophysics, prospection, bore holes, radiocarbon

Introduction

Archaeological remains within river valleys are often exceptionally well preserved through a combination of the presence of high water tables, stable terrace surfaces and substantial depths of alluvium (Brown 1997; Howard *et al*. 2003). However, recent archaeological research focused on British river valleys has shown that both cultural and taphonomic factors influence the wealth and spatial distribution of the archaeological resource across floodplains and terrace surfaces. A number of authors have demonstrated a direct link between the distribution and preservation potential of archaeology and the observed geomorphology (Howard & Macklin 1999; Passmore *et al*. 2006). Such patterns of preservation are not unique to the UK and have been observed in Europe (Howard *et al*. 2004), Africa (Pearl & Dickson 2004) and North America (Bettis & Mandel 2002; Bauer *et al*. 2004). Published studies are not just restricted to empirical observations; recent analytical work within meandering river systems has sought to predict the spatial distribution of archaeology

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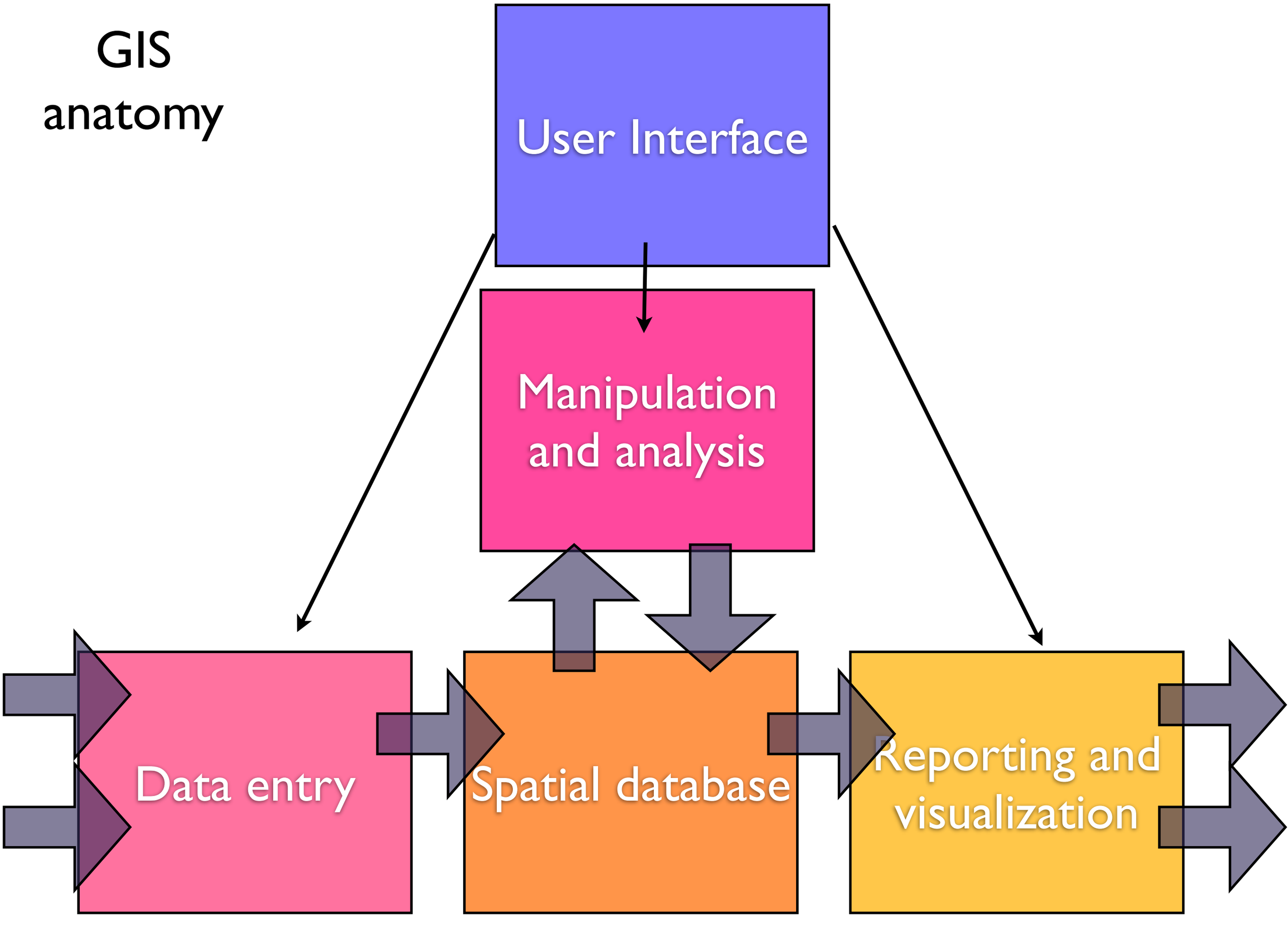
Received: 19 February 2007; Revised: 13 April 2008; Accepted: 23 June 2008

ANTIQUITY 82 (2008): 1040–1054

Podatki:

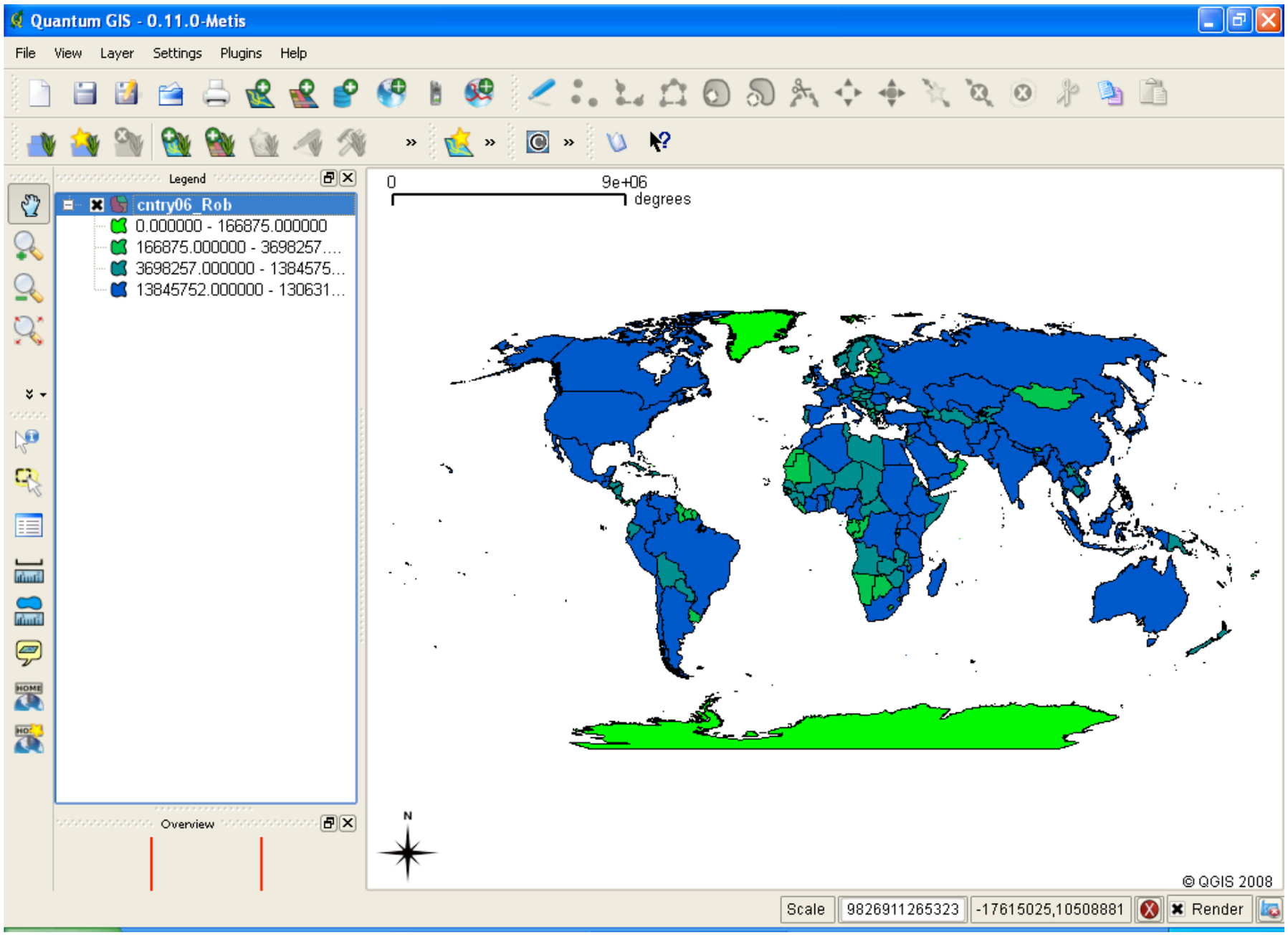
https://ge.tt/5igQ4SQ/v/0?c

GIS anatomy


User Interface
Manipulation and analysis
Data entry
Spatial database
Reporting and visualization

Quantum GIS

http://www.qgis.org/



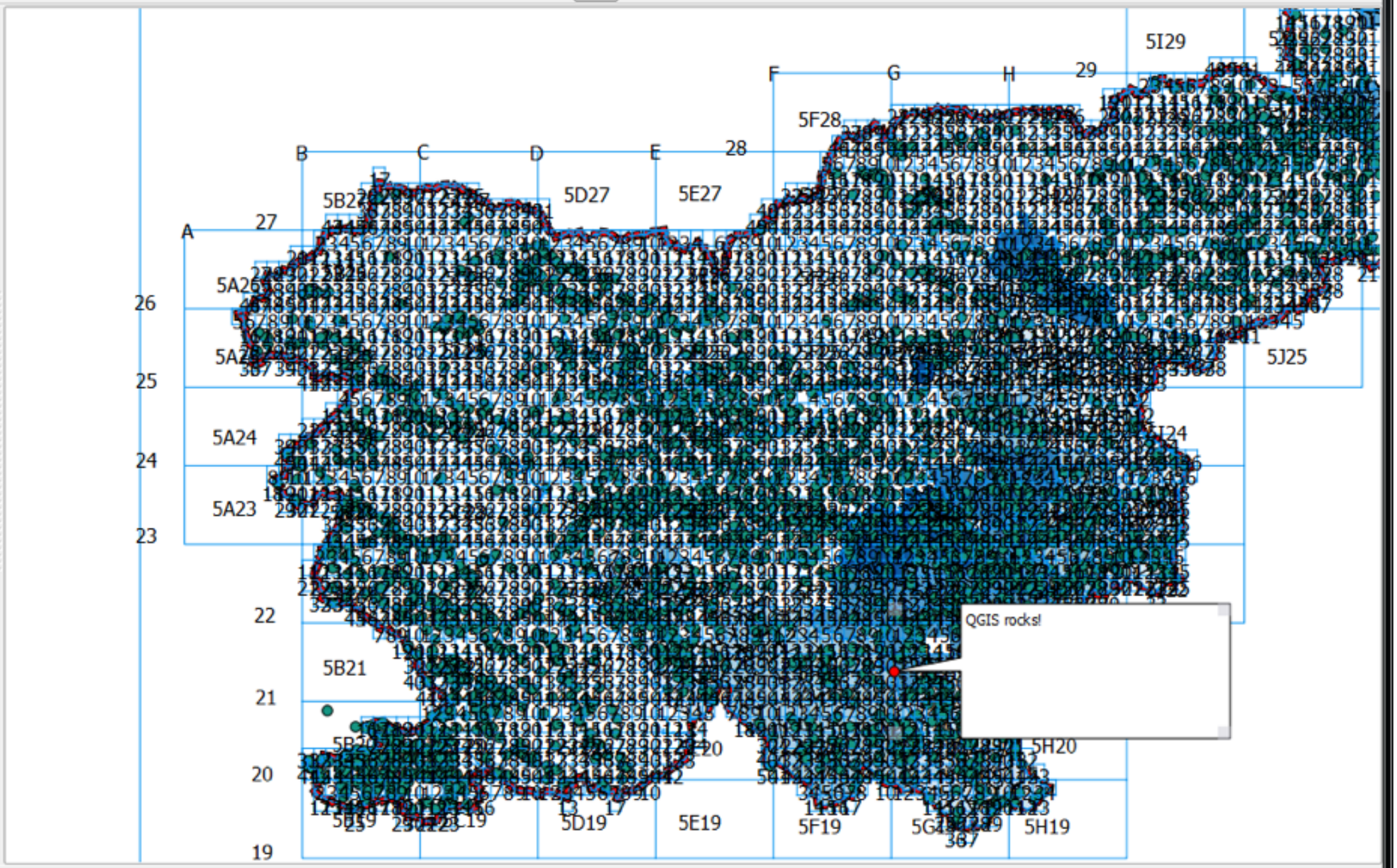
Quantum GIS 1.8.0-Lisboa

File Edit View Layer Settings Plugins Vector Raster Database Web Help

Layers

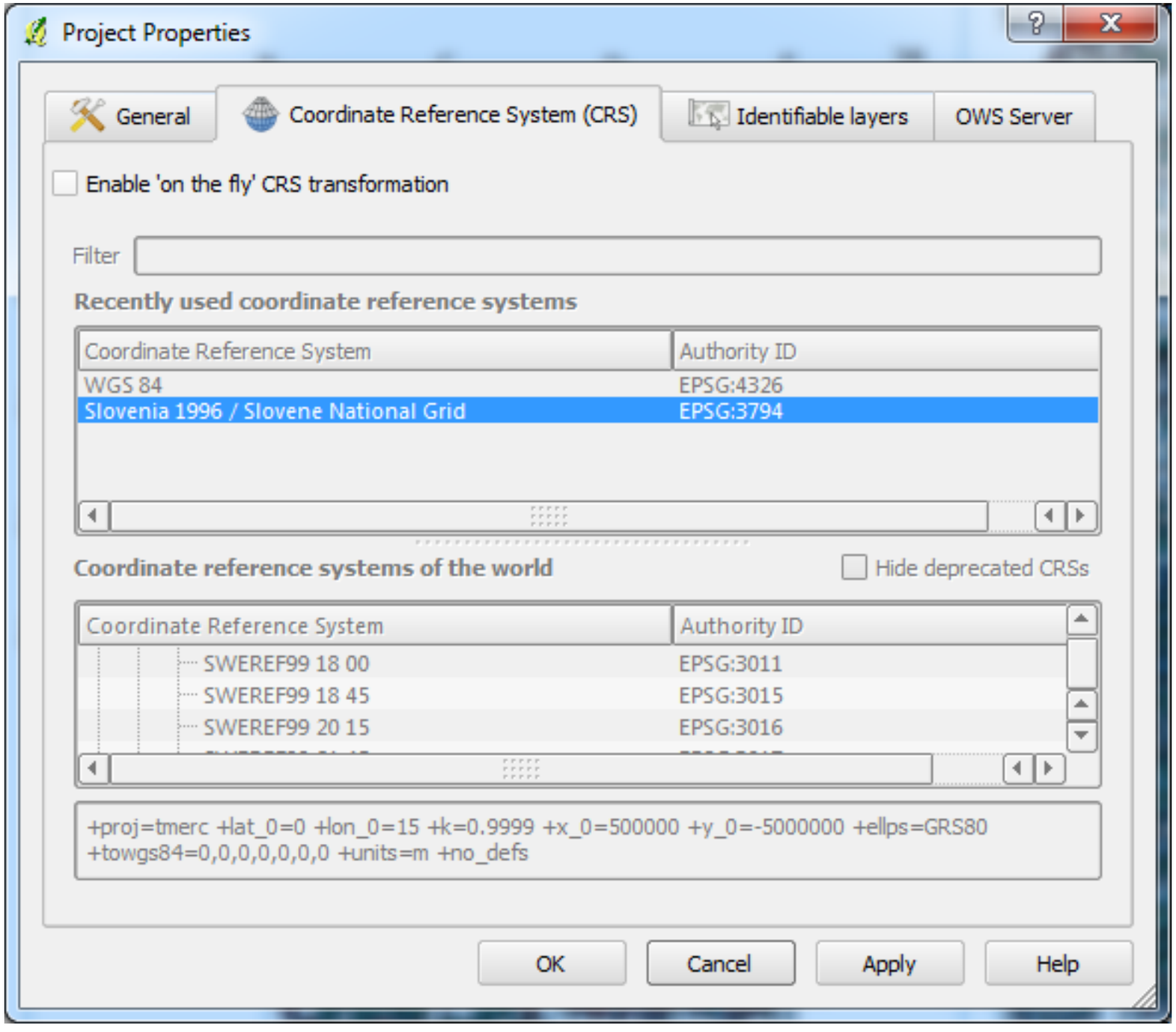
- 1499_00
- G210206
- G210306
- G210406
- G210506
- G210606
- G210706
- G210806
- G210906
- G211006
- G211406
- G211506
- G211706
- G211806
- G211906
- G212006
- 1498_00
- 1497_00
- razrezTTn5_texts
- razrezTTn5
- zdr_Podrocje_Srheologija
- 1496_00
- 1495_00
- 1494_00

Control rendering order



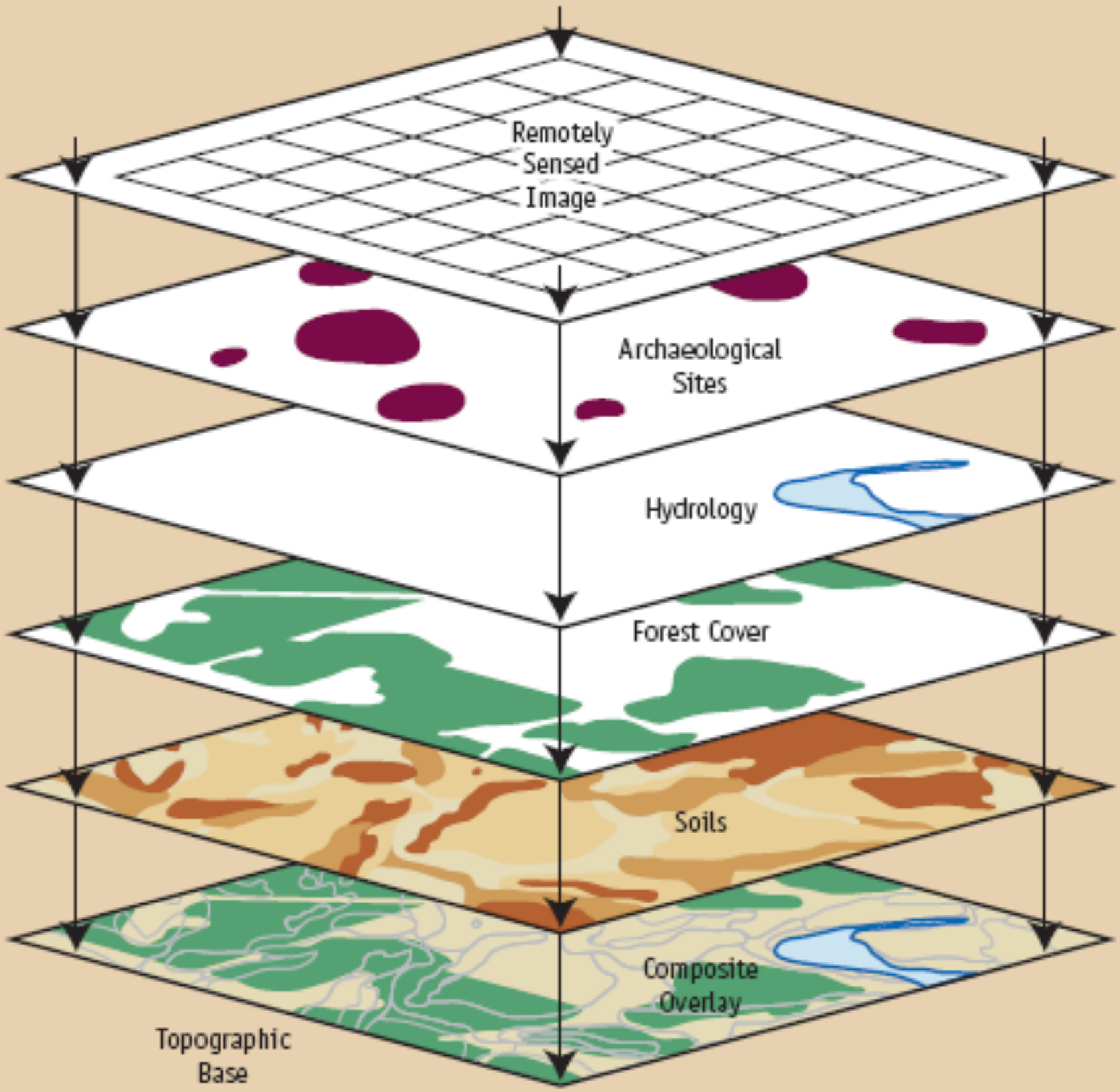
Coordinate: 334775,168598 Scale 1:972387 Render EPSG:3794

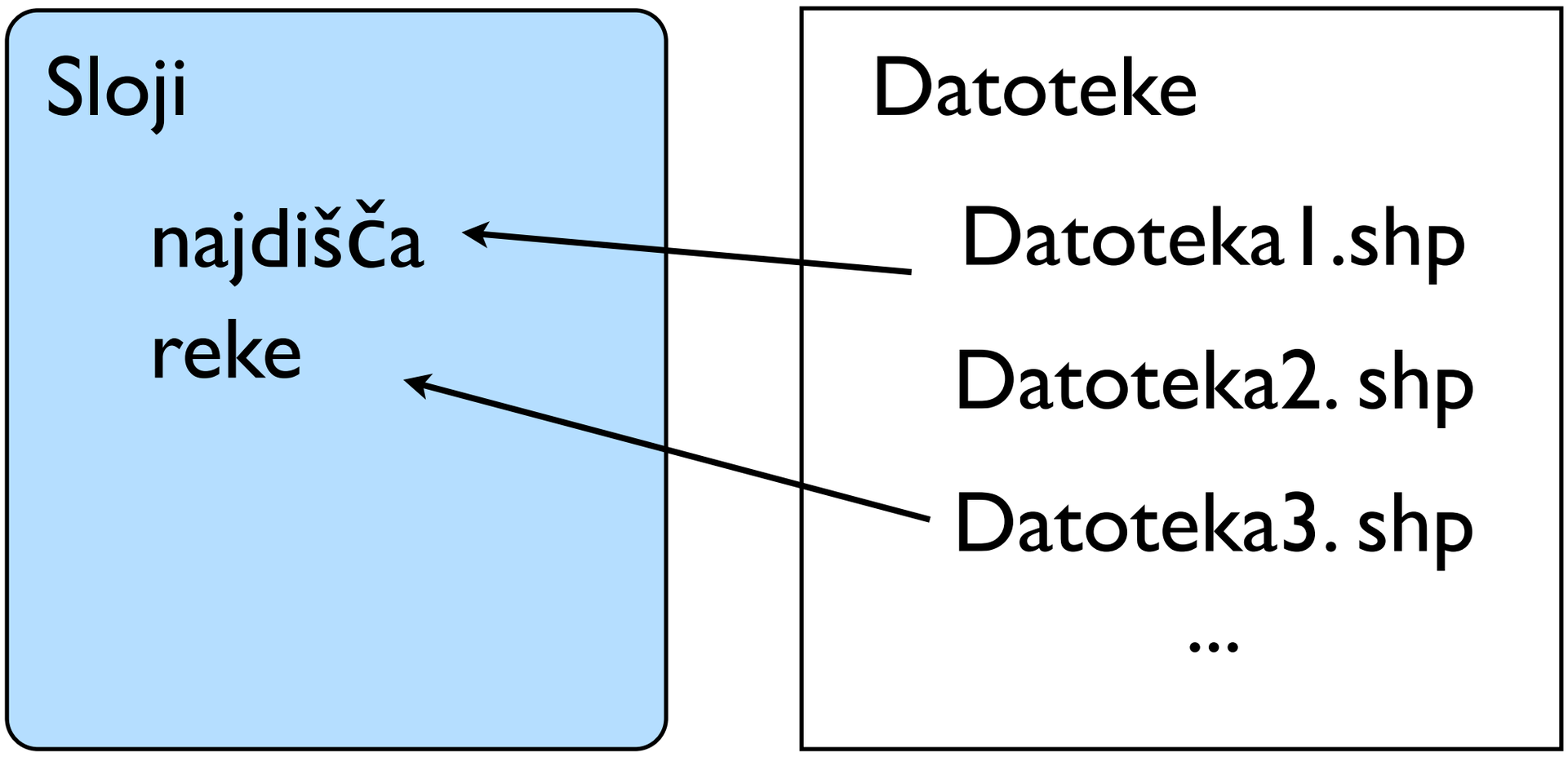
Projekt:


Project Properties
General
Coordinate Reference System (CRS)
Identifiable layers
OWS Server
Enable 'on the fly' CRS transformation
Filter
Recently used coordinate reference systems
Coordinate Reference System
Authority ID
WGS 84
EPSG:4326
Slovenia 1996 / Slovene National Grid
EPSG:3794
Coordinate reference systems of the world
Hide deprecated CRSs
Coordinate Reference System
Authority ID
SWEREF99 18 00
EPSG:3011
SWEREF99 18 45
EPSG:3015
SWEREF99 20 15
EPSG:3016
+proj=tmerc +lat_0=0 +lon_0=15 +k=0.9999 +x_0=500000 +y_0=-5000000 +ellps=GRS80
+towgs84=0,0,0,0,0,0,0 +units=m +no_defs
OK
Cancel
Apply
Help

Thematic layers

Geographical information system (GIS) works by creating a series of georeferenced overlays.





Projekt: Vaja 1

C:\GIS\vaje

EPSG (European Petroleum Survey Group)

http://www.epsg-registry.org/ http://spatialreference.org/

query by filter | retrieve by code

EPSG Geodetic Parameter Registry *Version: 7.9.4*

Welcome guest! | (login or register) | help

Name: slovenia

Type: Click to choose

Area: Name of the area of use

BBox: (dec. deg.) North Latitude West Longitude South Latitude East Longitude

Search Reset ?

Search Results (1 - 10 of 84 possible results)

Report all results ? | Report selected results ? | Entities per page: 10

<<prev | next>>

Report	Name	Code	Type	Status	Area Description	Remarks / Description	
☐	MGI 1901 / Slovenia Grid	EPSG::3911	ProjectedCRS	Valid	Slovenia - onshore and offshore.		view
☐	Slovenia 1996	EPSG::4765	GeodeticCRS (geographic 2D)	Valid	Slovenia - onshore and offshore.		view
☐	Slovenia 1996	EPSG::4883	GeodeticCRS (geographic 3D)	Valid	Slovenia - onshore and offshore.		view
☐	Slovenia 1996	EPSG::4882	GeodeticCRS (geocentric)	Valid	Slovenia - onshore and offshore.		view
☐	Slovenia 1996 / Slovene National Grid	EPSG::3794	ProjectedCRS	Valid	Slovenia - onshore and offshore.		view
☐	D48 / GK to D96 / TM (1)	EPSG::3929	CoordinateTransformation	Valid	Slovenia - upper Soca Valley and Julian Alps.	Information source gives rotation angle of source CRS axes as 359.9990153250° using opposite rotation convention to EPSG formula.	view
☐	D48 / GK to D96 / TM (2)	EPSG::3930	CoordinateTransformation	Valid	Slovenia - Gorica region including the Trnovo Forest, Nanos and Idrija Mountains.	Information source gives rotation angle of source CRS axes as 359.9987988952° using opposite rotation convention to EPSG formula.	view
☐	D48 / GK to D96 / TM (3)	EPSG::3931	CoordinateTransformation	Valid	Slovenia - The Karst with part of the Gorica area.	Information source gives rotation angle of source CRS axes as 359.9990080921° using opposite rotation convention to EPSG formula.	view
☐	D48 / GK to	EPSG::3932	CoordinateTransformation	Valid	Slovenia - the Slovene	Information source gives rotation	

Back to OGP Surveying and Positioning Committee home page

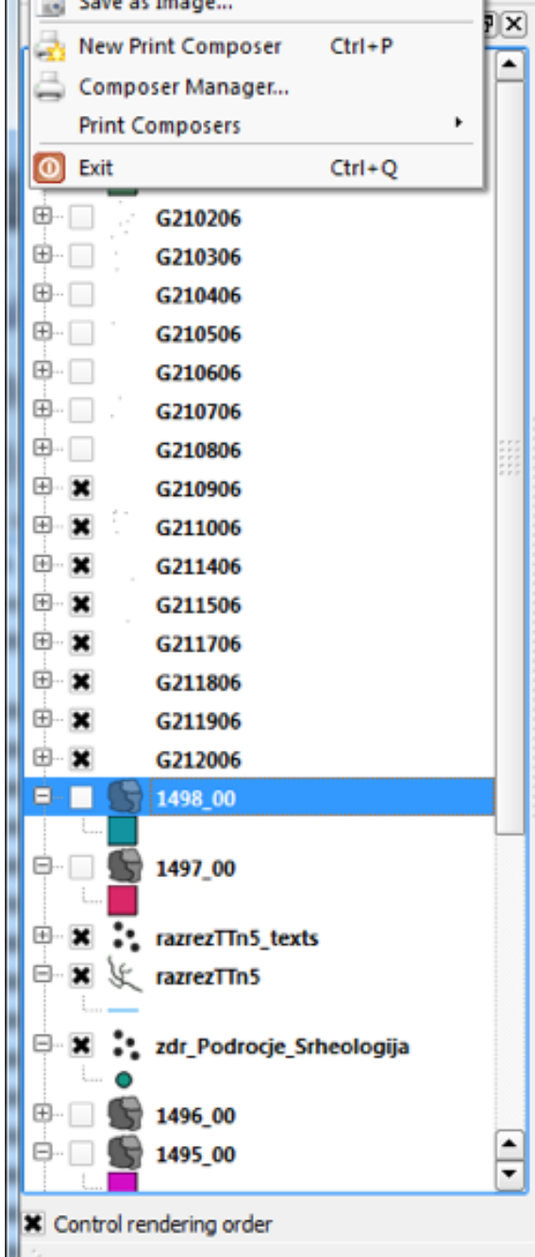
Developed by: Galdos Systems Inc.

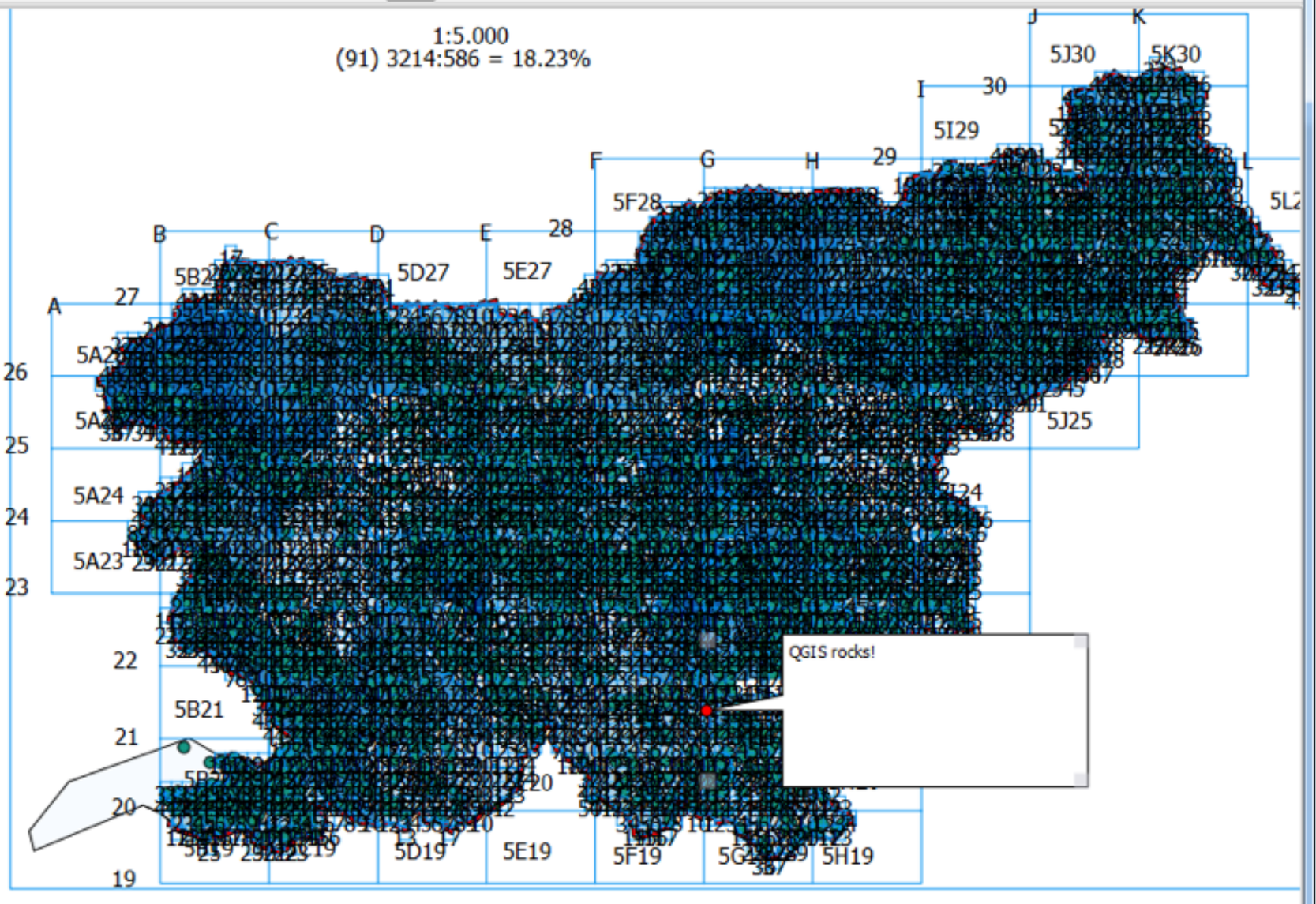
Version: 2.0.5

Quantum GIS 1.8.0-Lisboa

File Edit View Layer Settings Plugins Vector Raster Database Web Help

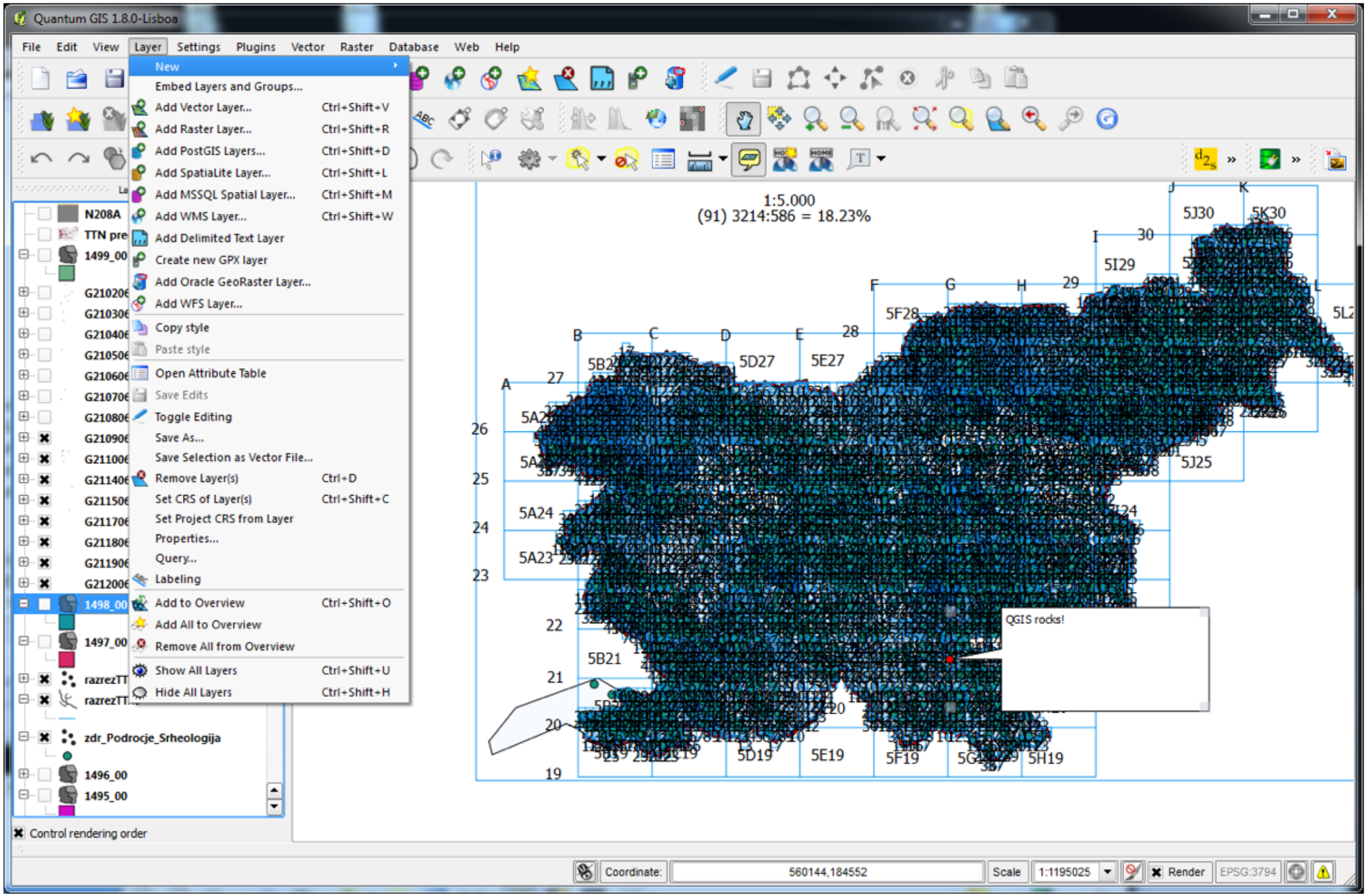
- New Project Ctrl+N
- Open Project... Ctrl+O
- Open Recent Projects
- Save Project Ctrl+S
- Save Project As... Ctrl+Shift+S
- Save as Image...
- New Print Composer Ctrl+P
- Composer Manager...
- Print Composers
- Exit Ctrl+Q



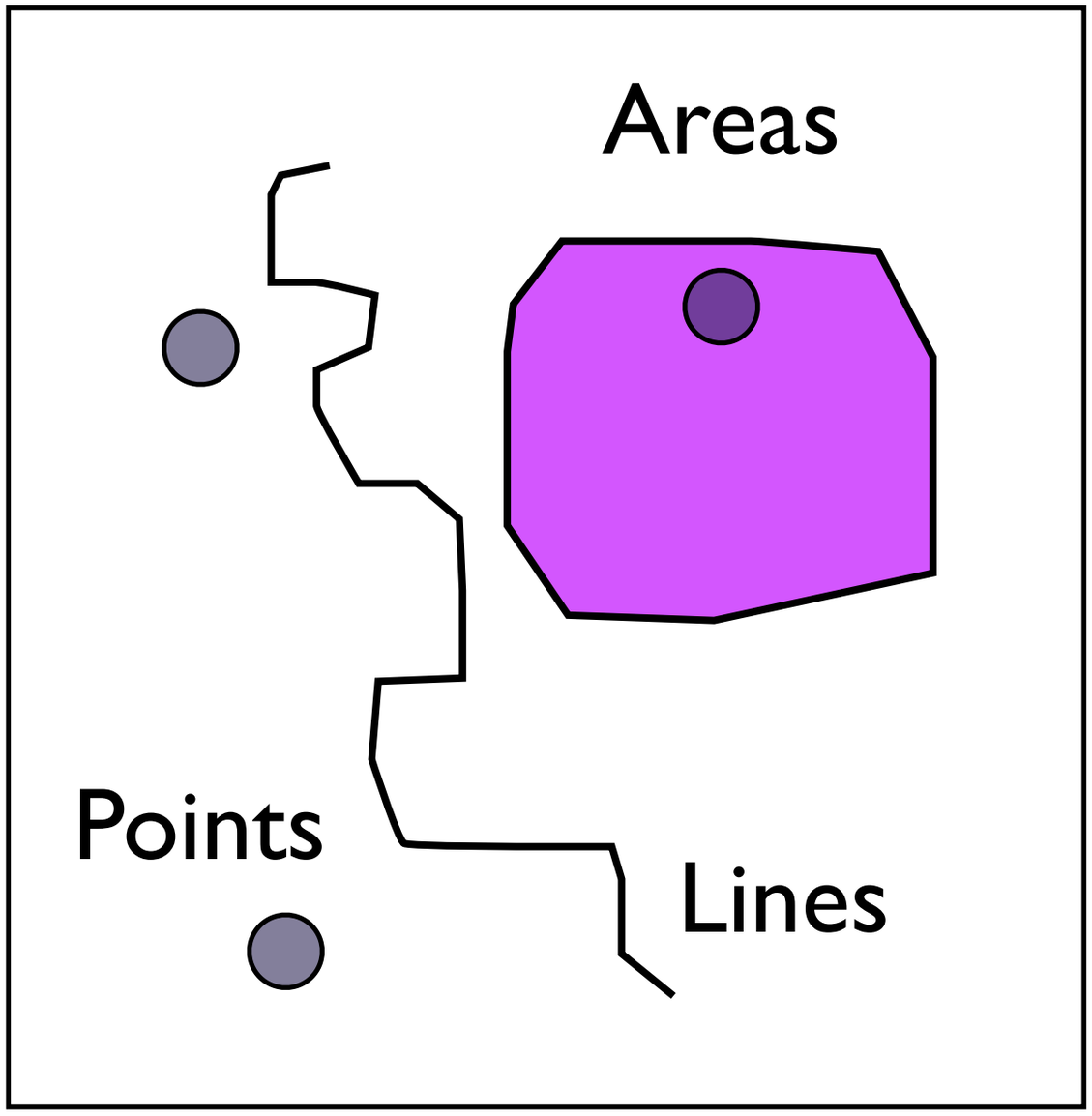


Coordinate: 560144,184552 Scale 1:1195025 Render EPSG:3794

Sloj:


Quantum GIS 1.8.0-Lisboa
File Edit View Layer Settings Plugins Vector Raster Database Web Help
New
Embed Layers and Groups...
Add Vector Layer... Ctrl+Shift+V
Add Raster Layer... Ctrl+Shift+R
Add PostGIS Layers... Ctrl+Shift+D
Add SpatiaLite Layer... Ctrl+Shift+L
Add MSSQL Spatial Layer... Ctrl+Shift+M
Add WMS Layer... Ctrl+Shift+W
Add Delimited Text Layer
Create new GPX layer
Add Oracle GeoRaster Layer...
Add WFS Layer...
Copy style
Paste style
Open Attribute Table
Save Edits
Toggle Editing
Save As...
Save Selection as Vector File...
Remove Layer(s) Ctrl+D
Set CRS of Layer(s) Ctrl+Shift+C
Set Project CRS from Layer
Properties...
Query...
Labeling
Add to Overview Ctrl+Shift+O
Add All to Overview
Remove All from Overview
Show All Layers Ctrl+Shift+U
Hide All Layers Ctrl+Shift+H
N208A
1499_00
1498_00
1497_00
razrezTT
zdr_Podrocje_Srheologija
1496_00
1495_00
Control rendering order
1:5.000
(91) 3214:586 = 18.23%
QGIS rocks!
Coordinate: 560144,184552
Scale 1:1195025
Render
EPSG:3794

Vectors



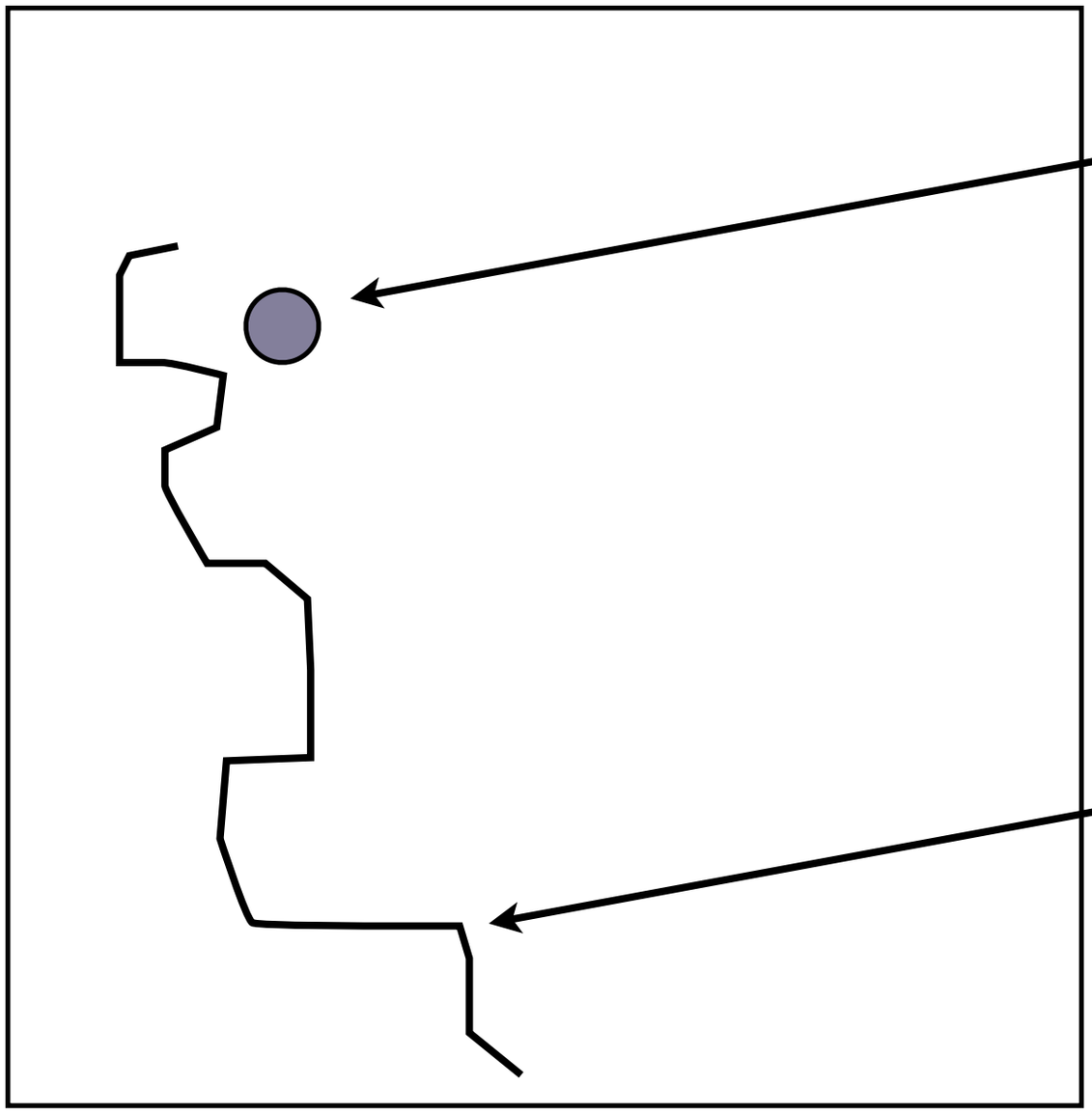
Locational component

Topological component

Attribute component

Metadata component

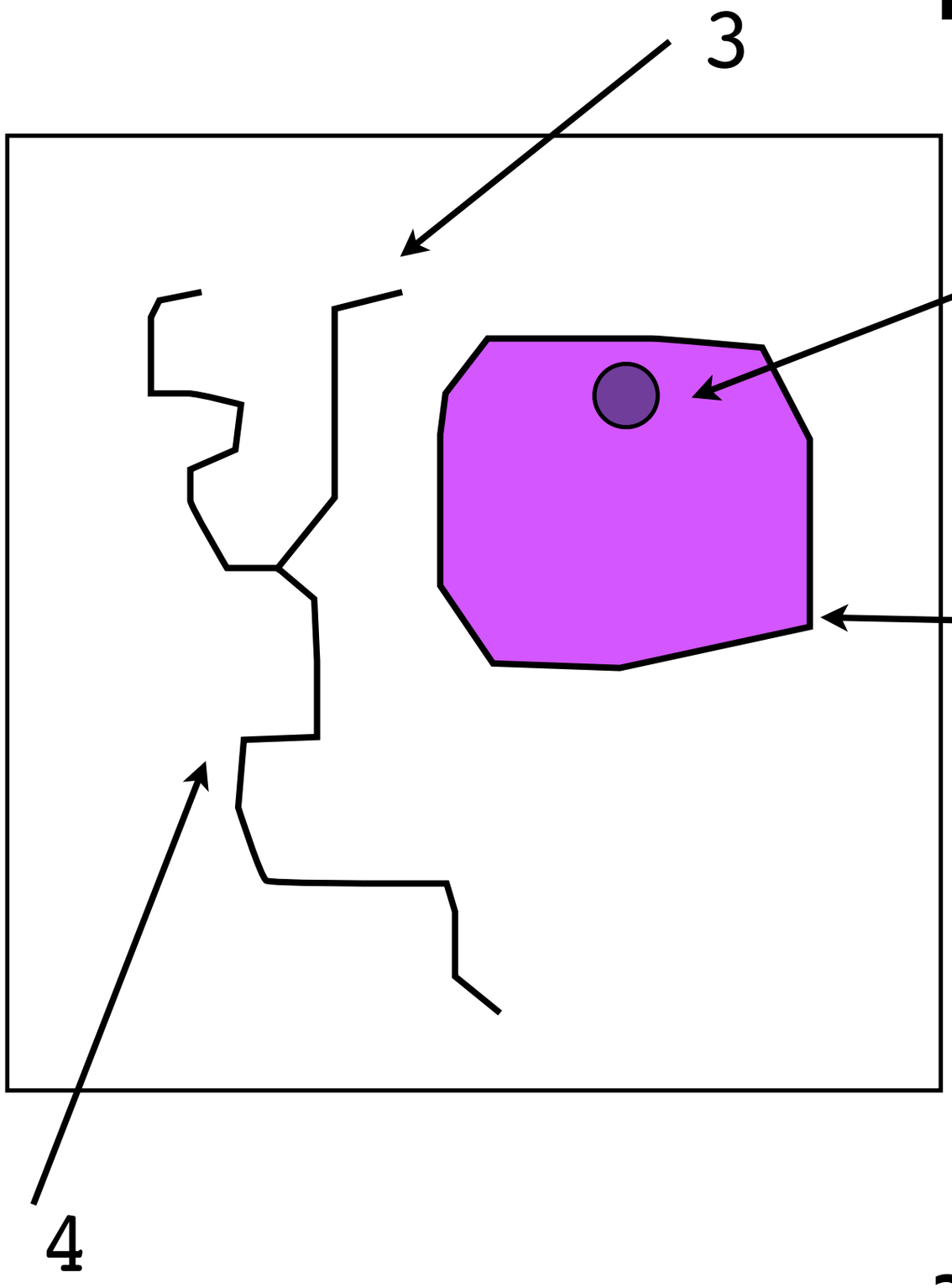
Locational component



Point,1201,6234

Line,
1134,6240,
1221,6220,
1211,6212
....

Topological component



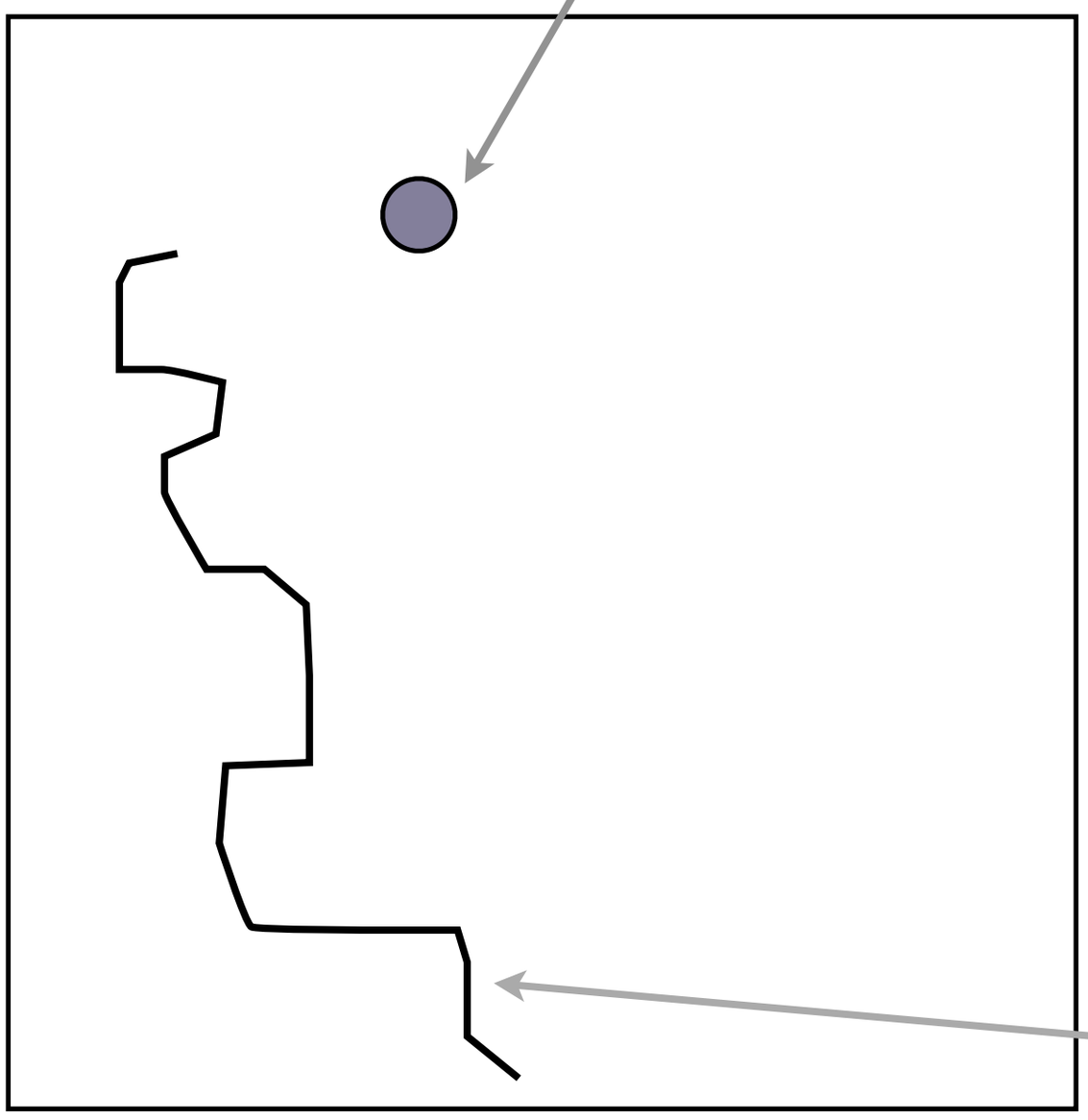
1 is inside 2

3 is connected to 4

Attribute component

id,type,date,name

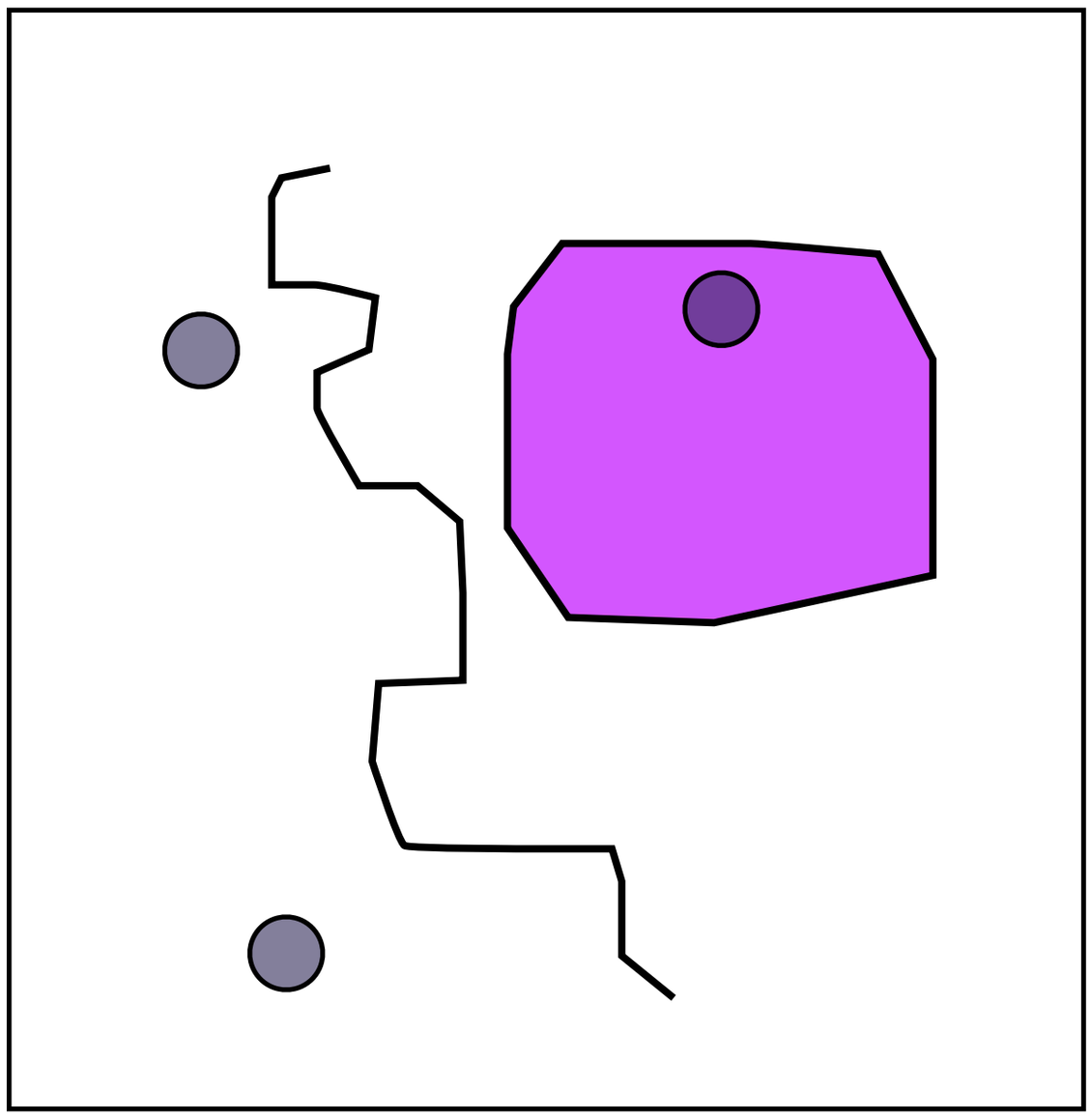
1, archaeological site, Roman, Ammaia



id,type,name

2, river,Rio Sever

Metadata



Projection

Source

Legend

Errors

Copyright

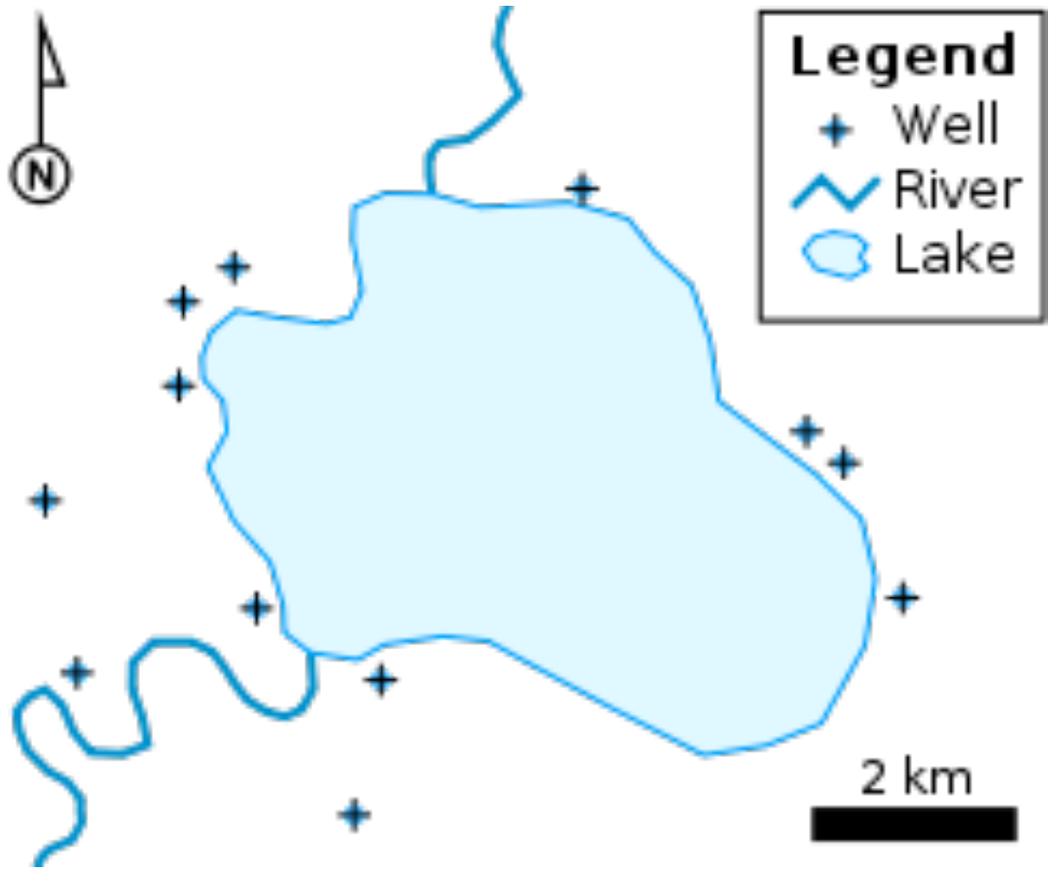
...

ESRI shapefile format

- .shp — shape format; the feature geometry itself
- .shx — shape index format; a positional index of the feature geometry to allow seeking forwards and backwards quickly
- .dbf — attribute format; columnar attributes for each shape, in dBase IV format

Optional files :

- .prj — projection format; the coordinate system and projection information, a plain text file describing the projection using well-known text format
- .sbn and .sbx — a spatial index of the features
- .fbn and .fbx — a spatial index of the features for shapefiles that are read-only
- .ain and .aih — an attribute index of the active fields in a table or a theme's attribute table
- .ixs — a geocoding index for read-write shapefiles
- .mxs — a geocoding index for read-write shapefiles (ODB format)
- .atx — an attribute index for the .dbf file in the form of shapefile.columnname.atx (ArcGIS 8 and later)
- .shp.xml — geospatial metadata in XML format, such as ISO 19115 or other schemas
- .cpg — used to specify the code page (only for .dbf) for identifying the character encoding to be used



.shp Locational component

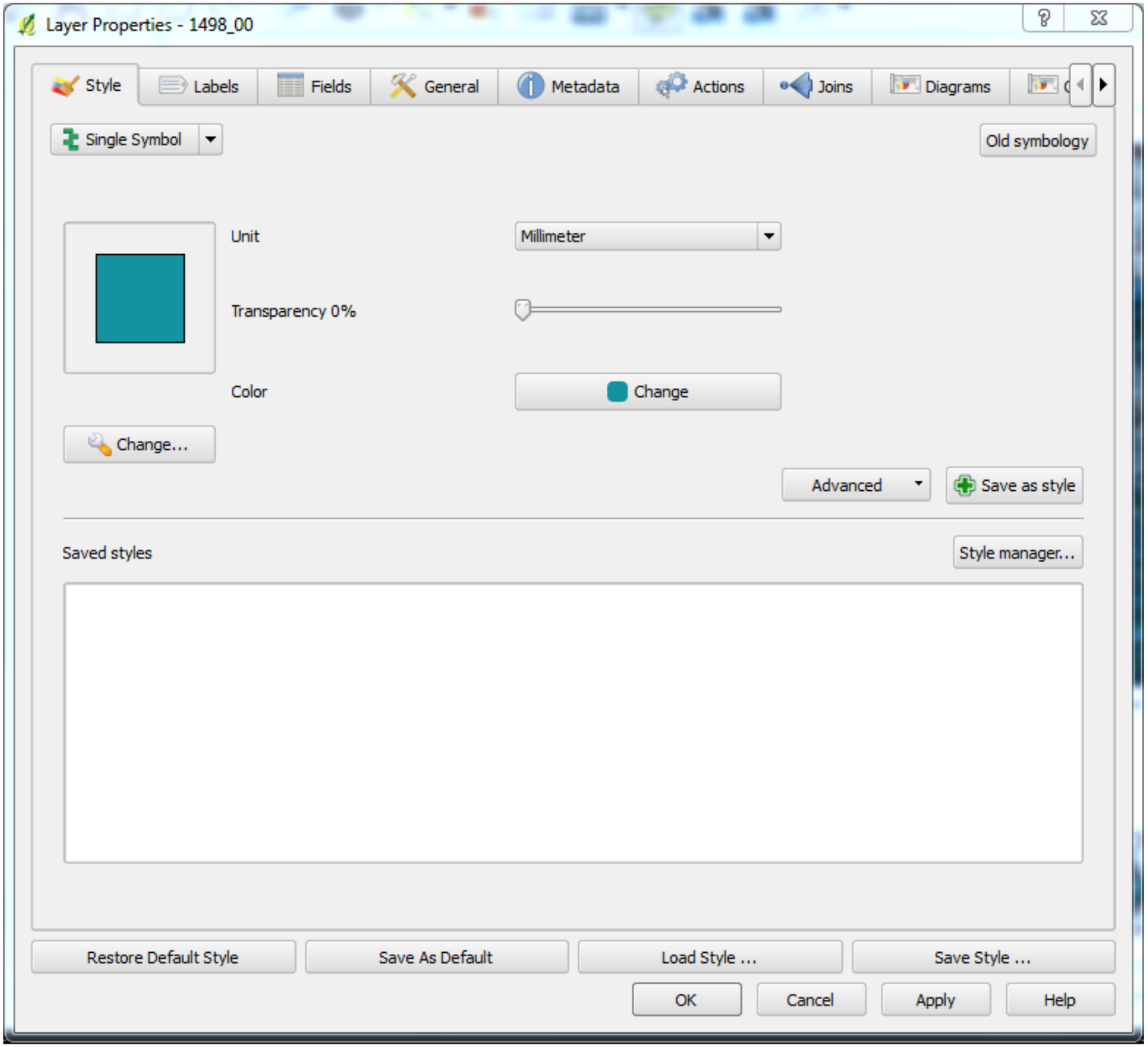
```
Line,
1134,6240,
1221,6220,
1211,6212
....
```

.idx

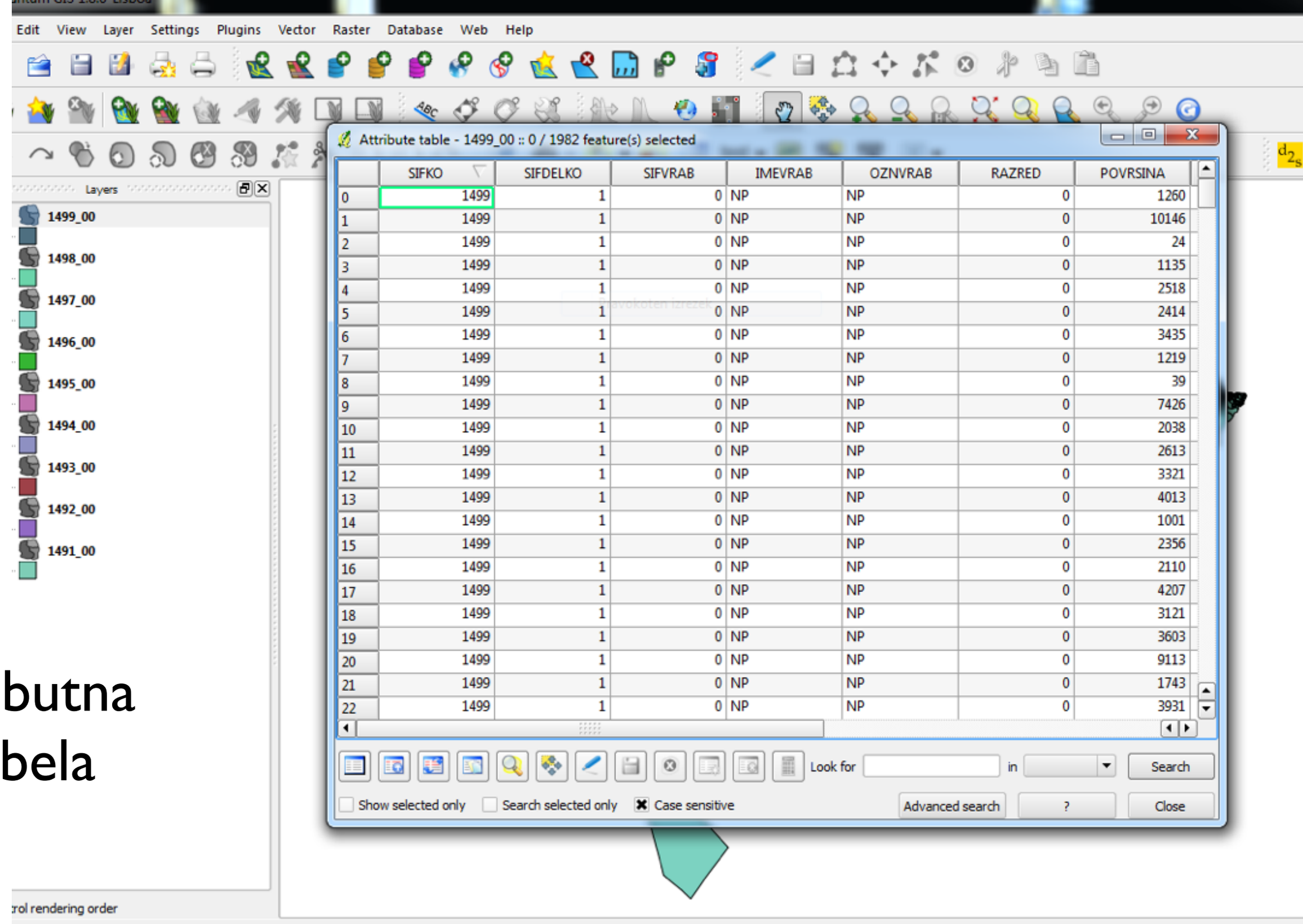
.dbf Attribute component

```
id,type,name
2, river,Rio
    Sever
```

Prikaz


Layer Properties - 1498_00
Style
Labels
Fields
General
Metadata
Actions
Joins
Diagrams
Single Symbol
Old symbology
Unit
Millimeter
Transparency 0%
Color
Change
Change...
Advanced
Save as style
Saved styles
Style manager...
Restore Default Style
Save As Default
Load Style ...
Save Style ...
OK
Cancel
Apply
Help

Atributna Tabela



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2	1499	1	0	NP	NP	0	24
3	1499	1	0	NP	NP	0	1135
4	1499	1	0	NP	NP	0	2518
5	1499	1	0	NP	NP	0	2414
6	1499	1	0	NP	NP	0	3435
7	1499	1	0	NP	NP	0	1219
8	1499	1	0	NP	NP	0	39
9	1499	1	0	NP	NP	0	7426
10	1499	1	0	NP	NP	0	2038
11	1499	1	0	NP	NP	0	2613
12	1499	1	0	NP	NP	0	3321
13	1499	1	0	NP	NP	0	4013
14	1499	1	0	NP	NP	0	1001
15	1499	1	0	NP	NP	0	2356
16	1499	1	0	NP	NP	0	2110
17	1499	1	0	NP	NP	0	4207
18	1499	1	0	NP	NP	0	3121
19	1499	1	0	NP	NP	0	3603
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22	1499	1	0	NP	NP	0	3931

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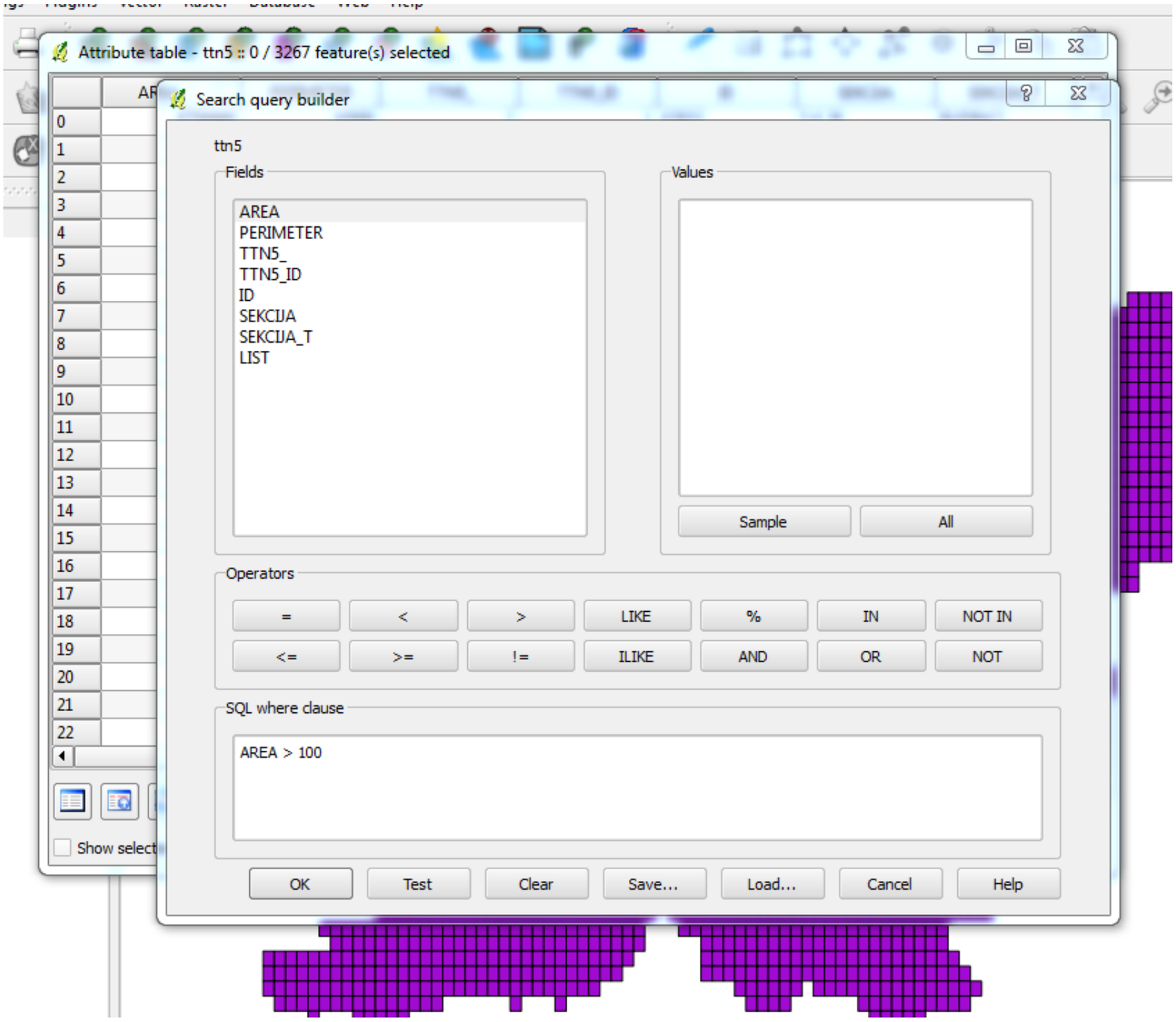
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Search query builder
ttn5
Fields
AREA
PERIMETER
TTN5_
TTN5_ID
ID
SEKCIJA
SEKCIJA_T
LIST
Values
Sample
All
Operators
=
<
>
LIKE
%
IN
NOT IN
<=
>=
!=
ILIKE
AND
OR
NOT
SQL where clause
AREA > 100
OK
Test
Clear
Save...
Load...
Cancel
Help
Show select

Layer Properties - 1499_00

Style | Labels | Fields | General | Metadata | Actions | Joins | Diagrams

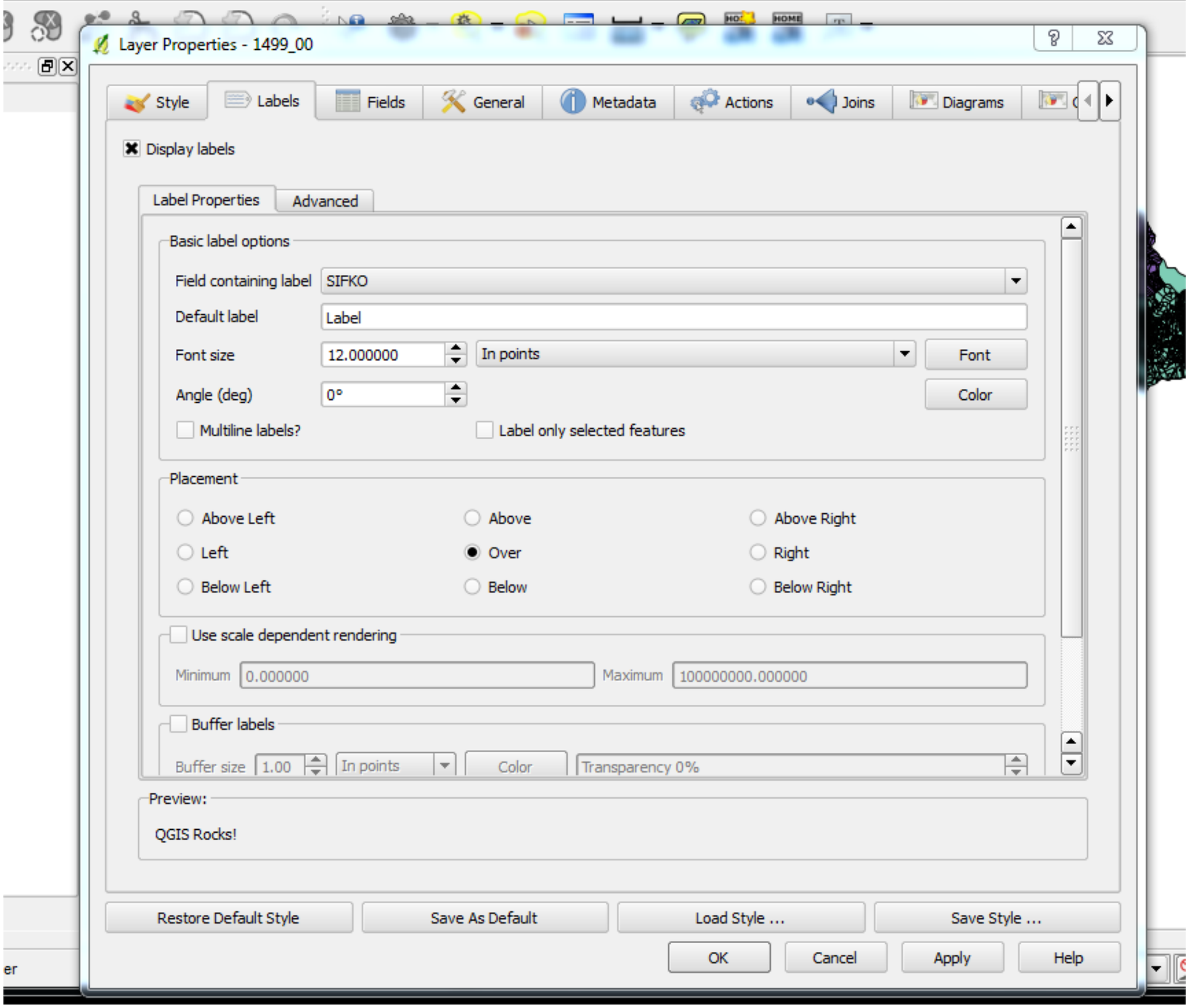
Id	Name	Type	Length	Precision	Comment	Edit widget	Alias
0	SIFKO	Integer	6	0		Line edit	
1	SIFDELKO	Integer	6	0		Line edit	
2	SIFVRAB	Integer	6	0		Line edit	
3	IMEVRAB	String	21	0		Line edit	
4	OZNVRAB	String	10	0		Line edit	
5	RAZRED	Integer	6	0		Line edit	
6	POVRSINA	Real	11	0		Line edit	
7	STEV	Integer	6	0		Line edit	
8	PODD	Integer	6	0		Line edit	
9	VRSTAP	Integer	6	0		Line edit	
10	PARCELA	String	10	0		Line edit	
11	STA_STEV	Real	19	9		Line edit	

Restore Default Style | Save As Default | Load Style ... | Save Style ...

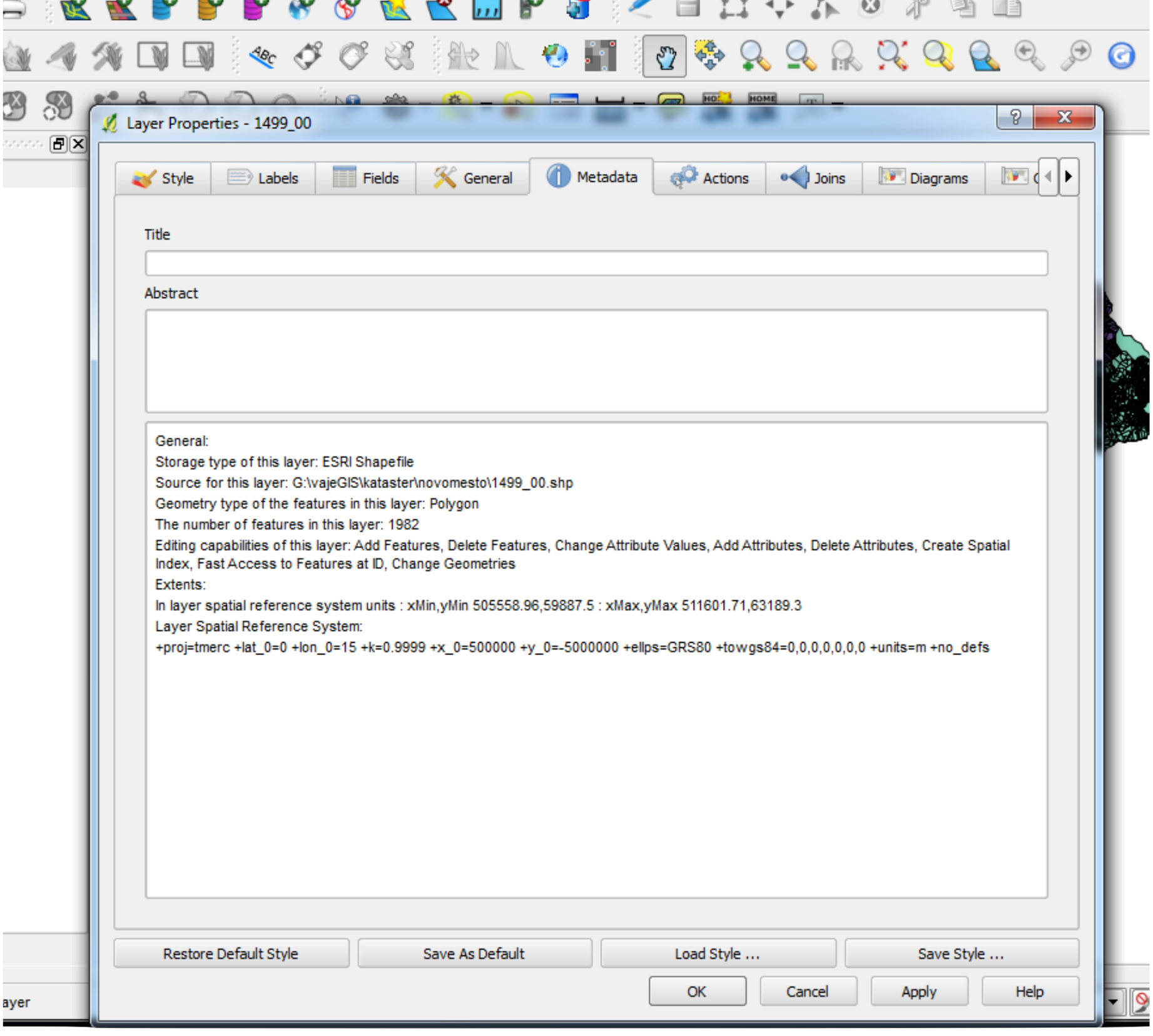
OK | Cancel | Apply | Help

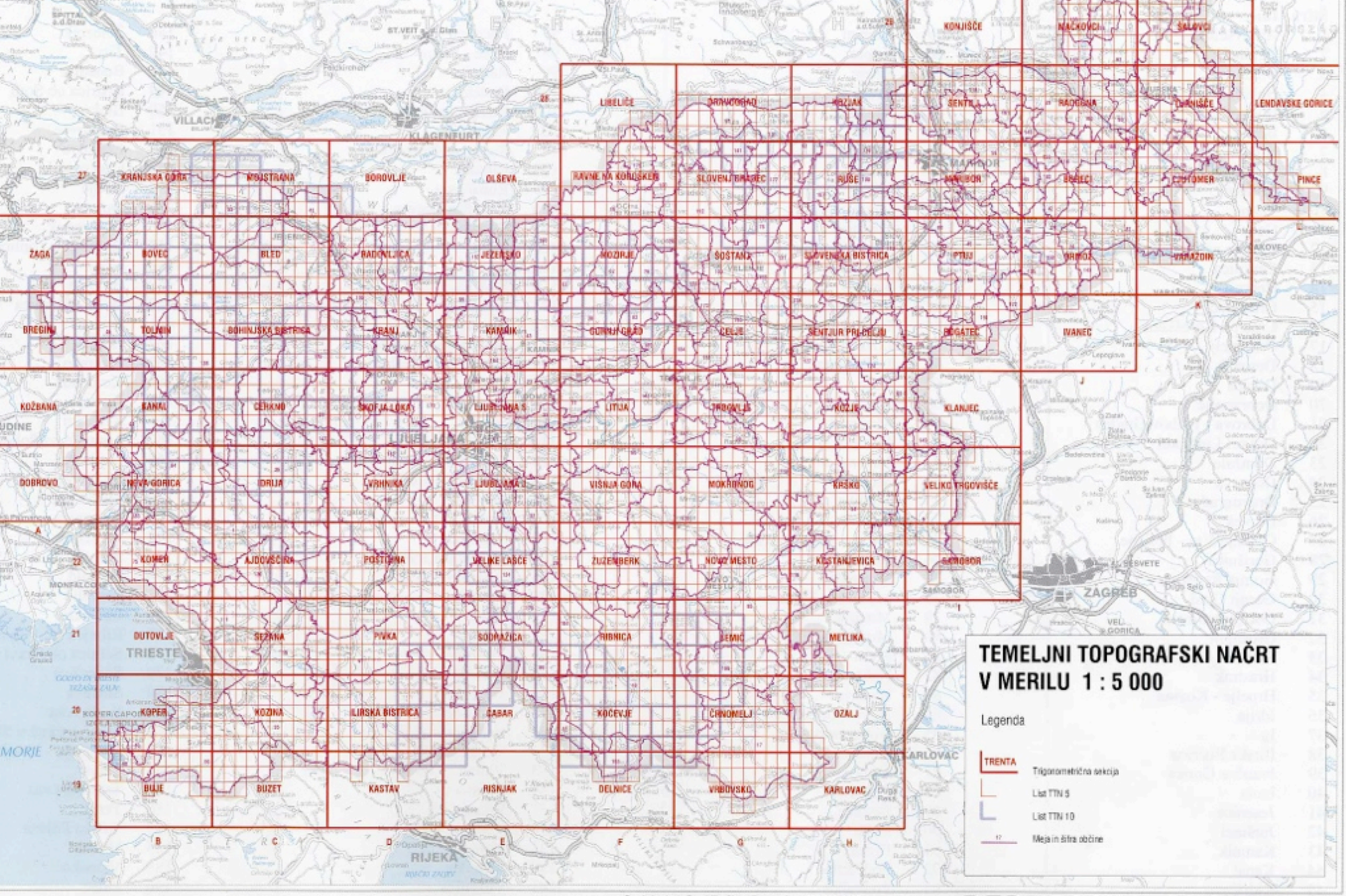
nt layer

Oznake


Layer Properties - 1499_00
Style
Labels
Fields
General
Metadata
Actions
Joins
Diagrams
Display labels
Label Properties
Advanced
Basic label options
Field containing label
SIFKO
Default label
Label
Font size
12.000000
In points
Font
Angle (deg)
0°
Color
Multiline labels?
Label only selected features
Placement
Above Left
Above
Above Right
Left
Over
Right
Below Left
Below
Below Right
Use scale dependent rendering
Minimum
0.000000
Maximum
100000000.000000
Buffer labels
Buffer size
1.00
In points
Color
Transparency 0%
Preview:
QGIS Rocks!
Restore Default Style
Save As Default
Load Style ...
Save Style ...
OK
Cancel
Apply
Help

Metapodatki





Pregledna karta Republike Slovenije v merilu 1: 750 000, 1999

Začasna izdaja

Izdala in založila: Geodetska uprava Republike Slovenije. Vrt: Geodetska uprava RS. Izdelava in tisk: Inštitut za geodezijo in fotogrametrijo FGG. Gauß-Krügerjeva projekcija. Razmnoževanje in prestiskavanje karte delno in v celoti brez odobritve Geodetske uprave Republike Slovenije je prepovedano. © Geodetska uprava Republike Slovenije

REPUBLIKA SLOVENIJA

Merilo 1 : 750 000

0 km 10 20 30 40 50

Rasters

Pixel

1	1	1	1	1	1	1	3	3	3
1	1	1	1	1	1	1	3	3	3
1	1	1	1	1	1	3	3	3	3
1	1	1	2	2	2	2	3	3	3
1	1	1	2	2	2	2	3	3	3
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1	1	1	1	2	2	2	3	3	3
1	1	1	1	1	1	3	3	3	3
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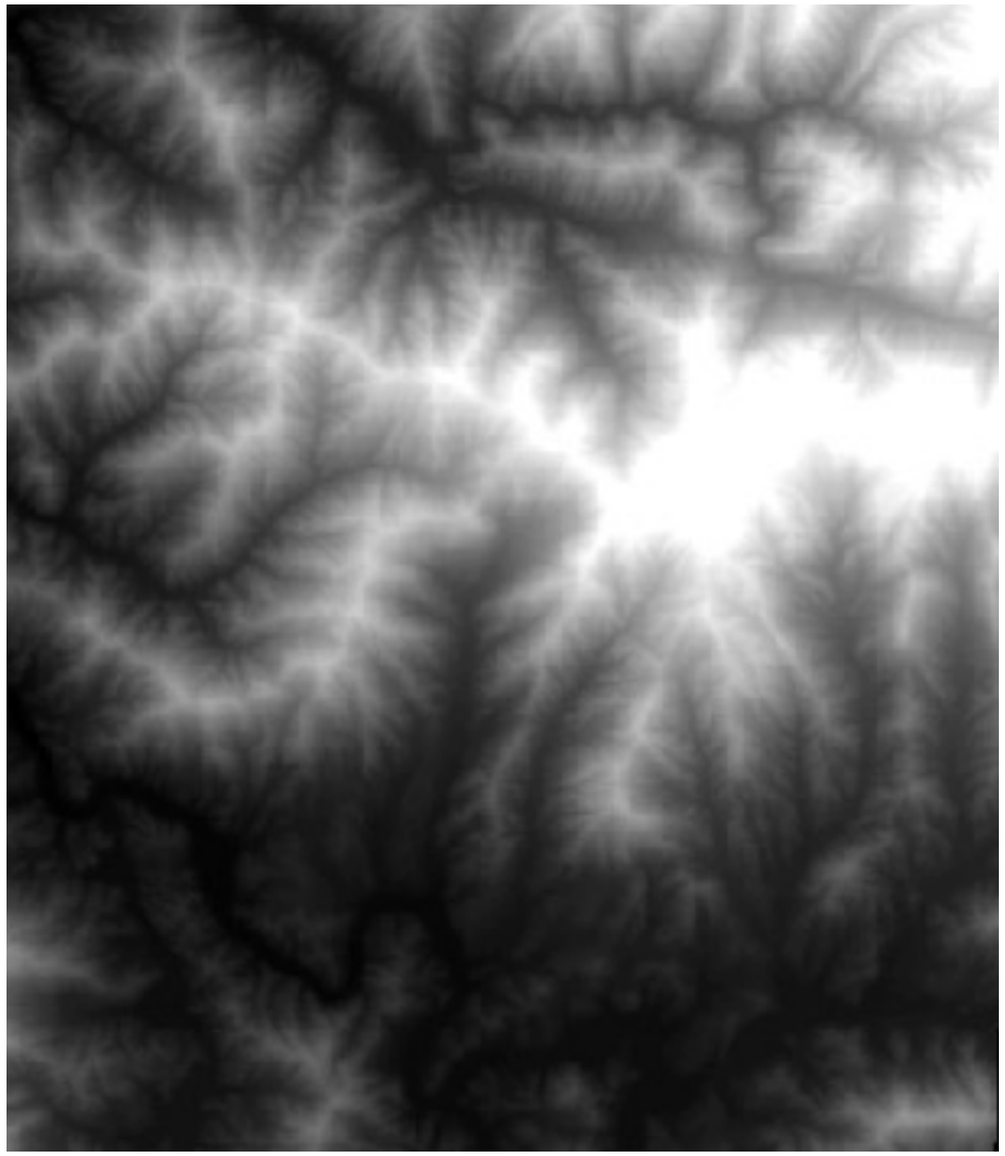
1	1	1	1	1	1	1	1	3	3



Raster data formats

GeoTIFF,
TIFF + world file

Tiff file

World file

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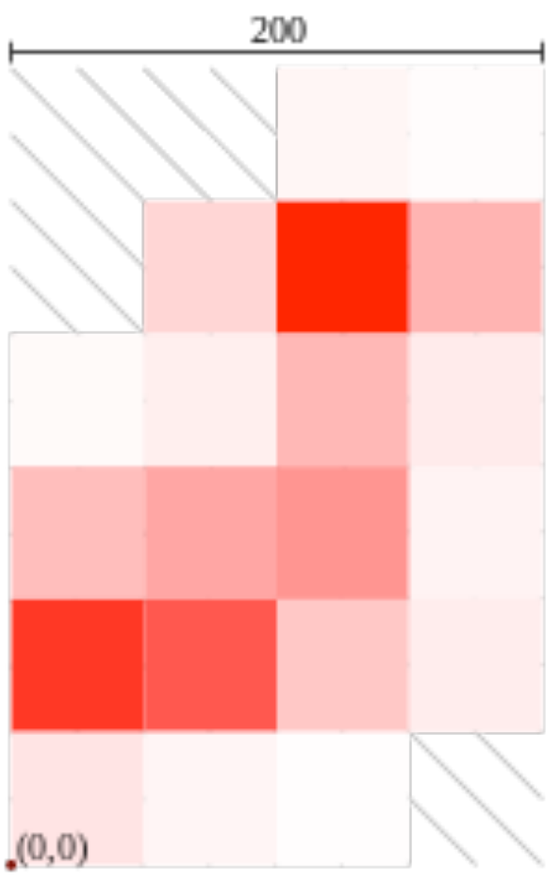
10000
0
0
-10000
-3683154.58
4212096.53
```

ESRI grid format



	25	75	125	175
275	NA	NA	5	2
225	NA	20	100	36
175	3	8	35	10
125	32	42	50	6
75	88	75	27	9
25	13	5	1	NA

```
ncols          4
nrows          6
xllcorner      0.0
yllcorner      0.0
cellsize       50.0
NODATA_value   -9999
-9999 -9999 5 2
-9999 20 100 36
3 8 35 10
32 42 50 6
88 75 27 9
13 5 1 -9999
```

Layer Properties - G212006

Style | Colormap | Transparency | General | Metadata | Pyramids | Histogram

Title

Abstract

Driver:

GDAL provider

GTiff
GeoTIFF

Dataset Description

G:\vajeGIS\ttn5\G21\H\G212006.tif

TIFFTAG_ARTIST=Copyright (C) RGU. IGEA,1994.

TIFFTAG_DATETIME=1994:12:16 14:07:01

TIFFTAG_IMAGEDESCRIPTION=G212006

TIFFTAG_MAXSAMPLEVALUE=1

Band 1

Dimensions:

X: 5316 Y: 7088 Bands: 1

Origin:

520250,67000.2

Pixel Size:

Restore Default Style | Save As Default | Load Style ... | Save Style ...

OK | Cancel | Apply | Help

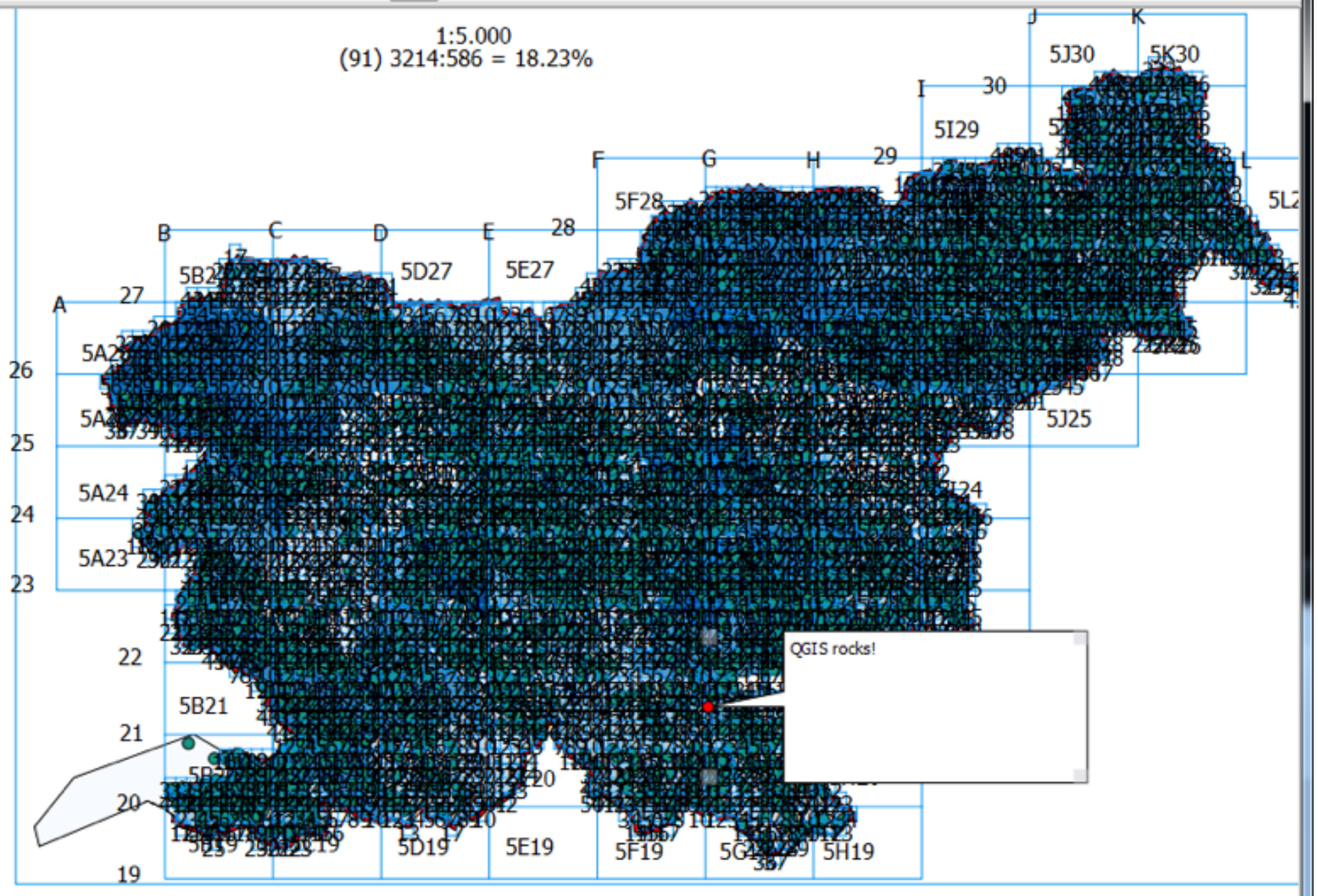
Quantum GIS 1.8.0-Lisboa

File Edit View Layer Settings Plugins Vector Raster Database Web Help

- Pan Map
- Pan Map to Selection
- Zoom In Ctrl++
- Zoom Out Ctrl+-
- Select
- Identify Features Ctrl+Shift+I
- Measure
- Zoom Full Ctrl+Shift+F
- Zoom to Layer
- Zoom to Selection Ctrl+J
- Zoom Last
- Zoom Next
- Zoom Actual Size
- Decorations
- Map Tips
- New Bookmark... Ctrl+B
- Show Bookmarks Ctrl+Shift+B
- Refresh Ctrl+R
- Tile scale slider
- Panels
- Toolbars
- Toggle Full Screen Mode Ctrl+F

G211806
G211906
G212006
1498_00
1497_00
razrezTTn5_texts
razrezTTn5
zdr_Podrocje_Srheologija
1496_00
1495_00
Control rendering order

1:5.000
(91) 3214:586 = 18.23%



Coordinate: 378254,186865 Scale 1:1195025 Render EPSG:3794