

Filière Génie de l'Environnement & Géosciences (S3)

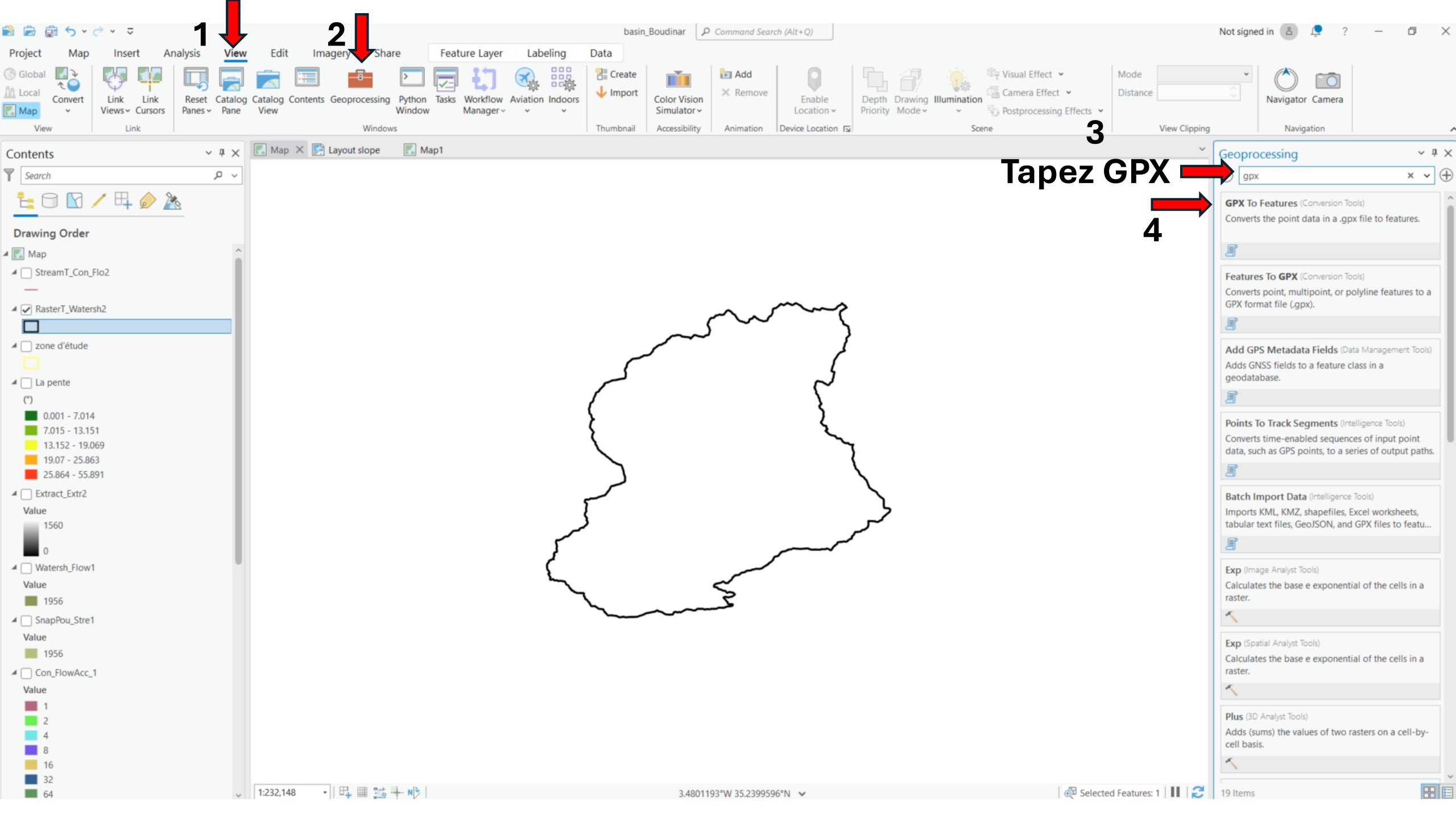
Module : Géomatique

**TP N°3 : l'interpolation spatiale à partir de
données ponctuelles**



Prof. Morad TAHER

Importation des coordonnées géographiques des points à partir de GPS portable



Geoprocessing

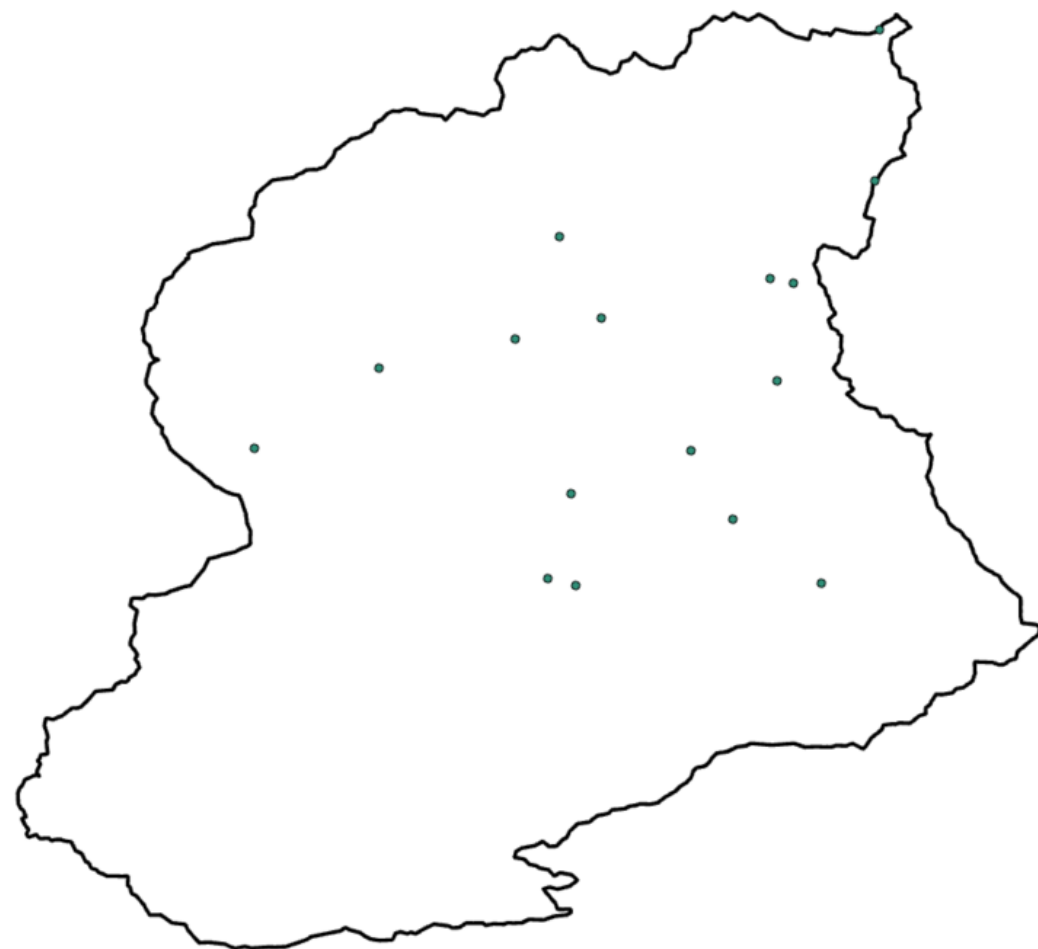
GPX To Features

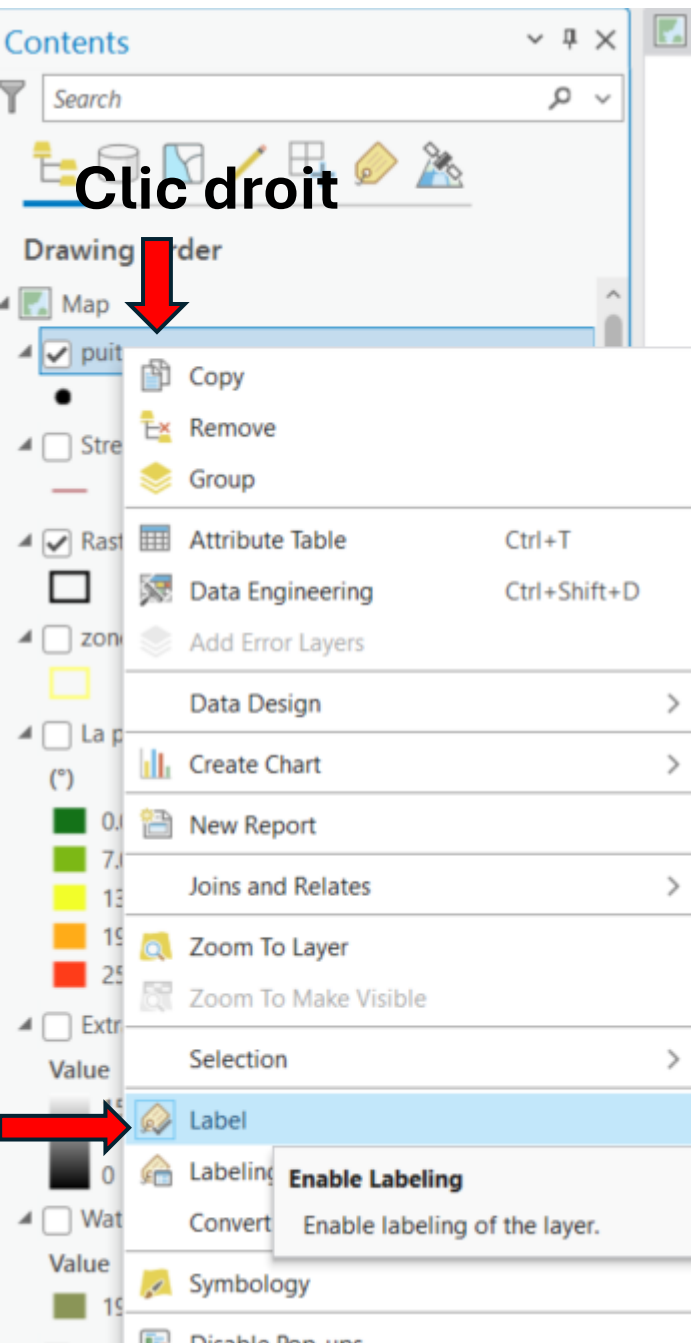
Parameters Environments

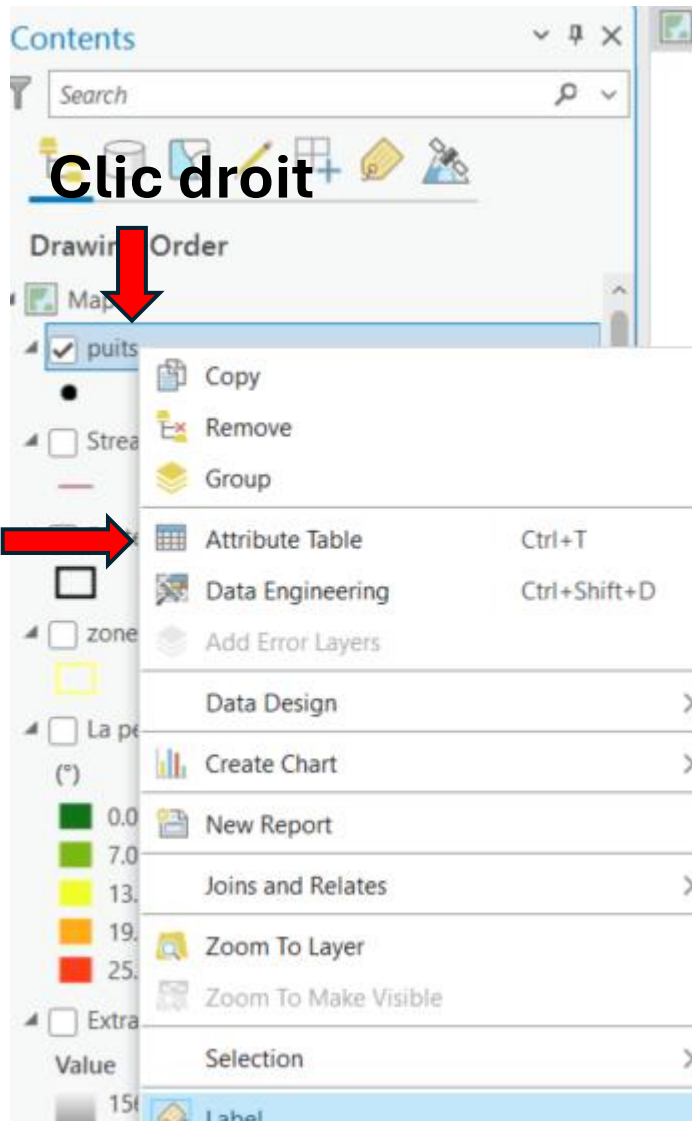
Input GPX File
C:\Users\HP\Desktop\TP rcgis pro\GPX\Waypoint

Output Feature class
puits.shp

Output Type
Points



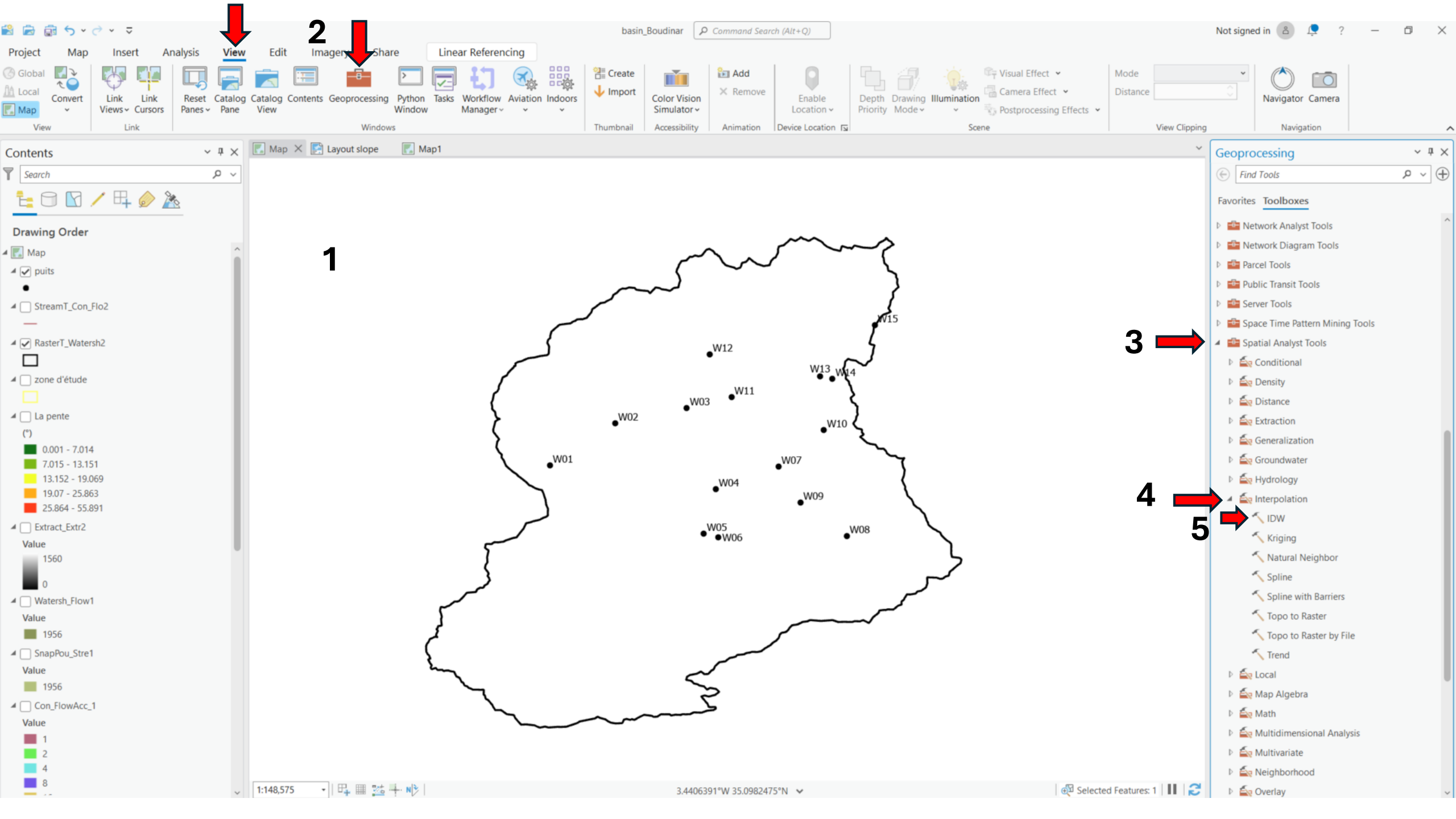


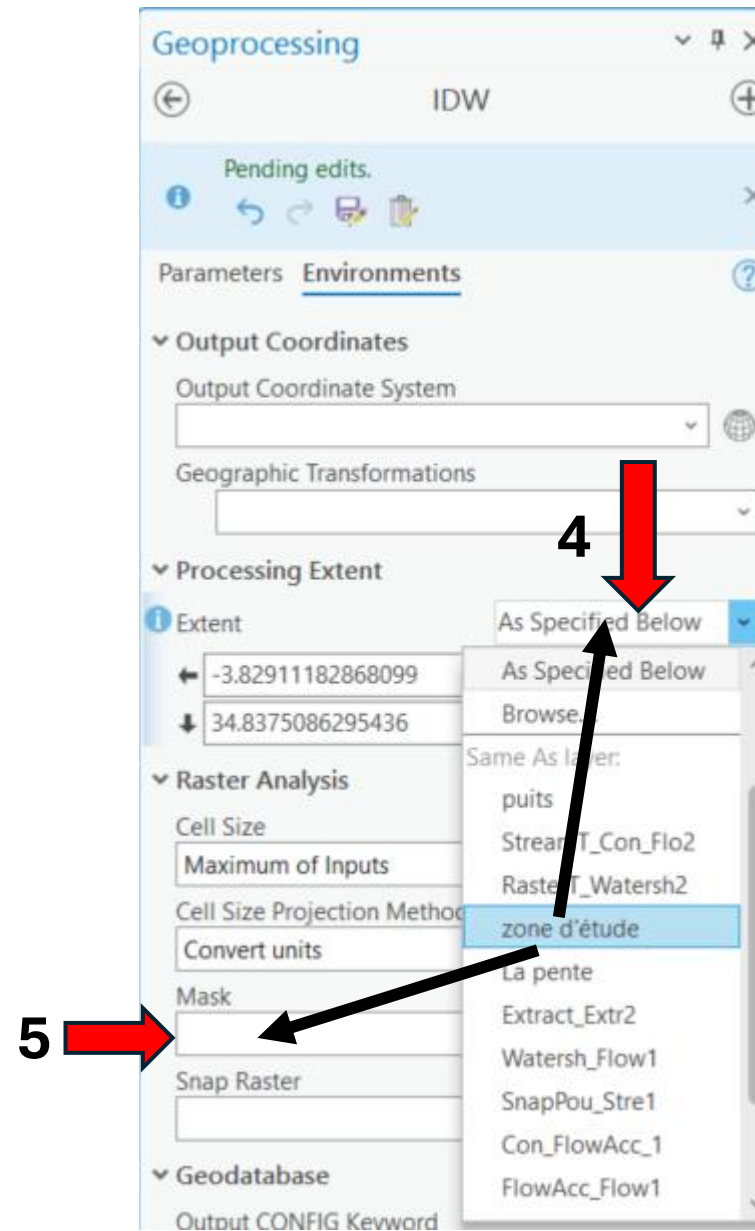
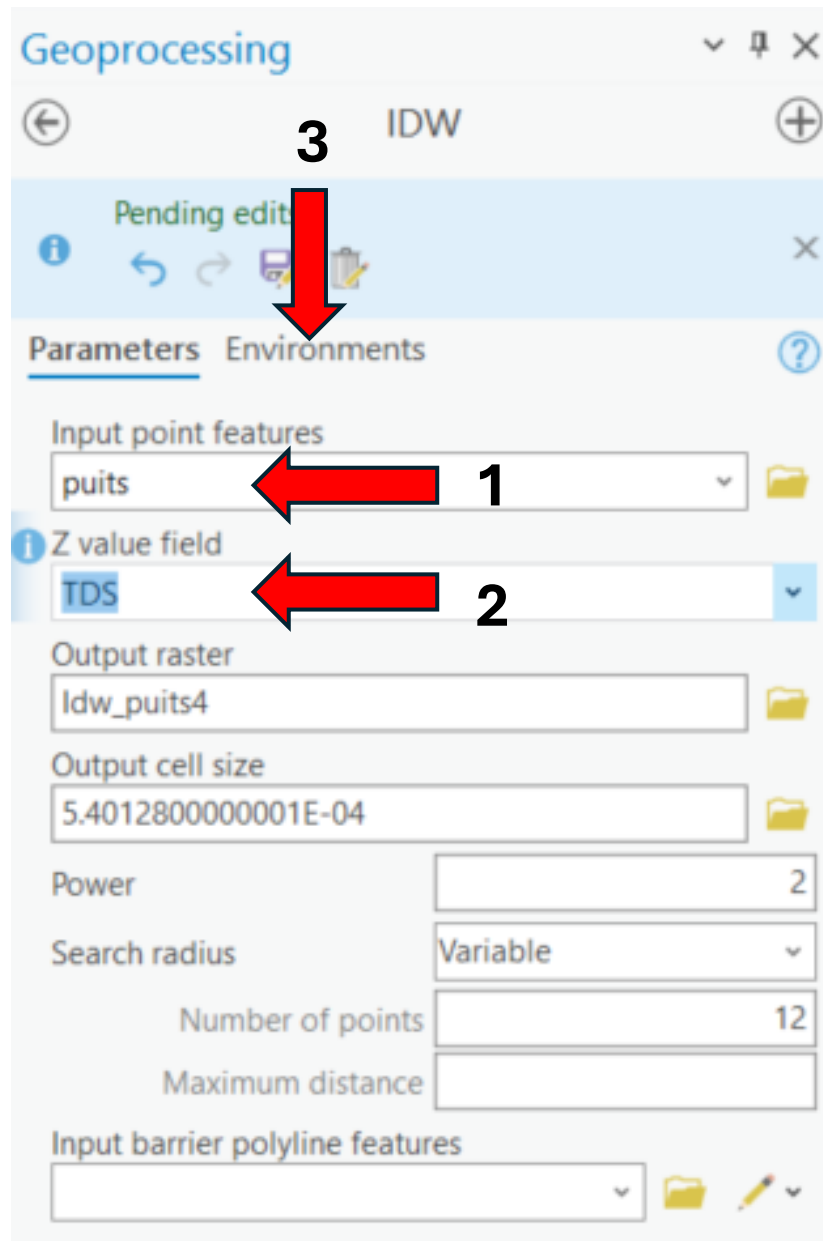


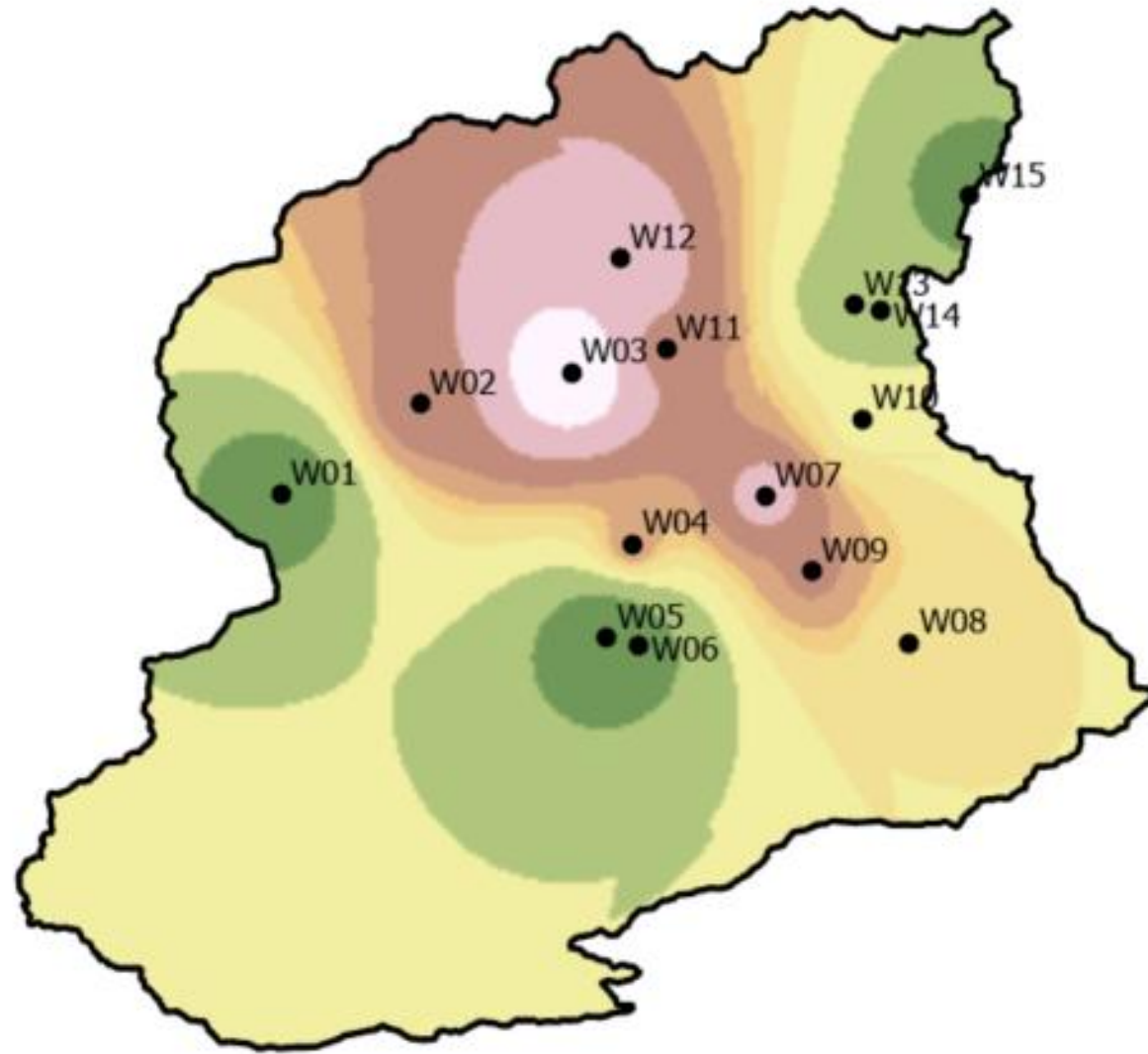
puits

Field: Add Calculate Selection: Select By Att

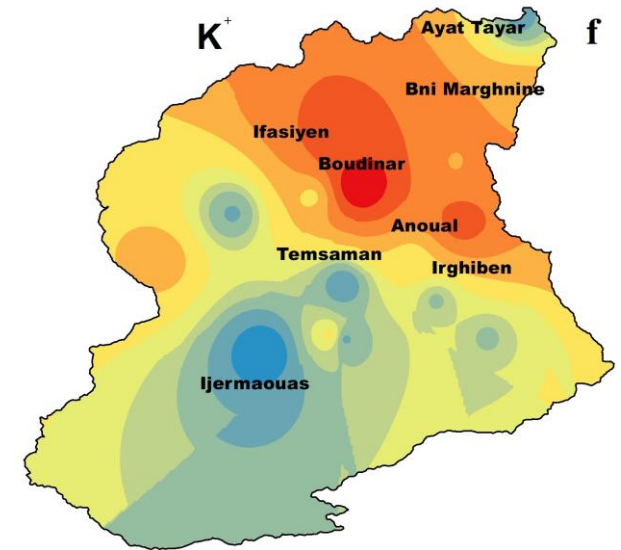
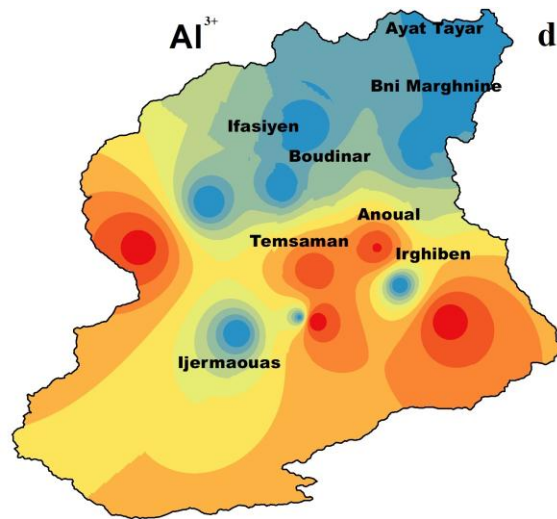
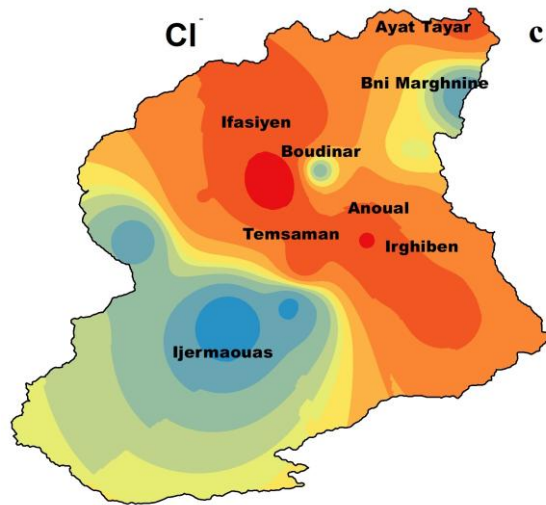
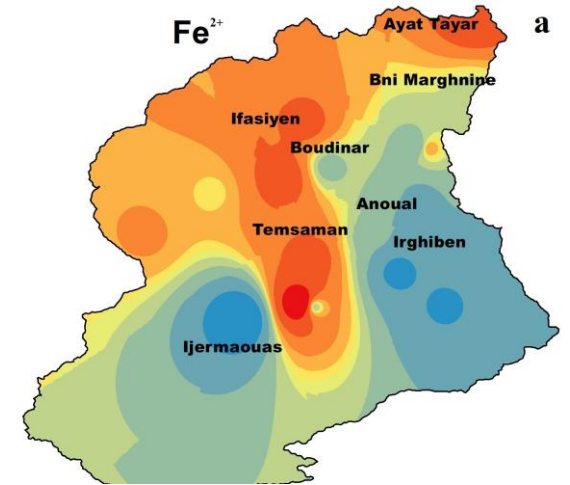
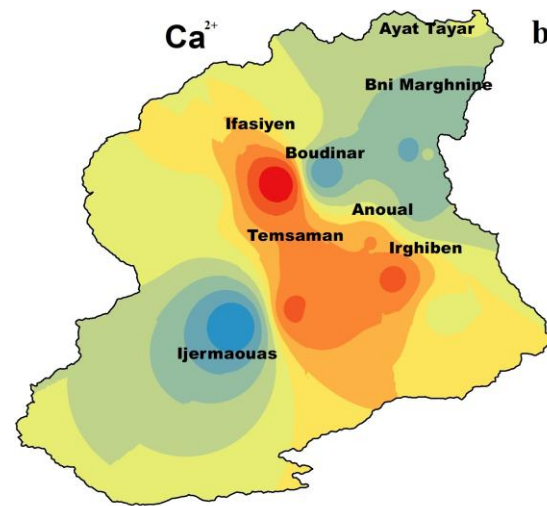
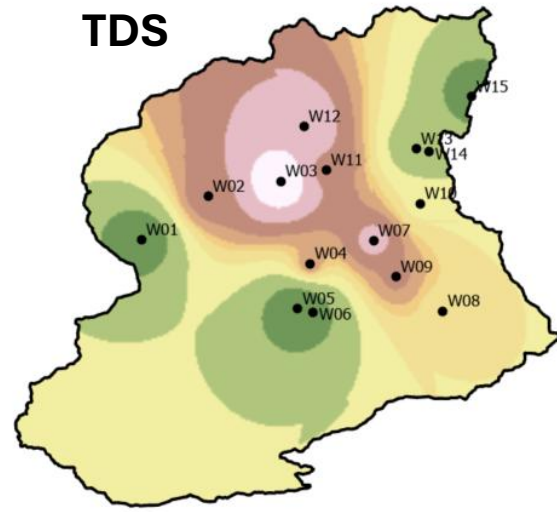
	FID	Shape *	Id	Name	Elevation
1	0	Point ZM	0	W01	718.641907
2	1	Point ZM	0	W02	500.257904
3	2	Point ZM	0	W03	188.159836
4	3	Point ZM	0	W04	349.304932
5	4	Point ZM	0	W05	386.464661
6	5	Point ZM	0	W06	377.063232
7	6	Point ZM	0	W07	361.113678
8	7	Point ZM	0	W08	494.110718
9	8	Point ZM	0	W09	421.870697
10	9	Point ZM	0	W10	386.841492
11	10	Point ZM	0	W11	279.366516
12	11	Point ZM	0	W12	139.590302







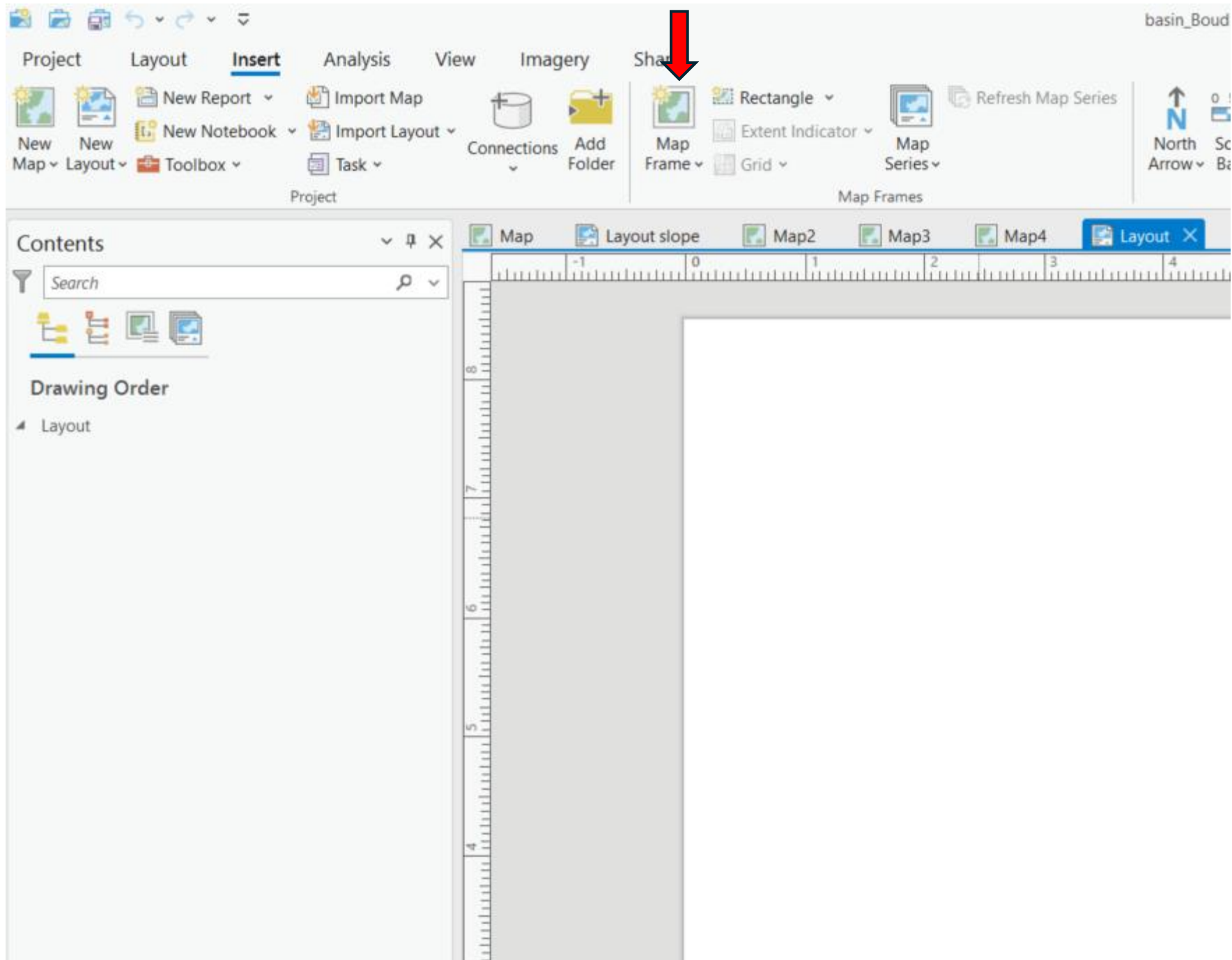
Faites la même chose pour les autres paramètres



**Ajouter plusieurs cartes thématiques dans la même
Layout de mise en page**

2





Project Layout **Insert** Analysis View Imagery Share Map Frame

New Map New Layout New Report New Notebook Import Map Import Layout Task

Connections Add Folder Map Frame Map Series

Rectangle Extent Indicator Map Series Refresh Map Series

North Arrow Scale Bar Legend Chart Table Additional Surrounds

Graphics and Text Dynamic Text Add New Import Add Item

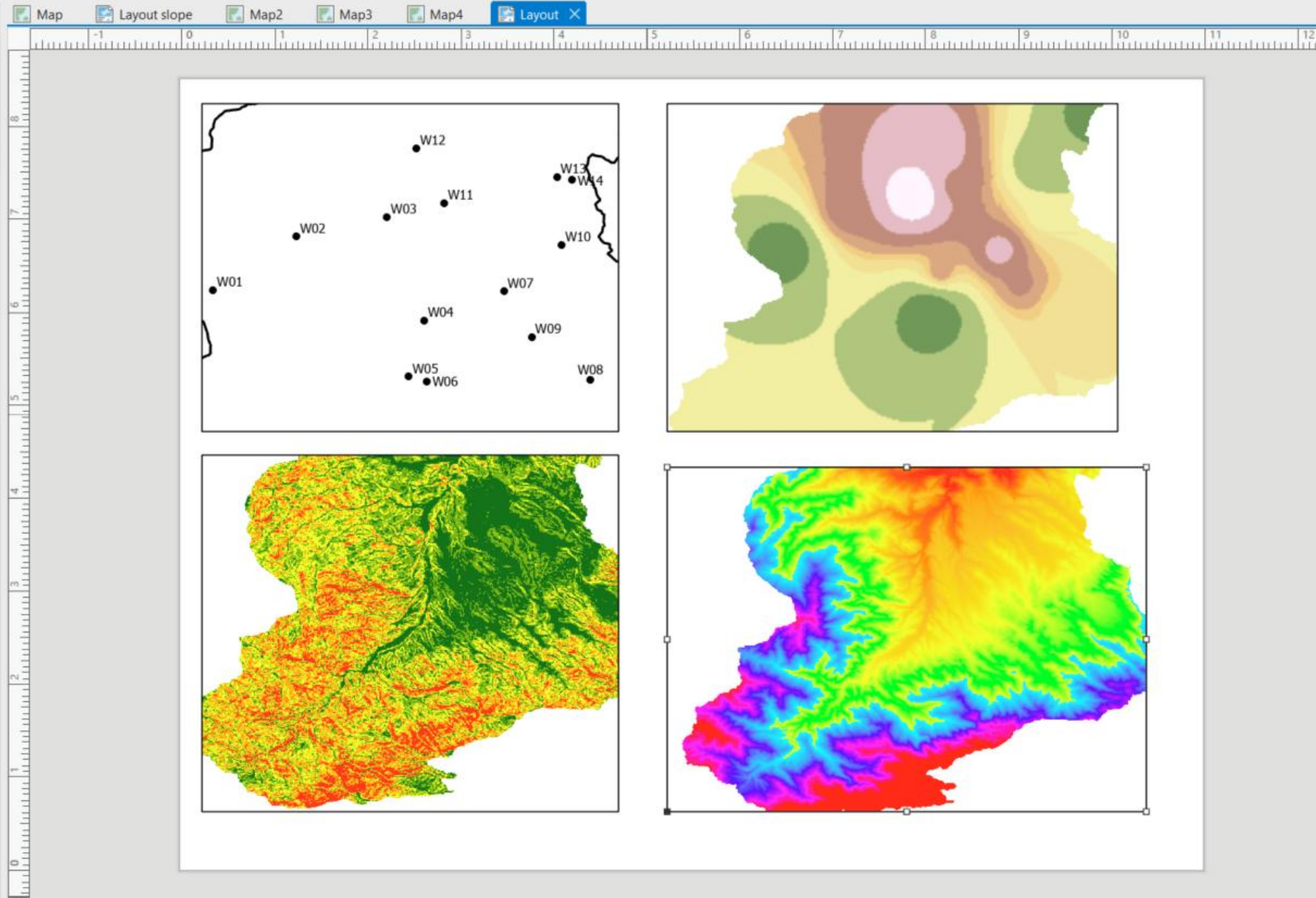
Contents

Search

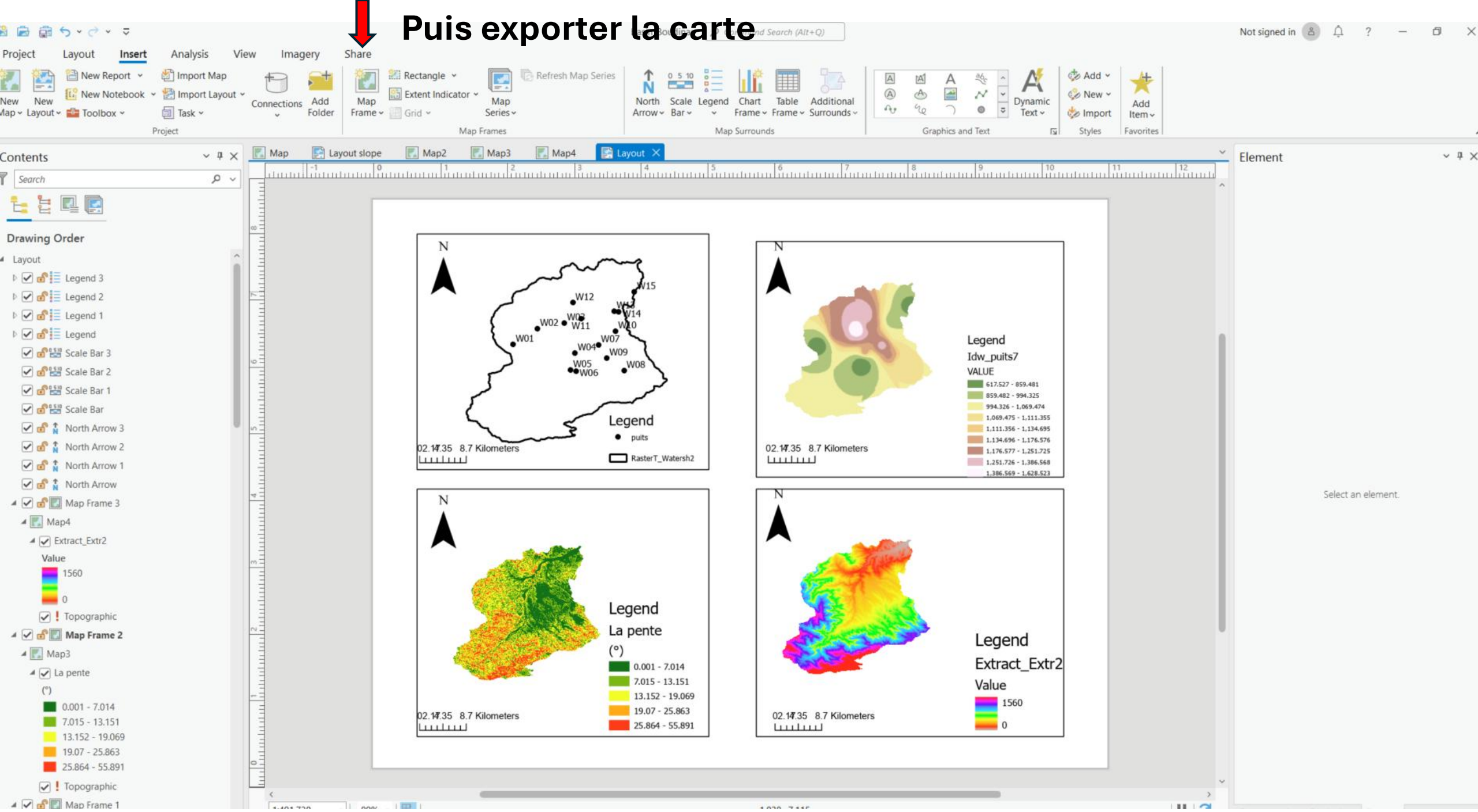


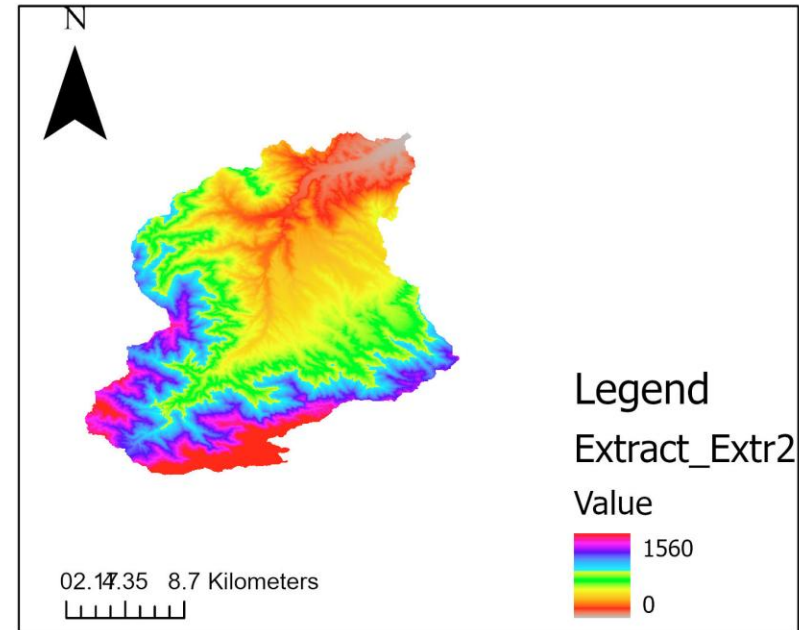
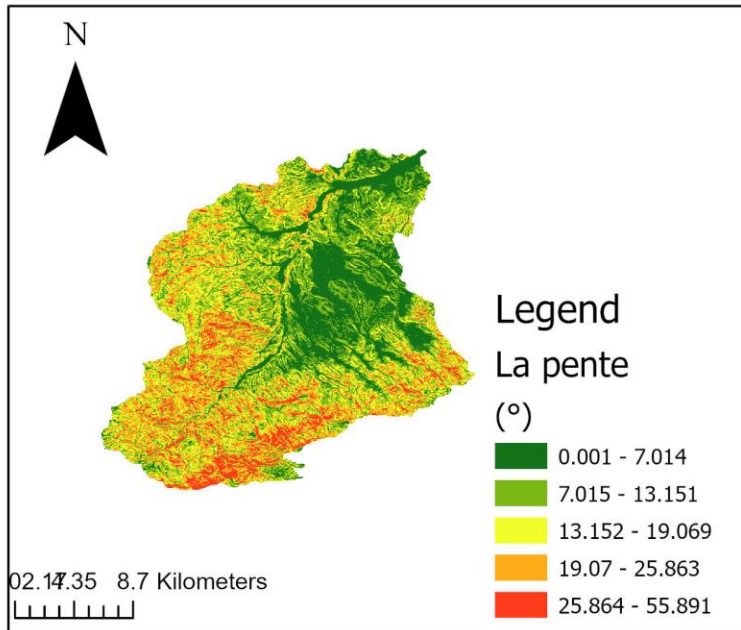
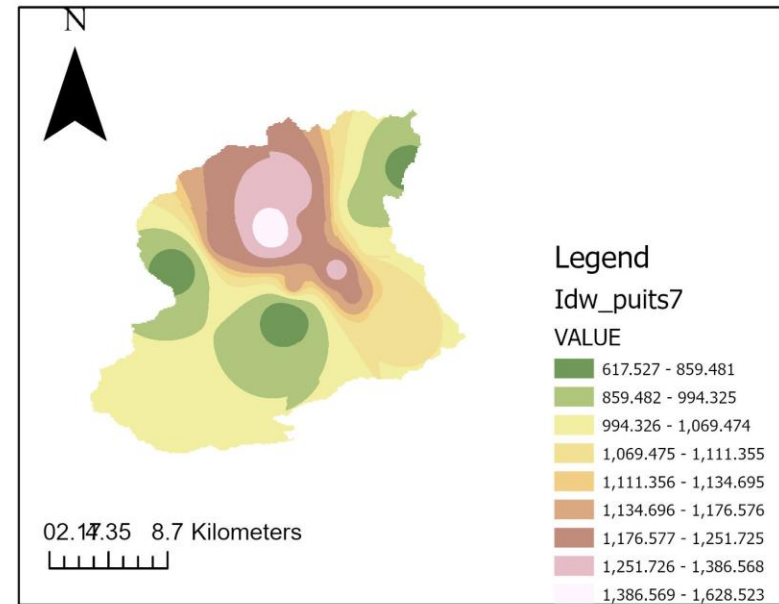
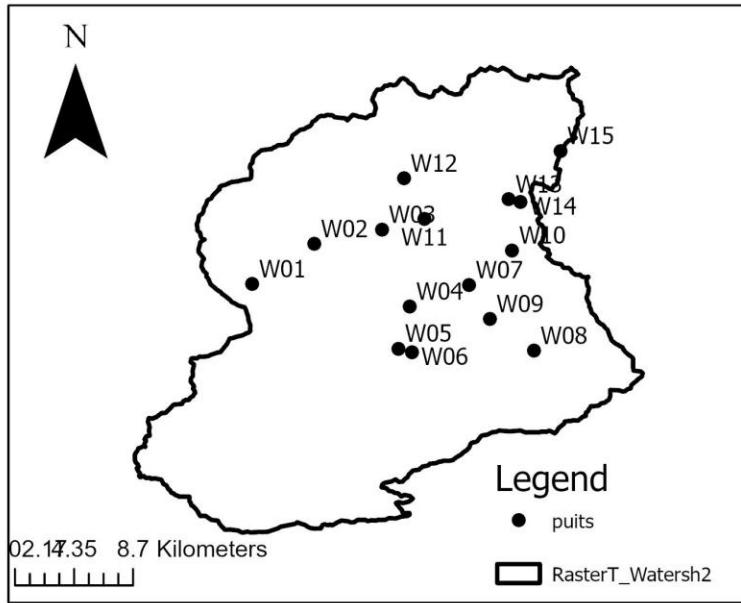
Drawing Order

- Layout
 - ☒ Map Frame 3
 - Map4
 - ☒ Extract_Extr2
 - Value
 - 1560
 - 0
 - ☒ Topographic
 - Map Frame 2
 - Map3
 - ☒ La pente
 - (°)
 - 0.001 - 7.014
 - 7.015 - 13.151
 - 13.152 - 19.069
 - 19.07 - 25.863
 - 25.864 - 55.891
 - ☒ Topographic
 - Map Frame 1
 - Map2
 - ☒ Idw_puits7
 - VALUE
 - 617.527 - 859.481
 - 859.482 - 994.325
 - 994.326 - 1,069.474
 - 1,069.475 - 1,111.355
 - 1,111.356 - 1,134.695
 - 1,134.696 - 1,176.576
 - 1,176.577 - 1,251.725
 - 1,251.726 - 1,386.568
 - 1,386.569 - 1,628.523



Puis exporter la carte





Visualisation 3D d'un MNT

basin_Boudinar Command Search (Alt+Q)

Project Map Insert Analysis View Edit Query Share

Cut Copy Paste Copy Path Clipboard

Explore Navigate

Bookmarks Go To XY

Basemap Add Data

Add Graphics Layer

Select Select By Attributes Select By Location Clear Zoom To

Measure Locate Infographics Coordinate Conversion

Pause Lock View Unplaced Convert Download Map Sync Remove

Labeling Offline

Contents

Search

Drawing Order

Map4

Extract_Extr2

Value

1560

0

Topographic

Elevation Surfaces

Ground

n35_w004_1arc_v3.tif

n34_w004_1arc_v3.tif

Map

Data

Add data to the map.

Data From Path

Add data using a local path or URL.

XY Point Data

Add x,y point data to the map.

Route Events

Add route event layer to the map.

Query Layer

Add query layer to the map.

Subtype Group Layer

Add subtype group layer to the map.

Address and Place Layer

Convert a table to places on the map.

Multidimensional Raster Layer

Add multidimensional raster layer to the map.

Elevation Source Layer

Add an elevation source layer to the ground.

Extract Locations

Map4

Layout

The screenshot displays the QGIS desktop environment. At the top, the 'Map' menu is highlighted with a red arrow and the number '1'. The 'Add Data' option in the 'Map' menu is also highlighted with a red arrow and the number '2'. A dropdown menu for 'Add Data' is open, showing various options. The 'Elevation Source Layer' option is highlighted with a red arrow and the number '3'. In the background, a 3D elevation map is visible, showing a terrain with a color gradient from blue (low elevation) to red (high elevation). The map is titled 'Map4' and is part of a project named 'basin_Boudinar'.

basin_Boudinar Command S

Project **Map** Insert Analysis View Edit Imagery Share

Cut Copy Paste Copy Path Clipboard

Explore Navigate Bookmarks Go To XY

Basemap Add Data Layer

Add Graphics Layer

Select Select By Attributes Select By Location Clear Zoom To Selection

Measure Locate Infographics Inquiry

Contents

Search

Drawing Order

Map4

Extract_Ext2

Value

1560

0

Topographic

Elevation Surfaces

Ground

n35_w004_1arc_v3.tif

n34_w004_1arc_v3.tif

Add Elevation Source Layer

TP rcgis pro MNT Boudinar

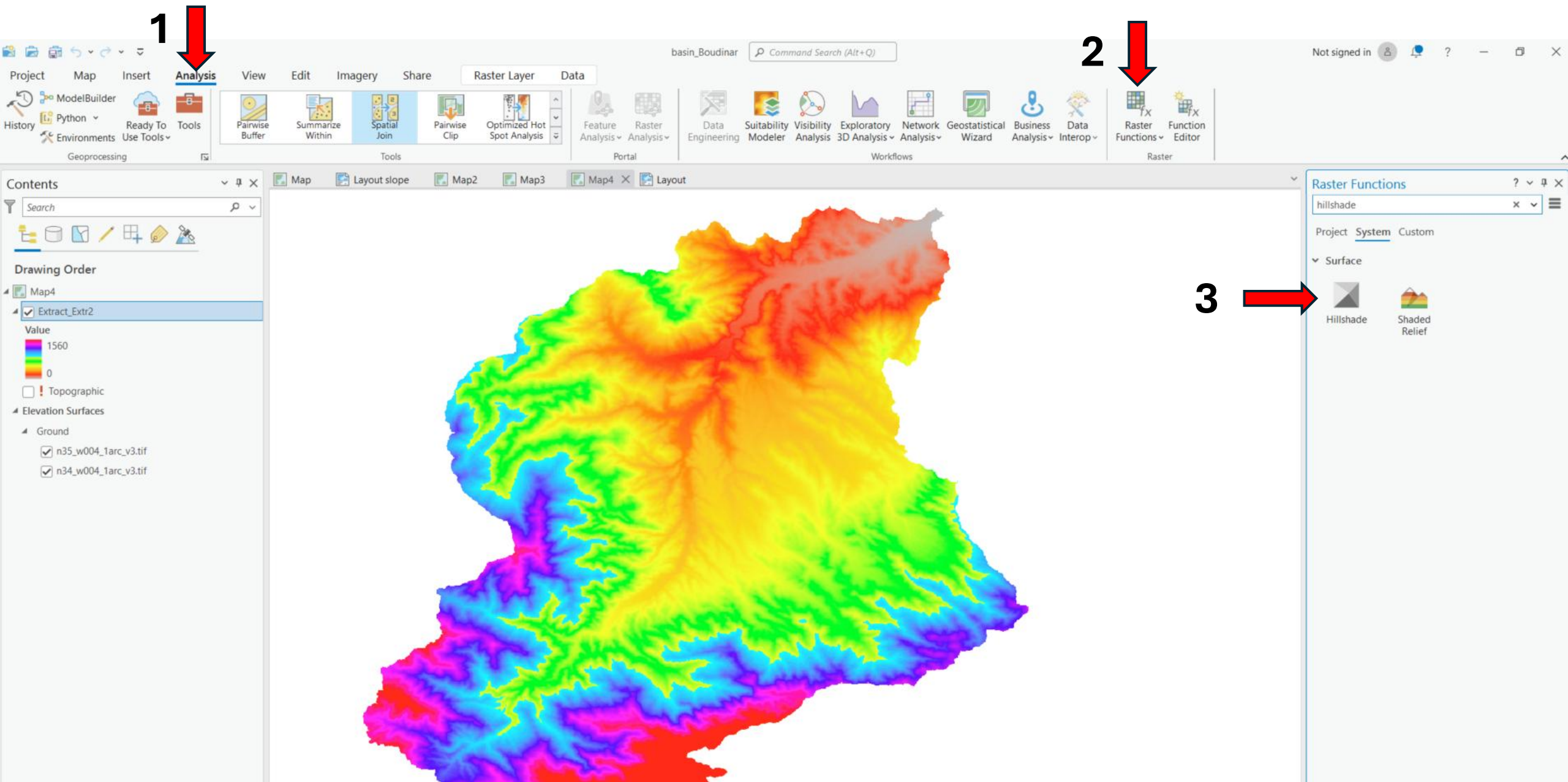
Search MNT Boudinar

Organize New Item

	Name	Type	Date M
Project			
Databases			
Folders			
Portal			
My Content			
My Favorites			
My Groups			
My Organization			
ArcGIS Online			
Living Atlas			
	basin_Boudinar	Folder	8/28/20
	boudinar.tif	Raster Dataset	8/28/20
	n34_w004_1arc_v3.tif	Raster Dataset	8/28/20
	n35_w004_1arc_v3.tif	Raster Dataset	8/28/20

Name Elevation Surfaces (All Types)

OK Cancel



Raster Functions

Hillshade Properties

General Parameters

Raster
Extract_Extr2

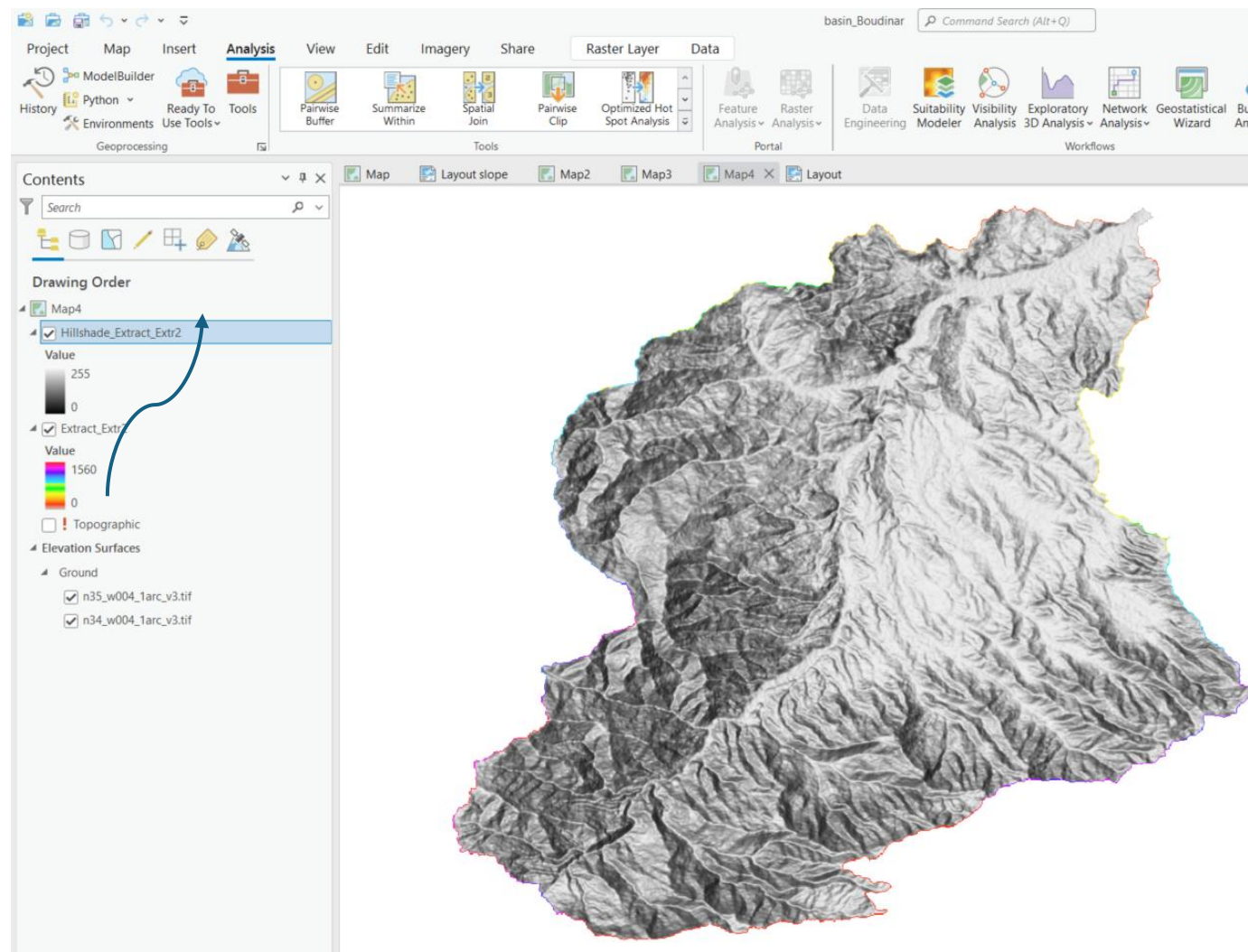
Hillshade Type
Multidirectional

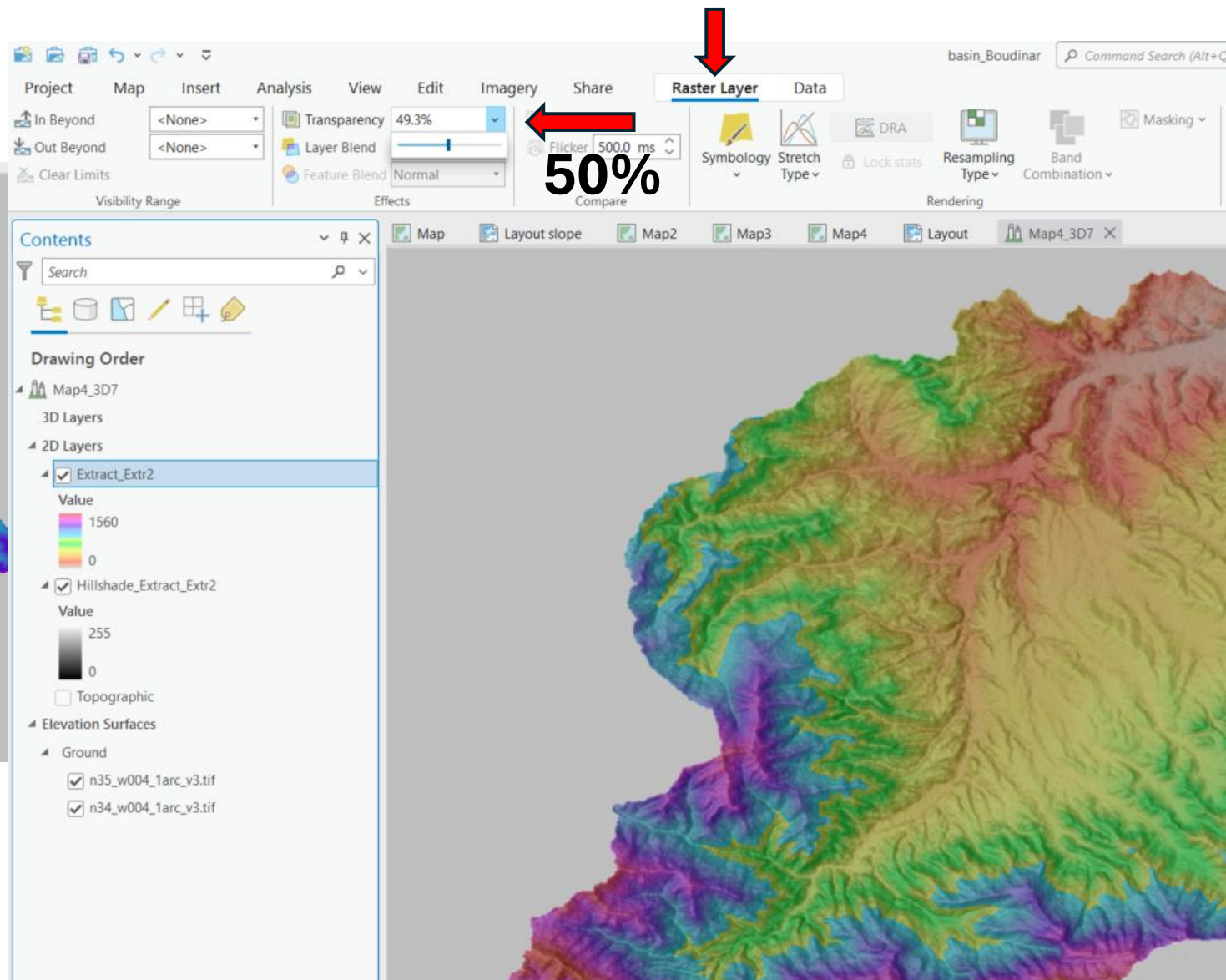
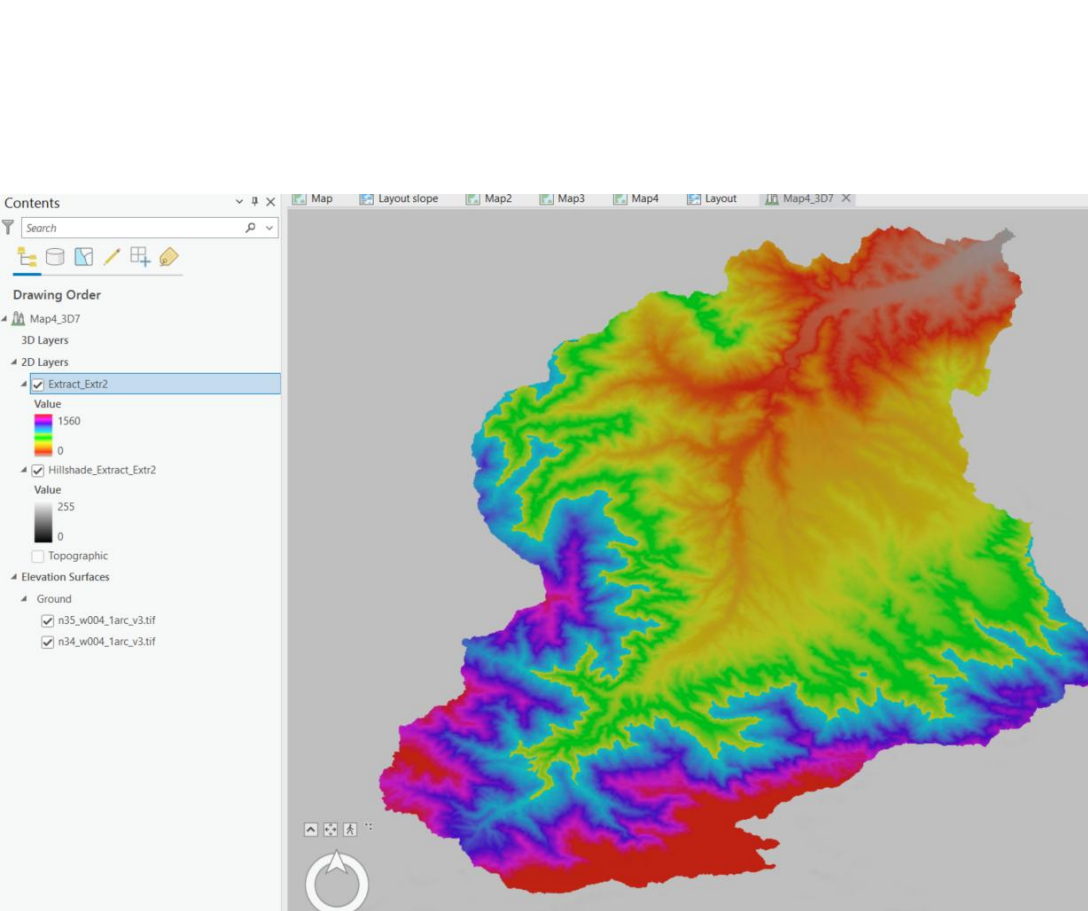
Scaling
None

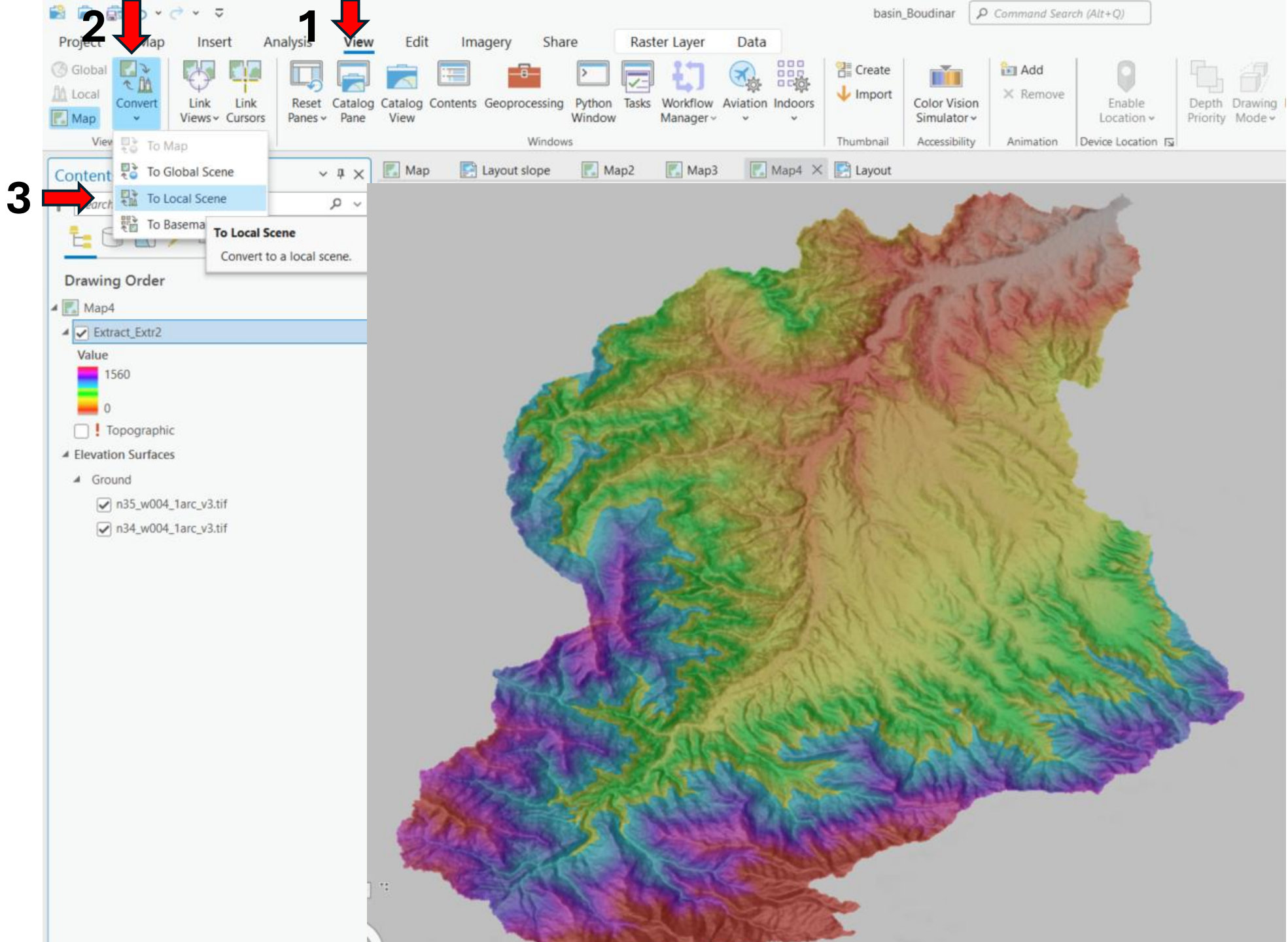
Z Factor
2

☐ Disable default edge pixel interpolation

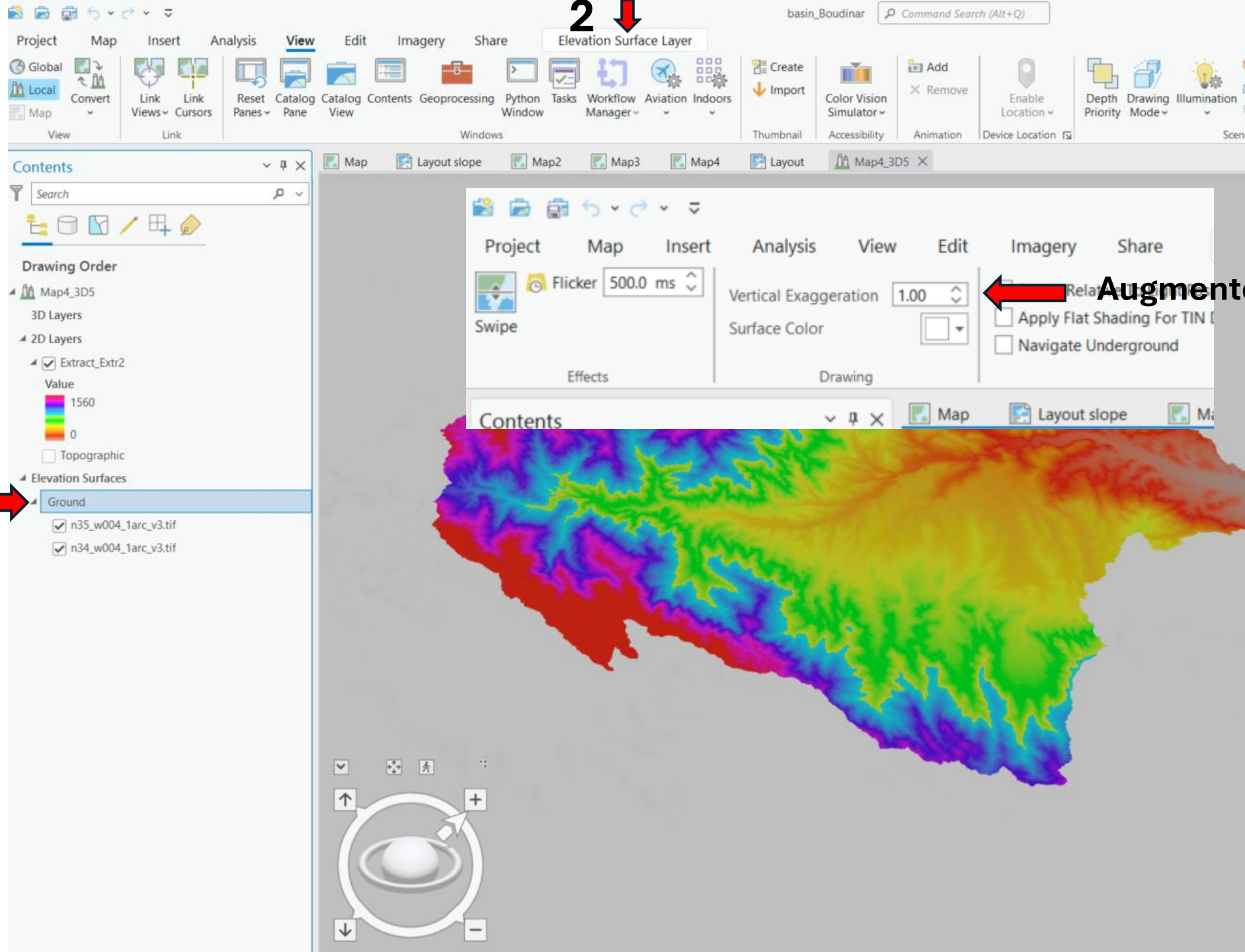
Create new layer







1
Clic sur
ground



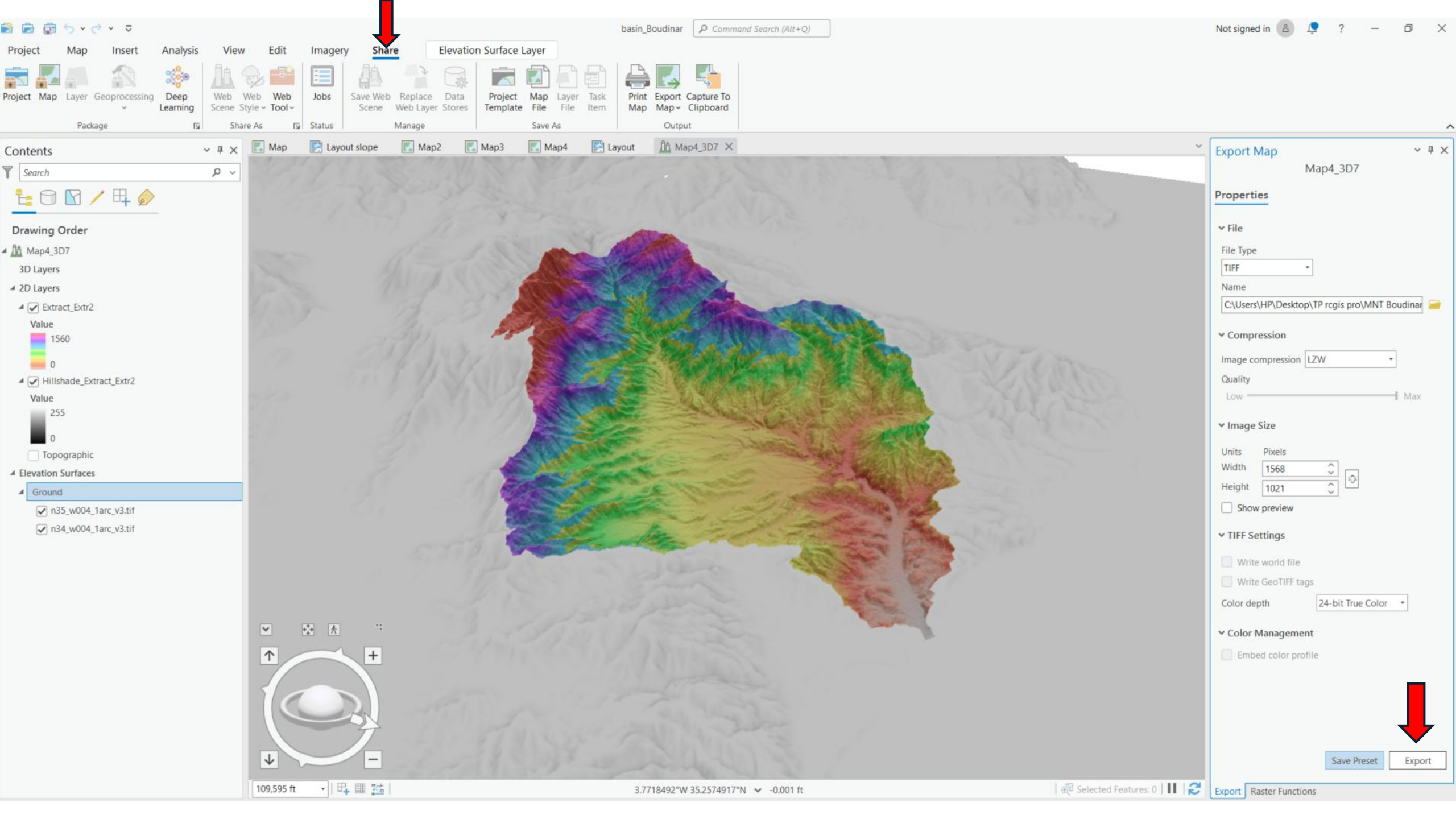
2

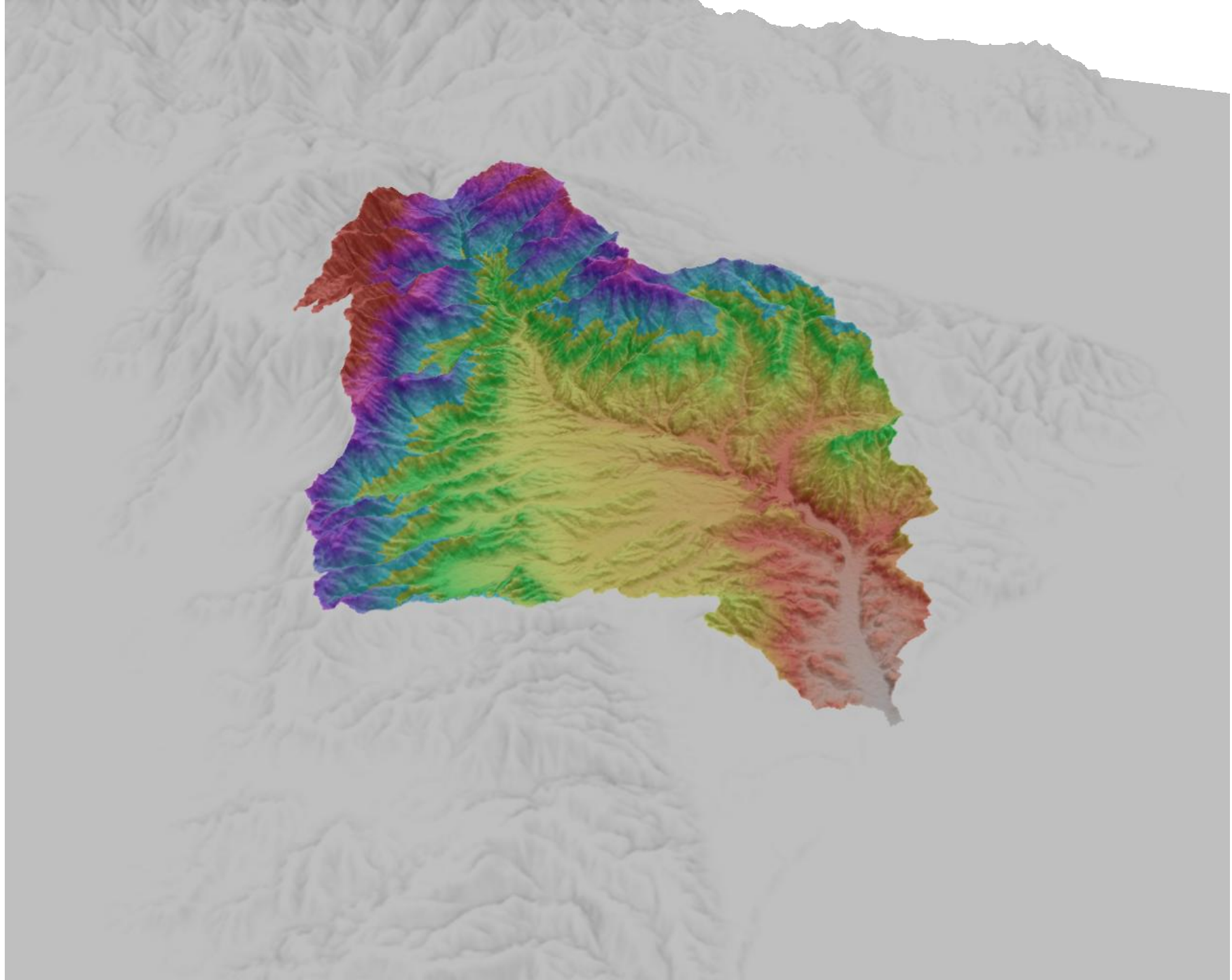


3

Augmenter le chiffre







Travail à faire :

Cartographie thématique

Soil sample N°	Longitude	Latitude	pH	BW%	OM%	CaCO ₃	X(10 ⁻⁶ SI)
S01	3.71301	35.12664	8.014	1.85	1.56	0.16	4000
S02	3.68038	35.13802	8.513	1.57	1.88	2.90	92
S03	3.63966	35.10393	8.330	3.67	2.91	3.14	2625
S04	3.68120	35.06073	8.389	2.88	1.94	0.97	1670
S05	3.66928	35.07542	8.572	1.77	1.29	1.41	1235
S06	3.61061	35.11447	8.528	1.86	1.99	2.49	2490
S07	3.60037	35.13375	8.527	2.03	1.84	3.78	782
S08	3.65865	35.18137	8.542	1.10	1.25	1.63	509
S09	3.58561	35.15503	8.350	2.37	2.09	5.68	2460
S10	3.56610	35.21595	8.324	4.38	2.69	1.99	42