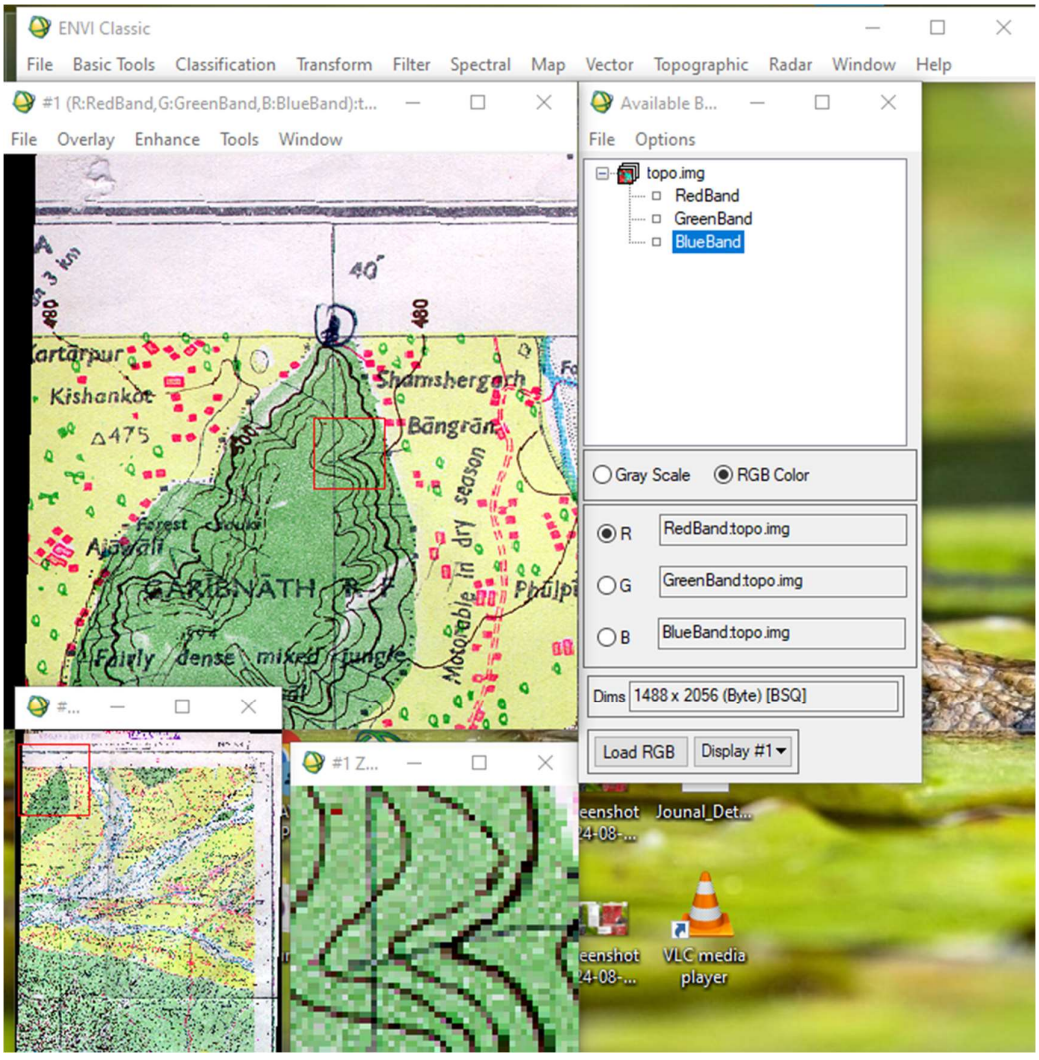
SRIMAYA MOHAPATRA ,244104010

LAB 3 ASSIGNMENT

CE 593 ADVANCED REMOTE SENSING

Georeference a Toposheet

GCP IMAGE



GCP IMAGE TO MAP

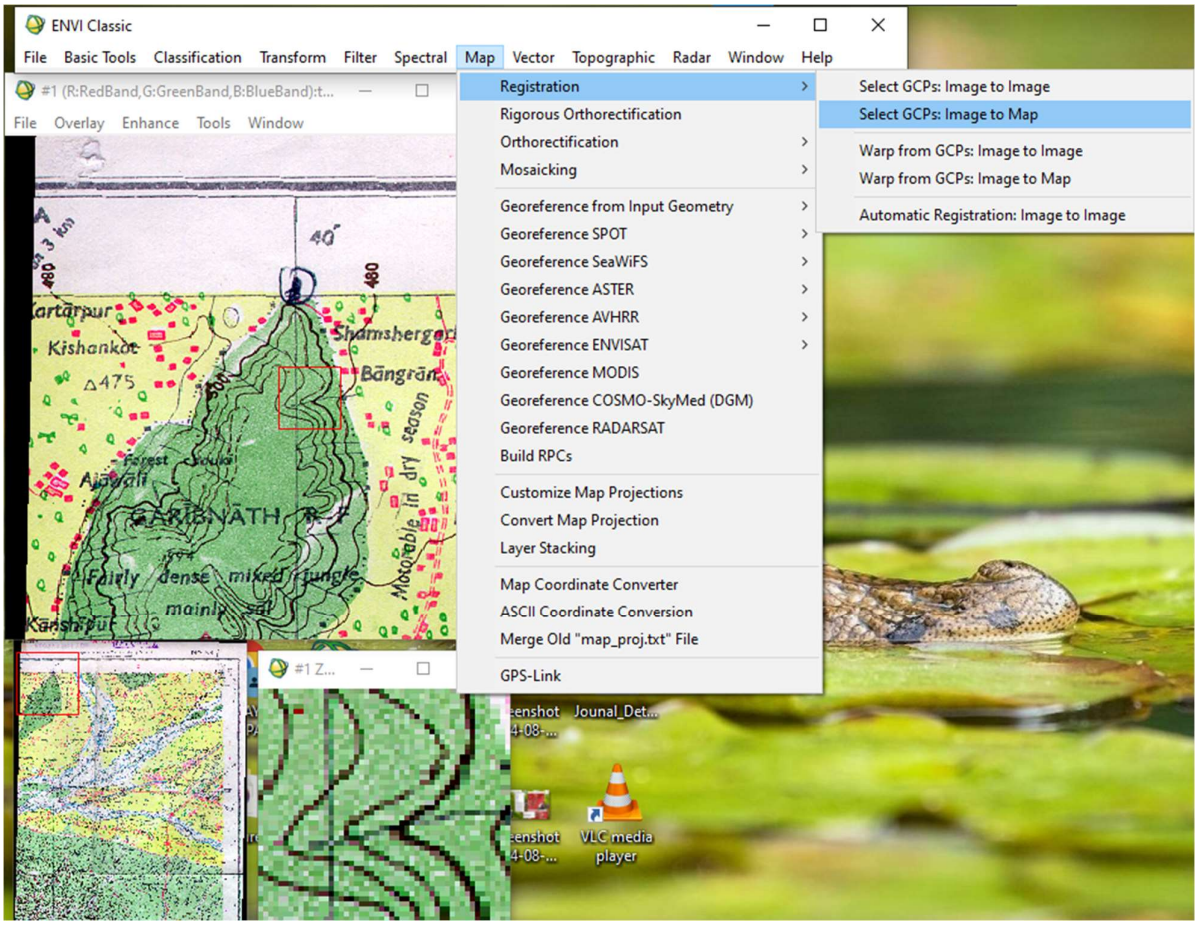
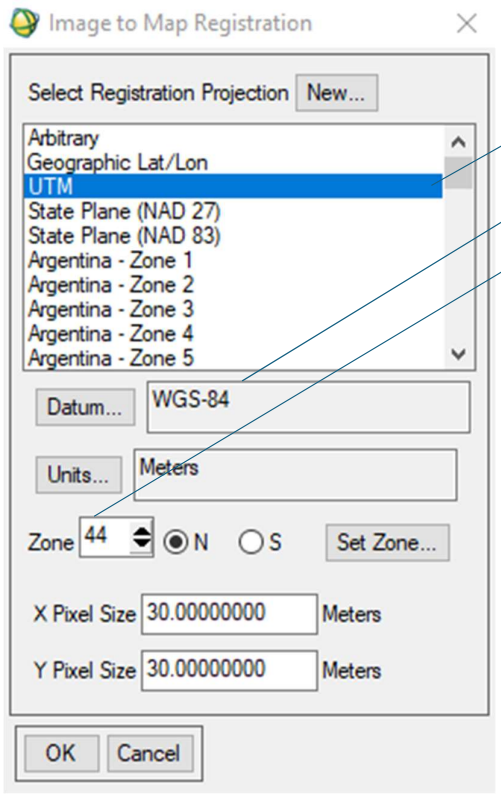


IMAGE TO MAP REGISTRATION

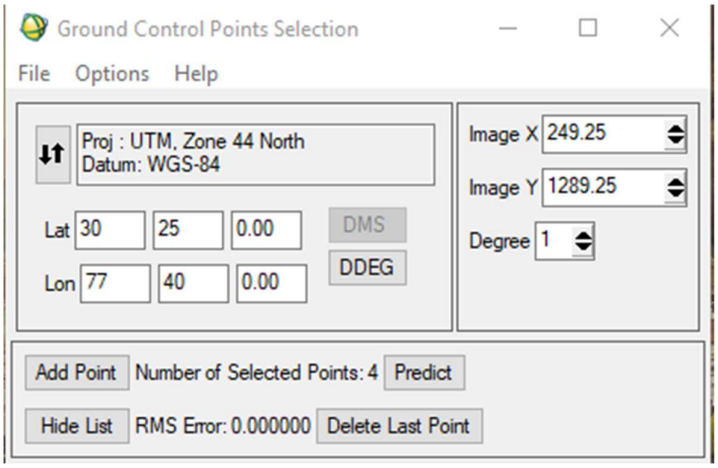


Registration Projection – UTM

Datum – WGS-84

Zone – 44

LAT. LON. OF GCP SELECTION



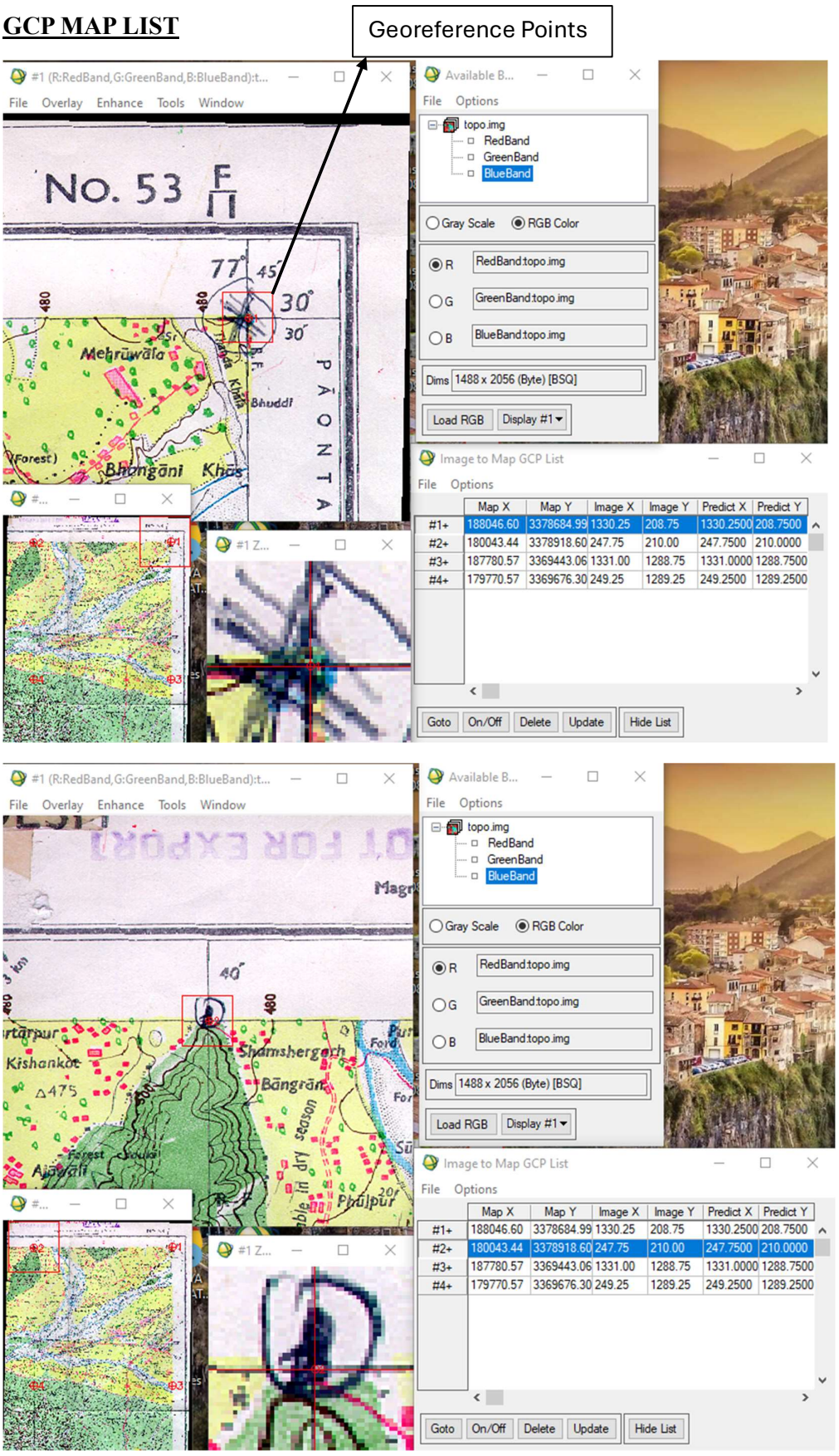
POINT	LAT	LON
1	30.30^0 N	77.45^0 E
2	30.30^0 N	77.40^0 E
3	30.25^0 N	77.45^0 E
4	30.25^0 N	77.40^0 E

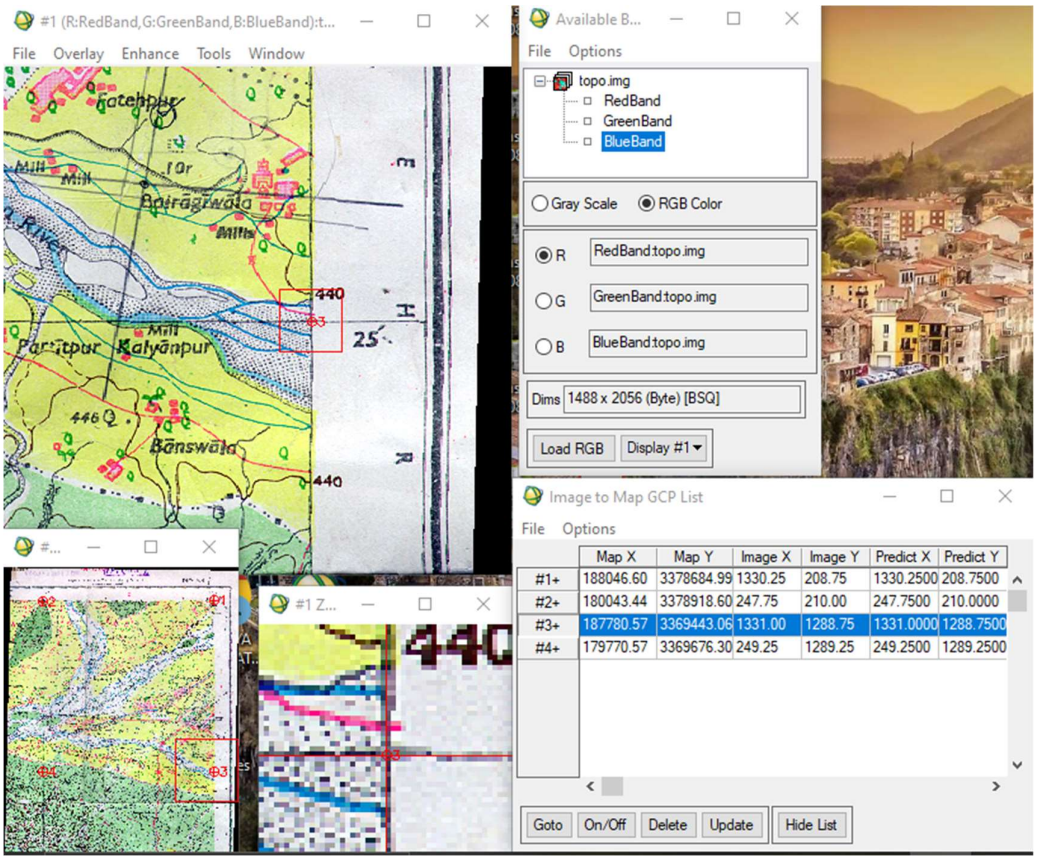
SHOW LIST

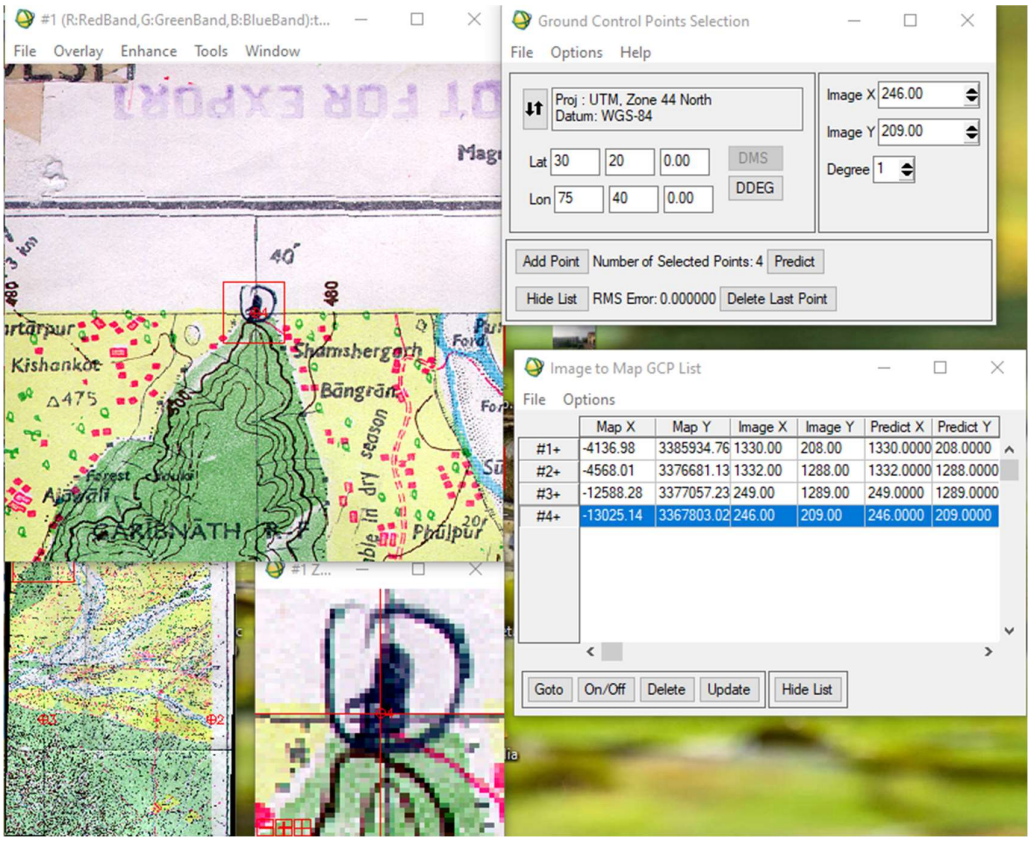
	Image X	Image Y	Predict X	Predict Y	Error X	Error Y	
#1+	1330.25	208.75	1330.2500	208.7500	0.0000	-0.0000	0.
#2+	247.75	210.00	247.7500	210.0000	0.0000	-0.0000	0.
#3+	1331.00	1288.75	1331.0000	1288.7500	-0.0000	0.0000	0.
#4+	249.25	1289.25	249.2500	1289.2500	-0.0000	-0.0000	0.

To check the RMS error and to select the points

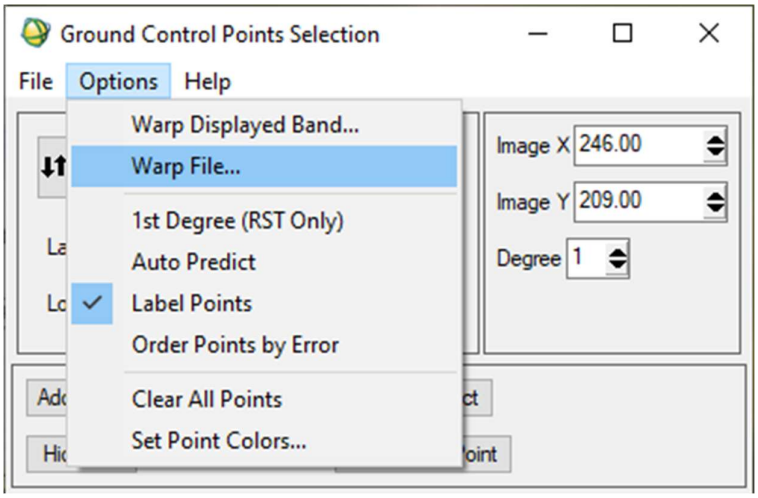
GCP MAP LIST


Georeference Points
#1 (R:RedBand,G:GreenBand,B:BlueBand):t...
File Overlay Enhance Tools Window
NO. 53 F
Mehruwala
Bhongani Khas
PAONTA
Available B...
File Options
topo.img
RedBand
GreenBand
BlueBand
Gray Scale
RGB Color
R
RedBand:topo.img
G
GreenBand:topo.img
B
BlueBand:topo.img
Dims 1488 x 2056 (Byte) [BSQ]
Load RGB
Display #1
Image to Map GCP List
File Options
Map X Map Y Image X Image Y Predict X Predict Y
#1+ 188046.60 3378684.99 1330.25 208.75 1330.2500 208.7500
#2+ 180043.44 3378918.60 247.75 210.00 247.7500 210.0000
#3+ 187780.57 3369443.06 1331.00 1288.75 1331.0000 1288.7500
#4+ 179770.57 3369676.30 249.25 1289.25 249.2500 1289.2500
Goto On/Off Delete Update Hide List
#1 (R:RedBand,G:GreenBand,B:BlueBand):t...
File Overlay Enhance Tools Window
Kishankot
Shamshergarh
Bangran
Phulpur
Available B...
File Options
topo.img
RedBand
GreenBand
BlueBand
Gray Scale
RGB Color
R
RedBand:topo.img
G
GreenBand:topo.img
B
BlueBand:topo.img
Dims 1488 x 2056 (Byte) [BSQ]
Load RGB
Display #1
Image to Map GCP List
File Options
Map X Map Y Image X Image Y Predict X Predict Y
#1+ 188046.60 3378684.99 1330.25 208.75 1330.2500 208.7500
#2+ 180043.44 3378918.60 247.75 210.00 247.7500 210.0000
#3+ 187780.57 3369443.06 1331.00 1288.75 1331.0000 1288.7500
#4+ 179770.57 3369676.30 249.25 1289.25 249.2500 1289.2500
Goto On/Off Delete Update Hide List


#1 (R:RedBand,G:GreenBand,B:BlueBand):t...
File Overlay Enhance Tools Window
Available B...
File Options
topo.img
RedBand
GreenBand
BlueBand
Gray Scale
RGB Color
R
RedBand:topo.img
G
GreenBand:topo.img
B
BlueBand:topo.img
Dims 1488 x 2056 (Byte) [BSQ]
Load RGB
Display #1
Image to Map GCP List
File Options
Map X Map Y Image X Image Y Predict X Predict Y
#1+ 188046.60 3378684.99 1330.25 208.75 1330.2500 208.7500
#2+ 180043.44 3378918.60 247.75 210.00 247.7500 210.0000
#3+ 187780.57 3369443.06 1331.00 1288.75 1331.0000 1288.7500
#4+ 179770.57 3369676.30 249.25 1289.25 249.2500 1289.2500
Goto On/Off Delete Update Hide List

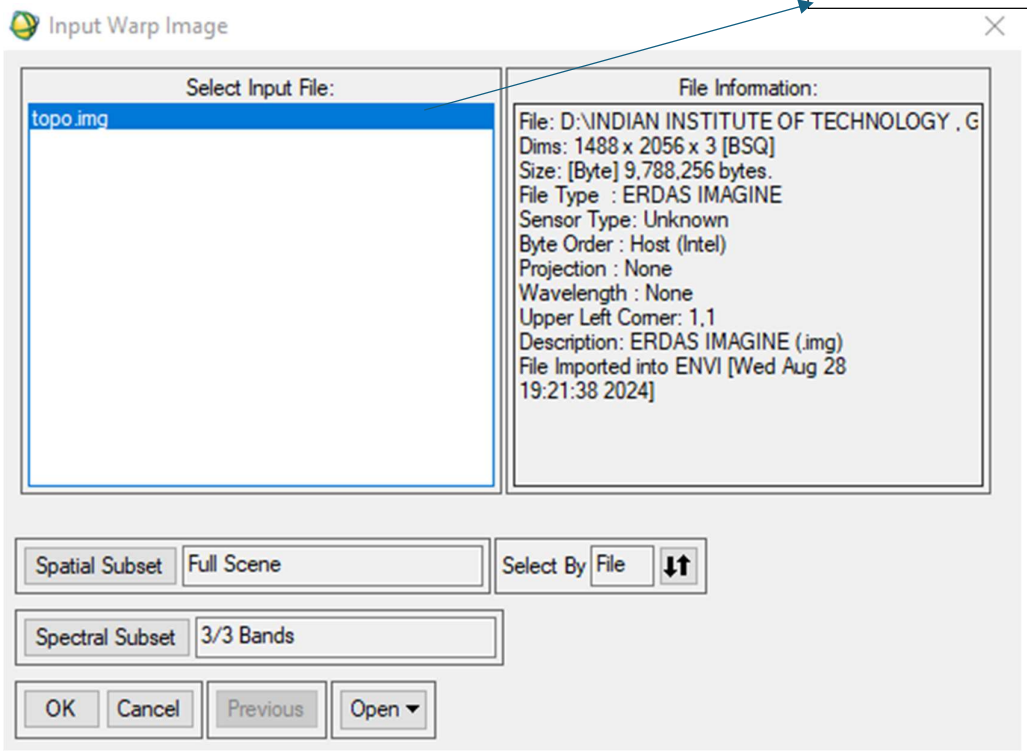

#1 (R:RedBand,G:GreenBand,B:BlueBand):t...
File Overlay Enhance Tools Window
Ground Control Points Selection
File Options Help
Proj : UTM, Zone 44 North
Datum: WGS-84
Lat 30 20 0.00 DMS
Lon 75 40 0.00 DDEG
Image X 246.00
Image Y 209.00
Degree 1
Add Point Number of Selected Points: 4 Predict
Hide List RMS Error: 0.000000 Delete Last Point
Image to Map GCP List
File Options
Map X Map Y Image X Image Y Predict X Predict Y
#1+ -4136.98 3385934.76 1330.00 208.00 1330.0000 208.0000
#2+ -4568.01 3376681.13 1332.00 1288.00 1332.0000 1288.0000
#3+ -12588.28 3377057.23 249.00 1289.00 249.0000 1289.0000
#4+ -13025.14 3367803.02 246.00 209.00 246.0000 209.0000
Goto On/Off Delete Update Hide List

WRAP FILE

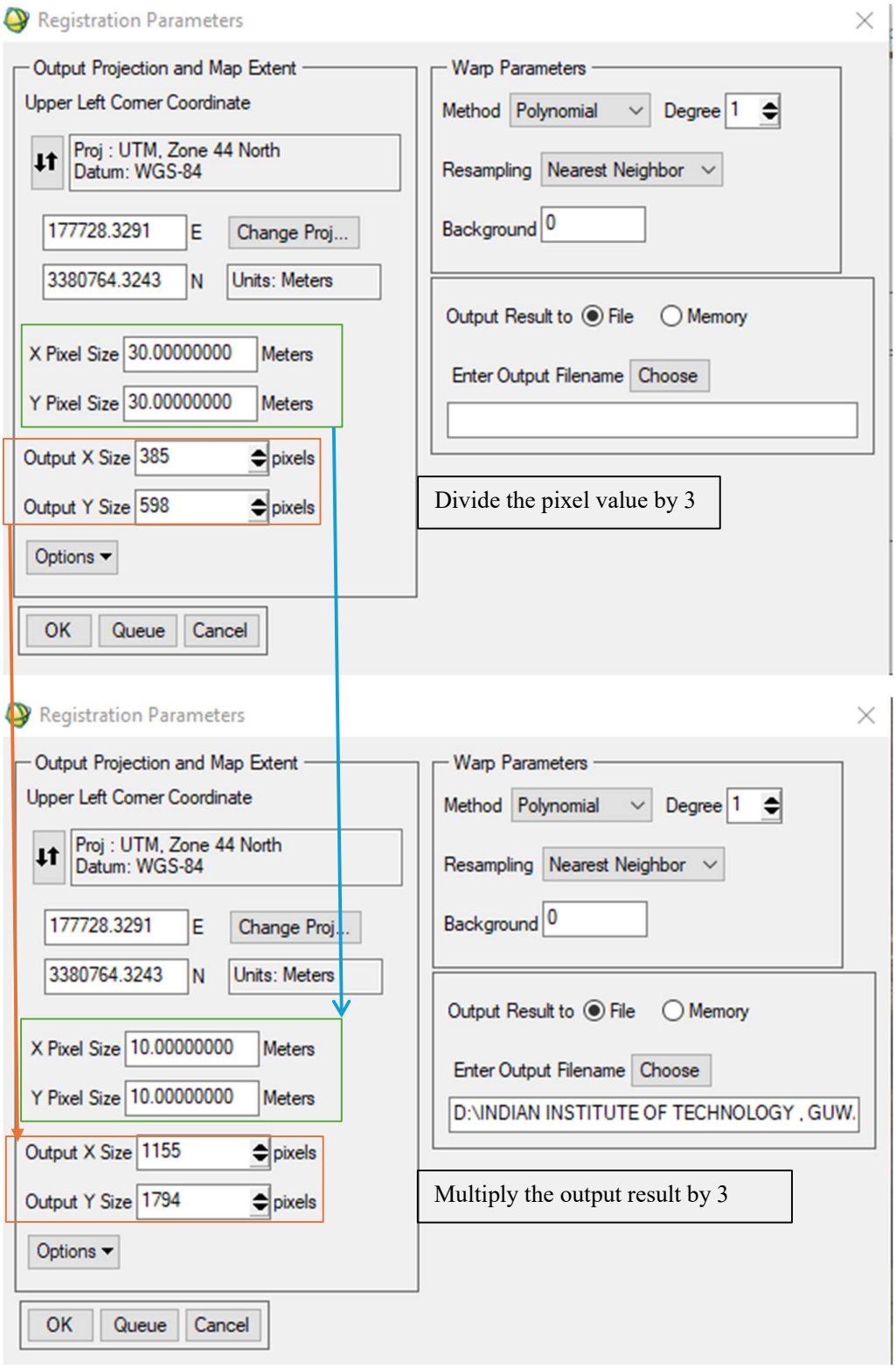


Wrap file to align with its actual coordinates

Select the input image

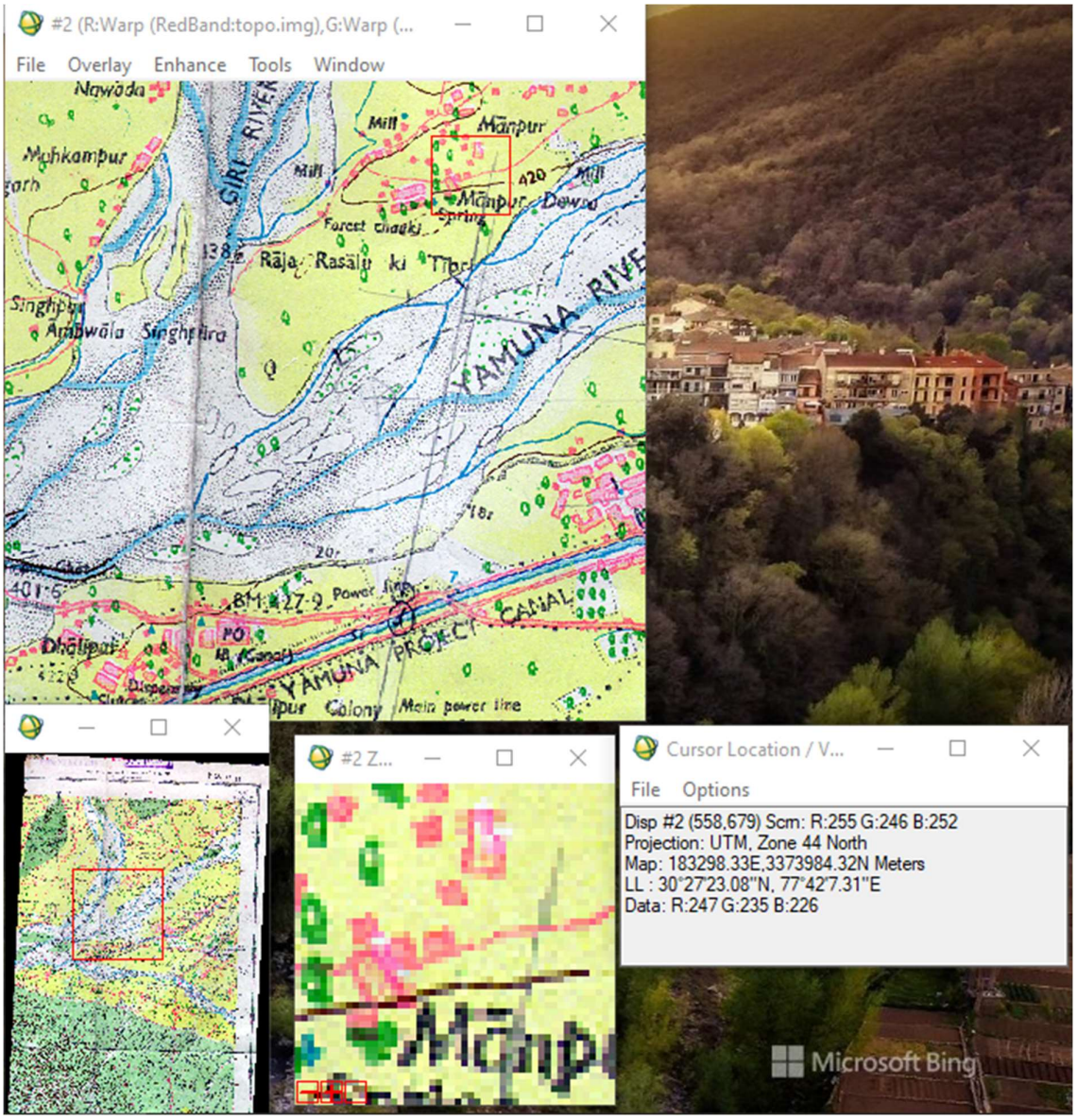


PARAMETERS



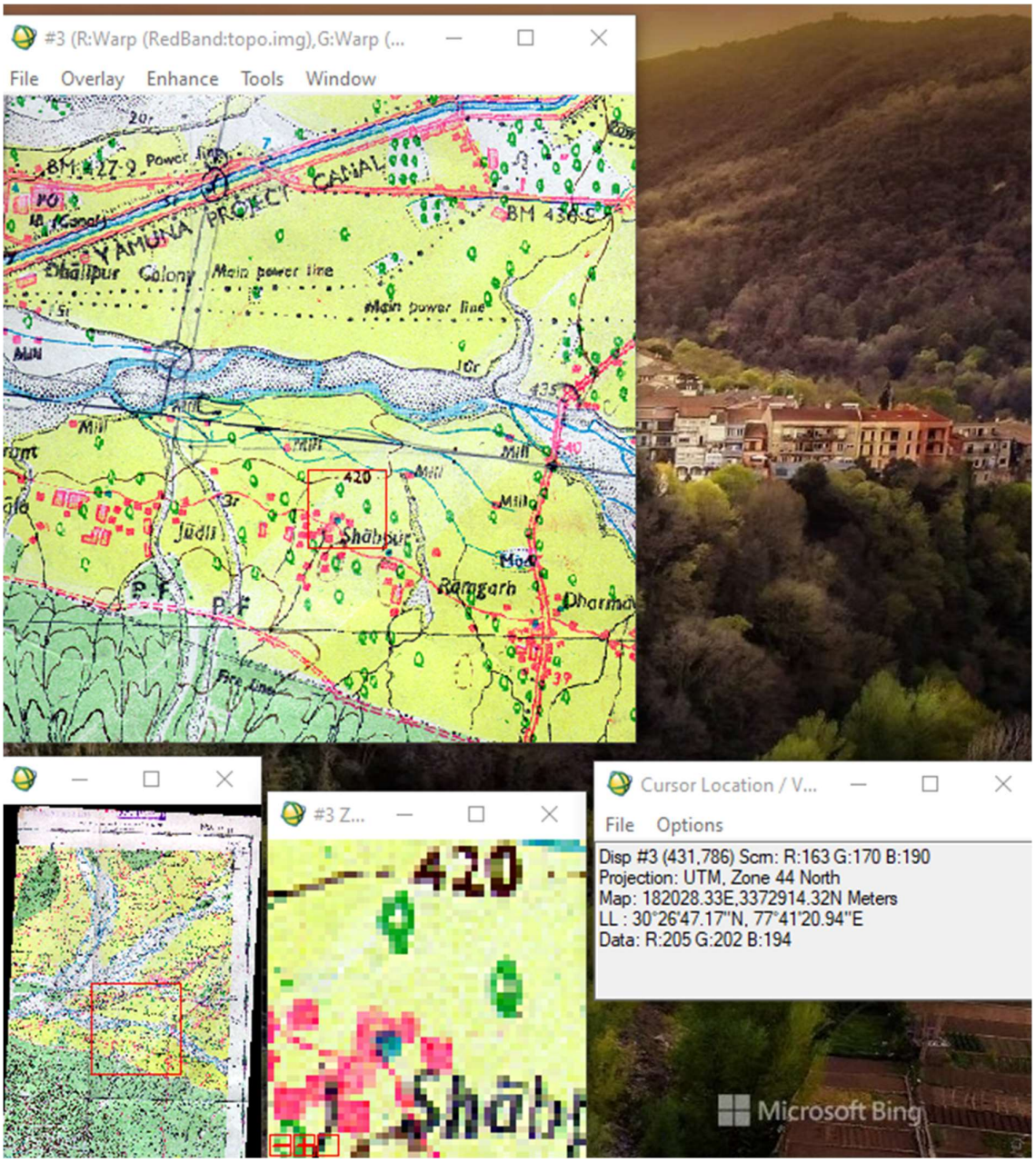
Interpolation – For better spatial Resolution

POLYNOMIAL METHOD



- Map Info
  - Proj: UTM, Zone 44N
  - Pixel: 10 Meters
  - Datum: WGS-84
  - UL Geo: 77°38'31.24"E, 30°30'57.63"N
  - UL Map: 177728.329, 3380764.324

RMS METHOD



Map Info
- Proj: UTM, Zone 44N
- Pixel: 10 Meters
- Datum: WGS-84
- UL Geo: 77°38'31.24"E, 30°30'57.63"N
- UL Map: 177728.329, 3380764.324

BYLINEAR METHOD

Map Info
- Proj: UTM, Zone 44N
- Pixel: 10 Meters
- Datum: WGS-84
- UL Geo: 77°38'31.24"E, 30°30'57.63"N
- UL Map: 177728.329, 3380764.324