

Copernicus Master in Digital Earth

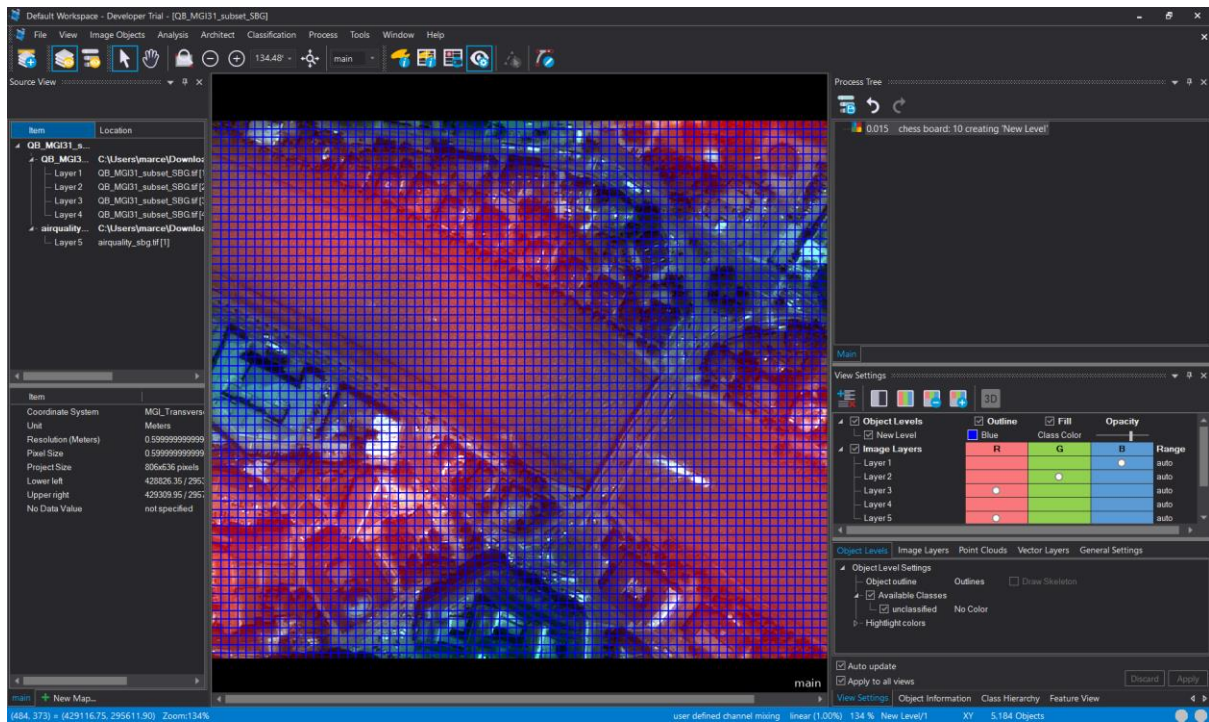
Marcelo Rigoto

12414032

Adv Remote Sensing - Supervised classification Part 2



Example 1



Edit Customized Feature

Arithmetic

Feature name

NDVI

Insert Text

☐ Do not use units

Calculation

No Unit

[[Mean Layer 4]-[Mean Layer 3]]/([Mean Layer 4]+[Mean Layer 3])

Calculate

Del

☒ Deg

☐ Rad

☐ Inv

7

8

9

(

)

abs

sin

4

5

6

+

-

floor

cos

1

2

3

*

/

ln

tan

0

.

PI(P)

e

^

lg

Search feature

Recent features

Mean -> Mean Layer 3

Mean -> Mean Layer 4

Customized features

Create new 'Arithmetic Featur

Create new 'Relational Featur

Process

Object features

Image layer

Mean

Brightness

Layer 1

Feature group

<automatic>

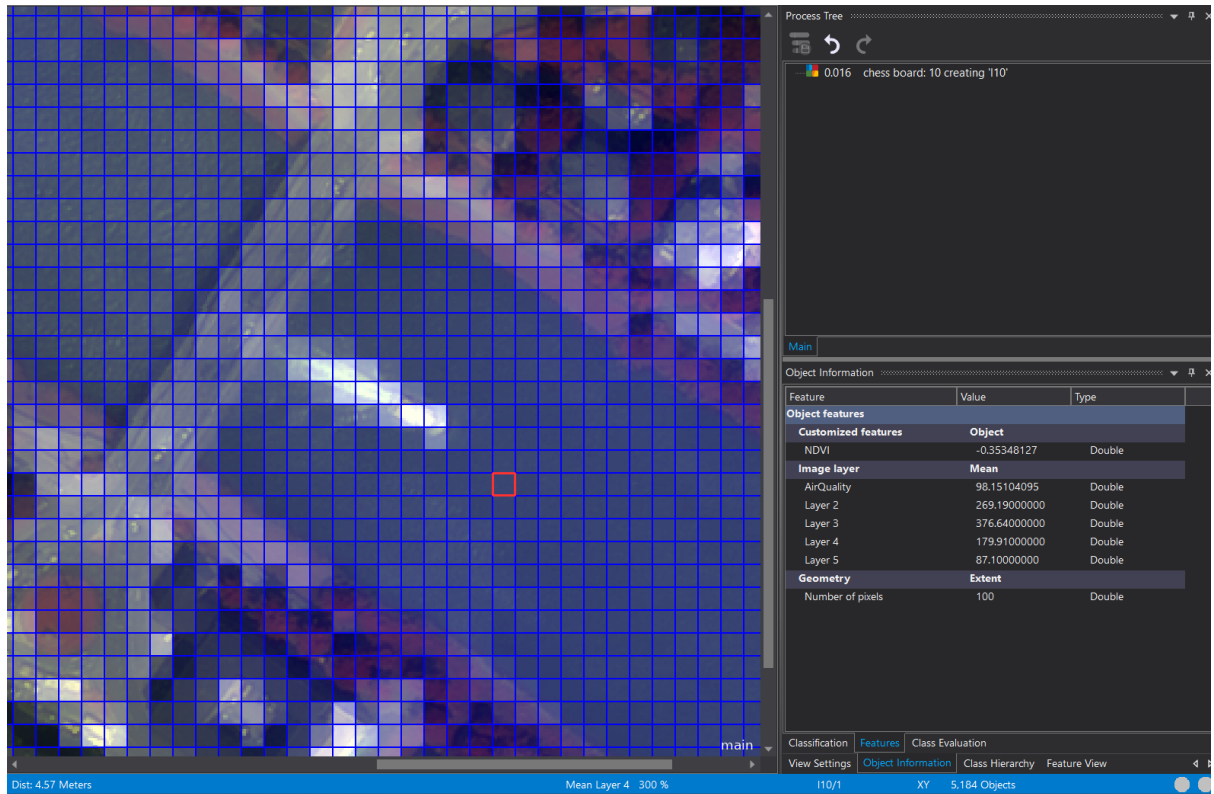
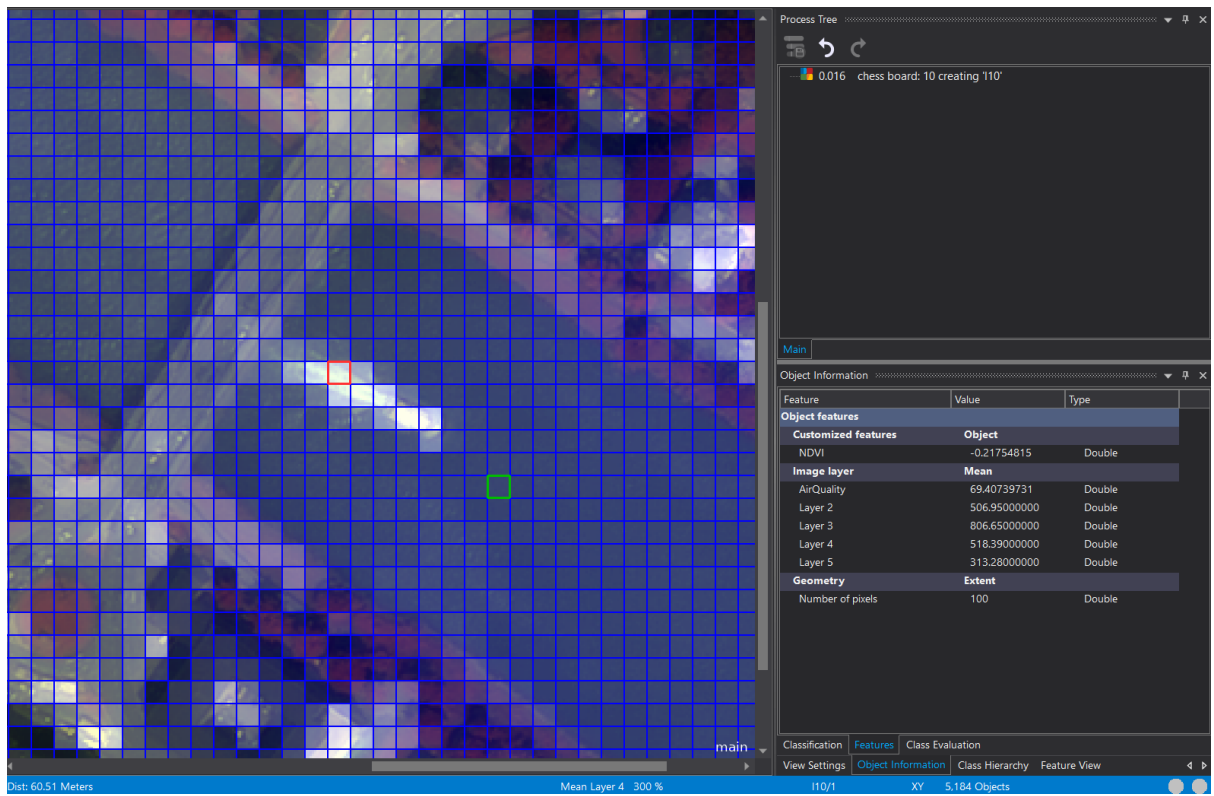
Edit...

OK

Cancel

Apply

Help



Question 1: What becomes obvious if you compare the values for the two objects of the chessboard segmentation?

Only the water objects display the truth, on the boat one the result is a mean between all different pixels because there is more than one feature in one square, causing the result to be a mean between all the features.

Question 2: Which features don't make that much sense in this case?

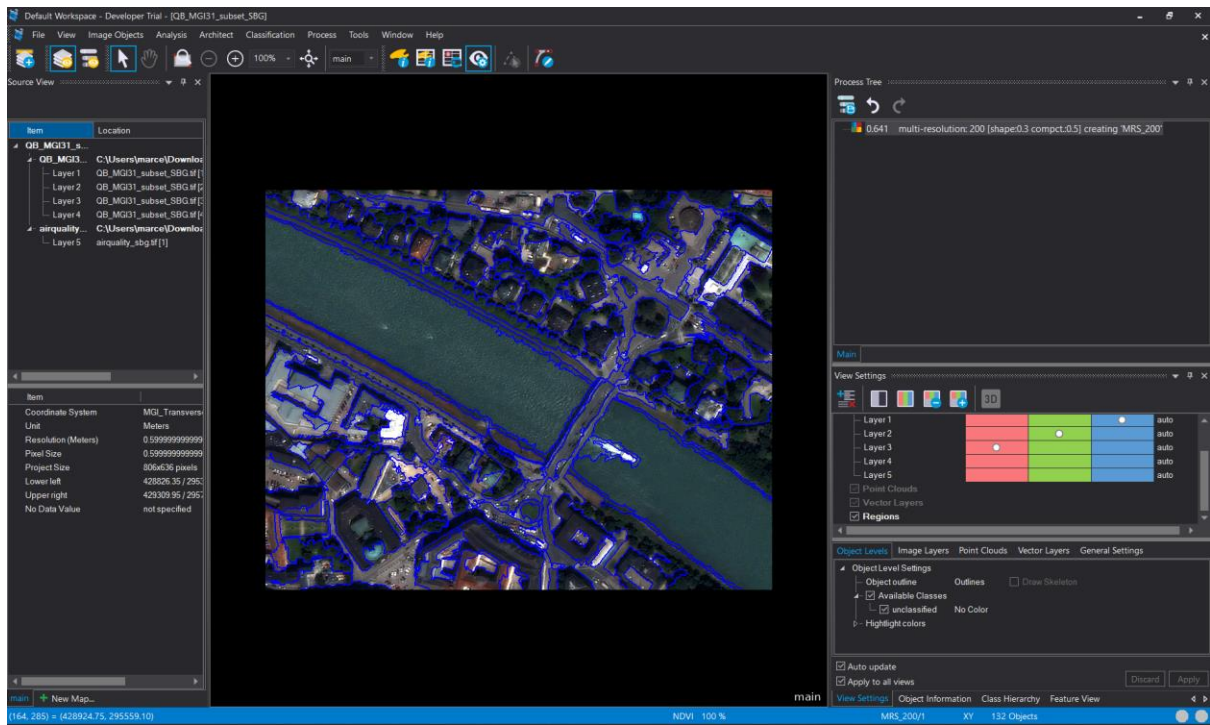
The square feature doesn't make possible to compare truthly some results because of the pixels that can be inside one feature, in this case there could be multiple features in one so it would cause confusion the best way would be to segment by the objects, making it possible to understand the features properly.

Example 2

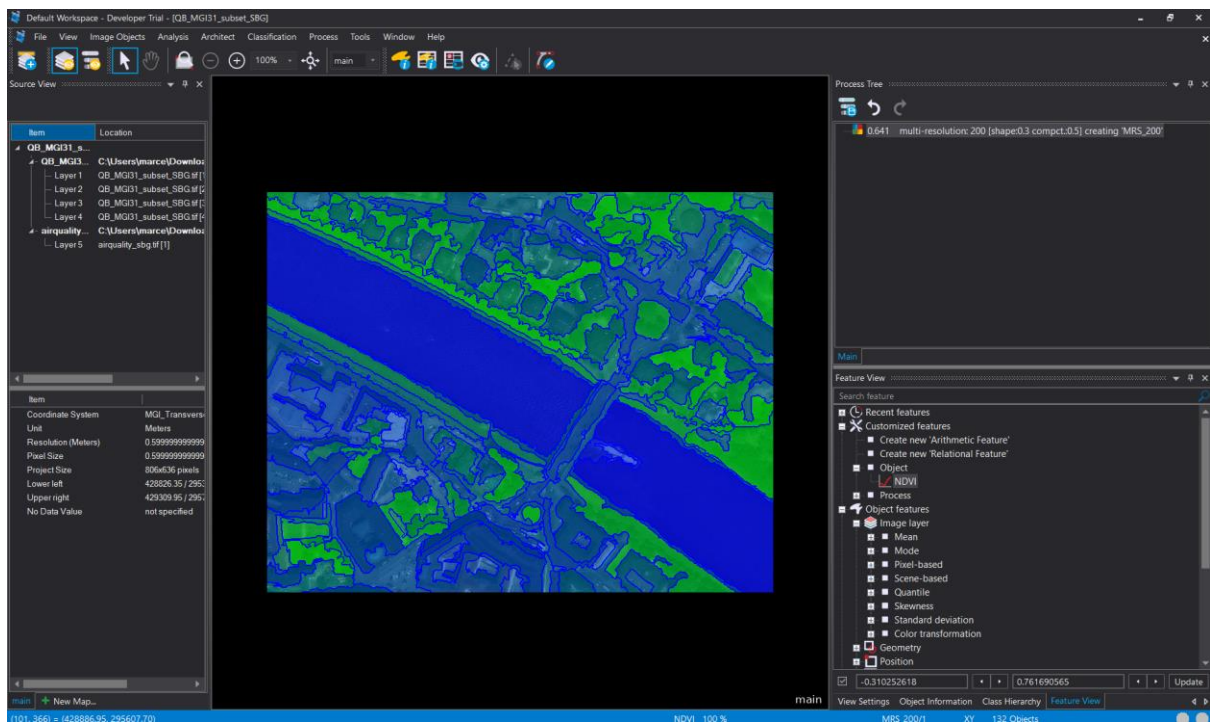
The screenshot shows the 'Edit Process' dialog box for the 'multiresolution segmentation' algorithm. The dialog is divided into several sections:

- Name:** Includes a checkbox for 'Automatic' and a text field containing 'do'.
- Algorithm:** A dropdown menu showing 'multiresolution segmentation'.
- Domain:** A dropdown menu showing 'pixel level'.
- Parameter Table:** A table with two columns: 'Parameter' and 'Value'. It contains three rows: 'Condition' with a value of '---' and a help icon, and 'Map' with a value of 'From Parent'. The 'Parameter' column is empty for the third row.
- Loops & Cycles:** Includes a checkbox for 'Loop while something changes only' and a 'Number of' dropdown set to '1'.
- Algorithm Description:** A text area stating: 'Apply an optimization procedure which locally minimizes the average heterogeneity of image objects for a given resolution.' with a help icon.
- Algorithm parameters:** A table with two columns: 'Parameter' and 'Value'. It contains several rows: 'Overwrite existing level' (Yes), 'Level Settings' (expanded), 'Level Name' (MRS_200), 'Compatibility mode' (latest version), 'Segmentation Settings' (expanded), 'Image Layer weights' (1, 1, 1, 1), 'Thematic Layers' (empty array), 'Scale parameter' (200), 'Composition of homogeneity criterion' (expanded), 'Shape' (0.3), and 'Compactness' (0.5).

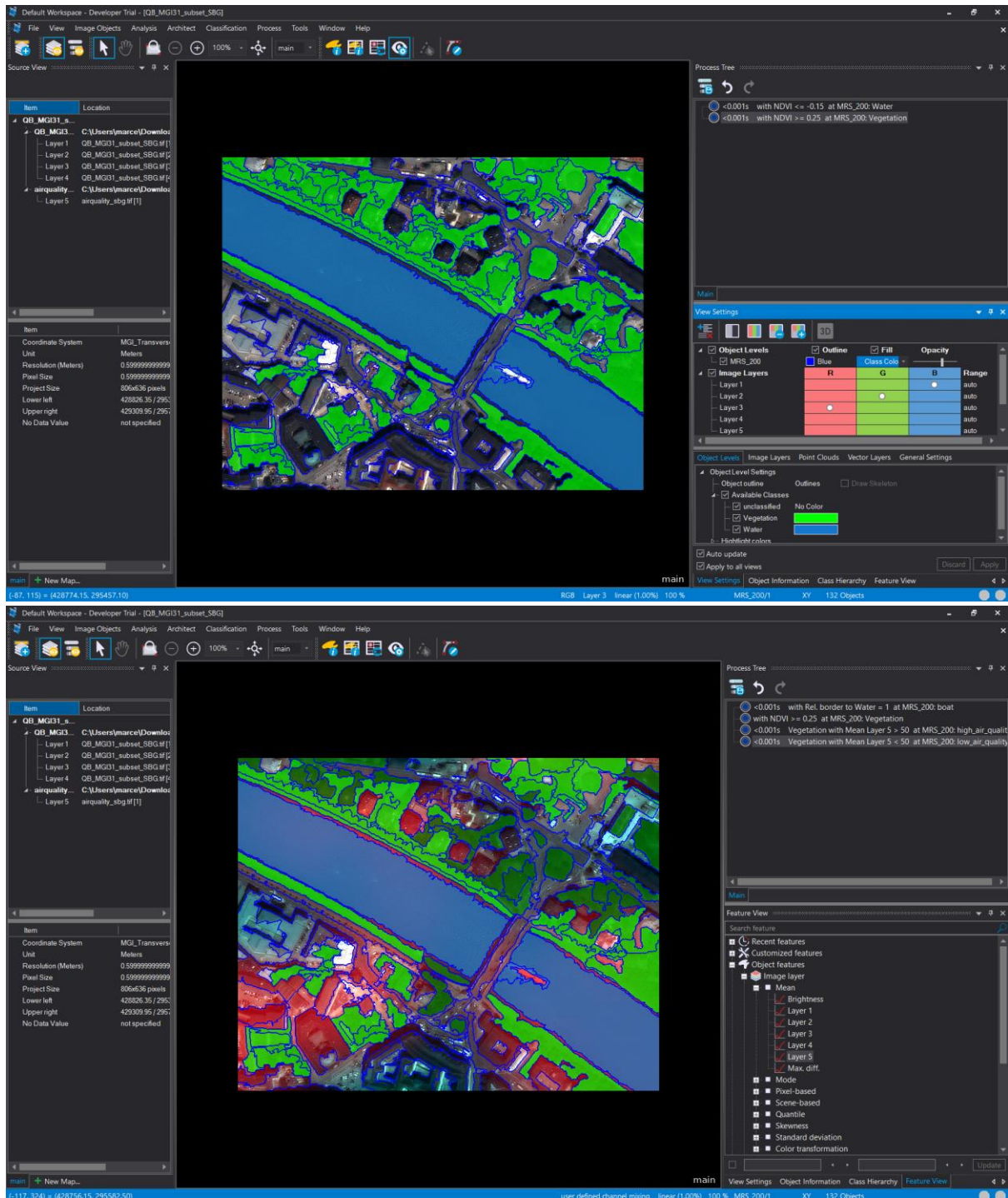
At the bottom of the dialog, there is a 'Segmentation Preview' button on the left and 'Execute', 'Ok', and 'Cancel' buttons on the right.



Example 3

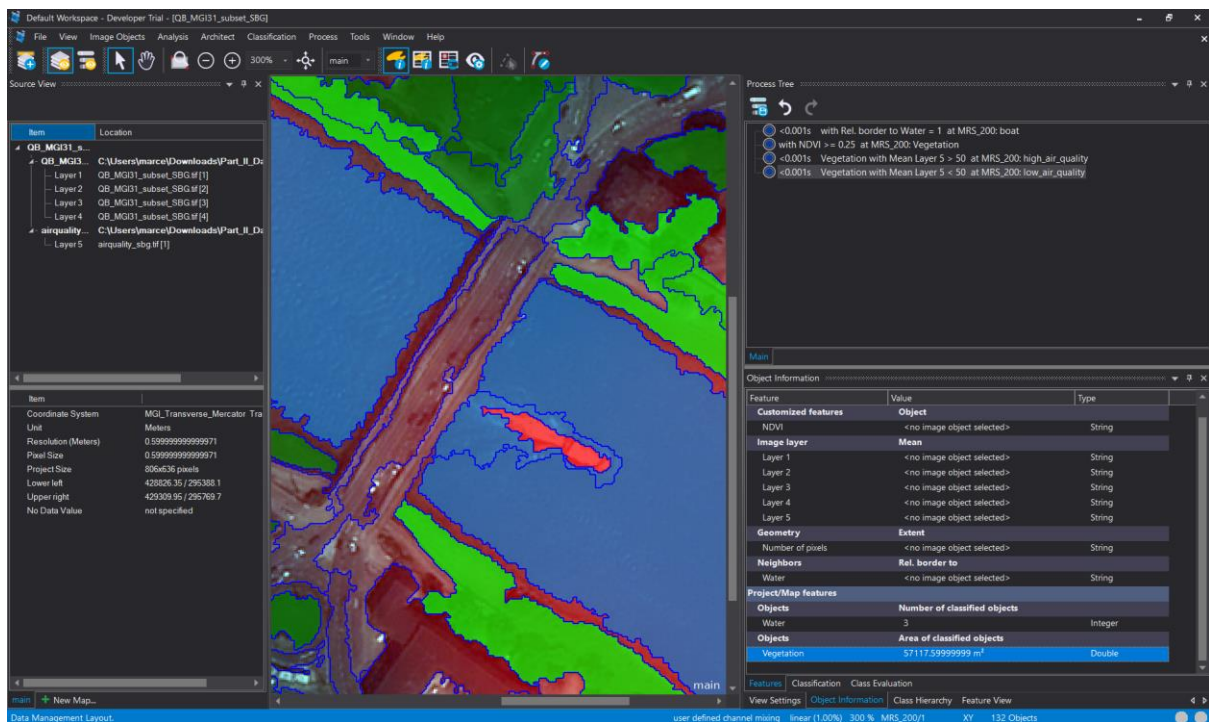
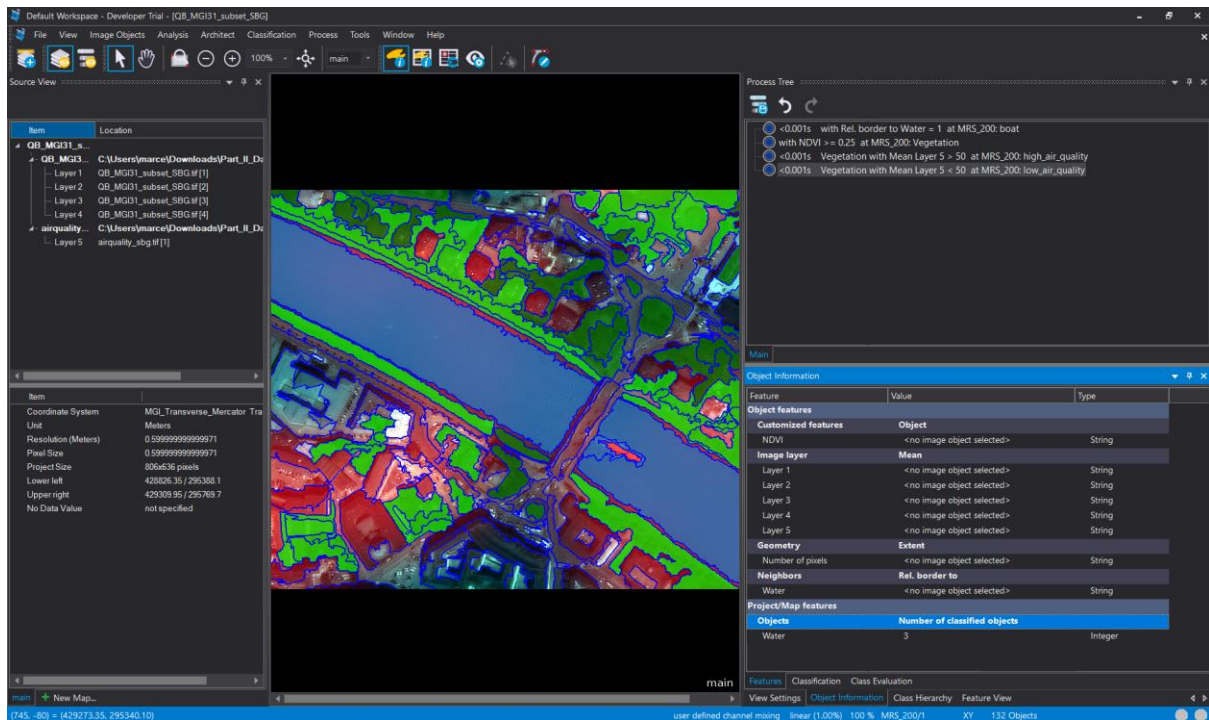


Example 4

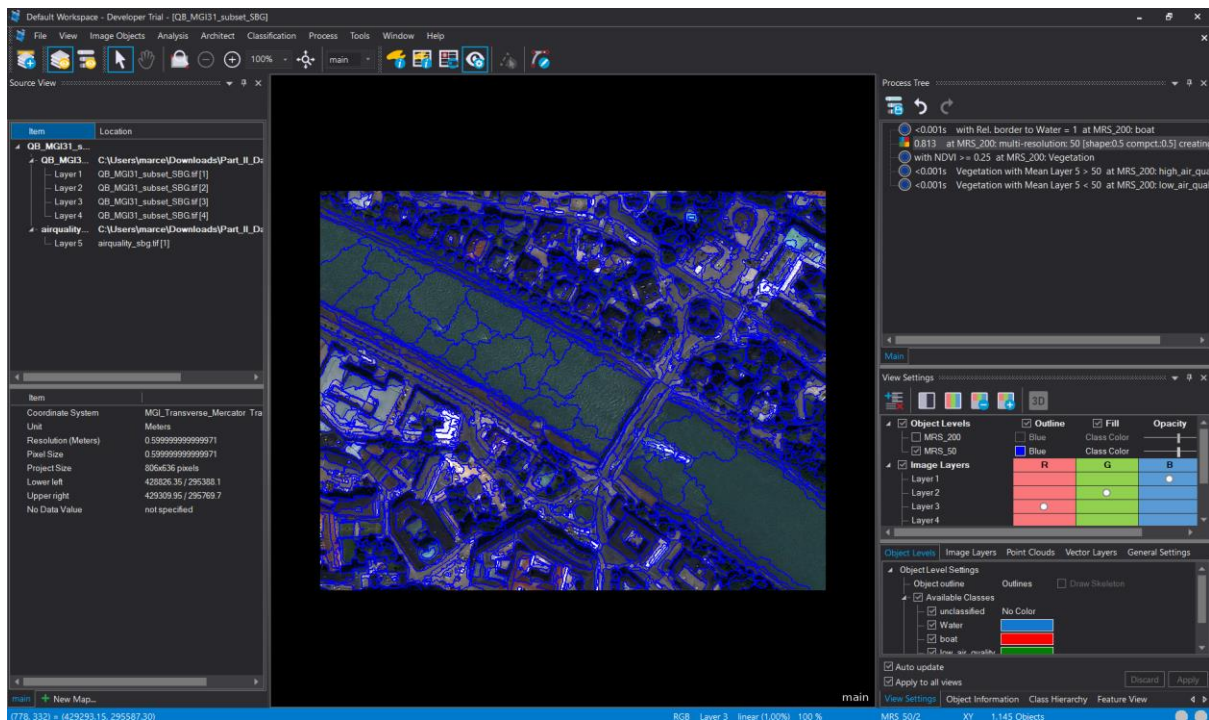


Question 3: How many objects were classified as „water“?

3 Features were classified as water, two of them are created because of the bridge and the last one is probably because the water trace behind the boat.



Example 5



Question 5: What is the meaning of the distance value when you create the feature?

The feature works returning a Boolean based on the Class it was selected, on this case was the Vegetation, so if the user clicks on the water returns a 0 (False) or 1 (True) if the input is on the Vegetation itself.

