

LAND COVER/LAND USE SCRIPT

The script is useful for land cover/use classification, including soil and rock type classification on barren grounds. It shows land cover and land use in a natural and pleasing way, separating various vegetation types, agriculture, barren ground, water, snow and dwellings. Barren ground is colored in hues from yellow to dark brown, depending on soil or rock type. Urban areas also appear brown or orange. Completely barren ground, such as landslides, stone quarries or barren agriculture fields appear bright orange and are thus easy to differentiate. For example, stone quarries pop out especially clearly. Water bodies appear black and are easily differentiated from other elements. Forests have various shades of green, ranging from dark green to aqua, based on, I believe, vegetation type and health, since color variations look like those of infrared false color composite. Grass fields are always relatively lighter green. Other types of vegetation, such as dry grass or makia have different, darker colors.

It should be noted, that the script recognizes only the top layer, be it vegetation, soil, sand or rock. Rock or soil types can only be differentiated, if they are not covered in vegetation or sand (such as in The Eye of Sahara). For example, an area might at a first glance seem barren and thus to have a different mineral structure, but is in reality covered in dry grass.

The script does not work well under clouds, which are colored differently, ranging from white, yellow, pink, red and blue, due to the water vapor band. Although it might be useful for cloud identification, smaller clouds can mislead about what is on the surface.

I made two versions of the script, one without the additional gain, and another with a gain of 1.5. The first one is more muted and natural, while the other has more lively, pastel colors.

I came across this script unexpectedly while experimenting with different bands. I believe that water vapor band B09 (blue channel) helps differentiate elements by taking moisture into account. This is apparent by blue values being added to green and red, making purple tinted barren grounds, occasional blue tinted vegetation and bright blue snow. These color differences are most apparent with the lighter color version. Band B07 shows vegetation, and B12 highlights differences between various non-vegetated areas. This band combination could not be substituted with any other, else losing the visual appeal or element differentiation.

Image 1 shows how the script highlights snow in bright blue, agriculture areas in orange, grasslands in bright green and barren earth in various shades of brown and purple.

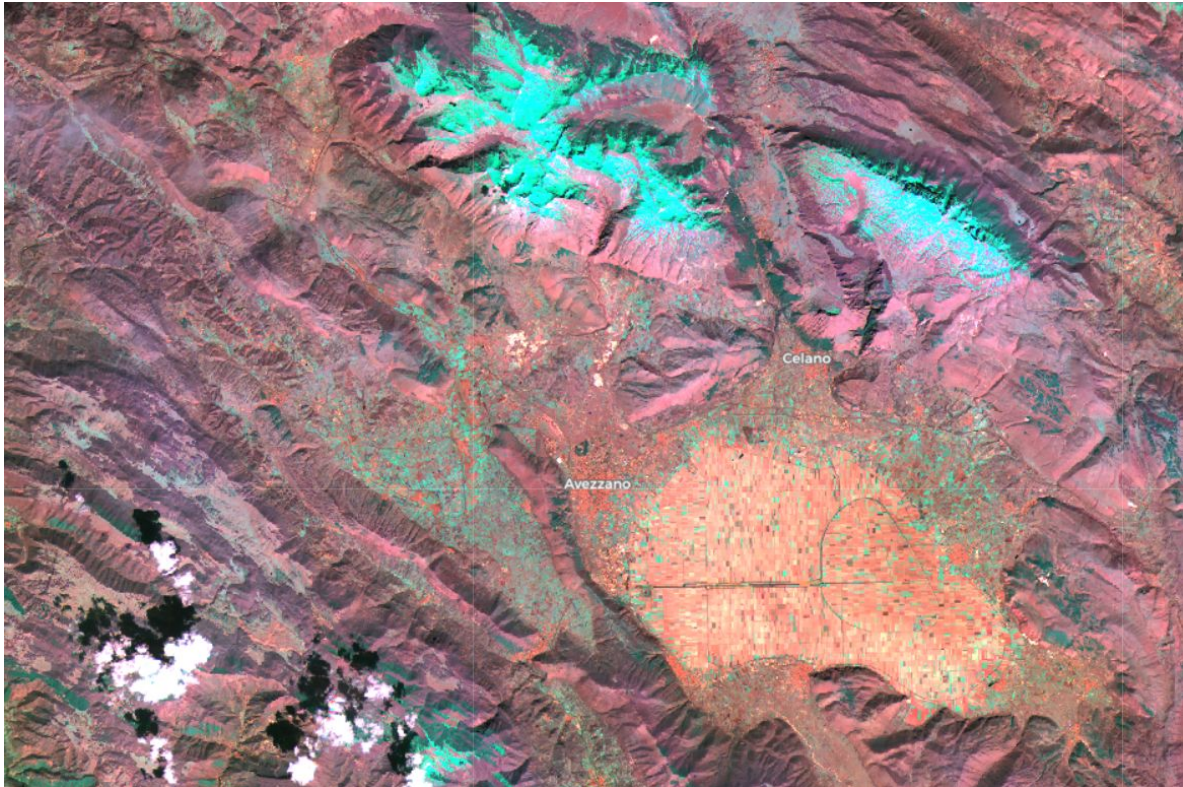


Image 2 focuses on agricultural areas, also highlighting water areas as black.

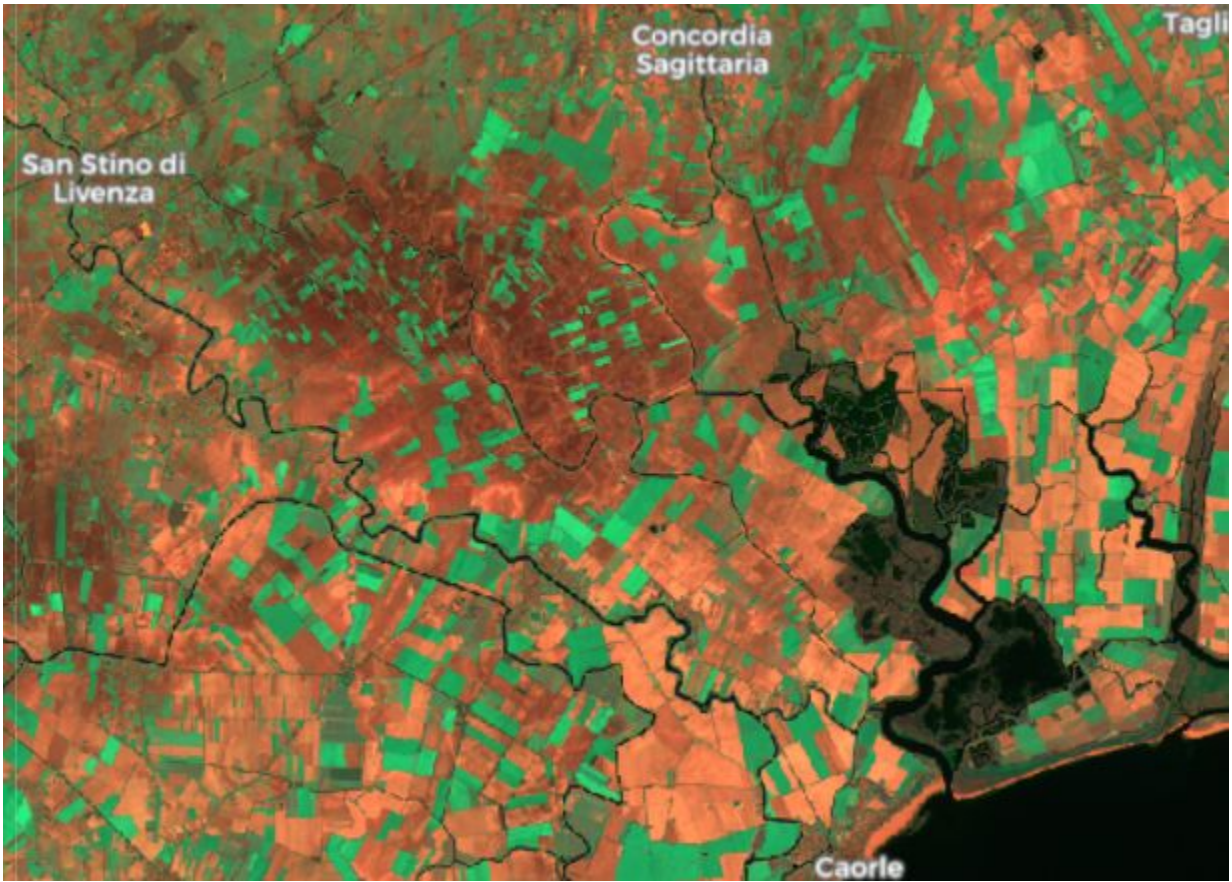
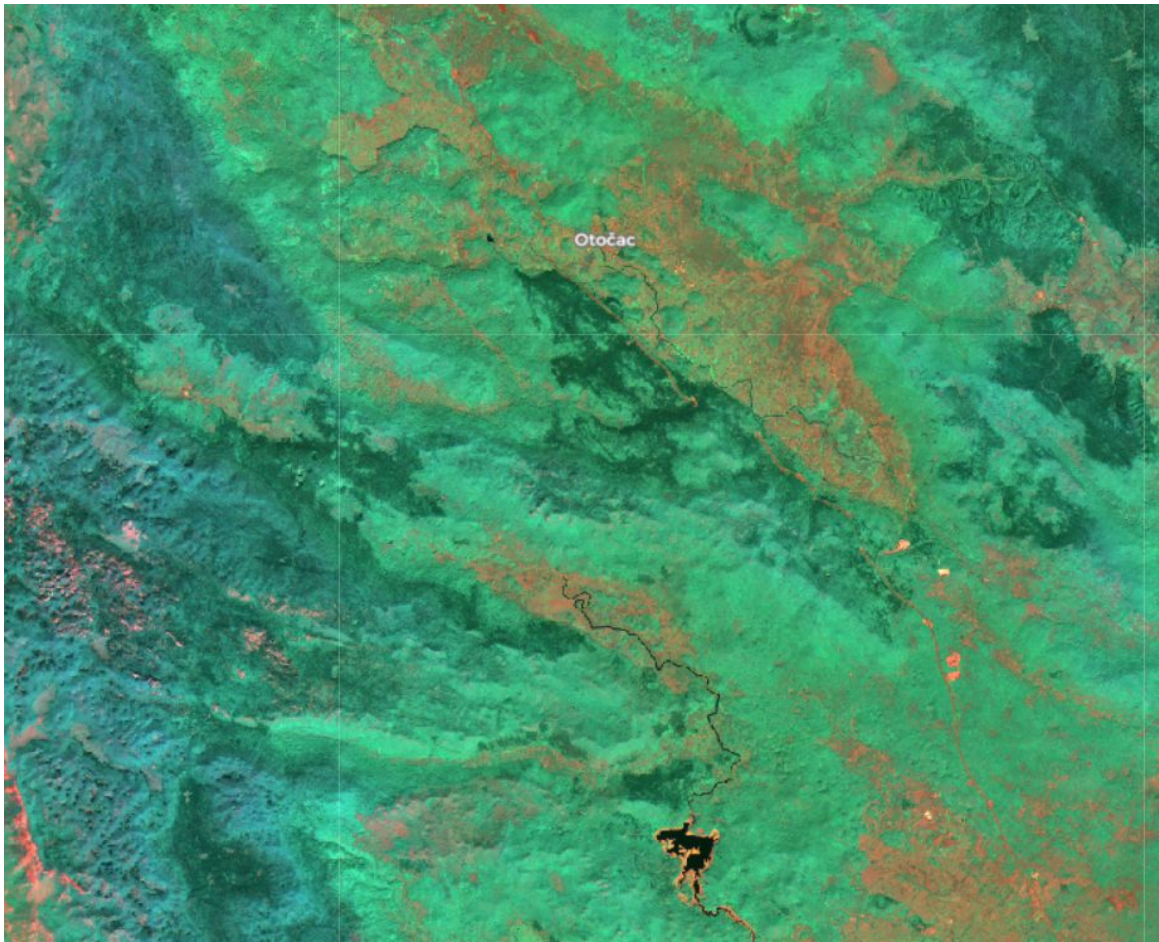


Image 3 shows vegetation in various hues of green, with agricultural and urban areas in between.



Æ

⇒ U[Yg('UbX') ZcW'g'cb'g'cbY'e'i Uff]Ygžk \]W 'UddYUf'Vf][\ hcfUb[Y']b'h.Y'gW]dH'Æ



Æ

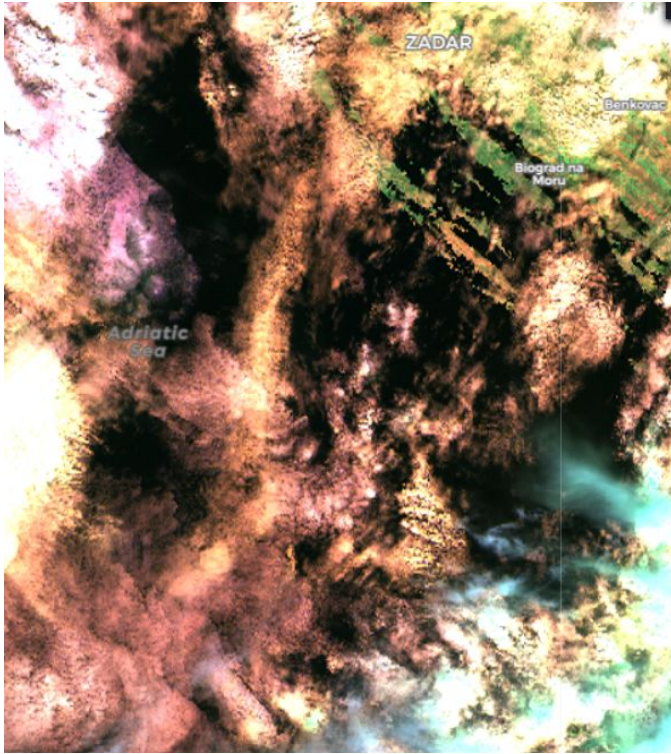
Æ

Æ

Æ

Æ

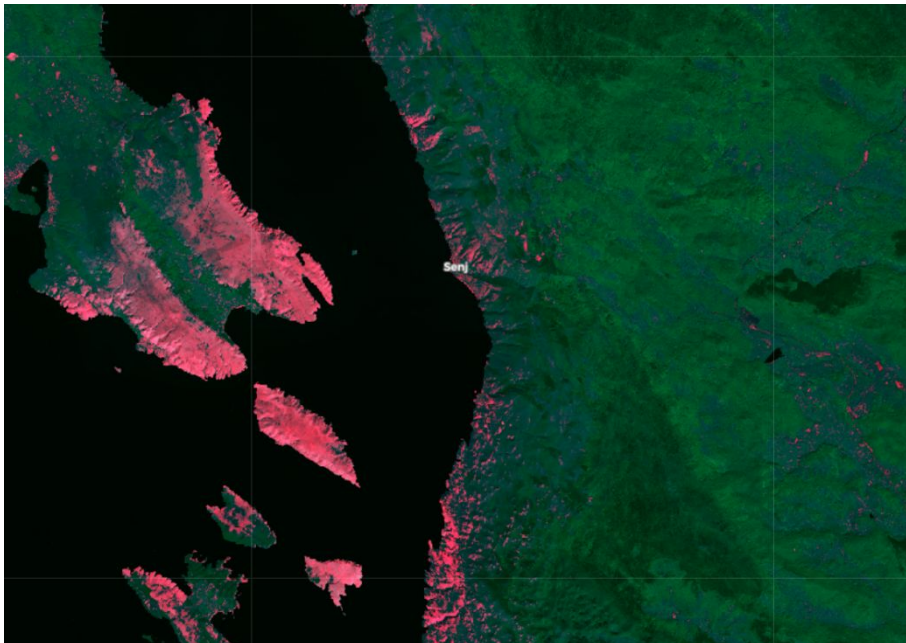
H\Y`Ugh]a U[Y'ZcWgYg'cbj Uf]ci g'Wci Xg'UWcj Y'h\Y'A YX]hYffUbYUb'gYU'Æ



Æ

Æ

5 8 8 H=C B 5 @'65 F 9'GC =@'G7F =DH'Æ 5; 9Æ



Æ

Æ

Æ

