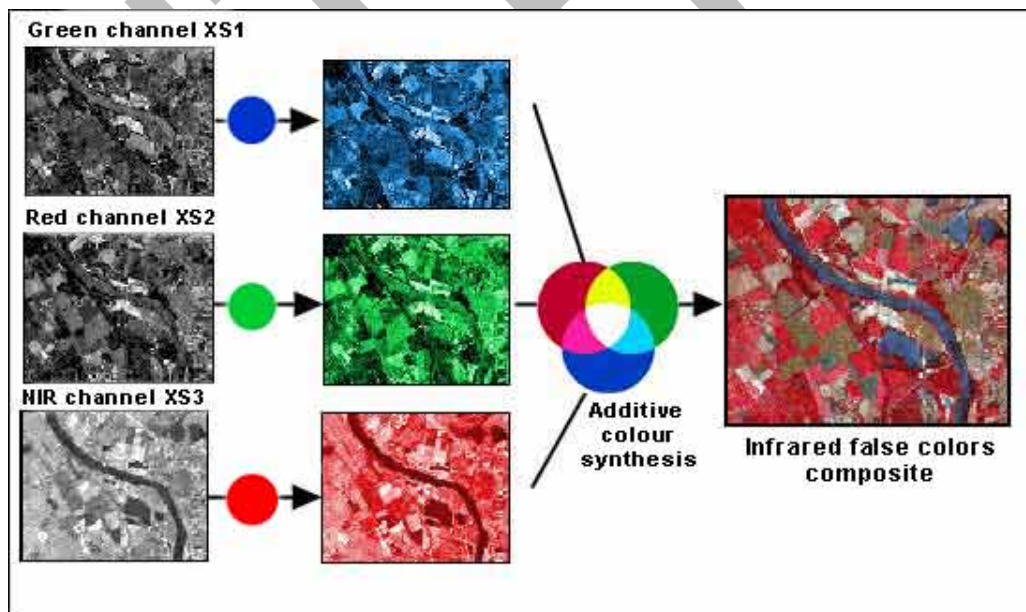
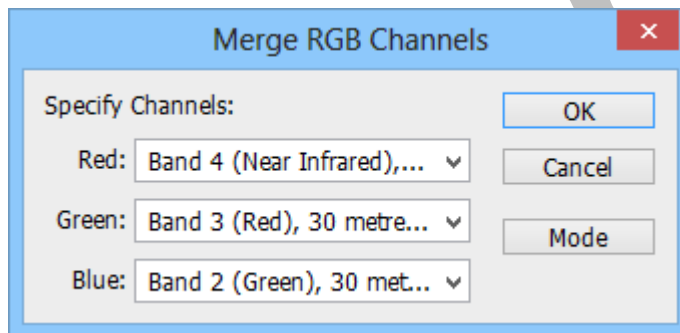


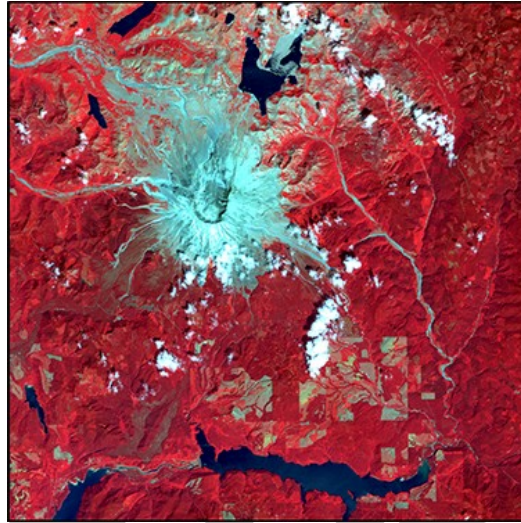
False Colour Composite (FCC) :

A false color image is one in which the R,G, and B values do not correspond to the true colors of red, green and blue. The most commonly seen false-color images display the very-near infrared as red, red as green, and green as blue.

An artificially generated colour image in which blue, green and red colours are assigned to the wavelength regions to which they do not belong in nature. For example, in standard a False Colour Composite blue is assigned to green radiations (0.5 to 0.6 μm), green is assigned to red radiations (0.6 to 0.7 μm and red is assigned to Near Infrared radiation (0.7 to 0.8 μm).

This false colour composite scheme allows vegetation to be detected readily in the image. vegetation appears in different shades of red depending on the types and conditions of the vegetation, since it has a high reflectance in the NIR band





| R,G,B | Description |
|-------|--|
| 3,2,1 | TRUE COLOR The "true colour" combination. It provides the most water penetration. |
| 4,3,2 | FCC Standard "false-colour" combination. Vegetation shows in red. |

RGB DESCRIPTION

Colour Signatures on Standard False Colour Composite of Earth Surface Features)

| S. No | Earth Surface Features. | . Colour(In Standard FCC |
|-------|--|------------------------------|
| 1 | Healthy Vegetation and Cultivated Areas | |
| | Evergreen | Red to magenta |
| | Deciduous | Brown to red |
| | Scrubs | Light brown with red patches |
| | Cropped land | Pink to Bright red |
| | Fallow land | Light blue to white |
| | Wetland vegetation | Blue to grey |
| 2 | Waterbody | |
| | Clear water | Dark blue to black |
| | Turbid waterbody | Light blue |
| 3 | Built - up area | |
| | . High density | Dark blue to bluish green |
| | Low density | Light blue |
| 4 | Waste lands/Rock outcrops | |
| | Rock outcrops | Light brown |
| | Sandy deserts/River sand/ | Light blue to white |
| | Salt affected Deep ravines | Dark green |
| | Shallow ravines | Light green |
| | Water logged/Wet lands | Mottled black |

• False Colour Composite (FCC) •

Any other combination of colours •

E.g., Blue band – Red; Red band – Green; Green band – Blue • E.g., Blue band – Red; Red band – Green; NIR band – Blue •

Standard False Colour Composite (FCC) •

E.g., NIR band – Red; Red band – Green; Green band – Blue • In IRS: Band 4 – Red; Band 3 – Green; Band 2 – Blue

Advantages of FCC

allow us to visualize the wavelengths the human eye does not see (near the infrared range). Human eyes could only separate up to 30 shades of gray color, so extracting information from gray-scale color visually is a bit difficult and resulting less information.

The use of bands, such as near infrared, increases spectral separation and can enhance the interpretability of data.

This band combination is valuable for gauging plant health. plants reflect near infrared and green light, while absorbing red. Since they reflect more near infrared than green, plant-covered land appears deep red

Application

the monitoring of forest fires. Surfaces with elevated temperatures, such as forest fires and calderas of volcanoes, saturate the image in medium IR channels and are displayed in shades of red or yellow.

Study of vegetation health

Our four most common false-color band combinations are:

1. Near infrared (red), green (blue), red (green). This is a traditional and popular band combination useful in seeing changes in plant health.
2. Shortwave infrared (red), near infrared (green), and green (blue), often used to show floods or newly burned land.
3. Blue (red), two different shortwave infrared bands (green and blue). We use this to differentiate between snow, ice, and clouds.
4. Thermal infrared, usually shown in tones of gray to illustrate temperature.

ABCD