

Landsat Assignment

A4

GROUP 1:

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2020-2021

Australia's Great Barrier Reef



Figure 1: Chosen Area from Australia's Great Barrier Reef

Australia's Great Barrier Reef

- **Latitude:** -20.87421043965721
- **Longitude:** 150.9466552734375
- **Path:** 092
- **Row:** 074
- **Date:** 2021/03/05
- **ID:** LC08_L2SP_092074_20210305_20210312_02_T1

Reason of interest

- Largest coral reef system in the world
- Biodiversity



Figure 2: Helicopter flight over Great Barrier Reef. (Source)

Natural Colour

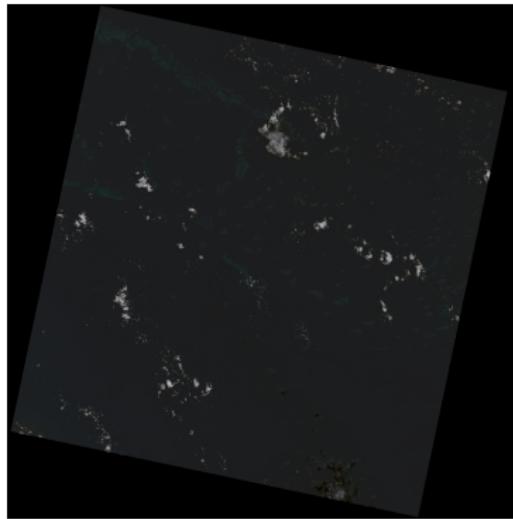


Figure 3: Original Photo; Bands(4,3,2)

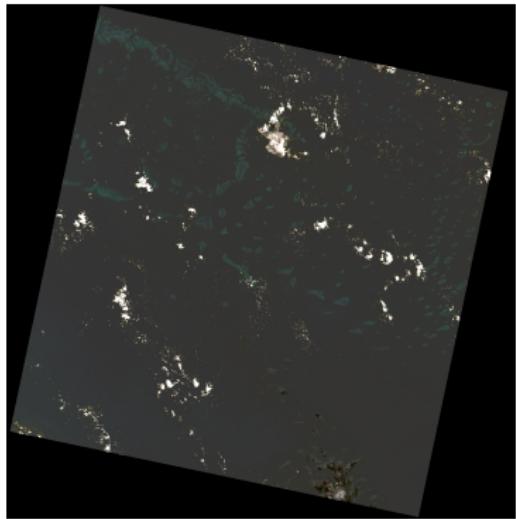


Figure 4: Natural Colour; Bands(4,3,2)

IR colour

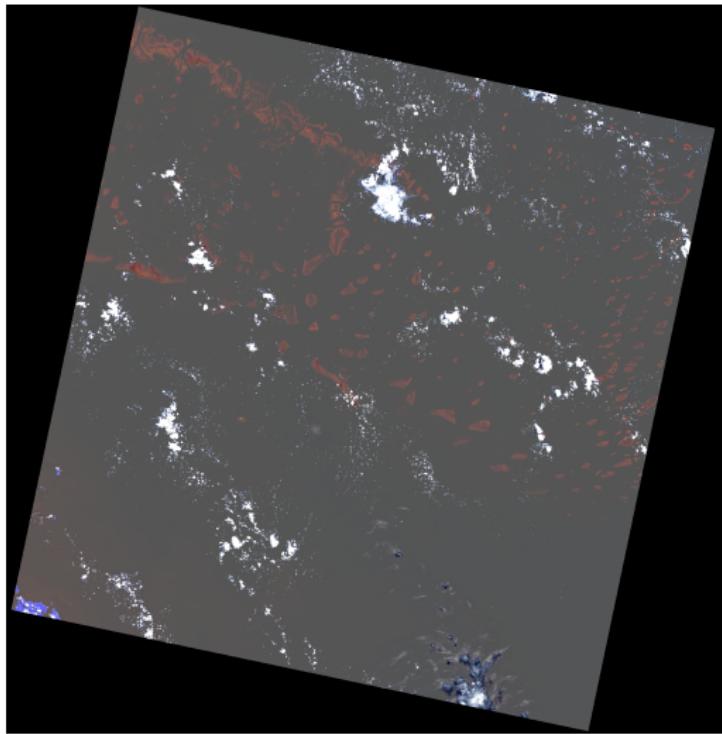


Figure 5: Infrared Color; Bands(5,4,3)

Normalized Difference Vegetation Index (NDVI)

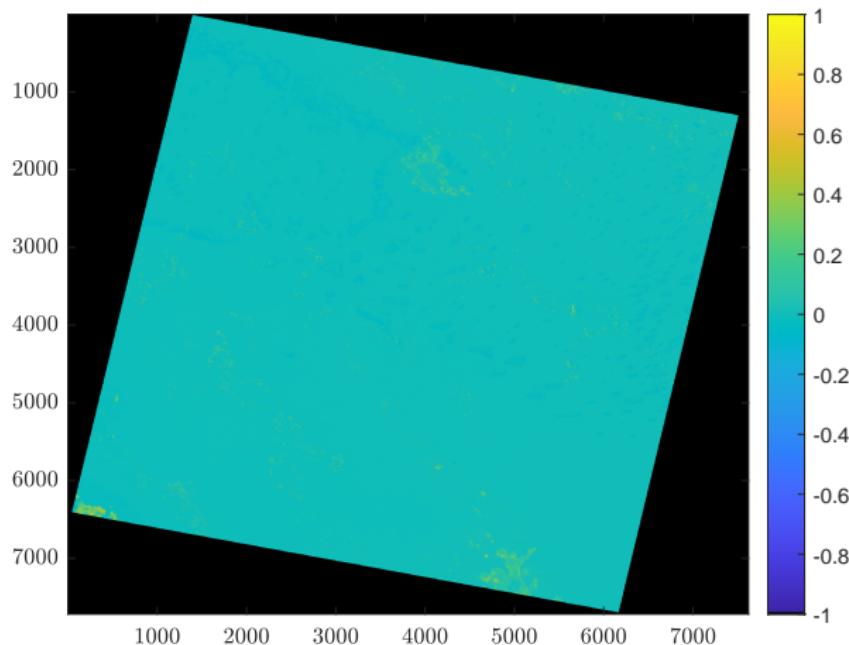


Figure 6: Normalized Difference Vegetation Index (NDVI); Bands(4,5)

Remote Sensing Reflectance (Rrs)

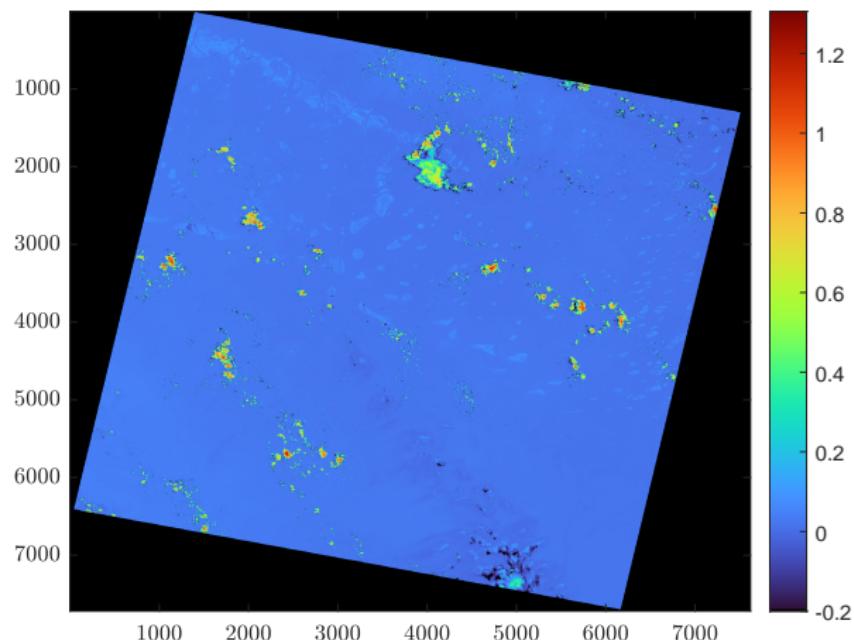


Figure 7: Remote Sensing Reflectance (Rrs); ; Bands(1)

Temperature

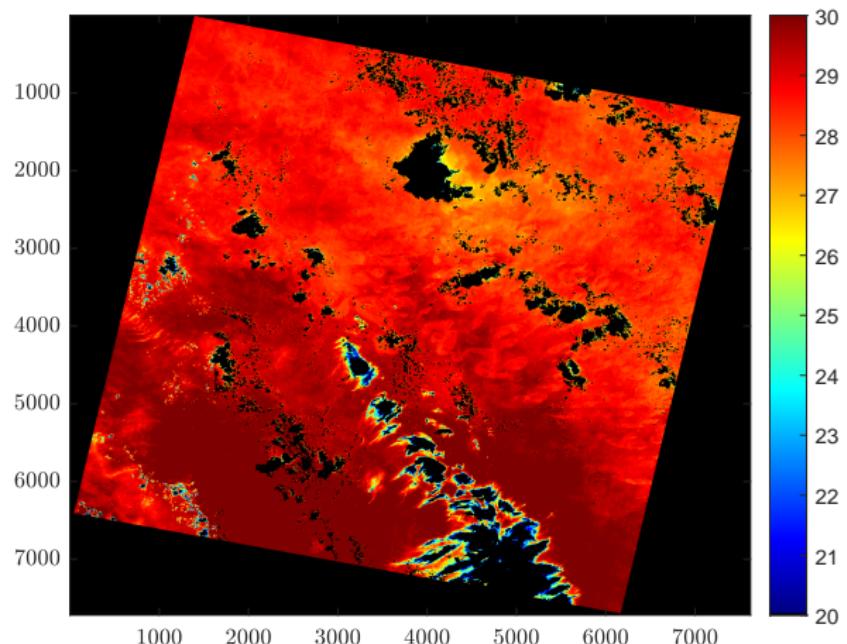


Figure 8: Temperature; Bands(10). Date: 2021/03/05 (Autumn)

Temperature

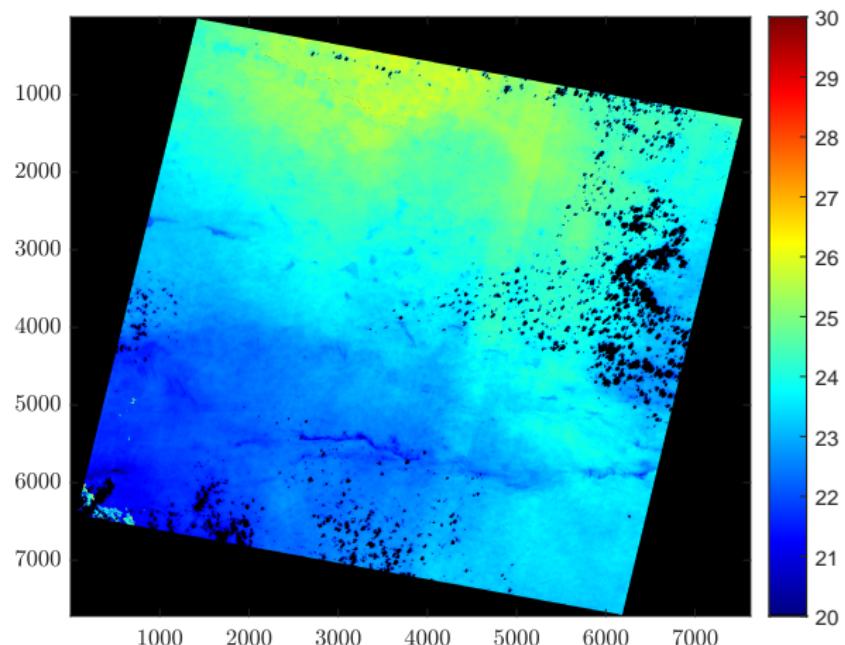


Figure 9: Temperature; Bands(10). Date: 2020/07/01 (Winter)

Water Mask

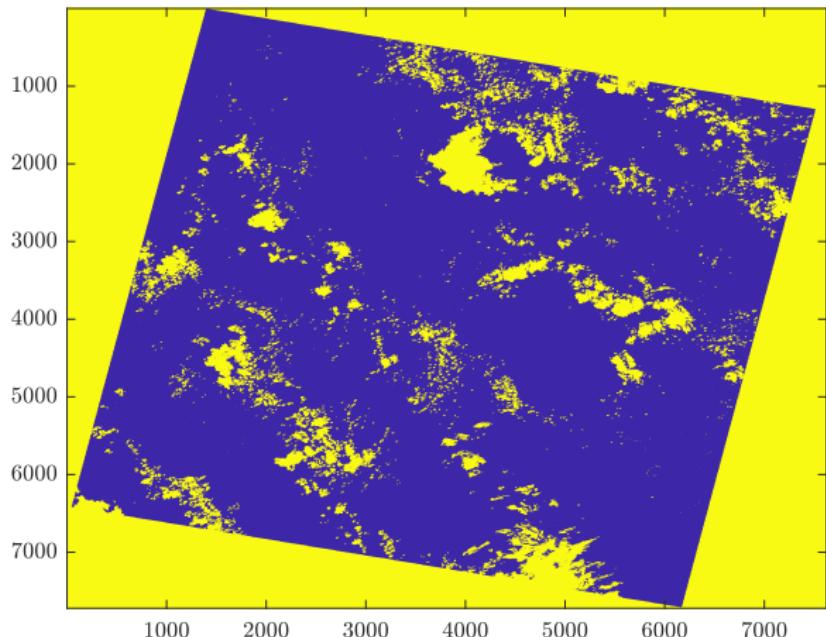


Figure 10: Water Mask. Yellow: Everything that is not water; Purple: Water. Bands (10,QA pixel)

Cloud Mask

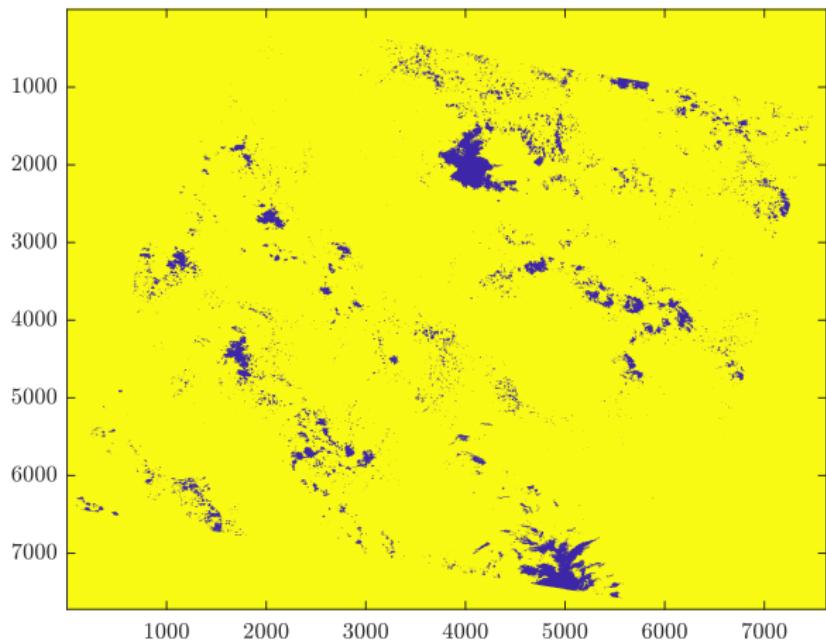


Figure 11: Cloud Mask. Yellow: Everything that is not clouds; Purple: Clouds.
Bands(10,QA pixel)

Geolocalized temperature map

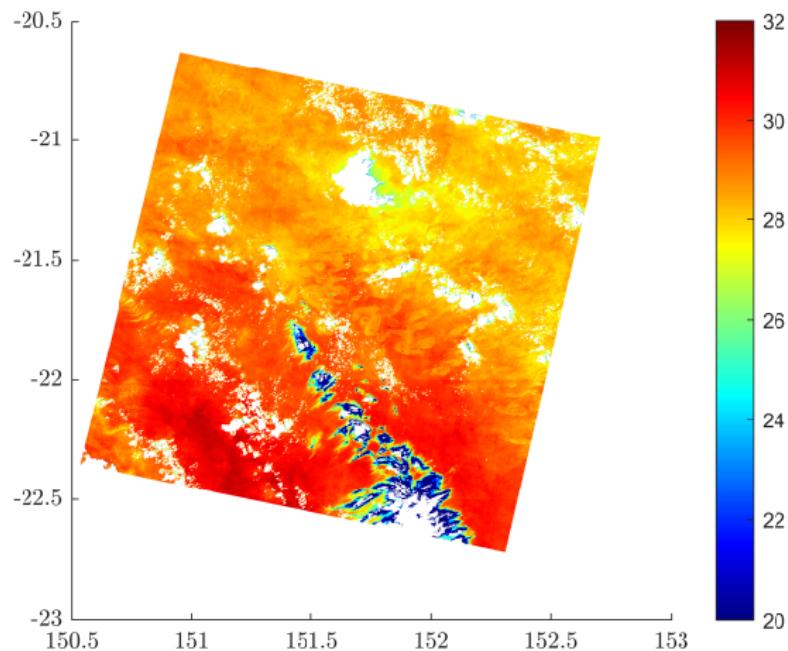


Figure 12: Geolocalized Temperature Map; Bands (10,QA pixel)

Turbidity

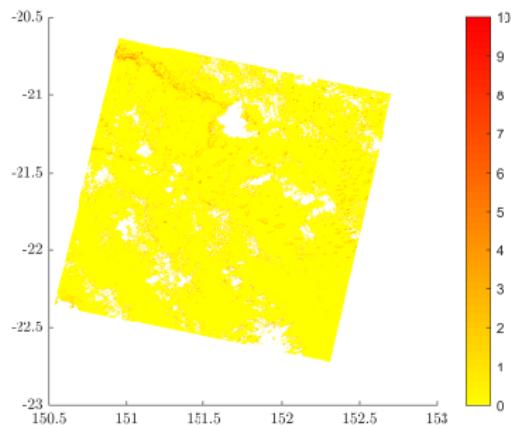


Figure 13: Turbidity Vantrepotte; Bands (4,5,QA pixel)

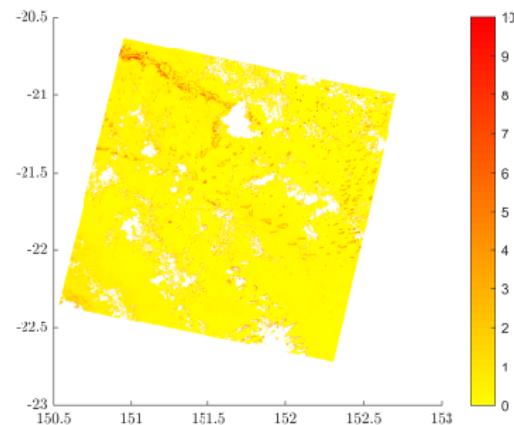


Figure 14: Turbidity Dogliotti; Bands (4,5,QA pixel)

Chlorophyll

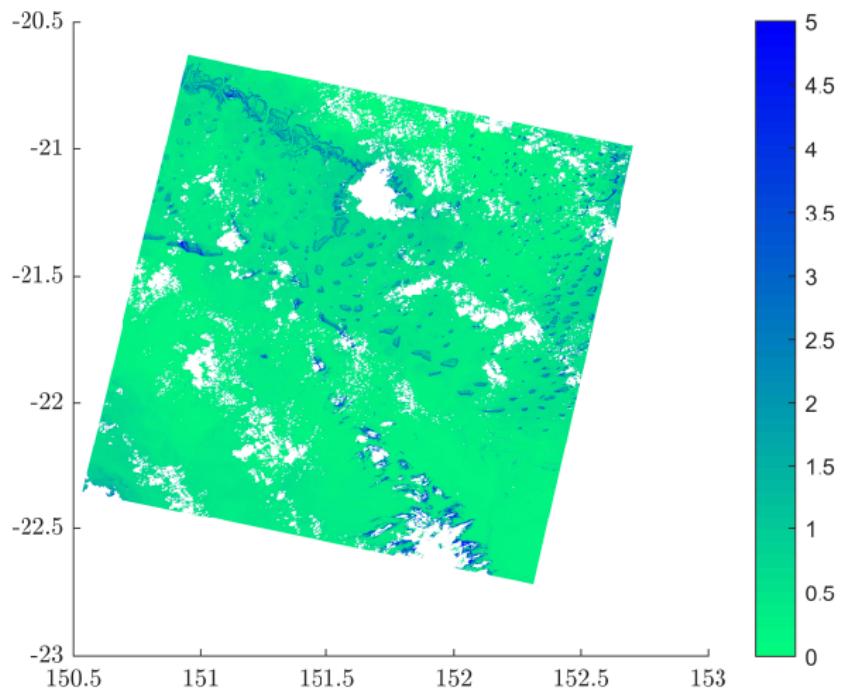


Figure 15: Chlorophyll; Bands (1,2,3,QA pixel)