

## **Abstract**

Sentinel-2 imagery can be employed in identifying land fires. The spectral index of Sentinel-2 imagery proved to be accurate for identifying land fires. This study analyzed the index value for burned area mapping in wetland areas using Sentinel-2 imagery data in 2019 and hotspot data from the MODIS data. The indices used to identify the burned area and the severity of the fire were dNBR and RBR. Visual validation tests were carried out by comparing maps to check appearance before and after burning with dNBR and RBR results. The dNBR value accuracy was 91.5%, and for a kappa, the accuracy was 0.89 or 89.58%. The RBR accuracy was 92.9%, and the kappa accuracy was 0.91 or 91%. The results confirmed that RBR was more accurate in identifying burned areas than dNBR, but both indices can be used for burned area mapping in wetland areas.

**Keywords:** Sentinel-2, dNBR, RBR, land fires, wetland area