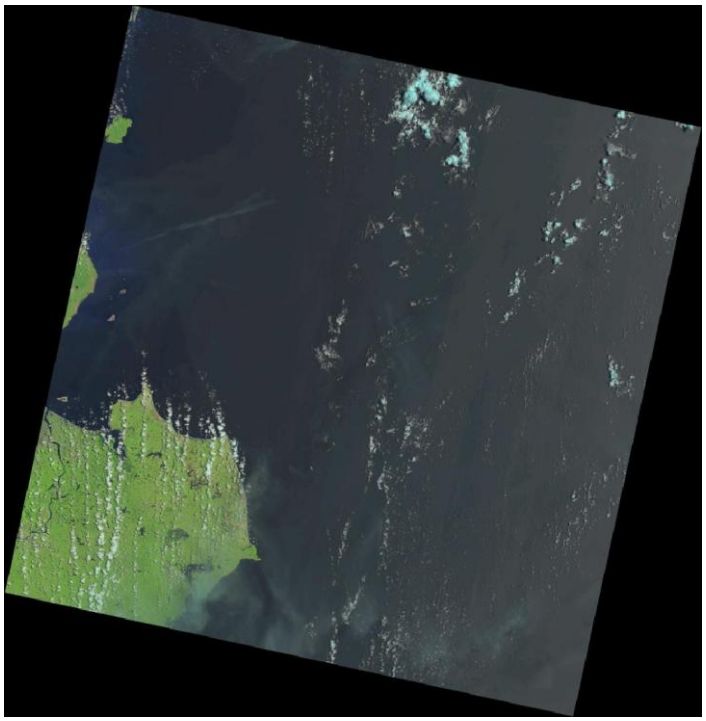
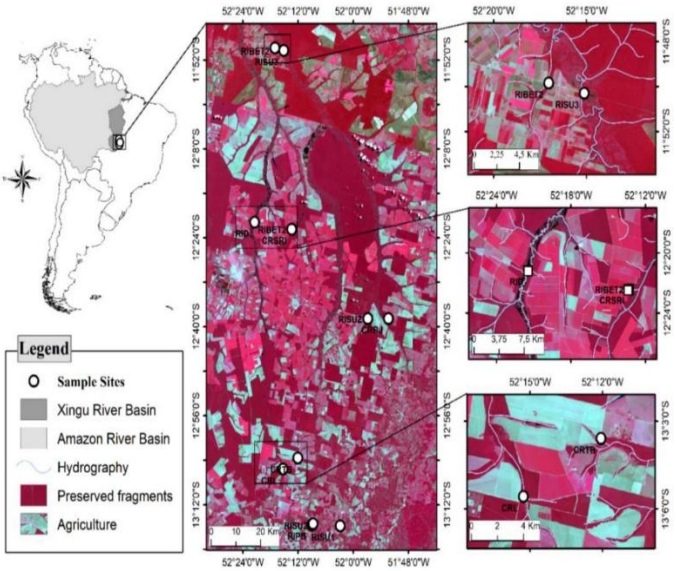
Visual Comparison – Upper Xingu Region

Satellite Image – 1



NDVI Image – 1

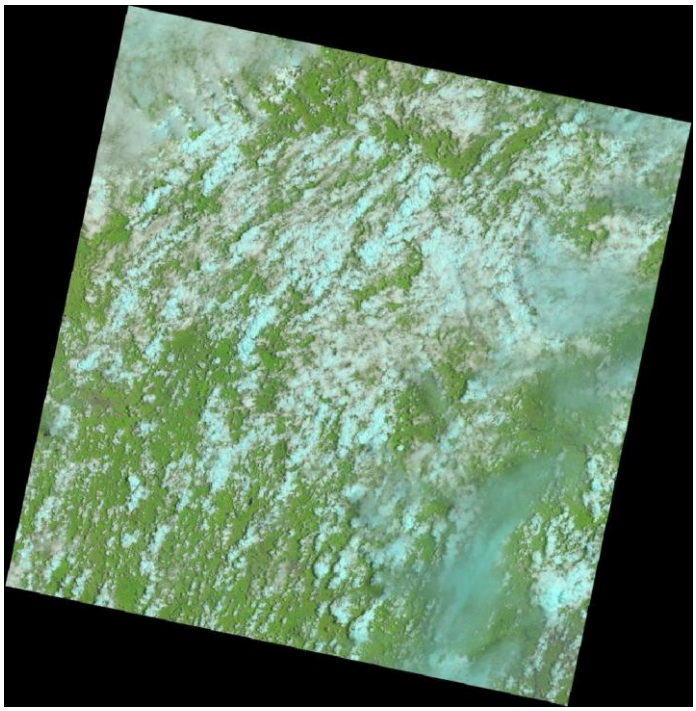


COMPARISON:

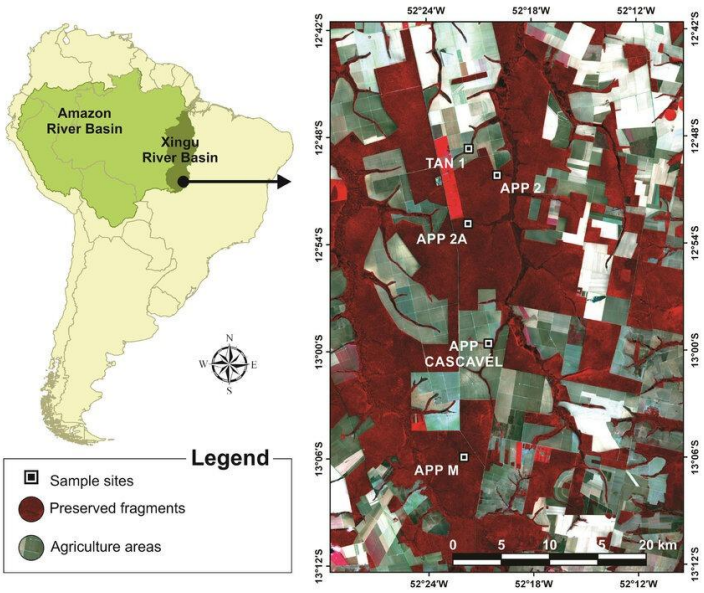
The Upper Xingu region is shown in its natural color in the left image (RGB). You can see the vegetation and landforms clearly. The right image (NDVI) uses infrared reflectance to show vegetation density. Areas that have been cleared or degraded appear in darker or paler shades, while healthier vegetation shows brighter tones. You can see faint linear clearings and geometric patterns cutting through the forest and agricultural fields in both photos. These patterns, typical of the area's archaeological landscape, may indicate roads, pre-Columbian earthworks, or historical land use.

Visual Comparison –Upper Xingu Region

Satellite Image – 2



NDVI Image – 2



COMPARISON:

The RGB image on the left shows the natural colors of the Upper Xingu landscape, while dense clouds hide some ground features. On the right, the NDVI-classified image, which has a map overlay, highlights agricultural areas in light green, preserved forest fragments in red, and sampling sites. Even with the cloud interference in the RGB view, the classified NDVI map clearly shows land use patterns and allows us to identify preserved and deforested areas. This contrast demonstrates the effectiveness of multispectral indices like NDVI for studying environmental changes, especially in tropical regions that often have clouds.