```
// NDVI Change Quality Check - Borneo
// Israel Vallejo - 2025
// ----------------------------

// 1. Define Area of Interest (use your own AOI or draw it manually)



// 2. Load Sentinel-2 collections for both years
var s2_2020 = ee.ImageCollection("COPERNICUS/S2_SR")
  .filterBounds(aoi)
  .filterDate('2020-06-01', '2020-08-31')  // same seasonal range
  .filter(ee.Filter.lt('CLOUDY_PIXEL_PERCENTAGE', 20))
  .median();

var s2_2024 = ee.ImageCollection("COPERNICUS/S2_SR")
  .filterBounds(aoi)
  .filterDate('2024-06-01', '2024-08-31')
  .filter(ee.Filter.lt('CLOUDY_PIXEL_PERCENTAGE', 20))
  .median();

// 3. Compute NDVI
function getNDVI(img) {
  return img.normalizedDifference(['B8', 'B4']).rename('NDVI');
}

var ndvi_2020 = getNDVI(s2_2020).clip(aoi);
```

```
var ndvi_2024 = getNDVI(s2_2024).clip(aoi);
var ndvi_diff = ndvi_2024.subtract(ndvi_2020).rename('NDVI_diff');

// 4. Compute mean NDVI values
var stats_2020 = ndvi_2020.reduceRegion({
  reducer: ee.Reducer.mean(),
  geometry: aoi,
  scale: 30,
  maxPixels: 1e9
});

var stats_2024 = ndvi_2024.reduceRegion({
  reducer: ee.Reducer.mean(),
  geometry: aoi,
  scale: 30,
  maxPixels: 1e9
});

print('Mean NDVI in 2020:', stats_2020);
print('Mean NDVI in 2024:', stats_2024);

// 5. Random pixel sampling
var samples = ndvi_diff.sample({
  region: aoi,
  scale: 30,
  numPixels: 100,
```

```
  seed: 42,
  geometries: true
});

print('Random NDVI difference samples:', samples);

// 6. Map visualization
Map.centerObject(aoi, 10);
Map.addLayer(ndvi_diff, {min: -0.8, max: 0.8, palette: ['red', 'white', 'green']}, 'NDVI 2024 - 2020');
Map.addLayer(aoi, {}, 'AOI');
```