Syeda Noor ul Saba Bukhari (s1109450)

Modified Code

```javascript
// Define a new Area of Interest (AOI) for deforestation in the Amazon Rainforest
var lat = -3.4653;  // Latitude of an area in the Amazon
var lng = -62.2159; // Longitude of an area in the Amazon
var point = ee.Geometry.Point(lng, lat); // Create a point geometry
var aoi = point.buffer(5000); // Create an area (5km buffer around point)
Map.setCenter(lng, lat, 10); // Center the map on this location, zoom level 10
// Download the Sentinel-2 imagery collection
var s2 = ee.ImageCollection('COPERNICUS/S2');

// Filter the collection for the "before" period (e.g., before deforestation)
var s2_filtered_before = s2.filterBounds(aoi)
    .filterDate('2018-07-01', '2018-08-31') // Adjust to match event period
    .filterMetadata('CLOUDY_PIXEL_PERCENTAGE', 'less_than', 30);

// Sort the collection to get the lowest cloud cover image
var sorted_before = s2_filtered_before.sort('CLOUDY_PIXEL_PERCENTAGE', true);
var image_before = ee.Image(sorted_before.first());

// Define visualization parameters for the "before" image
var vizParams = {
  bands: ['B4', 'B3', 'B2'], // True color visualization
  min: 0,
  max: 3000,
  gamma: [1, 1, 1]
};

// Add the "before" image to the default Map
Map.addLayer(image_before, vizParams, "Amazon Before Deforestation");

// Create a linked map for the "after" period
var linkedMap = ui.Map();

// Filter the collection for the "after" period (e.g., after deforestation)
var s2_filtered_after = s2.filterBounds(aoi)
    .filterDate('2023-07-01', '2023-08-31') // Adjust to match event period
    .filterMetadata('CLOUDY_PIXEL_PERCENTAGE', 'less_than', 30);

// Sort the collection to get the lowest cloud cover image
var sorted_after = s2_filtered_after.sort('CLOUDY_PIXEL_PERCENTAGE', true);
var image_after = ee.Image(sorted_after.first());

// Add the "after" image to the linked map using the same visualization parameters
linkedMap.addLayer(image_after, vizParams, "Amazon After Deforestation");

// Link the default Map to the other map
var linker = ui.Map.Linker([ui.root.widgets().get(0), linkedMap]);
```

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```
// Create a SplitPanel to compare the two maps side-by-side
var splitPanel = ui.SplitPanel({
  firstPanel: linker.get(0),
  secondPanel: linker.get(1),
  orientation: 'horizontal', // Horizontal split
  wipe: true,
  style: {stretch: 'both'}
});

// Set the SplitPanel as the only thing in the UI root
ui.root.widgets().reset([splitPanel]);
```