6.2

<var modis : ImageCollection “MOD13Q1. 006 Terra Vegetation Indices 16….”

var geometry : FeatureCollection (1 element)

var geometry 2 : Polygoan, 4 vertices

>

Map.centerObject(geometry, 10)

// Time-series plot using NDVI with different sensors and typos of charts

var ndvi = modis.filterDate('2018-01-01' , '2020-12-31').select('NDVI')

print(ndvi)

var chart =

ui.Chart.image

.series({

imageCollection: ndvi.select(['NDVI']),

region: geometry,

reducer: ee.Reducer.mean(),

scale: 250,

xProperty: 'system:time\_start'

})

.setSeriesNames(['NDVI'])

.setOptions({

title: 'Modis NDVI bi-monthly Average',

hAxis: {title: 'Fecha', titleTextStyle: {italic: false, bold: true}},

vAxis: {

title: 'NDVI (x1e4)',

titleTextStyle: {italic: false, bold: true}

},

lineWidth: 1,

colors: ['green'],

curveType: 'function'

});

print(chart);

var chart = ui.Chart.image

.doySeriesByYear({

imageCollection: ndvi,

bandName: 'NDVI',

region: geometry,

regionReducer: ee.Reducer.mean(),

scale: 250,

sameDayReducer: ee.Reducer.mean(),

startDay: 1,

endDay: 365

})

.setOptions({

title: 'Modis NDVI average per day of the Year ',

hAxis: {

title: 'Día del año',

titleTextStyle: {italic: false, bold: true}

},

vAxis: {

title: 'NDVI (x1e4)',

titleTextStyle: {italic: false, bold: true}

},

lineWidth:1,

curveType: 'function',

colors: ['cyan','brown','blue','red','39a8a7', 'yellow'],

});

print(chart);

var covers = geometry.merge(geometry2); // merging geomtries

var chart =

ui.Chart.image

.seriesByRegion({

imageCollection: ndvi,

band: 'NDVI',

regions: covers, // Multiple Geometries at the same time

reducer: ee.Reducer.mean(),

scale: 250,

seriesProperty: 'Crop',

xProperty: 'system:time\_start'

})

.setOptions({

title: 'Modis NDVI bimonthly Average',

hAxis: {title: 'Fecha', titleTextStyle: {italic: false, bold: true}},

vAxis: {

title: 'NDVI (x1e4)',

titleTextStyle: {italic: false, bold: true}

},

lineWidth: 1,

colors: ['f0af07', '0f8755', 'purple'],

curveType: 'function'

});

print(chart);

// Create image collection of S-2 imagery for the perdiod 2016-2018

var S2 = ee.ImageCollection('COPERNICUS/S2')

//filter start and end date

.filterDate('2018-01-01', '2020-12-31')

//filter according to drawn boundary

.filterBounds(geometry);

// Function to mask cloud from built-in quality band

// information on cloud

var maskcloud1 = function(image) {

var QA60 = image.select(['QA60']);

return image.updateMask(QA60.lt(1));

};

// Function to calculate and add an NDVI band

var addNDVI = function(image) {

return image.addBands(image.normalizedDifference(['B8', 'B4']));

};

// Add NDVI band to image collection

var S2 = S2.map(addNDVI);

// Extract NDVI band and create NDVI median composite image

var NDVI = S2.select(['nd']);

var NDVImed = NDVI.median(); //I just changed the name of this variable ;)

// Create palettes for display of NDVI

var ndvi\_pal = ['#d73027', '#f46d43', '#fdae61', '#fee08b', '#d9ef8b',

'#a6d96a'];

// Create a time series chart.

var plotNDVI = ui.Chart.image.seriesByRegion(S2, geometry,ee.Reducer.mean(),

'nd',500,'system:time\_start', 'system:index')

.setChartType('LineChart').setOptions({

title: 'NDVI short-term time series',

hAxis: {title: 'Date'},

vAxis: {title: 'NDVI'}

});

// Display.

print(plotNDVI);

// Display NDVI results on map

Map.addLayer(NDVImed.clip(geometry), {min:-0.5, max:0.9, palette: ndvi\_pal}, 'NDVI');