**LandUse LandCver classification using google earth engine(supervised classification)**

Code:

var image = ee.ImageCollection("LANDSAT/LC08/C02/T1\_TOA")

var image\_L8 =image.filterBounds(ROI)

.filterDate('2021-01-01','2021-12-31')

.median()

.clip(ROI)

Map.addLayer(image\_L8,imageVisParam)

Map.centerObject(ROI)

var training = waterbody.merge(residental).merge(forest)

var bands=['B1','B2','B3','B4','B5','B6','B7']

var label ='class'

var input =image\_L8.select(bands)

print(training.size())

var trainImage = input.sampleRegions({collection:training,properties:[label],scale:30})

print(trainImage)

var trainingData= trainImage.randomColumn();

var trainSet=trainingData.filter(ee.Filter.lessThan('random',0.8));

var testSet= trainingData.filter(ee.Filter.greaterThanOrEquals('random',0.8));

//classification models

var classifier =ee.Classifier.smileCart().train(trainSet,label,bands)

//classify the image

var classified=input.classify(classifier);

//define a palette for the classification

var landcoverPalette=[

'#09B3F7','#FF3C33','156924'

];

Map.addLayer(classified.clip(ROI),{palette:landcoverPalette,min:1,max:3},'CLASSIFICATION CART');

//export classified map

Export.image.toDrive({

image:classified,

description:"landsat\_8\_cart",

scale:10,

region:ROI,

maxPixels:1e13,

})

