

The attribute data extracted from (.shp) of each watershed

Table S1. Descriptive accompanying data of sub-basins for use in independent variable modeling.

Sub-basin name	Areas (sq.km.)	Perimeters	Average of DEM (meters)
		(km.)	
Jomjaeng	66.183	46.434	160.445
Poopim	18.432	23.986	161.624
Phonnoi	64.081	46.779	166.147
Phonkaeyai	72.794	43.279	172.894
Wanplachuem-1	51.264	36.087	180.397
Wanplachuem-2	16.071	20.354	174.412
Klangmai	27.738	28.053	167.640
Nakaew	12.708	24.316	164.155
Nongphue	10.040	18.698	170.894
Maikrabok	14.259	19.312	163.884

Google Earth Engine (GEE) coding to download Sentinel2 (Thailand)

```
//1) AOI for download Sentinel 2
var c = ee.FeatureCollection('USDOS/LSIB_SIMPLE/2017')
.filter(ee.Filter.eq('country_na', 'Thailand'));
//2) Load Sentinel 2 data
var image = ee.ImageCollection('COPERNICUS/S2_SR')
.filterDate('2019-12-01', '2021-01-31')
//3) Filter to 10 percent cloud cover
.filter(ee.Filter.lt('CLOUDY_PIXEL_PERCENTAGE', 10))
.filterBounds(c)
.median();
// 4) Band composite
var visParamsTrue = {bands: ['B2', 'B3', 'B4'], min: 0, max: 2500,
gamma: 2};
Map.addLayer(image.clip(c), visParamsTrue, "Sentinel-2 Jan 2022");
// Applies scaling factors.
function applyScaleFactors(image) {
  var opticalBands = image.select('SR_B.').multiply(0.0000275).add(-
0.2);
  var thermalBands =
image.select('ST_*.').multiply(0.00341802).add(149.0);
  return image.addBands(opticalBands, null, true)
.addBands(thermalBands, null, true);
}
var dataset = applyScaleFactors(c);
var visualization = {
  bands: ['SR_B4', 'SR_B3', 'SR_B2'],
  min: 0.0,
  max: 0.25,
};
```