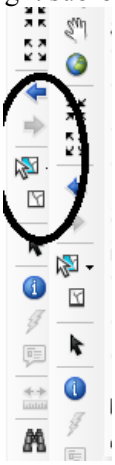
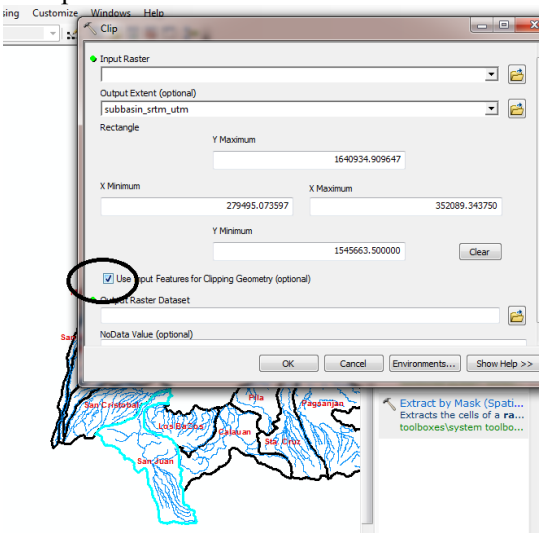
DEM

1. load DEM (srtm90) and ldb vector
2. highlight sub-basin



3. clip raster



4.fill
5. save to ascii
6. run to SedNet immediately to check stream define and sub-basin extent (check for outliers and wrong outlets)

Sednet Part

Load to Sednet

Load DEM to sednet

RKLS Factors

R factor
1. use rainfall (interpolated from hydromet stations)
2. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
3. compute for R using formula: 38.5 + (.35 x rainfall raster)
4. convert to ascii

K factor
1. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
2. convert to ascii

L
1. load slope (ldb wide)
2. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
3. compute for L using formula in notepad
4. convert to ascii

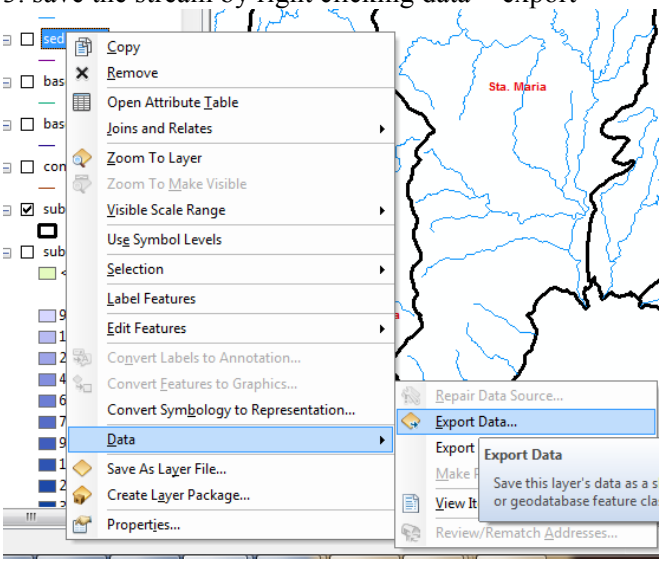
S
1. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
2. compute for S using formula in notepad
3. convert to ascii

Riparian Vegetation

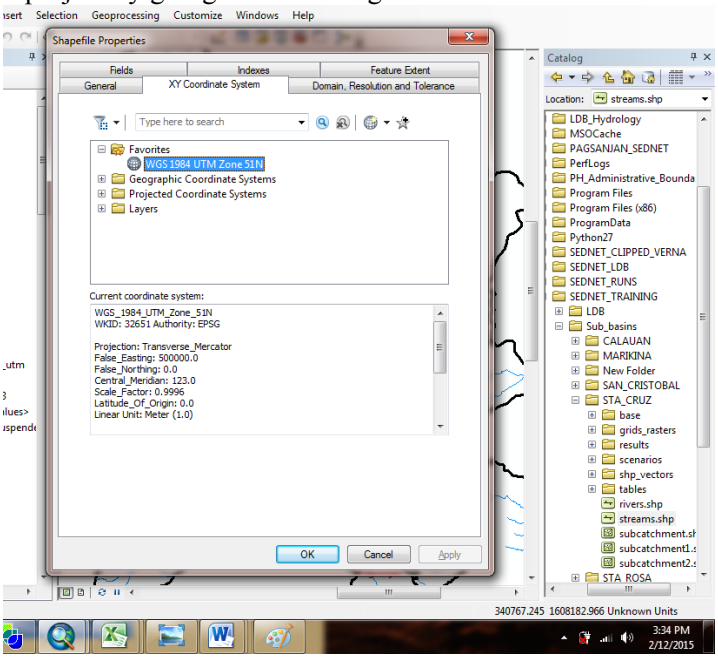
1. Load DEM to SedNet and save configuration

2. Get the stream from the saving directory (because SedNet will give you stream and subcatchment vectors after saving the config)

3. save the stream by right clicking data > export



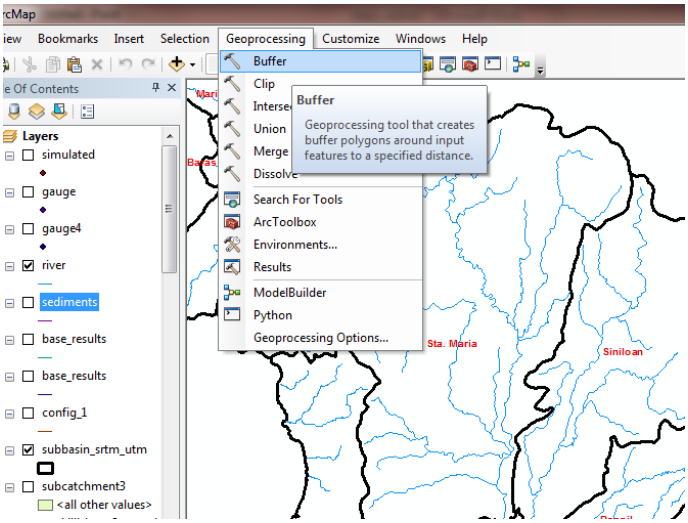
project by going to arc catalog > choose WGS 1984 UTM Zone 51N

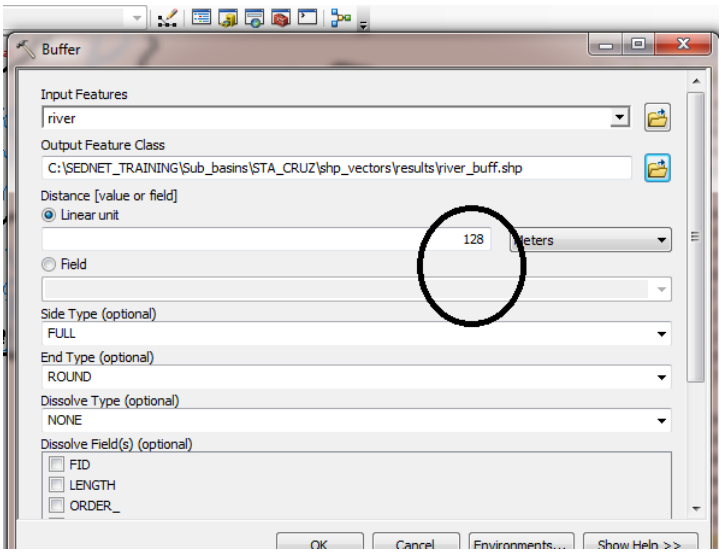


C-Factor Dissolve
Dissolve

4.

Buffer stream (128m both sides)





5. Intersect to land cover

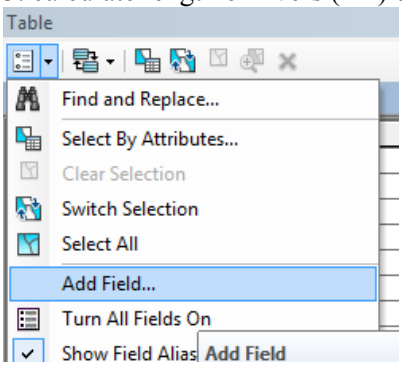
6. Rasterize based on C-factor (value)

Gully Density

1. Get subcatchment polygon from the 'config'

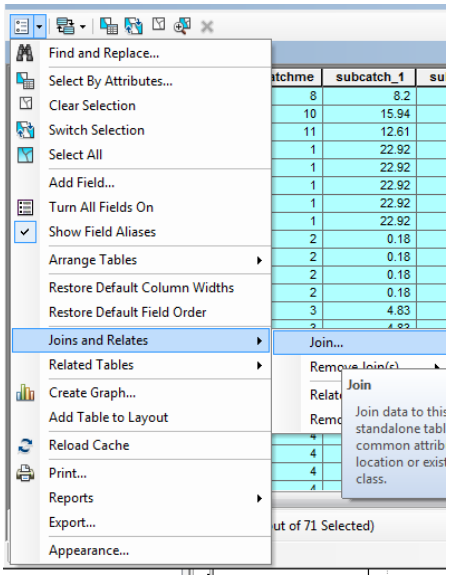
2. export and project

3. calculate length of rivers (km) by clicking options > addfield > calculate geometry

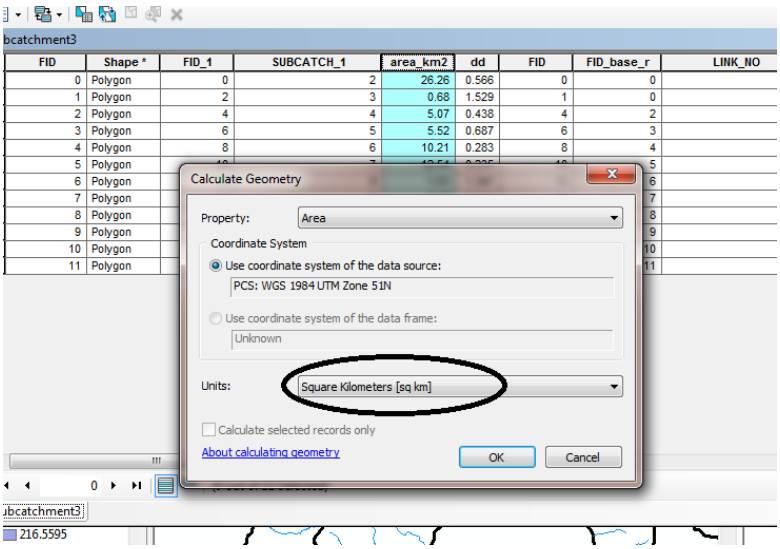


4. intersect subcatchment + stream

5. join attributes of intersect output (e.g. st_sc) using subcatchment as identifier from the subcatchment polygon



5. calculate area of subcatchment (km2)



6. calculate drainage density = km/km2 (length/area) using field calculator

7. rasterize (poygon to raster)

8. compute the 5% of drainage density in raster calcu

Landuse

1. rasterize (polygon to raster) land cover 2010
2. clip to sub-basin
3. convert to ascii

LC 2014 shapefile is input in Dissolve Operation to compute for the area

Landuse Lookup
ArcGIS
1. clip land cover 2010 to sub-basin
2. compute for area (ha)
3. select all > right click > copy selected
4. paste to excel and arrange ascending

SedNet
1. export table and open
2. arrange ascending
3. copy the 2 columns (land cover or AGG14 and C factor) from the other table
What other table???? What file???? Land cover that was dissolved and was created with cfactor
4. save
5. import back to SedNet

Gauge

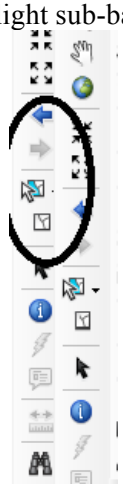
Creating shp
1. Go to arc catalog and folder directory
2. right click > new > shapefile
3. edit window > project into WGS UTM ZOne 51N

Editing features
1. right click > edit features > start editing
2. editor > editing windows > create features (better to pin this for future use)
3. click the vector (above) > click create features (below) *note that cursor will change
4. click to discharge point of river
5. name the 'ID' into the sub-basin number e.g. 14

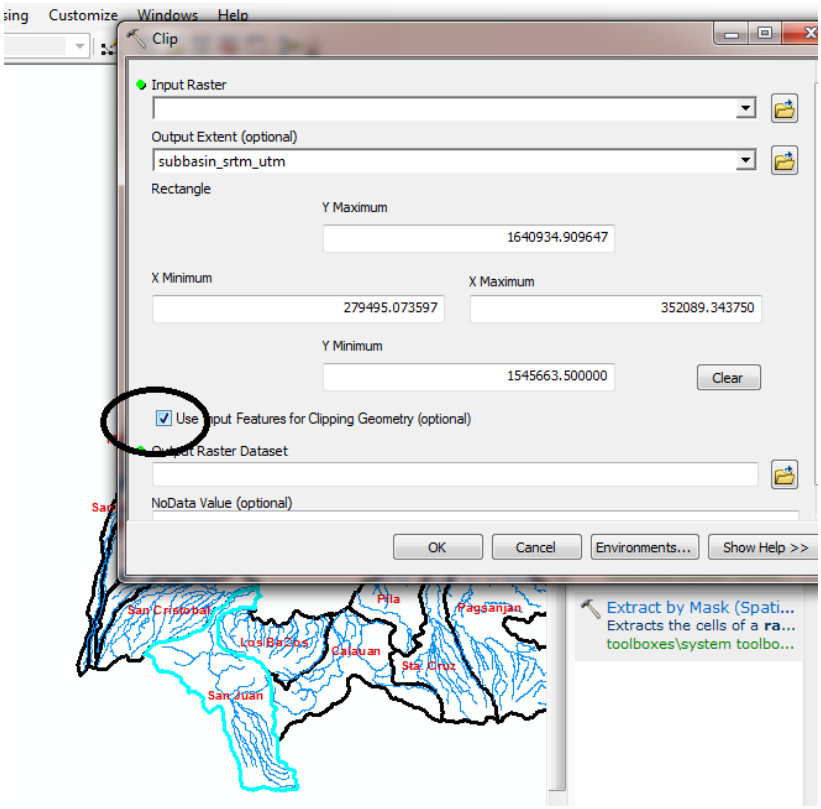
Discharge table
1. open disrcharge table in excel
2. get the date and readings using the sub-basin number as reference (bottom of worksheet)
3. recompute for megaliters per day using (b1/1000*86400)
4. copy third column to second column (paste values) and delete third column
5. save as basin name e.g. 14 to the same folder location of gauge

DEM

1. load DEM (srtm90) and ldb vector
2. highlight sub-basin



3. clip raster



4.fill
5. save to ascii
6. run to SedNet immediately to check stream define and sub-basin extent (check for outliers and wrong outlets)

RKLS Factors

R factor
1. use rainfall (interpolated from hydromet stations)
2. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
3. compute for R using formula: 38.5 + (.35 x rainfall raster)
4. convert to ascii

K factor
1. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
2. convert to ascii

L
1. load slope (ldb wide)
2. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
3. compute for L using formula in notepad
4. convert to ascii

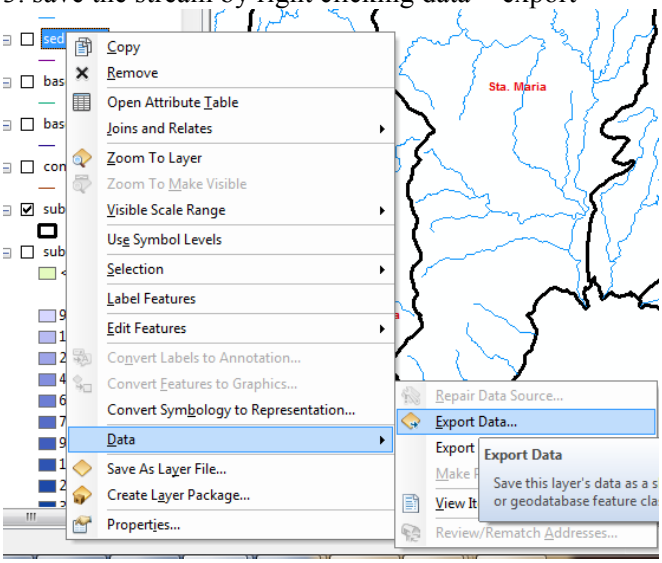
S
1. clip (extract by mask) to filled DEM or (clip raster) sub-basin vector
2. compute for S using formula in notepad
3. convert to ascii

Riparian Vegetation

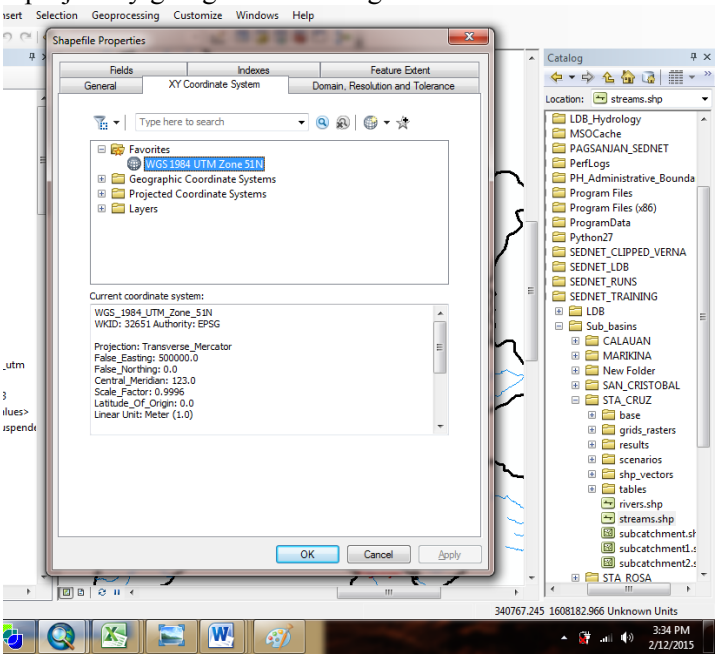
1. Load DEM to SedNet and save configuration

2. Get the stream from the saving directory (because SedNet will give you stream and subcatchment vectors after saving the config)

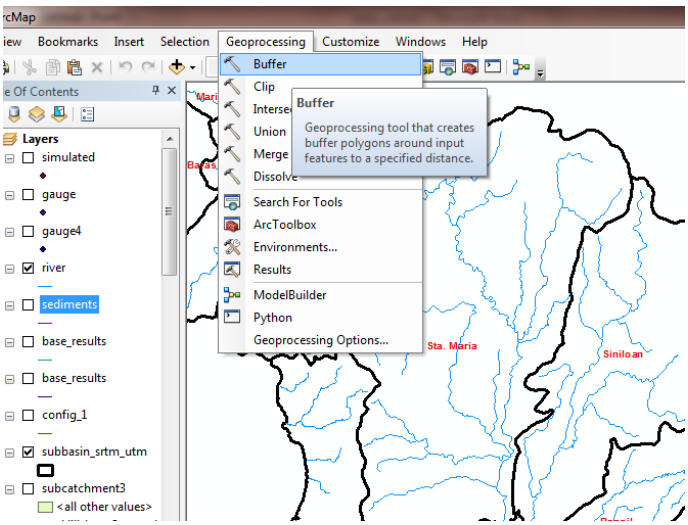
3. save the stream by right clicking data > export

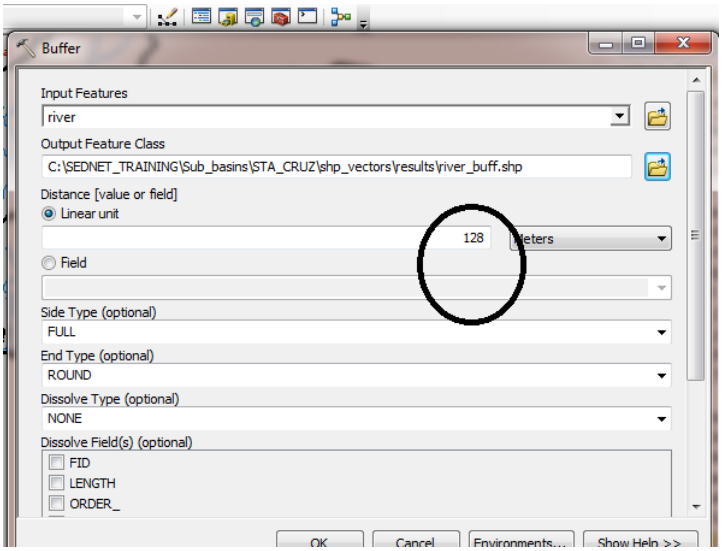


project by going to arc catalog > choose WGS 1984 UTM Zone 51N UTM Zone 50N



4. Buffer stream (128m both sides)





5. Intersect to land cover

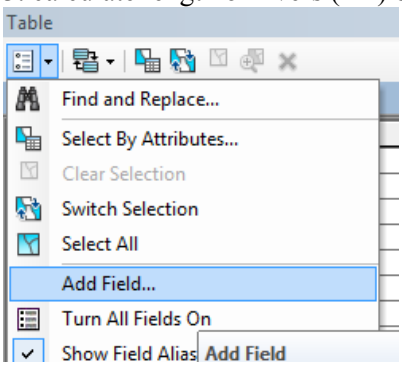
6. Rasterize based on C-factor (value)

Gully Density

1. Get subcatchment polygon from the 'config'

2. export and project

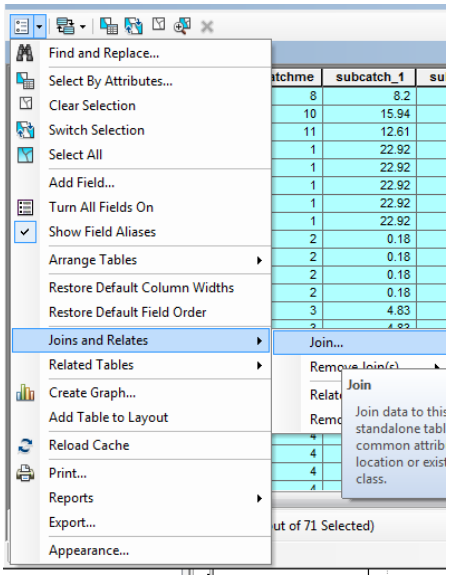
3. calculate length of rivers (km) by clicking options > addfield > calculate geometry



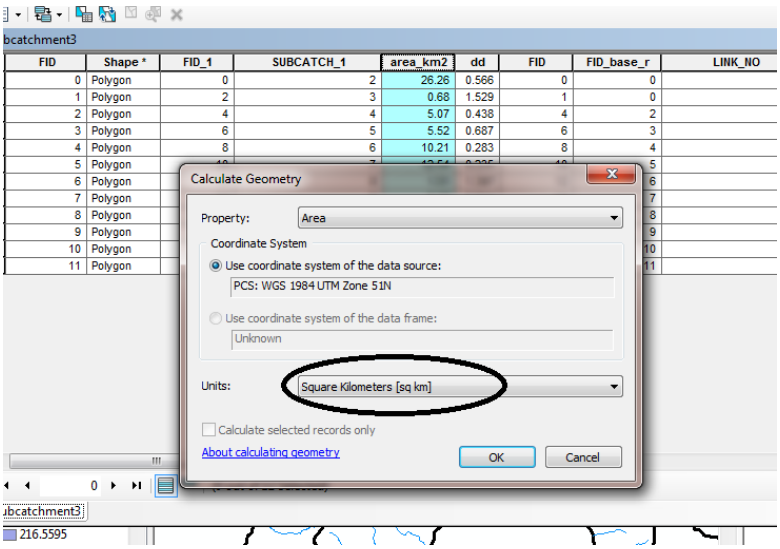
4. intersect subcatchment + stream

5. join attributes of intersect output (e.g. st_sc) using subcatchment as identifier from the subcatchment polygon

Note join the resulting intersected attrin\bute table to the subcatchment attribute table



5. calculate area of subcatchment (km2)



6. calculate drainage density = km/km2 (length/area) using field calculator

7. rasterize (poygon to raster)

8. compute the 5% of drainage density in raster calcu

Landuse

1. rasterize (polygon to raster) land cover 2010
2. clip to sub-basin
3. convert to ascii

Landuse Lookup
ArcGIS
1. clip land cover 2010 to sub-basin
2. compute for area (ha)
3. select all > right click > copy selected
4. paste to excel and arrange ascending

SedNet
1. export table and open
2. arrange ascending
3. copy the 2 columns (land cover or AGG14 and C factor) from the other table
4. save
5. import back to SedNet

Gauge

Creating shp
1. Go to arc catalog and folder directory
2. right click > new > shapefile
3. edit window > project into WGS UTM ZOne 51N

Editing features
1. right click > edit features > start editing
2. editor > editing windows > create features (better to pin this for future use)
3. click the vector (above) > click create features (below) *note that cursor will change
4. click to discharge point of river
5. name the 'ID' into the sub-basin number e.g. 14

Discharge table
1. open disrcharge table in excel
2. get the date and readings using the sub-basin number as reference (bottom of worksheet)
3. recompute for megaliters per day using (b1/1000*86400)
4. copy third column to second column (paste values) and delete third column
5. save as basin name e.g. 14 to the same folder location of gauge

Rainfall interpolation

Load pagasa vector in Palawan training under vector

Use IDW to interpolate cellsize 60 12 stations

Using project project output utm50n

Raster to ascii

Load to sednet

PET

Add temp in temp1 provided by Arnan

project Raster to WGS 1984 using “raster project”

Slope

Load filled dem

Create slope by Slope in Spatial analyst

Degrees

Raster calculator using formula in the notepad

Making change matrix table

Load 2010 and 2010

Intersect this

Calculate the area hec

Insert

Pivot table

Automatic select whole table

Pivot table is activated in the right

Select acg14 for 2010 as an opening stack

Columns is 2014

Area is drag to values

Averaging cover factor for scenario analysis as new cover factor

AGWAT paper you find the formula

Do in excel

Changing the c factor of forest

The forest was assigned weight of .80 assuming that .20 turned into shrubland

POST PROCESSING PROCEDURES