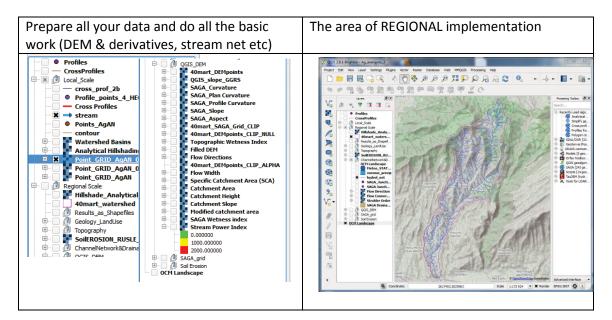
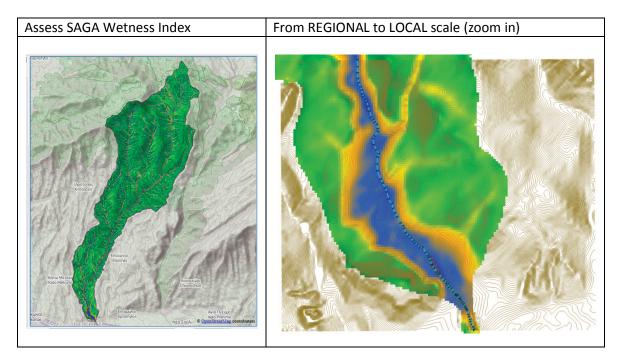
Flood Hazard assessment - From Regional to Local scale

A step-by-step tutorial

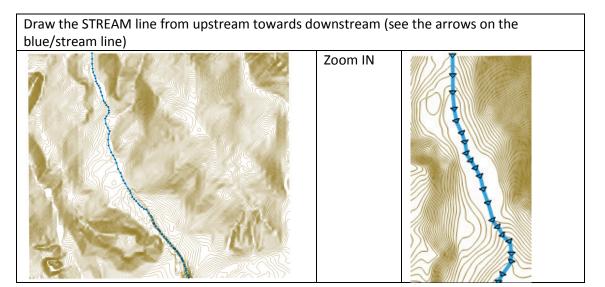
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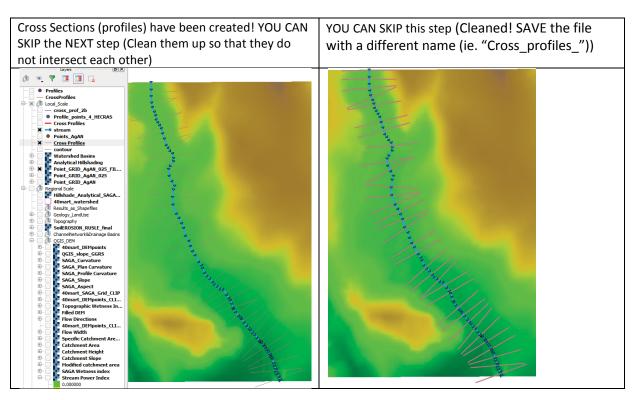
С.



D.

Find the TERRAIN ANALYSIS – PROFILES > PROFILES FROM LINES option and RUN	This pops up! Input (top to bottom): 1) the DEM; 2) the stream (line); 3) the distance between profiles; 4) the length of each profile; 5) the number of point samples (elevation points calculated) in each profile (here it is 31 samples for 150m profiles which gives one elevation point per 5 meters); 6) the path/NAME for saving the file (clicking on the "open output file", will load the file on the dataframe); 7) RUN. Done!
SAGA [243 geoalgorithms] Geotatistics Grid - Calculus Grid - Calculus Grid - Griding Grid - Spline Grid - Visualization Imagery - Classification Imagery - Segmentation Brindgery - RGA Bragery - RGA Bragery - Segmentation Bragery - RGA Bragery - Tools Shapes - Grid Shapes - Tools Shapes - Tools Bragery - Transect Bragery - Tools Bragery - Transect Bragery - Tools Bragery - Transect Bragery - Tools Bragery - Tools Bragery - Tools Bra	Cross profiles X Parameters Log Peth Pent. (GRD_AgAN, 025_FILED (EPSG: 2100) Les steam (EPSG: 2100) Profile Detatance Image: Construction of the state of the stat

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F.

Find the TERRAIN ANALYSIS –	Input: 1) DEM; 2) the "Cross_profiles_" file created; 3) select "ID" as
PROFILES > PROFILES FROM LINES	the key for the identification of each profile; 4) YES! Each line as a NEW
option and RUN	profile; 5) provide paths and name for the new files to be saved.
 Terrain Analysis - Morphometry Terrain Analysis - Profiles Cross profiles Profile from points table Vigra Scripts [14 geoalgorithms] 	Profiles from lines Perameters Log Perameters Log </td

G.

The att	rihuto ta	hle sh	owstin	o ID (th	e initial	ID we set	25			
	identifier. It corresponds to the respective Cross Section); ID (the									
identifi										
series r	umber (of the r	point wit	thin the	cross se	ction spe	cified with			
						•				
LINE_IL) numbe	r); DIS	I (the di	stance f	rom the	starting p	point of th			
specific	Cross S	ection)	:): DIST	SURF (the dista	nce on gi	ound			
						-				
surface); X, Y ((coordin	nates of	the poir	it) and Z	(the resp	ective			
altitude	e).									
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280	-						140.72874451			
							141.33917236 141.97134399			
		284	283.00812752	296.62723041			142.62182617			
284	0	285	284.00815624	297.82860841	462184.34797244	4550757.59502991	143.28759766			
285	0	286	285.00818496	299.03716227	462185.34797244	4550757.60260877	143.96623230			
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н.

Paste them into EXCEL. We need two NEW columns
called RIVER_NAME and RIVER_REACH respectively.
Insert TWO columns on the left: Column A will be named
as RIVER_NAME and Column B as RIVER_REACH
1. ADD the name of the river (column A) in ALL lines;
ADD the RIVER_REACH name;
3. RENAME column "Line_ID" as "RIVER_STATION"
(column "Line_ID" of the "Profile_points.shp" shapefile).
4. DELETE the rest of the columns. Now the file has six
columns: River_name (A), River_Reach (B), River_Station
(C), X (D), Y (E) and Z (F)
5. Save the file in excel format so that you can re-use it.
6. SAVE the file in .CSV format. Please note than in some
cases, EXCEL uses the semi-colon (;) character instead of
the comma (,). Ready for the HEC-RAS!

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Please note than in some cases, EXCEL uses the semi-colon (;) character instead of the comma (,). In such a case, open the CSV file with Notepad, press ctrl-H (replace function) and REPLACE ";" with "," (do not use the quotes). SAVE the CSV file and it is ready for importing into HEC-RAS.

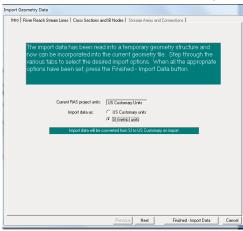
I. Import the .csv data file to HEC-RAS

Open HEC-RAS

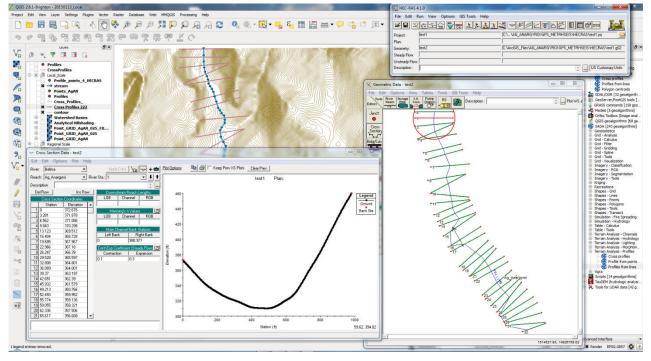
- 1. New Project (set project path and name and save)
- 2. New Geometry Data (set project path and name and save)
- 3. Import Geometry Data / CSV (select the CSV file and open it)
- 4. Select the respective Columns for River, River reach etc

CSV Import
Select the format type for the data you would like to import. If a River and Reach are not specified, the data will be imported with a unique River and Reach name which you can rename.
The first line of the import file must contain the Column Headings for the Comma Separated Value data. The first line of the file is:
RIVER_NAME,RIVER_REACH,RIVER_STATION,X,Y,Z
X, Y, Z Format
This format requires column data for River Station (RS), Easting (X), Northing (Y), and Elevation (Z).
OK Cancel

5. Press OK, and set the correct Unit System in the next window (below)



6. ...NEXT...NEXT or FINISHED/Import Data



7. Got it! Create in QGIS Cross Sections and import them into HEC-RAS in less than 5'