

Flood Risk Assessment (Data and Time Estimation)

1. Flood risk is of four types
 1. Pluvial
 2. Fluvial
 3. Coastal
 4. Groundwater
2. Data Requirement
 - 1 Digital map of the study area
 - 2 If digital map is not available, topo sheet of 1:25000 or 1:50000 or Satellite map. This will be digitized.
 - 3 Digital Elevation Model (DEM)
 - 4 Rainfall data of the area
 - a. Annual rainfall for at least 50 years
 - b. Monthly rainfall data of at least 15 years
 - c. Hourly rainfall data of at least 15 years
 - 5 Flood data
 - a. Flood data of at least 50 years of the major river in the area
 - b. Flood data of small streams of at least for 15 years
 - 6 Soil data
 - a. Soil characteristics of the area including infiltration data
 - b. Soil map of the area
 - 7 Coastal Tidal data
 - a. high tide data for at least for 15 years along with time
 - b. low tide data for at least for 15 years along with time
 - 8 Hydro geology
 - a. Geological map of the area
 - b. Brief description of geology of the area
 - c. Groundwater Water levels of the area at least for 15 years (Pre monsoon and post monsoon)
 - 1 Jan-Feb
 - 2 April-May
 - 3 Oct-Nov
 - d. Groundwater quality of main constituents (TDS, Chloride etc) for at least 15 years
 - 1 April-May
 - 2 Oct-Nov

3. Software Requirement

- 1 Arc.GIS – 9.2/9.3
- 2 HEC-RAS/ HEC_GEORAS
- 3 HEC_HMS/ HEC-GEOHMS

4. Time requirement after the data collection (Data will be supplied by the client at his cost)

The time requirement of various activities for estimation of Flood Risk in any area is given below. The time required for field work is not given, as it is assumed that the field work and data collection would be conducted by any agency separately. This is only the time schedule for Data analysis and interpretation with the help of suitable software and final report writing.

FLOOD RISK ANALYSIS- DATA AND TIME REQUIREMENT	
Details	No of hours
1 Digitizing	10
2 Rainfall analysis	24
3 Flood frequency analysis	24
4 Pluvial floods	12
5 Fluvial floods	24
6 Coastal floods	12
7 Groundwater floods	24
8 Writing draft report	36
9 Final report for submission	10
10 Incorporating clients suggestions , if any	24
Total time (Hrs)	200