LIST OF FIGURES

Figure No.		Page No.
1.1	Location map of the study area	2
2.1	Geological map of the study area	13
2.2	Relief Map of the study area	14
2.3	Drainage map of the study area	15
2.4	Soil map of the Study area	16
2.5	Natural Vegetation cover and Tea Garden Map of the Study area	20
3.1	Contour Map of the Study area	27
3.2	Digital Elevation Model of the Study area	29
3.3	Mean monthly rainfall (mm) and temperature (°C) of the Study	30
	area	
4.1	Longitudinal profile of Balasan River	41
4.2	Longitudinal Profile of Mahananda River	41
4.3	Cross sectional profiles of the alluvial fans under the study area	42
4.4	Cross Section line demarcation map of the study area	43
4.5	Slope map of the study area	44
4.6	Area-Slope Distribution of the Study area	46
4.7	Section view of the Study Area	47
4.8	The coverage of total area (Sq. Km.) under different geomorphic	47
	units based on major contours	
4.9	Area (in %) of alluvial fans under different amplitude or Relative	48
	Relief zones	
4.10	Drainage Density map of the study area	49
4.11	Alluvial fan segmentation of the study area	51
4.12	Soil sample collection map of the study area	55
5.1	Present Landuse map of the study area	59
5.2	Temporal comparisons of forest cover and tea gardens between	63
	year 1959 and 2016	
5.3	Differences of forest cover and tea garden cover in between year	64
	1959 and 2016	
5.4	Line graph showing fan segment wise coverage of landuse type	66
5.5	Diversified landuse occupancy on the different fan segments	68

5.6	3D visual comparison of the study area fan segments and landuse	69
6.1	Graphical representation of alluvial fan segment wise runoff	89
	differences	
6.2	Graphical representation of alluvial fan segment wise sand% and	89
	silt% differences	
6.3	Correlation (Negative) between altitude and silt percentage	91
6.4	Correlation (Positive) between altitude and sand percentage	92
6.5	Presence of sand, silt, clay and nitrogen in the collected samples	93
6.6	Presence of potassium and sodium in the collected samples	93
6.7	Land suitability map of the study area	96
6.8	Spatial status of landuse (Tea garden & Agricultural land) with	97
	land suitability outcome	
6.9	Flow Chart for land suitability classification	99