

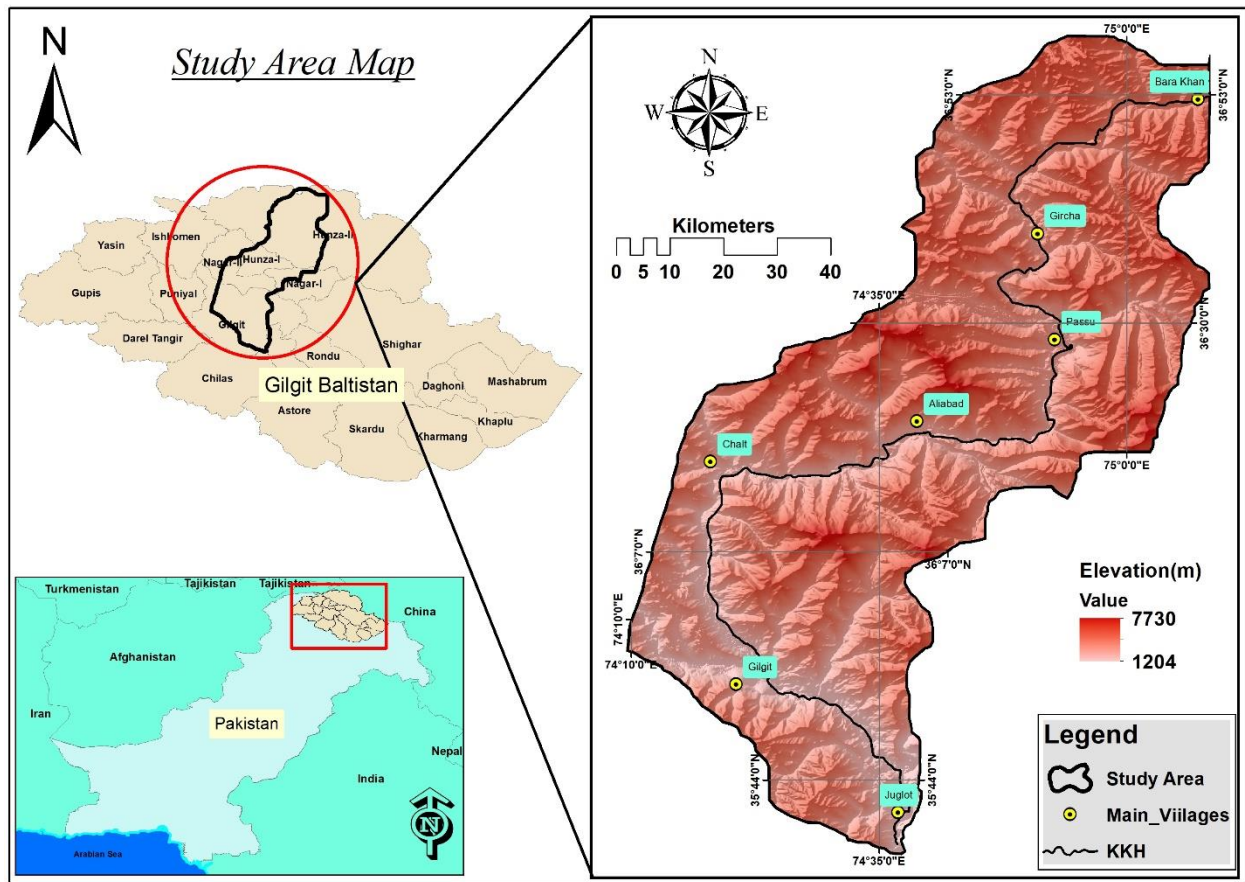


Figure 1 (a) Study Area Location map **(b)** Showing DEM of Study Area and Villages by the authors using ArcGIS Desktop version 10.7.1

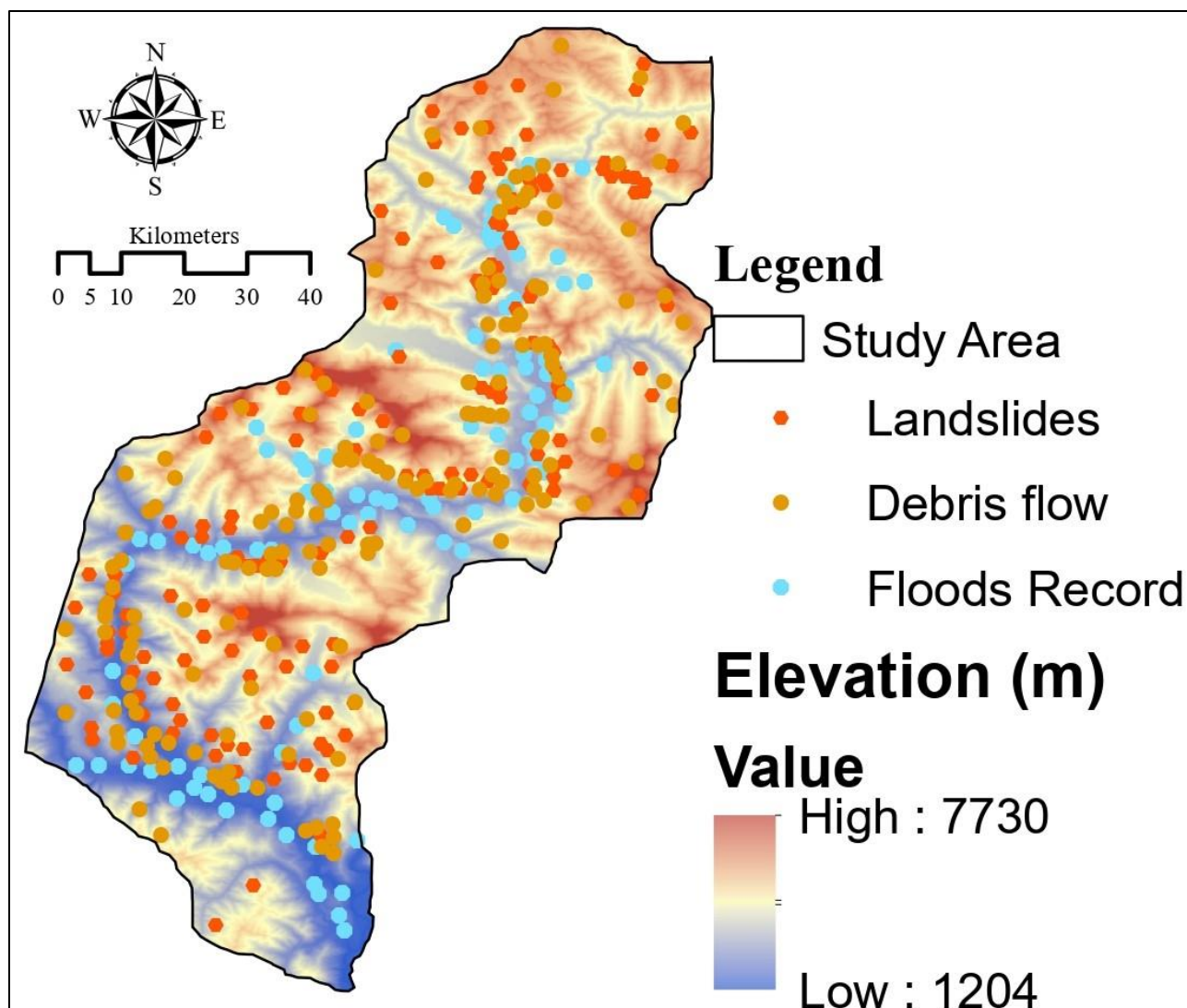
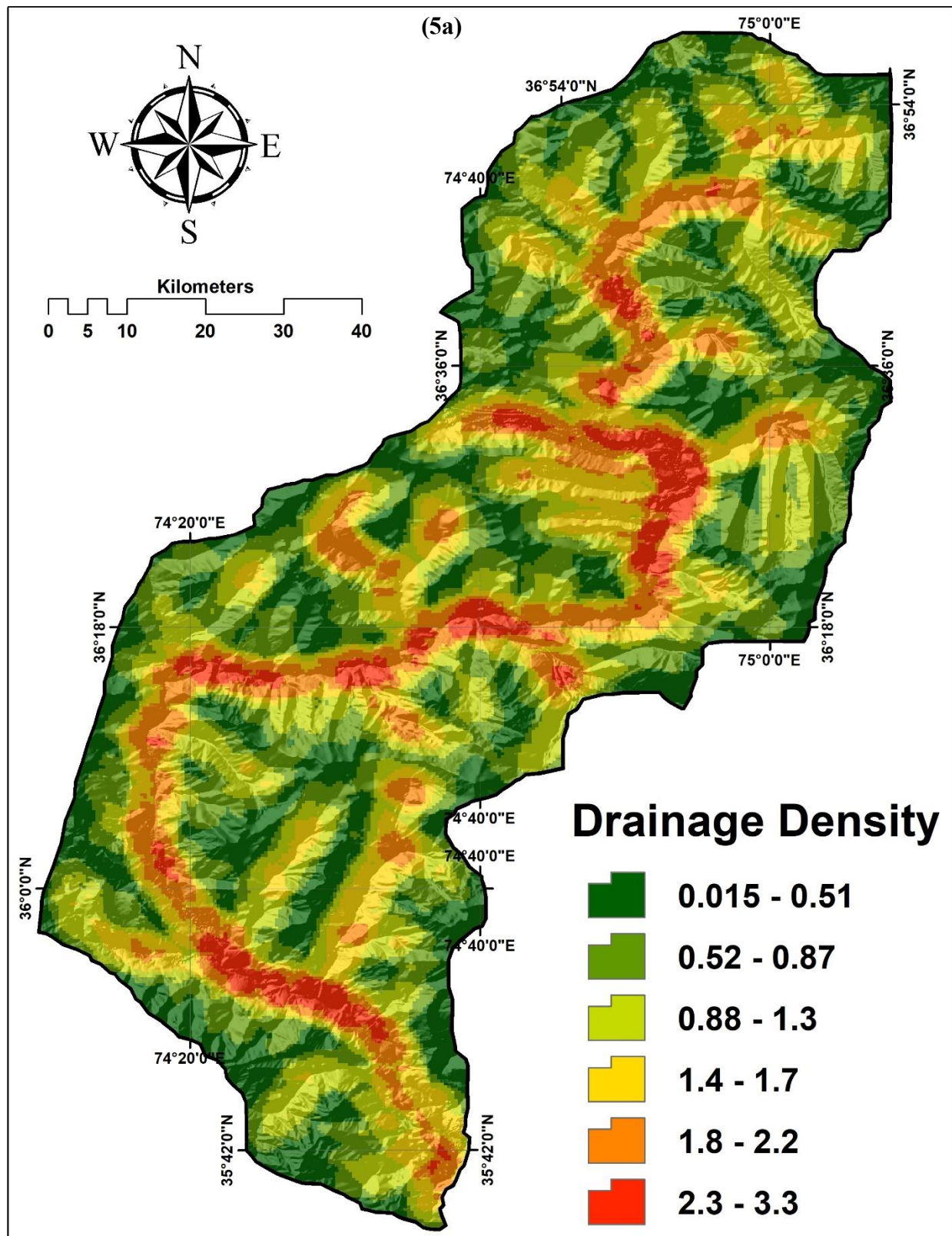
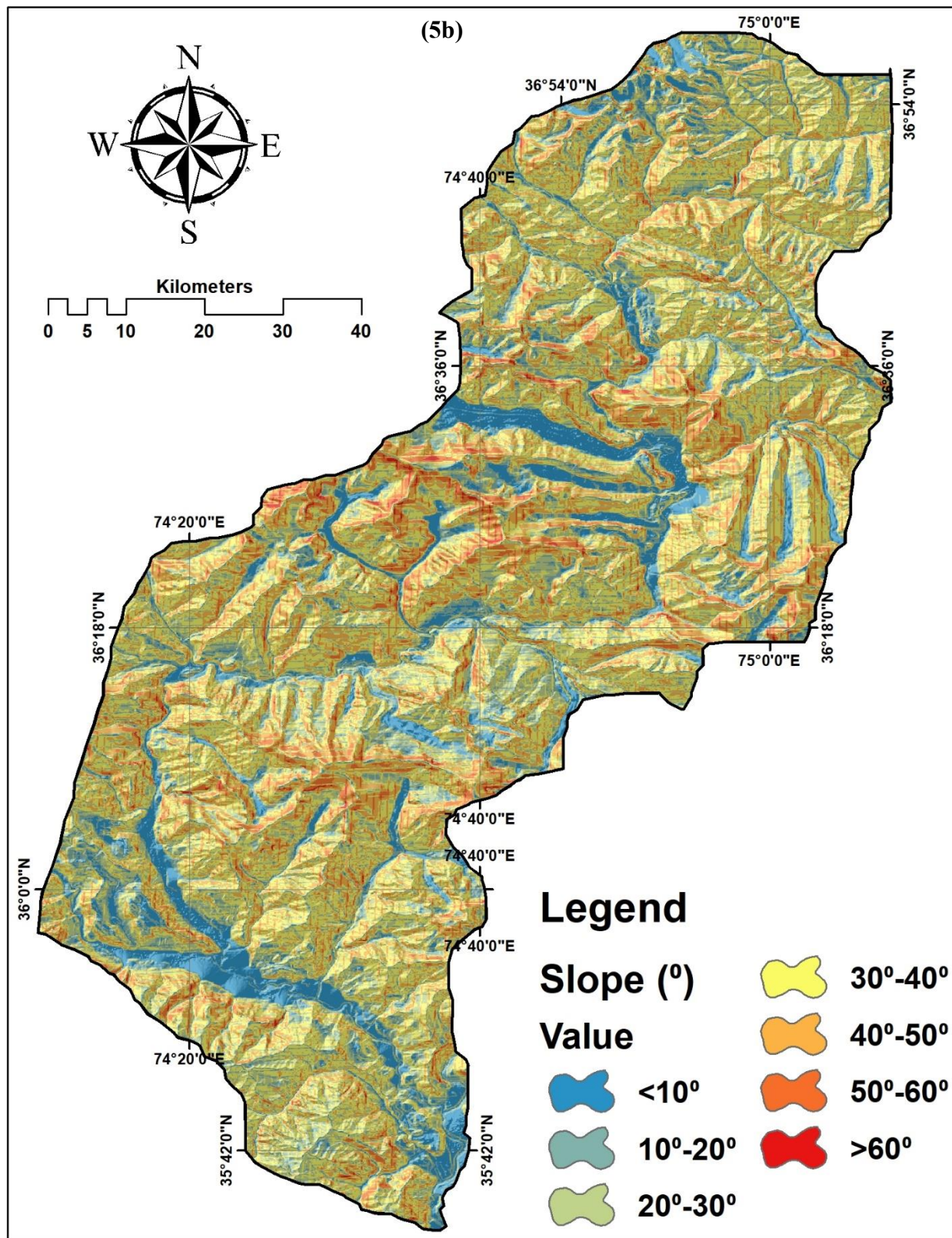
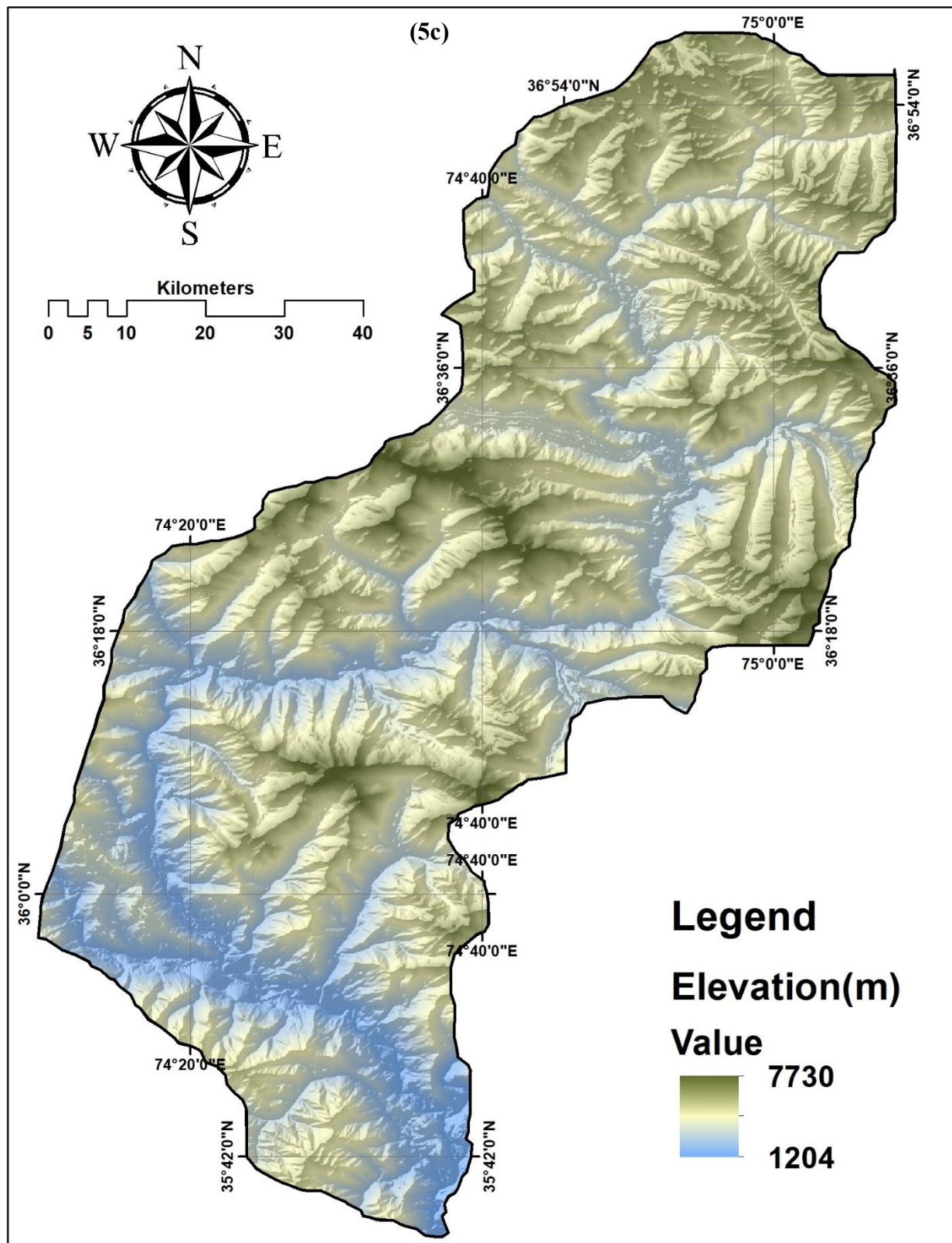
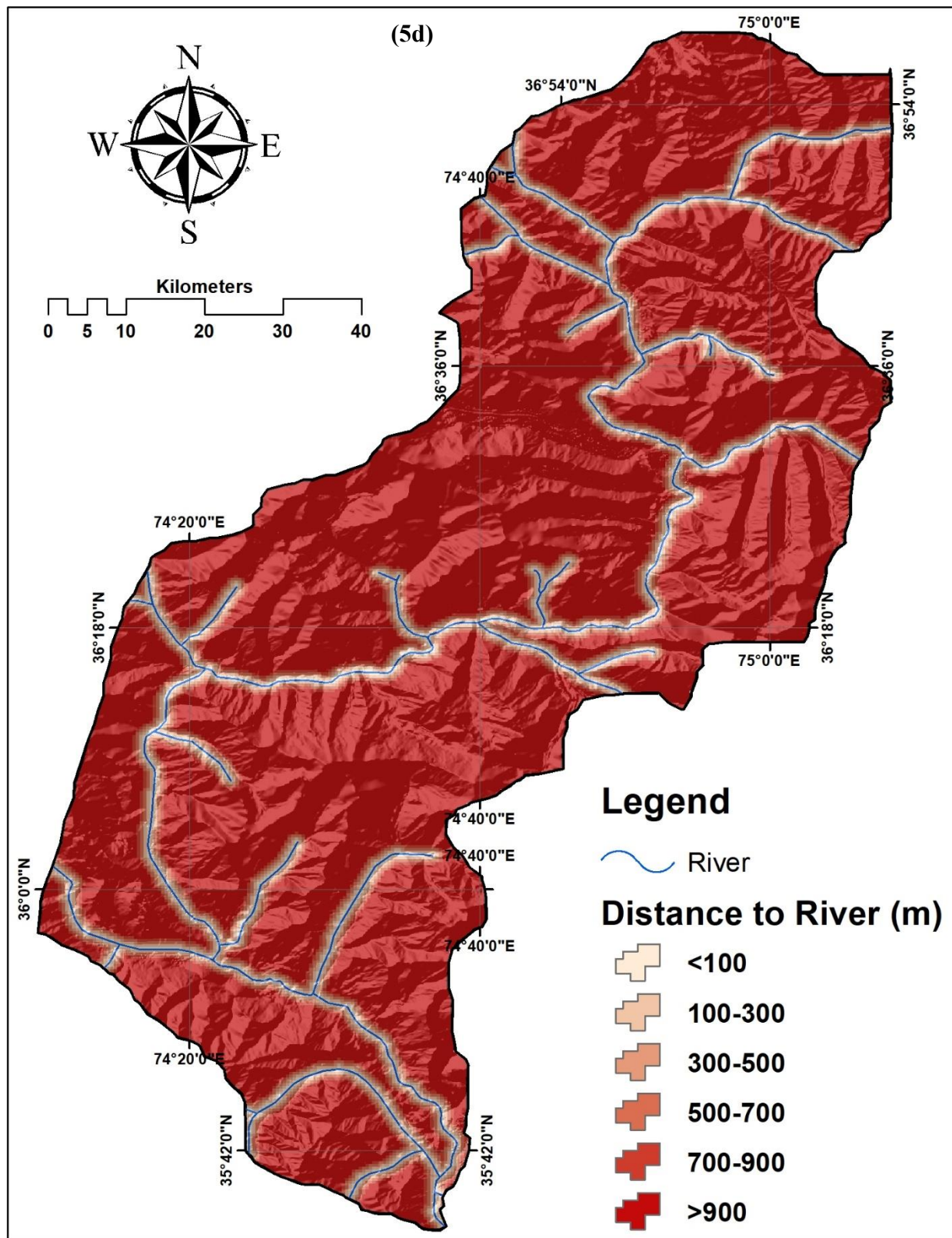


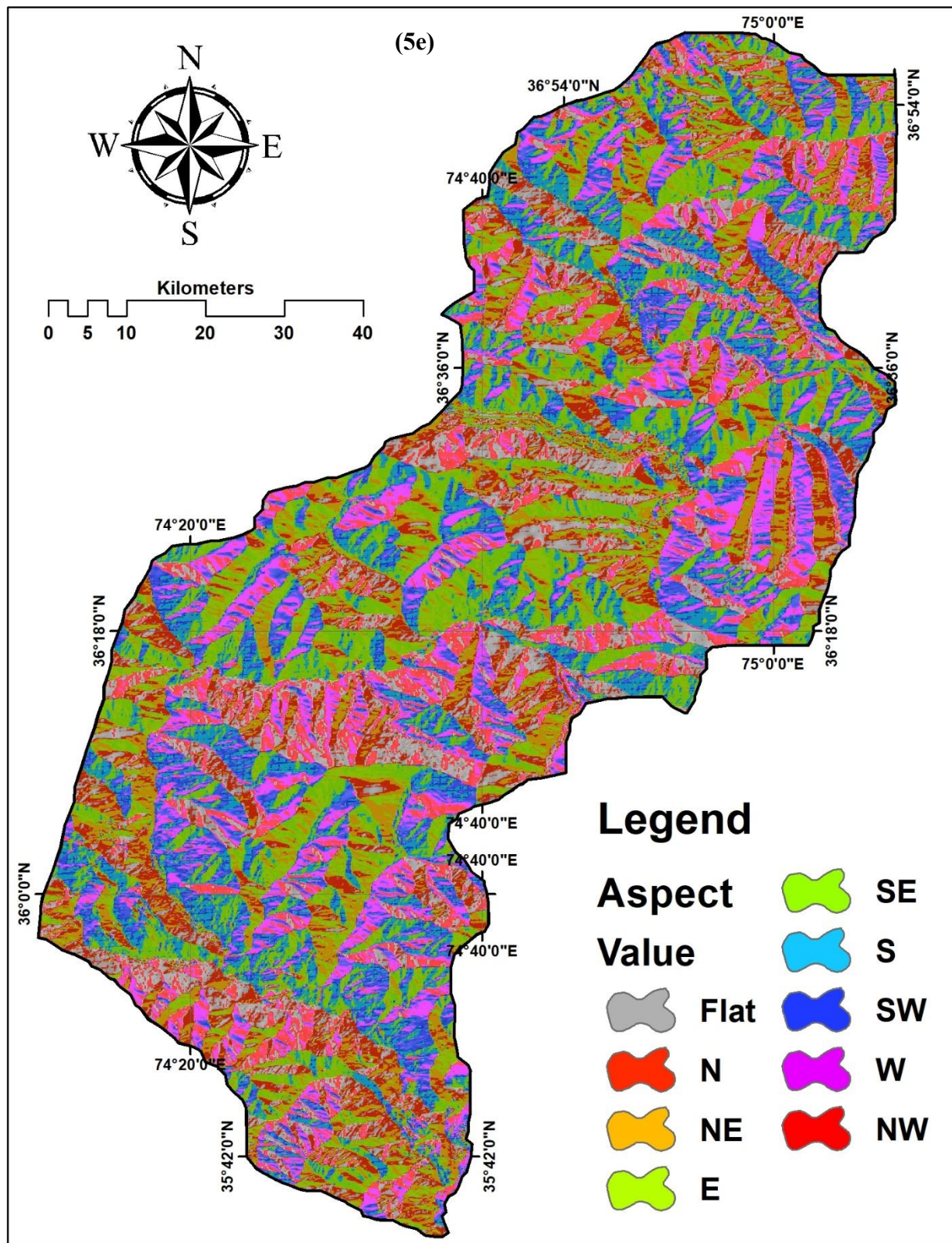
Figure 2 Inventory map of Hazards (2000-2023) by the authors using ArcGIS Desktop version 10.7.1

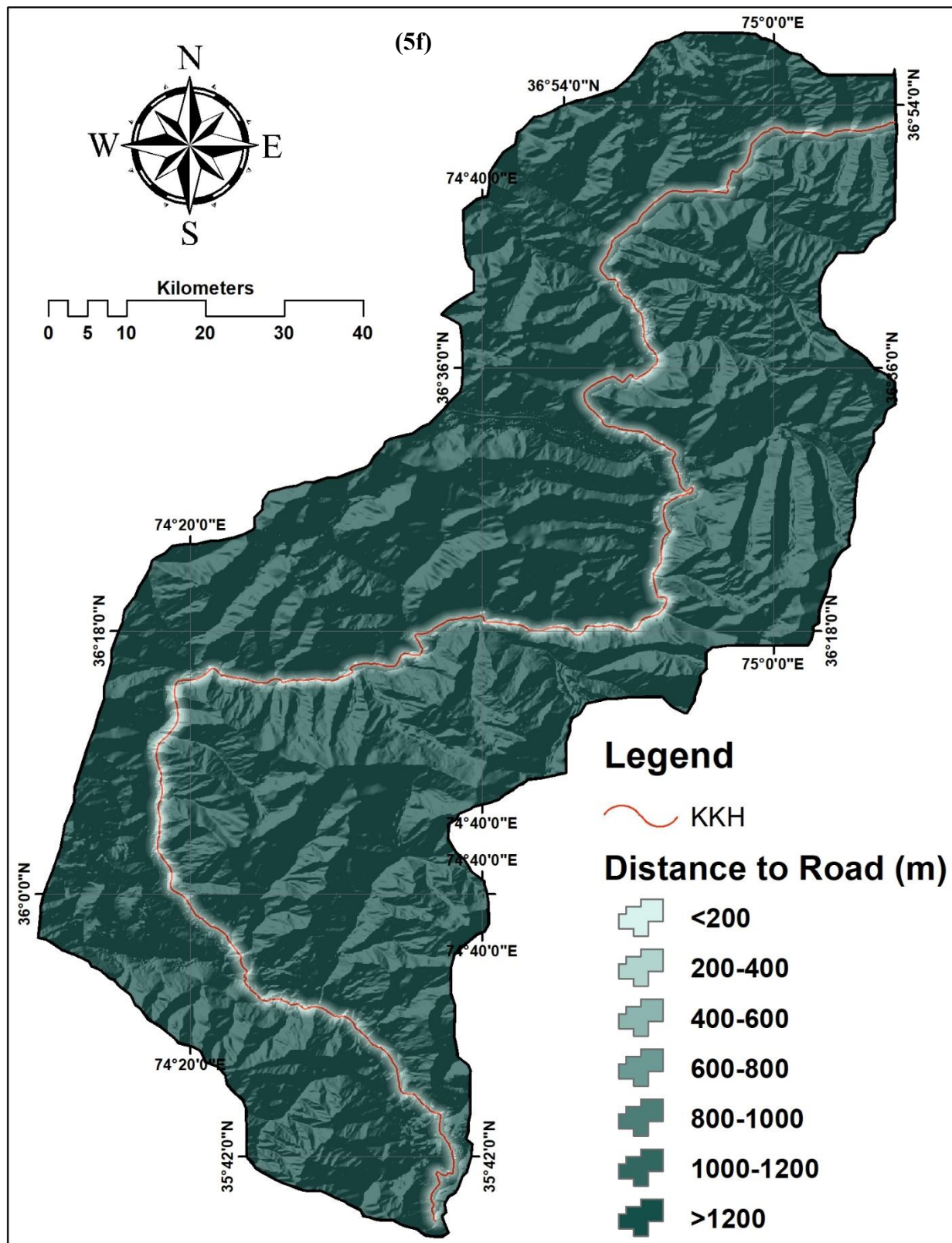


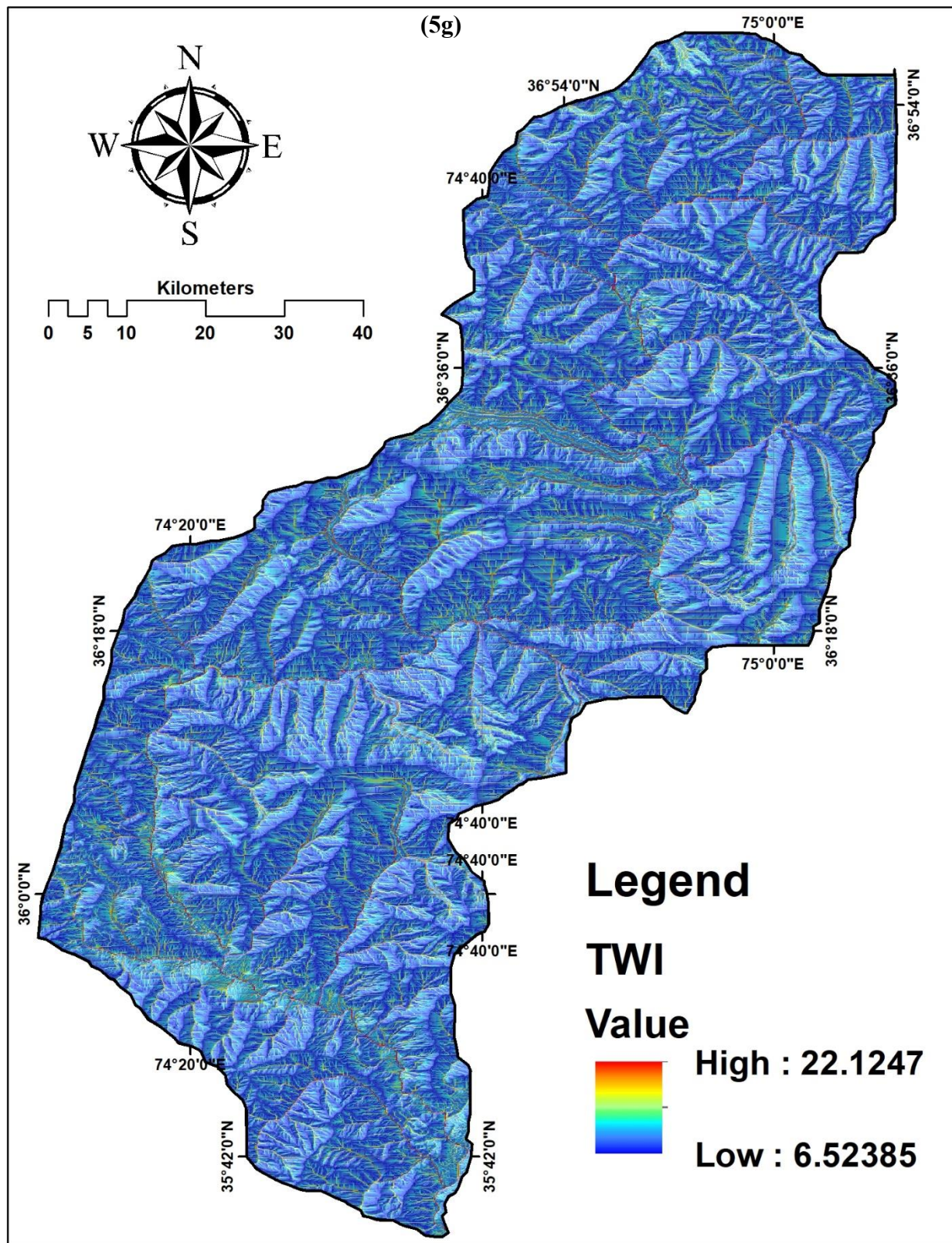


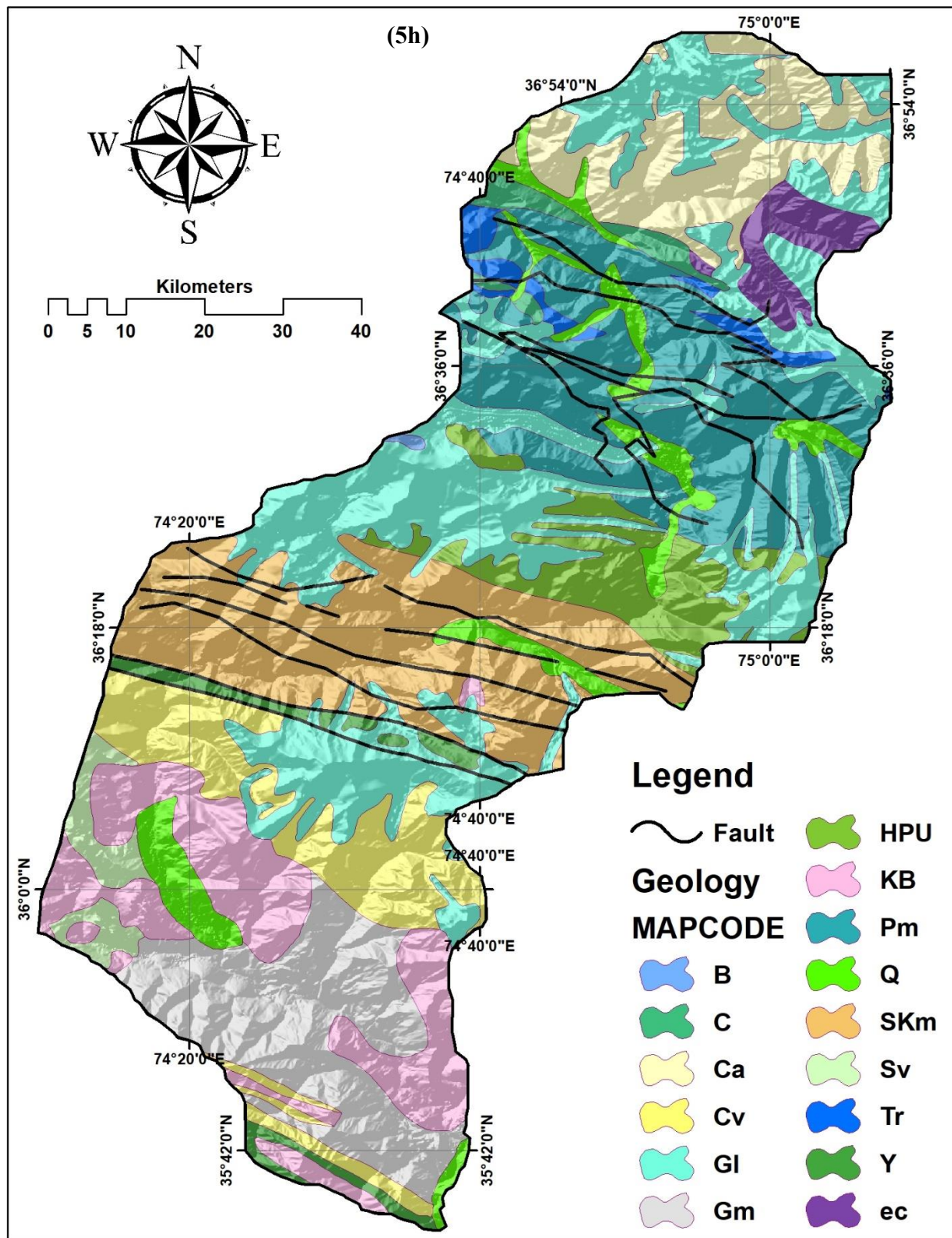


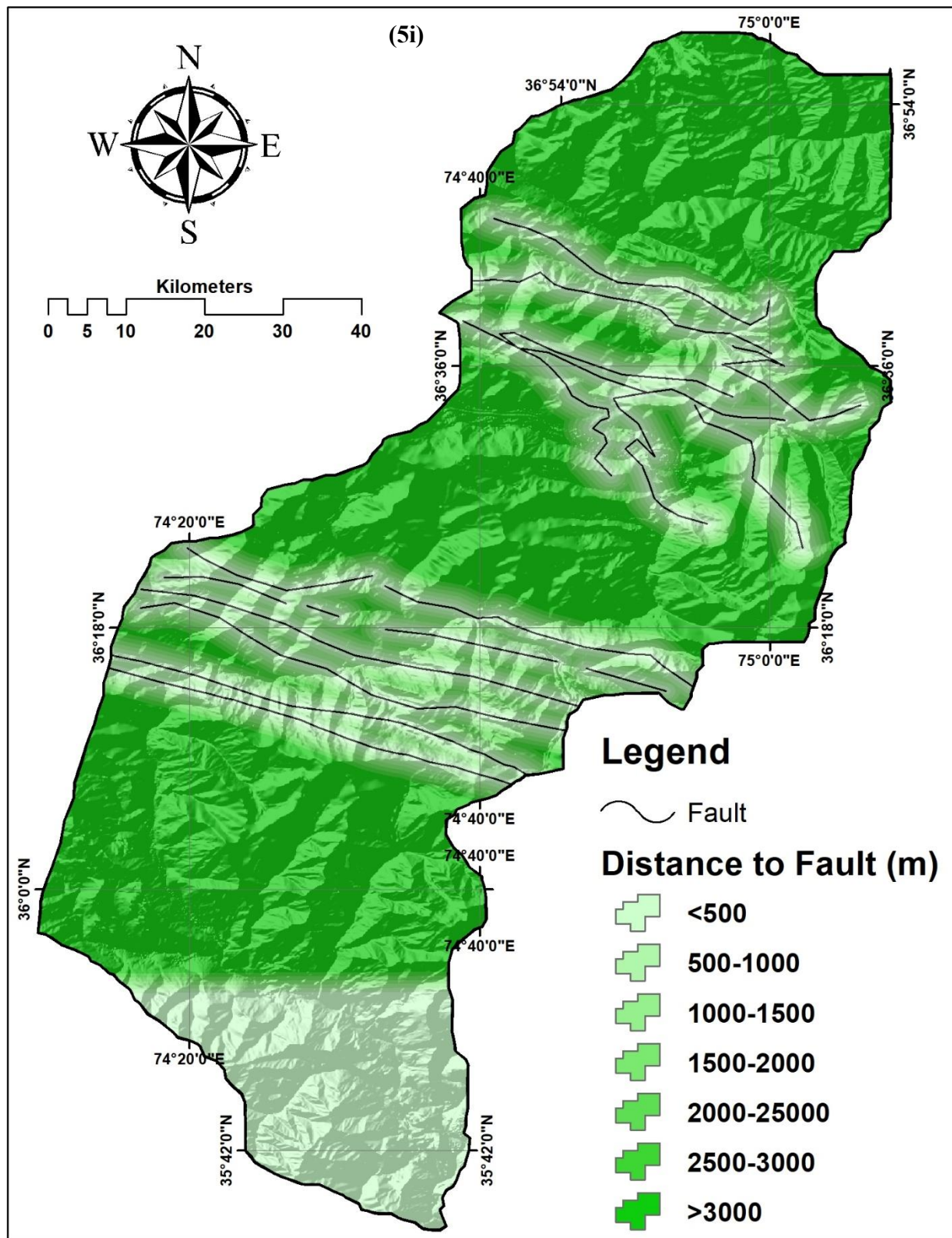


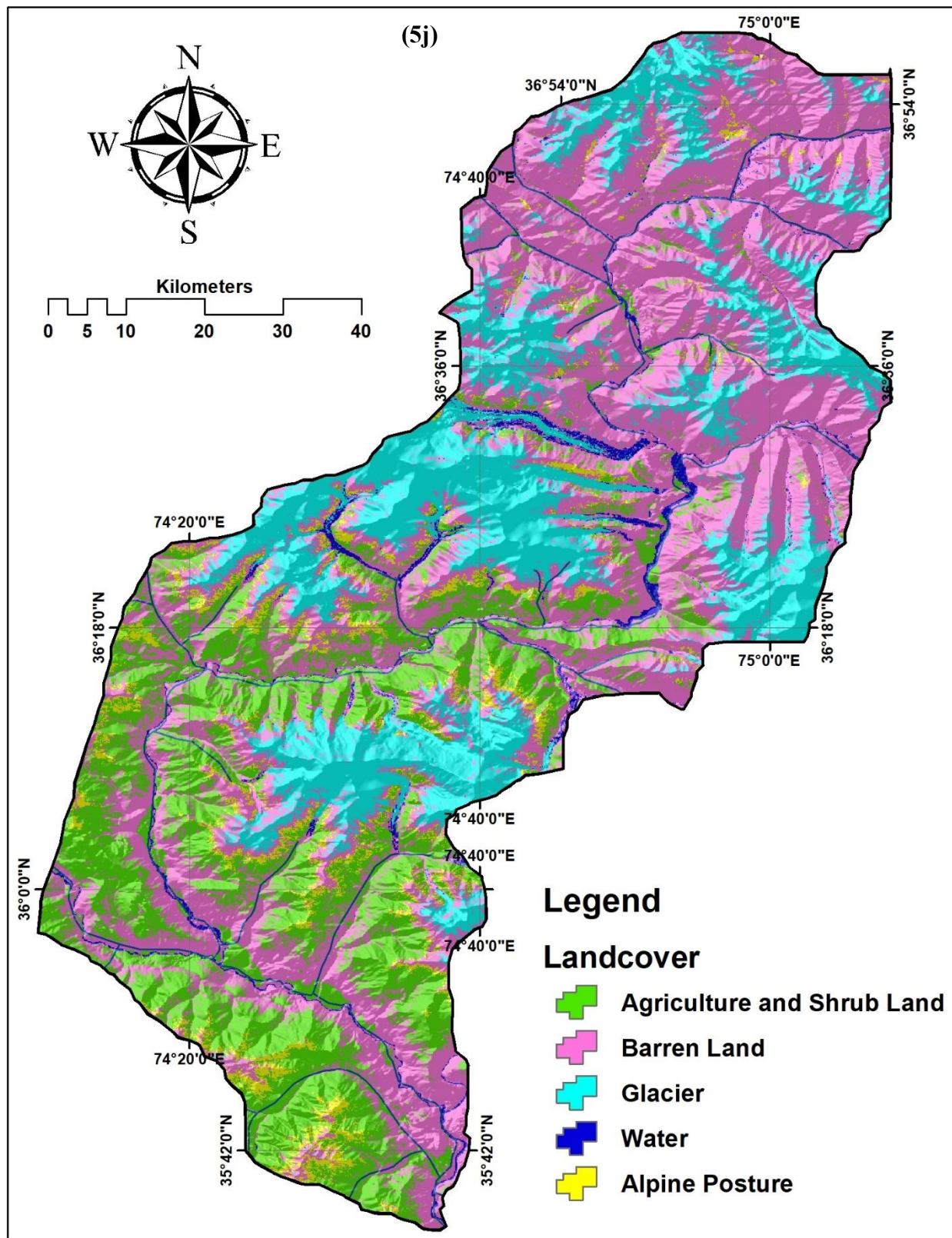


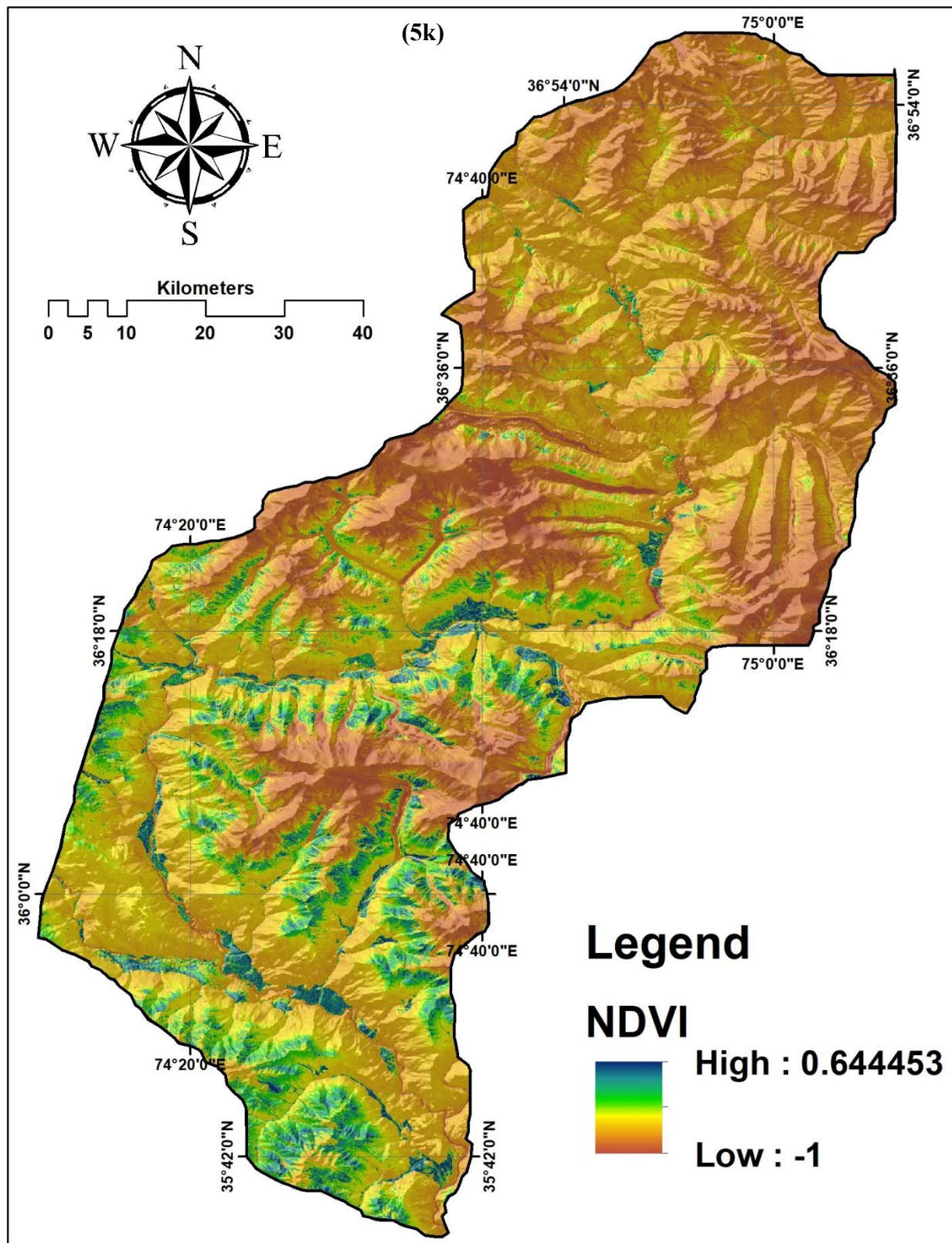












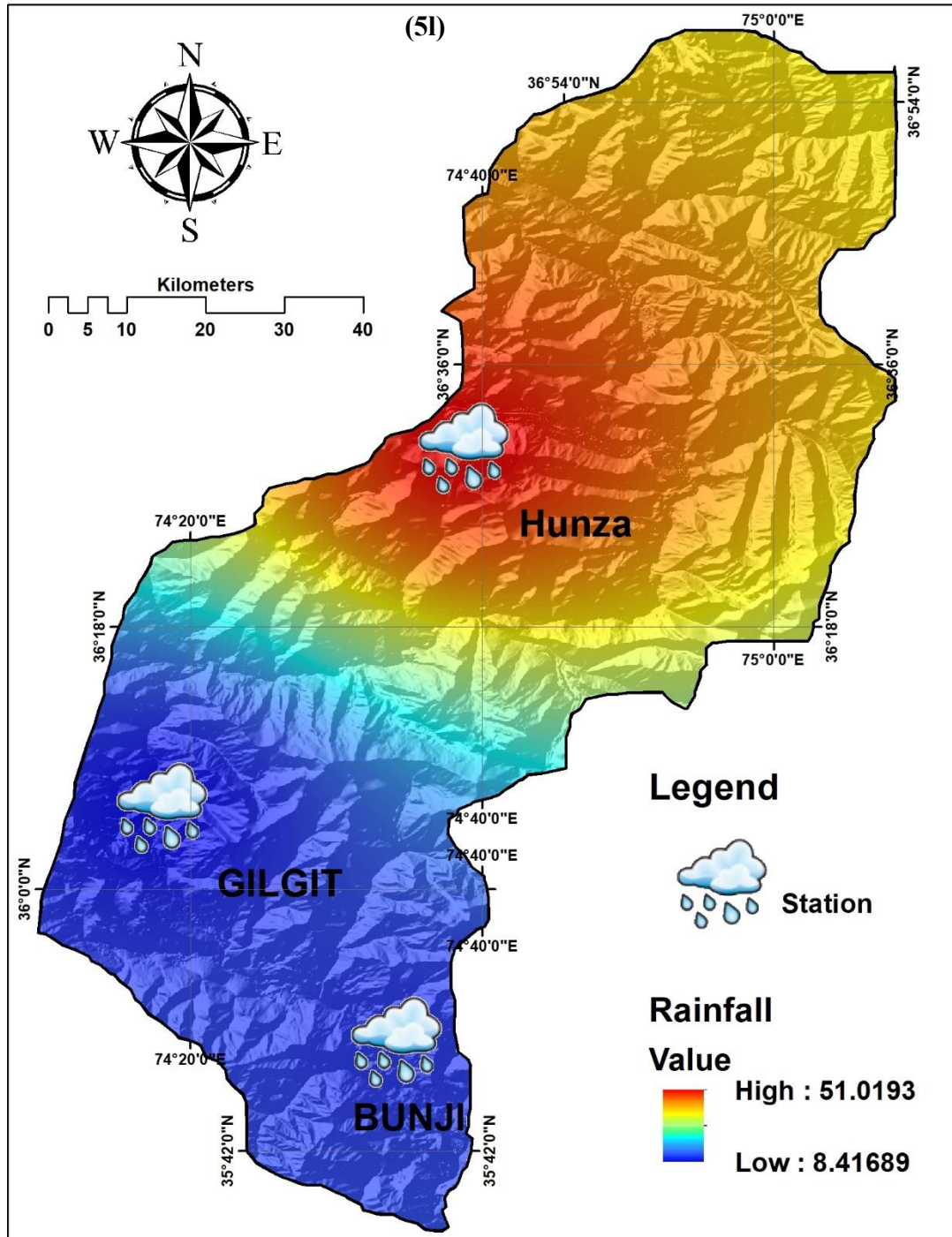


Figure 5a–5l. Hazards conditioning factors maps **a:** drainage density; **b:** slope; **c:** elevation; **d:** distance to river; **e:** aspect; **f:** distance to road; **g:** TWI; **h:** geology; **i:** distance to faults; **j:** land cover; **k:** NDVI; **l:** rainfall (8.42 to 51.02 cm/year) by the authors using ArcGIS Desktop version 10.7.1

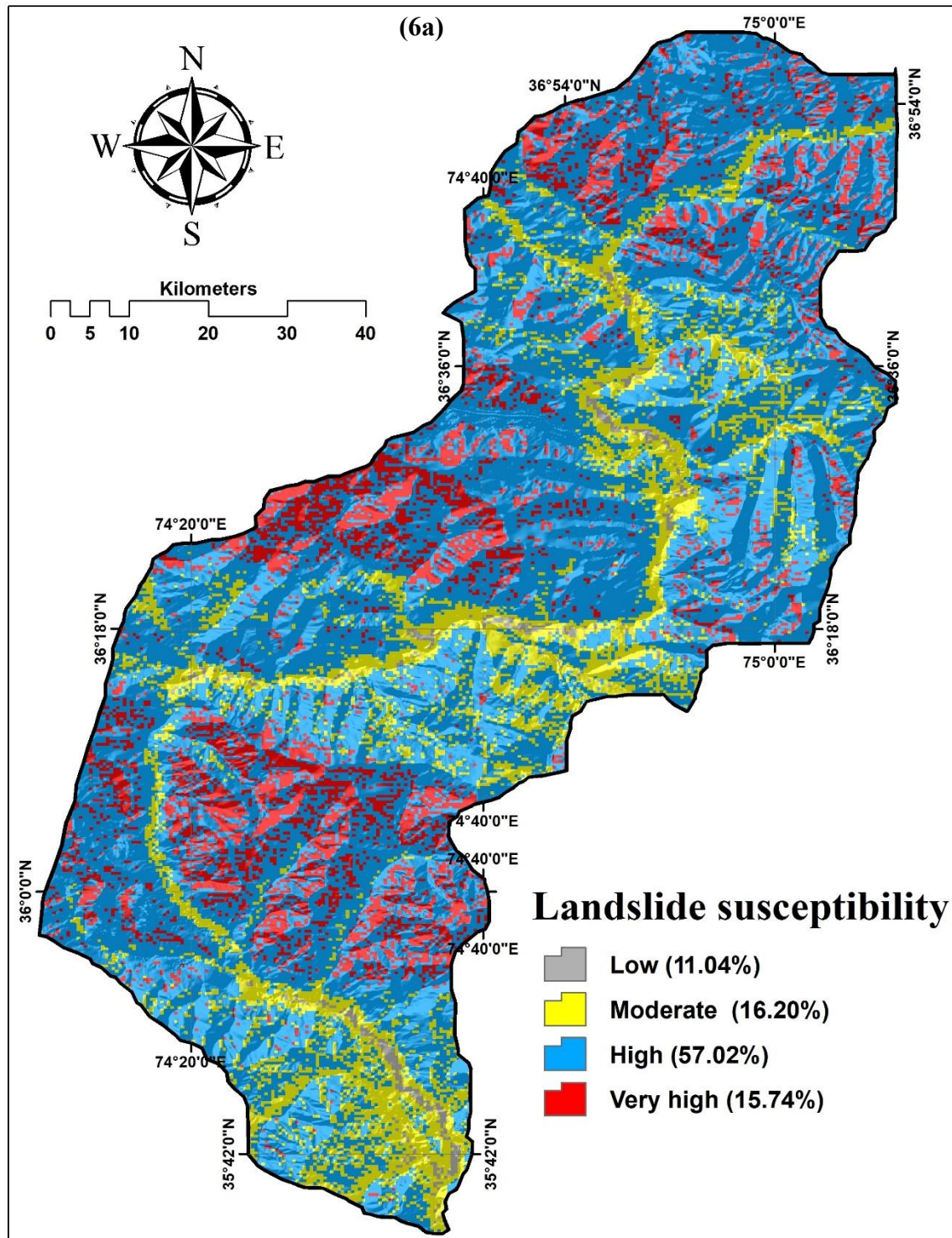


Figure 6. Single-hazard susceptibility maps produced by the AHP-FR model: (6a) landslide susceptibility by the authors using ArcGIS Desktop version 10.7.1

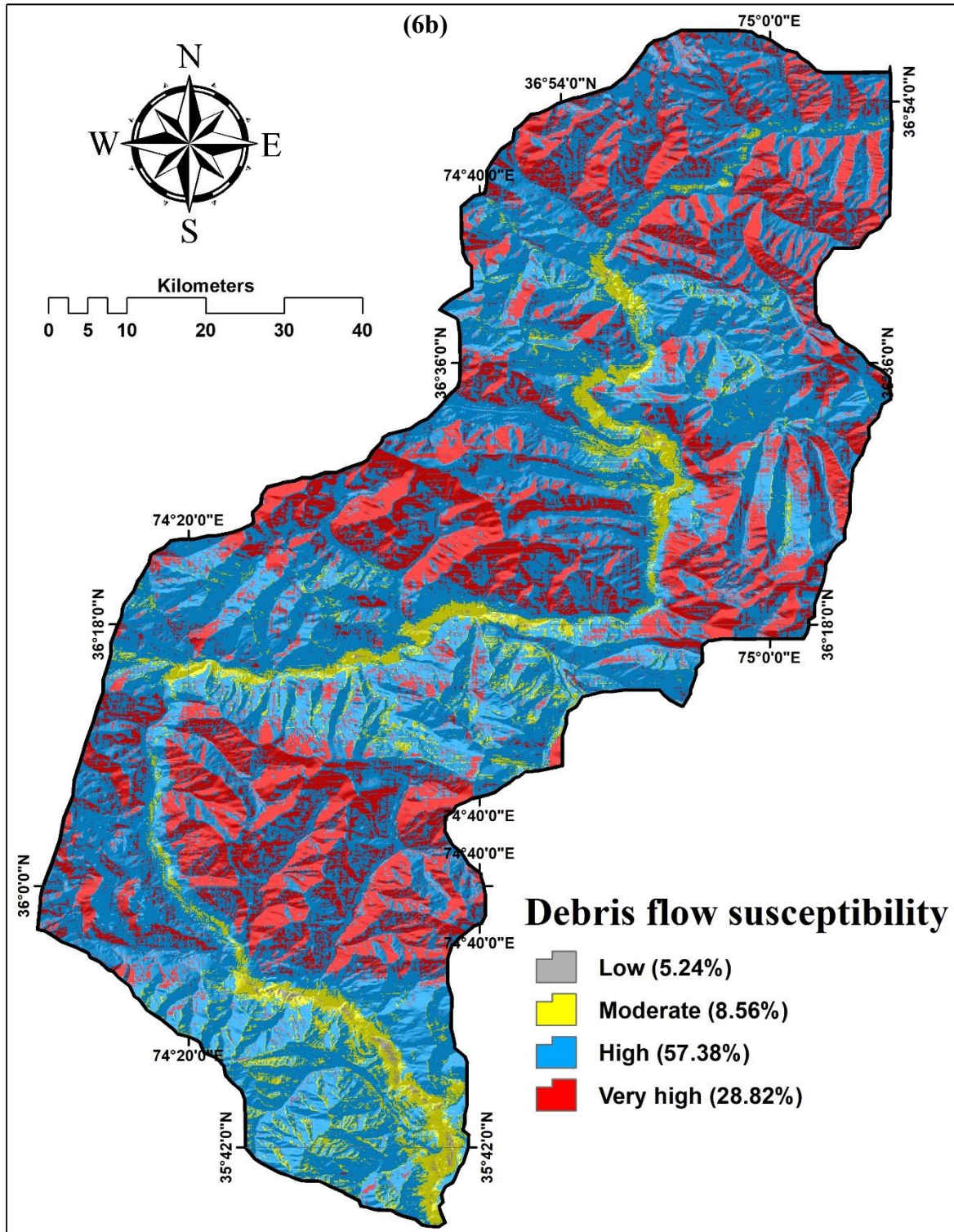


Figure 6. Single-hazard susceptibility maps produced by the AHP-FR model: (6b) debris-flow susceptibility by the authors using ArcGIS Desktop version 10.7.1

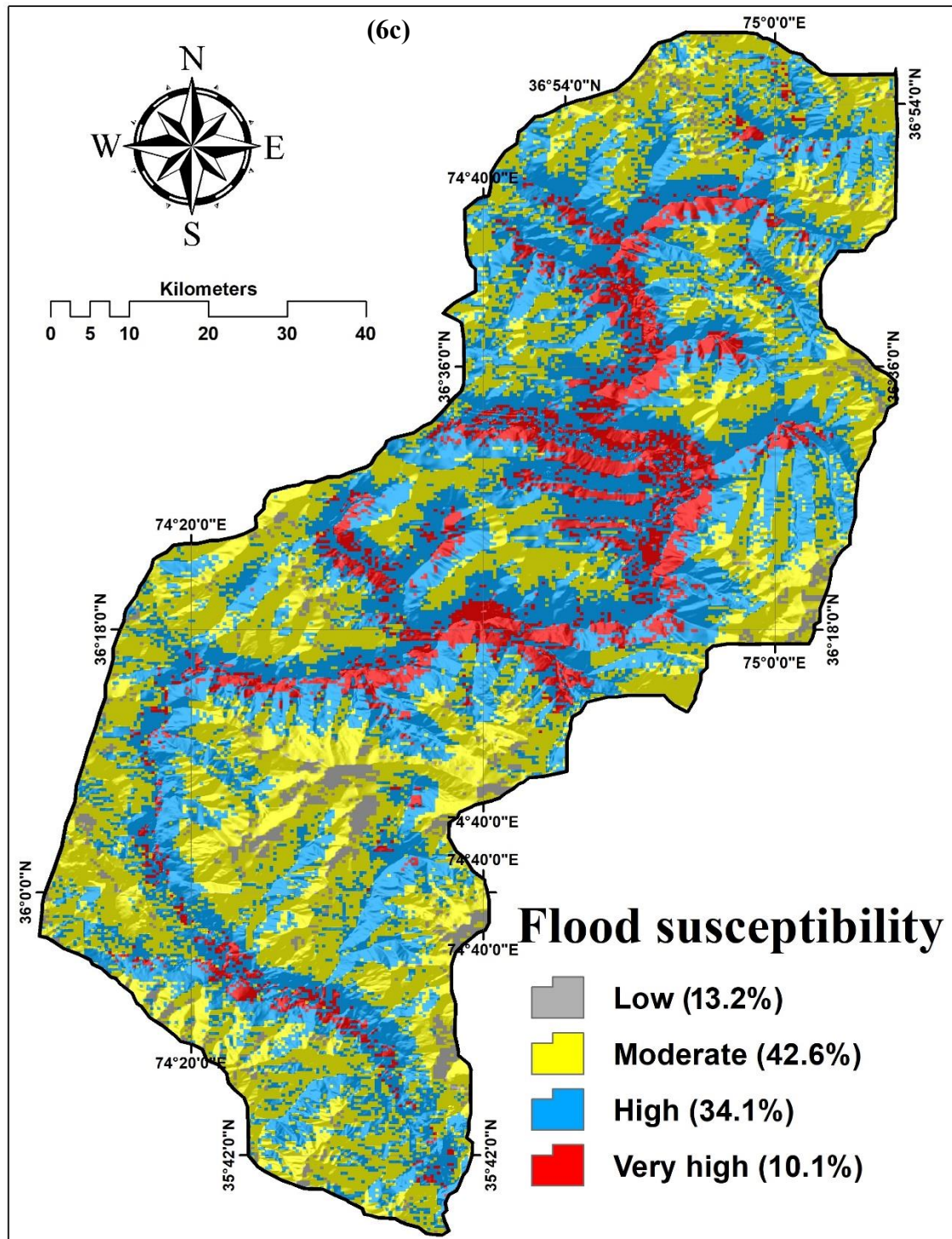


Figure 6. Single-hazard susceptibility maps produced by the AHP-FR model: (6c) flood susceptibility by the authors using ArcGIS Desktop version 10.7.1

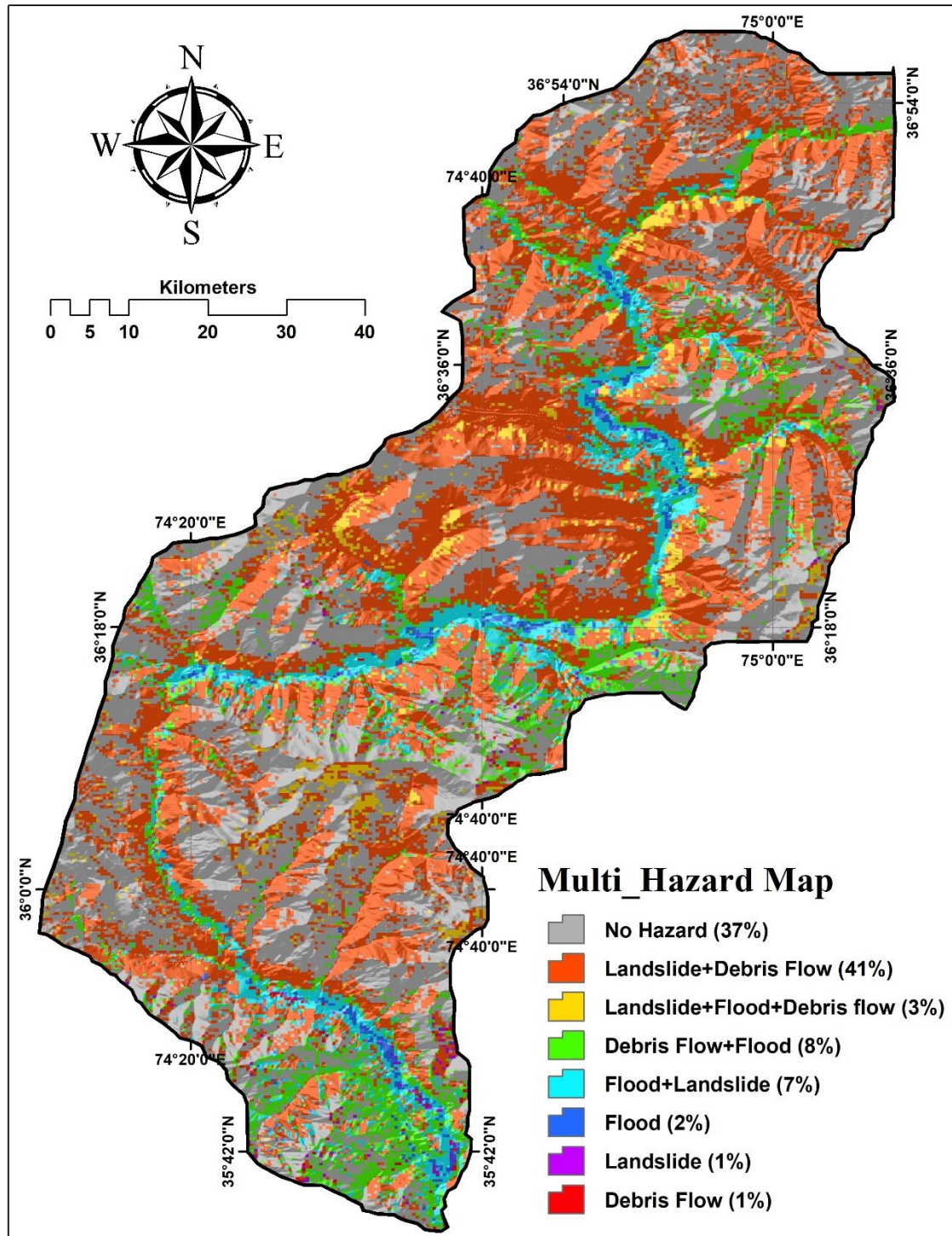


Figure 3 Spatial distribution of the eight multi-hazard susceptibility classes derived from the overlay of landslide, debris-flow, and flood susceptibility maps by the authors using ArcGIS version 10.7.1

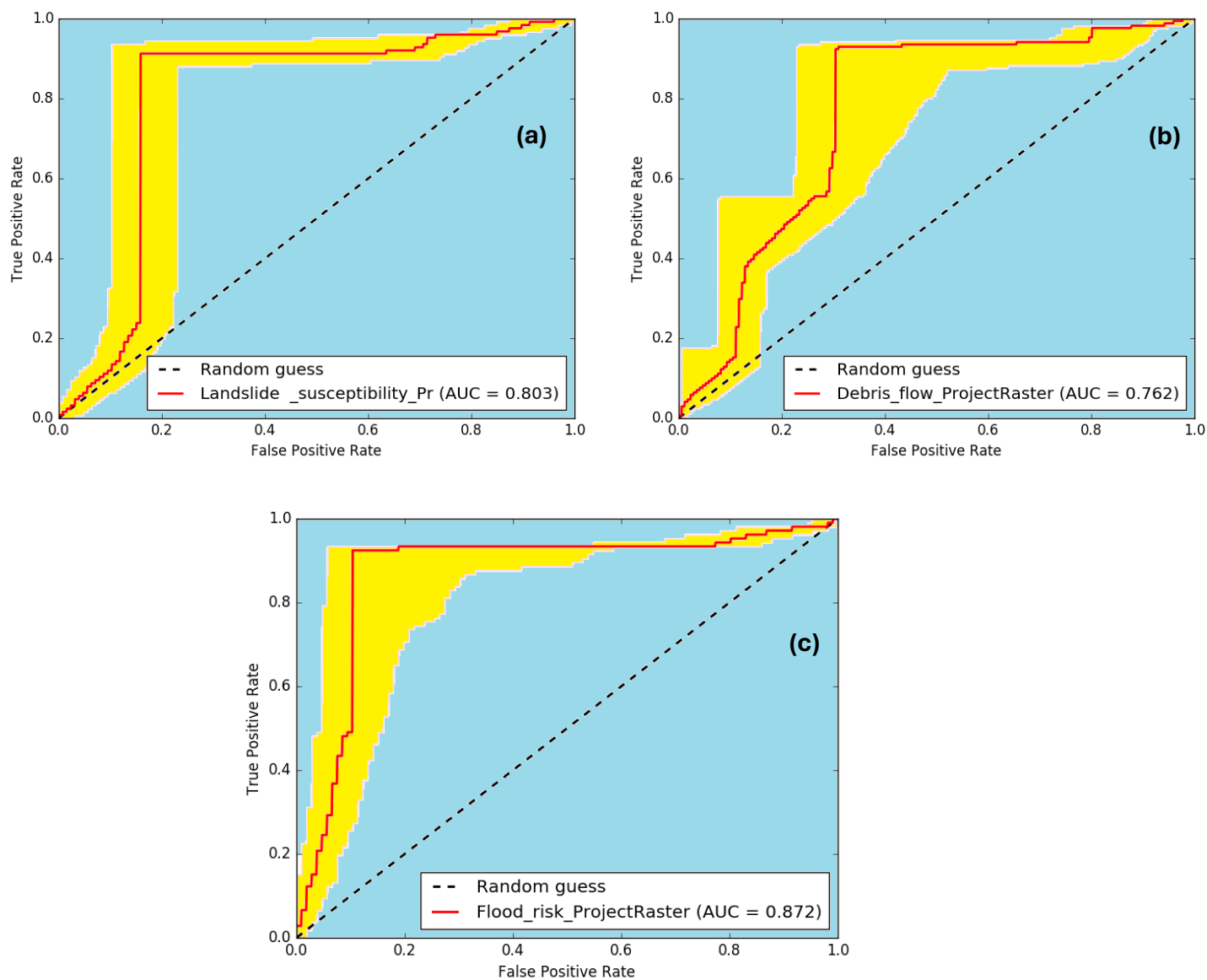


Figure 4 ROC-based accuracy assessment of the (a) Landslides (b) Debris flows (c) Floods susceptibility maps