Main method	Techniques	Aims/goals
Visualization	**Mapping includes: continuous surface map and thematic map.**	To provide insight into the spatial distribution of patterns of the phenomenon through visualizing the variations between these patterns in space and time.
Spatial statistical analysis	**Descriptive spatial methods (e.g. nearest neighbour analysis)**	To describe the distribution of incidents the phenomenon on a map whether incidents are clustered, randomly distributed or dispersed.
	Spatial autocorrelation techniques (e.g. Moran's I and Geary's C) and Local Indicators of Spatial Association	To investigate the spatial autocorrelation between values within study areas to identify clusters of locations with high or low values of the phenomenon. Furthermore, to assess the significance of these clusters of incidents.
Spatial modelling	**Regression analysis includes OLS and GWR**	To describe and investigate the spatial relationships among incidents of the phenomenon and other surrounding factors that can help explain why certain areas in the study area suffer from high rates than others.
	Predicting model	To forecast where the phenomenon will take place, when it is likely to happen and who is highly at risk of the phenomenon in the future.
Cluster analysis	**LQ measure with buffering using GIS software.**	To indicate the degree of concentration of the phenomenon events per area unit within this area in comparison to those in the study region.
Other GIS techniques	**The Structured Query Language (SQL)**	To identify spatial and temporal patterns of the phenomenon at different locations/different attributes by specifying selected variables
	Buffering	To create a radial area of a desired distance around specific data points to identify relationships between these points and surroundings features within the buffer zone.
	Overlay Technique	For examining the spatial characteristics of the phenomenon incidents and to investigate relations between the characteristics of the different key factors of an incident attribute.

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