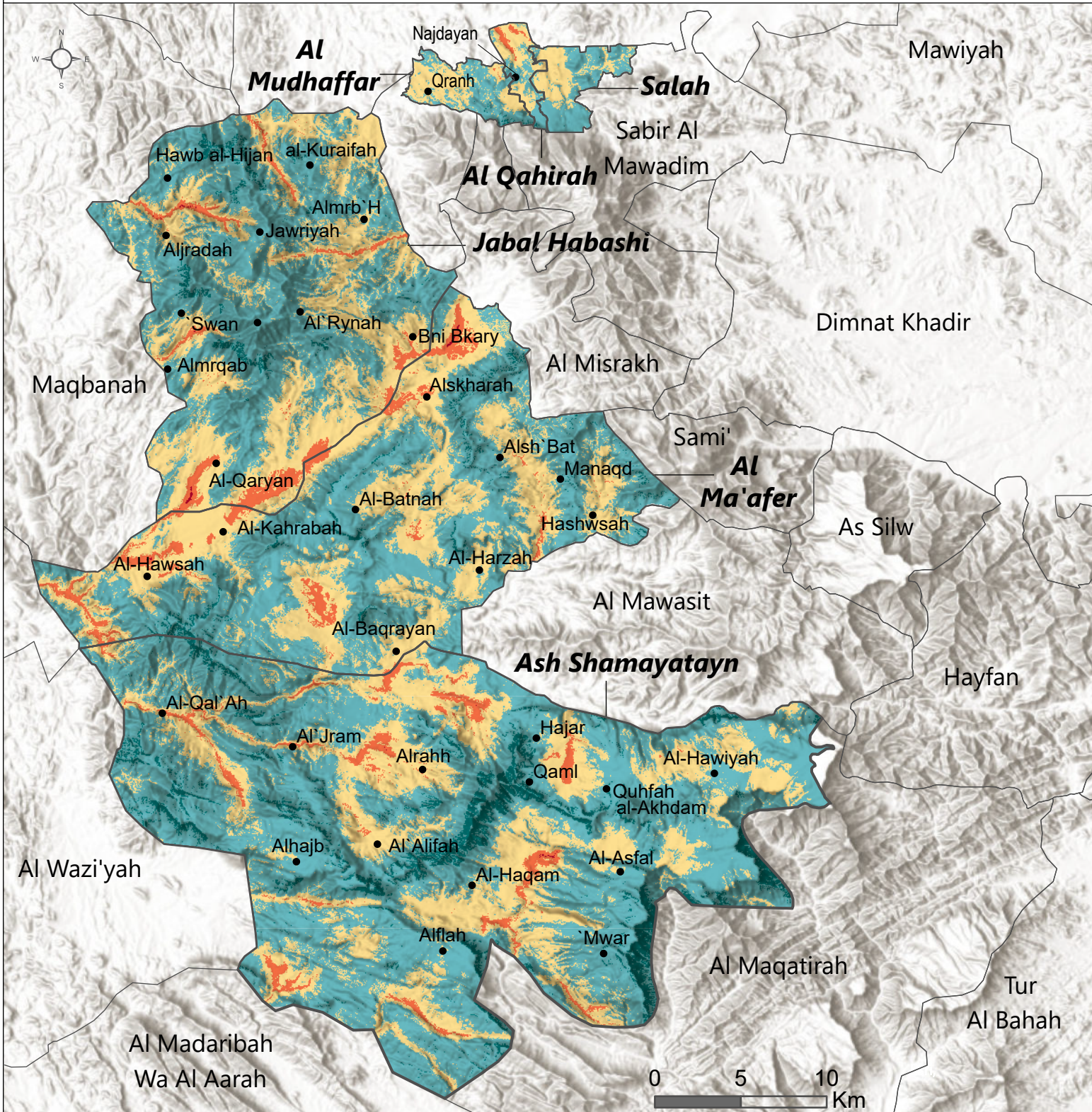


The flood susceptibility map for Ta'iz Governorate, Yemen, was generated using an Analytic Hierarchy Process (AHP). 8 flood-related factors were considered: elevation, slope, Topographic wetness index (TWI), drainage density, distance from drainage, distance from river, land use/land cover (LULC), soil hydrologic groups, and mean annual precipitation. Elevation was used as the base layer, and slope, flow accumulation, drainage density, and TWI were derived from it using hydrological analysis. The river network was delineated and used to generate distance-from-river and distance-from-drainage layers. All factors were reclassified into five susceptibility classes ranging from very low to very high flood susceptibility. A weighted decision matrix was applied to assign relative importance to each factor, and the final flood susceptibility map was produced using a weighted overlay approach, resulting in five flood susceptibility classes.



Administrative boundaries	Flood susceptibility risk classes
Governorates	1 - Very low
Districts	2 - Low
Non - assessed districts	3 - Moderate
Main towns	4 - High
	5 - Very high

Data sources: Digital Elevation Model DEM (ALOS World 3D (AW3D30), 30 m resolution, Japan Aerospace Exploration Agency (JAXA) Tile: ALPSMLC30_N013E043); Slope, Drainage Density, and Topographic Wetness Index (TWI) (Derived from the AW3D30 30 m DEM); Distance from River (Generated using Euclidean distance analysis based on the manual delineation of the river network from ESRI World Imagery basemap); Precipitation (Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS), mean annual precipitation for the period 2014–2024); Land Use / Land Cover LULC (ESA WorldCover 10 m 2021, Version 2.0 : Dataset: ESA_WorldCover_10m_2021_v200_N12E042_Map); Soil Hydrological Groups:(Global Hydrologic Soil Groups (HYSOGs250m) dataset, classified into Hydrologic Soil Groups (HSG)); Hillshade (Esri, Vantor, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community). All datasets were resampled to 30 m spatial resolution to match the DEM.

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by REACH partners, associates or donors mentioned on this map.