

SI-Table 1. Remote sensing and other hybrid data (e.g. field gauges, models) used to characterize land surface, soils, and model forcing parameters (e.g. precipitation, PGA).

Type	Variable	Source	Resolution
I	Elevation	Copernicus GLO-30 DEM	30 m
	Land use/land cover	ESRI Sentinel-2 LULC	10 m
	Lithology	Türkiye General Directorate of Mineral Research and Exploration (MTA) geologic map series	Vector
	Surface reflectance	Harmonized Sentinel-2 Surface Reflectance	10 m
	Leaf area index	NASA MODIS	500 m
II	Soil thickness (depth to bedrock)	ISRIC SoilGrids	250 m
	Saturated hydraulic conductivity (0-30 cm)	FutureWater HiHydro	250 m
	Wilting point (0-30 cm)	FutureWater HiHydro	250 m
	Field capacity (0-30 cm)	FutureWater HiHydro	250 m
	Saturated water content (0-30 cm)	FutureWater HiHydro	250 m
	Soil texture (0-30 cm)	FutureWater HiHydro	250 m
	Top layer soil moisture (0-5 cm)	NASA SMAP-L4	11000 m
III	Precipitation	NASA IMERG v7	11132 m
	Air temperature (2 m)	ECMWF ERA5 Atmospheric Reanalysis	27830 m
	Peak ground acceleration	USGS ShakeMap	Vector
Types: I - Land surface, II - Soils, III - Model forcing			