Key to input spatial databases underlying the CVI model

(Source: Annex A, Table 2 of the Coastal Vulnerability Index Final Technical Report)

Data Type	INPUT DATABASE		SOURCE	HOW THESE DATA WERE USED IN THE CVI MODEL
Physical Exposure	**Landmassline.zip**		OpenStreetMap	The model differentiates sheltered from exposed coastline and fetch. This determines whether the model calculates wave rank from oceanic or local (wind) generated waves.
	Bathymetry.zip		General Bathymetric Chart of the Oceans (GEBCO)	
	Elevation.zip (topographic relief)		ASTER Global Digital Elevation Model Version 2 (GDEM v2)	The model determines the average elevation (height in meters) of all DEM cells on land within a 3-km search radius. The resulting distribution is classified using percentile breaks to produce relative ranks of 5 through 1.
	Geomorphology.zip		Landsat 8, Google Earth and Street View imagery	This input data layer will include five geomorphology classifications of each 250-meter shoreline segment ranked from 1 to 5.
	Wave exposure.zip (local and oceanic waves)		National Center for Atmospheric Research (NCAR); ERA-Interim from European Center for Mid-Range Weather Forecasts (ECMWF)	The model computes relative wave exposure for each coastline segment using time series data (2010-2015) of wind speeds and associated direction, above the 90th percentile value, and fetch distance.
	Surge potential.zip		DIVA database model v1.0 (Hinkel and Klein 2004)	Surge potential was estimated using DIVA model output variable "S100" which represents 1 in 100 year surge height. The resulting distribution is classified using percentile breaks (25/50/75) to produce relative ranks of 5 through 2 respectively.
	Sea level rise.zip		Average historical sea level rise rate of 2.27 mm/year for the Arabian Gulf and 1.8 mm/year for the Arabian Sea (Ayhan and Alothman 2009)	The relative net sea level change along the coastline of a given region is the sum of global sea level rise (SLR), local SLR (eustatic rise) and local land motion (isostatic rise). Regional rates were assumed to be constant through the year 2050 and then doubled through 2100.
Social Exposure	**Coastal population.zip**		WorldPop 2014	Calculate total population within the coastal zone and how many of people are at reduced risk as a result of the protection provided by coastal-marine habitats.
	Area of interest.zip	Conservation	UAE Ministry of Climate Change & Environment and IUCN World Database on Protected Areas (WDPA) 2015	Maps the location of important ecological assets including protected areas, reserves, sanctuaries, and heritage sites
		Geopolitical boundaries	Global Administrative Areas (GADM v2.8)	Administrative boundary lines for the seven coastal emirates
		Critical infrastructure	AGEDI spatial database of select infrastructure	Tabular information with GPS coordinates and values of built infrastructure, including hotels, residential properties, ports, tourism and other coastal assets.
		Social, economic and ecological assets	Multiple sources cited in Table 2	As identified by stakeholders, these data can be used as metrics to quantify the risk reduction provided by natural habitats.
Natural habitats	Range	**Corals.zip** **Dunes.zip** **Mangroves.zip** **Marshes.zip** **Oysterbeds.zip** **Seagrasses.zp**	LNR Biodiversity Assessment for the UAE (AGEDI); Mapping and Characterizing Coral Habitats in the United Arab Emirates (Grizzle, Ward and Burt); Gazetteer of the Persian Gulf (John Gordon Lorimer)	The model computes a habitat rank from 1 to 5 based on the presence or absence of habitats along each shoreline segment. See Table 1 for ranking scheme.
	Condition	**Corals.zip** **Dunes.zip** **Mangroves.zip** **Marshes.zip** **Seagrasses.zp**		