Table S1: Projections Hazard Indicators

S.N.	Parameter	Abv	Explanation of the parameter	Data source	Data description:
1	Future Sea Leven Rise Projections (cm)	SLRP	Weighted average value of projected relative sea level rise in cm for each U.S. coastal state with CZMA areas, for different future scenarios and time horizons (2030, 2040, 2050).	NOAA Patterns and Projections of High Tide Flooding Report	Based on NOAA's federal interagency scenarios, this dataset projects relative sea level rise along U.S. coastlines accounting for local vertical land motion and regional ocean dynamics. Derived from historical tide gauge measurements and global sea level rise models, providing scenario-based estimates for coastal flood planning.
2	Maximum of Maximum (MOM) Inundation Depth (m)	MOM	Area-weighted mean depth of maximum inundation for different hurricane categories (1–5) under high tide conditions across US coastal CZMA states.	NOAA SLOSH MOM Inundation Grids	Derived from the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model, the MOM product composites maximum storm surge heights from thousands of hypothetical hurricanes (Category 1-5) of varying track, size, and speed. Raster layers classify expected inundation depths, and values are reclassified into area-weighted flood depths above ground level using NOAA's national seamless storm surge hazard grids.
3	High Tide Flood Days Projection (days/year)	HTFD	Weighted average of projected annual high tide flooding days for each CZMA	NOAA Annual	Using NOAA's National Water Level Observation Network

			areas in coastal states based on shoreline-segment analysis and NOAA tide station data.	High Tide Flooding Outlook	(NWLON) projections and the NOAA CUSP shoreline, flood day values were snapped onto the shoreline, segmented, interpolated between stations, and clipped by each state's CZMA boundaries. Line-length-weighted averages were computed for each state across multiple time horizons (2030, 2040 and 2050) to capture spatial variability in future tidal flooding exposure.

Table S2: Hazard indicators

S.N.	Parameter	Abv	Explanation of the parameter	Data source	Data description:
1	Relative Sea Level Rise Trend (mm/year)	RLSR	Weighted average value of Mean Sea Level Trend value in (mm/yr) for each of the US coastal states having CZMA areas in it.	NOAA Relative Sea Level Trends	Local Sea Level Trend measured by tide gauges, with reference to local reference. Combination of sea level rise and vertical land motion. It has been recorded by satellite altimeters since 1992.
2	Maximum of the Maximum Envelope of High Water (MEOW), called MOM	MOM	Area-weighted mean depth of maximum inundation for different hurricane categories (1–5) under high tide conditions across US coastal CZMA states.	NOAA SLOSH MOM Inundation Grids	Derived from the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model, the MOM product composites maximum storm surge heights from thousands of hypothetical

					hurricanes (Category 1-5) of varying track, size, and speed. Raster layers classify expected inundation depths, and values are reclassified into area-weighted flood depths above ground level using NOAA's national seamless storm surge hazard grids.
3	Monthly highest water level	MHWL	1% annual exceedance probability water levels in meters	NOAA extreme water levels	Spatial distribution across NOAA stations Inter-annual variation till 2023 October
4	Annual high tide flood days (days/year)	HTFD	Average of observed historical high flood days	NOAA annual high tide flooding outlook	Spatial distribution across NOAA stations Temporal: 1980-2023
6	Coastal erosion rate (mm/yr)	CER	Length of coastline multi-line feature with attribute 'EROSION' as 'High' and 'Very High'	USGS digital data series-68	Spatial distribution across Pacific, Atlantic and Gulf coast Temporal: NA
7	Vertical land motion (VLM) rate (cm/yr)	VLM	Rate in subsidence in cm/year	(Ohenhen and Shirazaei, 2023)	VLM rate derived from InSAR and GNSS measurements, covering 2007-2020 for the US Gulf Coast, 2007-2018 for California, and 2007-2023 for the US Atlantic coast
8	R95p – Mean Precipitation on wet days (mm)	APWD	Mean Rainfall intensity on wet days (when prcp≥95%)	ERA5 reanalysis dataset	Spatial: Global gridded (0.25° × 0.25° resolution) Temporal: Daily values (1980-2023)
9	Drought frequency (weeks/year)	Drought95	95th percentile drought weeks per year		

10	Extreme high temperature threshold ($°C$)	Temp95	95th percentile highest temperature for a city		
11	Extreme low temperature threshold ($°C$)	Temp5	95th percentile lowest temperature for a city		
12	Heatwave frequency (day/year)	AHTWD	Days with more than extreme high temperature.		
13	Cold spell frequency (day/year)	ACDSD	Days with less than extreme low temperature		
14	Strong wind event frequency (events/year)	AWSWD	No. of strong winds event	DAYMET dataset	Spatial: 2 km x 2 km Temporal: (1980-2023) Average daily eastwards and northwards wind

Table S3: Reclassification of NLCD classes

This reclassification was done to obtain few of the exposure and adaptive capacity indicators.

Reclassified category	NLCD class codes	NLCD class descriptions
Residential	22, 23, 24	Developed, low intensity; developed, medium intensity; developed, high intensity
Open area	21	Developed, open space
Agriculture	81, 82	Pasture/Hay; cultivated crops

Natural vegetation	31, 41, 42, 43, 52, 71	Barren lands; deciduous forest; evergreen forest; mixed forest; shrub/scrub; grasslands
Wetlands	90, 95	Woody wetlands; emergent herbaceous wetlands
Water Bodies	11, 12	Open water

Table S4: Exposure indicators

S.N.	Parameter	Explanation	Data description:	Data Source
1	Total area of land (km^2)	Total administrative area of the city	Administrative boundaries shapefile	U.S. Census Bureau's TIGER/LINE Shapefiles (2024)
2*	Population density (people/km^2)	Number of people per square kilometer	Population count divided by total land area	US Census Bureau's American Community Survey (ACS) 5-year estimates
3	Residential area (%)	Percentage of city area classified as developed land for residential use	NLCD classes 22,23,24 (Developed, Low/Medium/High intensity)	Annual NLCD land cover 2021 dataset (Jon Dewitz, 2023)
5	Agriculture area (%)	Percentage of city area used for agricultural purpose	NLCD classes 81, 82 (Pasture/Hay; Cultivated Crops)	Annual NLCD land cover 2021

				dataset (Jon Dewitz, 2023)
6	Forest area (%)	Percentage of city area covered by forest	NLCD classes 41,42,43 (Deciduous, Evergreen, Mixed Forest)	Annual NLCD land cover 2021 dataset (Jon Dewitz, 2023)
7	Wetland area (%)	Percentage of city area classified as wetlands	NLCD classes 90, 95 (Woody Wetlands; Emergent Herbaceous Wetlands)	Annual NLCD land cover 2021 dataset (Jon Dewitz, 2023)
8	LECZ area (% of total area)	Percentage of city area lying below 5m elevation from mean sea level	10-m resolution Digital Elevation Model (DEM)	USGS 3DEP-10m DEM
9	Residential area in LECZ (%)	Percentage of LECZ area classified as residential	Intersection of LECZ and NLCD residential classes	Analysis of NLCD and DEM data
11	Agriculture area in LECZ (%)	Percentage of LECZ area used for agriculture	Intersection of LECZ and NLCD agriculture classes	Analysis of NLCD and DEM data
12	Forest area in LECZ (%)	Percentage of LECZ area covered by forest	Intersection of LECZ and NLCD forest classes	Analysis of NLCD and DEM data
13	Wetland area in LECZ (%)	Percentage of LECZ area classified as wetlands	Intersection of LECZ and NLCD wetland classes	Analysis of NLCD and DEM data

Table S5: Vulnerability indicators

S.N.	Parameter	Explanation	Data description:	Data Source
Susceptibility Indicators				
1	Number of powerplants	Count of power generation facilities	Latitude and longitude of location	US Energy Information Administration
2	Number of aerodromes	Count of airports and airfields	Latitude and longitude of location	Federal Aviation Administration
3	Number of principal ports	Count of major shipping ports	Latitude and longitude of location	US Army Corps of Engineers
4	Number of powerplants in LECZ	Count of power generation facilities in low-elevation areas	Powerplant locations within LECZ	US Energy Information Administration
5	Number of aerodromes in LECZ	Count of airports in low-elevation areas	Airport locations within LECZ	Federal Aviation Administration
6	Population over 65 years old (%)	Percentage of total population aged 65+	Demographic data	U.S. Census Bureau's ACS 5-year estimates
7	Population below 5 years old (%)	Percentage of total population under the age of five	Demographic data	
Adaptive Capacity Indicator				
8	Open areas (% of total area)	Percentage of open space in city	NLCD class 21	Annual NLCD 2021 dataset (Jon Dewitz, 2023)
9	Open areas in LECZ (%)	Percentage of open space within LECZ	NLCD open space class within LECZ	
10	Median family income ($)	Median annual income of families	Economic data	

11	Economically active population (%)	Percentage of population in labor force	Employment statistics	U.S. Census Bureau's ACS 5-year estimates
12	Higher education (%)	Percentage of population with education beyond high school	Educational attainment data	