Appendix A. Literature Sample

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Appendix B. Coding Criteria

1. Scale: Multinational • National • Regional (e.g., state, multiple counties/districts/subnational units) • Local (e.g., county, district, township, island)
2. Continent: List
3. Subcontinent: List
4. Country: If not multinational, list
5. Location: If not multinational or national, list
6. Discipline/field: Natural hazards and disasters (e.g., hazard mitigation, disaster risk reduction) • Climate change (e.g., adaptation, impacts, climatic trends) • Both • Unclear
7. Physical hazard(s)/stressor(s): Sea level rise • Coastal flooding • Storm surge • Hurricanes • Cyclones •

Tsunamis • Tropical storms and cyclones • Other (e.g., heat wave and precipitation)

8. Considered impacts on human system (socioeconomic and demographic): Socio-demographic (e.g., age, gender, race, ethnicity, marital status, language, occupation, religion) • Economic (e.g., poverty and income inequality—With focus on economic wellbeing) • Socioeconomic (integrates one or more of sociodemographic variables like age, ethnicity, and marital status with one or more socioeconomic aspects like income, employment, education, and poverty) • Population • Population movement/displacement/migration • Health/medical • Governance and institutions • Other • Indirectly implied (i.e., not included in the vulnerability assessment and mapping, but discussed qualitatively)
9. Considered impacts on economic and sustenance system: Fisheries • Agriculture • Pastoralism • Industry • Other • None
10. Considered impacts on built environment: Housing • Urban land use • Damage/loss (e.g., to physical built environment) • Infrastructure (e.g., transportation, water/sewer lines, power grids, communication) • Critical facilities (e.g., airports, hospitals, fire/police stations, waste treatment facilities) • Other • None
11. Considered impacts on natural/environmental system: Wetlands, mangroves, and seagrasses dunes • Erosion • Coastlines (e.g., proximity, coastal zone, shoreline type/change) • Topography and geomorphology (e.g., elevation, contours, slope, bathymetry) • Cover (e.g., vegetation, hydrology) • Other • None
12. Index construction: Not applicable • Separate indicators (or variables) but no composite components or indices • Combined components constructed but no aggregate index • Vulnerability Index constructed with components (exposure, sensitivity, adaptive capacity or other components not per se defined in the study as exposure, sensitivity, adaptive capacity) • Vulnerability/hazard Index constructed without components (if Index was constructed directly from variables) • Other
13. Outputs of spatial unit: Grid cells • Administrative boundaries • Natural/topographic boundaries • Parcel level/property • Coastline delineation (output line along the coast)
14. Uncertainty assessment: None • Textual discussion of uncertainty • Quantitative assessment of uncertainty • Mapping/visualization of uncertainty • Other
15. Physical hazards/stressors: data time frame included in mapping: Static (single point in time) • Multi-year/series (recent past only) • Future projections • None
16. Physical hazards/stressors—Data source: Primary (e.g., basic data aggregation, modeling) • Secondary (e.g., using established projections or estimates from agencies etc.) • Arbitrary estimations • Other
17. Methods used: Write summary of protocol and unique aspects
18. Vulnerability/hazard mapping content: Physical hazards (e.g., individual, sea level rise, flooding) • Exposure (e.g., integrated hazards) • Socioeconomic considerations • Natural/environmental variables • Adaptive capacity • Sensitivity • Location • Vulnerability projected as overlays (e.g., socioeconomic over hazards) • Integrated vulnerability displayed (e.g., calculated and mapped)
19. The vulnerability map has the following features: Title • Textbox within/under the map • Scale bar • Landmarks and/or location identifiers (e.g., names, ocean, and neighboring countries) • Additional labels included with the map (e.g., graphs and diagrams of years, trends) • Classes clearly defined • Classes not clearly defined (continuous transitions) • Borders delineated • Uncertainty incorporated/visualized • Colored • Black and white • 2D • 3D • Legend textual (e.g., classes low to high, categorized by density, effect) • Legend numerical, based on row data output
20. The map’s innovative aspects and strengths: List
21. The map’s weaknesses: Legend clarity • Poor resolution • Difficult to distinguish between colors/patterns • Small/hard-to-read font (title, legend) • Hard to position/orient map in space • Insufficient labels and description • Map design—Hard to interpret and distinguish individual features • Other (specify)
22. Policy relevance: Suggests it is policy-relevant in brief ambiguous statement • Suggests it is policy-relevant and elaborates how in a few sentences (e.g., description) • Provides guidelines and recommendations, and lists specific steps/interventions • Does not provide any references to policy or broader impacts on decision-making • Other
23. Mark the text referring to policy relevance: full extract

Appendix C. Summary of Methodologies Used in Reviewed Literature

Table 2. Exposure variables, summary of methods, and the stem literature used in CVMA studies.

	Exposure	Summary of Methods	Stem Literature *
Ajin et al. 2014	Land use/land cover, slope, elevation, geomorphology, and distance from shoreline plus tsunami inundation data	GIS management: Tsunami vulnerability map was prepared by combining weighted thematic maps classified by Natural Breaks method using ArcGIS weighted overlay analysis method, after assigning proper ranks.	N/A
Akukwe and Ogbodo 2015	Proximity to water body; depth/height of flood	Field survey, questionnaire, and interviews plus secondary data to define exposure, adaptive capacity, and sensitivity. Methods include correspondence analysis, principal component analysis (PCA), and cluster analysis.	IPCC 2007; Concept: Deressa et al. 2008
Arkema et al. 2017	Coastal habitats, geomorphology, relief, sea level rise, and potential storm damage from waves and storm surge	Limited information on the approach: coupled the results from the hazard index coupled with census information.	N/A
Islam et al. 2015	Geomorphology, slope, relative sea level change, mean tide range, shoreline erosion and accretion, population density, bathymetry, coastal flooding	Coastal vulnerability index (CVI). Variables were prepared using GIS analysis and ranked. CVI was calculated using the square root of the multiplied ranked variables divided by the number of considered parameters.	Thieler and Hammar-Klose 1999: Doukakis 2005; Diez et al. 2007
Islam et al. 2016	Geomorphology, coastal slope, shoreline change rate, rate of sea level change, mean tide range, bathymetry and storm surge height	Coastal vulnerability index (CVI). Most variables were processed before aggregation. The index was derived using a semi-quantitative assessment, variable rankings assigned to each grid, CVI were calculated based on the square root of the product mean algorithm; final score divided into 5 classes.	Gornitz 1990, 1991; Thieler and Hammar-Klose 1999, Doukakis 2005; Diez et al. 2007
Balica et al. 2014	Flood depth (flood hazard)	Coastal Cities Flood Vulnerability Index (CCFVI) methodology. Flood depth was used to determine flood hazard. The CCFVI for each category (hydro-geological, social and economic) was calculated as flood vulnerability index (FVI) where exposure and susceptibility were multiplied and then divided by the resilience indicators. Flood risk is mapped as combination of the flood hazard and the flood vulnerability map. Future flood risk (2050, IPCC B2 SLR assumptions) were also calculated and mapped.	Balica et al. 2012
Barman et al. 2016	Coastal delta plain	Limited information on the approach: Coastal vulnerability score maps were prepared based on the calculated probability of coastal vulnerability and probability of vulnerability for the group and their total population. The study mentions “respondents,” but it is not clear how they were involved.	N/A

Bathi and Das 2016	FEMA Special Flood Hazard Areas (SFHA)	Equally weighted socioeconomic variables are aggregated based on equal weights into socioeconomic vulnerability and integrated with flood (climatological) vulnerability using GIS. Z-score ranges are used to display vulnerability on the census tract level. Flood hazard was referred to as "climatic vulnerability" and was assessed based on existing FEMA flood maps.	Chakraborty et al. 2005
Baum et al. 2009	100-year flood event (with 2-m storm surge assumption)	The Gold Coast Social Vulnerability Index for Flood (GCSVIF): PCA analysis was used to determine the social vulnerability to flooding. The procedure employs a multiplicative aggregation method, integration of flood risk for three different locations, and mapping. Interpretation is followed by extensive discussion on Adaptation: possibilities and recommendations.	Langlois and Kitchen 2001
Berdin et al. 2004	Vulnerability to erosion (shoreline changes)	Coastal Vulnerability Index (CVI): Variables were grouped in three ranked subindices. The final CVI score was calculated by summing up the partial weight of each subindex and mapped for each barangay (smallest municipal unit).	McLaughlin et al. 2002
Boruff et al. 2005	Vulnerability to erosion (mean tidal range, coastal slope, relative sea level rise, shoreline erosion, mean wave height, geomorphology)	Physical Coastal Vulnerability Index (CVI) based on the USGS methodology for shoreline erosion and coastal Social Vulnerability Index (SoVI) developed using PCA analysis were aggregated to create the Place Vulnerability Index (PVI) which was mapped for each U.S. coast. Additional statistical analysis was used to determine the relative importance of individual attributes.	Cutter et al. 2003; Thieler and Hammer-Klose 1999, 2000
Creach et al. 2015	Exposure of buildings to coastal flood hazard based on potential water depth in the building during flooding and its closeness to flood defenses	Inherent Extreme Vulnerability Index (VIE Index): Focused on buildings. Reflects lessons learned from storm Xynthia (2010) and offers a composite index of four criteria: two for exposure to flood, architectural type of houses, and proximity to a rescue point. The composite index procedure was modified using Human Development Index (HDI) protocol and then statistically validated using a known storm event.	Klugman et al. 2011
De Sherbinin and Bardy 2016	Flood risk data	Social Vulnerability Index methodology using PCA analysis and census data. Results overlaid with maps of actual flood events in two distinctly different urban areas. Population weighted SoVi used in mapping products. Includes discussion on limitations and policy relevance.	IPCC 2012; Cutter et al. 2003; Emrich 2011

De Sherbinin et al. 2014	Climate exposure: Elevation, flood risk	Uses two spatial composite indices, two spatial indices, the social vulnerability index and economic system index, as well as natural systems data layers. Data was transformed and combined in a weighted average to produce the SVI. Provides discussion on limitations and recommendations for the future research.	IPCC 2012
Dinh et al. 2012	Flood risk	Computed Coastal area Flood Vulnerability Index (CCFVI) from three components (hydro-geological, social, economic and politico-administrative). Uses 2000 flood event to calibrate the model and simulate 2050 event accounting for sea level rise. Shows flood vulnerability and flood risk assessment.	Cendrero and Fischer 1997
Dube et al. 2002	N/A	Developed Vulnerability Index of Human Life: as combination of individual indices (vulnerability of housing stock, of local economy, of physical infrastructure, of social infrastructure, and of the incidence of socioeconomic loss with each combined from multiple equal weight variables. No physical hazards were used in the vulnerability assessment.	N/A
Dwarakish et al. 2009	Shoreline change, geomorphology, coastal slope, tidal range, wave height, and sea level rise	Coastal Vulnerability Index (CVI): Six physical attributes are aggregated into geological and physical variables. Each section of the coastline is assigned a vulnerability value as delineation.	Gornitz et al. 1990; Thieler and Hammar-Klose 1999
Eckert et al. 2012	Tsunami severity and frequency	Risk assessment based on unweighted combination of hazard (two scenarios of tsunami wave heights) and vulnerability and focused on buildings only (defined by their elevation, type, number of floors, and distance to the shoreline.	UNDP 2004
ESPON 2013	Storm surge plus 1-m increase to account for SLR	10 variables of physical climatic/hazard exposure and five sensitivity attributes were combined to create five thematic impact maps. Combined impacts were combined with aggregate index of adaptive capacity to produce the vulnerability index, for each NUTS-2 region (subnational scale) at the European level.	Füssel and Klein 2006
Hung et al. 2016	Storm surge risk zones	Physical vulnerability (storm surge exposure) and Social Vulnerability Index (calculated using PCA) were overlaid in GIS.	Wang and Yarnal 2012
Jana and Bhattacharya 2013	Shoreline change rate	Shoreline change rate, land use and human activities, and population density were mapped as risk classes. CVI was calculated as the root square mean of aforementioned risk classes and mapped as coastal delineation.	Pendleton et al. 2005; Boruff et al. 2005

Jelinek et al. 2012	Tsunami	Tsunami risk was assessed based on tsunami hazard and vulnerability analysis. The indicators of equal weight were aggregated by summation. Tsunami risk was computed as the mean of hazard and vulnerability scores for each municipality.	Birkmann 2006; Birkmann et al. 2010
Joevivek et al. 2012	Shoreline change rate, coastal slope, relative sea	Coastal Vulnerability Index (CVI): Six variables that define coastal physical vulnerability reflecting secondary data or values determined by GIS/remote sensing techniques were aggregated with equal weight (using geometric mean) and delineated on the map.	Hedge and Reju 2007
Kane et al. 2015	Sea level rise	Vulnerability to sea level rise was determined via geometric aggregation of six different parameters. Their impact on SLR vulnerability was ranked using the literature and elicited expert knowledge.	N/A
Kantamanenet al. 2016	Rainfall, flood/storm impact, coastal erosion	Twelve parameters related to coastal vulnerability in the UK were reduced using arbitrary reduction approach to three fiscal (coastal infrastructure vulnerability) variables (population, residential property, and commercial property). Arbitrary ranking was used to create the Coastal infrastructure vulnerability index (CIVI).	Balica et al. (2012); Palmer et al. (2011)
Kleinosky et al. 2009	Storm surge flooding	SLOSH storm surge model was aligned with elevation to determine high-risk zones. Social vulnerability was represented by three components determined by PCA analysis. Flood-risk scores (based on category 1–5 storm surge) were multiplied by social vulnerability scores (defined as its Pareto ranks). Authors also evaluated risk change under different SLR scenarios and impacts on critical facilities.	NOAA Coastal Services Center 1999; Cutter et al. 2000; Wu et al. 2002
Krishnamurthy et al. 2011	Hurricane risk	An assessment includes two components: participatory GIS mapping of hurricane hazard and Vulnerability and Capacity Assessment (VCA) both informed (ranked and weighted) by community focus groups. Vulnerability is calculated as function of exposure and economic, social and physical/infrastructural vulnerabilities.	N/A
Kunte et al. 2014	Shoreline change, rate of relative sea level change, elevation, slope, mean tidal range, significant wave height, and geomorphology	Coastal Vulnerability Index (CVI): the assessment included two socioeconomic variables: population and tourist density. CVI was calculated as the square root of the product of the ranked variables divided by the total number of variables for each administrative unit/taluka.	Thieler and Hammar-Klose 1999, 2000; Pendleton et al. 2005

Lam et al. 2015	Hurricanes	Resilience Inference Measurement (RIM) model: K-mean cluster analysis to create resilience groups by assessing exposure (as hurricane frequency), damage per capita storm damage), and recovery (population return/growth) dimensions, followed-up by discriminant analysis to validate groups generated by K-mean clustering.	Baker 2009; Li 2011; Lam et al. 2014
Lee et al. 2016	Landslides, falling rocks, daily rainfall and flooding, debris slides, rockslides, tsunamis, and the dip slope distribution	Biophysical vulnerability index was derived from seven indicators using geometric mean, while social vulnerability index, created from variables shaping four dimensions (exposure, mitigation and preparedness, response capacity, and recovery capacity). Classes of synthesized vulnerability were mapped and used to identify adaptation strategies in addition to information obtained by questionnaires, interviews, and focus groups.	N/A
Lein and Abel 2010	Flood and hurricane probability	Pre-event vulnerability (physical variables of hazard potential and social dimension); post-event consequence analysis of Hurricane Katrina; GIS modeling analysis using weighted sum overlay technique to construct a series of models depicting storm impact and vulnerability.	N/A
Li et al. 2017	Surge floods	The comprehensive risk was determined as weighted synthesis of hazard assessment (flood depth and area), vulnerability (land use categories), and adaptation capability (number and capacity of emergency shelters). The risk was defined by 24 different typhoon scenarios that provided different flood surge simulations.	N/A
Liu et al. 2015	Storm surge flooding	Population vulnerability was defined by physical, built-up, and household components. Fuzzy logic analysis was used to determine how the different considerations were related and to generate vulnerability maps.	N/A
Lujala et al. 2014	Flooding	Place vulnerability was calculated as combination of exposure and social vulnerability (SoVI). Exposure assessment accounted for both the present and future hazards and SoVI was determined using Principal Component Analysis (PCA).	Cutter et al. 2003
Mahapatra et al. 2015	Coastal slope, coastal landforms/features, shoreline change rate, mean spring tidal range, and significant wave height	Integrated Coastal Vulnerability Index (ICVI): weighted Physical Vulnerability Index (PVI) was combined with Social Vulnerability Index (SVI) were calculated using the Analytical Hierarchical Process (AHP) method and averaged to create ICVI. Vulnerability ranking is shown as delineation.	Murali et al. 2013; Ju et al. 2012

Mahapatra et al. 2017	Low-laying area	Total Vulnerability Index (TVI) was determined by combining Exposure Index, Sensitivity Index, and Adaptive Capacity Index. Exposure index was based on low-lying areas below 6m, which was the highest historical wave height during storm surges in study area. Risk maps were created using overlay of classified socioeconomic considerations over multi-hazard map. Integrated risk index was not computed.	N/A
Mahendra et al. 2011	Storm surge, sea level rise, coastal erosion and topography	Multi-hazard zone was created as overlay of multiple coastal hazards. Land use/land cover area assessed using visual interpretation technique was used to establish risk classes within the coastal multi-hazard zone and to produce risk maps.	N/A
Maloney and Preston 2014	Hurricane storm surge and sea level rise	Exposure to storm surge (SLOSH model) and sea level rise were used as overlays to determine exposure of coastal infrastructure (electricity generating facilities and housing units) to coastal flooding.	N/A
Mani Murali et al. 2013	Slope, geomorphology, elevation, shoreline change, sea level rise, significant wave height and tidal range	The weights for physical and social vulnerability indices (PVI and SVI) were calculated using Analytical Hierarchical Process (AHP) and aggregated as an average to coastal vulnerability index (CVI). Uncertainty was computed through the use of different AHP ranking and was mapped.	Pendleton et al. (2005); Thieler and Hammer-Klose 1999, 2000
Manual et al. 2015	Sea level rise and storm surge flooding	Projections of older population, two flooding scenarios mapped using topographic data/DEM model for 2025, and public infrastructure and assets important for older population were mapped and overlaid.	Cutter et al. 2003
Marashinge and Wijetunge 2016	Coastal flooding (tsunami and storm surge)	Integrated risk of coastal flooding was determined from integrated hazard and vulnerability. Integrated hazard was computed based on wave height and return period, while vulnerability reflected population density and exposed population by age and gender.	N/A
Marome 2014	Flood frequency and land elevation	Information on approach and aggregation strategy is limited. Social vulnerability is mapped with limited detail on the procedure.	N/A
Martins et al. 2012	N/A	Variables defining physical vulnerability and human factors were consolidated in GIS, classified, and combined to vulnerability score for each grid cell along the coast. Future urban expansion model was developed but not integrated with vulnerability outputs.	Garcia et al. 2000 ; Dominguez et al. 2005

Mazumdar and Paul 2016	Cyclones	Principal Component Analysis (PCA) was used to identify socioeconomic (CVI) and infrastructural (InVI) vulnerability to cyclone. This resulted in two vulnerability indices. The factor scores for CVI and InVI were mapped using ArcGIS Jenk's natural break option.	N/A
Mendoza et al. 2014	Range of climate-related hazards	Vulnerability was assessed at both the commune and at the household level based on exposure, adaptive capacity, and social vulnerability dimensions. Surveys, focus groups, interviews, and stakeholder meetings were conducted to identify the main vulnerability drivers. Indicators' weights were determined by Analytical Hierarchy Process (AHP).	N/A
Muler and Bonetti 2014	Storm surge	Study identifies potential impacts on built environment to different wave heights and directions under the local climate and extreme events. Wave exposure vulnerability assessment shows combined wave exposure and built coastal assets.	N/A
Nguyen and Woodroffe 2016	Sea level rise	An analytical hierarchical process (AHP) was integrated directly into geographic information systems (GIS) to derive a composite vulnerability index of areas vulnerable to SLR. The hierarchical structure comprised of three key components (exposure, sensitivity, and adaptive capacity), developed from the subcomponents with respective variables. Exposure and sensitivity were combined into a component called potential impacts. Variables were assigned weights before inclusion into AHP pairwise by stakeholders.	Yusuf and Francisco 2009
Nicolodi and Mueller Petermann 2010	Extreme weather events, heavy rains, and sea level rise	The methodology was not fully described. Data was used to develop natural, social and technology risk maps that were then combined into a single vulnerability map. A few maps also provided a granular overlay of vulnerability and some critical infrastructure.	N/A
Pendleton et al. 2010	Sea level rise and coastal change	Coastal Vulnerability Index (CVI) was calculated from geomorphology, shoreline change, coastal slope, and namely wave height, tidal range, and sea level change ranked variables. CVI was divided into four categories using Jenks natural breaks. Principal Component Analysis (PCA) was applied on the CVI variables.	Thieler and Hammar-Klose 1999

Poompavai and Ramalingam 2013	Cyclones	The Hazard-of-Place framework was adapted using four components: environmental vulnerability, social vulnerability, hazard potential and mitigation capacity. Analytical Hierarchy Process (AHP) was applied to assign weights and rank the alternatives of each of the criteria to determine the coastal risk. Sensitivity analysis was also performed.	Cutter et al. 2003
Preston et al. 2008	Climate impacts: extreme heat, sea level rise and coastal hazards, extreme rainfall, and bushfire	Exposure, sensitivity, and adaptive capacity were established from a range of indicators and combined using additive aggregation. Different components were weighted by expert opinion. Physical hazard was not integrated in the assessment, but was implicit. Results of vulnerability mapping were compared with stakeholders' perception of vulnerability as a part of validation and uncertainty assessment).	Allen 2005
Radosavljevic et al. 2016	Erosion and flooding	Vulnerability assessment was focused on hazards resulting from shoreline change and coastal flooding. These two components were combined with sea level rise estimates and overlaid with the current location of buildings and UNESCO archeological sites to determine which are at the highest risk of coastal flooding.	Lantuit and Pollard 2008; Solomon 2005
Rana et al. 2010	Cyclone storms urge	A surge model based on past frequencies of cyclone events and associated storm surges and Digital Elevation Model (DEM) of area were used to develop a hazard map. Vulnerability analysis was based on the population data at the pixel level, classified by age and gender. A cyclone casualty map was developed for different age/gender groups.	N/A
Reams et al. 2012	N/A (implied by being a coastal county)	SoVI was developed using the Principal Component Analysis (PCA) applied to a variety of variables. Six factors identified by PCA were normalized and weighted to calculate the Resilience Capacity Index score of each community.	Cutter et al. 2003
Roy and Blaschke 2015	Floods	Indicators were ranked by local experts using Analytic Hierarchy Process (AHP) and converted into raster data for GIS manipulation. A spatial vulnerability assessment was done using GIS weighted overlay technique. Qualitative validation of maps was performed by disaster experts 2009 Cyclone Aila and the associated floods.	N/A

Sambah and Miura 2014	Tsunami	DEM data and remote sensing were used to create maps of the vulnerability drivers weighted by AHP process (elevation, coastal proximity, river flow, and land use). The tsunami hazard was integrated based on tsunami inundation maps. A spatial multi-criteria analysis was applied through cell-based modelling of vulnerability.	N/A
Snoussi et al. 2010	Coastal flooding	Physical Coastal Vulnerability Index (CVI) and Socioeconomic CVI were integrated into a Total Vulnerability Index using GIS techniques. SLR inundation/flooding risk maps were also prepared using GIS modeling. The methods are focused on GIS risk interpretation.	Gornitz et al. 1994; Mclaughlin et al. 2002
Tate et al. 2010		Method development includes identification of all hazards affecting the area, damage thresholds for each hazard, impact zone, multi-hazard frequency and losses, and social vulnerability (using PCA). Aggregation as achieved via GIS modeling. Scores of individual components were transformed, rescaled, and combined using H = R × V.	N/A
Toda et al. 2015	Climate-related hazards: flood, landslide, storm surge	Social Vulnerability Indicator (SoVI) was created from indicators and subindicators representing exposure, sensitivity and adaptive capacity using additive approach. Indicators were normalized and weighted. Outputs were classified using Jenks breaks.	Cutter et al. 2003
Torresan et al. 2012	Climate change hazards: sea level rise inundation, storm surge flooding, and coastal erosion	Regional Vulnerability Assessment (RVA) for site-specific spatial information was used to identify key vulnerable receptors. Regional vulnerability matrix is made of hazard-specific variables that represent susceptibility, pathways, and values factors. For each hazard, the aforementioned variables are associated with arbitrarily established vulnerability scores, which are then aggregated to represent final vulnerability of each impacted systems.	N/A
Wang and Yarnal 2012	Hurricane storm surge	Paper presents two sets of maps outlining physical vulnerability (SLOSH model to determine storms urge risk zones and FEMA's flood risk zones) and social vulnerability (place-based approach derived from PCA). These sources of physical vulnerability were then overlaid with some critical infrastructure. There is no composite index.	Cutter 1996; Cutter et al. 2000
Wang et al. 2015	N/A	This paper presents a framework for Climate Change Vulnerability Assessment (CCVA) and its simplified application. Indicators are combined into exposure, sensitivity, and adaptive capacity using subjective weighting and then into a composite vulnerability map.	Füssel and Klein 2006

Weis et al. 2016	Flooding	Vulnerability index was derived from exposure, sensitivity, and adaptive capacity. Local experts provided feedback on selection of variables. Subindices and total vulnerability index were shown under four different flood scenarios (storm surge and SLR combinations).	Mucke 2012; Shepard et al. 2012
Wood et al. 2010	Storm surge, sea level rise	Vulnerability was measured using GIS-based Coastal Community Vulnerability Assessment Protocol (CCVAP). It considered vulnerability of built and natural environment, and social system. Coastal Vulnerability Index was also created,	N/A