



National Shoreline Management Study

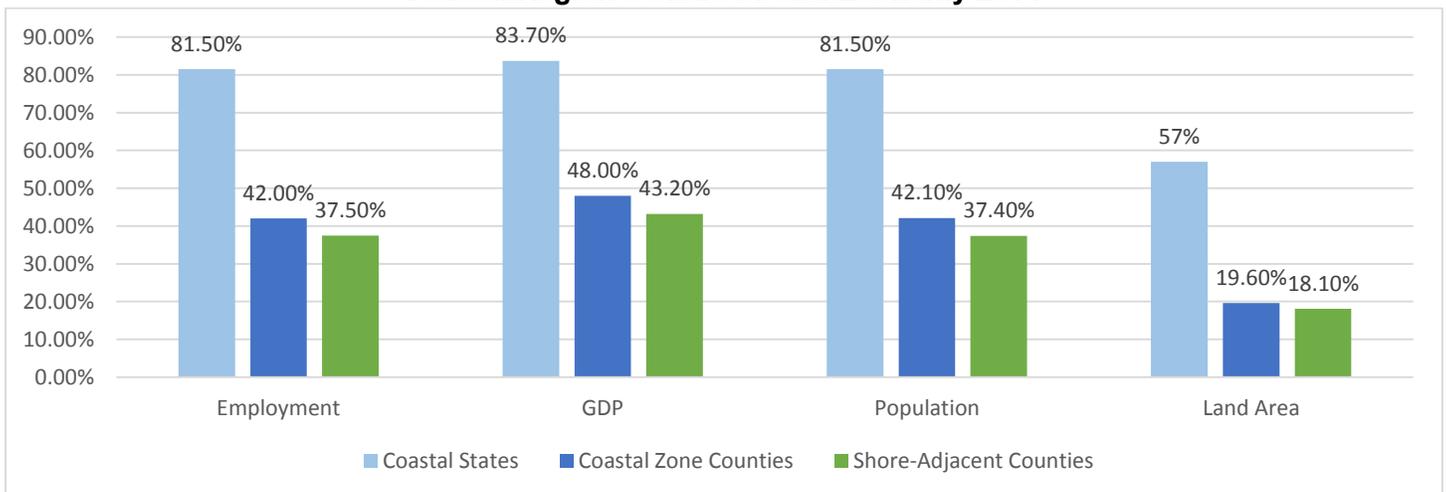
Eroding U.S. Shorelines - A Call for Resilience Planning

The congressionally-authorized National Shoreline Management Study (NSMS) is the first undertaking in nearly a half-century to document the physical, economic, environmental, and social impacts of shoreline change across each region of the U.S. Under the leadership of the *Institute for Water Resources* of the U.S. Army Corps of Engineers, NSMS provides coastal scientists, government policymakers, and stakeholders with information about the coastal regions most in need of resilience planning.

While Congress has funded NSMS since 2001, appropriations in recent years have declined. This decrease in support has come just as there is a public awakening to the dangers of increased coastal flooding. The congressionally-mandated Comprehensive Study following SuperStorm Sandy shows the critical role that Federal leadership and funding plays to help States, local government, businesses and other key stakeholders engage in planning that addresses potential future risks and allows for a fundamental shift away from costly and near-sighted disaster-driven responses.

Continual erosion of the U.S. shoreline presents a considerable financial and safety risk to coastal infrastructure, economies, and populations. Individual regions face unique challenges and require solutions reflective of that. The following graphs and charts underscore the importance of the coastal economy to the national economy.

Coastal Region's Share of U.S. Economy 2014



Growth Rates in the Coastal Economy 2010-2014

Region	Employment (millions)			GDP (\$Trillion, 2009)			Population (millions)		
	2010	2014	Annual Change	2010	2014	Annual Change	2010	2014	Annual Change
United States	127.8	136.6	1.72%	\$14.6	\$15.8	1.9%	309.3	318.9	0.77%
Coastal States	104.1	111.3	1.73%	\$12.3	\$13.2	2.0%	252.1	259.8	0.76%
Coastal Zone Counties	53.6	57.3	1.72%	\$7.0	\$7.6	1.9%	129.9	134.2	0.84%
Shoreline Adjacent Counties	47.8	51.2	1.78%	\$6.3	\$6.8	2.0%	115.5	119.3	0.82%



Hawaii

Beaches are the lifeline of the state's economy, and a major contributor to the national economy. Hawaii's beaches are now eroding and threatening shoreline development, infrastructure and natural resources. These hazards will increase in occurrence and severity with climate change and sea level rise.

Regional and local sediment and shoreline management plans are critically needed to systematically approach the issue of eroding beach and the loss of natural habitats (e.g. turtles, monk seals).

There is a lack of beach quality sand for beach nourishment. The U.S. Army Corps of Engineers dredging projects are one source, but more needs to be done to find non-Federal sponsors of dredging projects. In addition, federal dollars will be needed to support the state's efforts on a range of site-specific adaptation measures.

Ocean Economy

- Generated \$7 billion or 9.1% of GDP.
- Provided \$3.7 billion in wages and salaries.
- Provided 109,279 jobs.
- 99,105 jobs (90.7%) of the state's lake economy employment were in coastal tourism and recreation.
- Tourism and recreation contributed \$6.2 billion (88.2%) to the state's lake GDP.

Hawaii's Direct Ocean Economy	
Tourism & Recreation	\$6.203 billion
Transportation	\$521 million
Construction	\$104 million
Living Resources	\$76 million
Ship & Boat Building	\$90 million

Coastal Population

- State population – 1.4 million, 12.7% growth
- Largest county – Honolulu: 991,788
- Highest density – Honolulu: 1,653 per sq. mile
- County population and growth rates:

Hawaii	194,190	20%
Honolulu	991,788	10.5%
Kauai	70,475	14.3%
Maui	163,019	18.3%

Coastal Economy

The coastal economy includes all economic activity in the state. In 2014, Hawaii generated \$77.4 billion in GDP.

County	Employment	Wages (\$billion)	GDP (\$billion)
All Counties	626,146	\$28.3	\$77.4
Hawaii	65,575	\$2.6	\$7.1
Honolulu	457,191	\$21.5	\$58.9
Kauai	30,065	\$1.2	\$3.3
Maui	72,477	\$2.9	\$8

The state has had a slow recovery from its pre-recession peak. From 2007 to 2014, the state's GDP grew 5% in constant dollar while employment and wages were sluggish. Growth since 2010 has been expanding.

State and County Economic Change, 2007-2012			
County	Employment	Wages	GDP
All Counties	0.1%	0.3%	5.0%
Hawaii	-4.9%	-6.8%	-2.4%
Honolulu	1.3%	2.4%	7.2%
Kauai	-2.4%	-2.6%	2.0%
Maui	-2.2%	-6.6%	-2.2%

Source: National Ocean Economics Program (NOEP) National Report 2016