

WHAT LOUISIANA STANDS TO LOSE

DAVID BATKER, SARAH MACK, FRED SKLAR, MARY KELLY, ANGELINA FREEMAN, WILLIAM NUTTLE, ROBERT COSTANZA

QUESTION 8

WHAT ARE THE COSTS TO LOUISIANA IF WE DON'T RESTORE THE COAST?

We examined what is at stake economically for Louisiana if we maintain the status quo and do not undertake large scale action to restore the coast.

OUR ANALYSIS

Our analysis considers the Mississippi River Delta to include the area from southeast Louisiana stretching west to the wetlands of the Chenier Plain. Our review used two different metrics: standard indices of economic activity (e.g., GDP, jobs) and the value of ecosystem goods and services. Our key assumption was that all of this value was at risk from storm damage and coastal deterioration if we do not recreate a strong wetland buffer through large scale restoration activities. We further assumed that the feasibility of restoring the delta was not in question, and that options exist for saving this ecosystem.

WHAT THE SCIENCE SAYS

From oil and gas, to tourism, to fisheries, the delta provides a wealth of economic activity. Between 80 and 90 percent of the state's economy, seafood production, and quality of life is linked to coastal ecosystem goods and services. Over 2 million residents live in the coastal parishes (47 percent of total state population), and the bulk of Louisiana's economic activity is generated in the southern part of the state. The following indices explain these economic effects in more detail.

Standard Indices of Economic Activity

Five of the top 15 largest ports in the United States are located in Louisiana. The Port of South Louisiana ships more than 200 million tons of cargo annually and is the largest port in the U.S. in terms of tons shipped. Altogether south Louisiana ports carry over 457 million tons of waterborne commerce annually, accounting for 18 percent of all waterborne commerce in the United States. This port activity is linked to a trucking network that serves the entire contiguous United States (see Figure 1). Further loss of Louisiana's coastal wetlands will degrade segments of the Gulf Intracoastal Waterway (GIWW), which is a prime transportation route for goods, services, and commodities.

Ecosystem Services

Mississippi River Delta ecosystems provide economically valuable services including hurricane storm protection, fresh water supply, climate stability, food, furs, habitat, waste treatment, and other benefits worth at least \$12 to \$47 billion per year. These annual benefits provide a vast amount of value to people across time. Estimates of the present value of the benefits from 11 coastal ecosystem goods and services are between \$330 billion and \$1.3 trillion (3.5 percent discount rate). Wetlands include fresh water, salt water, estuaries, tidal bays, and cypress swamps. These habitats account for more than 90 percent of the estimated total value of ecosystem services provided in the Mississippi River Delta.



Figure 1: Louisiana's Mississippi River ports: Inland movement of maritime cargo by truck. Louisiana Coastal Protection and Restoration Authority, 2006, (courtesy FHWA).

Recent Losses from Storm Damages and Coastal Deterioration

Over the last century, hurricanes have caused approximately \$2.7 trillion (2010 dollars) of significant asset damage across Texas, Louisiana, Mississippi, and Alabama. The continued loss of protective wetlands will greatly exacerbate these economic impacts. The Gulf Coast is vulnerable to growing environmental risks today and could expect over \$350 billion in cumulative expected losses by 2030. In 20 years, storms with Hurricane Katrina/Rita levels of economic impact may become once a generation events instead of the once a century events they are today. A healthy wetland buffer will help protect communities and assets from the storm surge and waves associated with these hurricanes.

The table below lists a sampling of the economic value that is at risk without large scale coastal restoration in Louisiana.

THE ECONOMIC CONTRIBUTIONS OF LOUISIANA'S COAST			
CATEGORY	INDEX & SOURCE	DOLLAR IMPACT	STATE OR GULF JOBS
Commercial Fisheries	Yearly impact 2003 (WaterMarks 2007)	\$2.85 billion	40,000
Recreational Fisheries	Yearly impact 2003 (NOAA, 2011)	\$1.7 billion	20,000
Wildlife	Hunting related expenditures (LDWF, 2011)	\$975 million annually	
	Wildlife watching (LDWF, 2006)	\$517 million annually	
	Fur harvest 2007-2008 (LDWF, 2008)	\$1.27 million	
	Alligator and egg harvest (LDWF, 2006)	\$109.2 million	
Tourism	Lodging and food services in coastal Louisiana (Louisiana Workforce Commission, 2006)		110,000
	Statewide value of tourism before Hurricane Katrina, most in south Louisiana (Louisiana Workforce Commission, 2006)	\$10 billion	
Oil and Gas	Economic impact (Secure Gulf Project, 2010)	\$1.1 billion to state and local taxes	Direct employment of 131,500
	Job related benefits	\$2.7 billion to state and local taxes from payroll	More than 42,000 Louisiana residents
Sugar Industry	Economic value	\$1.7 billion	
Shipping	Direct economic impact of south LA ports (Ryan, 2001)	In 1999, \$10.3 billion	250,000
Transportation and Material Moving	Economic impact (Secure Gulf Project, 2010)	\$3.7 billion to state and local taxes from payroll	1.1 million



Photo By: Yuki Kokubo, www.yukikokubo.com

IMPLICATIONS FOR POLICY MAKERS

Restoration of Louisiana's coast is required to maintain billions in state economic value. Without an aggressive restoration program, the economic activity of the coast, worth hundreds of billions of dollars, cannot be maintained.

- Solving this problem requires accounting for and investing in the economic assets of nature – natural capital – as an integral component of hurricane damage prevention and as a critical foundation for healthy communities and economies.
- Large scale restoration activities represent a sound investment in natural capital. Restoration will provide economically critical natural capital in the form of improved fresh water supplies, flood control, hunting, fishing, ranching, farming, and other nature based uses of the coast.
- All aspects of our economy are linked to climate change. Climate change, particularly increases in sea level, will severely impact coastal areas around the world. This is especially true for the coastal communities at elevations near or in some cases below sea level.
- Many studies link coastal conditions to home values. Given the housing stocks that are at risk to flooding due to coastal erosion in Louisiana, the economic impacts of restored wetlands are several times larger than other locations in the nation.
- Wetland restoration can create twice as many jobs as the oil/gas and road construction industries combined.
- Habitat restoration projects not only create direct local jobs, but they also stimulate indirect jobs in industries that supply project materials such as lumber, concrete, and plant material. Restoration projects can spur job creation in businesses that provide local goods and services to restoration workers.
- Restoration projects provide strong returns on investment to local and regional economies in the form of new jobs, increased tourism and tourist dollars, hunting and fishing revenues, tax revenues, and property values.