Coastal Louisiana is a nexus of commercial & recreational activities providing ecosystem goods & services to the nation.

**CONCLUSIONS AND RECOMMENDATIONS**

Coastal Louisiana is a national asset for the delivery of natural, cultural, & economic resources to the world. It includes rich natural habitat, migratory songbird flyways, & corridors for waterborne commerce. An historic blending of cultures provides a gumbo of ethnic backgrounds that contribute to a unique heritage that is intricately linked to our coastal ecosystems. Combined with commerce through our ports & one of the largest concentrations of oil & gas, a wide range of local commodities are consumed nationally & internationally.

**FURTHER INFORMATION**

Coastal Louisiana Ecosystem Assessment & Restoration (CLEAR)  
www.clear.lsu.edu

SCIENCE COMMUNICATION: Graphics, design, & layout by Alaina Owens & Integration and Application Network, University of Maryland Center for Environmental Science

FUNDING  LCA Science & Technology Office

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**Coastal Louisiana is a national asset**

Coastal Louisiana is an important nexus for the delivery of natural, cultural, & economic resources to the world. It includes rich natural habitat, migratory songbird flyways, & corridors for waterborne commerce. An historic blending of cultures provides a gumbo of ethnic backgrounds that contribute to a unique heritage that is intricately linked to our coastal ecosystems. Combined with commerce through our ports & one of the largest concentrations of oil & gas, a wide range of local commodities are consumed nationally & internationally.

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**RESULTS VS. RETREAT:**

**SECURING ECO SYSTEM SERVICES PROVIDED BY COASTAL LOUISIANA**

Based on Conceptual Ecological Model Focus Group—September 2006

Printed—February 2007

The hurricanes of 2005, following years of wetland loss, reinforced the urgent need for more aggressive coastal restoration. One reason is the enormous array of ecosystem goods & services provided by Louisiana’s coastal landscape. Ecosystem goods & services are benefits that ecosystems provide to people. Ecosystem goods & services provided to Louisiana & the nation by coastal landscapes include wildlife & fisheries habitat, support for petrochemical production, improved water quality & flood protection, ecotourism & aesthetic appeal. One example illustrating the connection between coastal Louisiana & the nation was the widespread spike in gasoline prices following Hurricanes Katrina & Rita. The economic benefits of sustainable coastal restoration are substantial. Although most human–built infrastructure degrades over time (e.g., levees need to be maintained), healthy ecosystems sustain themselves & retain their value. The flood protection afforded by intact coastal landscapes (e.g. the ‘horizontal levees’ concept) is a key aspect of coastal Louisiana restoration; however, the multitude of ecological services provided by intact coastal landscapes produces the most compelling argument for an integrated & comprehensive restoration plan.

**Sustaining coastal Louisiana provides vast economic benefits**

Annual economic benefits

$50 billion—crude oil refined in LA1

$75 billion—cargo handled in LA ports2

$3 billion—total fisheries harvested in LA2

Annual restoration costs

<500 million—average expenditure from 1990–2006 on LA coastal restoration2

>500 million—amount required for sustainable coastal restoration in LA3

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1. LA Department of Natural Resources, ’06.


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**RESULTS FROM ENVISIONING THE FUTURE OF THE GULF COAST (New Orleans, LA: April 2006)**

Achieving Sustainability and Addressing Local Restoration Needs

Results from Envisioning the Future of the Gulf Coast (New Orleans, LA: April 2006)

Workshop participants (alphabetical): David Balker: Earth Economists; Jan Boydstun: Louisiana Dept. of Environmental Quality; Tim Carruthers: Univ. of Maryland Integration & Application Network; Piers Chapman: Coastal Restoration & Enhancement through Science & Technology; Ellis Budd: Claimain Engineer Research & Development Center; Chad Courville: Ducks Unlimited; Bill Dennison: Univ. of Maryland Integration & Application Network; Jane Hawkey: Univ. of Maryland Integration & Application Network; Doug Meffert: Tulane Univ.; Alaina Owens: Coastal LA Ecosystem Assessment & Restoration; Rick Raynie: LA Dept. of Natural Resources; Charles Sasser: Louisiana State Univ.; Greg Stryer: U.S. Geological Survey; Simone Theriot: Restore or Retreat; Robert Twilley: Louisiana State Univ.; Jennelle Visser: Louisiana State Univ.; Not pictured: Cindy Brown: The Nature Conservancy; Denise Reed: Univ. of New Orleans.
Many of Louisiana's cypress forests are currently unsustainable. They are too degraded to support cypress harvest. Swamp floors are flooded too long for cypress saplings to grow & mature, nutria destroy the few that do survive, & salt water intrusion is also a threat. These conditions impact the ability of cypress trees to regenerate & provide future ecosystem goods & services.

A vast array of ecosystem goods & services are supported by sustainable cypress forests. Not only do healthy, regenerating cypress forests support fish & wildlife habitat, they also provide aesthetics, recreational opportunities, flood protection, & water quality improvement. Restoring seasonal fresh water & nutrient inflows is vital to sustain Louisiana's cypress forests.

Ensuring a sustainable coast requires immediate & aggressive wetland creation & barrier island restoration. This can only be achieved using river resources & effective use of dredged material. A sustainable coast provides storm protection for urban & rural communities & infrastructure, maintains normal oxygen conditions in offshore waters, reduces inshore salt water intrusion, & supports habitat for abundant fish & wildlife as well as the thriving Cajun & Creole cultures. With aggressive restoration, accretion can keep up with subsidence & sea level rise so that there is a net land gain. Only with aggressive restoration does coastal Louisiana stand a fighting chance to survive the effects of future climate change.
CONCLUSIONS AND RECOMMENDATIONS

Coastal Louisiana is a nexus of commercial & recreational activities providing ecosystem goods & services to the nation.

Restore and sustain Louisiana’s coastal wetlands to benefit the nation. Incorporate the valuation of coastal Louisiana’s ecological goods & services in developing restoration strategies.

Invest now in sustainable restoration to maximize long term benefits & minimize loss. Employ valuation of ecosystem services in restoration planning.

Develop an aggressive regional approach to restoration that transcends local issues. Incorporate climate change scenarios (e.g., sea level rise) to achieve sustainable restoration strategies.

Support Louisiana residents in coastal restoration using various local, regional & national initiatives. Prioritize restoration activities that create sustainable ecosystems rather than human built infrastructure.

Investing in coastal LA ecosystems results in a long term accrual of economic gains.

Sustainable restoration can be achieved only by reconnecting the Mississippi River with the coastal Louisiana landscape.

Louisiana residents are committed to restoring rather than retreating from coastal ecosystems.

Results from Envisioning the Future of the Gulf Coast (New Orleans, LA; April 2006)

Achieving Sustainability and Addressing Local Restoration Needs

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FUNDING LCA Science & Technology Office

RESTORE VS. RETREAT: SECURING ECOSYSTEM SERVICES PROVIDED BY COASTAL LOUISIANA

Based on Conceptual Ecological Model Focus Group—September 2006

Printed—February 2007

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< $50 million—average expenditure from 1990–2006 on LA coastal restoration
> $500 million—amount required for sustainable coastal restoration in LA

1. LA Department of Natural Resources. 1995.

Coastal Louisiana is a national asset

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PROVIDED BY COASTAL LOUISIANA


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