

TREASURES OF THE SOUTH

THE TRUE VALUE OF WETLAND FORESTS



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Research Provided By: Key-Log Economics

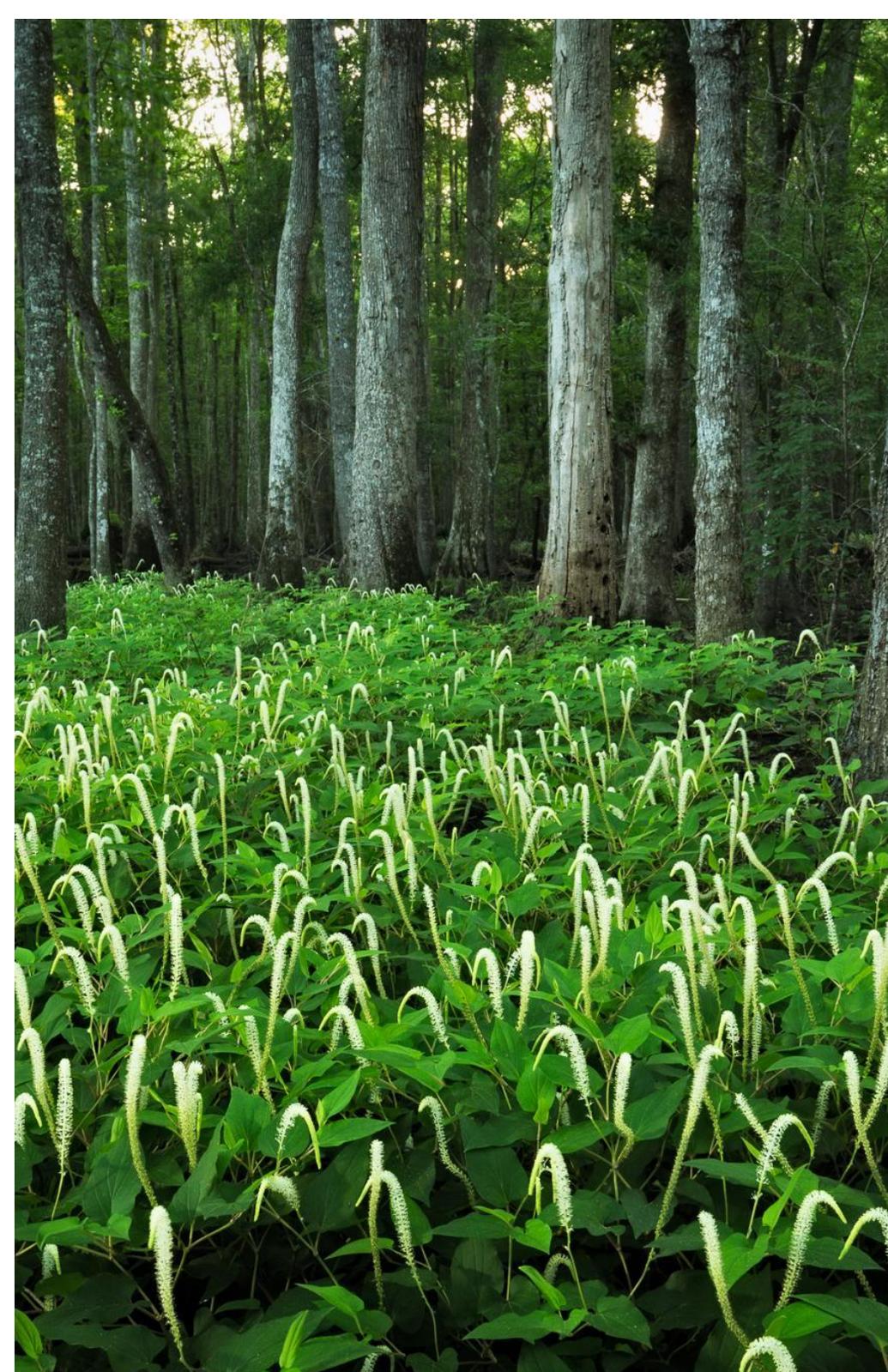
WHAT'S IT WORTH?

An ecosystem service valuation for wetland forests in Florida and the US South

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*Research provided by
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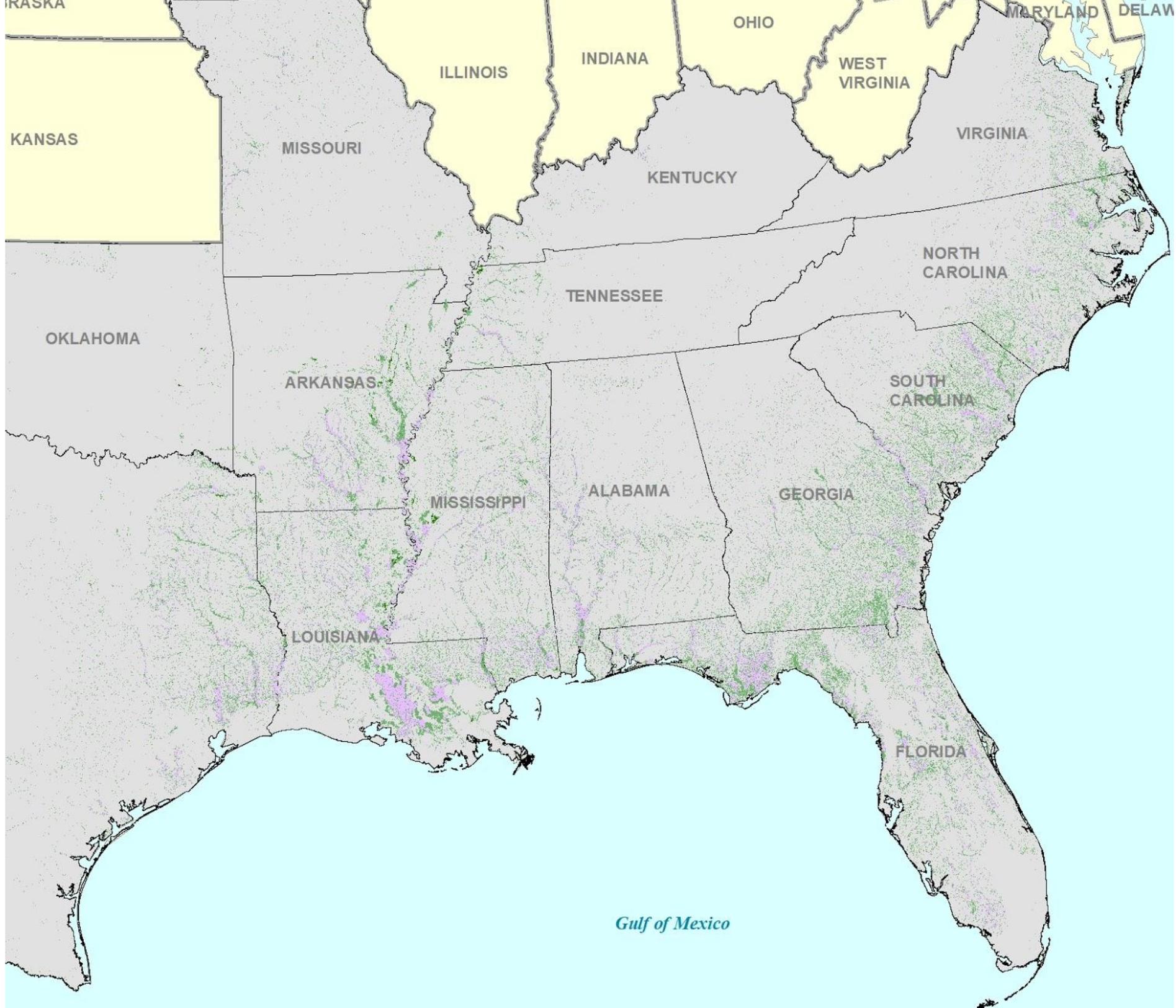
<http://www.dogwoodalliance.org/treasures-of-the-south>

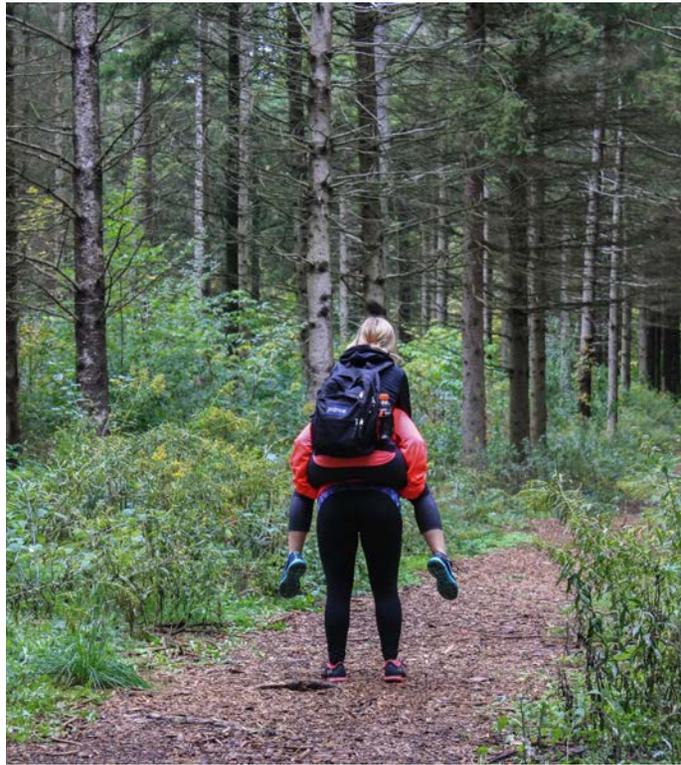
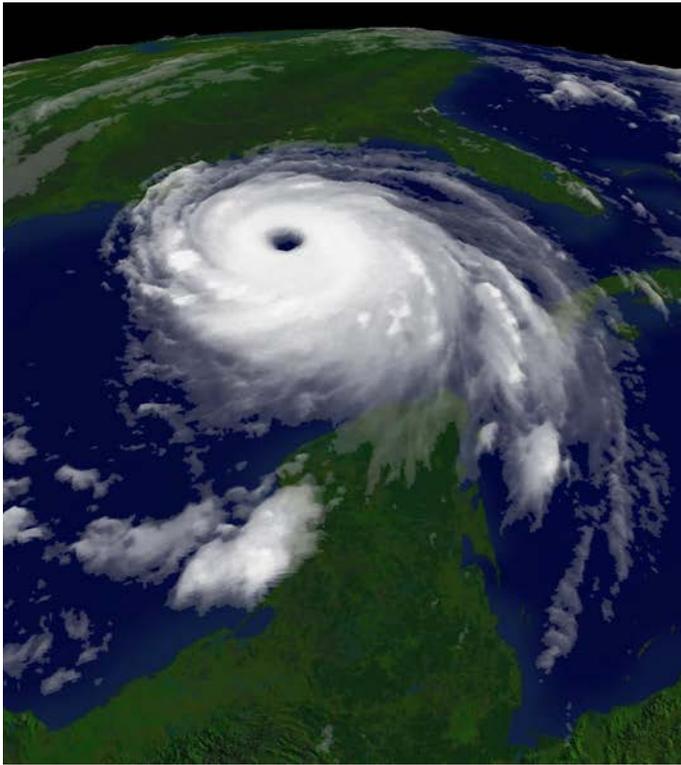




There are 35 million acres of wetland forests in the US South



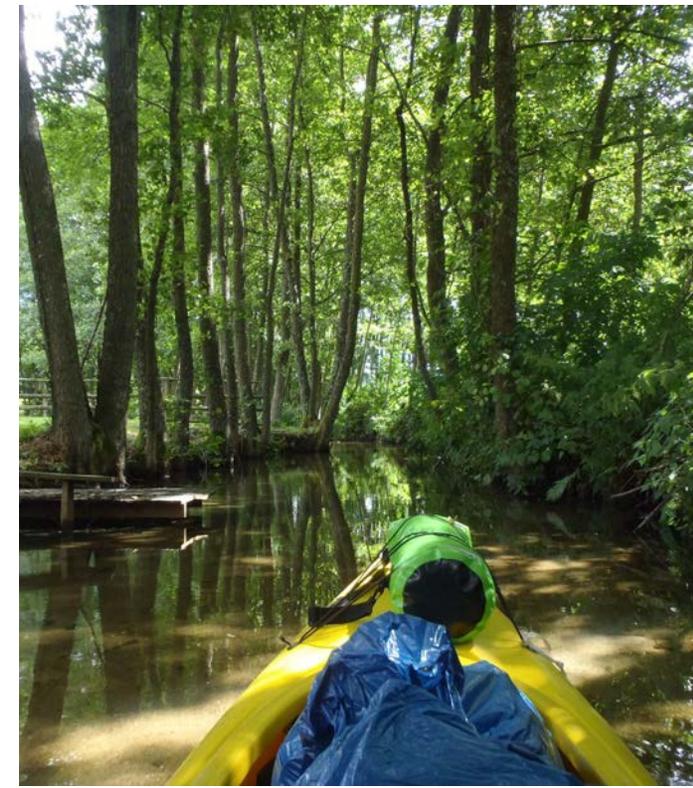




These wetland forests provide protection from extreme events, recreation opportunities, waste and water treatment, food, and provisioning services like clean air, erosion control, and raw materials.



Our report shows how important wetland forests are to the economy of southern states.



HOW MUCH ARE FLORIDA'S WETLAND FORESTS CURRENTLY WORTH?



5.4 Million Acres - \$80.8 BILLION

Special Note About The Everglades

Our estimation of wetland forests was conservative and mostly excluded marshy habitats, and as a result, much of the Everglades are not included in the report calculations.

However...

Our main category/values are listed here, so you can estimate values yourself:

Benign neglect: \$18,550 per acre

Ecological forestry: \$18,663 per acre

Intensive forestry: \$1,194 per acre

So 1.5 million acres of protected wetland forests
= \$27.8 billion in value

And...

The way we performed calculations means that the categorical percentage value remains roughly the same. So continuing with the 1.5 million acres / \$27.8 billion example...

Protection from extreme events	29.9%	\$8.3 billion
Tourism and recreation	25.1%	\$7 billion
Water and waste	23.0%	\$6.4 billion
Food and Pollination	14.6%	\$4.1 billion
Regulating Services	7.1%	\$2 billion
Raw Materials	0.3%	\$834 million

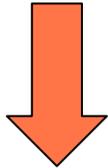


How Conservation Increases Value

Report Methodology

Current Value

Identify the value of the ecosystems you're evaluating



When doing a scenario -- identify the changes in acre allocation.

Baseline: \$1,400

Unprotected: \$10/acre, 90 acres = \$900

Protected: \$50/acre, 10 acres = \$500

Conservation Value

Find scientific studies that put a price tag on services in your ecosystem area.



Get an average value, per acre, for each type of ecosystem service

Conservation: \$3,000

Unprotected: \$10/acre, 50 acres = \$500

Protected: \$50/acre, 50 acres = \$2,500

EXAMPLE:



Our regional conservation scenario did three things:

- **Extended protections from 3 to 13 million acres**
- **Increased riparian buffers from 50 to 150 ft**
- **Increased certified forests from 2% to 10%**

Baseline Ecosystem Services \$503.8 B

Aesthetic Value
Air Quality
Climate Regulation
Erosion Control
Protection from Extreme
Events
Food
Pollination
Raw Materials
Recreation
Soil Formation
Waste Treatment
Water Supply
Water Flow Regulation

Protection from Extreme Events | Water Flow Regulation

\$151 B

Extreme Event Protection

Aesthetic Value | Recreation

\$126 B

Tourism & Recreation

Waste Treatment | Water Supply

\$115 B

**Water Supply & Waste
Treatment**

Food | Pollination

\$73 B

Food and Pollination

Air Quality | Climate Regulation | Erosion Control | Raw
Materials | Soil Formation

\$39 B

Provisioning Services



What's Florida's Wetland Forest Worth?

FL Baseline Ecosystem Services \$80.8 B

Protection from Extreme Events | Water Flow Regulation

\$24.2 B

Extreme Event Protection

Aesthetic Value | Recreation

\$20.3 B

Tourism & Recreation

Waste Treatment | Water Supply

\$18.6 B

**Water Supply & Waste
Treatment**

Food | Pollination

\$11.7 B

Food and Pollination

Air Quality | Climate Regulation | Erosion Control | Raw
Materials | Soil Formation

\$5.9 B

Regulating Services

Aesthetic Value
Air Quality
Climate Regulation
Erosion Control
Protection from Extreme
Events
Food
Pollination
Raw Materials
Recreation
Soil Formation
Waste Treatment
Water Supply
Water Flow Regulation



Our Florida conservation scenario:

- Extended protections to > 2,200,000 million acres
- Increased riparian buffers from 50 to 150 ft
- Increased certified forests

Conservation

Protection from Extreme Events | Water Flow Regulation

Increases

+\$2.1 B

Extreme Event Protection

Aesthetic Value | Recreation

Ecosystem

+\$2.1 B

Tourism & Recreation

Services

+ \$ 7.5 B

Waste Treatment | Water Supply

Water Supply & Waste Treatment

Aesthetic Value

+\$1.8 B

Food | Pollination

Food and Pollination

Air Quality

Climate Regulation

Erosion Control

Protection from Extreme

Events

Food

+\$1.1 B

Pollination

Raw Materials

Recreation

Soil Formation

Waste Treatment

Water Supply

+\$265 M

Regulating Services

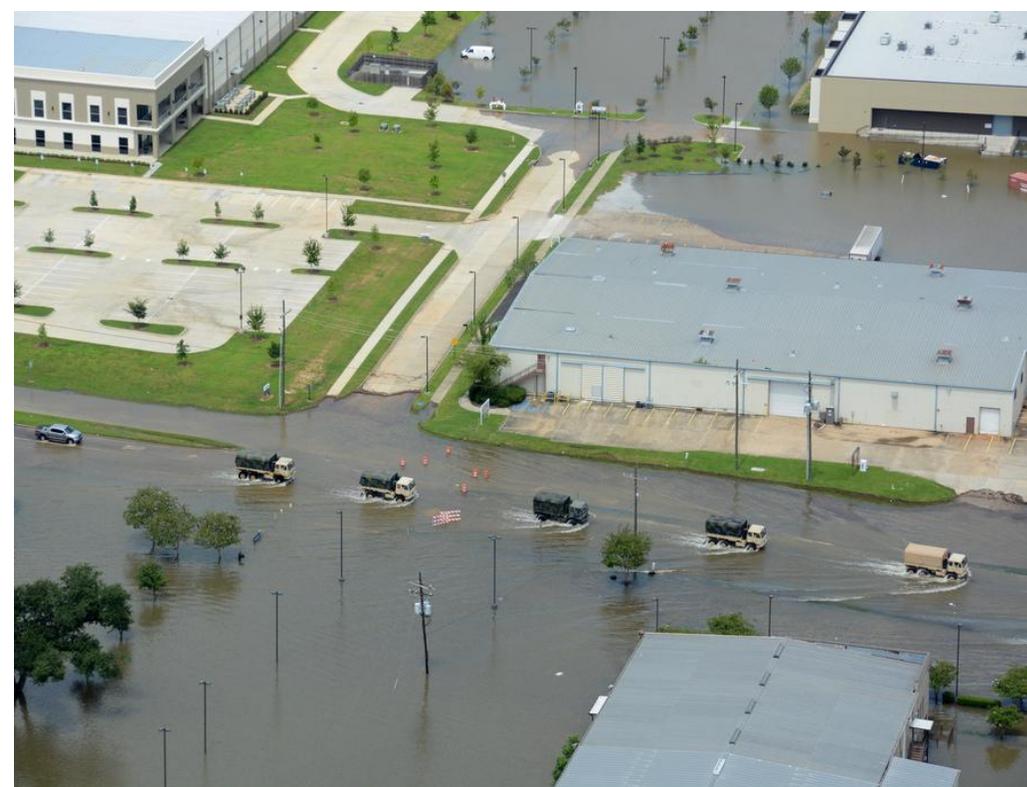
Water Flow Regulation

Air Quality | Climate Regulation | Erosion Control | Raw Materials | Soil Formation

**PROTECTION FROM
EXTREME EVENTS IS THE
LARGEST VALUE ADDED BY
WETLAND FORESTS**



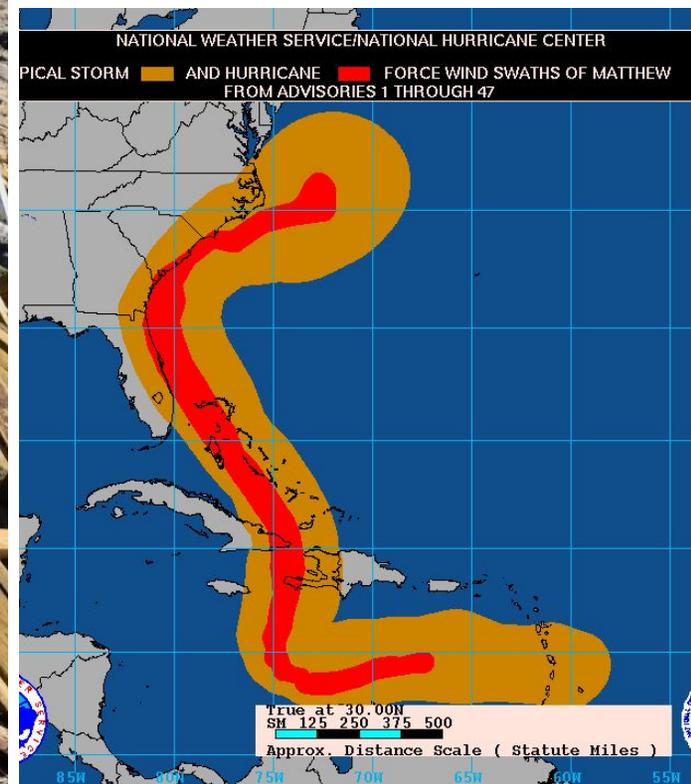
Two of the world's most expensive natural disasters in 2016 were in the U.S. South, each totalling \$10.3 billion USD in damages.





A recent study showed that wetlands prevented \$625 million USD in damages from Hurricane Sandy.

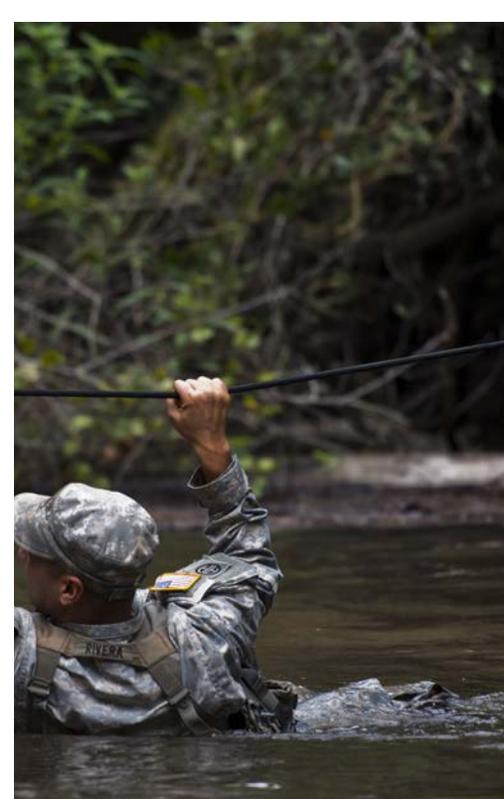
Forest protection from extreme events in Florida currently generates over \$24 billion dollars in ecosystem service value.





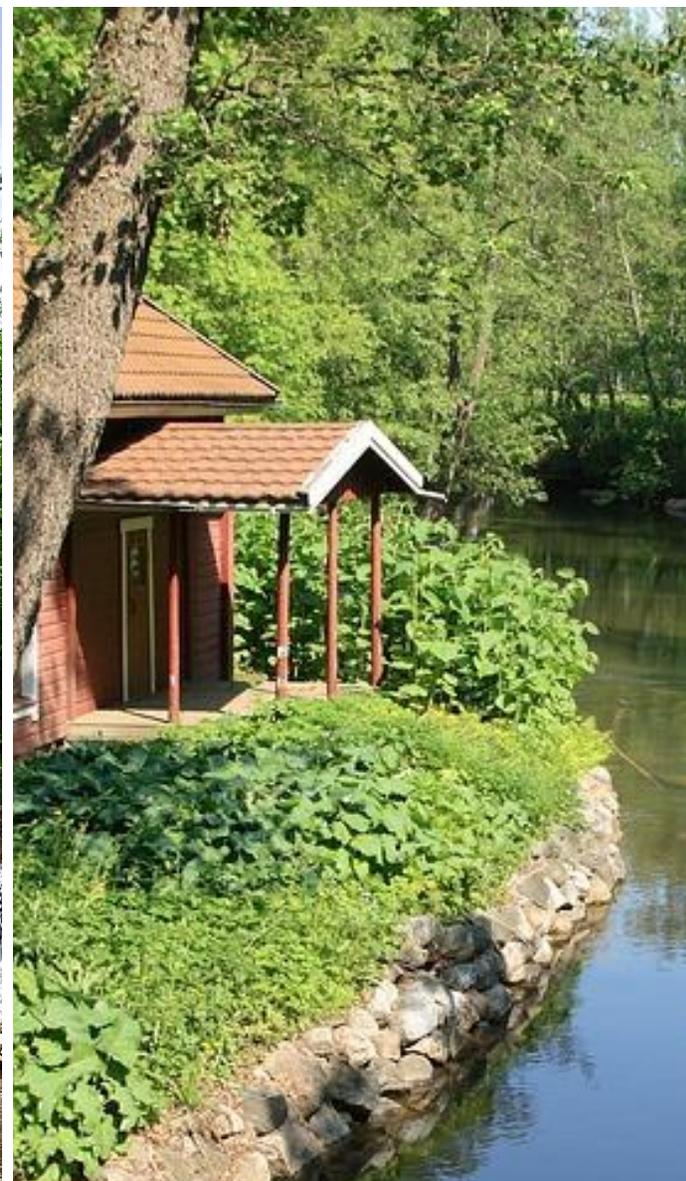
Investing in conservation results in gains of \$2 billion in protection from extreme events.

**WE NEED RECREATION AND
TOURISM
IN OUR WETLAND FORESTS**



The most recent recreation survey shows that Florida had 112 million visitors who contributed \$108 B to the economy in 2011.



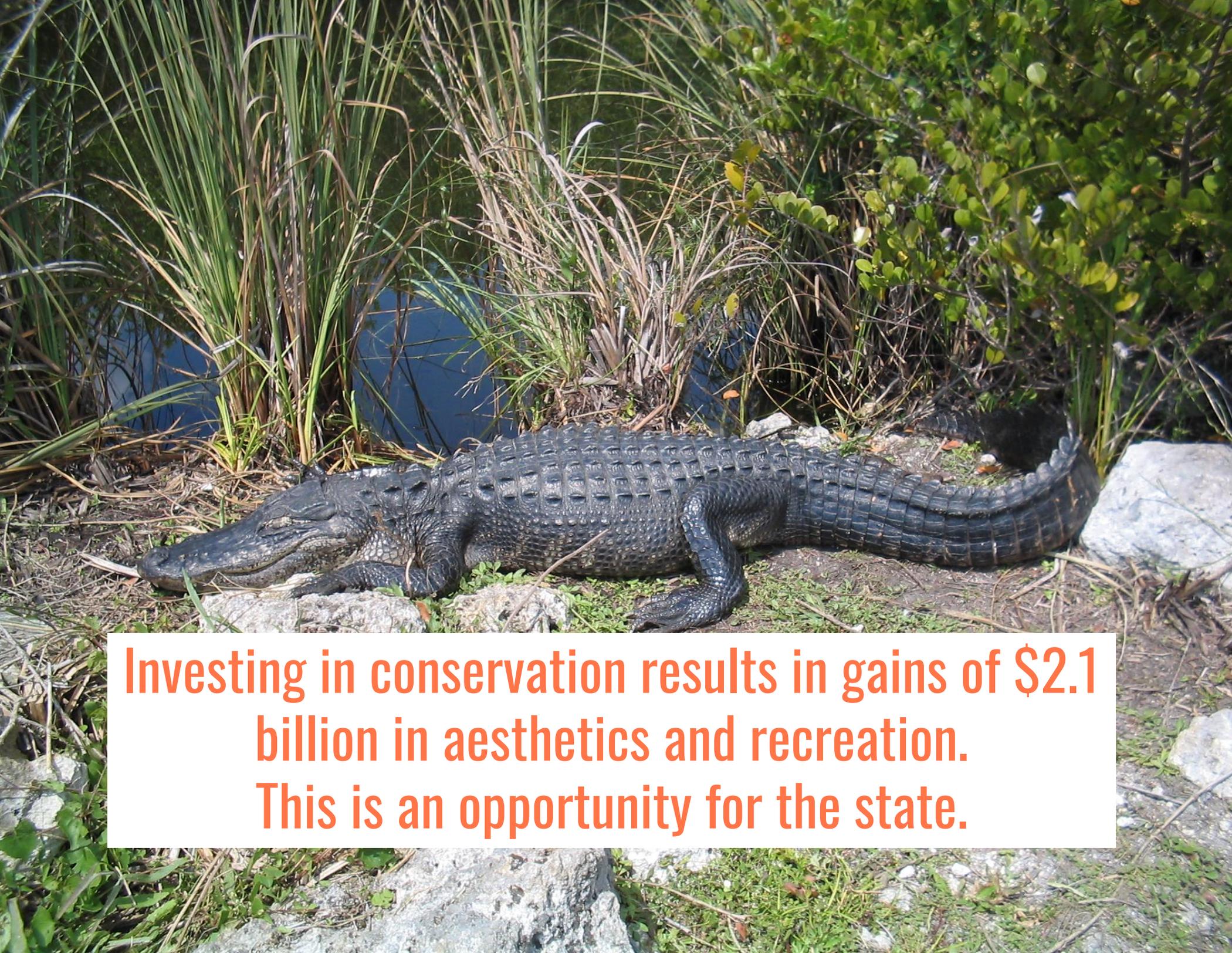


Aesthetics matter
The more natural landscapes visible from a property,
the higher it's value.



Aesthetics and recreation currently generate \$20.2 billion dollars in FL ecosystem service value.



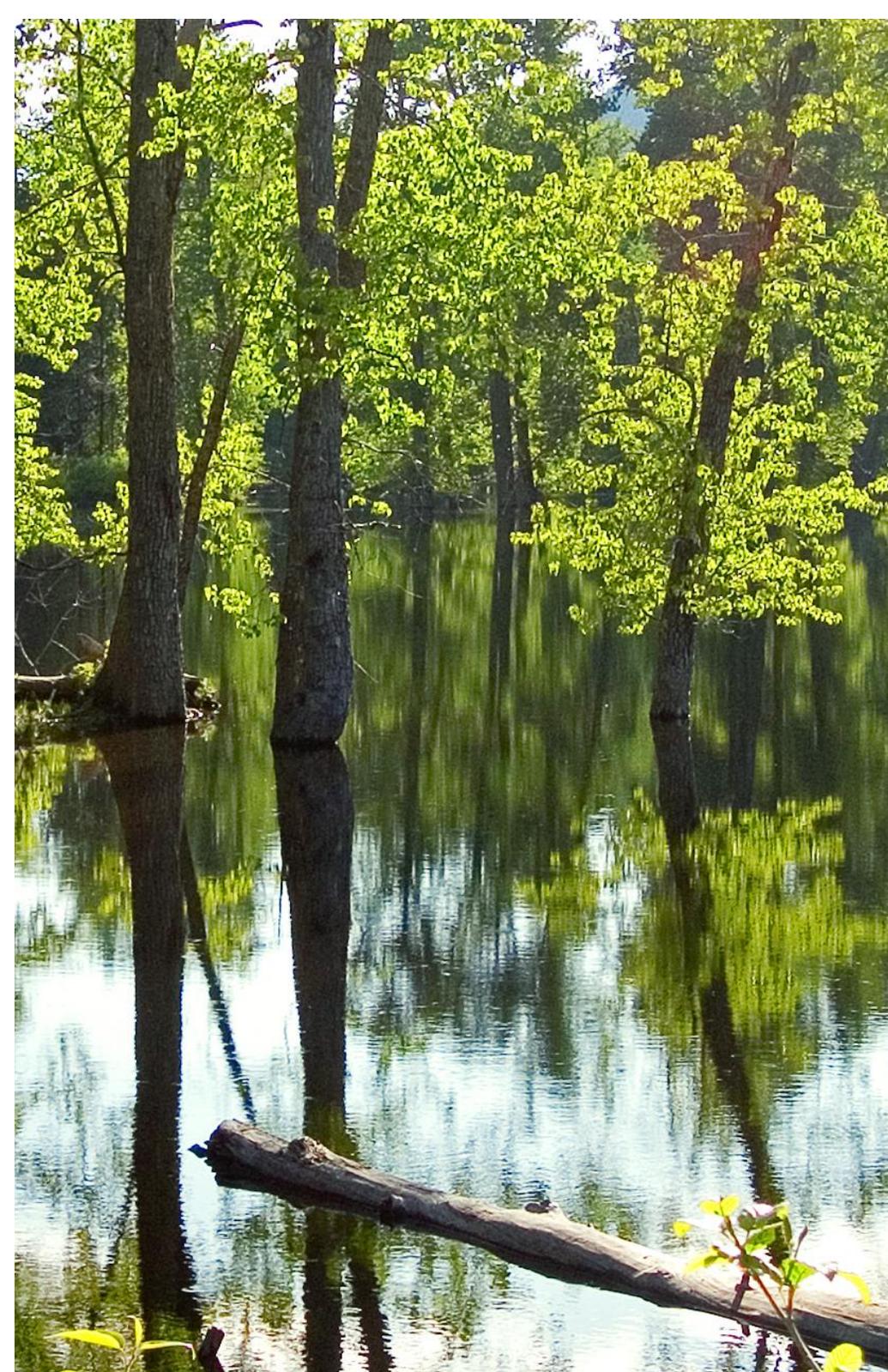


Investing in conservation results in gains of \$2.1 billion in aesthetics and recreation. This is an opportunity for the state.

**RURAL COMMUNITIES NEED
WETLAND FORESTS FOR
CLEAN WATER AND WASTE
TREATMENT**

Millions in the regional study area rely on wells instead of public water supply.





Nearly 50 million southerners rely on forests to filter their fresh water supply.





**Waste treatment and water supply
generate \$18.6 billion dollars in
Florida ecosystem service value.**

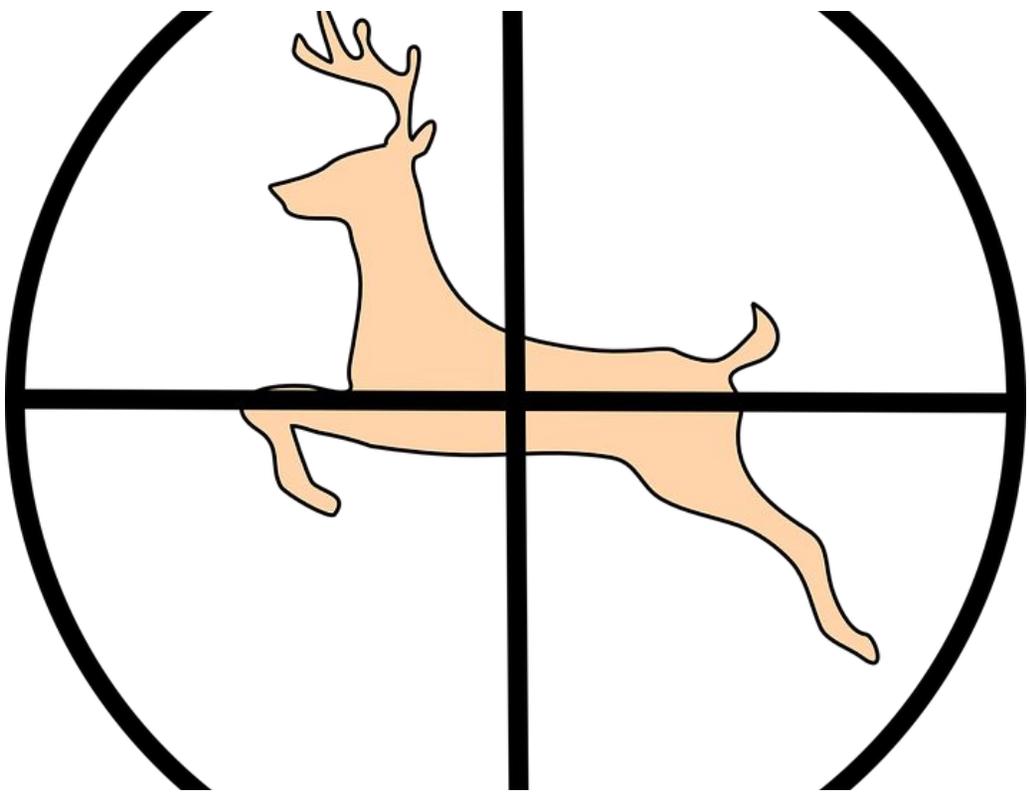




Investing in conservation could result in gains of \$1,8 billion in waste treatment and water supply.

WETLAND FORESTS
PROVIDE **FOOD** AND
SUPPORT **POLLINATORS**

Over two million
Florida residents
hunt
or fish for food



ROUND
1





Wetland forests support pollinators. Farms located near forest fragments produce more product because of pollinators.





**Food and pollination
currently generate
\$11.7 billion dollars in
Florida ecosystem
service value.**





Investing in conservation could result in gains of \$1.1 billion in food and pollination services.

OTHER PROVISIONING
SERVICES: CLIMATE & AIR
QUALITY

Trees remove up to 23.2 million metric tons per year of pollution in the United States

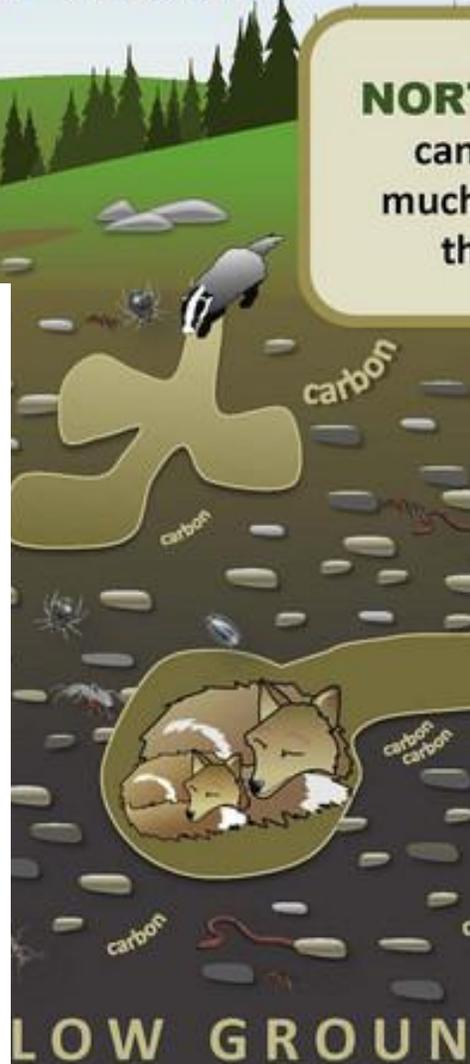


Understanding Soil

Climate Based Restoration for Resilience

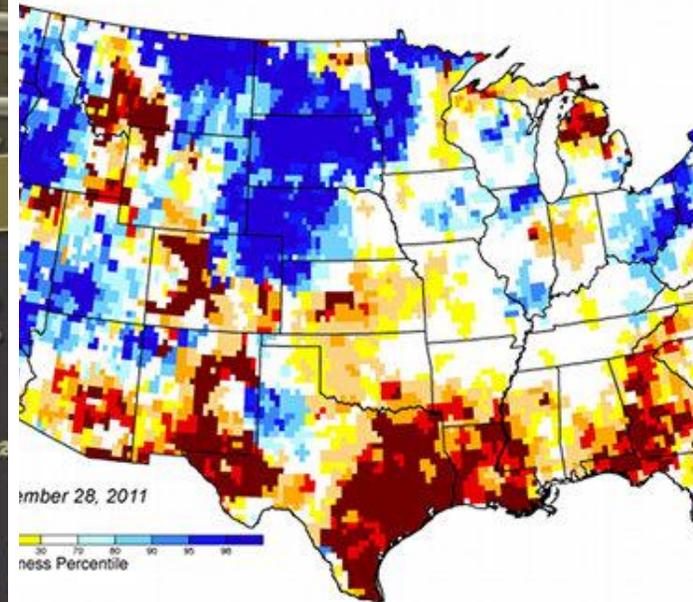
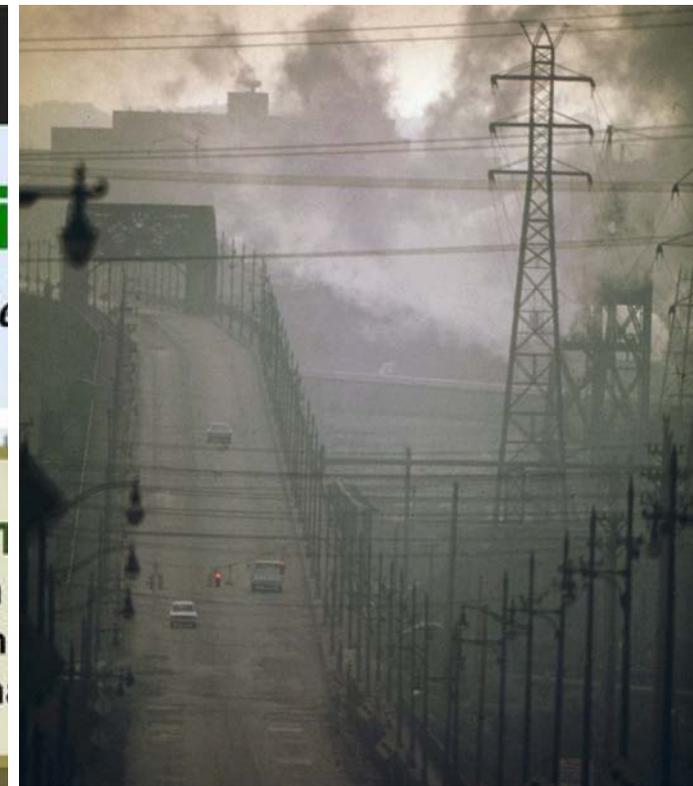
CARBON STORED ABOVE GROUND

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LOW GROUND

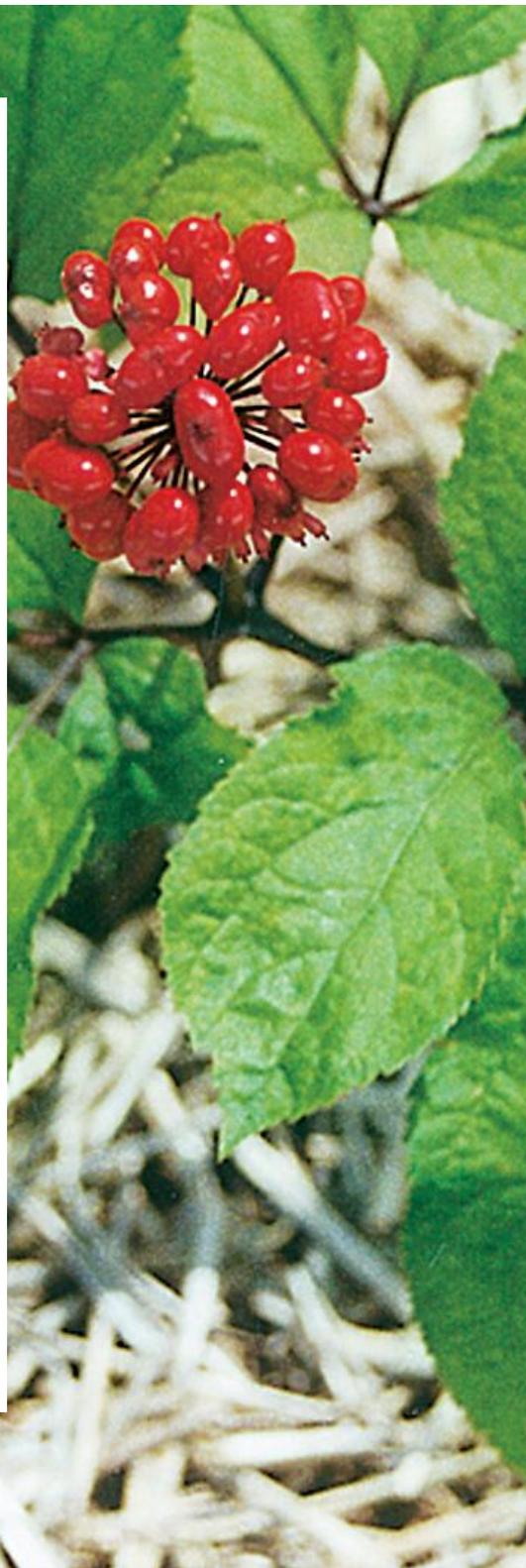
Wetland forest climate and air quality benefits are worth \$16.6 billion dollars



OTHER PROVISIONING
SERVICES: RAW
MATERIALS

A lot of Floridians gather non-timber forest products like ginseng, truffles, and morels.

These are a much better way to harvest materials from wetland forests than logging.



LOGGING WETLAND FORESTS IS A WASTE

LEAVING WETLAND FORESTS STANDING INCREASES THEIR VALUE BY

15x

\$18,600

Value of Conservation, Social welfare, and Public Interest

(15 times the value of timber alone)



Value of Timber Alone



\$1,200

Learn more: dogwoodalliance.org/treasures-of-the-south





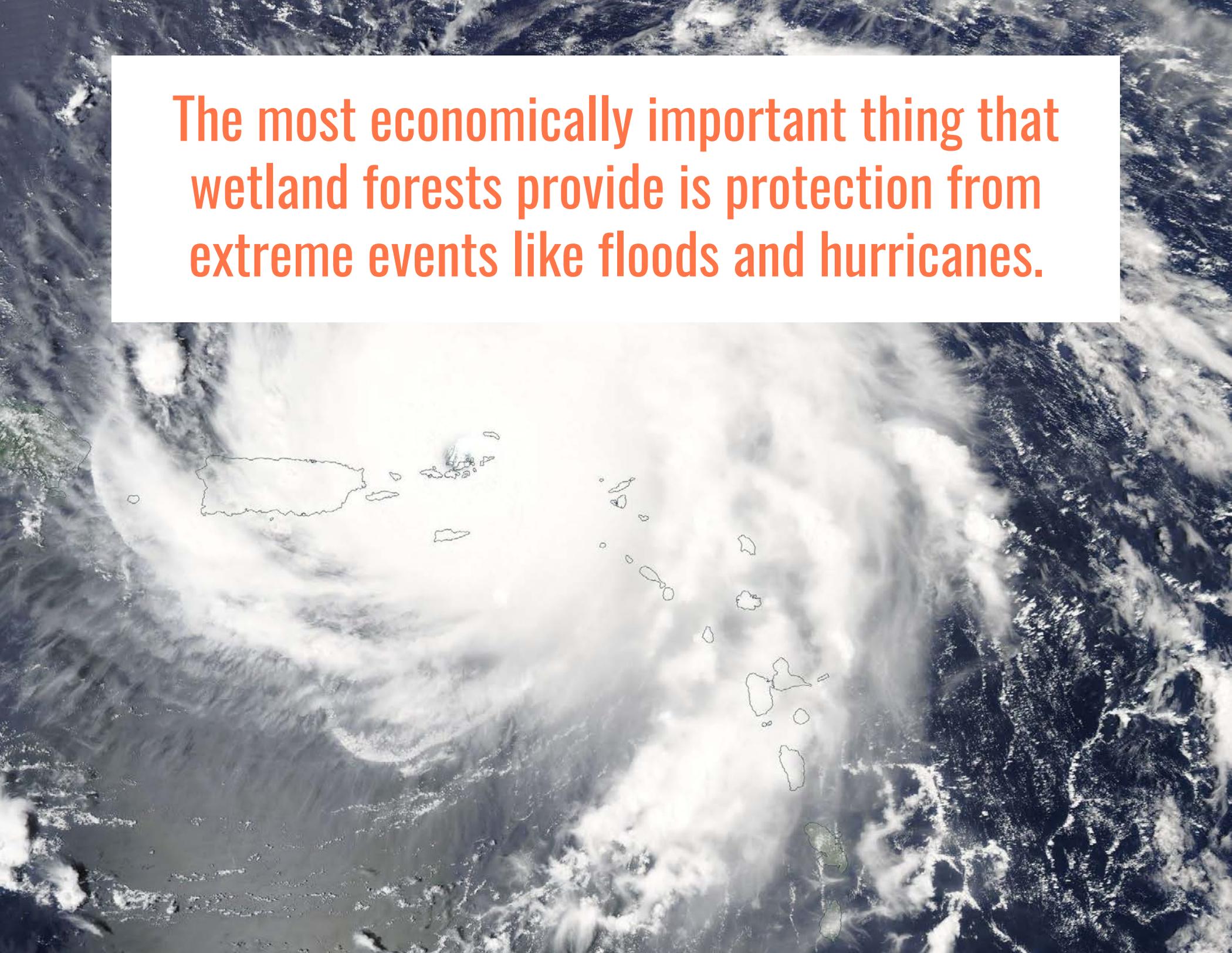
Investing in conservation results in gains in raw materials (\$600 mil across the study region)

CONCLUSIONS

A photograph of a wetland forest. In the foreground, several large, gnarled tree trunks are visible, some with buttresses. The trees are reflected in a body of water in the background. The scene is lush and green, with sunlight filtering through the canopy.

Florida's wetland forests represent over \$80 billion, and could be worth \$7.5 billion more if we invest in conservation.

The most economically important thing that wetland forests provide is protection from extreme events like floods and hurricanes.





By valuing *standing* wetland forests, we can bolster our recreation and tourism economy without degrading our ecosystems.



Wetland forests regulate the climate, clean our air, control erosion, and form soil. These intrinsic values should not be forgotten.

QUESTIONS?

Want to get involved? <http://www.wetlandforests.org>

Want the report?

<http://www.dogwoodalliance.org/treasures-of-the-south>

Want your state's fact sheet?

<https://www.dogwoodalliance.org/interactive-map/>

Want to chat?

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