

2015 FSBPA Annual Conference

# The Moral & Economic Basis for Beach Restoration



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# Presentation Outline

*expand the basis for public funding*



- **Economic Basis**
  - Historical Funding
  - Criteria for Funding



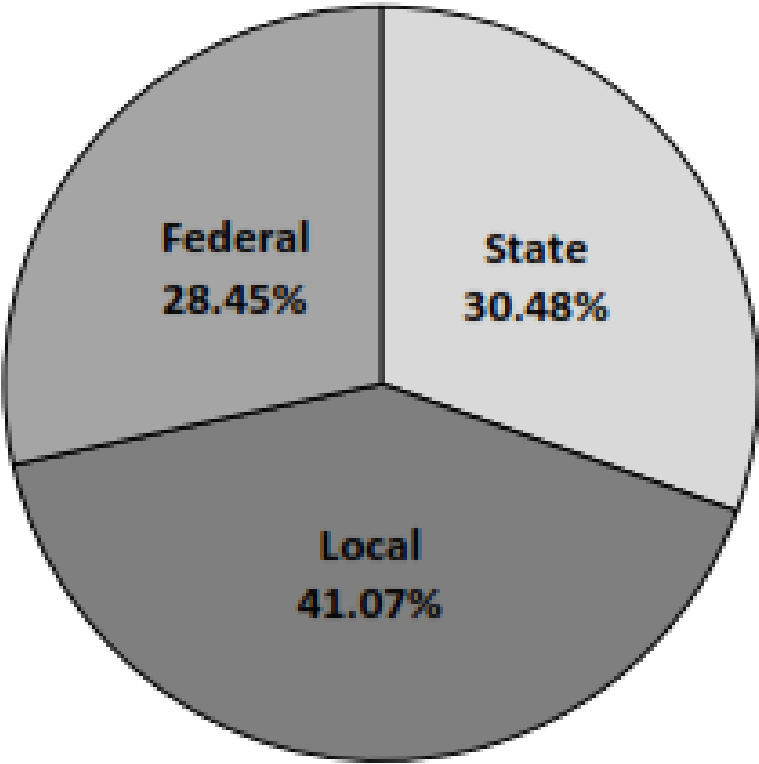
- **Moral Basis**
  - Foundation
  - Environmental Attitudes
  - Religious Connection



- **Conclusions**

# Economic Evaluation of Florida's Investment in Beaches

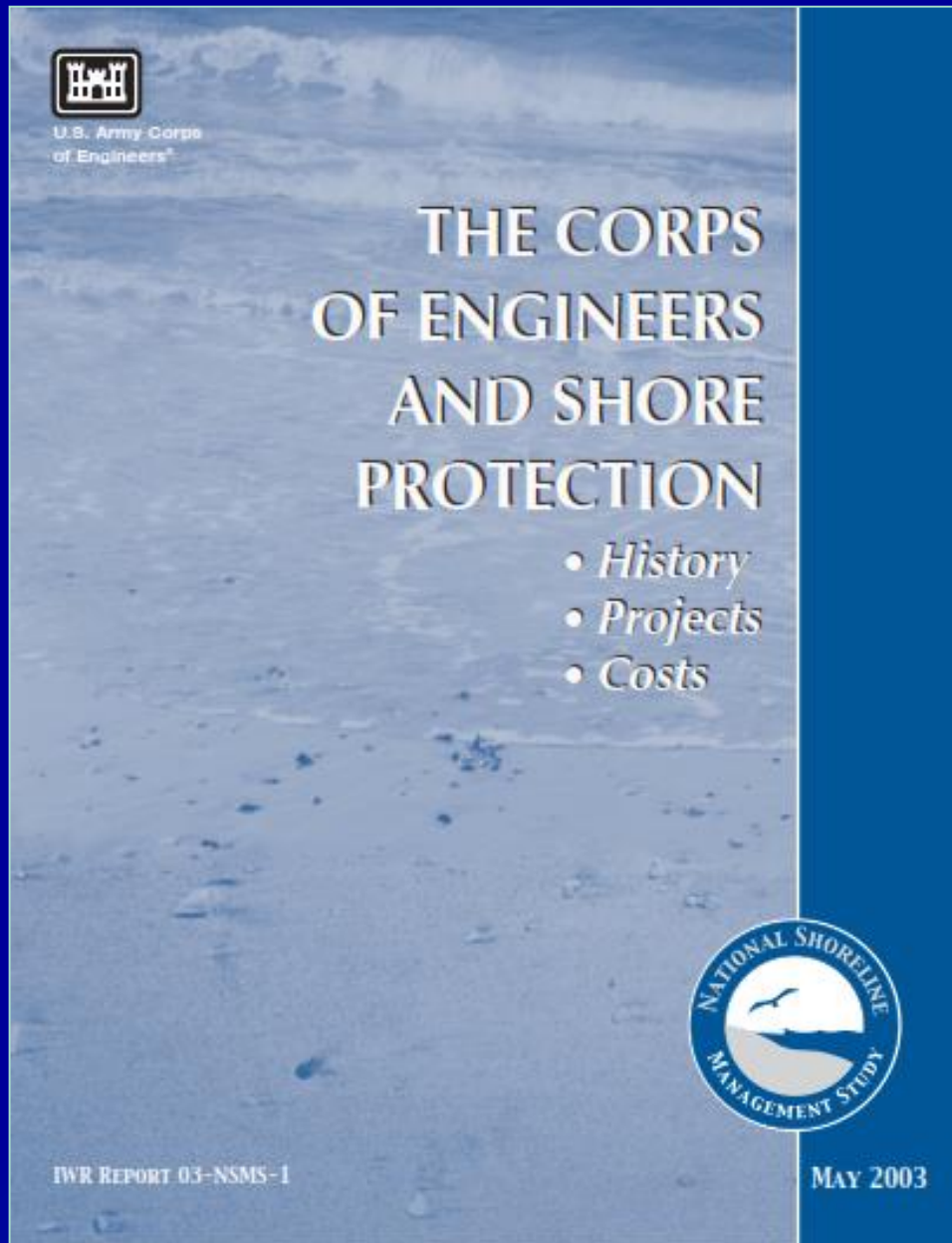
Florida - Office of Economic & Demographic Research - January 2015



Source: DEP Current Project Requests for Funding

## Approximate Beach Restoration Expenditures

Fiscal Years  
2010-11, 2011-12, & 2012-13



**1950-2002**  
**Total Construction Costs**  
**\$1.2B  $\approx$  \$23M/year**

The collected data indicate that as miles of coastal area protected by Corps shore protection projects increase, coastal damages due to hurricanes per mile of coastal project and damages from hurricanes per U.S. citizen both decrease.





# North Atlantic Coast Comprehensive Study

Second Interim Report

Authorized Projects – not Constructed

Construction Costs  
≈ \$2.16 B

From: NACCS- Second Interim Report  
Disaster Relief Appropriations Act, 2013

North Atlantic Division	
Authorized but Unconstructed Projects	
Project	Construction Cost Estimate <sup>1</sup>
DELAWARE	
Delaware Bay Coastline, Broadkill Beach, DE & NJ	\$13,000,000
NEW JERSEY	
Barnegat Inlet to Little Egg Harbor Inlet - (LBI) <sup>2</sup>	\$50,000,000
Brigantine Inlet to Great Egg Harbor Inlet, NJ- (Absecon) <sup>2</sup>	\$70,000,000
Joseph G. Minish Waterfront Park and Historic Area, NJ <sup>2</sup>	\$26,000,000
Sandy Hook to Barnegat Inlet, NJ <sup>2</sup>	\$75,000,000
Delaware Bay Coastline, Oakwood Beach, NJ	\$7,000,000
Great Egg Harbor Inlet to Townsends Inlet	\$68,000,000
Manasquan Inlet to Barnegat Inlet	\$86,000,000
Passaic Main Stem, NJ (Passaic River and Newark Bay upstream to the Dundee Dam)	\$300,000,000
Raritan Bay to Sandy Hook Bay, Port Monmouth, NJ	\$110,000,000
Raritan Bay to Sandy Hook Bay, Union Beach, NJ	\$125,000,000
South River, Raritan River Basin, NJ	\$110,000,000
NEW YORK	
Atlantic Coast of New York City, Rockaway Inlet to Norton Point, NY (Coney Island) <sup>2</sup>	\$30,000,000
East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY <sup>2</sup> (Under Reformulation Study)	\$150,000,000
Fire Island Inlet to Montauk Point, NY <sup>2</sup> (Under Reformulation Study)	\$700,000,000
Long Beach, NY	\$200,000,000
Montauk Point, NY	\$18,000,000
VIRGINIA	
Willoughby Spit and Vicinity, Norfolk, VA	\$22,100,000

# Florida Beach Management Program

## Funding FY2005/06 to FY2015/16

Fiscal Year	# of Projects		Value of Projects		
	Requested	Funded	Requested	Funded	
FY 05-06	39	39	\$67,104,981	\$70,300,000	105%
FY 06-07	31	34	\$53,790,846	\$50,000,000	93%
FY 07-08	33	33	\$48,040,807	\$47,400,000	99%
FY 08-09	39	16	\$61,924,882	\$21,900,000	35%
FY 09-10	58	10	\$69,990,758	\$15,000,000	21%
FY 10-11	58	7	\$81,812,891	\$15,540,000	19%
FY 11-12	61	16	\$101,169,830	\$16,250,000	16%
FY 12-13	61	14	\$89,406,397	\$20,000,000	22%
FY 13-14	57	28	\$90,227,566	\$37,500,000	42%
FY 14-15	56	25	\$89,754,676	\$47,300,000	53%
FY 15-16	53	22	\$100,962,865	\$32,106,500	32%
Totals:	546	244	\$854,186,499	\$373,296,500	44%

Adapted From Data provided by Debbie Flack, FSBPA, August, 2015

# **Economic Evaluation of Florida's Investment in Beaches**

Office of Economic & Demographic Research - January 2015

Beaches are the most important feature of Florida's brand, accounting for **25.5%** of the state's attractiveness to visitors.

Florida's beaches are primarily responsible for attracting approximately **18.6 million tourists** to the state each fiscal year.

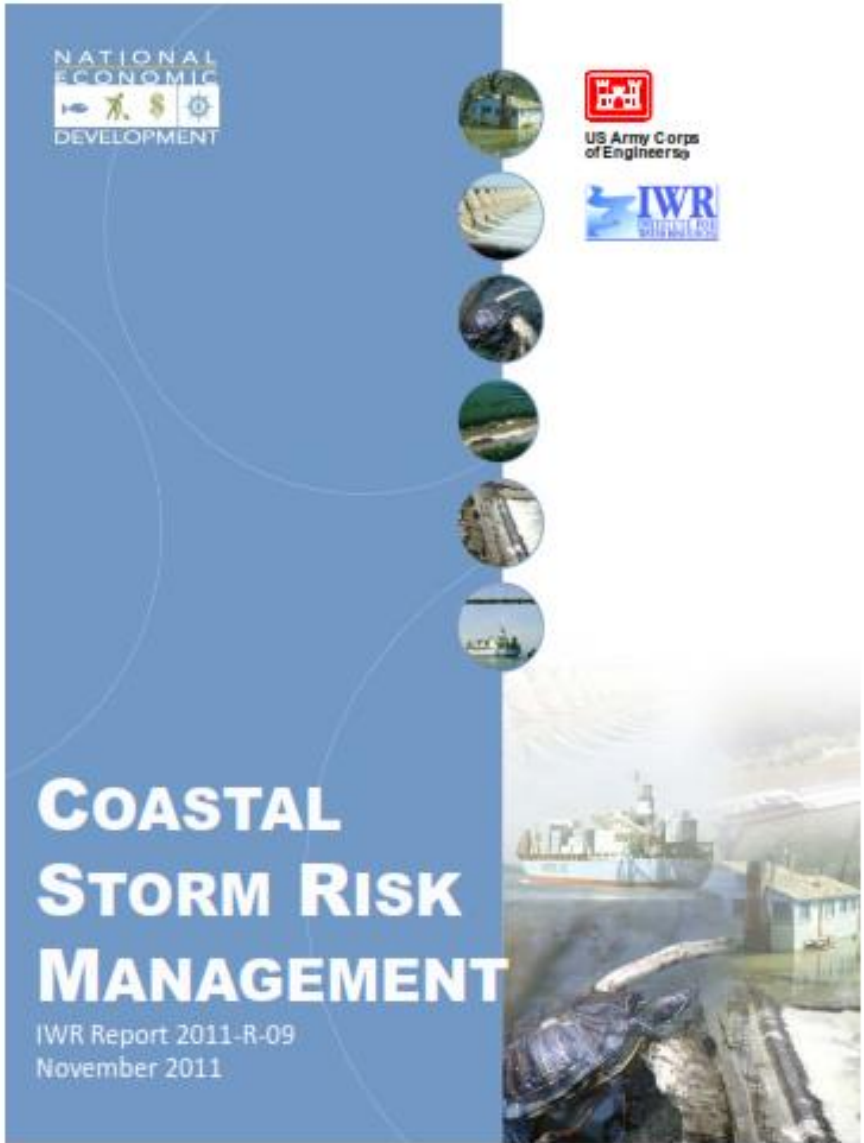
The **investment in Florida's beaches is relatively low** compared to the amount of economic activity generated by tourists.

**Maintaining the beaches at a level of high quality is important**, but once the beaches have reached that level, there are diminishing economic returns to beach investment.

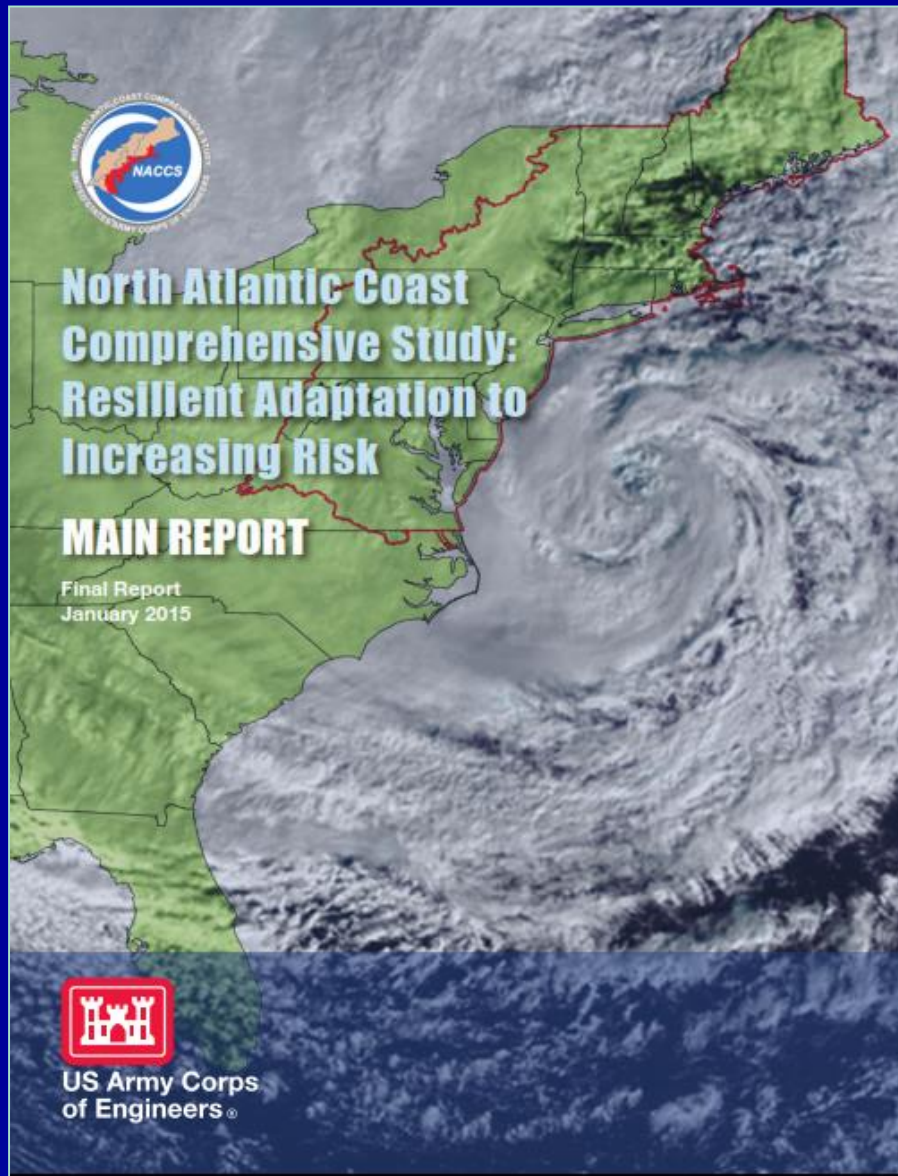
The state's investment in the Beach Management and Restoration Program generated a **positive return on investment of 5.4**.

current policy specifies ...  
**that projects are formulated  
to provide hurricane and  
storm damage reduction and  
that recreation is incidental.**

Contributions to NED benefits  
in coastal areas are primarily  
reductions in damages to  
property. The NED benefit  
must be equal or greater than  
the NED costs and display a  
minimum 1:1 benefit cost  
ration. No more than 50  
percent of the benefits  
required for justification can  
be attributed to recreation  
benefits.







In addition to providing engineering functions related to **managing risks from coastal storms**, integrated solutions can provide a range of additional ecosystem services. ...These include benefits related to commercial and recreational fisheries, **tourism**, clean water, habitat for threatened and endangered species, and support for cultural practices.

# **The Economic Value of Beaches – a 2013 Update**

**Jim Houston, *Shore & Beach*, Fall 2013**

**... Travel & Tourism ... is the largest employer in the U.S.**

**... beaches are the leading U.S. vacation destination.**

**... for every \$1 the federal government spent on beach nourishment in 2012 (\$44 million), it collected about \$570 (\$25 billion) annually in tax revenues from beach tourists.**

**.... Renewed U.S. investment in tourism infrastructure is important to grow the economy and number of jobs and to reduce the U.S. trade imbalance.**

# **FDEP – Beach Management Funding Assistance Program**

## **62B-36.006 (1) Beach Management Project Ranking criteria:**



- (a) Severity of erosion.**
- (b) Threat to upland structures.**
- (c) Recreational and economic benefits.**
- (d) Availability of federal funds.**
- (e) Local sponsor financial and administrative commitment.**
- (f) Previous state commitment.**
- (g) Project performance.**
- (h) Mitigation of inlet effects.**
- (i) Innovative technologies.**
- (j) Enhance nesting sea turtle refuges.**
- (k) Regionalization.**
- (l) Significance.**
- (m) In the event that more than one project receives the same number of points, ... most ready to initiate construction.**



**What is the foundation of the moral basis for beach restoration?**

# **Human Need**

**“Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and give strength to body and soul alike.”**

**John Muir**



From: *The Yosemite* (1912), page 256.

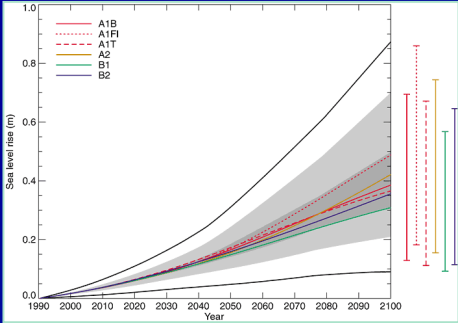


# What is the foundation of the moral basis for beach restoration?

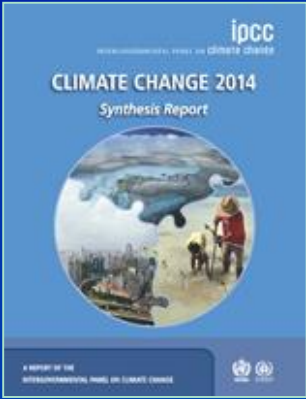
## Causes of Erosion – Public Actions



Inlets



Sea Level Rise



Structures



# **"The Politics of Ecological Restoration"**

**A. Light & E.S. Higgs, Environmental Ethics Vol. 18 Fall 1996**



**Preservationists claim that not preserving ...nature ... violates a moral and a political obligation.**

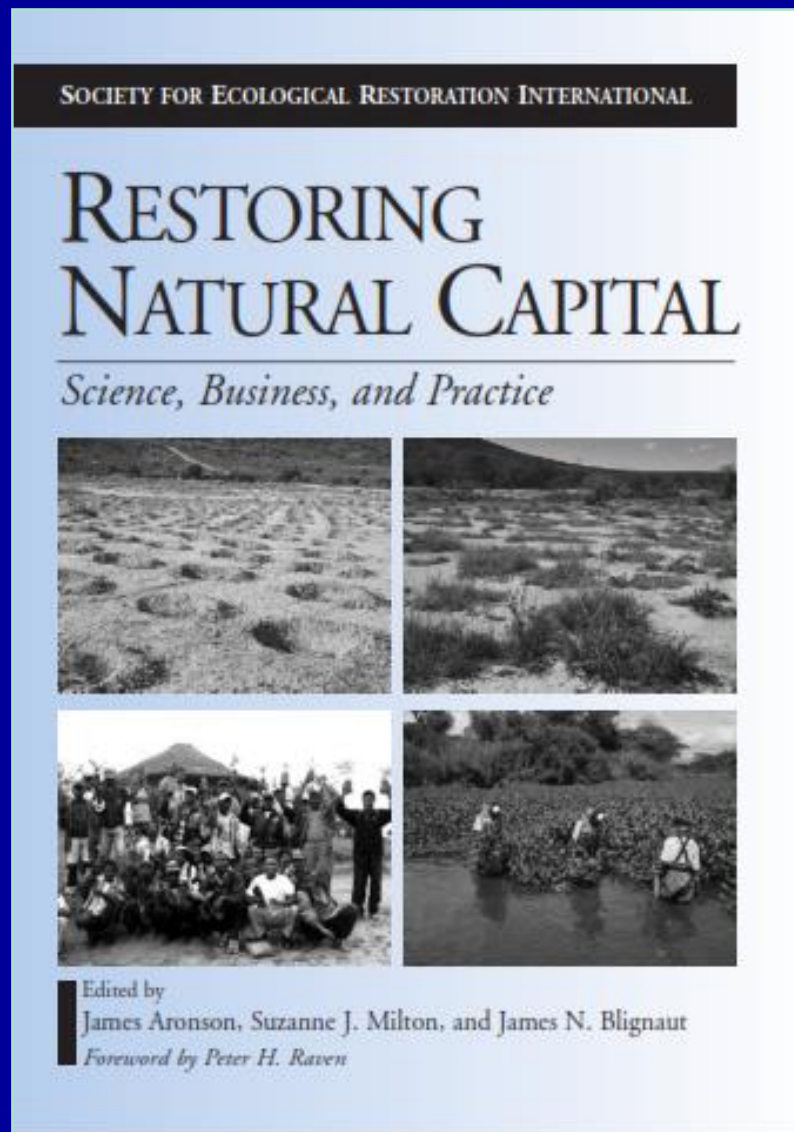
**At its core, we can define restoration as public participation in nature.**



**Ecological restoration will be democratic in practice only if we make it so by politically shifting the terrain of discourse about restoration.**



**Because of this threat, the fight over the politics in and of ecological restoration is a struggle for the future of the very identity of nature in North America.**



Published: 2007

We argue that fulfilled relationships, with oneself, with others, and with the natural world, are the most desirable of all ethical values frameworks. We consider sustainable development as the most effective instrument for building this framework.

**if we do not maintain the adaptive capability of natural ecosystems, we compromise the ability of future generations to provide for their own needs.**

The restoration of natural capital has economic costs, but these are greatly outweighed by its benefits, because it increases the prospects for sustainable development and reduces the threat of economic, social, and ecological disaster ...



# The Moral Roots of Environmental Attitudes

**the more individuals recognize the consequences of environmental degradation and the more they feel personally responsible for such degradation, the more they view pro-environmental behavior as moral**

**results suggest that political polarization around environmental issues ... can be reduced by crafting pro-environmental arguments that resonate with the values of American conservatives.**

**most of the world's religions emphasize humanity's role as stewards of the earth** charged with keeping pure and sacred God's creation .... Thus, reframing moral rhetoric around the environment to fit with this religious tenet might be persuasive to many religious individuals...



From: Matthew Feinberg & Robb Willer, "*The Moral Roots of Environmental Attitudes*", December 10, 2012 Center for Compassion and Altruism Research and Education, Stanford University, and Sociology Department, University of California, Berkeley



New York Times February 17, 2015

## Is the Environment a Moral Cause?

**Hypothesis:** “pro-environmental messages specifically targeting conservative values could close the moral gap and persuade conservatives to join the environmental cause.”

**Study:** presented “a pro-environmental message based in moral purity. This message emphasized the need to protect natural habitats from ‘desecration’ so that our children can experience the ‘uncontaminated purity and value of nature.’ ”

**Results:** “The conservatives presented with the purity message reported significantly greater support for pro-environmental legislation ... as supportive as a group of liberals we also surveyed.”

**Implications:** “To win over more of the public, environmentalists must look beyond the arguments that they themselves have found convincing. ... Such efforts to understand others’ moral perspectives might .. also foster the sort of sincerity and respect necessary to sustain a large-scale collective effort.”

# Religious Connection

the need to expand “the growing dialogue regarding the **role of the world’s religions as moral forces in stemming the environmental crisis.**”

**religion plays an integral** role in forming cultural values and world views, which in turn shape a society’s ethical orientation toward the natural world

## Restoration as Sacramental Practice

This active participation in ecological processes, beyond simply observing or recreating in nature, becomes the necessary **foundation for the cycle of gift exchange, or mutual reciprocity, that is integral to any deep relationship**

From: Gretel Van Wieren. “Restored to Earth.” Georgetown University Press, 2013.

# Conclusions

- **Public funding for beach restoration is justified based on economic and a moral basis.**
- **The economic basis warrants reconciliation on the state & federal level to prompt consistency.**
- **Greater emphasis of the moral basis may prompt increased appropriations of public funds for beach nourishment which is needed to sustain Florida's beaches & economy.**

# Thank You!





end