
Preparing New Jersey for Climate Change: A Workshop for Decision Makers

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Economic Development & Demographic Pressures on the Jersey Shore

Natural Capital

Economic Development & Population Growth

Natural Damages
Economic Flows from Natural Capital (examples)

**GOODS** -

- Commercially harvested fish & shellfish
- Minerals
- Plants
Economic Flows from Natural Capital (examples)

SERVICES -
- Outdoor recreation (beach visits, fishing, bird watching, etc.)
- Nutrient recycling
- Water filtration
- Buffering from floods & storms
- Aesthetic amenities
- Maintenance of biodiversity
Capitalization of Annual Benefit Flow

Asset Yields $5,000 per year

Interest rate = 5\% \ (\text{alternative yield})

Value of Asset = $100,000
\ ($5,000/0.05 \ (\text{Present Value of flow of }$5,000 \text{ in perpetuity})$)
Surf Fishing on Long Beach Island

Source:
http://www.basspro.com/webapp/wcs/stores/servlet/CFPage?storeId=10151&catalogId=10001&langId=6&mode=article&objectId=32616
Bird Watching
The Jersey Shore
Barnegat Bay Tidal Marshes

Source: www.delvalkayakers.com/events/13056929/
Little Egg Harbor

Source: http://www.hi-techboats.com/Website_Pics/NEW_JERSEY_INLETS/07_Great_Egg_Harbor_Inlet.JPG
Methods to Infer Annual Economic Value of Natural Capital Flows

- Travel Cost Method
- Contingent Valuation
- Hedonic Price Method
- Avoided Cost Method
Sediment Budget Impacts

beach budget versus dune budget
Static Land Use

Dynamic Coastal System
Beach and Dune Displacement

Psuty, May 2011
References

NJDEP Natural Capital Study:

• [www.state.nj.us/dep/dsr/naturalcap/](http://www.state.nj.us/dep/dsr/naturalcap/)

Natural Capital Project from Stanford University, the University of Minnesota, the Nature Conservancy and the World Wildlife Fund:

• [www.naturalcapitalproject.org](http://www.naturalcapitalproject.org)

National Research Council of the National Academy of Sciences