Measuring the Economic Benefits of Greening

focus on “human services”

Kathleen L. Wolf, Ph.D.
College of Forest Resources
University of Washington
kwolf@u.washington.edu
Maia says, “science rocks!”

30+ years of urban nature science
Putting a price on nature is a crude, risky business

WHAT price would you put on the beautiful, musical and now extinct ivory-billed woodpecker? Of course, the entire genus presently product could not bring the bird back. It’s gone. 

But suppose you could fly the time machine back 50 years to the shrinking Southern swamp, where the last pairs were seen. And said, placing a price tag on nature remains a risky business.

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In his article titled, “What is Nature Worth?” Whalen doesn’t dismiss such calculating out-of-hand, although he’d rather be making a moral argument. But he finds that today’s economic-value assessments made for a crude measuring device. They tend to lowball the worth of a species over the long haul.

Consider the economic case for saving the endangered blue whale. The sensible environmentalist would realize for the blue whale. Gene-spool remains in its infancy.

Likewise, our minds can be persuaded for new places as a living organism. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms. Right 10 percent of the prescription drugs sold in the United States are derived from the living organisms.
Economic Valuation of City Green - Challenges!

- Forest Products Industry
  - market goods
  - excludable
  - identifiable ownership
  - expenses - revenues - profits

- Trees/Forests in Cities
  - public goods
  - non-excludable
  - multiple “owners”
  - expenses - returns? - profits?

“harvesting” many goods & services
Urban Ecosystems & Greening
Environmental Services

- Air pollutants reduction
- Nitrogen, phosphorus and sediment interception
- Carbon emissions reduction & sequestration
- Urban heat-island cooling
- Reduced “bad” ozone
- Stormwater runoff reduction
- Wildlife habitat

Urban Ecosystems & Greening
Community Economics

- Improved consumer environments in business districts - 9-12% product spending
- Residential real estate values - 3-7% with trees in yard
- Residential real estate values - 5-20%, proximity to natural open space
- Commercial property rental rates - 7%
- Air pollution mitigation
- Heating and cooling costs reductions
- Less frequent pavement replacement
Most cherished in this mundane world
is a place without traffic;
truly in the midst of a city
there can be mountain and forest.

Wen Zhengming (1470-1559)
Urban Ecosystems & Greening
Human Cognition & Functioning

- Higher job satisfaction, reduced absenteeism
- Lower crime rates in well landscaped areas
- Reduced violence and more constructive conflict resolution in domestic conflict
- Reduced ADHD symptoms

“human services”
Improved surgery and illness recovery

Stress reduction in urban lifestyles

Reduced driving stress response & frustration

Improved community walkability, lower BMI

“human services”

Physical Inactivity & Obesity

majority of Americans not active enough

goal-30 minutes per day of moderate activity

risk factor for chronic diseases
(heart, stroke, cancer, diabetes)

significant costs to national health services

310-580,000 deaths per year

$100 annual billion medical costs (1995)

9.4% of all U.S. medical costs
Obesity Trends* Among U.S. Adults

1985

(*BMI ≥ 30, or ~ 30 lbs overweight for 5’ 4” person)

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2002

(*BMI ≥30, or ~30 lbs overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults

**2003**

(*BMI ≥30, or ~ 30 lbs overweight for 5’ 4” person)

Doubling of adult obesity rate since 1980.

Source: Behavioral Risk Factor Surveillance System, CDC.
A brisk walk in the park keeps Manolo in shape between dog-sitting shifts at a nearby hotel. Here, the 5-year-old Doberman mixes up his regular routine. The hotel owner, Caroline, named Manolo after her favorite movie. Typically, Manolo walks in Riverpark.

Canine Constitutional

Fitness Center
Durham, NC

parks, open spaces & trails
walkable neighborhoods

make room for pedestrians
Increased environmental services values
Positive community economics
Improved human cognition & functioning
Better human health and well-being

Urban Ecosystems & Greening

Beautification Makes ($$ and) Sense!

- Increased environmental services values
- Positive community economics
- Improved human cognition & functioning
- Better human health and well-being

economics of non-market goods & services
www.cfr.washington.edu/research.envmind

Human Dimensions of
Urban Forestry and
Urban Greening

Nature and Consumer Environments
Research about how the urban forest
networks enhance consumer behavior.

Tree and Transport Issues
Studies on the role of trees in
urban transportation.

Civic Ecology
Studies of human behaviors and benefits when
people are active in the environment.

International Urban Greening
Studies of urban green space
in other nations.

Urban Forestry and Human Benefits
More resources, studies and links...

Research Director
Kathleen L. Wolf, Ph.D.