



# Policy Decision-Making in Urban Forestry

A Case Study of Portable Science

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# Trees and Forests in Cities

Public Ideas

Innovation

Policy

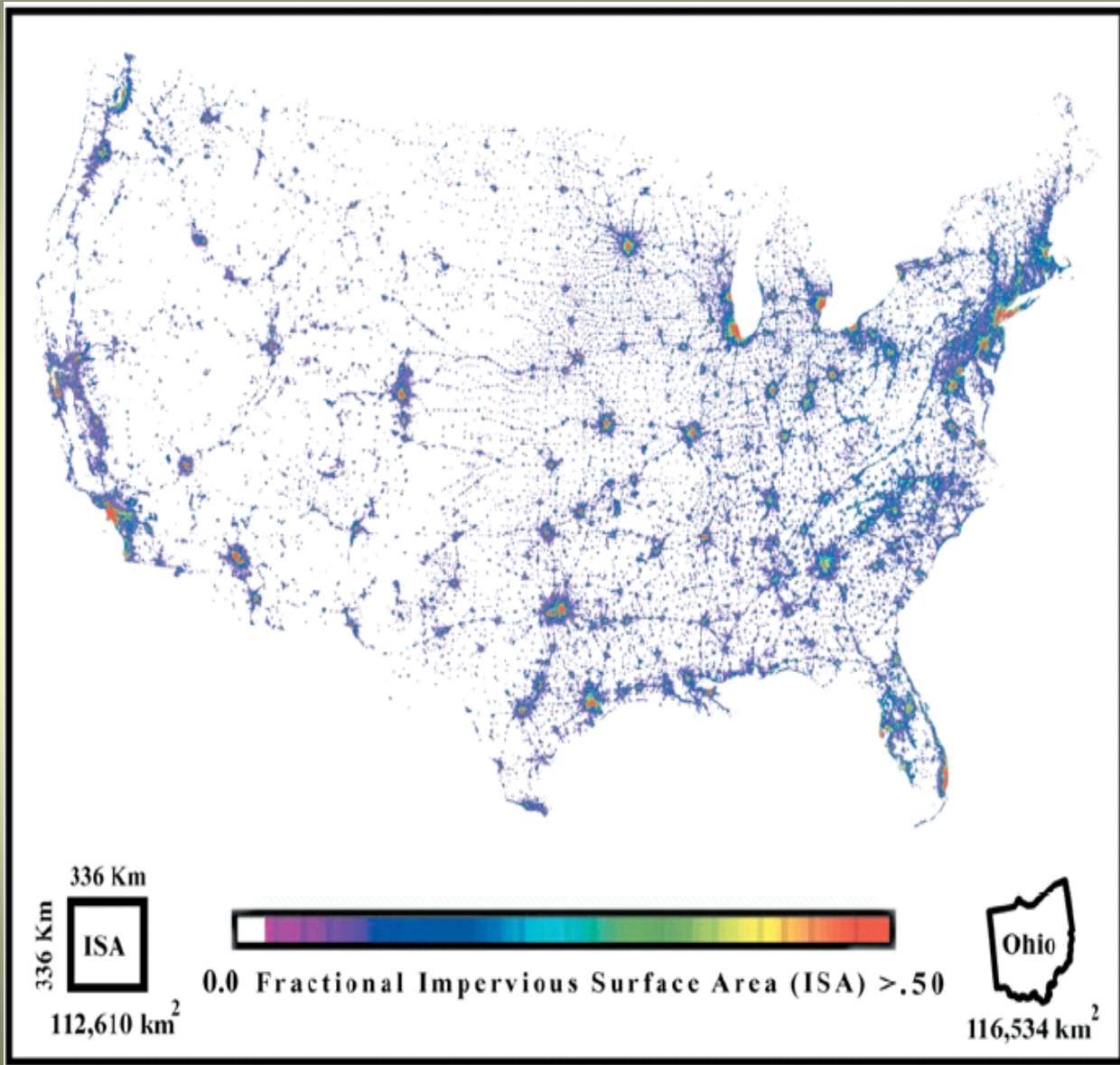
“why” =

fundamental

benefits &

best practices

# U.S. Impervious Surface Area



**Each Year!**  
**3 M people**  
**1 M homes**  
**10,000 miles road**

**NOAA study, 2004**









EST. 1948  
**SYLVAN**  
Furniture

**MONARCH MATTRESS**



**PARKING**

**MONARCH MATTRESS**



**WALKER**

CELEBRATING  
57 YEARS OF  
DOING GOOD  
BUSINESS WITH A  
MOVE TO THIS  
NEW LOCATION  
THANKYOU

SYLVAN  
FURNITURE  
**SALE**

**PEPPI GLASS**

**TEL**

**AD.**

**AGERS**

**ING**





**Scientific Research**  
**Benefits of Trees in Cities**

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# Urban Forests

## Environmental Services

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

# Urban Nature

## Economic Benefits

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- 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

# Urban Nature

## Human Functioning Benefits

- Improved surgery and illness recovery
- Higher job satisfaction and reduced absenteeism
- Greater creativity and modeling behavior in children's play
- Stress reduction in urban lifestyles
- Reduced violence and more constructive conflict resolution in domestic conflict
- Reduced ADHD symptoms

# Forest Outcomes! Planning & Mgmt





# Societal Values/Public Goods

Public Ideas

public education

Innovation

seat belt laws

Policy

emergency response

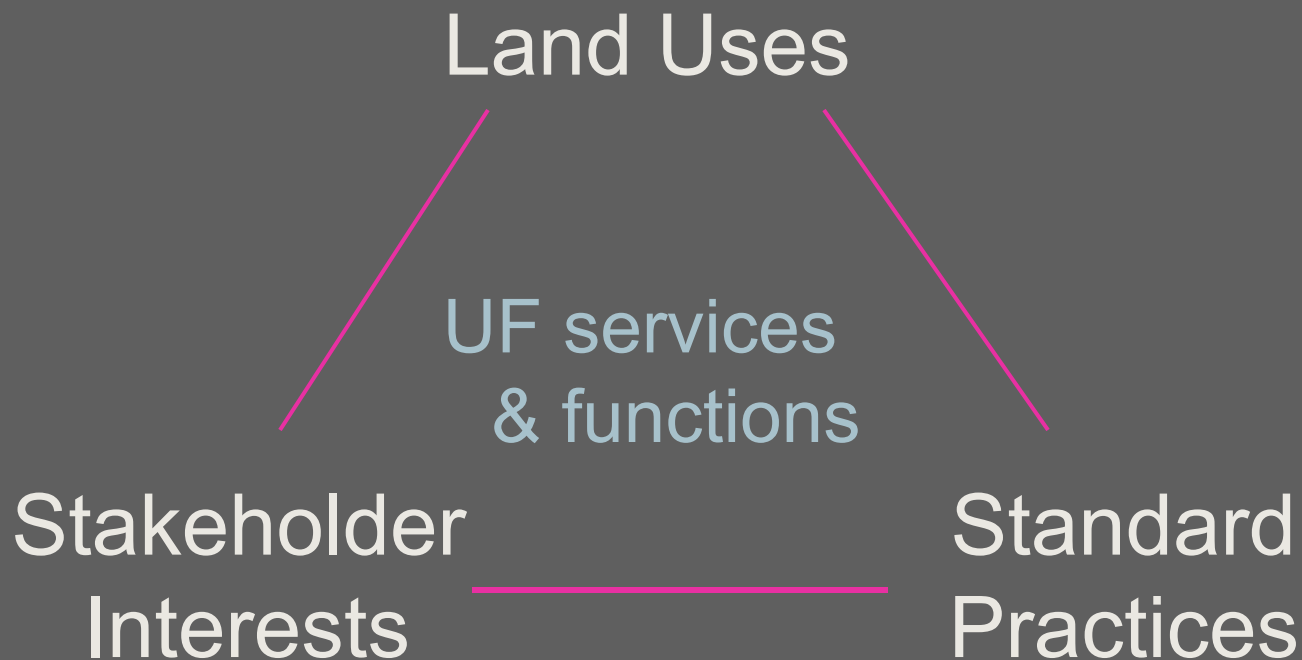
lighthouses

# Definitions (public idea to policy)

- ⇒ *Diffusion of innovations* - process and channels, innovation is communicated among units in social system.
- ⇒ *Innovation* - idea, product or process perceived as new, may include technology.
- ⇒ *Technology* - element of “hardware” or “software” to accomplish some task or purpose.
- ⇒ *Technology transfer* - scientific research communicated, then put into use.

Rogers, 2002, Science Communication

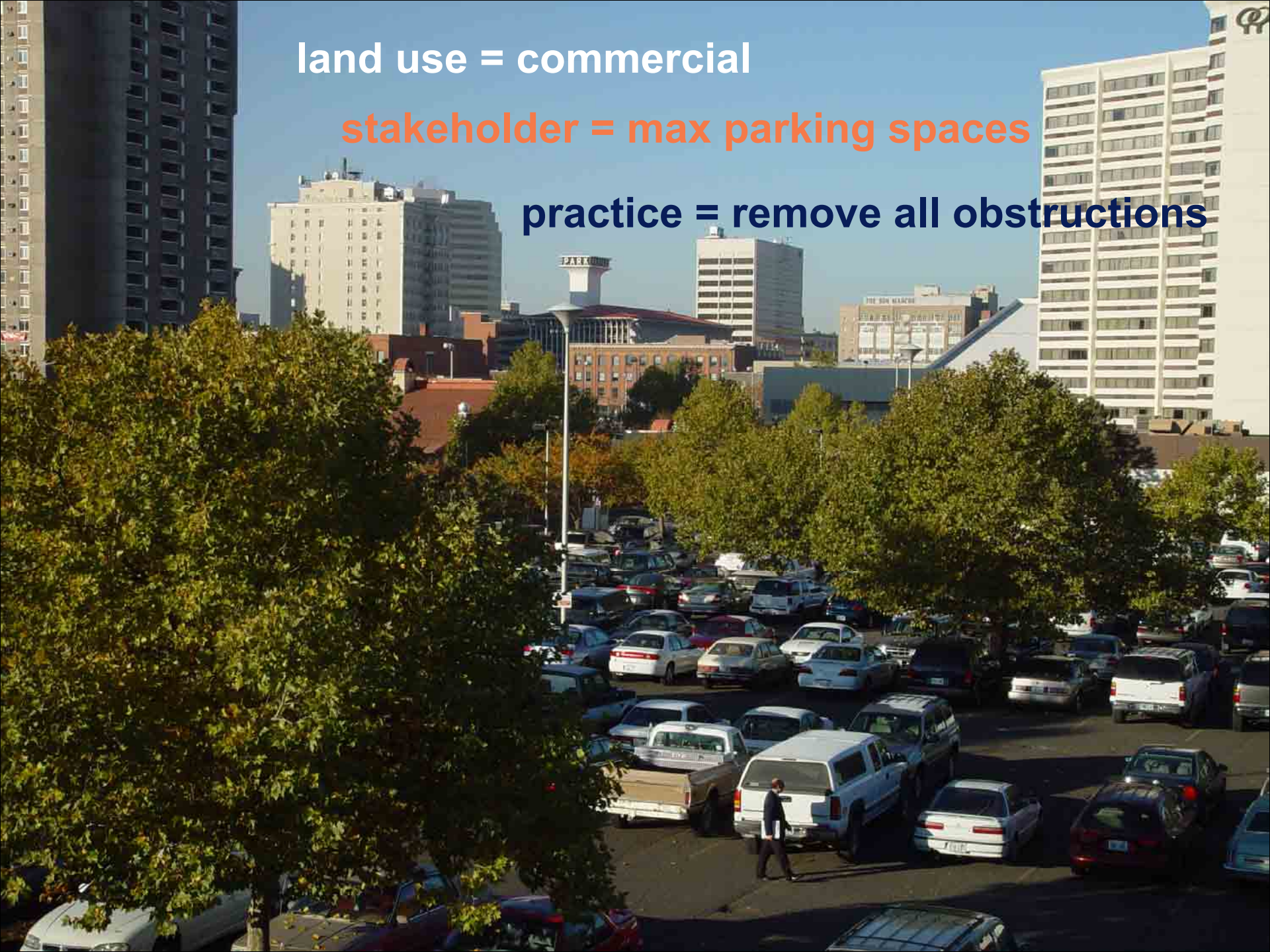
# Dimensions of Urban Forestry Policy



land use = commercial

stakeholder = max parking spaces

practice = remove all obstructions



# Research Mission:

To discover, understand and communicate  
human behavior and benefits  
as people experience nature in cities

# public perceptions & values research

Center for Urban Horticulture, College of Forest Resources, University of Washington

## Human Dimensions of Urban Forestry and Urban Greening

featuring research on peoples'  
perceptions and behaviors  
regarding nature in cities



### **Nature and Consumer Environments**

Research about how the urban forest influences business district visitors.

### **Trees and Transportation**

Studies on the value of having quality landscapes in urban roadsides.

### **Civic Ecology**

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

### **International Urban Greening**

Scientific explorations of people and urban nature in other nations.

### **Urban Forestry and Human Benefits**

More resources, studies and links . . .

Research Director  
**Kathleen L. Wolf, Ph.D.**

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[www.cfr.washington.edu/research.envmind](http://www.cfr.washington.edu/research.envmind)

# Technology Transfer

- ⇒ web site
- ⇒ fact sheets (5+/-2 ideas, science yet accessible)
- ⇒ professional publications
- ⇒ 2° and 3° publications
- ⇒ presentations (“champions” & “problem pioneers”)

# Issues & Challenges

- ⇒ Stakeholder access - research collaborators and more
- ⇒ Quality & character of TT tools - salience to audiences
- ⇒ Optimal dissemination strategies?
- ⇒ Fidelity of scientific information in public arenas
- ⇒ Science objectivity vs. advocacy

# Needed Research!

understanding  
intangible TT  
products or practices



- ⇒ TT impact on policy outcomes?
- ⇒ Diffusion pathways?
- ⇒ Prioritize TT efforts
- ⇒ Integration with other small scale TT efforts, efficiencies & synergies