

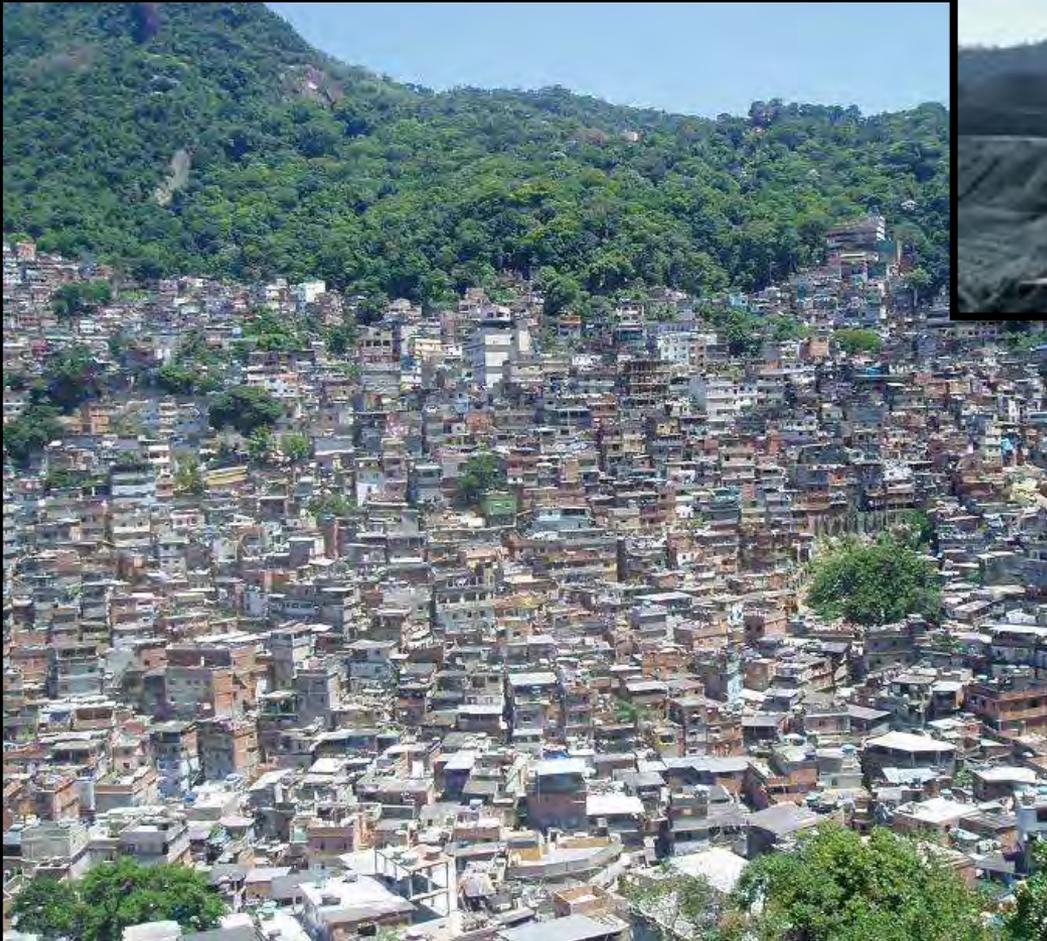
# Sustainability in America's National Parks & Concessions

Concession Management Advisory Board

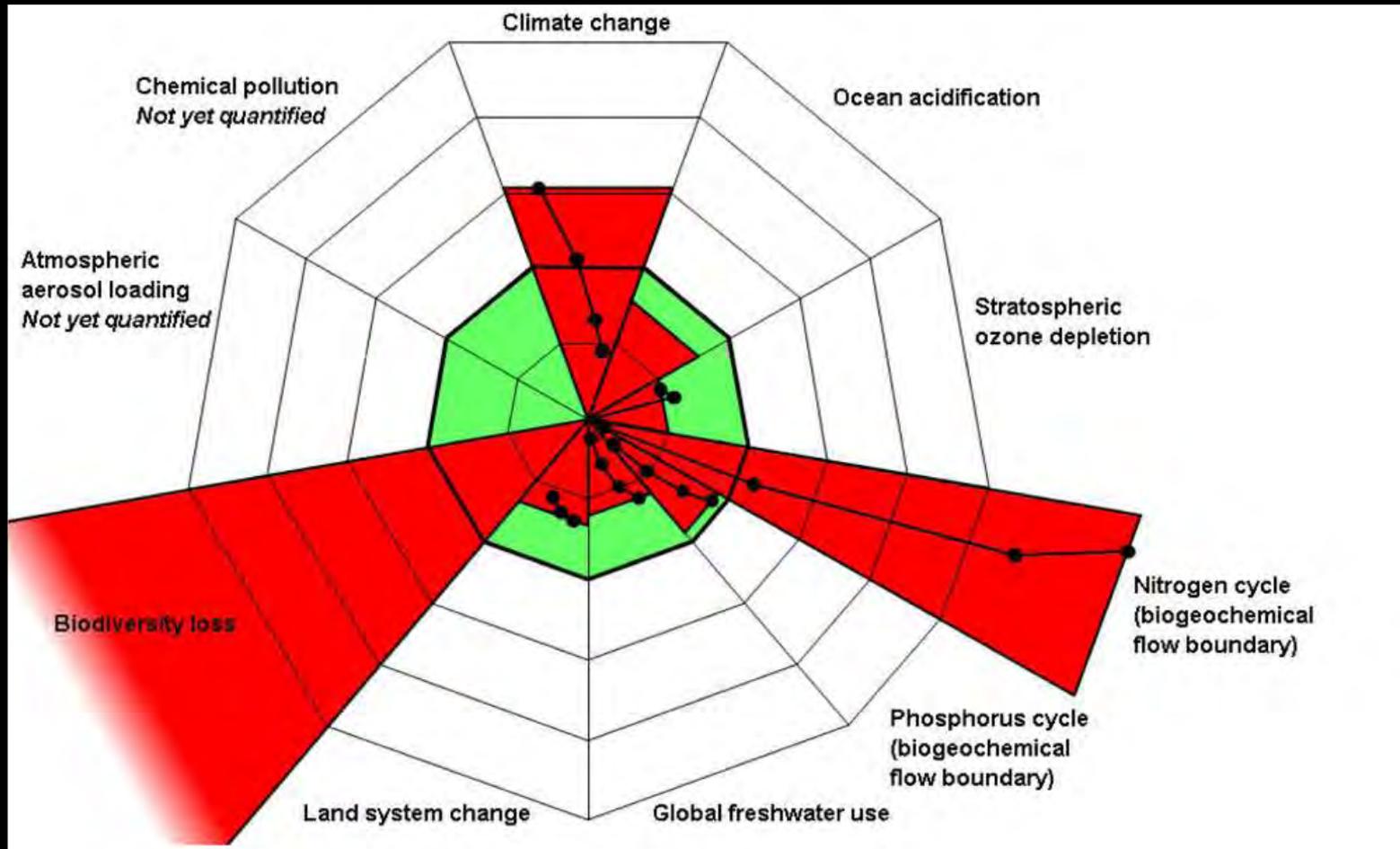
William S. Becker  
Natural Capitalism Solutions  
March 17, 2011



# Bigfoot



# Planetary Boundaries



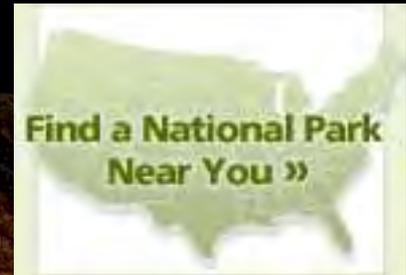
# The Big Picture

- Cost of human environmental damage in 2008: \$6.6 trillion (11% of GDP)
- Top 3,000 public companies responsible for 1/3 of damage



# World's Best Stewardship Classrooms

- Co-existence of human & natural systems
- Co-existence of business & ecology
- ~280 million “students” every year
- Park experience creates teachable moments

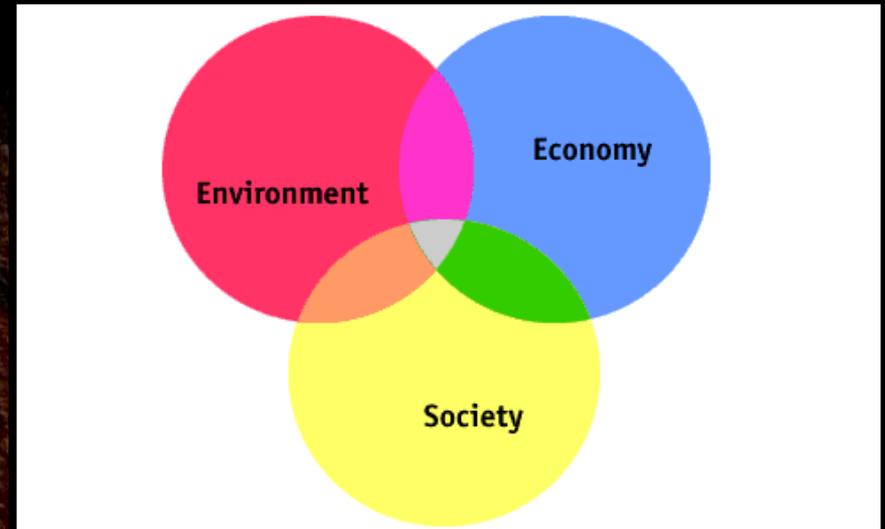


Yellowstone  
National Park



# What is sustainability?

- Triple bottom line
  - Economy (profit)
  - Environment (planet)
  - Equity (people)
- In practice
  - Conservation
  - Mitigation
  - Restoration
  - Adaptation



## Harvard Business Review

“Sustainability isn’t the burden on bottom lines that many executives believe it to be. It can lower your costs and increase your revenues. That’s why sustainability should be a touchstone for all innovation.

In the future, only companies that make sustainability a goal will achieve competitive advantage. That means rethinking business models as well as products, technologies and processes.”

Why Sustainability is Now the Key Driver of Innovation

## Built Environment

- 39% of total energy use
- 70% of electricity consumption
- 30 - 60% of green house gas emissions
- 30% of waste output
- 40% of raw materials use
- 30% of waste output
- 12% of potable water consumption

***Indoor air quality can be two to five times worse than outdoor air***

## State-of-the-shelf

Technologies can make old buildings  
3X to 4X more efficient  
— new buildings 10X



## Opportunities: Heating & Cooling

# Building Envelope

Measure	ROI	
Close Windows and Doors	Immediate	Minimize the loss of treated air by keeping doors and windows closed
Seal Leaks	26% - 38%	A typical building has so many little cracks that it is equivalent to leaving a window open for an entire year
Add Insulation	20% - 40%	More than 80 percent of buildings constructed prior to 1980 lack sufficient insulation
Replace Windows	34% - 52%	Buildings typically lose up to 30 percent of their heating and cooling energy from windows alone
Add Shades	16% - 24%	Installing blinds allows you to harness the sun's heating powers in the winter and reduce its impact in the summer
Treat Windows	45% - 60%	Adding storm windows or weatherization film offer low cost alternatives to installing high performance windows

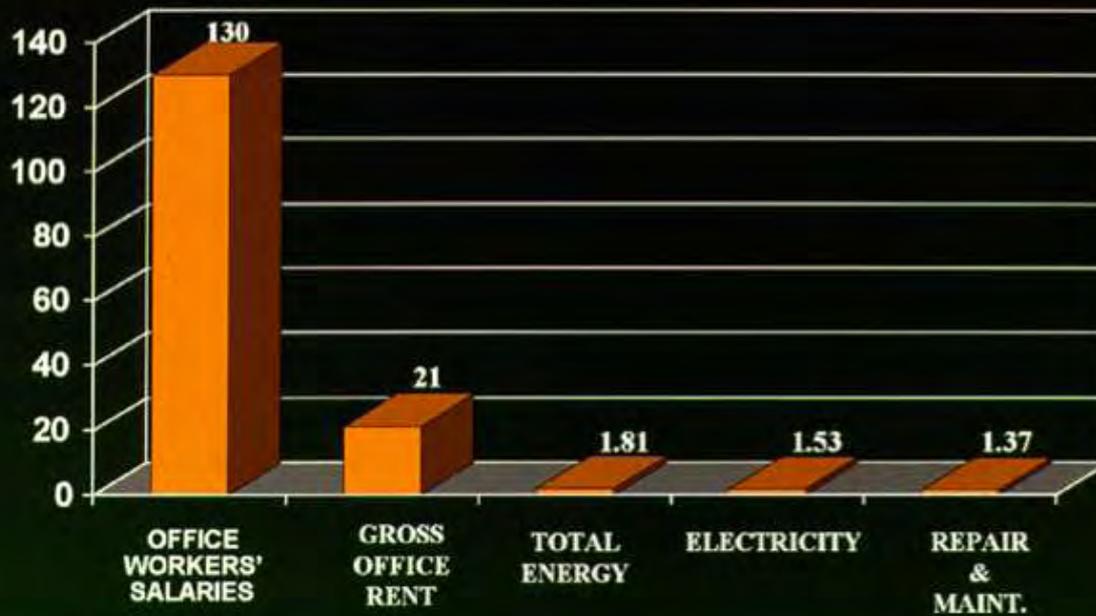
## Green buildings improve labor productivity and worker health

Improving indoor air quality could save U.S. businesses

- \$58 billion in avoided sick time each year,
- Another \$200 billion earned in increased worker performance.

Fisk, "Health and Productivity Gains from Better Indoor Environments" in *The Role of Emerging Energy-Efficient Technology in Promoting Workplace Productivity and Health*, Lawrence Berkeley National Laboratory, February 2002.

## Comparative Costs in Large Office Buildings



# Water

- Average commercial business pays \$2,000/year for water
- Conservation can reduce water/sewer costs up to 30%
- Opportunities:
  - Fixing leaky toilets can save 22,000 gal/year
  - Dual-flush can reduce water use up to 77%
  - Faucet aerators cut consumption 33%/faucet with 33% ROI
  - Energy Star dishwashers use 800 gallons less/year
  - High-efficiency showerheads reduce water 40% & save \$100 each with 111% ROI

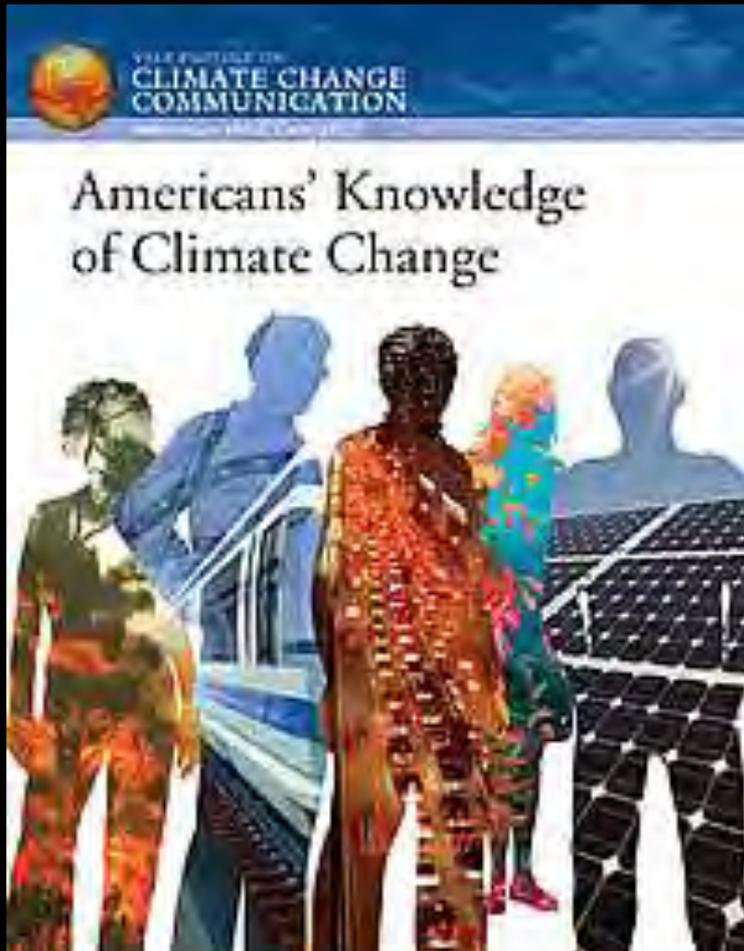
# Preventing “Waste”

- 30% of all waste comes from packaging
- Bottled water
  - Each gallon of bottled of water uses 2 gallons in processing
  - Americans buy 9 billion bottles/year
- Plastics
  - 4% of annual oil consumption for feedstocks
  - Another 4% to turn feedstocks to product





# The “Perfect Problem”



- Esoteric science
- Distant consequences
- Language gap
- Too big to solve
- Too costly to solve
- Media loves controversy
- Faith in technical fixes
- End of Days mentality

## Not a left or a right issue



R. James Woolsey's solar powered plug-in-hybrid has a bumper sticker reading:

“Osama bin Ladin hates my car.”



Q: Why is climate change unusual?

A: You don't have to believe in the problem believe in its solutions

- Energy independence
- Economic stability
- Cleaner air & water
- Fewer “resource wars”
- Greater security
- Less waste/lower costs
- Energy efficiency = economic stimulus
- New industries & jobs



# GLOBAL WARMING: Early Warning Signs



## Fingerprints and Harbingers

-  Heat waves and periods of unusually warm weather
-  Sea level rise and coastal flooding
-  Glaciers melting
-  Arctic and Antarctic warming
-  Spreading disease
-  Earlier spring arrival
-  Plant and animal range shifts and population decline
-  Coral reef bleaching
-  Downpours, heavy snowfall and flooding
-  Droughts and fires

# Indicators of Climate Change in U.S.

- Anthropogenic GHG emissions: Up 14% between 1990-2008
- Temperature: 7 of 10 warmest years since 1990
- 2000-2010: Warmest decade on record (worldwide)
- Hurricanes: 6 of 10 most active seasons since mid-1990s
- Sea level rise: Twice as fast from 1993 to 2008 as the long-term trend
- Heat waves: Frequency up since 1960s
- Precipitation: 8 of 10 top years for extreme 1-day rainfall occurred since 1990

Source: U.S. EPA Indicators Report

[www.epa.gov/climatechange/indicators.html](http://www.epa.gov/climatechange/indicators.html)



# Parks at risk from Climate Change

- Bandelier National Monument, New Mexico
- Death Valley National Park, California
- Glacier National Park, Montana
- Glen Canyon National Recreation Area, Utah and Arizona
- Golden Gate National Recreation Area, California
- Grand Teton National Park, Wyoming
- Mesa Verde National Park, Colorado
- Mount Rainier National Park, Washington state
- North Cascades National Park, Washington state
- Rocky Mountain National Park, Colorado
- Yellowstone National Park, Wyoming, Montana & Idaho
- Yosemite National Park, California

*“Losing Ground: Western National Parks  
Endangered by Climate Disruption” - NRDC*

# NPS climate policy

*National parks provide tangible examples of the effects of climate change...The NPS is ideally positioned to raise public understanding of climate change and its effects on parks.*

- NPS Climate Change Response Program

Communication tools at  
[www.nps.gov/climatechange](http://www.nps.gov/climatechange)

# Key Messages

## NPS Climate Change Response Strategy

- Climate change is happening. Human activities contribute
- Climate change has consequences for parks, people & planet
- NPS practices address climate change
- Choices today can help avoid catastrophic impacts

## Baby steps won't get us there

“Incrementalism is innovation’s worst enemy. We don’t want continuous improvement, we want radical change.”

– Sam Walton



# Corporations Go Green

*Corporate America's embrace of sustainability has more than doubled in strength in the past three years with 76 percent of the largest U.S. firms reporting efforts and commitments that exceed those required by law.*

- Siemens Building Technologies/McGraw Hill Construction - 2009

# Beating the Competition

*A 2007 Goldman Sachs study found that companies with a strong emphasis on sustainability outperformed the market, often by a large margin. A recent PricewaterhouseCoopers report said companies that report sustainability data get better returns on their assets than those that don't.*

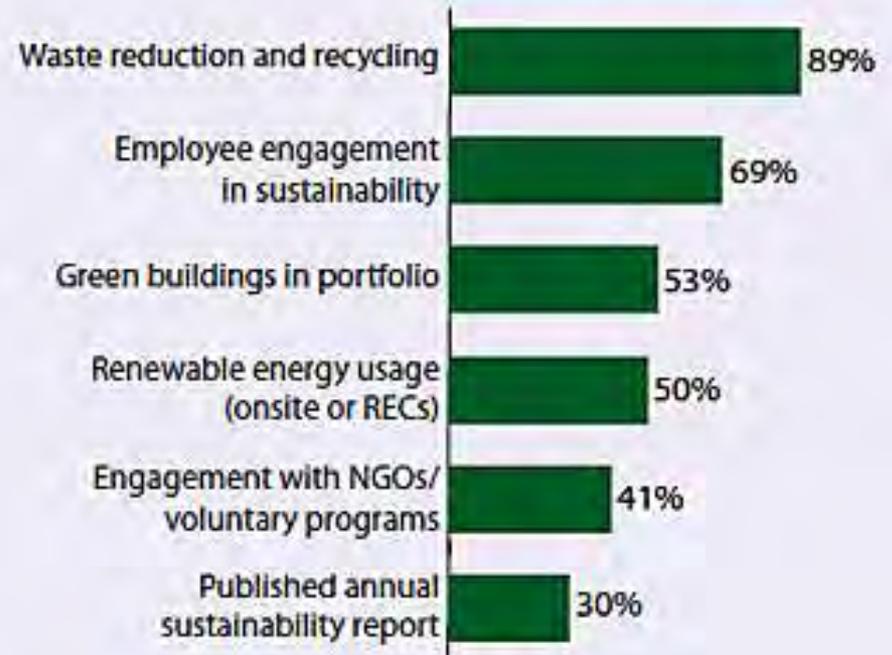
TIME, Sept. 21, 2009

# Corporations Go Green

**Drivers Promoting Sustainability**  
(according to all respondents)



**Sustainability Practices**  
Occurring in Corporate America



# Ceres' Roadmap to Sustainability

[www.ceres.org/ceresroadmap](http://www.ceres.org/ceresroadmap)

- Board of Directors oversight & sustainability committee
- Management accountability for achieving goals
- Sustainability a key factor in executive compensation/bonuses
- Sustainability imbedded in day-to-day decision-making
- Company supports sustainable public policies
- Ongoing stakeholder engagement
- Ongoing investor engagement
- Disclosure of sustainable performance in annual reports, financial filings, etc.
- Product transparency – standardized performance information
- Operational footprint: GHGs, green buildings, water, waste, human rights
- Green procurement & supply chain
- Low-impact transportation systems
- Products designed for beneficial life-cycle impacts, social & environmental
- Provide formal training/coaching for executives & employees
- Promote sustainable lifestyle choices of employees with education & innovative benefits

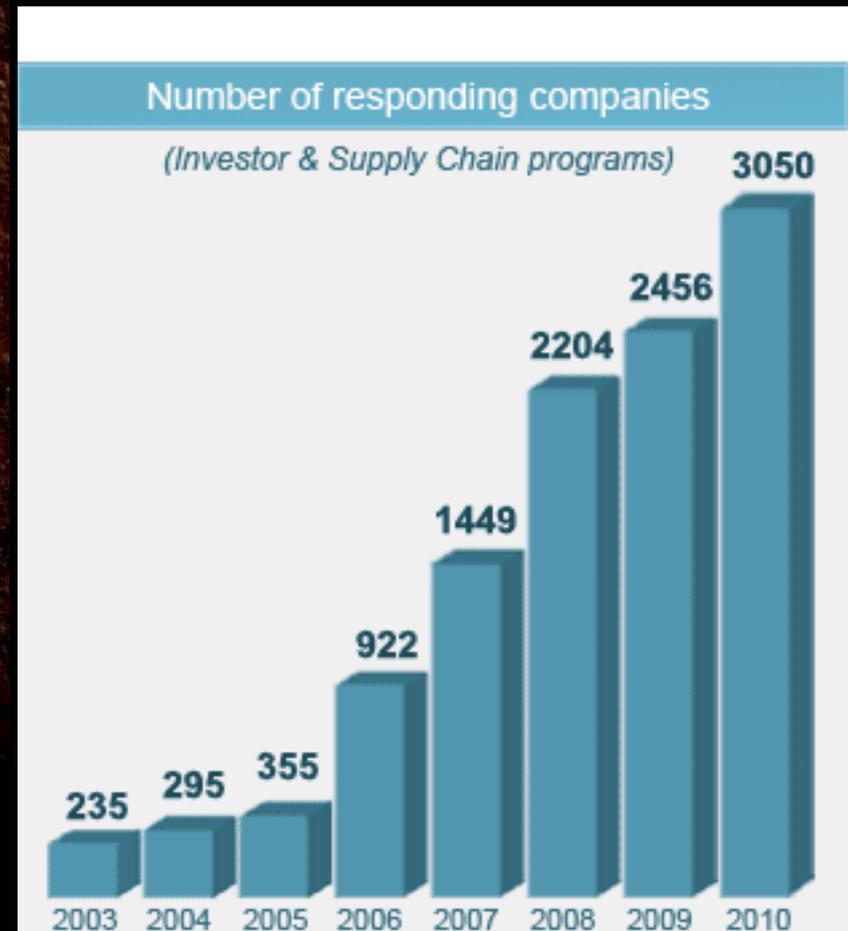
# Corporate Knight's "Global 100"

[www.global100.org](http://www.global100.org)

- Energy productivity
  - Carbon productivity
  - Waste productivity
  - Leadership diversity
  - CEO-to-Average Worker pay
  - Safety productivity
  - Sustainability pay link
  - Innovation capacity
  - Transparency
1. Statoil ASA
  2. Johnson & Johnson
  3. Novozymes
  4. Nokia
  5. Umicore
  6. Intel Corp.
  7. Astrazeneca
  8. Credit Agricole
  9. Sotrebrand ASA
  10. Danske Bank

# Carbon Disclosure Project – 2010

- Signatories include 534 financial institutions with assets over \$64 trillion
- Surveyed 4,700 of world's biggest companies
- 80% of Global 500 complied
- Questions:
  - GHG emissions
  - Significant climate risks & opportunities



# 2010 CDP Global 500 results

- Global 500 results
  - 48% embedding climate change & carbon management into business strategy
  - 66% responding companies have board- or other executive-level responsibility for climate change
- 73% disclose GHG emissions
- 73% incorporate emissions in annual reports
- 50% set public emission reduction goals
- 46% verify emissions

# SEC's Guidance on Climate Risk

## January 2010

- Legislation & regulation
- International accords
- Business trends
- Physical impact
- Legal, political, scientific developments

# Unilever

- Plans to cut carbon footprint in half in 10 years
- Sets 50 economic, social & environmental targets to cut emissions, water consumption & waste of suppliers & consumers
- Will source 100% of palm oil sustainably by 2015



# Ford

- Saves \$1 million by shutting off computers at night
- Develops first U.S. hybrid SUV
- Building carbon management plan for suppliers
- Plans to cut GHG emissions 30% by 2018



# Coca-Cola

- “Live Positively” sustainability drive in 7 key core areas
- Give back 1% of earnings to support community sustainability
- Reduce absolute GHG emissions 5% by 2015
- Install 100,000 HFC-free coolers
- Recover 50% of bottles & cans
- Obtain 25% of plastic from recycled/renewable material
- Improve water efficiency 25%
- Replenish to nature water equivalent to what’s used in beverages



# Diversey

- Manufactures hygiene & cleaning products
- Sales in 175 countries; 10,500 employees
- Commits to 1/3 absolute cut in GHGs by 2013
- \$31 million operational savings in 5 years
- ROI of 163%



# Chipotle: “Food with Integrity”

- Commits to purchasing 25% of at least one produce line from small & mid-size local farms
- Romaine lettuce, green bell peppers, jalapeno peppers, red onions



<http://www.localharvest.org/>

# Green Hotel Groups & Programs

- Green Hotels Association
  - Membership group lists green hotels
  - Approved vendors
  - [www.greenhotels.com](http://www.greenhotels.com)
- Travelocity Green Guarantee
  - Works with third-party certifiers of “eco-friendly” hotels
  - [www.travelocity.com/TravelForGood](http://www.travelocity.com/TravelForGood)
- Global Sustainable Tourism Criteria
  - UNEP, UNF, World Tourism Council
  - 37 voluntary standards
  - Developed by 40 leading institutions
  - [www.sustainabletourismcriteria.org](http://www.sustainabletourismcriteria.org)



# Executive Order 13514

- Reduce GHGs 28% by 2020 compared to 2005
- Report annually
- Achieve zero net energy buildings in 2020
- Reduce potable water use 26% by 2020
- Ensure that 95% of products & services in supply chain are green
- Cut petroleum use 2% annually
- Help host communities achieve sustainability



# McKinsey: Value of C-Suite Involvement

*Companies where sustainability is a top item in their CEOs' agendas are twice as likely as others to integrate sustainability into their companies' business practices. This suggests that senior executives who want to reap the benefits of incorporating sustainability into their companies' overall strategies must take an active role in the effort.*





October 10, 2007

Lee Scott, CEO Wal-Mart Stores, Inc

Save  
Money.  
Live  
Better.



## Sustainability is a long term trend, not a passing fad



# Wal-Mart's Footprint

100% Renewable Energy



Zero Waste



Sustainable Products



8% of Wal-Mart's footprint is from direct operations

92% of Wal-Mart's footprint is from products

Align supply chain around sustainable product innovations

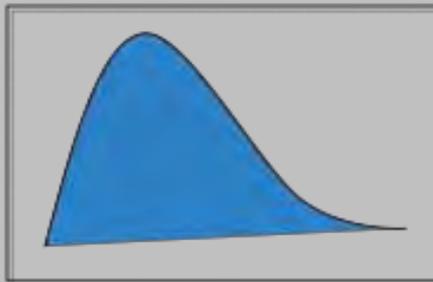
## Cost reduction and sales increases are the ultimate measures

### Costs Decrease

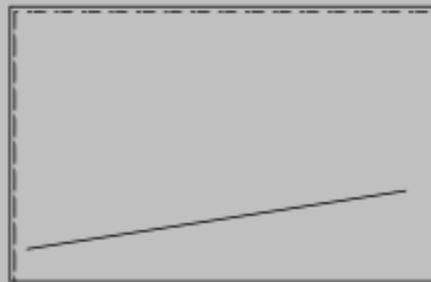
- Reduction of Hidden inefficiencies
  - Example: *Kid Connection Toys' Package Right-Sizing*



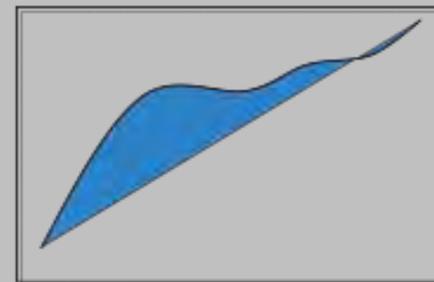
### Sales Increase



A fad product  
NO



Growing w Market  
NO



A Game Changer  
YES

## Your Opportunity

### The Customer is Watching

- 88% of opinion leaders say they're "making more of an effort to learn whether companies are acting in a socially responsible manner."\*



Now, it is time to choose....



Check the Box?

OR

**INNOVATE**

Change the Game?

\* Yankelovich Monitor Oct 8

# Wal-Mart today

*We must raise the bar. We must continue to meet the social obligations and expectations ahead. Walmart will never look back. – CEO Mike Duke, 2010*





**As the world's largest retailer, Walmart has unparalleled opportunities to reduce environmental impact, conserve natural resources and sell more sustainable products. In fiscal 2010, we reduced our global plastic bag consumption by more than 16 percent, and continued to improve the efficiency of our U.S. truck fleet. By collaborating with suppliers and the Sustainability Consortium on our Sustainable Product Index, we will drive product innovation, increase supply chain transparency, and create a single source for product sustainability. This year, we committed to reduce 20 million metric tons of greenhouse gas emissions in our supply chain by the end of 2015.**

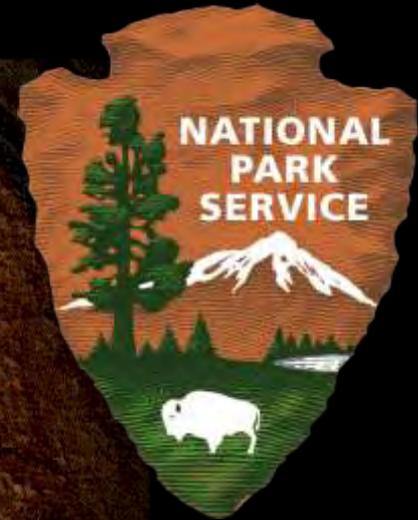
# Wal-Mart

- Goals
  - Cut 20 million metric tons of GHGs from supply chain by 2015
  - 100% renewable energy
  - All sustainable products
  - Cut packaging 5% by 2013 to save 77 million gallons of diesel fuel each year
  - Green supply chain
- Saved \$200 million/yr by asking suppliers to reduce packaging, rework delivery routes & boost fuel efficiency
- Only one of two companies in Dow Jones Industrial Average whose stock price rose in 2008, by 18%

*Even as recently as a year or two ago, sustainability was seen as a cost-plus program. Sustainability is actually very good for business. – Matt Kistler, Senior VP for Sustainability*

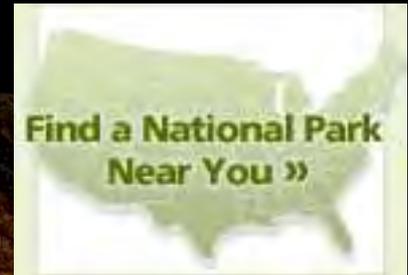
# What Can Concessioners Do?

- Use recycled & recyclable materials
- Prevent/recycle/reuse “waste”
- Conserve & recycle water
- Use biodegradable products
- Lower carbon footprint
- Increase resource efficiency
- Use renewable energy – hardware or green tags
- Serve healthy foods
- Set example & educate visitors
- Support sustainable lifestyles for employees
- Develop clear sustainability objectives & measure/report progress
- Make your footprint transparent
- Avoid green-wash
- Celebrate & brag about success



# World's Best Stewardship Classrooms

- Co-existence of human & natural systems
- Co-existence of business & ecology
- ~280 million “students” every year
- Park experience a teachable moment



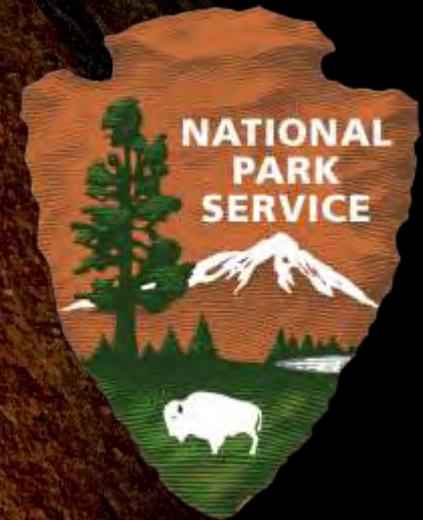
# Interpretation

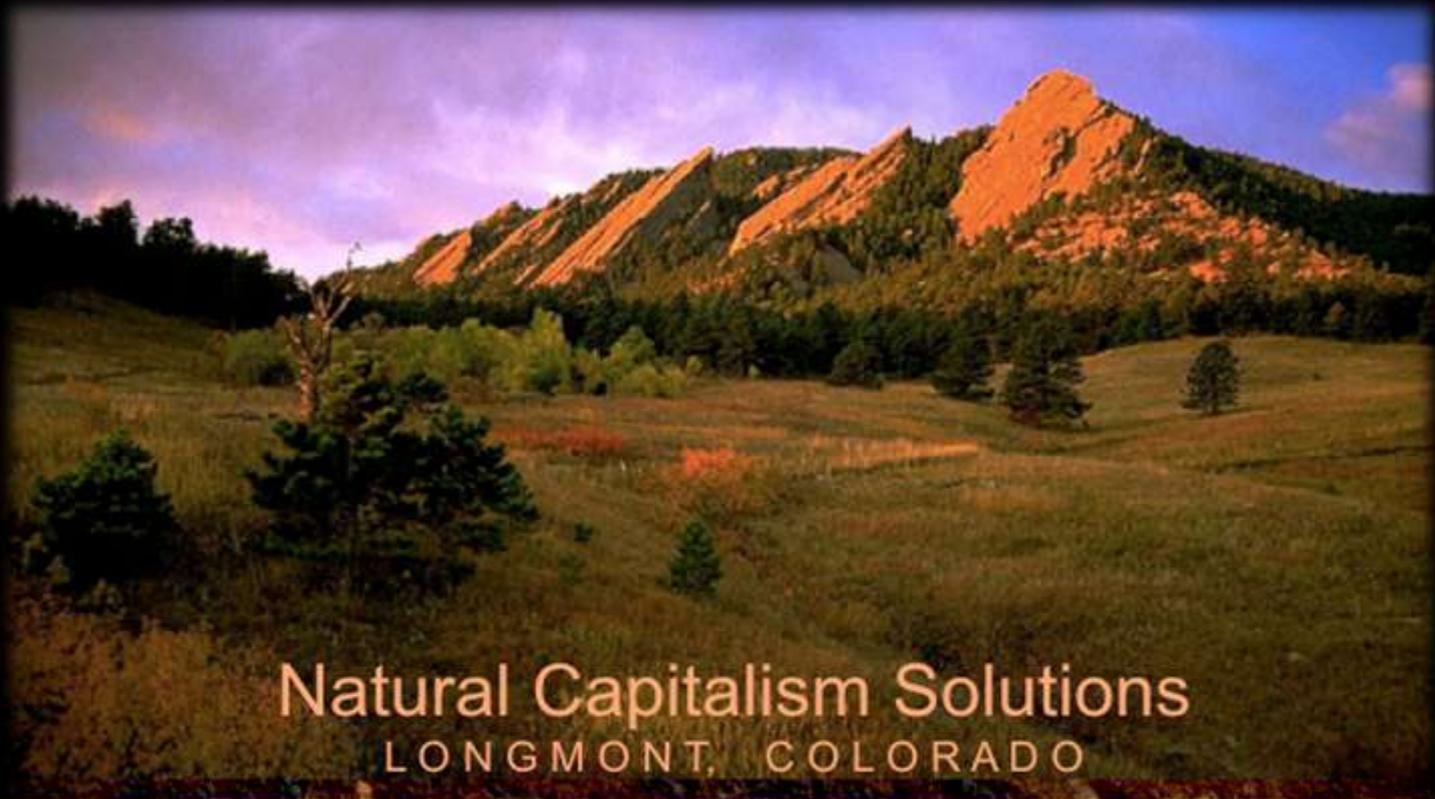
- Point out evidence of environmental impacts in parks
  - Wildlife
  - Ecosystem services
  - Water
  - Visibility
  - Forests
- Explain sustainability efforts in signage, product labels, videos & other media
- Enlist visitor involvement



# Recommendations

- Offer sustainability training to concessioners
  - Cover contractual & voluntary measures
  - Principles of sustainability
  - Business case
  - Low-hanging fruit
  - Interpretation/visitor education
- Conduct sustainability audits
- Publicly recognize top performers
- Identify barriers to concessioner action
- Use EO 13514 as guidance for priorities
- Make concessioner's corporate commitment part of competitive process





Natural Capitalism Solutions  
LONGMONT, COLORADO

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Visit: [www.natcapsolutions.org](http://www.natcapsolutions.org)