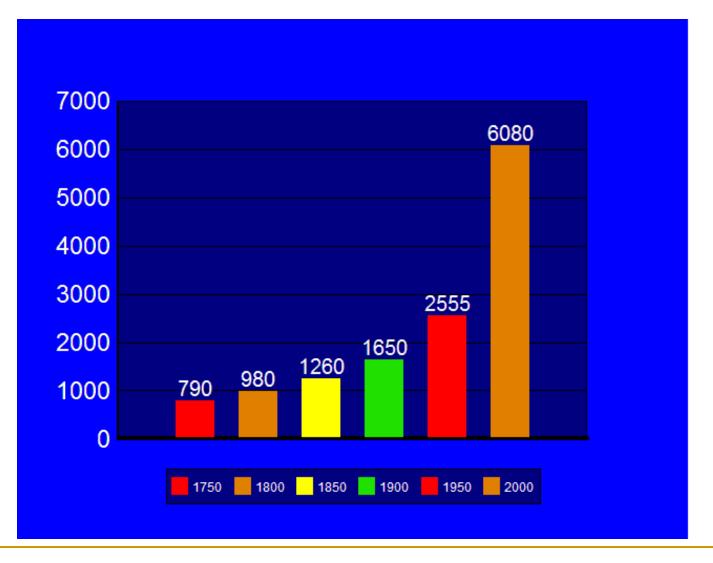
# Making the Case for Sustainable Business Practices: An Introduction



### Outline

- Why is sustainability such a hot topic and what does it really mean?
- Why business is the best way to save the environment
- Making the business case for sustainability
- Accounting and sustainability
- What can you do?
- Career Opportunities

### Increasing Population



### Destruction of the Ecosystem



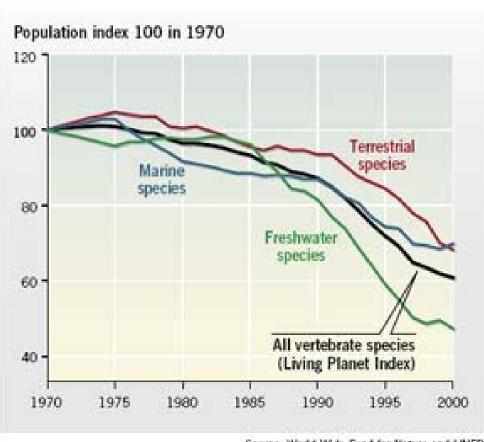
### Depletion of Resources



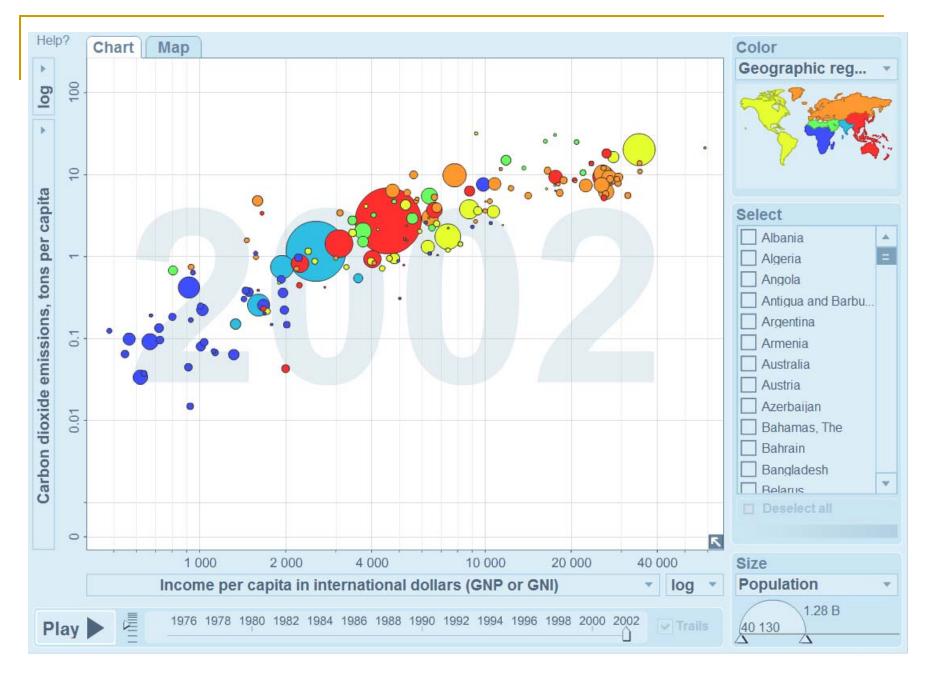


4.4 pounds/person/day

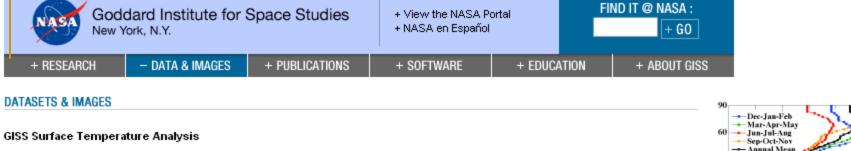
125M phones/year, 65,000 Tons



Source: World Wide Fund for Nature and UNEP World Conservation Monitoring Centre<sup>4</sup>



http://tools.google.com/gapminder/



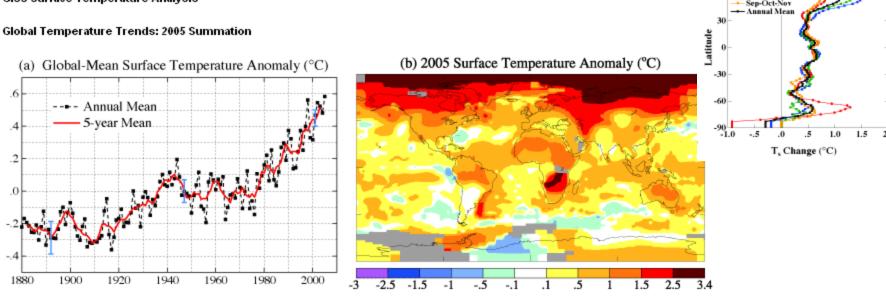
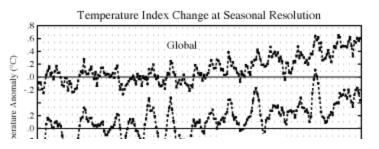


Figure 1: (Left) Global annual surface temperature relative to 1951-1980 mean based on surface air measurements at meteorological stations and ship and satellite measurements for sea surface temperature. Error bars are estimated 2σ (95% confidence) uncertainty. (Right) Temperature anomaly for 2005 calendar year. Gray areas indicate a lack of station data within 1200km. (Click for a large GIF or PDF of this figure.)

The highest global surface temperature in more than a century of instrumental data was recorded in the 2005 calendar year in the GISS annual analysis. However, the error bar on the data implies that 2005 is practically in a dead heat with 1998, the warmest previous year.

Our analysis, summarized in Figure 1 above, uses documented procedures for data over land (1), satellite measurements of sea surface temperature since 1982 (2), and a ship-based analysis for earlier years (3). Our estimated error (2 $\sigma$ , 95% confidence) in



### Credible Coverage of the Issues





### Questions

What is sustainability?

What does it mean to live sustainably?

### What is sustainability?

Your definition

To me, sustainability is living within earth's natural limits where all live fulfilled lives as part of the greater ecosystem in a way that ensures ecological diversity for future generations to appreciate.

### Definition of Sustainable Development

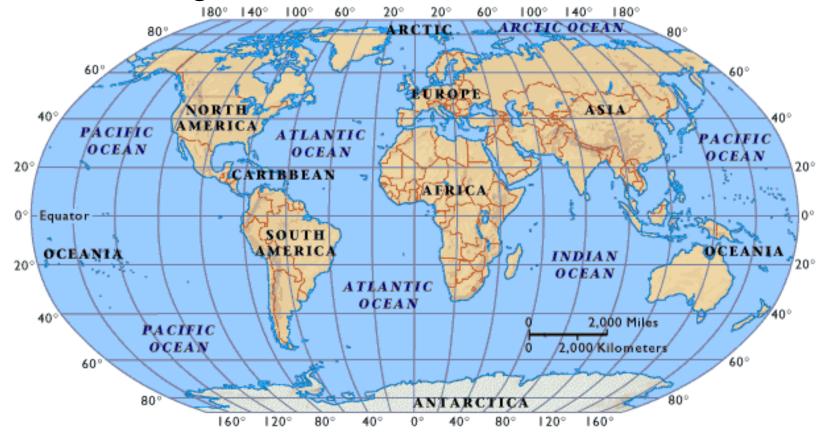
"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

- UN, 1983 World Commission on Environment and Development
- The Report of the Brundtland Commission, <u>Our Common Future</u>, was published by Oxford University Press in 1987. The full text of the <u>Brundtland Report</u> can be downloaded as a scanned copy of the UN General Assembly document A/42/427.

### The Power of Business



## If WalMart was a country it would rank as the 21st largest in the World



### 1 in 120 people work for Wal-Mart in US

### The Business Case for Sustainability

- Risk Management
  - Climate Change
  - Consumer Activism
  - Legislation
- Business Opportunities
  - Demand for "green" products
  - Cost savings

LIFEST

Analysis from FORTUNE: Plugged In

Column archive

#### Insurance companies take on global warming

It's past time for the industry that rated vehicle safety and lobbied for building codes to address climate change, says Fortune's Marc Gunther.

By Marc Gunther, Fortune senior writer

August 24 2006: 1:31 PM EDT



NEW YORK (Fortune) -- Throughout their history, insurance companies have done more than collect premiums and pay claims. They've made the world a safer place - by promoting fire prevention, lobbying for building codes, testing the crash-worthiness of cars and <u>rating vehicles for safety</u>.

Now some insurers are worried by the threat to their business posed by climate change. And they are starting to see what, if anything, they can do about it.

Some examples:

Marsh (Charts), the world's largest insurance broker, last spring sent a 36-page "risk alert" on Climate Change to clients that, among other things, looked at the possible relationship between climate change and natural disasters.

"Climate change - often referred to as 'global warming' - is one of the most significant emerging risks facing the world today, presenting tremendous challenges to the environment, to the world economy, and to individual businesses," the report said.

"Businesses - if they haven't already - must begin to account for it in their strategic and operation planning."

#### More from FORTUNE

American car buyers get amnesia

Surviving the housing bust

Magellan is off course

**FORTUNE 500** 

Current Issue

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More plugged in

It's time for Ford to give

### Consumer Activism

- Nike
- Levi's
- McDonald's
- Starbucks
- Wal-Mart











#### Innovate for a Better World



NIKE'S APPROACH

#### ENVIRONMENT/DESIGN

THE EVOLUTION OF CONSIDERED DESIGN

JOHN HOKE, VP CREATIVE DESIGN FOR FOOTWEAR

#### BECOME CLIMATE NEUTRAL

WORKERS/FACTORIES

LET ME PLAY

BUSINESS TARGETS

FY05-06 CR REPORT

### We see sustainability as a source of innovation.

Nike equipment.

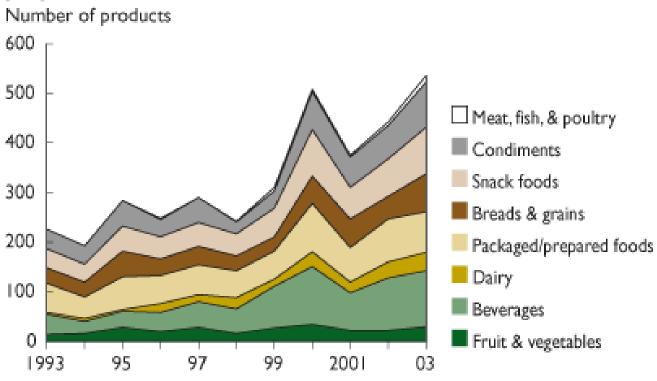
A perfect sustainable product would be one that delivers premium design, maximum performance and zero waste—at every stage of its lifecycle. A dream today, but we believe a real possibility tomorrow. Learn more

### EU Directives

- ROHS Restriction of Hazardous Substances
- REACH Registration, Evaluation and Authorization of Chemicals
- WEEE Waste Electrical and Electronic Equipment

# Increasing Number of Consumers Interested in Sustainable Goods

New organic product introductions are led by beverages, prepared foods, and snacks



Source: ERS calculations using ProductScan data from Datamonitor, 2004.



#### ALL ABOUT GUAYAKÍ



Guayaki Business Model:

#### MARKET DRIVEN RESTORATION

With a passion for mate, Guayakí partners with small farmers and indigenous communities to source mate from the sub-tropical forests of South America. From the simple love of a beverage, Guayakí drinkers have become a driving force for conservation and community development by paying a fair trade price for rainforest-grown mate. In honor of the Aché Guayakí people native to the mate forest, we bring you Guayakí Yerba Mate.

When you purchase Guayakí Yerba Mate at the "MARKET" you are "DRIVING" the "RESTORATION" of the Guayakí Rainforest Preserves and its people.

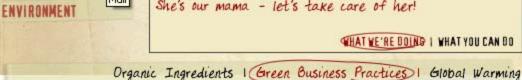
Guayakí creates markets for rainforest mate which provide a sustainable economic alternative to destructive income generating practices such as deforestation for lumber, cattle grazing, and monocrop agriculture. This principle of renewable resource management supported by consumers of sustainable products is called Market-Driven Restoration™.

**Guayakí uses a triple bottom line to measure success:** Economic Viability, Social Justice and Environmental Stewardship.

#### Guayakí's Mission

**Guayaki works directly with growers** to deliver unique and beneficial products that enhance personal health and well being. Our goal is to create economic models that drive reforestation while employing a living wage.





#### Green Business Practices

Everything we do has an impact on the environment. To help our business tread more lightly on the planet, we're working to reduce our use of energy and resources, and to buy recycled materials whenever we can. Here are some changes we've made to "green up" our business since 2001:

Improved Packaging

Producing environmentally-sound packaging is a difficult challenge, and one we're still working on. However, in the past few years we've made some significant changes to our packaging system that are moving closer to our goal.



 In 2002, we redesigned our caddies (the cartons that hold our bars) to eliminate 90,000 pounds of shrink wrap per year.

 In 2003, we switched to a 100% (50% post-consumer) recycled paperboard for all caddies. Using recycled materials instead of virgin wood will save about 7,500 trees, conserve 3.3 million gallons of water and avoid the production of 660,000 pounds of greenhouse gases each year.

#### Renewable Energy

We offset our office and bakeries energy use with clean, renewable wind energy by purchasing green tags through <u>Native Energy</u>.

#### Recycled Paper

We purchase only 100% post-consumer recycled paper for our office and use only unbleached, recycled paper and non-toxic inks for printing.

#### Organic Cotton

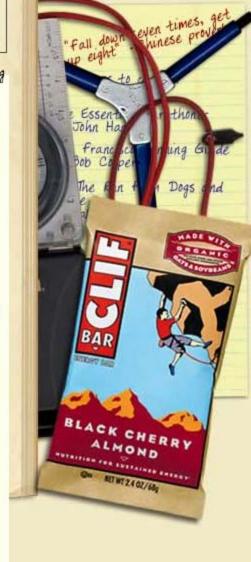
All of our promotional T-shirts and tote bags are made of 100%-certified organic cotton.

Why Organic Cotton?

#### Reducing Solid Waste

Our goal is to move our office toward Zero Waste—aiming to divert 90% or more of all solid wastes from landfill or incineration.

- Our in-house Eco Posse leads various "green-up" projects, including efforts to recycle everything we use.
- We now recyle or compost more than 80% of all waste generated at our Berkeley headquarters.
- Our recycling efforts include cardboard, mixed paper, plastic and glass bottles, cans, non-rigid plastic, wooden pallets and batteries.



### Clif Bar's Triple Bottom Line

- Sustaining our Brands
- Sustaining our Business
- Sustaining our People
- Sustaining our Community
- Sustaining our Planet



<b>Nutrition Facts</b>	Amount/Serving	%DV*	Amount/Serving	%DV*	Amount/Serving	%DV
	Total Fat 6g	9%	Sodium 130mg	5%	Insoluble Fiber	3g
Serving Size 1 Bar (68g)	Sat Fat 1g	6%	Potassium 310mg	9%	Sugars 21g	
Calories 250	Trans Fat Og		Total Carb. 43g	14%	Other Carb 18	g
Calories from Fat 50	Cholest. Omg	0%	Dietary Fiber 5g	20%	Protein 10g	20°
*Percent Daily Values (DV) are based on a 2,000 calorie diet.	(B1) 25% * Riboffa 15% * Biotin 10%	avin (B2) * Pantoth Seleniun	Calcium 25% * Iron 259 15% * Niacin (B3) 15% enic Acid 20% * Phosp n 20% * Copper 15% * I	* Vit. Be horus 20	3 20% * Folate 20% * 0% * Iodine 15% * Ma	Vit. B1



#### It's easy and cheap being green

By Jeff Nachtigal, Fortune

October 19 2006: 5:04 PM EDT



(FORTUNE Magazine) -- Adobe has turned its headquarters into a towering example of environmentalism-and is saving millions in the process.

An employee at Adobe Systems (Charts) e-mailed Randy Knox III in April, wondering whether the individual coffee creamers in company break rooms were more wasteful than one big container. For Knox, Adobe's director of real estate, facilities, and security, the tiny detail warranted immediate action. Adobe is now conducting research to determine which containers will produce the least waste. "With the help of 5,500 employees, we manage to find these kinds of things," Knox says.

The coffee creamers are just a tiny example of the massive ecofriendly overhaul underway at Adobe. In June the \$2 billion software maker became the first company to receive a platinum award from the nonprofit U.S. Green Building Council. That makes Adobe's San Jose headquarters the greenest corporate site on record in the U.S. Even more impressive is that Adobe earned the honor by retrofitting its existing office towers (about one million square feet); most of the 151 buildings that have received the council's gold rating are new structures. By installing everything from motion detectors to waterless urinals, Adobe has reduced its electricity use by 35% and its gas consumption by 41% since 2001, at the same time that headcount has swelled 80%. More important, Adobe is proving that building green isn't just good citizenship; it's plain good business. To

#### More from FORTUNE

Help! If employers Google me, they'll find a racy site

Why it's not easy being green

Rocking like a hurricane

**FORTUNE 500** 

Current Issue

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date, the company has invested about \$1.1 million in 45 energy-efficiency projects, yielding nearly \$1 million in annual savings, including about \$350,000 in energy rebates. "This isn't some pie-in-the-sky kind of thing the enviros are pushing," Knox says. "It really works." The featured examples demonstrate how Adobe saved green by going green. The Adobe Checklist

### Sustainable Business Practices

- Business practices that:
  - Conserve resources
  - Are energy efficient
  - Reduce, recycle, and reuse materials Incorporate renewable resources
  - Prevent pollution
  - Consider social impact
  - Close the loop

# What would be a way to describe this financially?

 Meeting the quarterly goals of Wall Street analysts without jeopardizing LTEV for shareholders

 Meeting your short term budget expectations while being able to take advantage of longterm opportunities

### The Sustainable Value Portfolio

#### **Tomorrow**

Clean Technology
•develop new competencies
•pursue leapfrog innovation



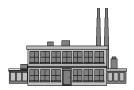
•meet unmet needs
•raise the base of the pyramid



Internal

**External** 

Pollution Prevention
•minimize process waste
•enhance resource productivity

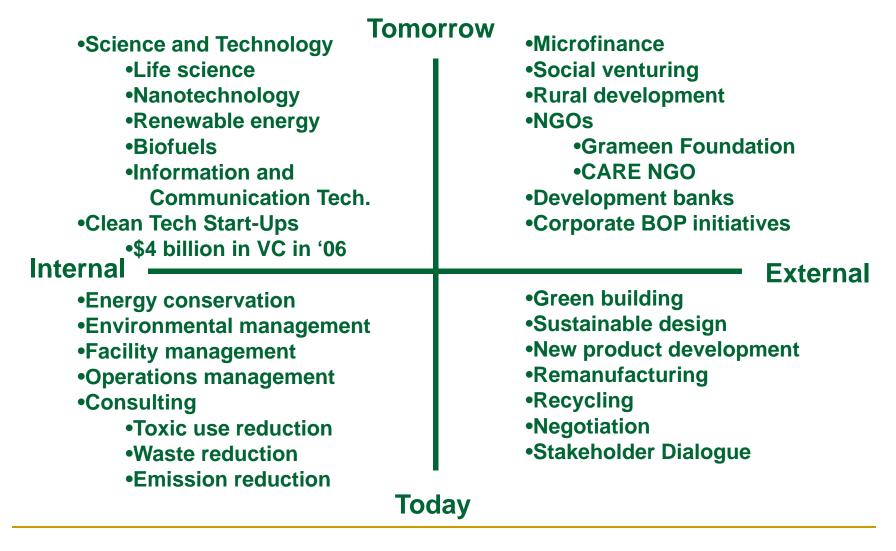


Product Stewardship
•lower product life cycle impact
•increase transparency/accountability



**Today** 

### Business Opportunities



### Who said this?

- "We are all passionate about making real progress regarding the environment. By working together, we can help each other save money, reduce greenhouse gas emissions and pass the savings on to our customers. Sustainability is good for the environment, and it's also good for business."
- "We asked ourselves: If we had known 10 years ago what challenges we would face today, what would we have done different? What struck us was: This world is much more fragile than any of us would have thought years ago."

### Lee Scott, Walmart CEO July 12 and Sept 25. 2006

WAL\*MART Contact Us | Feedback



Sustainable Products

Marine Stewardship

Council

Organics at Wal-Mart

Sustainable Product Success Stories We believe that environmentally sensitive facilities and processes add quality and value to our products. Our commitment doesn't stop there; we see real promise in our ability to bring cleaner, more environmentally preferable products within the reach of everyday people around the world. We believe you should not have to pay more for healthy and environmentally preferable products. We have a long way to go to make this happen, and because we are learning and listening in new ways, we expect to make mistakes.

With more than 68,000 supplier partnerships, 1.5 million empowered associates, and the buying power of more than 100 million customers a week, we believe we have the right ingredients for leadership.

#### We Know We Can't Do It Alone

We are creating networks of innovation-made up of suppliers, associates, and non-governmental organizations. We are



### ESR gaining momentum

- Over half of the 300 largest companies in the world have a "sustainability officer" at VP level or higher
- 89% of Fortune 1000 CEOs thought sustainability would be a "more significant issue" in 5 years
- A 2002 survey concluded that CEOs think that going beyond compliance gives companies:

An enhanced reputation: 90%

Competitive advantages: 75%

Significant cost savings: 73%

What is Sustainability?

Our Compass

Our Journey

Seven Fronts

Circle of Influence

Renewable Energy

Climate Change

Community

Ray Watch

Our Progress

Product Focus

THE SEVEN FRONTS (FACES OF MT. SUSTAINABILITY)

- Eliminate Waste: Eliminating all forms of waste in every area of business;
- 2. Benign Emissions: Eliminating toxic substances from products, vehicles and facilities;
- Renewable Energy: Operating facilities with renewable energy sources solar, wind, landfill gas, biomass, geothermal, tidal and low impact/small scale hydroelectric or non-petroleum-based hydrogen;
- 4. Closing the Loop: Redesigning processes and products to close the technical loop using recovered and bio-based materials;
- 5. Resource-Efficient Transportation: Transporting people and products efficiently to reduce waste and emissions;
- 6. Sensitizing Stakeholders: Creating a culture that integrates sustainability principles and improves people's lives and livelihoods;
- 7. Redesign Commerce: Creating a new business model that demonstrates and supports the value of sustainability-based commerce;



Next: Circle of Influence











What Is Sustainability?

Our Compass

Our Journey

Seven Fronts

Circle of Influence

Renewable Energy

Climate Change

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Next: Circle of Influence











### Interface's Triple Bottom Line



### Triple Bottom Line Perspective

- Every business decision considers:
  - Impact on profit
  - Impact on people
  - Impact on planet
- Evaluate success on these three measures

### Accounting Discipline's Contributions

- Disclosures and Reporting
- Decision-making
- Market Mechanisms
- Investment Analysis
- Other

# Disclosures and Reporting:

- Environmental Liabilities
  - GAAP Guidelines
- Sustainable Business Practices
  - Voluntary disclosure
  - GRI guidelines
  - Mission driven
  - Scope

# Decision-making

- Costing Issues and Cost-Benefit Analysis
  - Waste minimization
  - Energy Consumption Reduction
  - Proper allocation of environmental costs to products for product introduction, retention and elimination
  - Financing and Costing a Cleanup site
- Development of a Balanced Scorecard
  - Qualitative Issues

## Market Mechanisms

- National Government level accounting
- How do we adjust national income accounting to include the use of
  - Renewable resources
  - Non-renewable resources
  - environmental and social degradation
- Emerging area is in CO2 greenhouse gas trading

## Investment Analysis

- Social Return on Investment
  - A compliment to the financial bottom line
  - Computed on the same investment as financial ROI

## Other

- National Income Environmental Accounting
  - Genuine Progress Indicator
    - An alternative to GDP
    - A measure of well-being
- Eco Efficiency
  - Guideline areas
    - Water use, Energy use, Global warming contribution,
       Ozone depleting substances, Waste

# The Social Component is

# Often Missing

- "The social dimension of sustainability encompasses the political, the cultural and all people-centred issues, except the economic. It entails ensuring that the basic conditions for human life to flourish exist within society. These include:
  - Food, shelter and clothing
  - Health care
  - Education
  - Social interaction, sense of belonging and spiritual enrichment
- These conditions cannot be met without a healthy and sustainable natural environment and economy."

# What can you do

- Learn as much as you can
- Question the status quo
- Get involved at Cal Poly
- Consume conscientiously
- Invest proactively
- Reduce, Reuse, Recycle



## FINDING AND PROMOTING SOLUTIONS TO GLOBAL WARMING

▶ FOR CORPORATIONS

**▶** FOR CAMPUSES

**▶** FOR COMMUNITIES

**▶ FOR SCIENCE CENTERS** 



**ABOUT CA-CP** 



**GET INFORMED** 



TAKE ACTION



DONATE

## **Talking 'Bout My Generation**



Climate Champion Billy Parish

According to Climate Champion Billy Parish, global warming is an issue that should be thought of in generational terms. "For my generation," says the 23-year-old once-and-future Yale student, "global warming activism is a call to arms — because we are the ones who will have to deal with its growing consequences. And our efforts are at the same time a plea for accountability to the generation now in power; they have allowed the crisis to get to this point."

Working to help develop sustainable U.S. energy policies and attitudes is, in Billy's words "an awesome, and a sobering, responsibility for the youth community." One Billy Parish, founder of the Climate Campaign and recent recipient of the Brower Youth Award from the Earth Island Institute, has taken up with gusto.

In the summer of 2002, Billy was in India, doing research on community forestry and giving a lot of thought to his new role as the incoming head of the

Yale Student Environmental Coalition. Pulling from his environmental background— which included a semester at Vermont's Mountain School as a high school junior, Billy pinpointed the lack of a unified student network to address the issue of global warming, within campus communities and beyond. He decided to start there.

Back on campus in the fall, Billy began surveying the student-activist landscape to get a sense of what networks and resources already existed. As a way of bringing together the groups he discovered, he began to plan the Yale-hosted Northeast Student Environmental Leadership Summit, held in February 2003, convening 75 students from 32 colleges and universities throughout the Northeast.

## The Cool Current

Sign up for the <u>Clean Air-</u> <u>Cool Planet quarterly</u> <u>newsletter</u>! Type your email address below:

Go

## Get a Job

Check out the latest opportunities to do good work: visit our climatefriendly jobs page, internship listings, and partner pages.

http://www.cleanair-coolplanet.org

Saturday, 07/01/06

## 2 schools have new energy fee

MTSU, Tech students show huge support

By MICHAELA JACKSON For The Tennessean

A \$150-per-year tuition increase won't be the only new bill that students and parents at Board Regents schools will be footing next year — Mother Earth will be getting her piece of the pie, too.

Students from Middle Tennessee State University and Tennessee Tech successfully lobbied the Board of Regents this week into increasing student fees at their campuses by \$16 a year to fund energy-conservation programs and the partial switch to renewable energy.

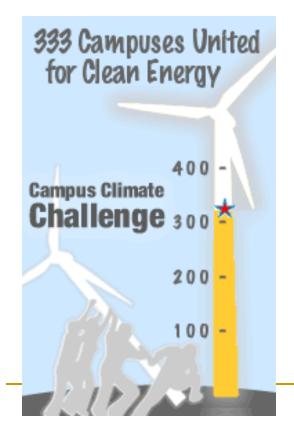


The two schools, in addition to promoting environmental awareness, will now get part of their operating energy from renewable sources such as wind and sun, thanks to Green Power Switch, a conservation program offered by the Tennessee Valley Authority.

"I think it's a huge step because Tennessee could very easily become a national leader in sustainability on the university level," said Brandon Armstrong, a recent graduate of MTSU who addressed the Board of

Regents' Business and Finance Committee during its annual quarterly meeting this week at





http://www.campusclimatechallenge.org/



## **Global Warming Solutions for America**





#### **ABOUTUS**

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- > Who we are
- > FAQ
- > Contact us

### **BUILD FOCUS**

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- > K-12
- > Faith organizations
- > Business partners
- > Civic organizations
- > Resources
- > Sample Agenda
- > Log In

### **FOCUS NEWS**

- > Blog
- > Media
- > Endorsers
- > E-bulletin
- > Coming events

## **FOCUS PARTNERS**



## January 31, 2008

A national teach-in engaging millions of students and citizens with political leaders and decision makers about Global Warming Solutions.

We stand at a unique moment in human history. Decisions that are ours to make today – to stabilize global warming pollution and invest in clean energy solutions – will have a profound impact not only on our lives and the lives of our children, but indeed for every human being who will ever walk the face of the planet from now until the end of time.

More than just one day, Focus the Nation: Global Warming Solutions for America is an unprecedented educational initiative, involving over a thousand colleges, universities, high schools, middle schools, faith groups, civic organizations and businesses. Focus the Nation is a catalyzing force shifting the national conversation about global warming towards a determination to face this civilizational challenge.

Learn more

Flash Video

0

Focus Explained - Video

## **Getting Started**

- 1. Sign Up!
- 2. Watch the Video: Focus Explained -
- 3. Explore the Website.
- 4. Build Your Team.

SIGN UP to organize Focus the Nation events at your college, university, high school, middle school, faith group, civic organization or business. Join over 600 institutions already committed to change the future.

Find Focus the Nation Events:



## STAY INFORMED

about the project by signing up for our bi-monthly newsletter.

FEATURED PARTNER

Start Global Cooling!



At Clif Bar & Co. we understand



## Global Warming Solutions for America





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## **FOCUS PARTNERS**



## Easter in Las Vegas - Steven Marx Reports on the Focus the Nation Organizing Conference April 6-8 2007



I took the bait for Focus the Nation while attending the first national conference of AASHE, the Association for the Advancement of Sustainability in Higher Education in October 2006. That conference attracted 800 faculty and administration activists and featured a panoply of environmentalist superstars.

In welcoming remarks, the President of Arizona State University declared that ASU henceforth would stand for Arizona Sustainable University and announced the formation of a Sustainability Institute endowed with a five million dollar grant from the Wrigley family. [more]

Learn more

**0** F

Flash Video



Focus Explained - Video

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## Start Global Cooling!



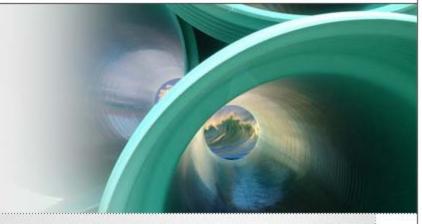
At Clif Bar & Co. we understand



> About CSinE > News & Events > Related Links > Contact Us

California Polytechnic State University

PROJECT RESOURCES FOR FACULTY
CURRICULAR RESOURCES FOR FACULTY
CURRENT PROJECTS
SHOW YOUR SUPPORT



## CAMPUS MOBILITY AND TRANSPORTATION PROJECT



Take on a project that will change Cal Poly » CSinE is committed to leading the development of engineers who are systems thinkers, technological innovators and catalysts of change for sustainable futures.

It is incumbent on engineers, whose business is the innovation of and management of technology to provide new and creative solutions in the global community's quest for sustainable solutions. The Center for Sustainability in Engineering at the <u>California Polytechnic State University</u> in San Luis Obispo, California, is a collection of faculty who are committed to participating is this quest. We also serve as a resource for faculty who want to embed sustainable practices into their activities.





## SEDE: Sustainable Environmental Design Education

Home Background Curriculum Model Teaching Methods Resources

The California Integrated Waste Management Board (CIWMB) together with the Renewable Energy Institute at Cal Poly-San Luis Obispo (REI) undertook a project from March 2002 to May 2004 to improve the adoption of sustainable environmental design principles in higher education and industry continuing education programs in architecture and landscape architecture. This web site marks the beginning of a resource package that we hope will evolve into a living resource and human network for sustainable design.



#### Environmental Context of the Project

Buildings and landscapes consume material, energy, and water resources on an enormous scale. The World Watch Institute reported (Roodman and Lessen, 1995) that the impacts of building construction on people and the environment are approximated at:

- 40% virgin materials (raw stone, gravel, and sand)
- 25% virgin wood used for construction
- 40% total energy resources
- 16% total water withdrawals
- · percentage of construction waste comparable to municipal solid waste generation
- 30% of new and renovated buildings have unhealthy indoor air quality.



Educating current and future generations of architects, builders, contractors, interior designers, and landscape architects to design, build, deconstruct, and renovate projects in ways that are more symbiotic with the efficiencies and resiliency of natural systems is critical at a time when we may have exceeded the world's peak oil production (Deffeyes, 2001) as well as are rapidly exceeding our planet's carrying capacity for the ecological systems that support us (Wackernagel and Rees, 1996). A sustainable environmental design curriculum is a step towards outlining issues and creating a resource package for course development in post-secondary educational settings.

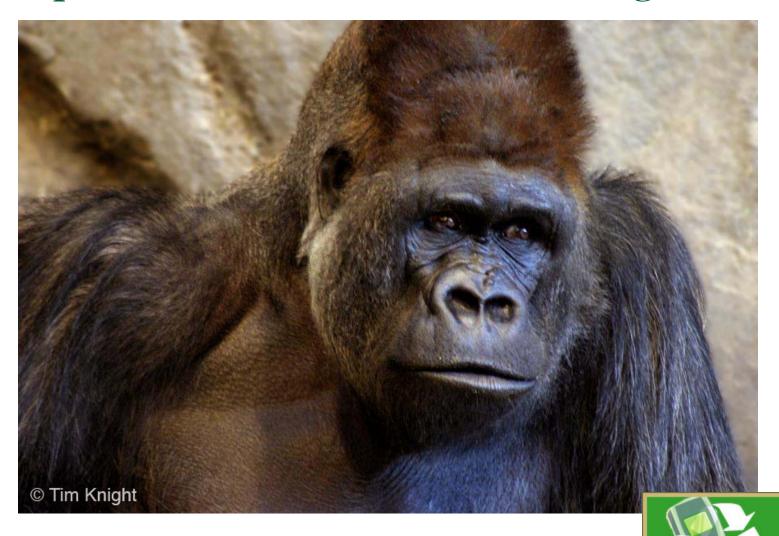


#### Definition of Sustainable Design

"Sustainable Environmental Design" consists of the principles and practices of architecture and landscape architecture that protect environmental quality and human health, reduce environmental impacts resulting from physical changes to buildings and landscapes, and improve the life-cycle economics of natural, human, and financial investments in the built and natural environments.

[Definition for this project.]

# Cell phones, coltran, and lowland gorillas



http://homepage.mac.com/wildlifeweb/gorillas/news/index.html http://www.epa.gov/epaoswer/education/pdfs/life-cell.pdf

# Career Opportunities

- "Sustainability is everywhere. With that in mind, jobs in sustainability are everywhere."
  - Treehugger Jobs
  - GreenBiz
  - SustainableBusiness
  - http://www.emagazine.com/view/?3943

# Let your capital be simplicity and contentment.

Henry David Thoreau, naturalist and author (1817-1862)

