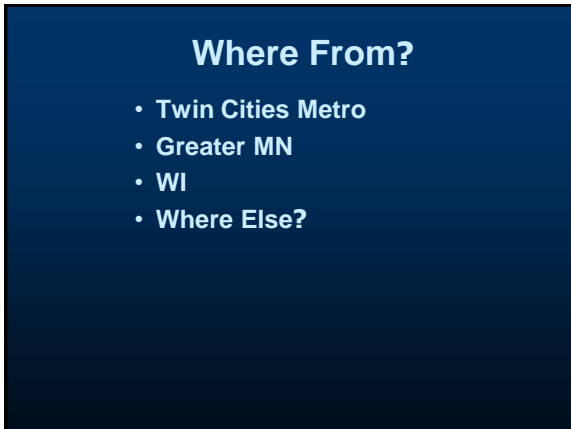




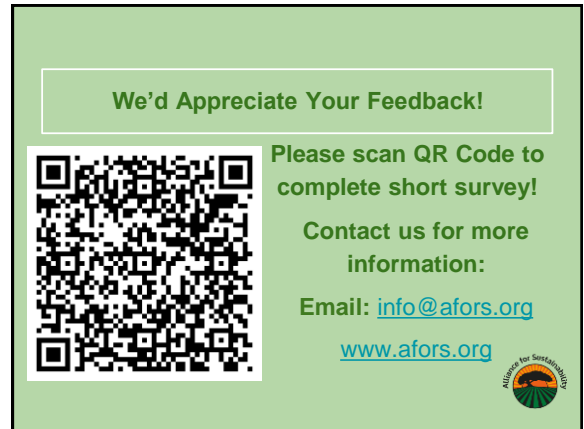
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Agenda

- What is Sustainability?
- Ten Simple Steps You Can Take to Save Money and the Environment
- Questions and Discussion

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Definition of Sustainability

A system that is:

1. Ecologically sound
2. Economically viable
3. Socially just
4. Humane -- embodying our highest values, how we treat people, animals & the Earth

— Alliance for Sustainability, *Manna* 1984 www.afors.org

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□101

The Roots of Sustainability

□94

Definition of Sustainability

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

— U.N. World Commission on Environment and Development
Our Common Future, 1987

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□102

Definitions of Sustainability

□100

Sustainability is a North Star

a vision of the world we'd like to create

We see sustainability from a holistic, integrative perspective that embodies all aspects of life.

It encompasses regeneration, resilience, permaculture, circular economy, and other cutting-edge approaches.

□109

Sustainability can be profitable!



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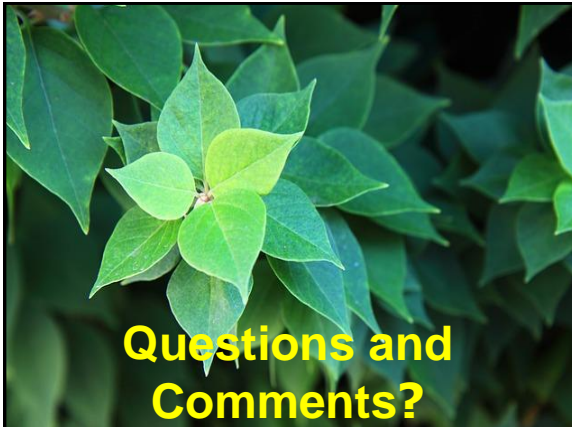
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Ten Simple Sustainability Steps:

1. Recycle and Think Before You Toss

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Questions and Comments?

□152

Recycling of Aluminum Cans

- Just over half of aluminum cans are recycled
- Americans throw away enough aluminum cans in 3 months to rebuild entire US commercial air fleet
- Making new aluminum cans from used ones takes 95% less energy
- 20 recycled cans can be made with the energy needed to produce one can using virgin ore



Source: www.anchoragerecycling.com/alumfact.htm

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We'd Appreciate Your Feedback!



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complete short survey!

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information:

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□153

Recycling Benefits



- 40% of MN municipal solid waste recycled in 2006 saved 46 trillion BtU's = energy for 410,000 households
- 2003 recycling = 1.5 million ton decrease in greenhouse gases = one million cars off road
- 20,000 jobs from MN recycling industry, \$64 million in taxes, \$2.98 billion to state economy
- MN tosses 1 million+ tons recyclables/yr = \$312 million value & disposal costs \$200 mil

Source:
www.recyclenoreminnesota.org

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Zero Waste to Address Climate Change

- US uses 30% of world resources & creates 30% of waste
- Can reduce waste 1%/yr & divert 90% of discards from landfills & incinerators thru recycling, reuse & composting
- = decrease greenhouse gas emissions 406 megatons/yr = closing 21% of 417 coal-fired US power plants = 7% US emissions
- Urban Environmental Accords (103 mayors) supports zero waste to landfills & incinerators by 2040 – reduce, reuse, recycle



www.stoptrashingtheclimate.org

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2 NiMH Rechargeable Batteries Save \$1,000!

- 1 = 1500 alkalines
- Last 4x longer in high tech
- Recharge 1000x
- Recharge any time
- Must be recycled

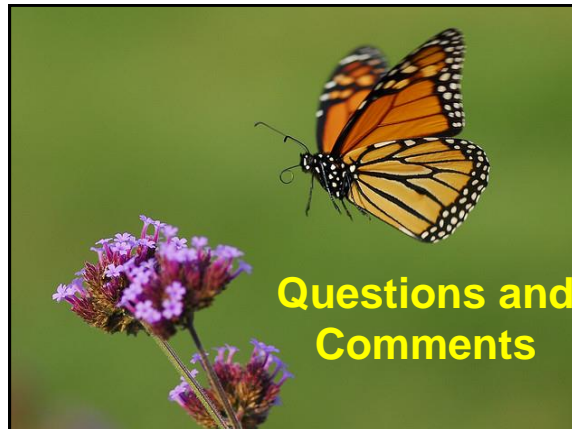


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□171



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Ten Simple Sustainability Steps:

2. Use Rechargeable Batteries

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Ten Simple Sustainability Steps:

3. Switch to LED Light Bulbs

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LEDs Save Money with Many Benefits

Compared to 60W incandescent:

- Each saves \$102 over 22 yr life
- Less than one year payback
- 85% less energy + reduced AC
- Reduces CO₂ by 86 lbs per yr
= Not driving car for 3 days
- Saves 25 bulbs from landfill
- Dimmable and instant on
- No hazardous material
- By 2027, widespread LED use could save equivalent annual electrical output of 44 large electric power plants with \$30 billion total savings



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177

Public Transit Saves Money & Time - Reduces Stress, Congestion & Pollution



- Save \$1000/yr for av. household
- 50% less energy & emissions/mi
- Commuter cost = \$985 million/yr
- Business cost = \$300 million/yr
- Transit saves \$164 million/yr (TTI)
- Traffic congestion is #1 livability issue in Twin Cities
- Congestion in 75 US cities costs \$67.5 billion (TX Trans Institute 2002 Urban Mobility Study)

Source: Transit for Livable Communities

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184



181

Benefits of Bus vs. Car Commuting



- Compared to other household actions, public transit can be 10x greater in reducing ghg
- Commuter switching to public transit can reduce household CO₂ emissions 10%, 20 lb/day or more than 4,600 lb/yr
- Avg household spends 18% of every dollar on transit
- Transit can save \$779/mo or \$9,343/yr

Source: Metro - Greater Portland Transit District
www.gpmetrobus.com/index.php?option=com_content
&view=article&id=119&Itemid=226

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Ten Simple Sustainability Steps: 4. Do Smarter Commuting

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Benefits of Bike Commuting



- One person calculated the benefits from mixture of bus and biking instead of driving:
- 3260 pounds of CO₂ kept out of the atmosphere
 - \$2542 dollars saved
 - 134,000 calories burned and 38.3 pounds of fat

Source: <http://carfree.us/?p=97>

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Bicycle: Most Efficient Machine



LaFree Electric Bike

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Ten Simple Sustainability Steps: 5. Switch to a Battery-Powered Electric Lawn Mower

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Eco-Driving Saves \$ and Energy



- Properly inflate tires
- Avoid sudden stops & starts
- Drive speed limit

Save 25% or more on fuel costs

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Benefits of Battery vs. Gas Lawn Mower



Neuton Electric Lawn Mower

- Easy start, low maintenance
- Costs \$5 vs. \$70/yr to operate
- 1/10th the noise
- 1hr w/ gas mower creates as much smog pollution as driving car 340 miles

Sources: www.drpower.com,
www.faihf.org

□192

Questions and Comments?



□190

Questions and Comments?



□193

Ten Simple Sustainability Steps: 6. Avoid Plastic Water Bottles and Use Refillable Ones

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194



199

Plastic Water Bottles



- Americans used **50 billion** plastic water bottles in **2006**, **167** per person
- Water bottles made of totally recyclable polyethylene terephthalate or PET plastic
- But recycling rate for PET is only **23%**
- 38 billion** water bottles land-filled a year – more than **\$1 billion** worth of plastic

– “Message in a Bottle” by Charles Fishman, *Fast Company*, July 2007

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Ten Simple Sustainability Steps: 7. Eat Fewer Animal Products

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Alternatives to Plastic Water Bottles Three Rivers Park District



- Maintain current beverage selection but replace 1 use disposable plastic w/ environmentally responsible alternatives: compostable cups, reusable bottles & aluminum cans
- Sell low cost reusable beverage containers with beverage of choice
- Promote free water sources
- Provide ed messages informing park guests of issues re plastic bottles & encourage reuseables
- Relatively insignificant revenue

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197



The Standard American Diet (SAD)
will take 20 years off life with a cost of
\$3 million per person in medical
costs.

-- Dr. Alan Greene, Pediatrician,
Stanford University School of
Medicine

Author, *From First Kicks to First Steps*
www.Dr.Green.com

Source: Closing Session of Eco-Farm Conference, Asilomar
Conference Center, Pacific Grove, CA January 27, 2007

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Meatless Mondays www.meatlessmonday.com

 • Sodexo  • Puma  • San Francisco  • Johns Hopkins Hospital  • Oprah  • Yoko Ono  • Gwyneth Paltrow  • LA Mayor Antonio Villaraigosa	 • AARP  • U of CA, Davis  • Russell Simmons  • Sir Paul McCartney  • James Cameron  • Robin Roberts  • Philippe Cousteau  • Toyota  • Simon Cowell
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207

livestock's long shadow
environmental issues and options



Impact of Livestock

The livestock sector emerges as one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global.

- UN FAO, *Livestock's Long Shadow*, 2006

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The ENGINE 2 DIET
'The Texas Firefighter's 28-Day Save-Your-Life Plan that Lowers Cholesterol and Burns Away the Pounds'
RIP ESSELSTYN



NY Times Best-Seller TX Firefighters Plant-Based Diet


- Lose weight
- Lower cholesterol
- Significantly reduce risk of disease
- Become physically fit
- Just 4 weeks
- Whole Foods now promoting with employees

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210

Impact of Food Choices

- Livestock cause 18% of global warming, more than all cars, trucks, SUVs, planes & transit combined
- Livestock produce 100+ other polluting gases, including more than 66% of world's emissions of ammonia, a main cause of acid rain
- Major deforestation source
- Overgrazing turning 1/5 of pastures & ranges into desert



Source: UN FAO, *Livestock's Long Shadow*, 2006

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Questions and Comments?

211

Ten Simple Sustainability Steps: 8. Consume Less Water

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Water at Ridgeview Medical Center



www.h2eonline.org/docs/h2estatgreen90105.pdf

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- Save \$25,760/yr on water
- 21.5%/yr (3 million gallon/yr) drop in water supply and discharge water
- Low flow toilets, sinks & showers
- Reduce lawn – low water plantings
- Lawn irrigation based on moisture
- Water cooled equipment replaced with air cooled wherever possible
- Recirculation reservoir on water cooled to allow reuse
- Air handling condensation water used in cooling towers

□215

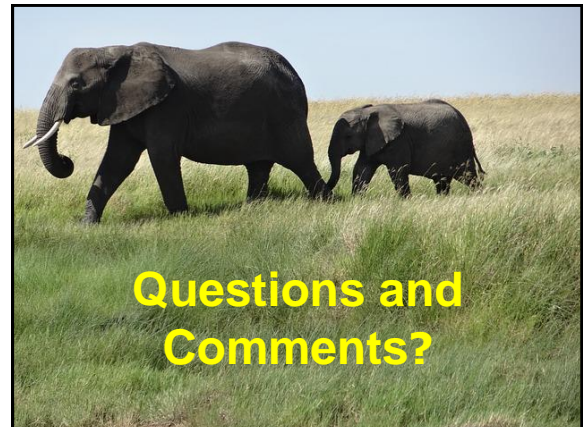
Saving Water Saves Money & Energy



- Turning off the tap when brushing teeth saves one gallon of water/use
- Using a faucet and shower aerator uses half the water and cuts hot water costs in half
- Using a front-load washer uses 50% less water and 30% less energy
- All of this saves money and energy since water pumping is a city's largest energy use

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Questions and
Comments?

□218

Santa Monica Sustainable City Program Progress Summary



Resource Conservation - Water

- Citywide Water Usage - Reduced 6% between 1990 & 2000



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Ten Simple Sustainability Steps: 9. Use Less Paper and Only Post-Consumer Recycled

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Opportunities to Save Money Using Less Paper and Only Post-Consumer Recycled



Environmental Savings Statement

Using 2,000 pounds (~16,800 sheets) of Earth Lover's Gift Wrap compared to using standard gift wrap saves the following resources:

trees	59
water (gallons)	10,195
energy (kwh)	13,815
atmospheric emissions (lbs)	1,082
solid waste (lbs)	2,098

Calculations based on research by Environmental Defense and other organizations.

- E-communications reduce paper use 10-30%
- Duplex copying = 20% reduction
- Cloth napkins save \$1,354 and cloth towels save \$1,000 over five years
- A ton of PCR paper saves enough energy to power a home 6 mos., plus 7,000 gallons of water

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Post-consumer Recycled Paper

Savings if every US household replaced just one roll of 500 sheet virgin fiber bathroom tissues with 100% recycled:



- 297,000 trees
- 1.2 million cubic feet of landfill space = 1400 garbage trucks
- 122 million gallons of water, a year's supply for 3500 families of four
- No chlorine bleaching

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Source: www.seventhgeneration.com

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Paper-Free Office Electronic Records Management



- Reduce paper
- Reduce costs
- Easy, efficient management & integration of documents, files & records
- Many suppliers such as SmeadSoft

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□234



Do We Want Recycled Paper?

No, we want Post-Consumer Waste (PCW) Recycled Paper

Why?

All paper is recycled
Only PCW recycled will close the loop

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Ten Simple Sustainability Steps:

10. Consume Less and Live Happier, More Fulfilled Lives

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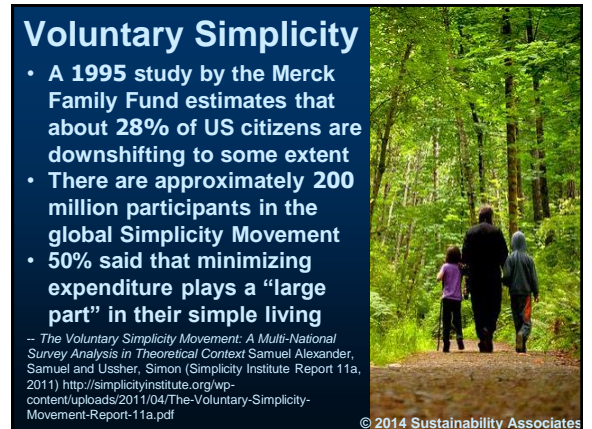
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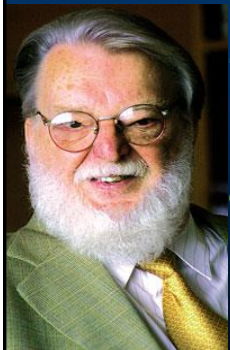


□238



□243

Dr. Manfred Max-Neef



Rector of Universidad Austral de Chile
 “Barefoot economist” from Sustainable Development in Latin America and Africa
Outside In: Real-Life Economics with Paul Ekins
Can meet fundamental needs with unlimited amounts of learning, laughter, love, community & meaningful work while eliminating what we don't want: stress, expense, pollution & violence

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Essence of Manfred Max-Neef Fundamental Human Needs are:

1. Defined and possible to classify
2. **The same in all countries and in all historic times**

Source: Max-Neef, Manfred, “Development & human needs,” in Max-Neef, Manfred & Ekins, Paul (eds.), *Real-life economics: Understanding wealth creation*, Routledge Publishing, New York **1992**

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Manfred Max-Neef Says Fundamental Human Needs are:

1. Defined and possible to classify
2. The same in all countries and in all historic times
3. **Not interchangeable**

Source: Max-Neef, Manfred, “Development & human needs,” in Max-Neef, Manfred & Ekins, Paul (eds.), *Real-life economics: Understanding wealth creation*, Routledge Publishing, New York **1992**

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Fundamental Human Needs

• Subsistence	• Leisure
• Protection/Security	• Creativity
• Affection	• Identity/Meaning
• Understanding	• Freedom
• Participation	• Transcendence

Source: Max-Neef, Manfred, “Development & human needs,” in Max-Neef, Manfred & Ekins, Paul (eds.), *Real-life economics: Understanding wealth creation*, Routledge Publishing, New York **1992**

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Manfred Max-Neef Says Fundamental Human Needs are:

1. Defined and possible to classify
2. The same in all countries and in all historic times
3. Not interchangeable
4. **Possible to satisfy at a high degree while decreasing society's use and disposal of natural resources**

Source: Max-Neef, Manfred, “Development & human needs,” in Max-Neef, Manfred & Ekins, Paul (eds.), *Real-life economics: Understanding wealth creation*, Routledge Publishing, New York **1992**

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Greenhouse & Fundamental Needs



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*When you are inspired
by some great purpose,
some extraordinary project,
all your thoughts break their bonds;
your mind transcends limitations,
your consciousness expands
in every direction,
and you find yourself in a new,
great & wonderful world.*

– Patanjali

□273

*We can no longer have everything we want,
but we can be more than we ever imagined.*
– Mike Nickerson, Sustainability Project



□266

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complete short survey!

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□277

Possible Next Steps:

**Presentation or
Workshop on
Sustainability & the
Natural Step
Framework**

□271



Questions & Discussion

Terry Gips

Alliance for Sustainability

In the Greenway Building
2801 21st Ave. S, Minneapolis, MN 55407
Terry@afors.org www.afors.org

□278



Join the Alliance at the MN State Fair

Come to one of our free talks on the Sustainability Stage in the Eco Experience building

Thursday Aug 26
 4 - 4:45 **Raising Kids Sustainably - Having a Fun, Healthy Life and Planet While Saving Money**
 with Alliance for Sustainability President Terry Dipe and family members


Friday Aug 27
 10-10:45 **Can We Overcome our Consumption Addiction (Affluenza)?**
 with Alliance for Sustainability President Terry Dipe

Monday Aug 30
 12-12:45 **How can We Save Money: Ten Simple Sustainability Steps You Can Take To Save Money and the Environment**
 with Alliance for Sustainability President Terry Dipe


Wednesday Sept 1
 10-10:45 **Co-Creating a World of Sustainability, Health, Equity and Kindness**
 with Alliance leaders Terry Dipe, Myron Lowe and Toya Lopez

Thursday Sept 2
 4 - 4:45 **Students Speak about Sustainability: The Challenges, Opportunities, and Future**
 with Panel of Alliance for Sustainability members

□282



Presentations to Business



- Share powerful and impactful presentations with 20 businesses and corporations of all sizes
- Engage employees and have them commit to at least one sustainability action
- Build business support
- Shift corporate practices and culture

□290




SHE Kindness Campaign


Campaign for Sustainability, Health, Equity and Kindness



□287



Presentations to Schools



- 20 presentations to diverse schools, including at least 10 in underserved communities
- Energize young people
- Have them commit to at least one sustainability action
- Engage them and their schools to actively participate in the Campaign
- Co-create Students for Sustainability

□291



Goals of SHE Kindness Campaign

- Support personal and institutional transformation, fundamental policy shifts and systems change
- Educate, engage and inspire more than one million people and groups to action on everything from lifestyle and consumption to impactful campaigns and policy changes

□288



Public Policies and Campaigns



- Work with our allied partners to successfully support 10 public policies and high-impact campaigns
- Create key tipping points for sustainability, health, equity and kindness.

□292



Declaration of Co-Creation and Interdependence



Build broad support from more than 1,000 people and institutions for our Declaration of Co-Creation and Interdependence, a bold and inspiring call to action

□293