

2015

Beyond Offsets: Innovative Approaches to Achieving and Exceeding Our Climate Commitments

Laura Drauker
Amherst College

Greg Norris
International Living Futures Institute

Daniel Greenberg
Earthdeeds

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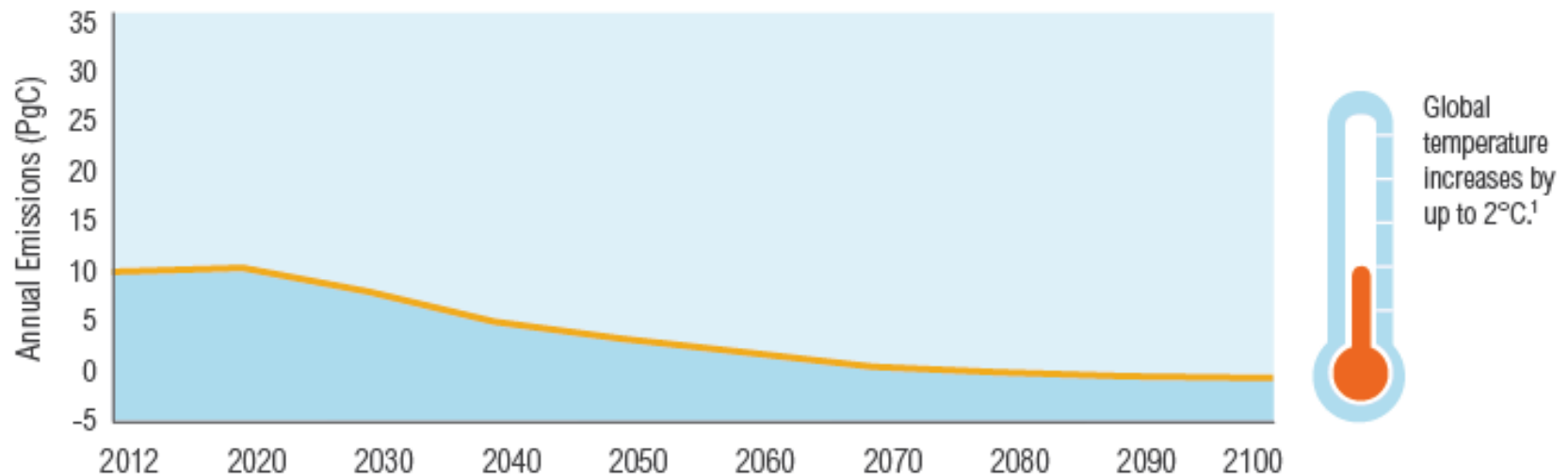
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BEYOND OFFSETS

INNOVATIVE APPROACHES TO
ACHIEVING AND EXCEEDING
OUR CLIMATE COMMITMENTS

LOW EMISSIONS PATHWAY

Carbon dioxide emissions peak by 2020 and then drop 66 percent below 2010 levels by 2050. While the world will still experience some climate impacts under this pathway, they grow exponentially worse under higher emissions scenarios.



About 24% more of the projected global population will face reduced renewable groundwater resources by the 2080s compared to the 1980s.



In the 2080s, about 4 times as many people are expected to be annually exposed to the amount of water associated with a 100-year flood compared to the 1980s.



Roughly one-third of the world's coral reefs, which provide habitat and resources to more than 500 million people, will experience long-term degradation over the next few decades.



Australasia provides more than 40% of global dairy products. With 1°C of warming by 2030, dairy production will likely decline throughout Australia.

Global Action

CAIT Paris Contributions Map



Map

Detailed View

View Pre-2020 Map

Download Data

Documentation

FAQ

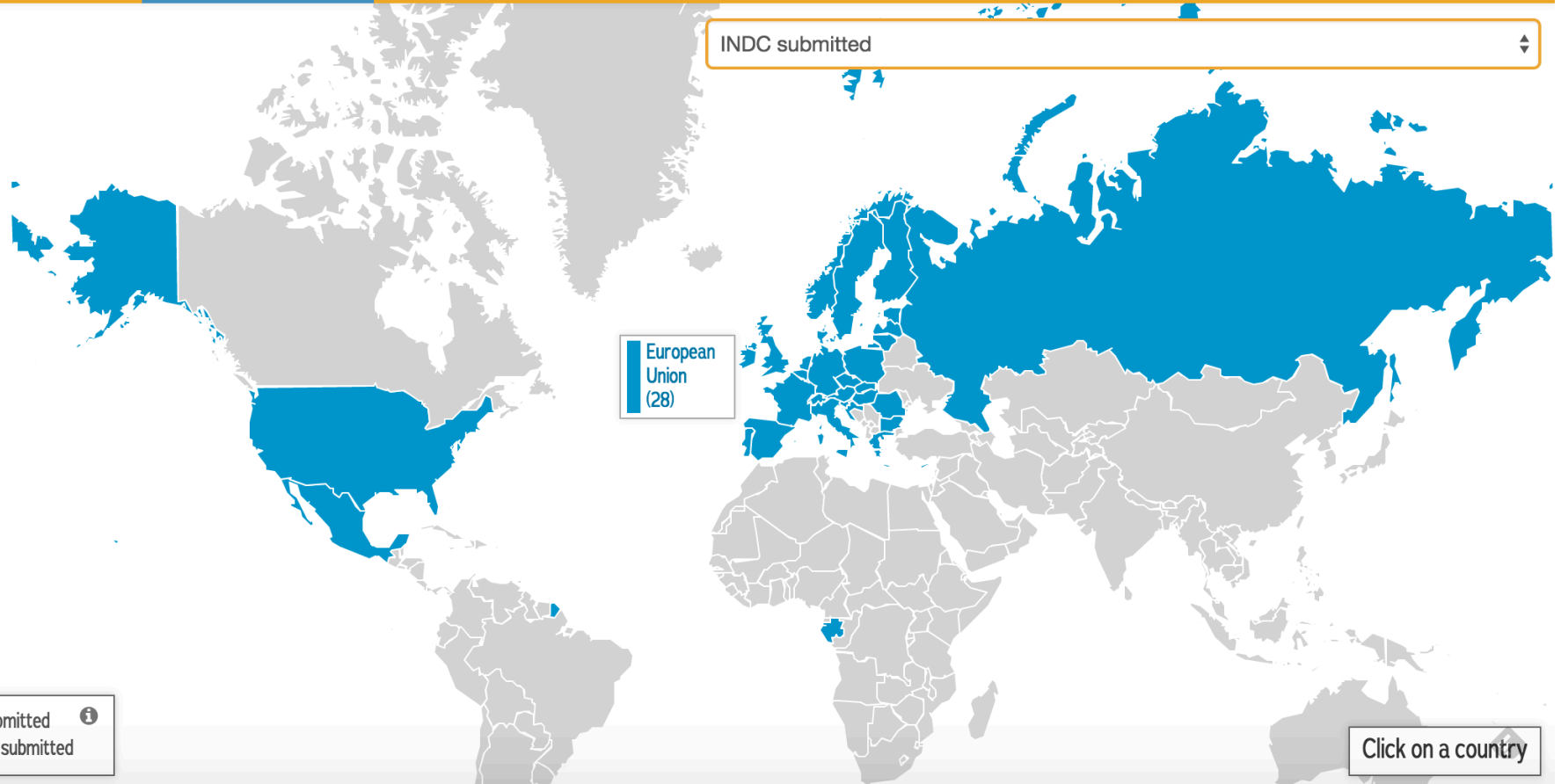
Feedback






Search for a country...



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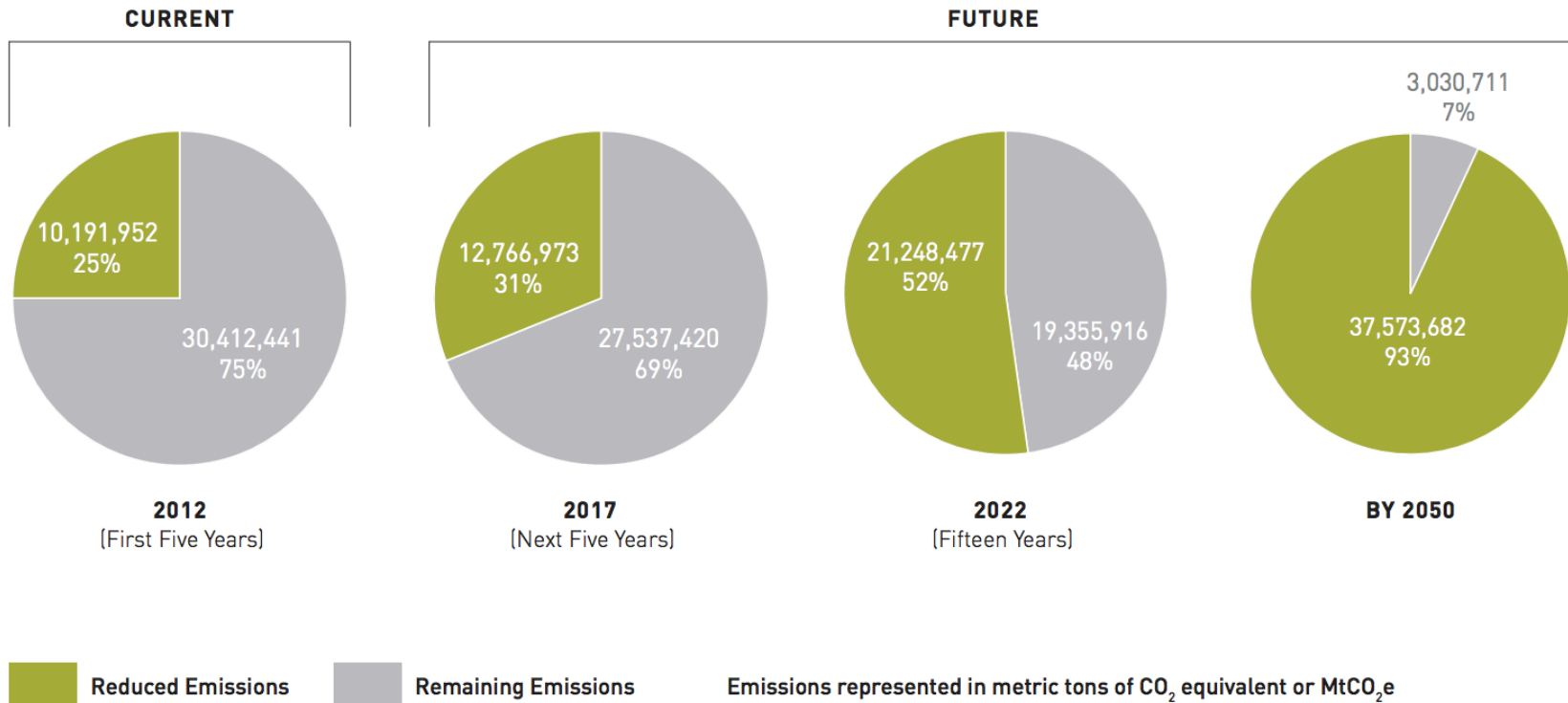


European Union (28)

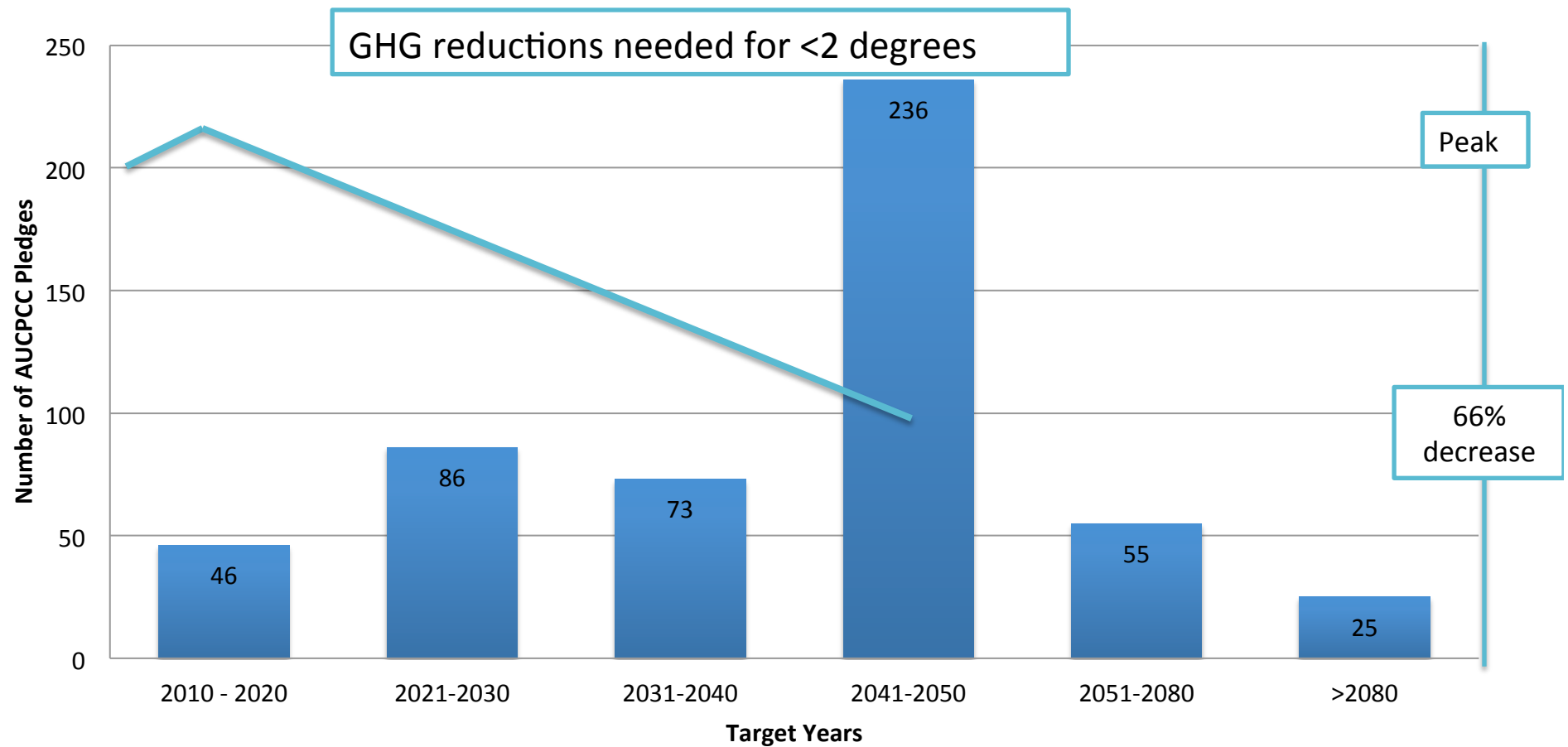
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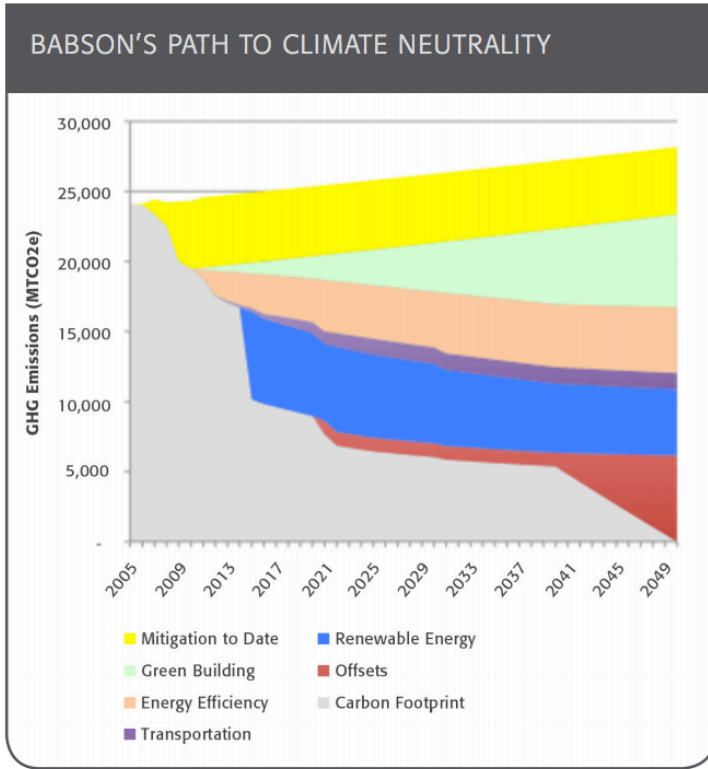
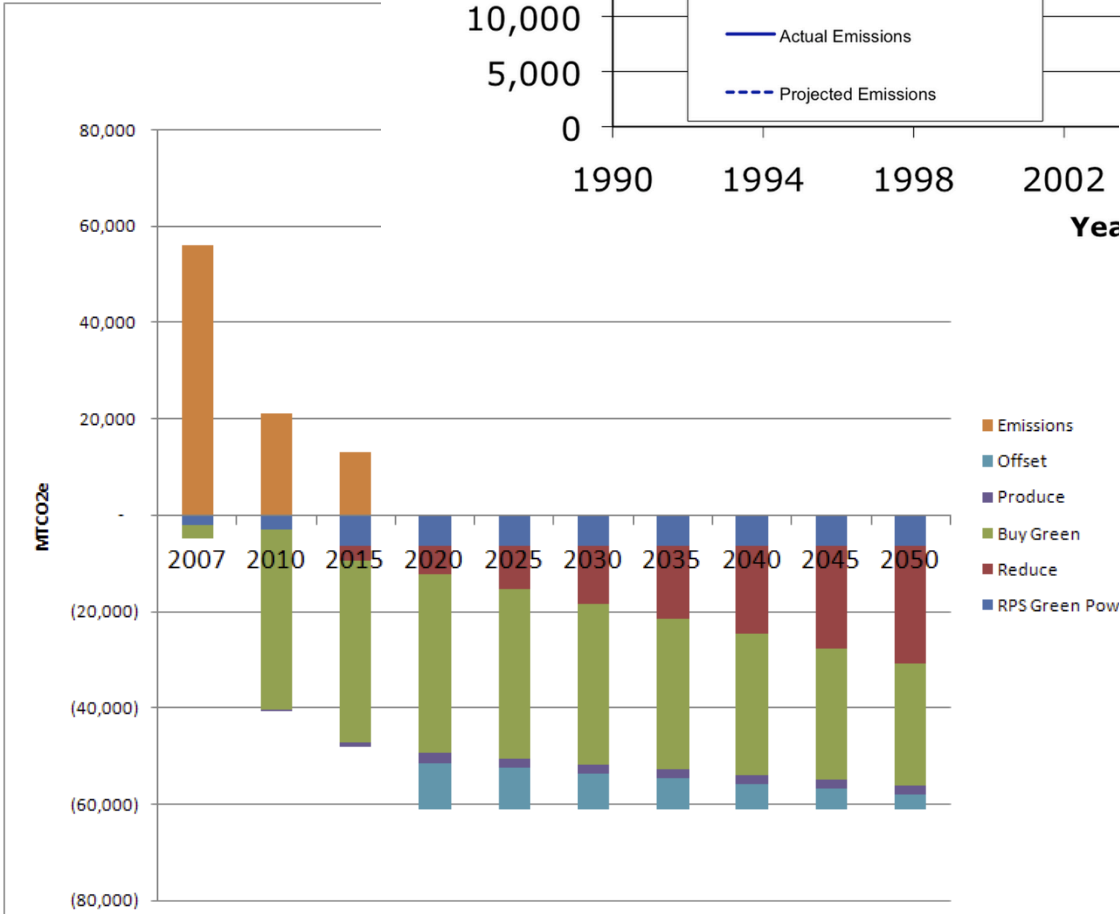
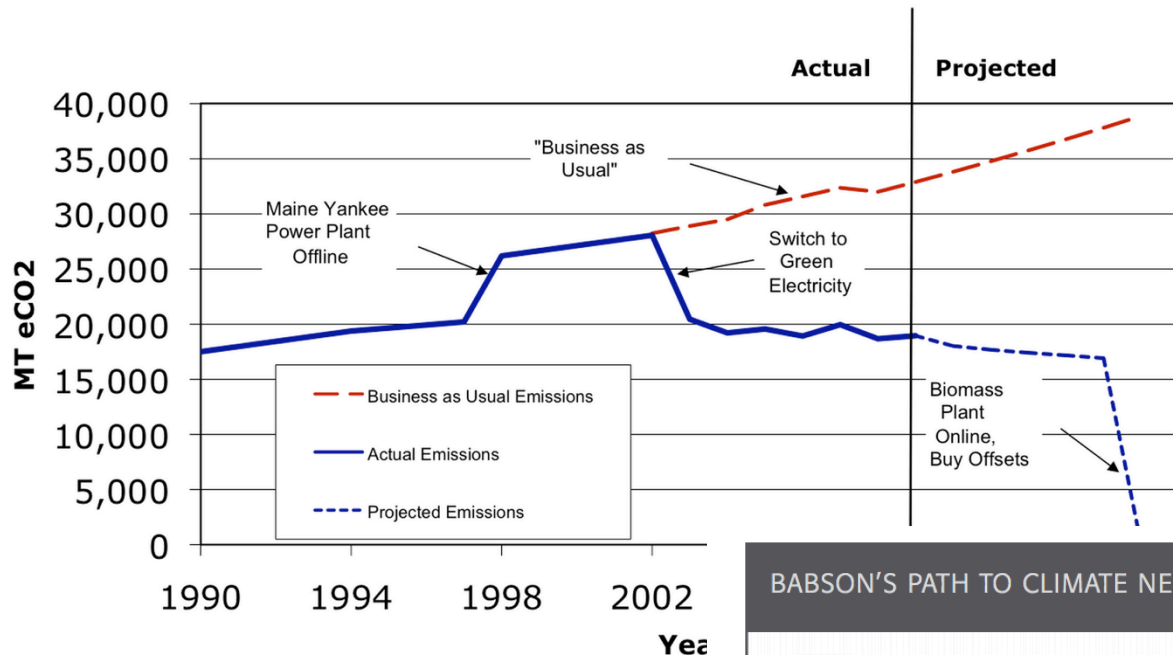
Higher Education Action – AUCPCC Pledges



Higher Education Action- Carbon Neutrality



Colby College Emissions Trajectory



Agenda

- Setting the stage
 - Laura Draucker, Amherst College
- Introduction to Onsetting
 - Daniel Greenberg, Earthdeeds
- Introduction to Handprinting
 - Greg Norris, Harvard School of Public Health/Living Futures Institute
- Synergies
- Breakout and Discussion

Onsetting

Local Solutions to Global Warming



EARTHDEEDS

Daniel Greenberg, Ph.D.

Founder and Director, Earth Deeds

Daniel@EarthDeeds.org

www.EarthDeeds.org



Onsetting

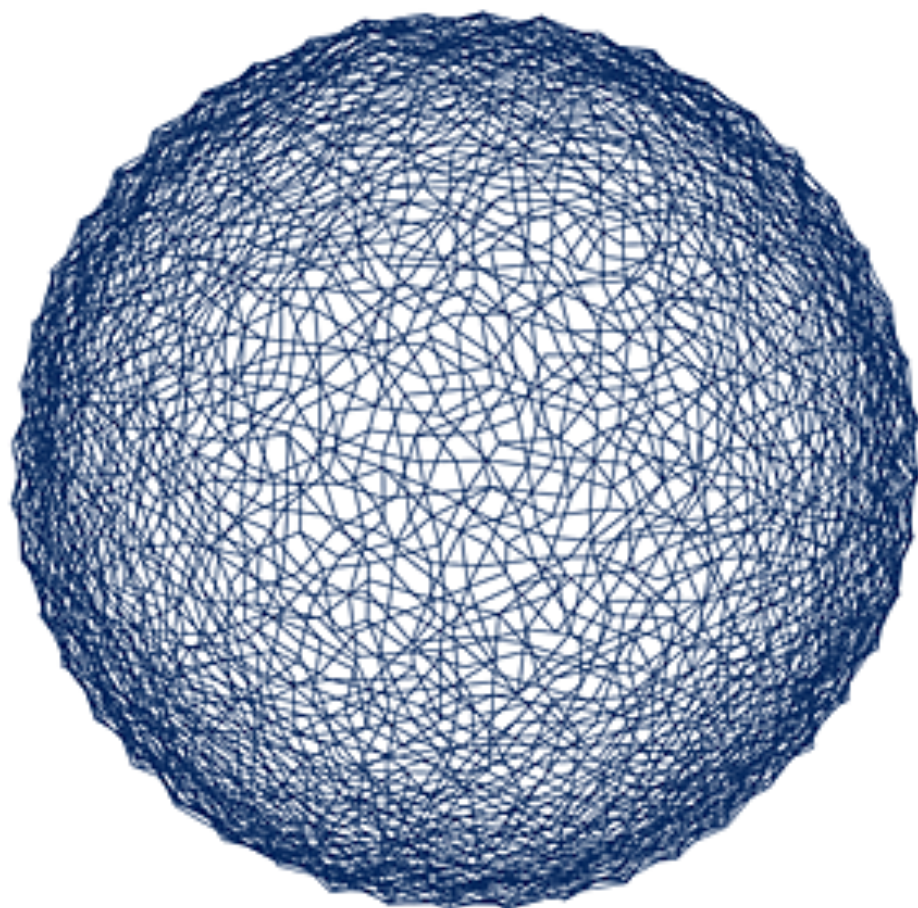
Local Solutions to Global Warming



EARTHDEEDS

- 1) Background
- 2) Onsetting vs. Offsetting
- 3) Case Studies





COP15
COPENHAGEN
UN CLIMATE CHANGE CONFERENCE 2009



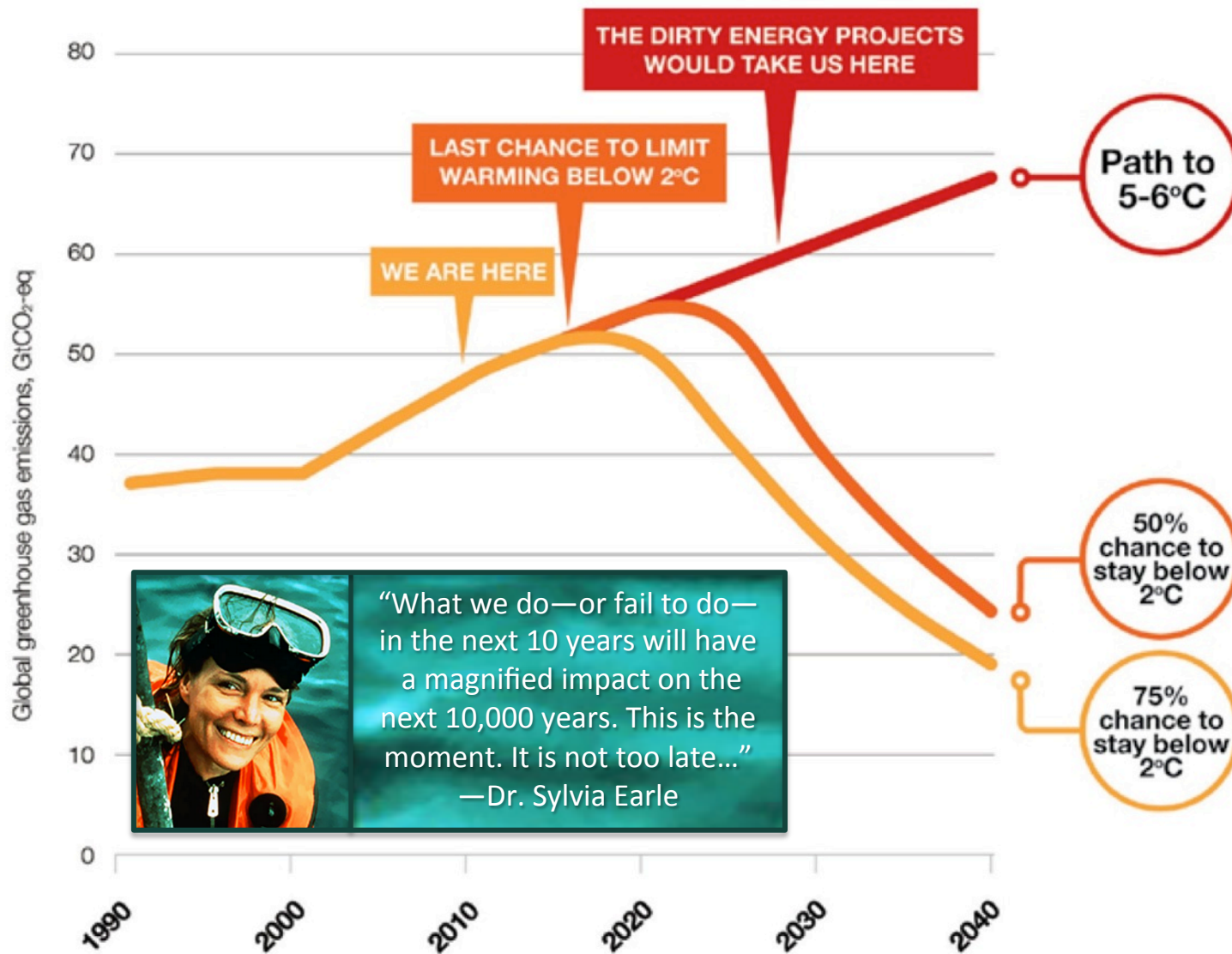






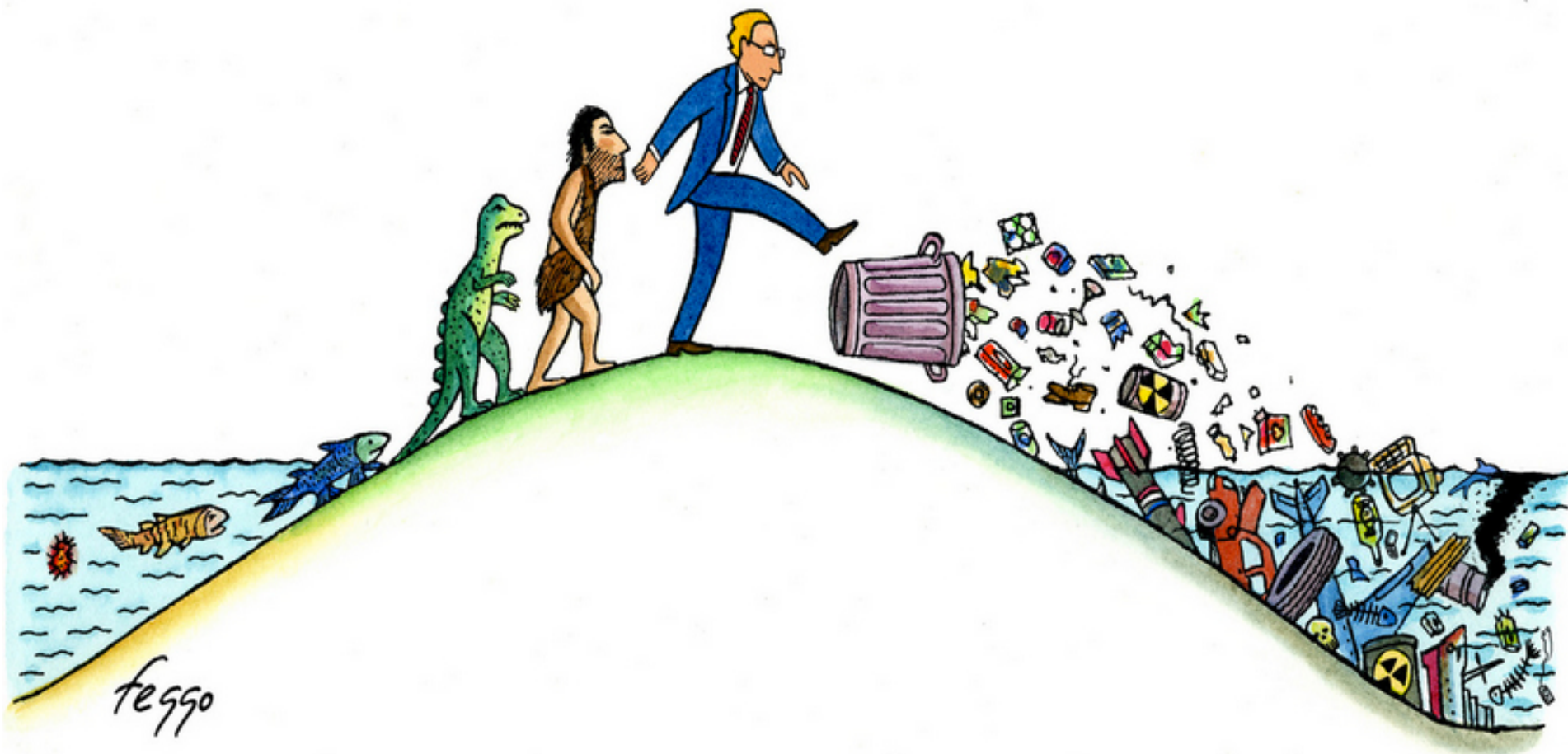


Window of Opportunity









feggo

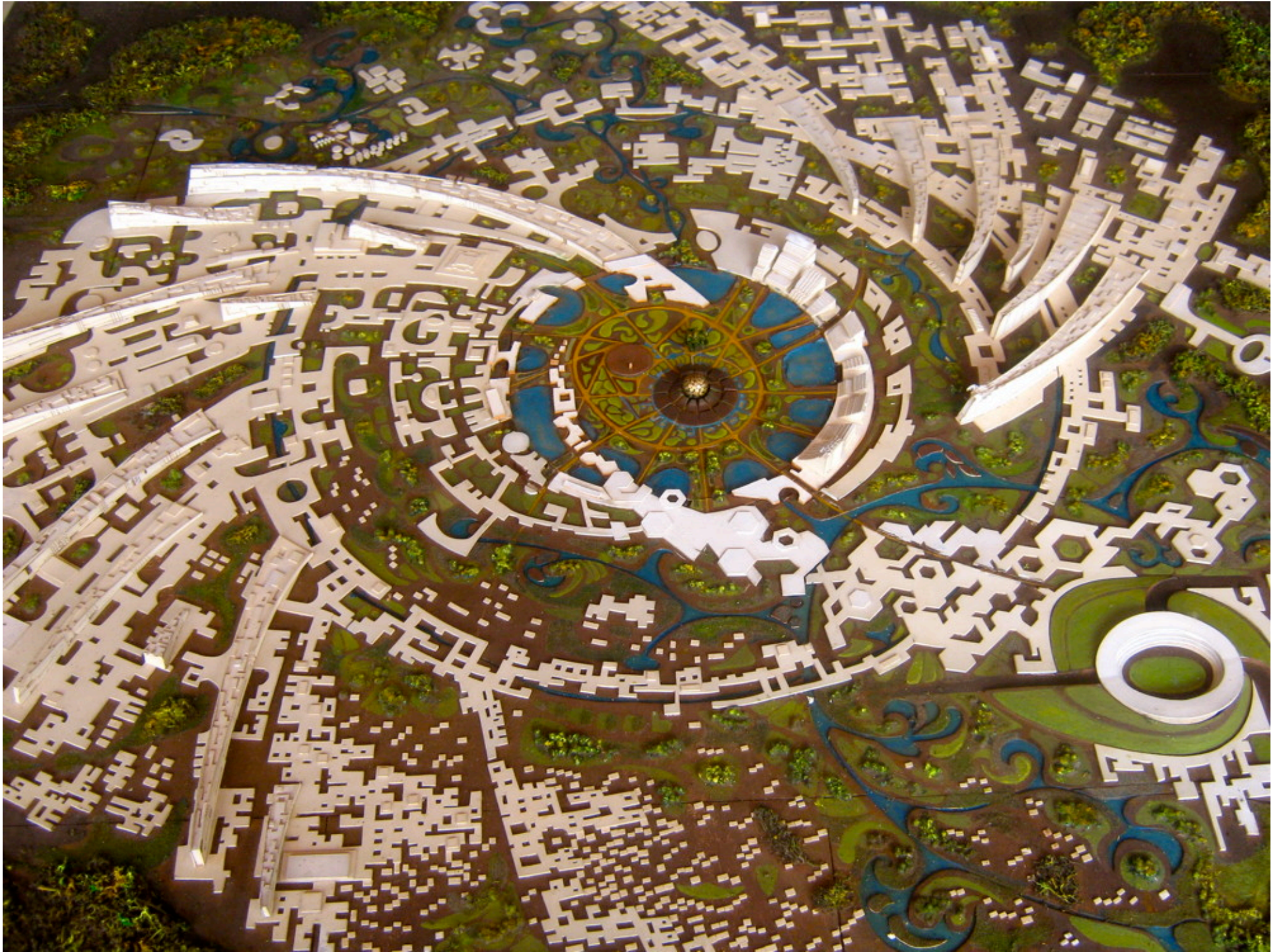








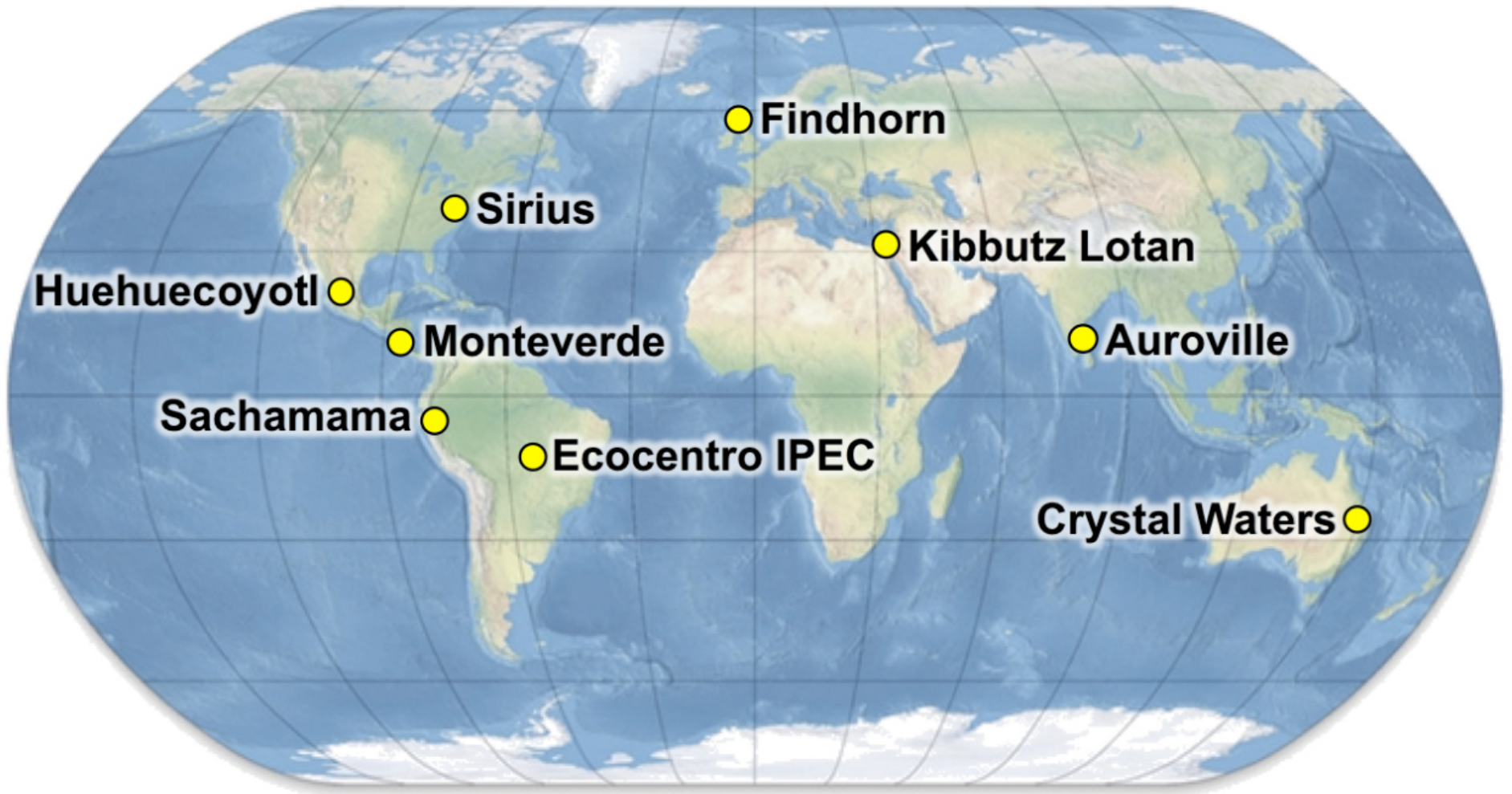
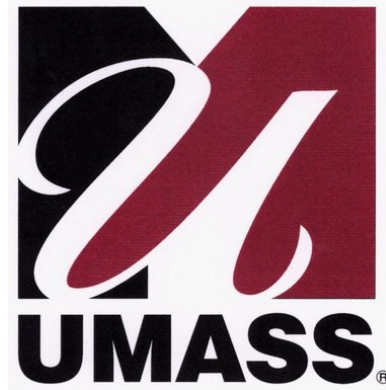






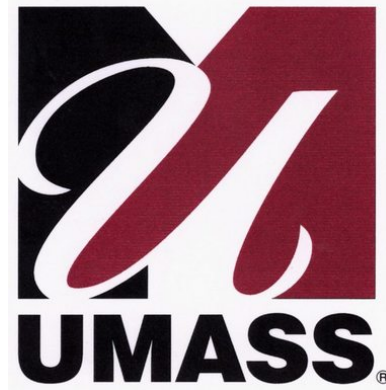


Study Abroad in Ecovillages



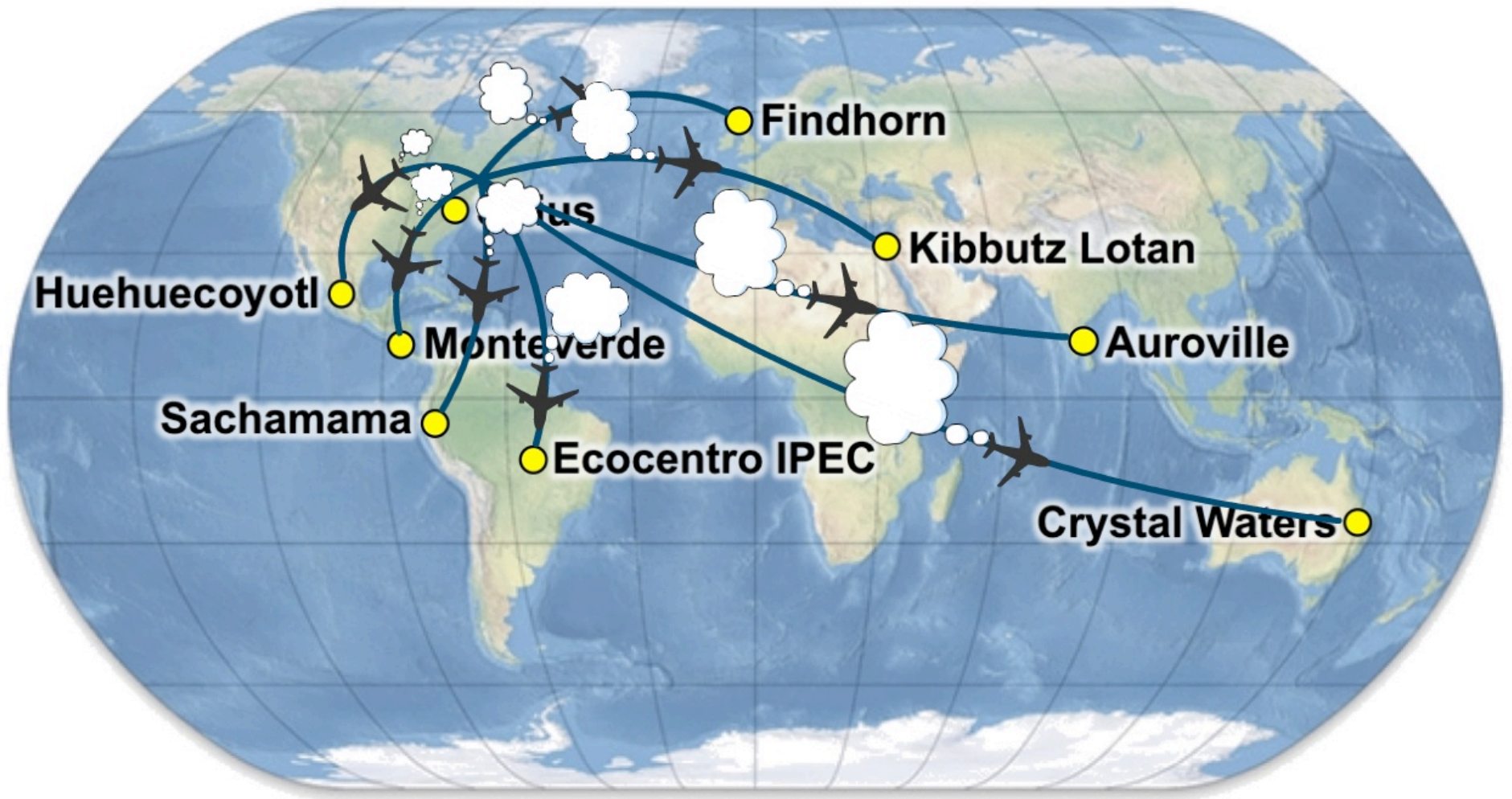


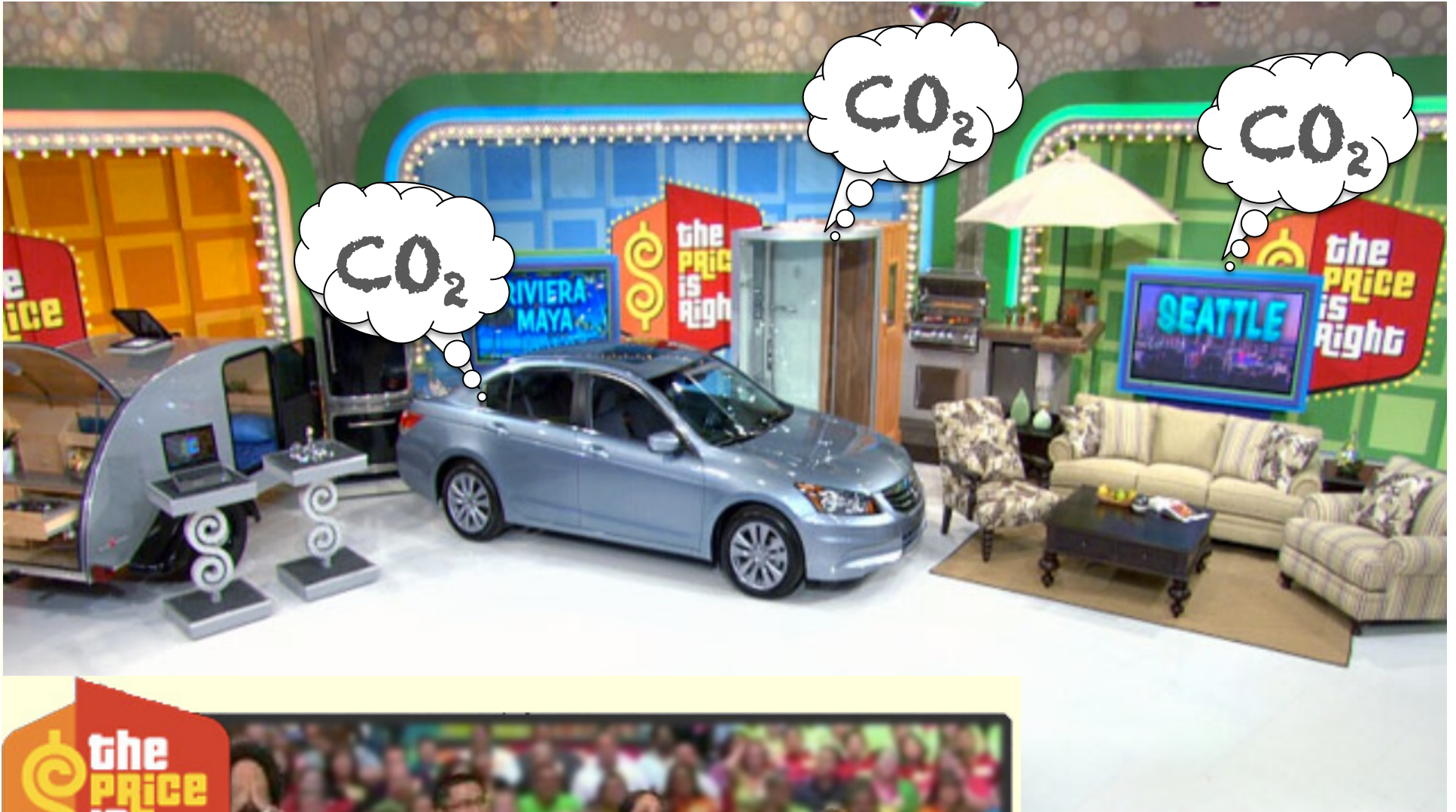
Study Abroad in Ecovillages

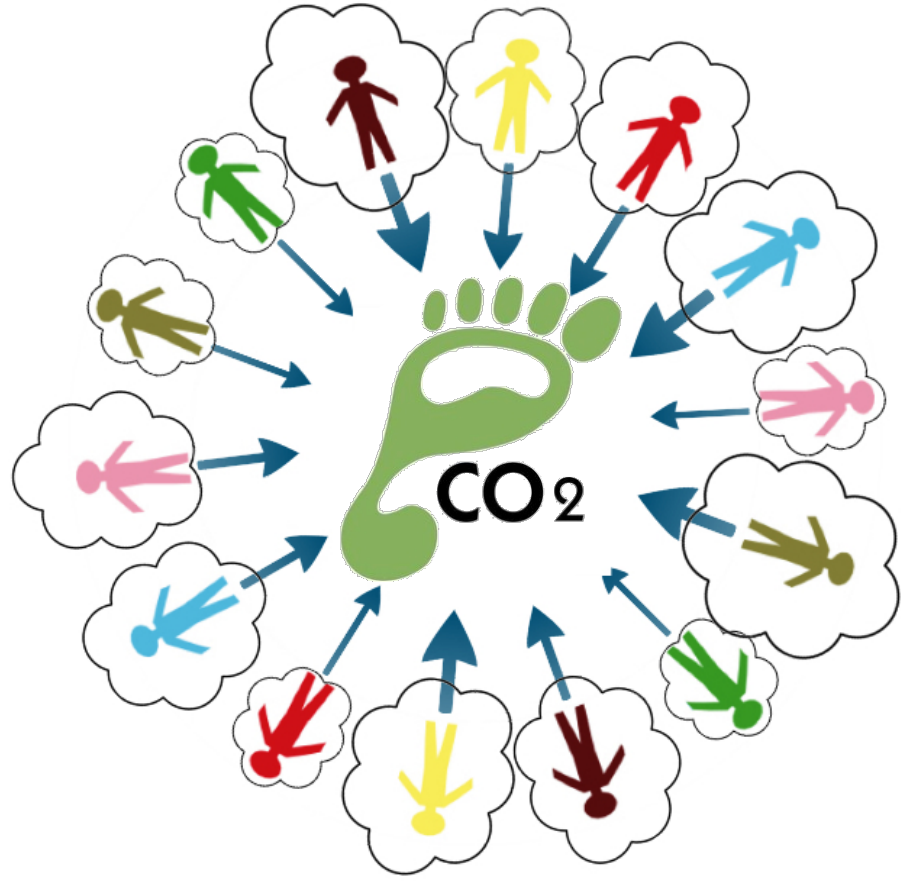




Study Abroad in Ecovillages



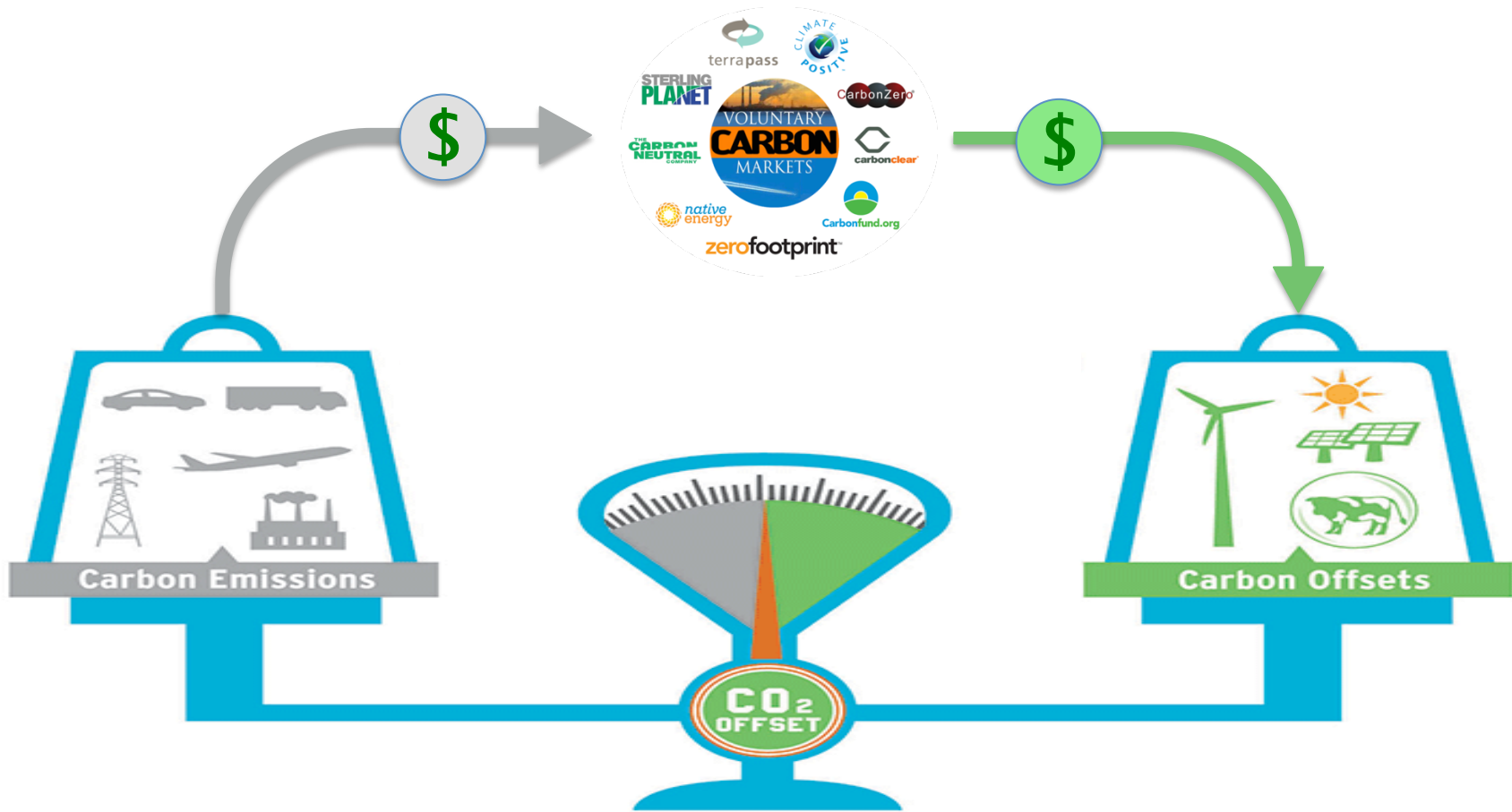




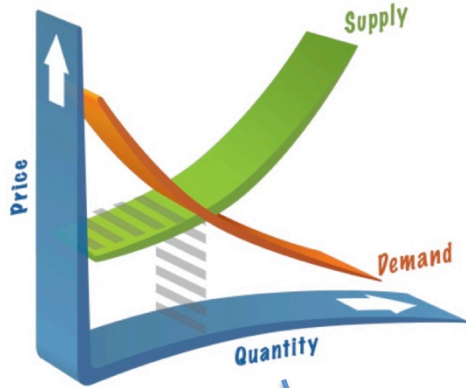




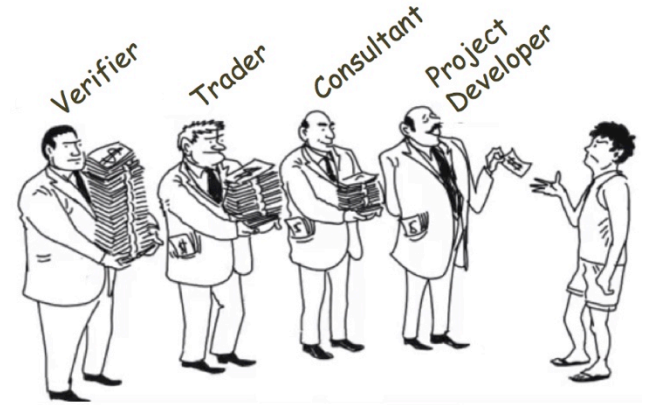




Market Incentives



Volatile
Perverse incentives
Limited Physically
Limited Mentally



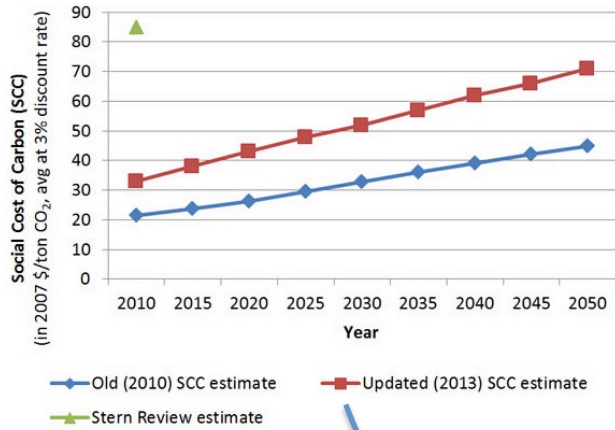
Onsetting



- ✗ Inefficient transfer of funds
- ✗ Neutrality = "Indulgences"
- ✗ Inadequate market-based pricing
- ✗ Additionality difficult to prove
- ✗ Large, non-local projects



Social Cost of Carbon



Interagency Working Group

Accounts for Actual Costs

Currently \$39/mT CO₂e



Onsetting



- ✓ Efficient transfer of funds
- ✓ Positive “pay-it-forward” story
- ✓ Price based on scientific evidence
- ✓ Support existing projects
- ✓ Small, local projects



**BUY FRESH
BUY LOCAL**



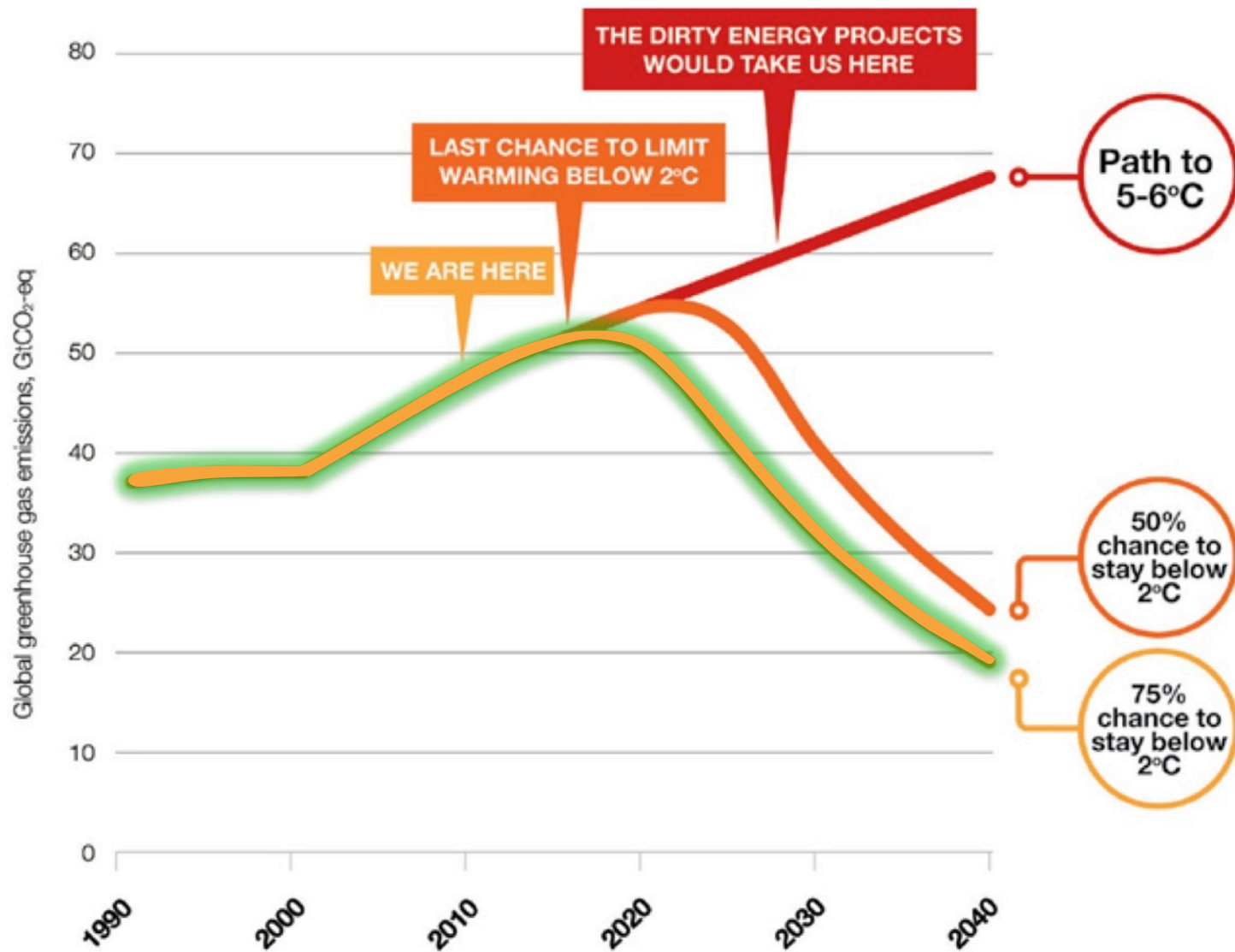


CLIMATE JUSTICE

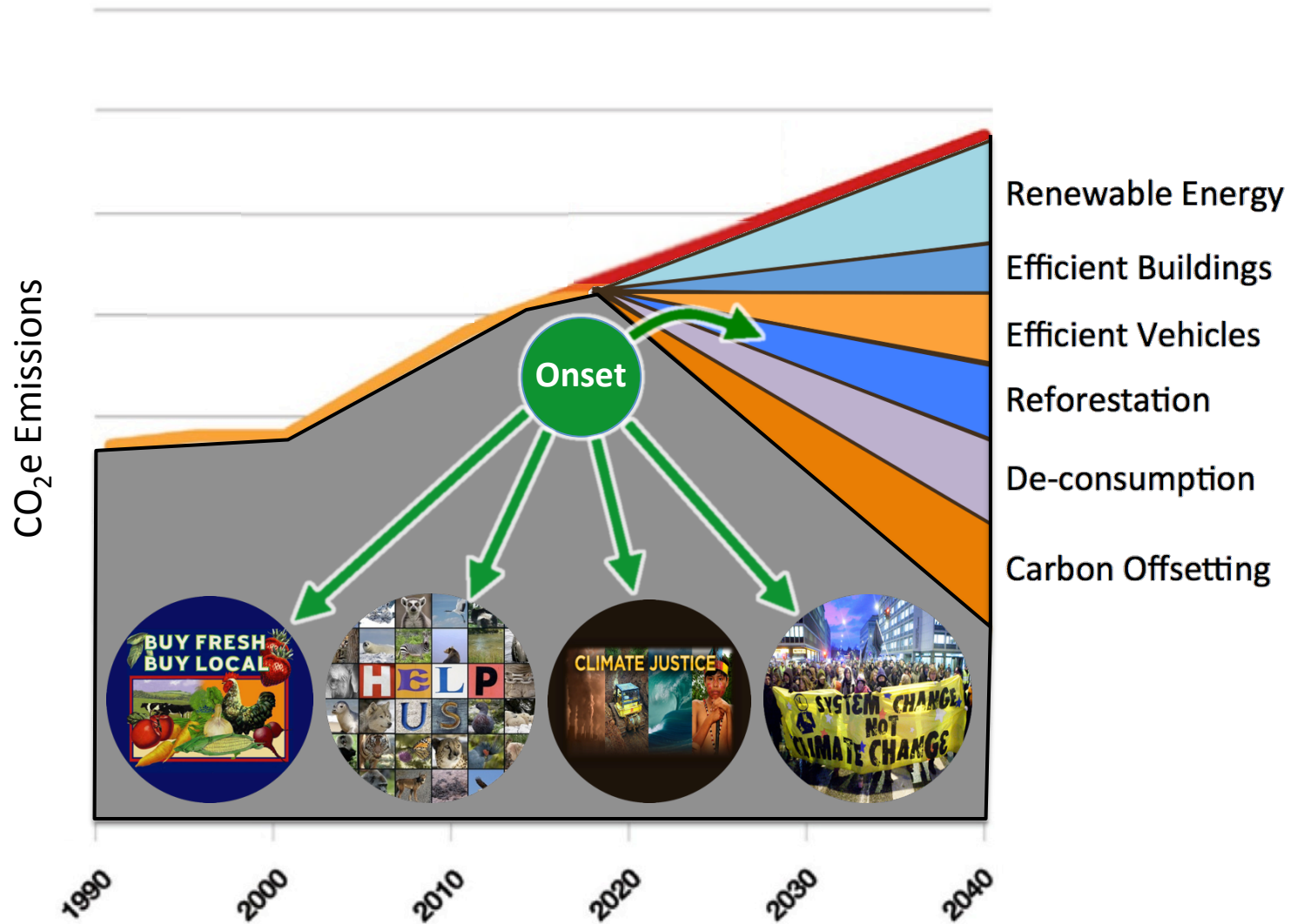


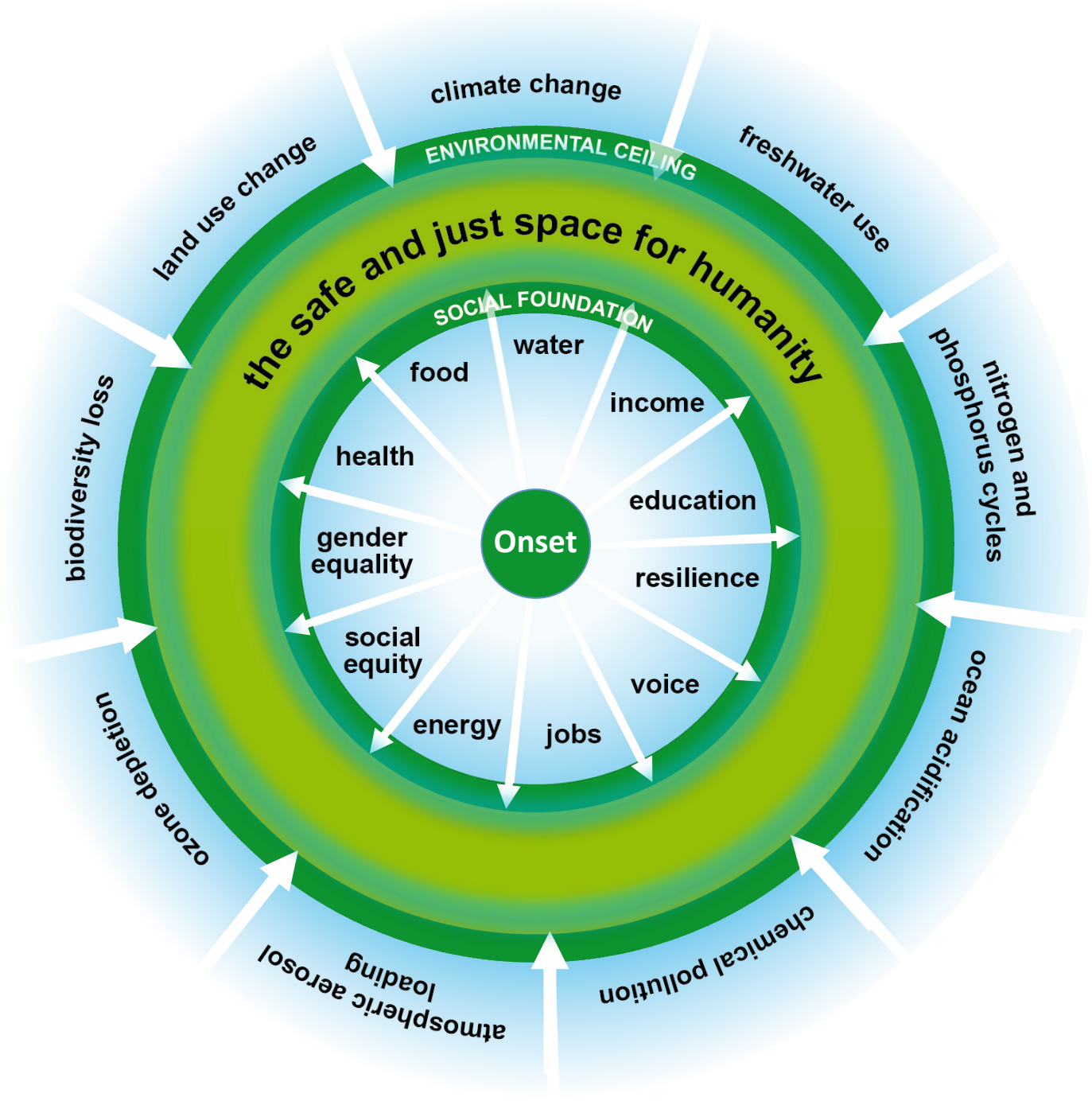


Window of Opportunity



Climate Change





Onset

ENVIRONMENTAL CEILING

SOCIAL FOUNDATION

the safe and just space for humanity

climate change

freshwater use

nitrogen and phosphorus cycles

ocean acidification

chemical pollution

atmospheric aerosol loading

ozone depletion

biodiversity loss

land use change

food

water

income

education

resilience

voice

jobs

energy

social equity

gender equality

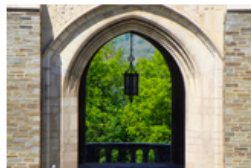
health



***Understand and take responsibility for your carbon footprints.
Pay-it-forward and support sustainability projects of your choice.
Increase awareness and action around climate change.***

Select a box below to learn how Earth Deeds can work for YOU.

HIGHER EDUCATION



Support campus sustainability by

BUSINESS



Be a sustainability leader by engaging

ECOTOURISM



Account for your travel emissions and

NON-PROFIT



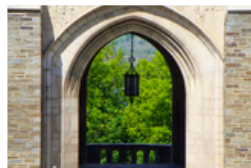
Help your constituents become



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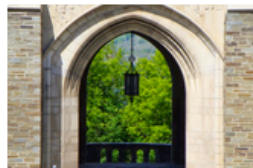
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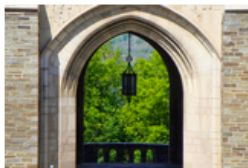
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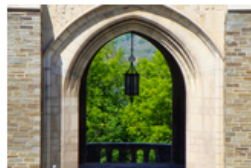
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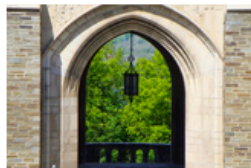
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Help your constituents become


Team



Sustainable Living Class

Spring 2013 - PLSOILIN 185

Jan 20, 2013
To: May 7, 2013



Summary


Update


Emissions

Comments

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[Add Emission](#)

 **Team Emissions: 39.8mT**

 **Projects** **Support**
[UMass Eco-Rep Program ...](#) **\$876.00**



[Join Team](#)

[Admin Access](#)

Sustainable Living (PLSOILIN 185) is an introduction to diverse global perspectives on environmental, economic and social sustainability. The course presents a cultural, ethical and technical review of the impact that our daily decisions make on the global condition.

During the Spring 2013 semester, four students conducted a Service Learning Project to:

1. Measure the class' carbon footprint
2. Consider ways to reduce this footprint
3. "Teamfund" resources to acknowledge this footprint
4. Contribute these resources to a UMass campus sustainability project


Project



UMass Eco-Rep Program

Fostering environmental literacy within the UMass Community



 **Team**
[Sustainable Living Class](#)



\$876.00

USD
Raised by
30 people

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[Summary](#) [Updates](#) [Comments](#)

The Eco-Rep program is an academic class in which students teach other students about sustainability and environmental education. Students gain a basic understanding of all sorts of topics, ranging from waste and recycling, industrial agriculture, climate change, energy, and much more. They also get an opportunity to interact with and educate their peers about what they've learned by putting on monthly events that seek to change campus behaviors.

During the Spring 2013 semester, the Eco-Reps

1. put on "No Impact Week", trying to get the campus community to reduce its carbon footprint,
2. participated in a Divestment campaign from fossil fuels, and
3. will be helping run events at Earth Day.

A next step for the program is to move from Eco-Reps simply participating in events to actually


Project



UMass Eco-Rep Program

Fostering environmental literacy within the UMass Community



 **Team**
[Sustainable Living Class](#)



\$876.00

USD
Raised by
30 people

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Summary

Updates

Comments

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Facebook

<https://www.facebook.com/sharer/sharer.php?u=http%3A%2F%2Fearthdeeds.org%2Fproject.ph...>

On your own Timeline

Please contribute to the UMass Eco-Rep Program! They're doing great work and it is also helping our Sustainable Living class be carbon conscious about our unavoidable emissions. Thanks!



UMass Eco-Rep Program

Fostering environmental literacy within the UMass Community. I am supporting UMass Eco-Rep Program by offsetting my carbon emissions from attending Sustainable Living Class. Check out <http://www.earthdeeds.org> to learn how you can also support local solutions to global warming.

EARTHDEEDS.ORG

Public Cancel **Share Link**


Project



UMass Eco-Rep Program

Fostering environmental literacy within the UMass Community



 **Team**
[Sustainable Living Class](#)



\$876.00

USD
Raised by
30 people

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Donation to Earth Deeds:

Total: \$0.00

First Name* Last Name*

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- Display my name in contribution page
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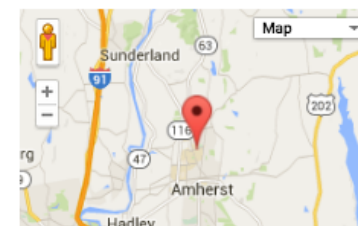
Summary **Updates** Comments

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Team



Spr. '15 Sem. in Central America

Go beyond study abroad in Central America with CELL


Jan 15, 2015
To: Apr 9, 2015



[Summary](#) [Update](#) [Emissions](#) [Comments](#)

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 **Team Emissions: 19.48mT**


 **Projects** **Support**
[Grupo Fenix...](#) N/A




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Explore the principles of "Sustainability Through Community" in Nicaragua and Costa Rica! Learn from front-line organizations demonstrating the best practices in conservation and environmental management. Participate in sea turtle conservation, build a solar power system, and live at a sustainable eco-lodge/farm.

 Follow @Earth_Deeds 140 followers

 Like  Share 645




Project



Grupo Fenix

Supporting appropriate, renewable energy technologies in Nicaragua



Team
[Spr. Sem. in Central America](#)



\$0 USD
Raised by
0 people

[Click to view complete team list](#)

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[Summary](#) [Updates](#) [Comments](#)

Grupo Fenix is a consortium of entities and people revolving around renewable energy and sustainable development in Nicaragua, formed in 1996. It consists of several small organizations, projects and individuals located in Managua, the rural north of Nicaragua and the United States. Members of Grupo Fenix include: PFAE (Alternative Energy Source Program), COOMUSOT (Cooperativa Multisectorial "Mujeres Solares de Totogalpa", SuniSolar and Skyheat. PFAE at the National Engineering University (UNI) in Managua serves as the legal base for and directs "Grupo Fenix".

Grupo Fenix's projects are developed through cooperation between community members, Nicaraguan engineers, universities, like-minded organizations, interested third party donors, and volunteers. Projects are created to gain and maintain self-sufficiency within communities, Grupo Fenix is not a charity in its classical sense, but rather an example of how communities can work with outside groups to shape and develop their own destiny.

Mission

Contribute to the well-being of rural communities by offering alternatives to harmful environmental practices, creating an awareness of sustainable life-styles through technical and cultural exchange, promotion and investigation in the field of renewable energy technologies. The guiding principles

Team Onset Calculator



Team
Spr. '15 Sem. in Central America
 Go beyond study abroad in Central America with CELL!



Project:
Grupo Fenix
 Supporting appropriate, renewable energy technologies in Nicaragua







1 Enter your travel details and **Calculate Emissions.**

Flights ?

From:	To:	Round Trip	One Way	Class	# of People:	Distance (miles)	CO ₂
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy ▾	<input type="text" value="1"/>	0.00	0.00mT
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy ▾	<input type="text" value="1"/>	0.00	0.00mT
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy ▾	<input type="text" value="1"/>	0.00	0.00mT
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy ▾	<input type="text" value="1"/>	0.00	0.00mT
Subtotal:						0.00	0.00mT

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[Clear All](#)

Ground Travel

 Car	<input type="text" value="Miles"/>	<input type="text" value="MPG"/> ?	<input type="text"/>		0.00mT
 Train	<input type="text" value="Miles"/>	<input type="text"/>	<input type="text"/>		0.00mT
 Bus	<input type="text" value="Miles"/>	<input type="text"/>	<input type="text"/>		0.00mT
Subtotal:					0.00mT

[Clear All](#)

1 Enter your travel details and **Calculate Emissions.**

Flights ?

From:	To:	Round Trip	One Way	Class	# of People:	Distance (miles)	CO ₂
MIAMI, (MIA)	SAN JOSE, COSTA RICA (S)	<input checked="" type="radio"/>	<input type="radio"/>	Economy	1	2,233.18	0.94mT
		<input type="radio"/>	<input type="radio"/>	Economy	1	0.00	0.00mT
		<input type="radio"/>	<input type="radio"/>	Economy	1	0.00	0.00mT
		<input type="radio"/>	<input type="radio"/>	Economy	1	0.00	0.00mT
Subtotal:						2,233.18	0.94mT

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Ground Travel

Car	200	30		0.06mT
Train	Miles			0.00mT
Bus	Miles			0.00mT
Subtotal:					0.06mT

[Clear All](#)

? **Calculate Emissions** **Total: 1.00mT**



Enter your travel details and **Calculate Emissions.**

Flights

						Distance (miles)	CO ₂
American	2395	SAN JOSE, COSTA RICA (SJO)		MIAMI, (MIA)		1,116.59	0.47mT
Economy	1	12/13/2015	1:50 PM	12/13/2015	4:46 PM		
Airline	Flight #	Departure Airport		Arrival Airport		0.00	0.00mT
Economy	# Persons	Date	Time AM	Date	Time AM		
Airline	Flight #	Departure Airport		Arrival Airport		0.00	0.00mT
Economy	# Persons	Date	Time AM	Date	Time AM		
Subtotal:						2,233.18	0.94mT

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[Cant find an airport?](#)

Ground Travel

	Miles	MPG		
Car	200	30	0.06mT
Train			0.00mT
Bus			0.00mT
Subtotal:				0.06mT

[Clear All](#)

Calculate Emissions

Total: 1.00mT



Bus

[Clear All](#)



0.00mT

Subtotal:

0.06mT



Calculate Emissions

Total: 1.00mT

1.00mT is approximately the same CO₂ as.....

the annual emission of someone in El Salvador



6% of the annual emission of someone in USA



25% of the annual emission of an average human



50% of the fair Earth share of your annual emissions



292 hours talking on a cellphone



100,000 plastic supermarket bags



83,333 paper supermarket bags



667 Sunday New York Times (recycled)



400 Cheesburgers



1,000 Veggie Burgers



1,111 imported bottles of beer



3,333 locally brewed cask ale



2,941 large lattes



11,111 hours watching TV (34-37" LCD)



2,222 toilet paper rolls(recycled)



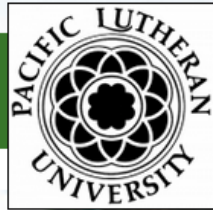
250,000 emails



12,500 bananas




Team



PLU Spring 2015 Study Away


Carbon Neutral in 2020; Carbon Conscious Now

Feb 4, 2015
To: May 16, 2015



[Add Emission](#)

 **Team Emissions: 299.84mT**

 **Projects** **Support**
[Wang Center Retrofits...](#) **N/A**



....

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[Summary](#) [Update](#) [Emissions](#) [Comments](#)

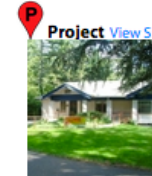
 [View Site](#)

Global and intercultural education is one of the primary focal points of the academic program at Pacific Lutheran University.

Committed to educate for a just, healthy, sustainable, and peaceful world, PLU weaves global education through almost every aspect of a student's study. World events shape our lives, and PLU's curriculum reflects that reality. As a result, students will graduate well prepared for graduate study or a career with a global focus.

PLU's partnership with Earth Deeds allows us to go further in these commitments and enable students to measure and acknowledge the unavoidable carbon footprints from their study away experience and help support a meaningful sustainability project.

Wang Center Retrofits Insulation and Landscaping



[Project View Site](#)



[Team View Site](#)

[Click to view complete team list](#)

\$17,100 USD
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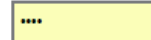
Summary

Updates

Comments

Made possible by a generous gift from Drs. Grace and Peter Wang, the Wang Center for Global Education is an academic support unit dedicated to providing faculty, students and staff with the resources necessary to advance PLU's distinction and vision for global education of "educating for a just, healthy, sustainable, and peaceful world at home and abroad" through faculty development and grant opportunities, delivery of study away programs, on campus programming on pressing world issues, and a commitment to best practices when engaging with educational partners worldwide.

Funding is being sought to make the building more sustainable by increasing insulation and renovating the landscape.



[Admin Access](#)

Student Opportunities

Home

➤ **Study Away**

Programs

Semester

Short Term

International Internships

Accepted

Current

Returner

Funding

Resources

Post-Grad Opportunities

Calendar

Documents and Forms

Staff

Wang Center for Global Education



Photo Gallery



GATEWAY SEMESTER PROGRAMS



Chengdu, China

Open to all majors and language levels, students take courses at Sichuan University in Chengdu, China. At SCU, in addition to classes in Mandarin and Chinese culture, students take assorted courses that are taught in English.



Oslo, Norway

Explore Peace and Conflict Studies and Norway's successful implementation globally with respect to aid



Oaxaca, Mexico

This program explores the intersection of development, culture, and social change through the lens of the dynamic and evolving context of contemporary Mexico. Internship option; courses taught in Spanish.



Telemark, Norway

Open to all language levels, the Telemark University College program offers Scandinavian Studies,



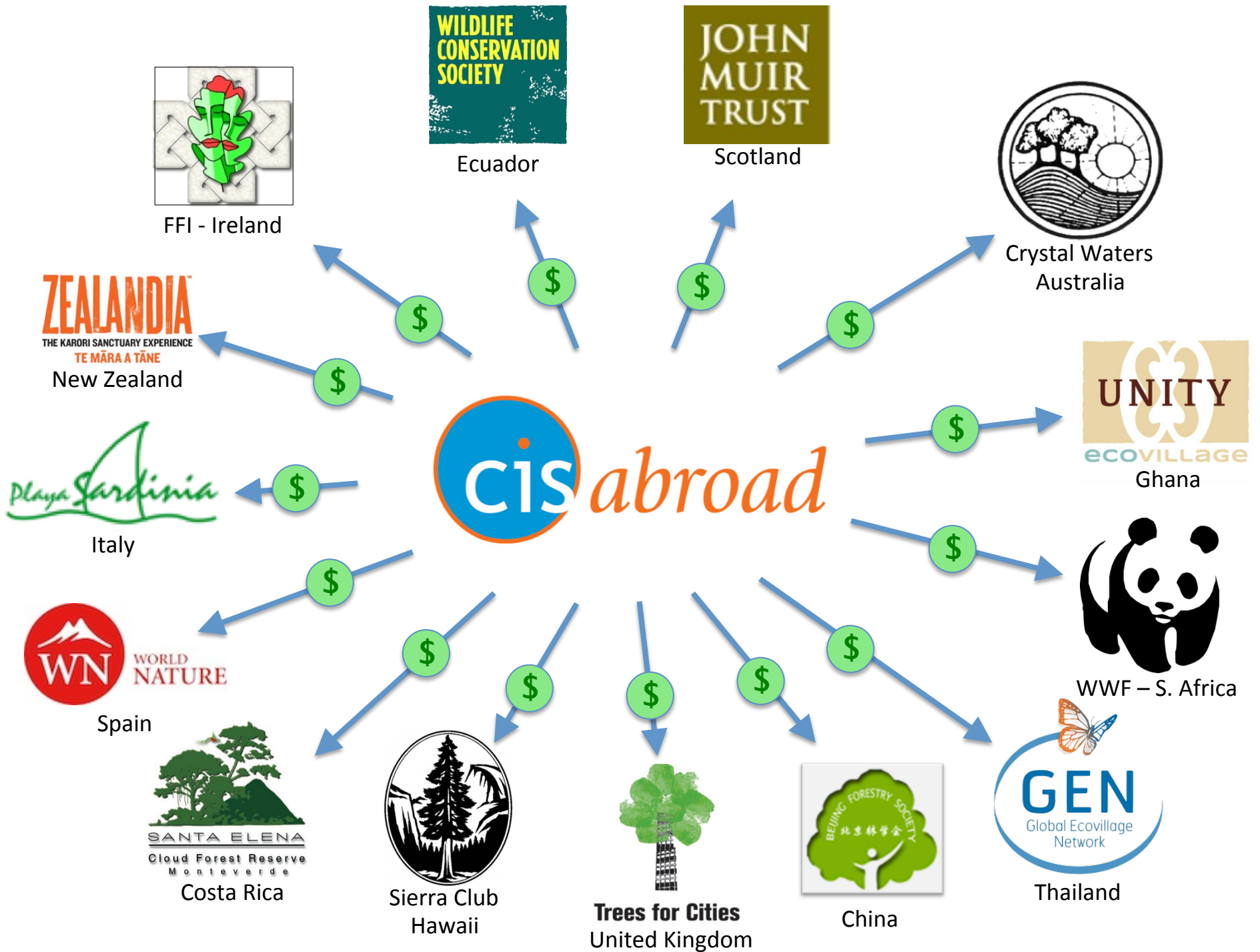
Caribbean - Trinidad & Tobago

This program provides students a unique opportunity to explore the islands and the varied heritage of this multicultural society. Open to all majors; courses taught in English.



Oxford-IHON

PLU International Honors Program in Social Justice in Oxford, England. Throughout history, some




Team



International Students

2014-2015 travel


Sep 2, 2014
To: May 7, 2015



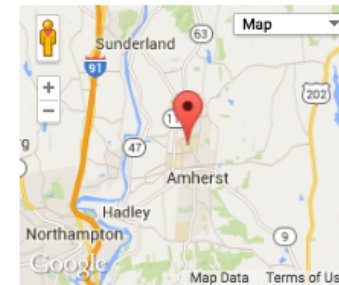
[Summary](#) [Update](#) [Emissions](#) [Comments](#)

 [View Site](#)

[Add Emission](#)

 **Team Emissions: N/A**


 **Projects** **Support**
[Sustainability Innovati...](#) **N/A**





[Join Team](#)

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Students from more than 70 countries attend UMass Amherst, and they are an essential part of our diverse campus community. As an international student, you will benefit from the full range of opportunities and resources that UMass Amherst offers, as well as the support and guidance of the International Programs Office. We hope you'll find UMass Amherst a welcoming home away from home.

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Project



Sustainability Innovation & Engagement Fund

Study Abroad and International Students



 **Team**
[International Students](#)



\$0 USD
Raised by
0 people

[Click to view complete team list](#)

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[View Site](#)

Summary

Updates

Comments

The Sustainability Innovation & Engagement Fund was established in August 2013 to foster a strong culture of sustainability on the UMass campus by incentivizing students, faculty, and staff involvement. This particular fund is available to any international student propose and carry out a sustainability project.

Projects completed or in process during the Summer of 2014 include:

1. Sustainable showerheads
2. Minute Riders - bicycle pick-up of compost
3. New2U Reuse Collection and Tag Sale
4. Random Acts of Sustainability
5. Pollinator Hotels
6. Paperless Campus Recreation


Team



Climate Leadership Award

AASHE 2015 Conference

Oct 25, 2015
To: Oct 28, 2015



[Summary](#) [Update](#) [Emissions](#) [Comments](#)

 [View Site](#)

AASHE 2015 Conference & Expo, themed Transforming Sustainability Education, will convene a diverse group of campus representatives including faculty, students, sustainability officers, staff, administrators and presidents together with business, non-profit, government and community members for a sustainable celebration.

Participants are invited to onset their carbon emissions from travel and accommodations associated with the conference and capitalize a Climate Leadership Award that will be given to a project submitted by and voted on by conference participants.

[Add Emission](#)

 Team Emissions: N/A


 **Projects** **Support**



Project #1 ...	N/A
Project #2 ...	N/A
Project #3 ...	N/A



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Team Onset Calculator






Team
Climate Leadership Award
 AASHE 2015 Conference

THANK YOU for being carbon concious and onsetting your emission as a part of Team - Climate Leadership Award. Please follow the three steps below and [contact us](#) if you have any question.

 Rank Projects in order of preference		Preferences		
		1st	2nd	3rd
	Project #1 To Be Determined	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Project #2 To Be Determined	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Project #3 To Be Determined	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Enter your travel details and **Calculate Emissions.**

Flights

From:	To:	Round Trip	One Way	Class	# of People:	Distance (miles)	CO ₂
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy 	<input type="text" value="1"/>	0.00	0.00mT
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy 	<input type="text" value="1"/>	0.00	0.00mT
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	Economy 	<input type="text" value="1"/>	0.00	0.00mT



AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT

Number of Signatories to Date »

0 6 8 4

Submitted GHG Inventories »

2 1 5 1

Submitted Climate Action Plans »

0 5 3 3





AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT

PROPOSAL:

- 1) Drop neutrality requirement**
- 2) Price carbon based on the SCC**



AMERICAN COLLEGE & UNIVERSITY
PRESIDENTS CLIMATE COMMITMENT

BENEFITS:

- 1) Support Campus/Community Projects**
- 2) Increase Efficiency**
- 3) Offer Pedagogical Value**
- 4) Avoid Controversies**
- 5) Access New Funding Sources**
- 6) Eliminate Excuses for Inaction**
- 7) Have a Positive Story**



Thank You

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Blog.EarthDeeds.com



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www.EarthDeeds.org/contact



info@EarthDeeds.org



(413) 367-7027



85 Baker Rd., Shutesbury, MA 01072 USA



**STRENGTHENING TIES FOR
COLLECTIVE IMPACT:
CAMPUS
SUSTAINABILITY
IN THE
NORTHEAST
REGION**

save the date



Achieving NetPositive Sustainability by Creating
Handprints Bigger than your Footprints

10 April 2015

Gregory A. Norris



What is a Footprint?

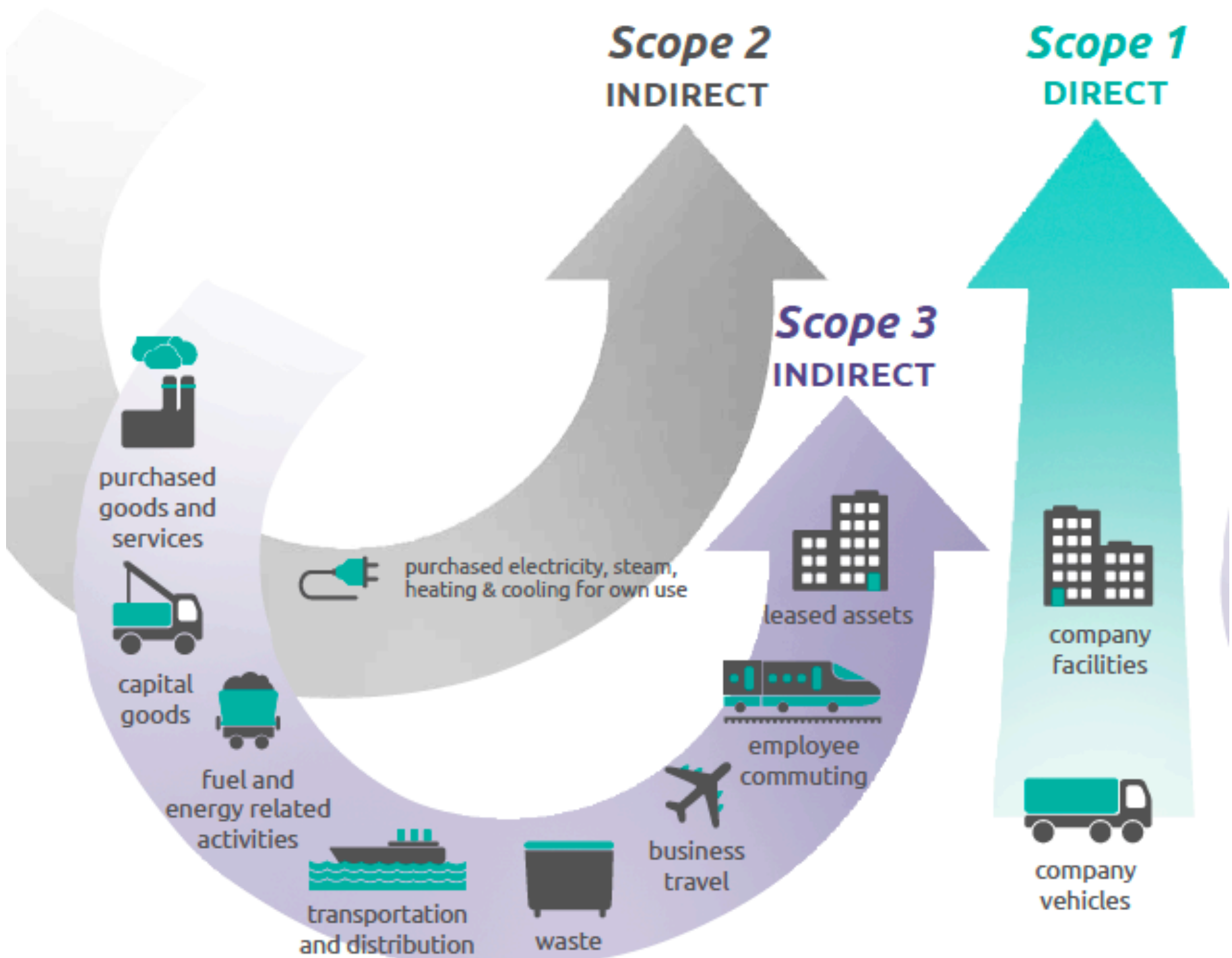
All the negative impacts of all the processes needed to sustain or produce something.

Products have them

Services too

People

Organizations





Sustainability has been all about shrinking your footprint.



ENERGY



WATER

EVERY Product Still Has (Many) FOOTPRINTS



CLIMATE



MATERIAL
HEALTH

B. Monginoux / Landscape-Photo.net (cc by-nc-nd)

Flickr: Carvalho;Lourenco



The planet would be better off without me?



© 2008 Caitlin Taylor



Becoming Positive...

We can't *shrink* our way to Positive.

To become healers,

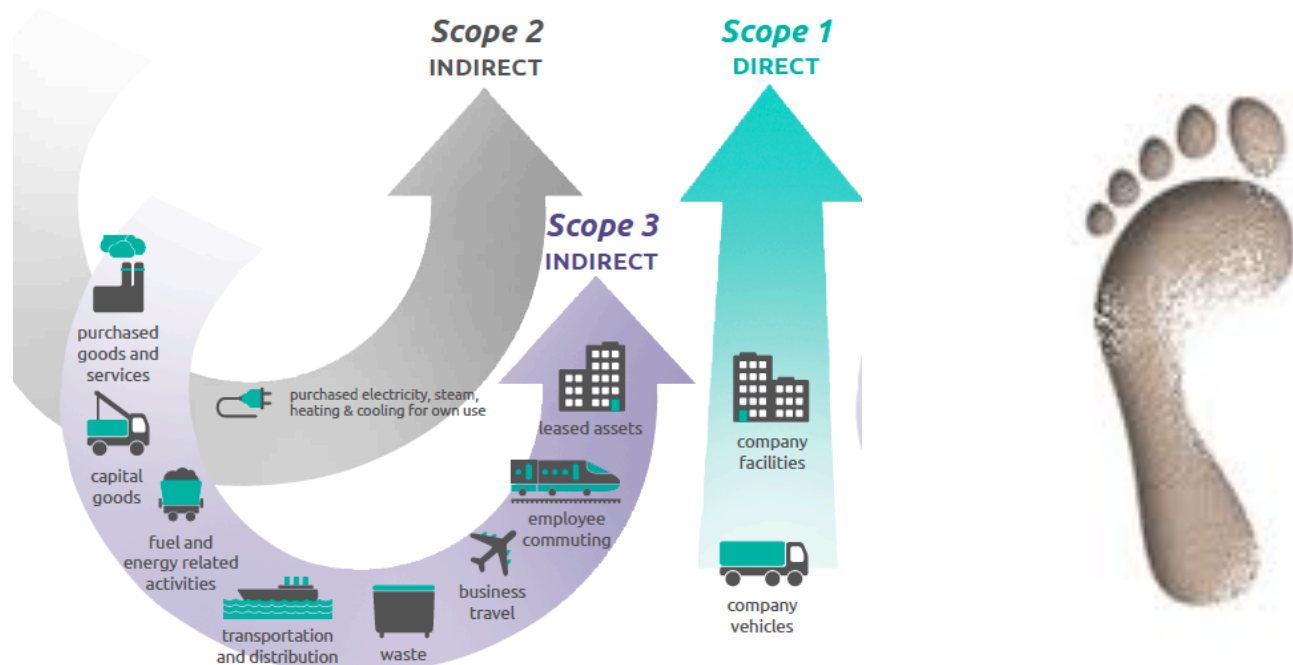
We Must Give More than we Take.

What do you Take?

Person: What is required to sustain you.

Organization: What is required to enable you to offer what you offer to the world.

Product: What is required to offer it to the world.



What do you Give?

**If We Want to be NetPositive,
We've Got To Learn To Give.**



What is a Handprint?

Handprints are positive impacts we cause to happen relative to “business as usual”



INTRODUCING HANDPRINTING AND FOOTPRINTING



A handprint of a product is the sum total of positive impacts we create.

A footprint of a product is the sum total of negative impacts caused by the process necessary to produce the product.

continued >>

Handprints were defined in direct relation to Footprints,
so that Handprint > Footprint → NetPositive

Built on LCA using the same metrics as
Footprints

Same Impact Dimensions: Supply Chains
and Life Cycles

Footprinting: Shared Responsibility

Handprinting: Shared Credit

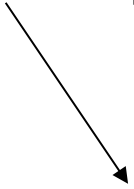


3 ways to create Handprints

Step 1: Reduce your own footprint:

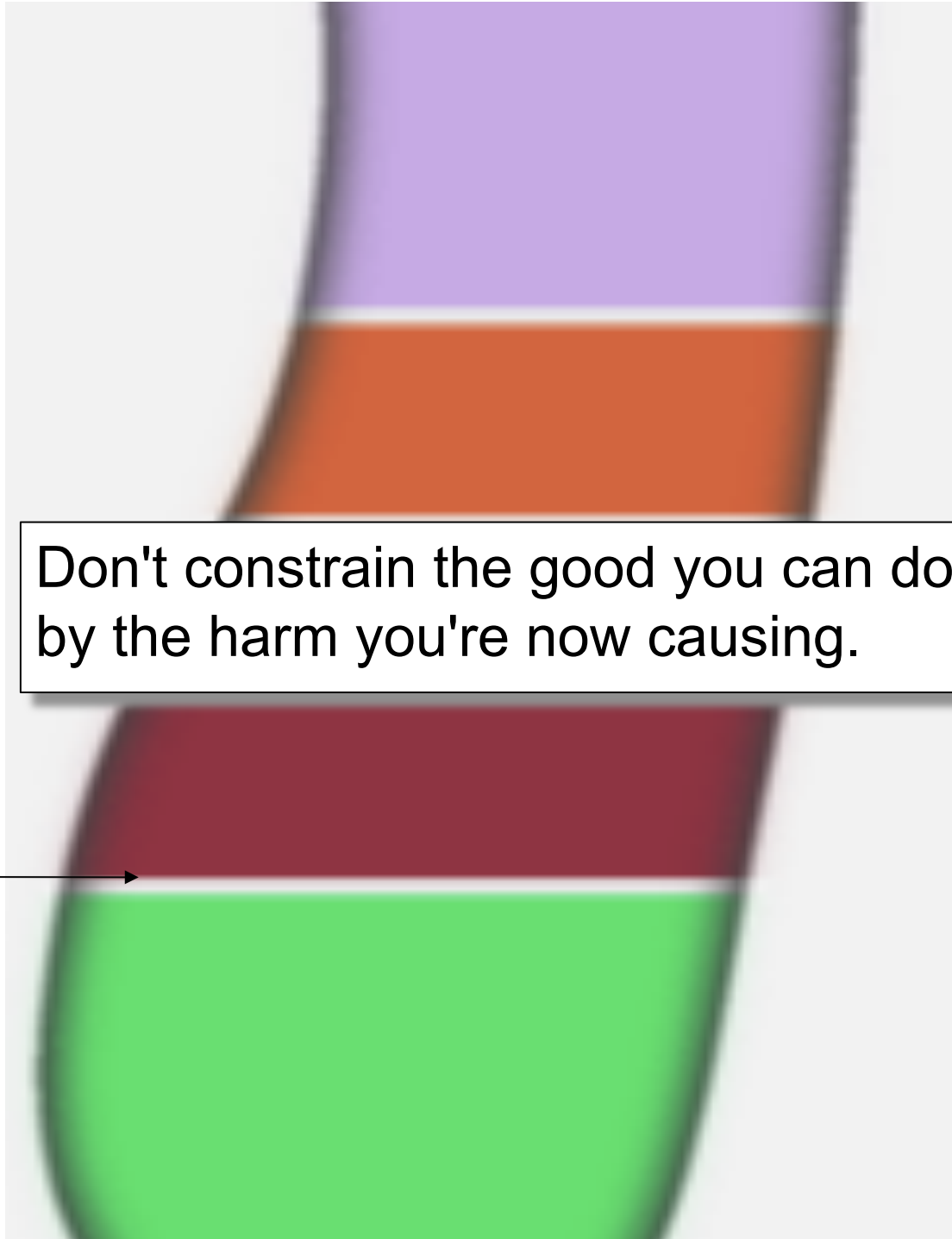
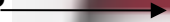
- * Reformulate/redesign your good or service
- * Switch suppliers, or promote innovation in your supply chain
- * Green your own production operations

Your footprint



Don't constrain the good you can do by the harm you're now causing.

Humanity's
Footprint



The background of the slide is a close-up photograph of light-colored sand. Several distinct footprints are visible, showing the texture and depth of the sand. The footprints are scattered across the frame, with some being more prominent than others. The overall tone is warm and natural.

Step 2: Help anyone/everyone else reduce their footprint

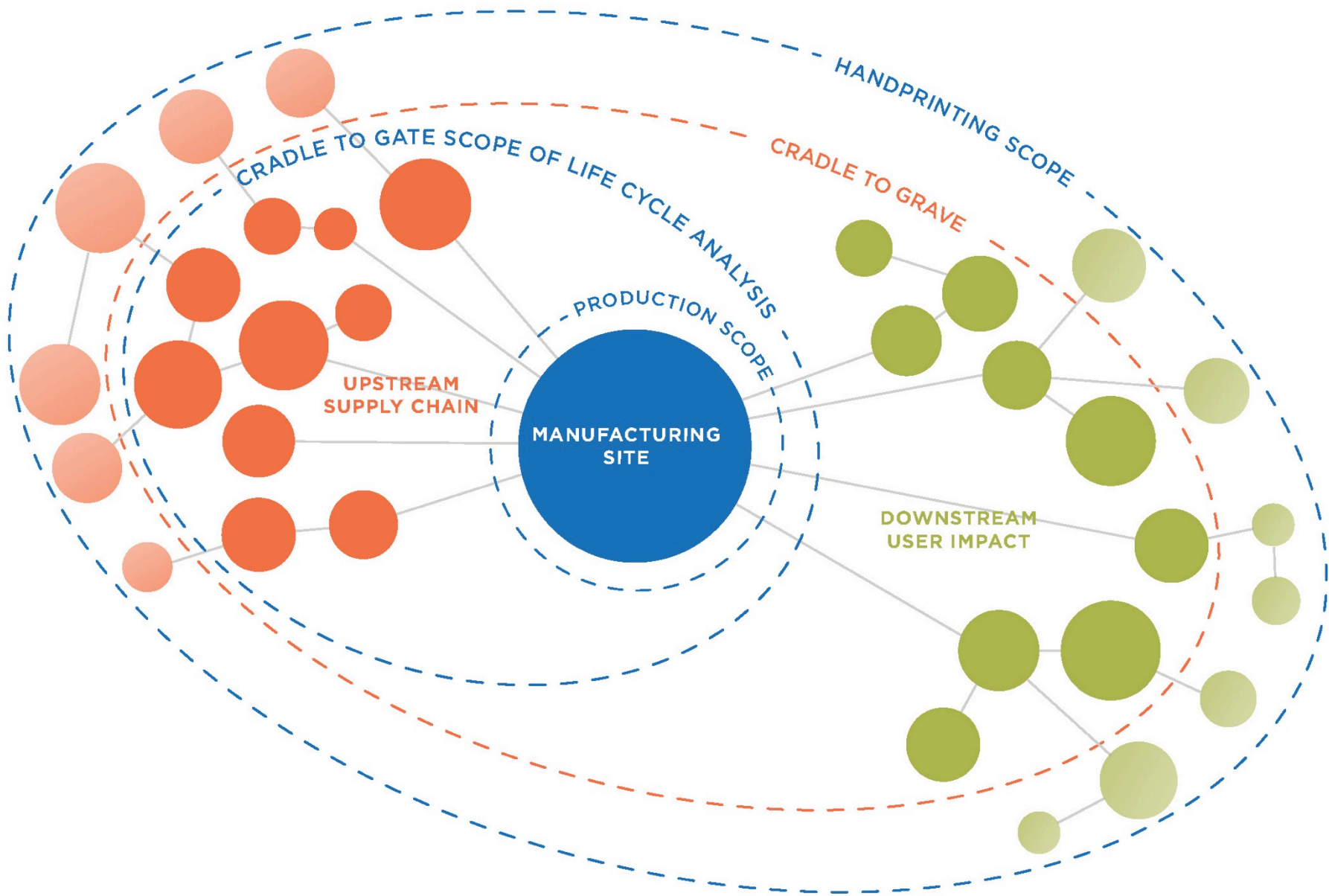
- * Make your product more efficient for others to use
- * Engage/inform/inspire users to use more wisely
- * Share innovations or research
- * Grow demand for NetPositive goods and services

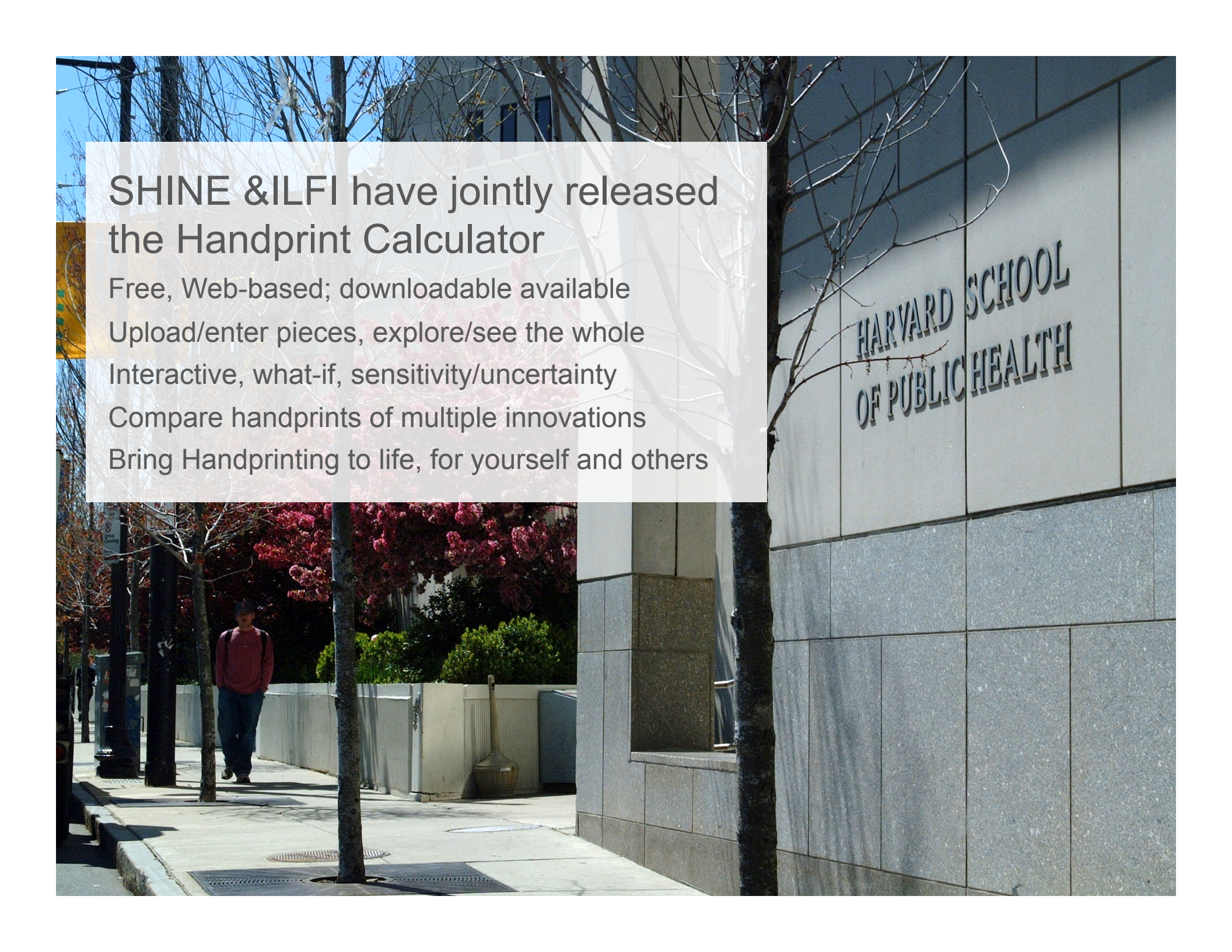


Step 3: Think outside the foot!

Take generative actions:

- * Plant a tree
- * Protect or restore habitat or other ecosystems
- * Promote healing, health, and human development



The background of the slide is a photograph of the Harvard School of Public Health building. The building is a modern structure with a grey stone facade. The words "HARVARD SCHOOL OF PUBLIC HEALTH" are engraved in large, dark letters on the wall. In the foreground, there is a sidewalk with a person walking, and some trees with pink blossoms. A semi-transparent white box is overlaid on the left side of the image, containing text.

SHINE & ILFI have jointly released the Handprint Calculator

Free, Web-based; downloadable available

Upload/enter pieces, explore/see the whole

Interactive, what-if, sensitivity/uncertainty

Compare handprints of multiple innovations

Bring Handprinting to life, for yourself and others

Handprint Calculator

The Handprint Calculator will appear below. Model may take a few moments to load; please be patient.

Handprint Calculator

Modeling

Input Data

Innovations	Edit Table	Add Innovation
Impact Categories	Edit Table	Remove Innovation
Inputs (various units)	Edit Table	
Annual Sales (projected) (product units per year)	Edit Table	
Impacts by Data Column (various units)	Edit Table	

Sales year-based results: The impacts of a product across its life cycle (and thus also the handprint-driven changes to these impacts) are assigned to the year of product sale.

Impacts by Sales Year	Calc
Annual Handprint	Calc

Impact year-based results: The impacts of a product during its life cycle (and thus also the handprint-driven changes to these impacts) are assigned to the year during which these impacts occur.

Impacts by Year by Phase	Calc
Annual Handprint	Calc

Welcome to the Handprint Calculator!
Use this tool to help you organize, evaluate, compare and communicate your handprinting opportunities.

Handprints are positive impacts that we cause to happen, relative to business as usual. They are based on life cycle assessment (LCA), just like footprints. And they can be compared with footprints (the unintentional negative impacts caused by producing a product or sustaining a person or organization) in order to guide the achievement of NetPositive sustainability. When your handprint is bigger than your footprint, you give more than you take, and you are NetPositive.

This tool is currently tailored to assessing the handprints caused by innovations which occur somewhere in the life cycle of a product. It allows you to upload LCA results for the product before and after the handprint-creating innovation or action. And it allows you to assess the impacts of multiple innovations, one at a time – and to compare their impacts. You can set the Impact Categories to match the life cycle impact assessment method you use. If you need support in doing an LCA of your product, please contact us.

The results buttons allow you assess the timing of your handprints in one of two ways. Sales-based results assign the (life cycle) impacts of an innovation to the year in which the innovated product was sold. Impact year-based results take the timing of the actual impacts explicitly into account, so that for example the benefits of energy efficiency occurring in the 10th year of a product's life occur 10 years after it was sold.



SCHOOL OF PUBLIC HEALTH

Center for Health and the
Global Environment

Handprint Calculator

Input Data

Innovations

Edit Table

Add

Remove

Impact Categories

Edit Table

Add

Remove

Inputs

(various units)

Edit Table

Annual Sales (projected) (product units per year)

Edit Table

Impacts by Data Column

(various units)

Edit Table

Sales year-based results: The impacts of a product across its life cycle (and thus also the handprint-driven changes to these impacts) are assigned to the year of product sale.

Impacts by Sales Year

Calc

Annual Handprint

Calc

Impact year-based results: The impacts of a product during its life cycle (and thus also the handprint-driven changes to these impacts) are assigned to the year during which these impacts occur.

Impacts by Year by Phase

Calc

Annual Handprint

Calc

Handprint Calculator

Input Data

Innovations

Edit Table

Add

Remove

Impact Categories

Edit Table

Inputs

(var

Annual Sales (projected) (product unit

Impacts by Data Column

(var

Innovations

Provide a short description name for each separate innovation. Innovations are handprint actions, they bring improvements to the life cycle performance of a product during one or more life cycle stage, and relative to one or more impact categories.

Definition: Edit table indexed by Innovation_index

Welcome to the

Use this tool to
handprinting c

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results for the
And it allows ;
and to compa
cycle impact a

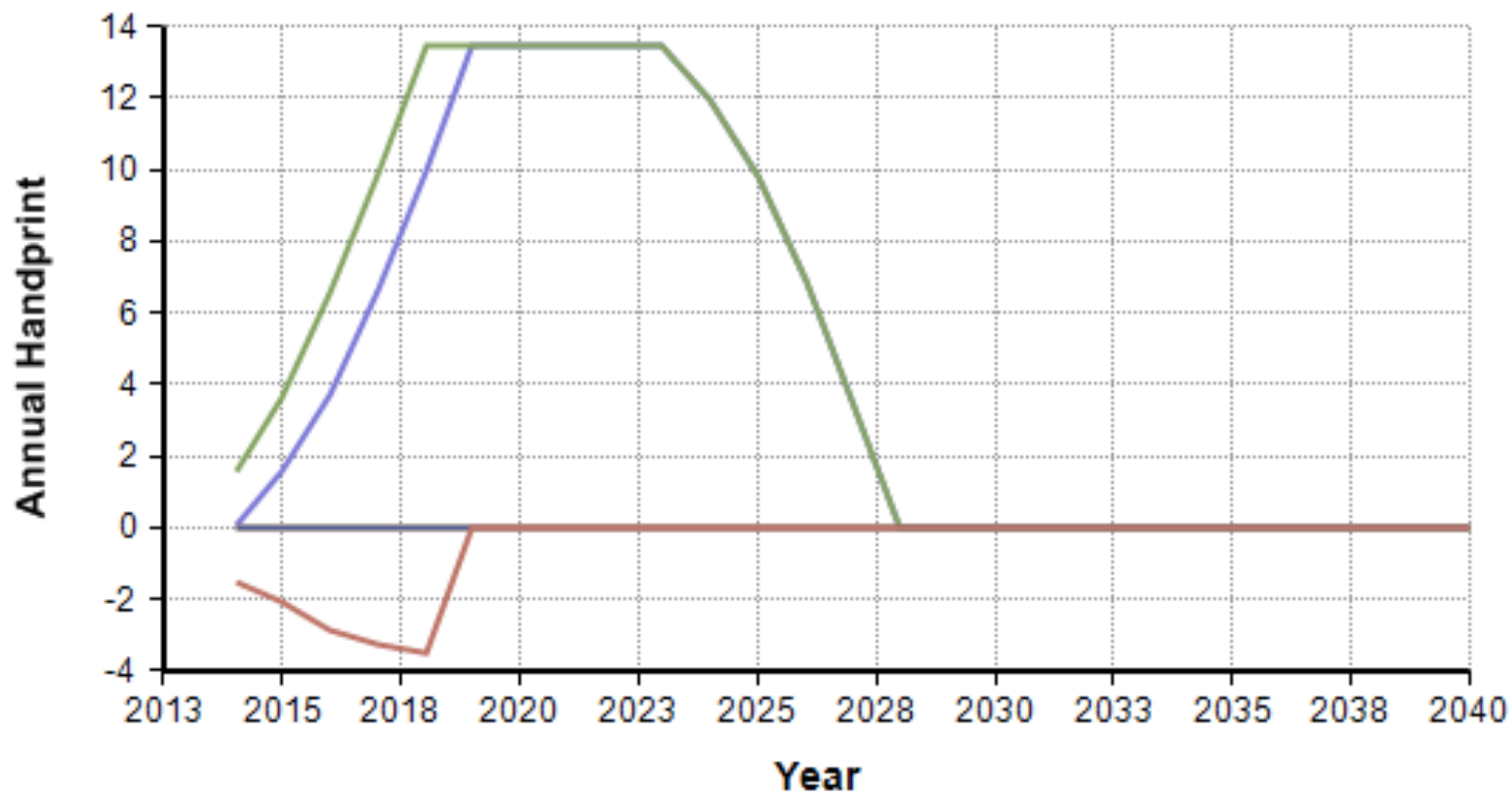
Sales year-based results: The impacts of a product across its life cycle (and thus also the handprint-driven changes to these impacts)

Impact Categories

Innovations

Horizontal Axis:

Key:



Phase


— Upstream — Production — Use — End-of-use — TOTAL



Energy Handprinting

Water heater blankets can reduce standby heat losses by 25%–45% and save about 4%–9% in water heating costs, allowing for a pay-off of about a year¹.

¹energy.gov



An aerial photograph of a rugged coastline. The foreground shows dark, rocky terrain with some green vegetation. The middle ground features a large, curved bay or inlet with a mix of blue and brownish water, suggesting a mix of sand and rocks. The background shows a wide expanse of the ocean under a blue sky with scattered white clouds. A semi-transparent white rectangular box is overlaid on the right side of the image, containing text.

Design for Ripple Effects

Harness abundance to
create more abundance



Use 9 months savings from 1 donated blanket to:

- * Buy and give 2 more blankets
- * Support a school activity

With NetPositive, it's *Not* a Not

- Your footprint remains in the limelight.
- And shares it with your handprint.



Handprints are About **Change**

- You create a handprint when you **cause a change** to business as usual (BAU).
- For a business, basic BAU = responding to this year's demand with last year's product.



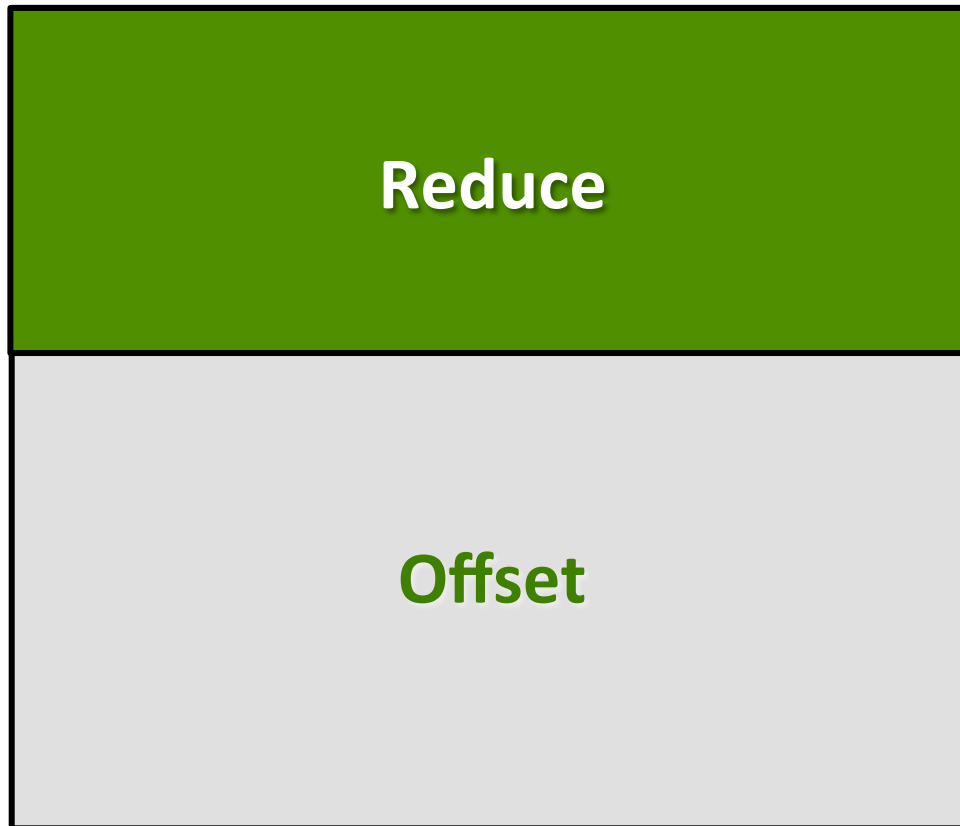


Innovating for NetPositive Impact

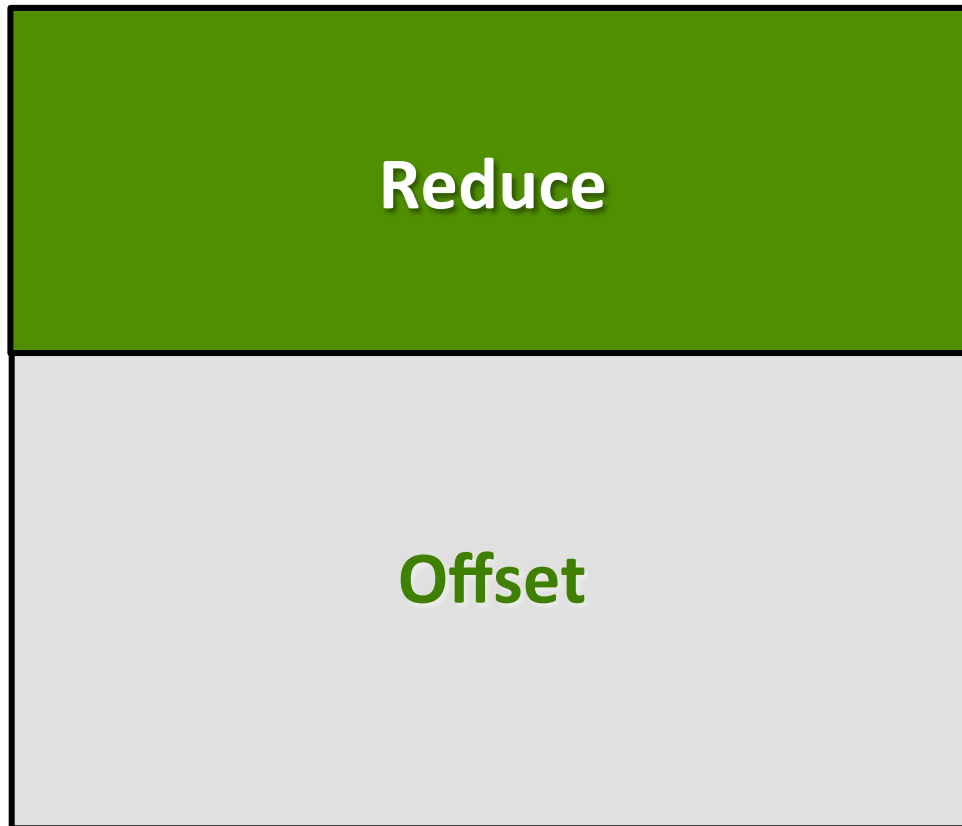
June 4-5, 2015

Harvard Campus, Cambridge MA

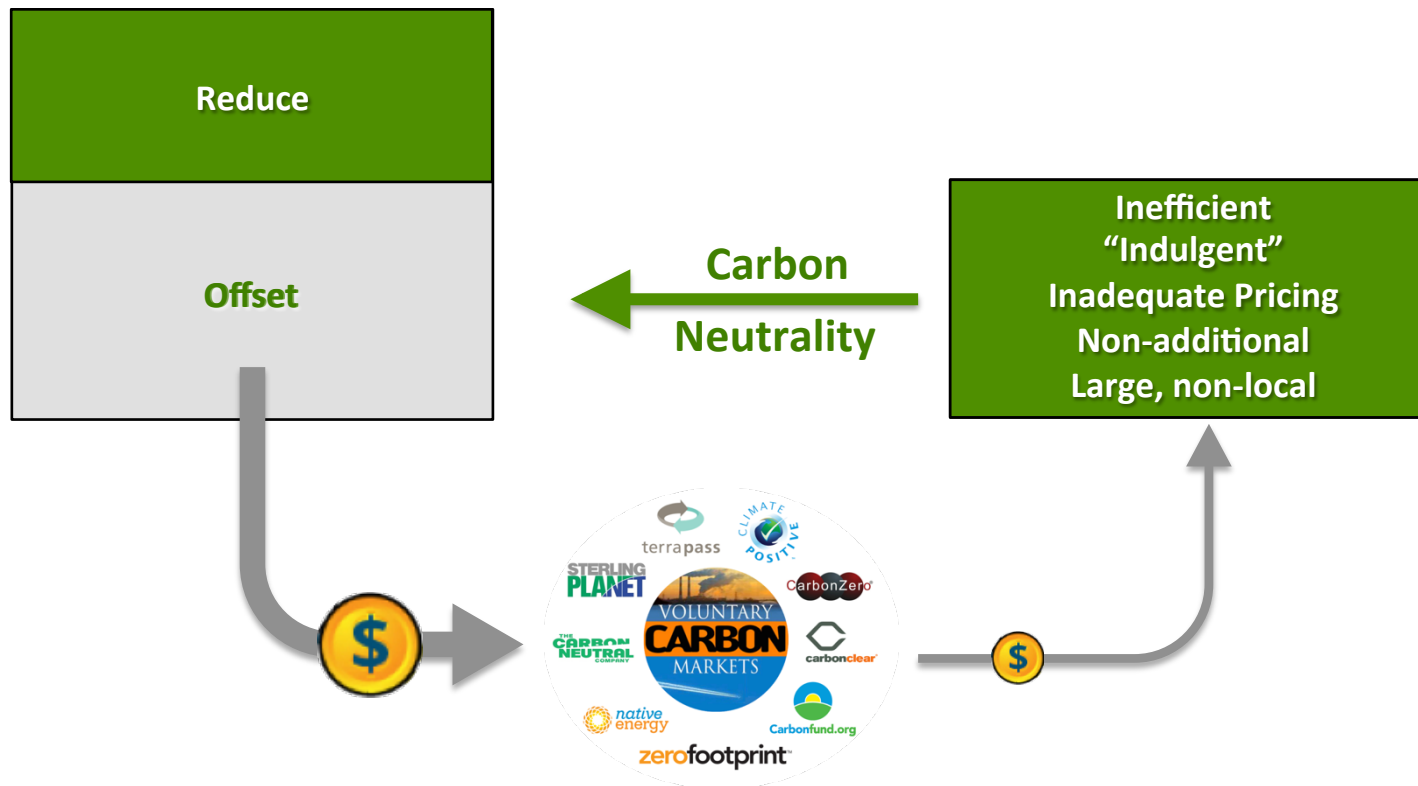
Offsetting

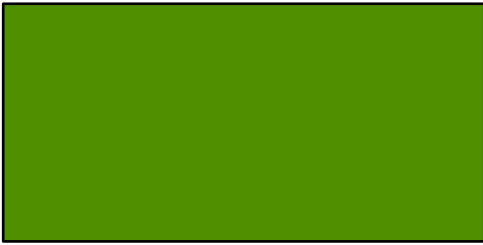
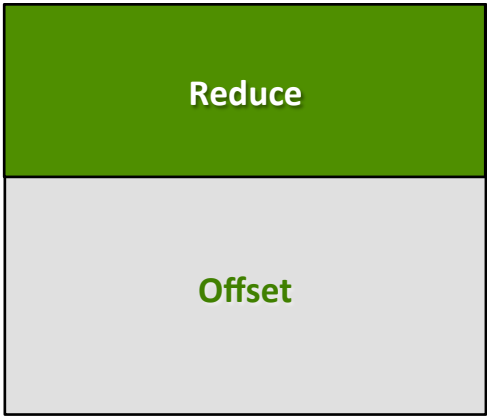


Offsetting

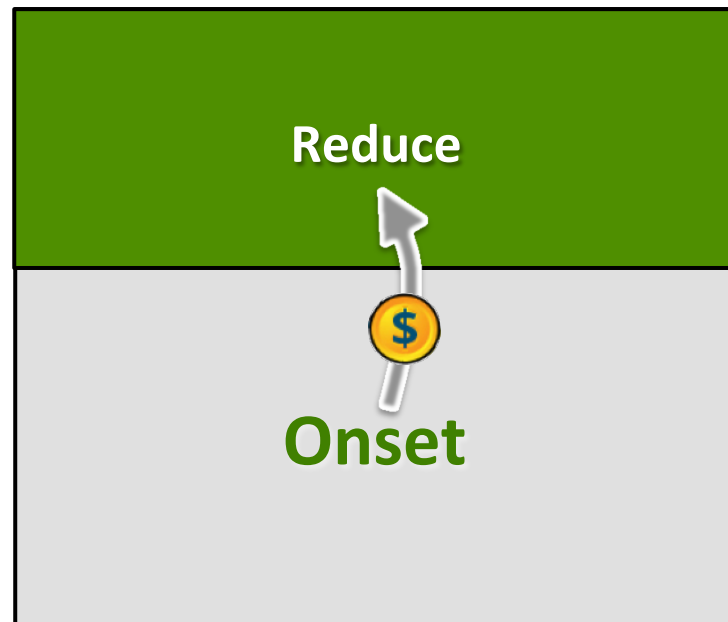


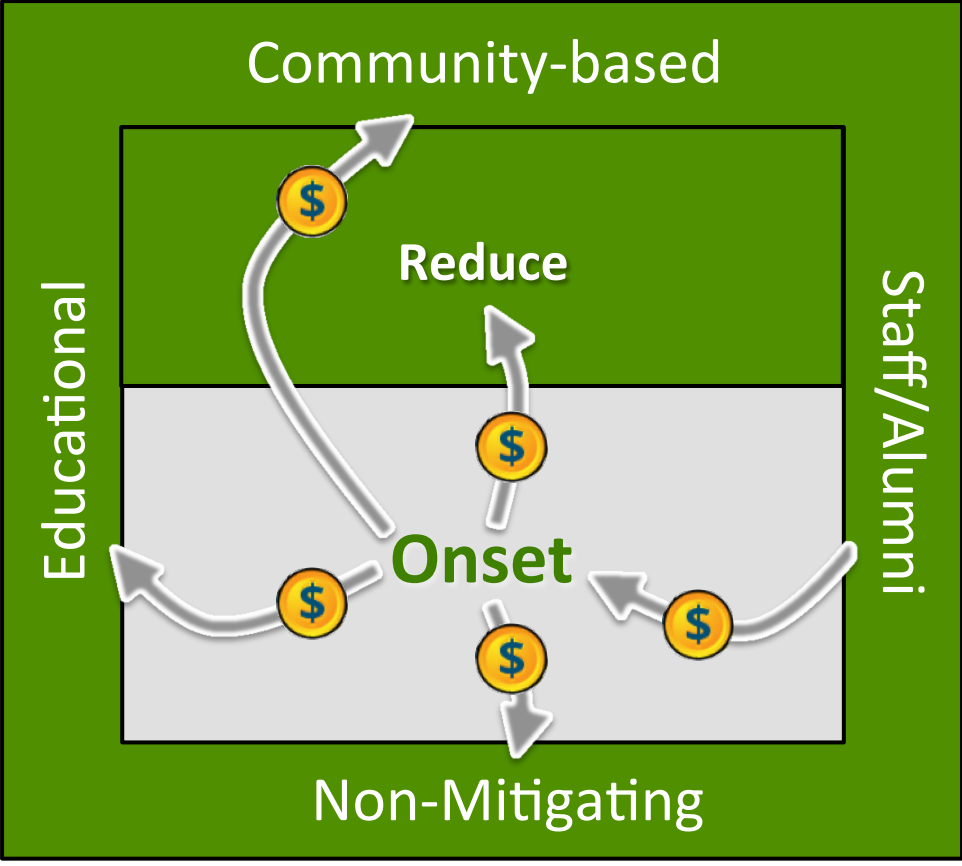
Offsetting

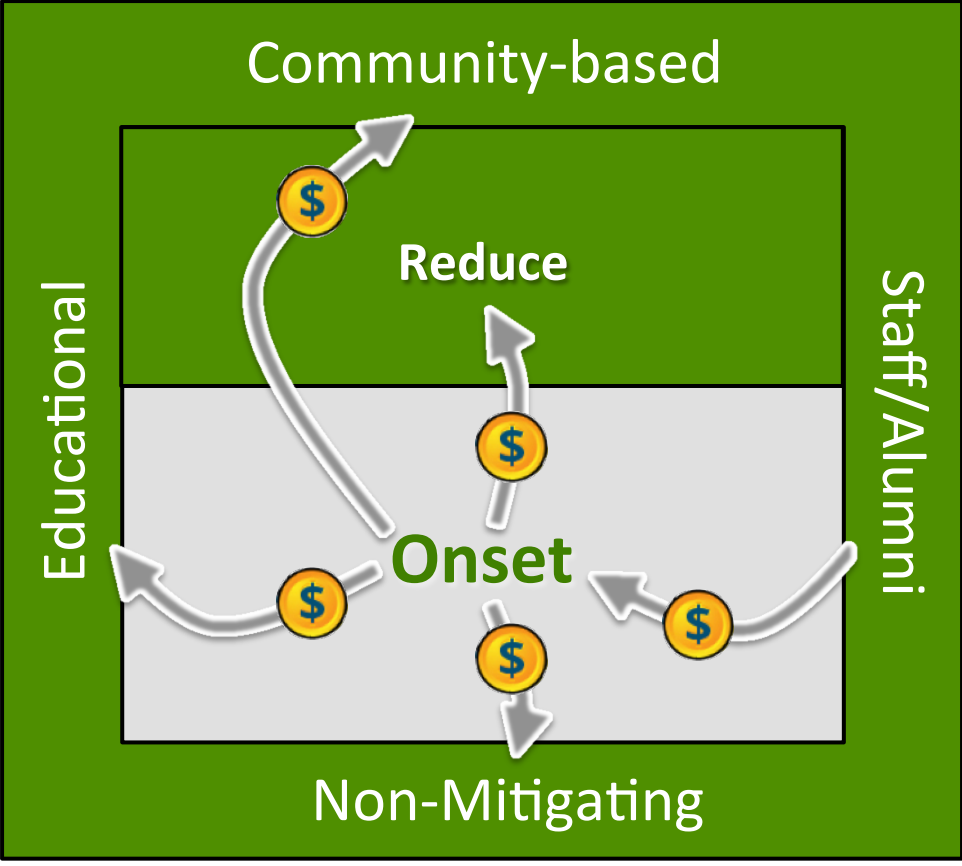


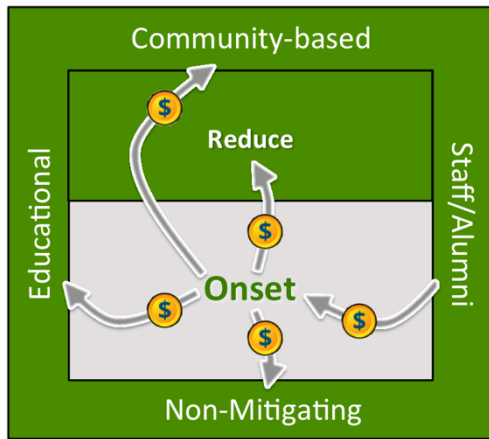


Reduce



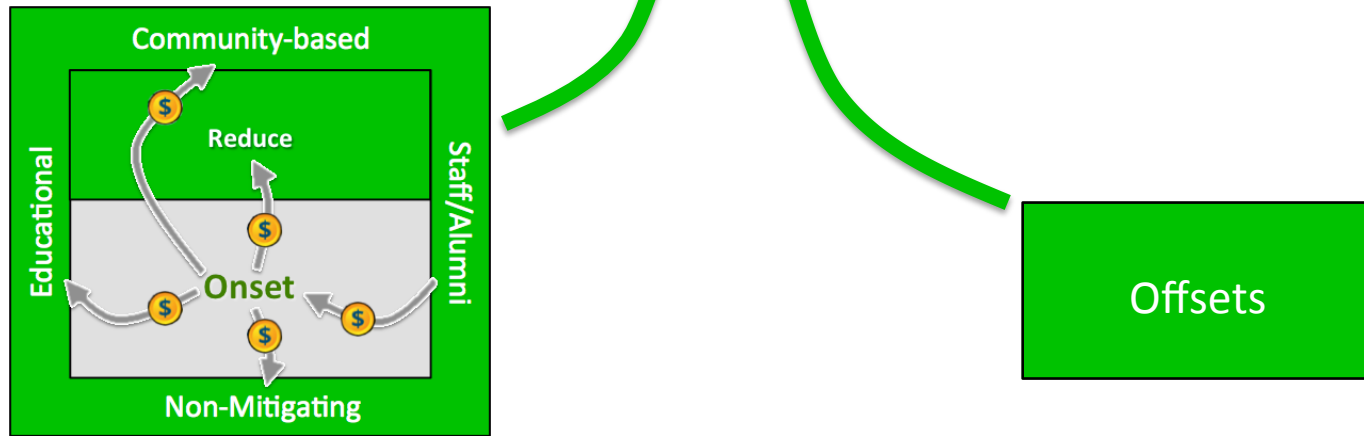






Offsets

handprints



Discussion

- Turn to your neighbors, discuss the concepts presented and any questions to bring back to the group.
- Think about onsetting/handprinting projects you might do on campus, and how it might influence your greenhouse gas reduction strategy.
- How can we work together to keep this conversation going?