

Sustainability: In Theory & In Practice



Sustainability Institute for
Regional Transformations



The logo for ORBIS. It features the word "ORBIS" in white, bold, italicized capital letters, with a registered trademark symbol (®) to the right.

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What is Sustainability?

Stephanie Spehar

Director, Sustainability Institute for Regional
Transformations

Associate Professor of Anthropology



Sustainability Institute for
Regional Transformations



Dr. Stephanie Spehar
Associate Professor, Anthropology
Director, Sustainability Institute for Regional Transformations (SIRT)

- Physical anthropologist
- Specializes in primate socioecology (how ecology and the environment have shaped primate social systems and behavior)
- Research focus on primate mating systems, group dynamics and social behavior, and communication
- Secondary research interest in primate conservation, especially the effect of habitat alteration, fragmentation, and hunting on primate communities
- Ph.D., New York University; Master of Arts, New York University; Bachelor of Arts, California State University Los Angeles



UNIVERSITY OF WISCONSIN
OSHKOSH

Sustainability Institute for
Regional Transformations

What is Sustainability?

When you hear “sustainability”, what does it mean to you?

What is Sustainability?

When I hear “sustainability” it means to me:

<i>(please darken all that apply)</i>	
4a. Reducing	<input type="radio"/>
4b. Reusing	<input type="radio"/>
4c. Recycling	<input type="radio"/>
4d. Conserving resources	<input type="radio"/>
4e. Reserving resources for future generations	<input type="radio"/>
4f. Living simply	<input type="radio"/>
4g. Taking action	<input type="radio"/>
4h. Being proactive	<input type="radio"/>
4i. Thinking differently about daily behavior	<input type="radio"/>
4j. Making behavior changes	<input type="radio"/>
4k. Cutting my carbon footprint	<input type="radio"/>
4l. Educating ourselves	<input type="radio"/>
4m. Understanding the global effects of my actions	<input type="radio"/>
4n .Being efficient	<input type="radio"/>
4o. Taking responsibility for my actions	<input type="radio"/>
4p. Other (please describe)	

What is Sustainability?

UN World Commission on Environment & Development
(Brundtland Commission), 1987:

sustainability is meeting **“the needs of the present without compromising the ability of future generations to meet their own needs”** (1987)....A world in which poverty and inequity are endemic will always be prone to ecological and other crises. Sustainable development **requires meeting the basic needs of all and extending to all the basic opportunity to satisfy their aspirations for a better life.”**

What is Sustainability?

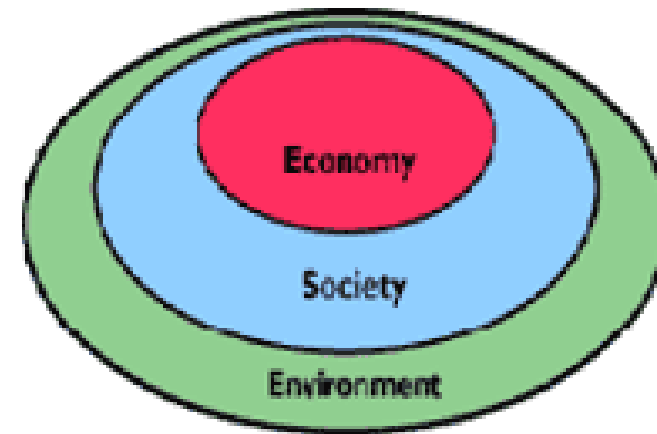
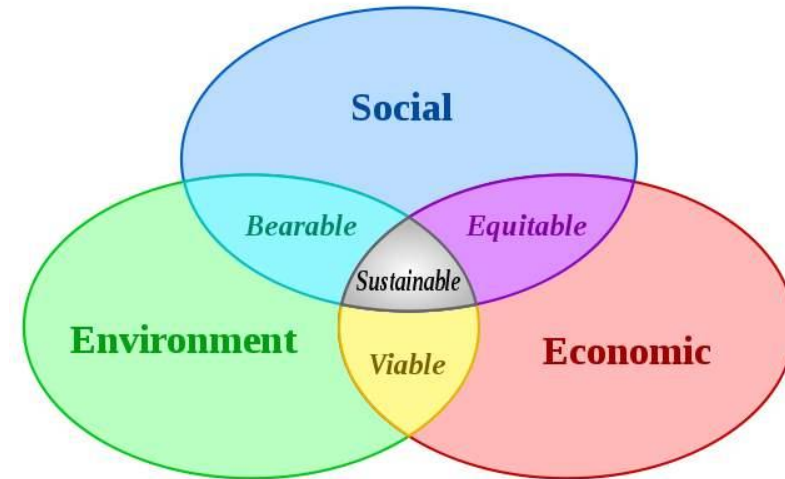
- Sustainability is about figuring out how to structure our institutions and society in such a way that we can live within ecological limits while supporting good quality of life for all

“A dynamic process which enables all people to realize their potential and improve their quality of life in ways which simultaneously protect and enhance the Earth’s life support systems”

- UK’s Forum for the Future (2006)

Sustainability Key Concepts

- Ecological limits + social and economic justice: “thrive, not just survive”
- Interconnectedness of human communities and the Earth (often broken into three components or “pillars”: environment, society, economy)
- Sustainability = good quality of life. It’s about questioning, creativity, and collaboration, not prescription



Ecological Limits

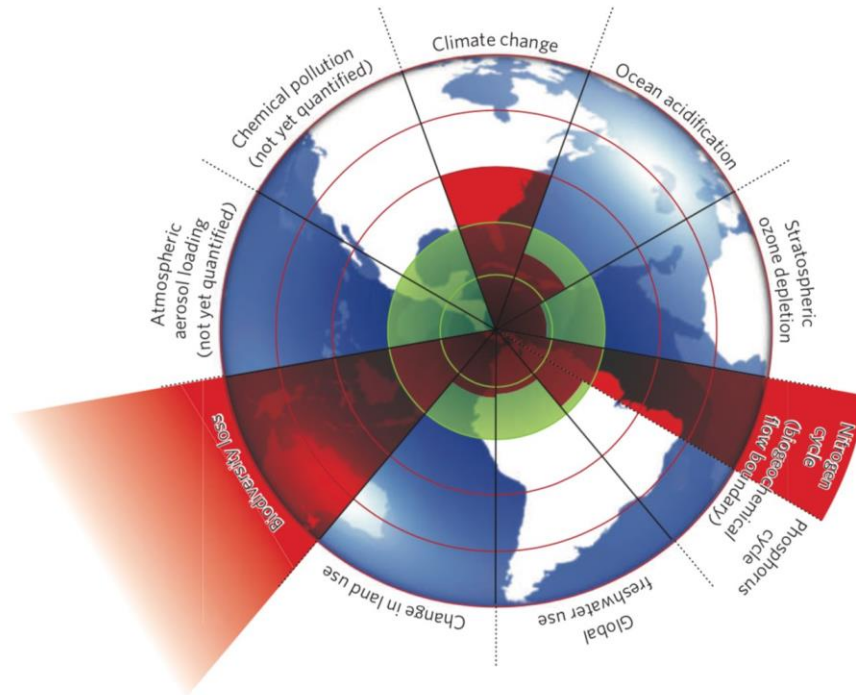


Figure 1 | Beyond the boundary. The inner green shading represents the proposed safe operating space for nine planetary systems. The red wedges represent an estimate of the current position for each variable. The boundaries in three systems (rate of biodiversity loss, climate change and human interference with the nitrogen cycle), have already been exceeded.

Rockstrom et al. (2009), "A safe operating space for humanity." *Nature* 461: 472-475

News | Climate Crisis

'Now or never' to avoid climate catastrophe: IPCC report

UN panel warns that policies are leading the planet to extreme temperature rises, and calls for an urgent halt to rising emissions.



The United Nations' Intergovernmental Panel on Climate Change says greenhouse gas emissions should be stopped from rising any further before 2025 [File: AFP]

4 Apr 2022



Will "require rapid, far-reaching and unprecedented changes in all aspects of society."

Social and Economic Justice

- Who benefits most from the status quo? Who is impacted the most by environmental harms?
- How does "unsustainability" harm economic activity and opportunity?
- >50% of the world's population "highly vulnerable" to climate change



Climate change 'cause of most under-reported humanitarian crises'

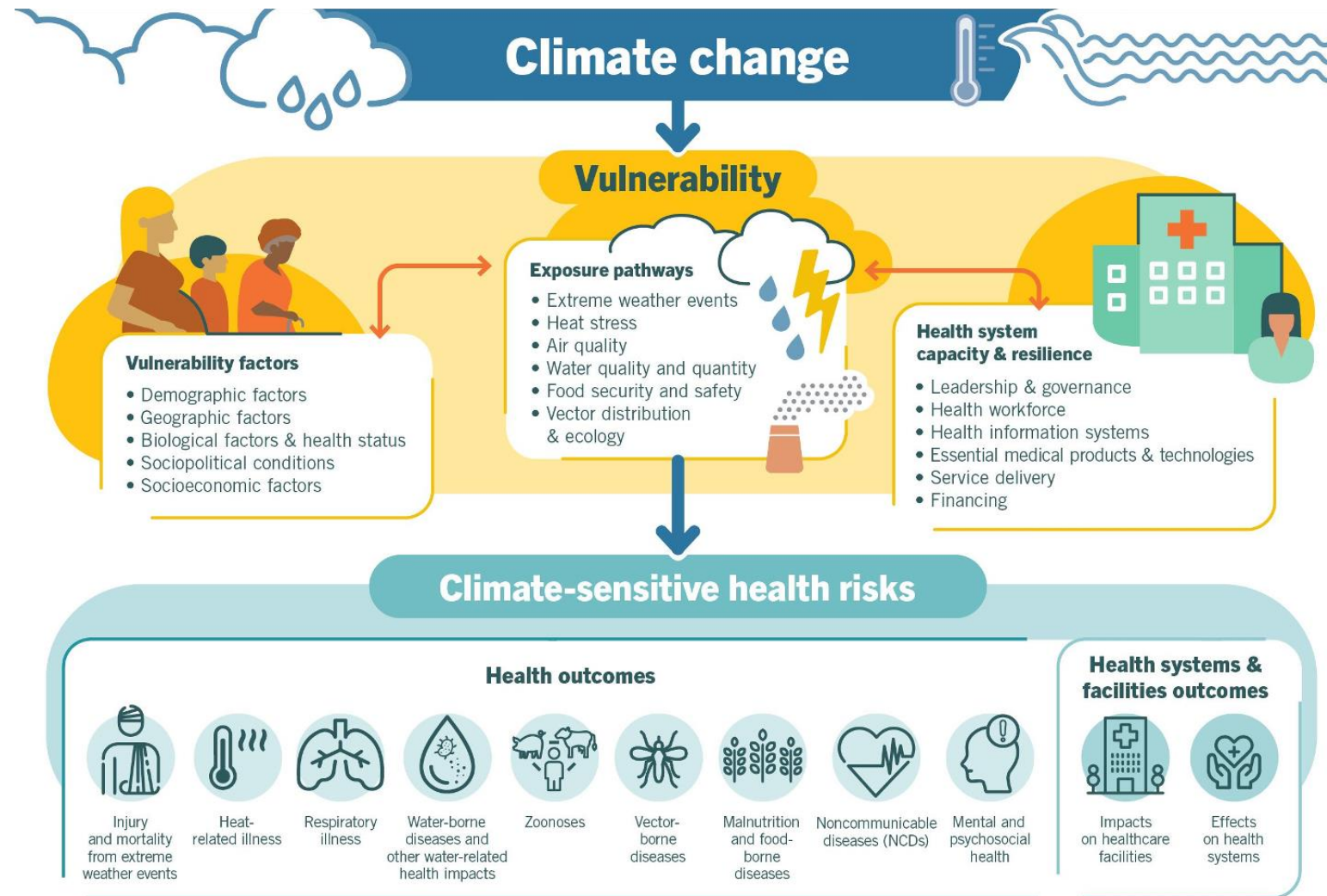
Report says few headlines sparked by food crises that ravaged Madagascar, Ethiopia and Haiti



▲ A girl eats a food supplement in Ifotaka, southern Madagascar, in December 2018. Photograph: Rijasolo/AFP/Getty Images

Climate change was responsible for the majority of under-reported humanitarian disasters last year, according to analysis of more than a million online news stories.



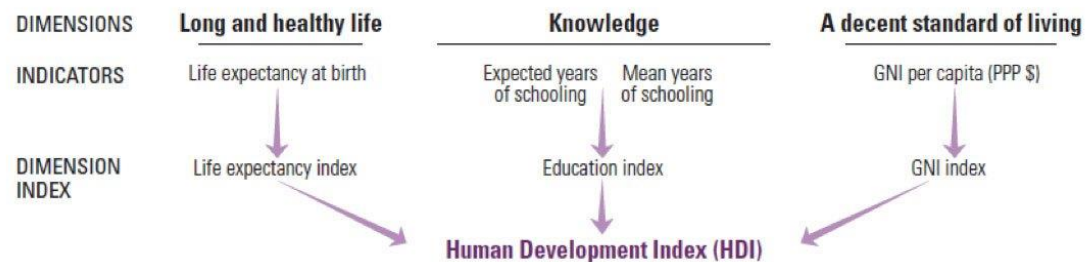


"Climate change is the single biggest health threat facing humanity...the people whose health is being harmed first and worst by the climate crisis are the people who contribute least to its causes, and who are least able to protect themselves and their families against it - people in low-income and disadvantaged countries and communities"--World Health Organization, 2021

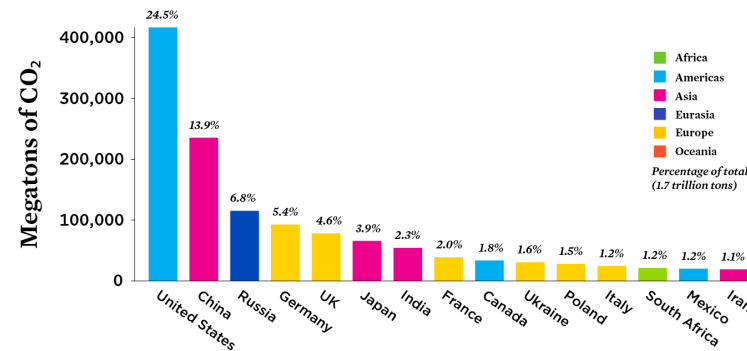
How do we measure sustainability?

- Plot **measures of human well-being** against **environmental impact**: how well are we meeting human needs within environmental limits?

Human Development Index (HDI)



Top CO₂ Emitting Countries, 1750-2020
(from fossil fuels and cement)



© 2021 Union of Concerned Scientists
Data: Global Carbon Project via Our World in Data

HDI

+

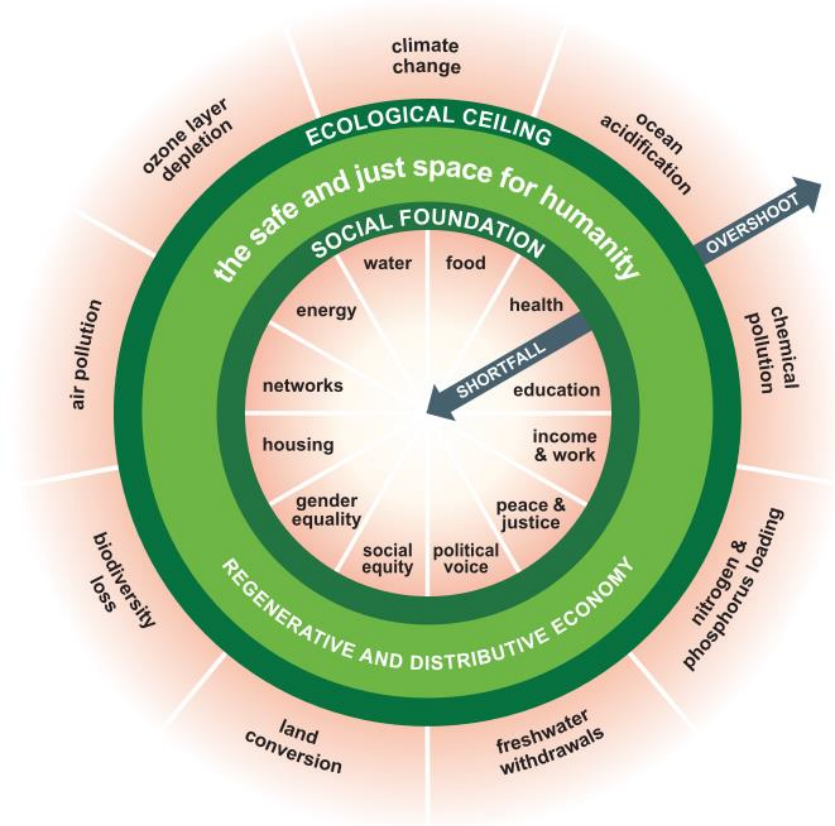
CO2 emissions

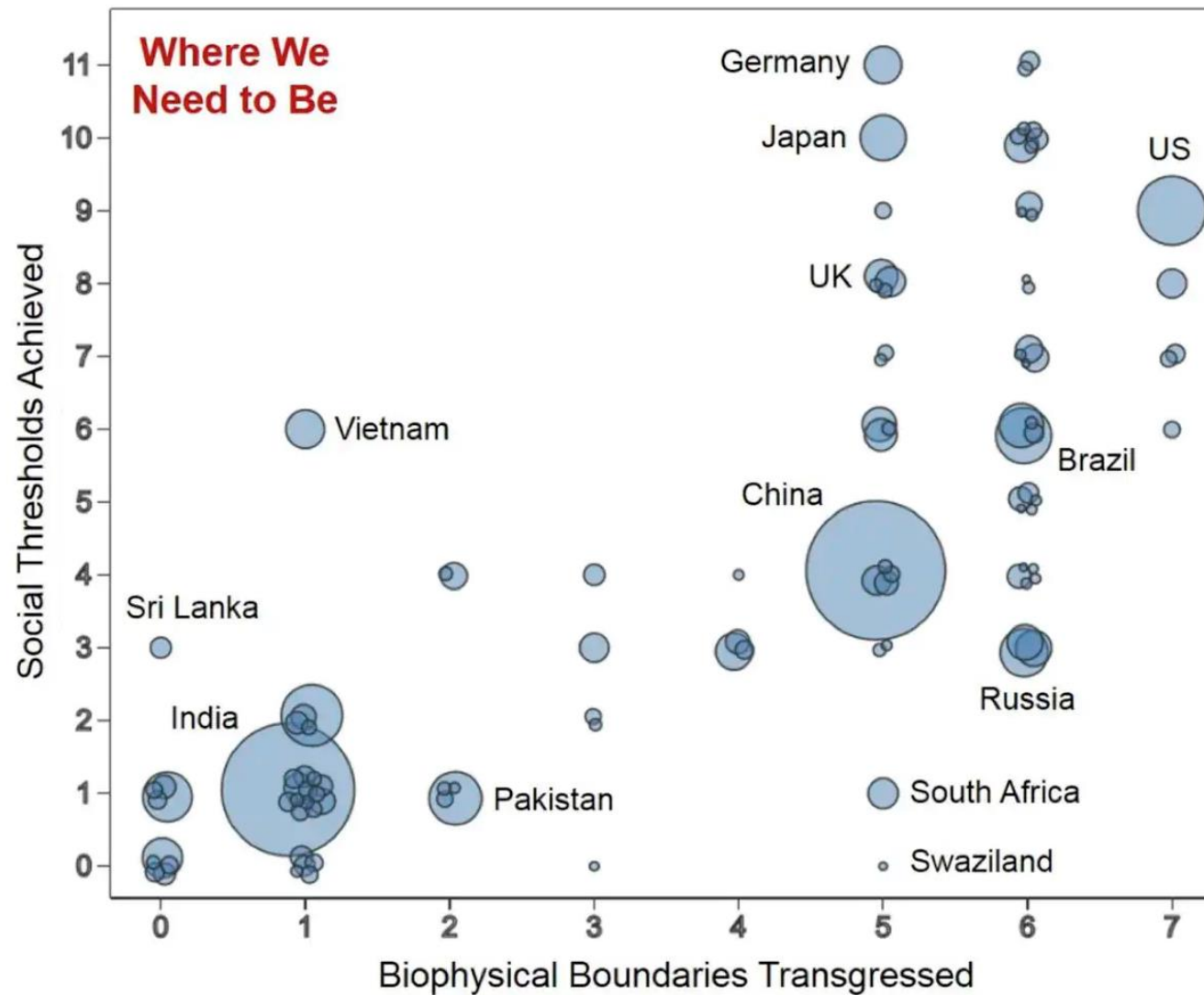
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Planetary Pressures-
Adjusted Human
Development Index
(PHDI)

How do we measure sustainability?

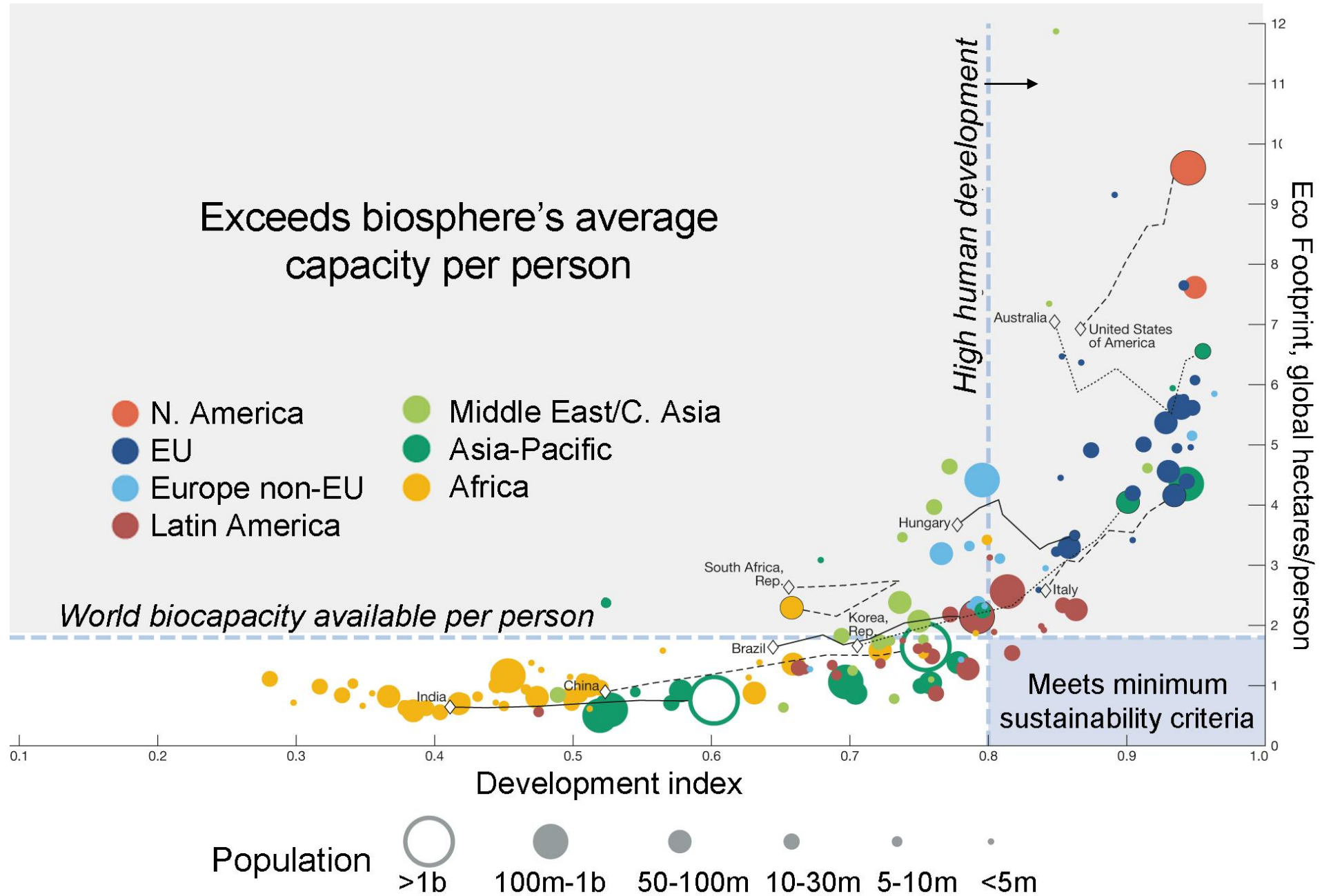
- Good Life For All Within Planetary Boundaries:
<https://goodlife.leeds.ac.uk/>
- How well are countries meeting the “social foundation,” and how much are they busting through the “ecological ceiling”?





Measures of a 'good life' vs overuse of resources for different countries (scaled by population). Ideally, countries would be located in the top-left corner. O'Neill et al, Author provided

[O'Neill et al. 2018, "A good life for all within planetary boundaries" Nature Sustainability volume 1, pages 88–95 \(2018\)](#)



But can we measure sustainability?

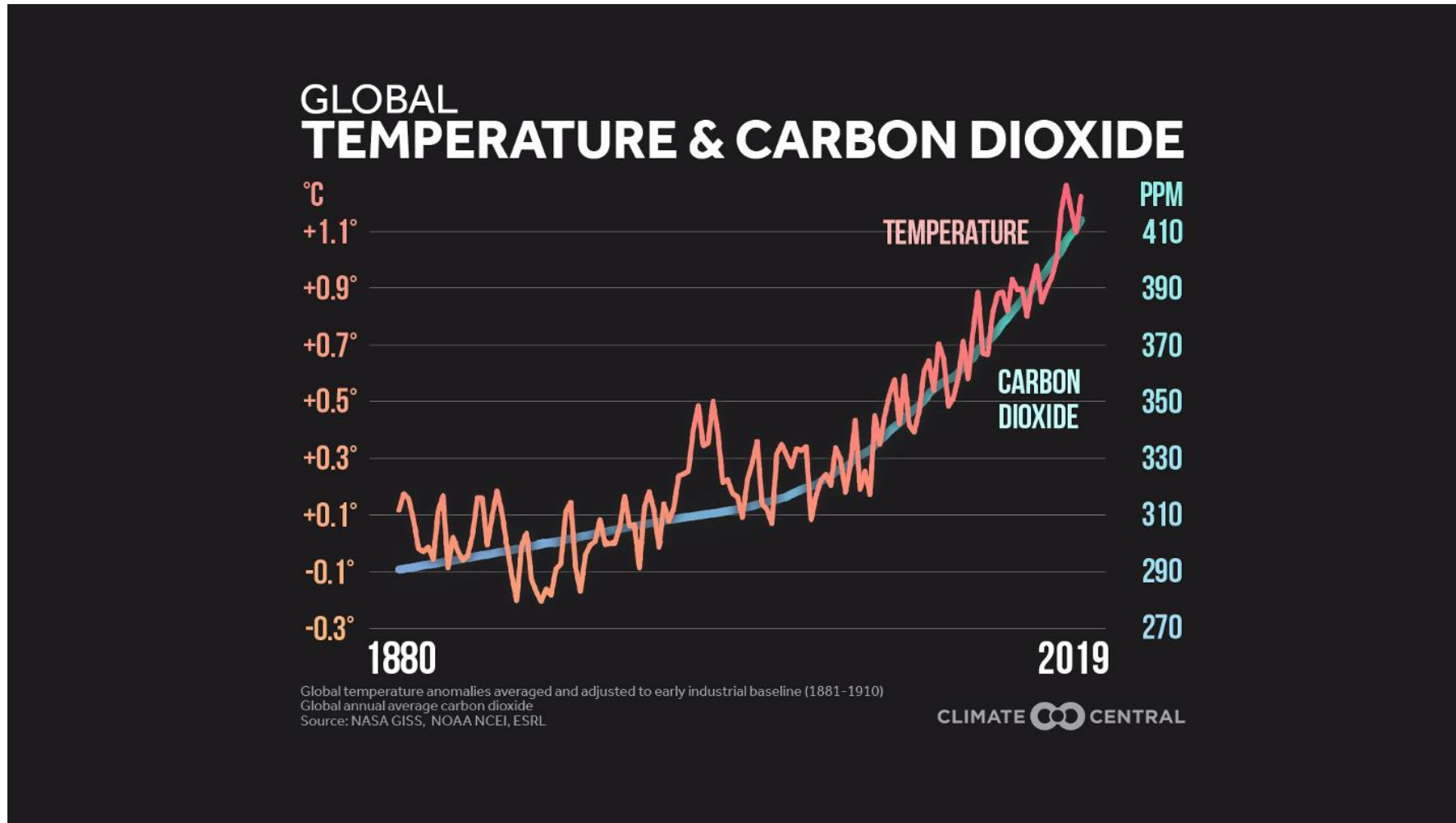
“Human nature being what it is, we may push the global physical and biological capacities to their very limits, which will be survival rather than sustainability. Survival is merely not dying, whereas we probably think of sustainability in terms of justice, interdependence, sufficiency, choice and above all (if we were to think deeply about it) the meaning of life.”

- Fricker (1998), "Measuring Up to Sustainability," p. 192

Case Study: Climate Change

- Illustrates interconnectedness of environment, society, economy
- Climate change has environmental, economic, and social **impacts**; has environmental, social, and economic **causes**

We have already warmed the planet by $\sim 1.2^{\circ}\text{C}$



19 of the 20 hottest years on record have occurred since 2000; July 2022 was the hottest month on record

Current climate change impacts

- **Increased extremes:** heat, weather events, rainfall
- Sea level rise
- Food and water insecurity
- Displacement
- All this has economic, social, and health impacts, especially for most vulnerable

CLIMATE

Climate change likely helped cause deadly Pakistan floods, scientists find

September 19, 2022 · 12:18 PM ET

REBECCA HERSHER



People wait in line for food in Sindh province, Pakistan, on Sept. 19, 2022. The province was one of the hardest hit by recent deadly floods. A new analysis confirms that climate change likely helped cause the disaster. *Persim Masud/AP*

It is likely that climate change helped drive deadly floods in Pakistan, according to a new scientific analysis. The floods killed nearly 1,500 people and displaced more than 30 million, after record-breaking rain in August.

CAPITAL WEATHER GANG

No September on record in the West has seen a heat wave like this

In just the past week, nearly 1,000 heat records have been broken

By Jason Samenow

Updated September 9, 2022 at 12:03 a.m. EDT | Published September 8, 2022 at 4:03 p.m. EDT



Lifeguard peeks up for the day as the sun sets on Sept. 1 in Long Beach, Calif., amid the heat wave. (Ashley Landis/AP)

Listen 6 min | Comment 327 | Gift Article | Share

The New York Times

With More Storms and Rising Seas, Which U.S. Cities Should Be Saved First?



Wisconsin Impacts

- WI has already warmed an average of 2.1°F, max in winter
- More rain (+15% since 1950s), more extreme precipitation: flooding, agricultural impacts
- More extreme summer heat, esp in cities
- More mosquitoes, ticks, crop pests
- Lower water quality (blue-green algae)

-- [Wisconsin Initiative on Climate Change Impacts](#)



Dairy State: Cheese Producers Wrestle With Climate Change Amid Already Struggling Industry

Farmers, Experts Know Risks Of Climate Change, But Questions On How To Move Forward Persist

MEGAN MOLTENI | SCIENCE 05.24.19 02:45 PM

FOR THE MIDWEST, EPIC FLOODING IS THE FACE OF CLIMATE CHANGE



Massive rainfall has put millions of people at risk of flooding and kept farmers out of their fields, harming the nation's ability to produce food. SCOTT OLSON/GETTY IMAGES



(AP Photo/Julie Jacobson)

CLIMATE CHANGE

Climate Connections: Rising temperatures bring health risks for Milwaukee, and some bear a bigger burden



BY MADDIE BURAKOFF | MILWAUKEE
PUBLISHED 4:10 PM ET SEP. 30, 2021



As Wisconsin's climate gets warmer and wetter, beloved winter activities could be in jeopardy

Skiing, ice fishing and other sports face shorter seasons as snowfall and lake ice cover are affected by rising temperatures.

Madeline Heim, USA TODAY NETWORK-Wisconsin

Published 6:02 AM CST Feb. 1, 2022 | **Updated 6:02 AM CST Feb. 1, 2022**

And summer activities....harmful algal blooms (blue-green algae) are on the rise in our lakes!





THE HEALTH BENEFITS OF ACTING NOW

The people in Wisconsin most vulnerable to fossil fuel air pollution include children, the elderly, low-income communities, and people of color.

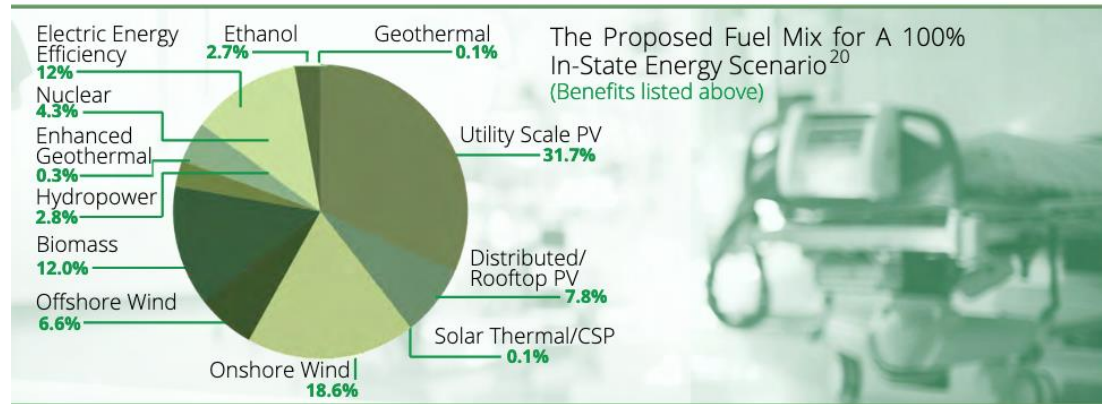
Nationally, nearly six million African Americans live within three miles of a coal-fired power plant and over 1 million African Americans live in counties that face a cancer risk due to toxins emitted by natural gas facilities.^{61,62,63}

Additionally, high energy costs force low-income families to choose between essential items, and lack of air conditioning puts these families at higher vulnerability to heat illness.

WISCONSIN YEARLY HEALTH SAVINGS ESTIMATES INCLUDE²⁰

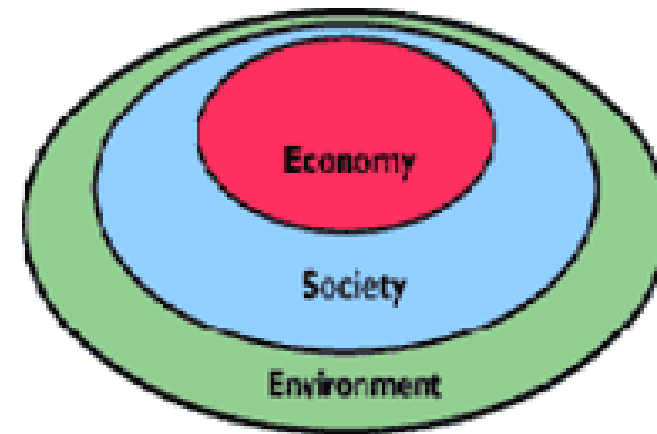
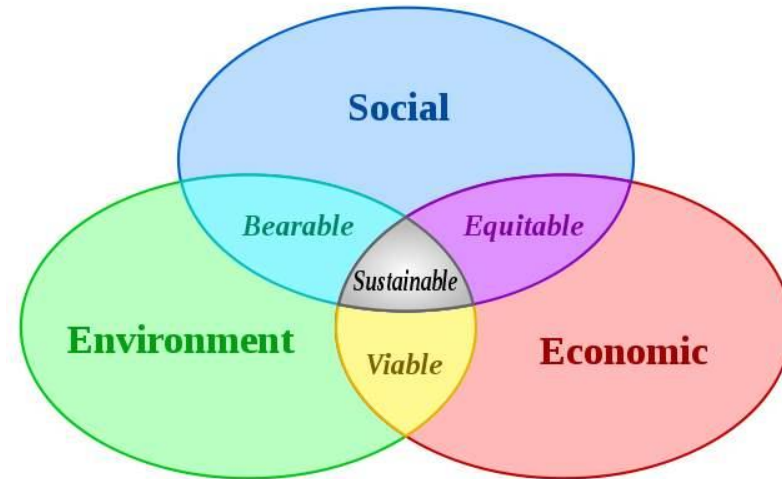
- 1,910 PREMATURE DEATHS
- 650 RESPIRATORY ER VISITS
- 873,000 MINOR RESTRICTED ACTIVITY DAYS
- 148,000 WORK LOSS DAYS
- 49,400 RESPIRATORY SYMPTOM CASES
- 34,400 CASES OF ASTHMA EXACERBATION
- 1,580 CASES OF ACUTE BRONCHITIS
- 670 HOSPITAL ADMISSIONS
- 650 HEART ATTACKS

Switching to 100% clean energy in Wisconsin alone translates to an economic savings of \$21 billion.²⁰ Over the last half century, the Clean Air Act has saved \$30 in hospital room visits for every \$1 spent and the estimated health benefits of low carbon policies in the U.S. will offset technology investment costs by 26% to 1050%.⁵⁷ According to the International Renewable Energy Agency, the U.S. solar and wind energy industry is creating jobs 12-times faster than the rest of the U.S. economy. Clean energy is estimated to produce at least 162,000 jobs in Wisconsin.²⁰



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Alice's Garden



Sustainability=good
quality of life
Sustainability =
innovation,
creativity,
community, joy-
NOT deprivation!



Ohe·láku and Ukwakhwa:
Oneida Corn Growers

- **Climate Action and Justice at UWO and in UW System**

150
1871-2021
100
YEARS



Bradley Spanbauer, M.Sc.

Sustainability Director

Sustainability Institute for Regional Transformations (SIRT)

- Two-time graduate of UW Oshkosh
- Master's degree in Biology
- Has been with the Office of Sustainability since 2009; has served as Director since 2019.
- UWO is a recognized leader in Sustainability and has received numerous accolades for various projects and initiatives.
- UWO: 2022 U.S. Department of Education's Green Ribbon Schools award.



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Sustainability

- Impacts

- UW System
 - Infrastructure
 - Students
 - Reputation

- UWO

- Energy Trends
- Emissions
- Solutions

Sustainability

- How does Sustainability connect to your role on campus?
- What is the cost of inaction?

For the Future of UW System

- For the future of...
 - our 165,000 current students
 - our 37,000 annual graduates
 - 65 million sq. ft. to heat, cool, and maintain
 - \$119 million spent on utilities
 - our health and wellbeing

Enrollment

- Impacts on our students
 - In 2021, 78% of students said that environmental commitments contribute to the school choice (up from 63% in 2018).



Mental Health and Wellness

- Climate Anxiety - “the chronic fear of environmental cataclysm that comes from observing the seemingly irrevocable impact of climate change and the associated concerns for one’s future and that of next generations” - APA

Mental Health and Wellness

- Mental Health - 45% of teens and young adults say that climate anxiety is affecting their daily lives and ability to function
- Future Choices - Doubt in the future affecting choice to go to college, buy a house, have a family, etc.

Infrastructure

- \$1.8 million in flood damage claims at UW-Milwaukee, 10-year period
- \$18.6 million in tornado damage at UW-Platteville in 2014
 - We know storms are getting more severe and more frequent

Infrastructure & Health

- Health
 - Heat-related deaths have the highest mortality of all weather-related deaths
 - Water-borne disease increase
- Further stress on agriculture, forestry, tourism, fisheries, wildlife

Reputation

- University of **Michigan** Commits to Climate Neutrality
- **Ohio** State - Sustainability Institute
- Ball State (**Indiana**) - Largest geothermal in nation
- U of **Illinois** System - Sustainable Investing
- **IL** Green Economy Network - 48 Community Colleges
- **Iowa** leading in Renewable Energy installations
- U of **Minnesota System** hires a Sustainability Officer

Sustainable UW Oshkosh

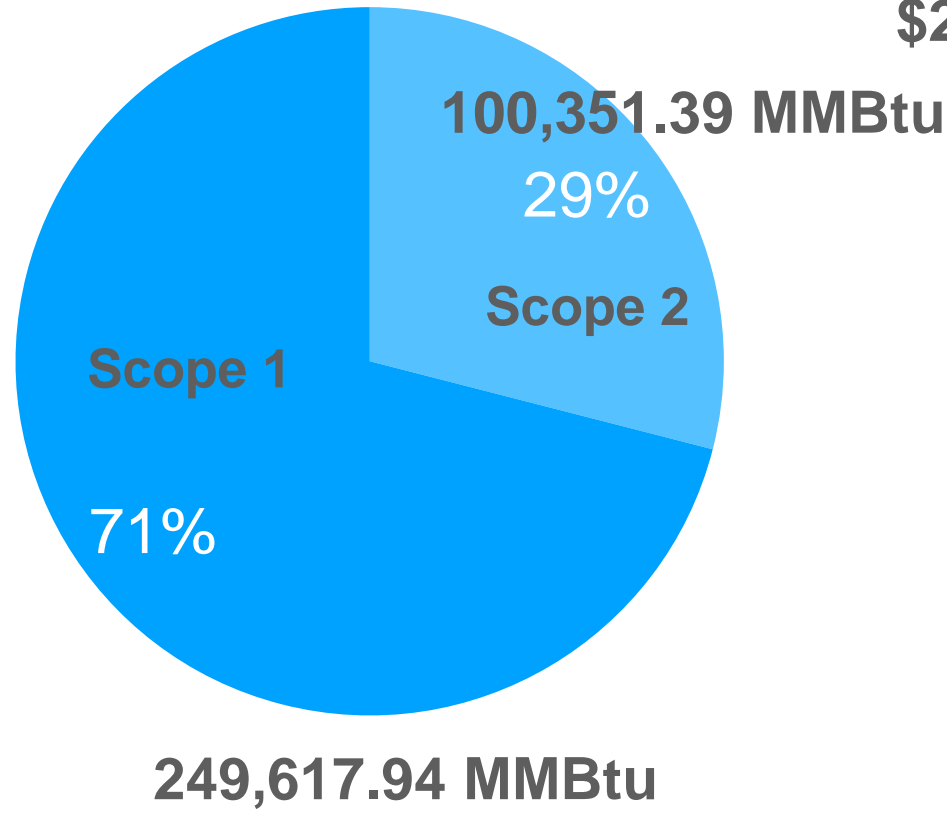
- Energy use in Facilities:
- 30 million kWh/yr for the last 20 years.
- Relying on natural gas and fuel oil for heat, used to be coal

- Students and Faculty responded:
- OSA: OSA 19-025, OSA 20-009, -010, and -011 calling for Climate Neutrality and Divestment
- Faculty Senate passed a Climate Neutrality and Divestment Resolution in Spring 2021
- Climate Neutral by 2030

- We took Action:
- Established Climate Action Committee
- Presented to Strategic Planning

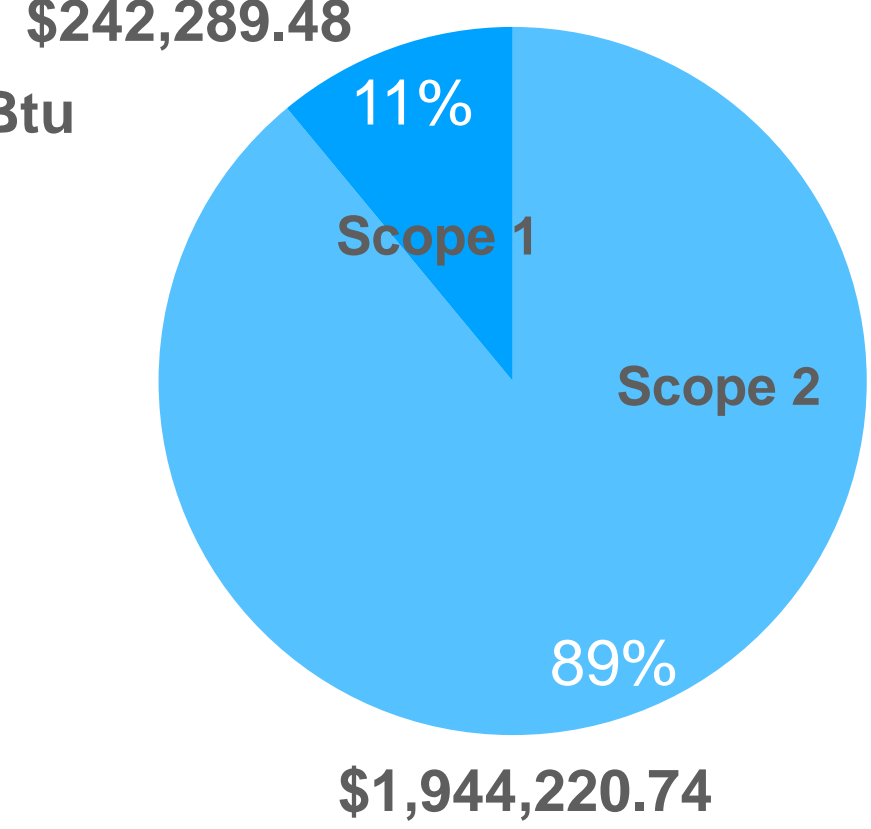
2019 Energy use in MMBtu

Electricity Nat. Gas



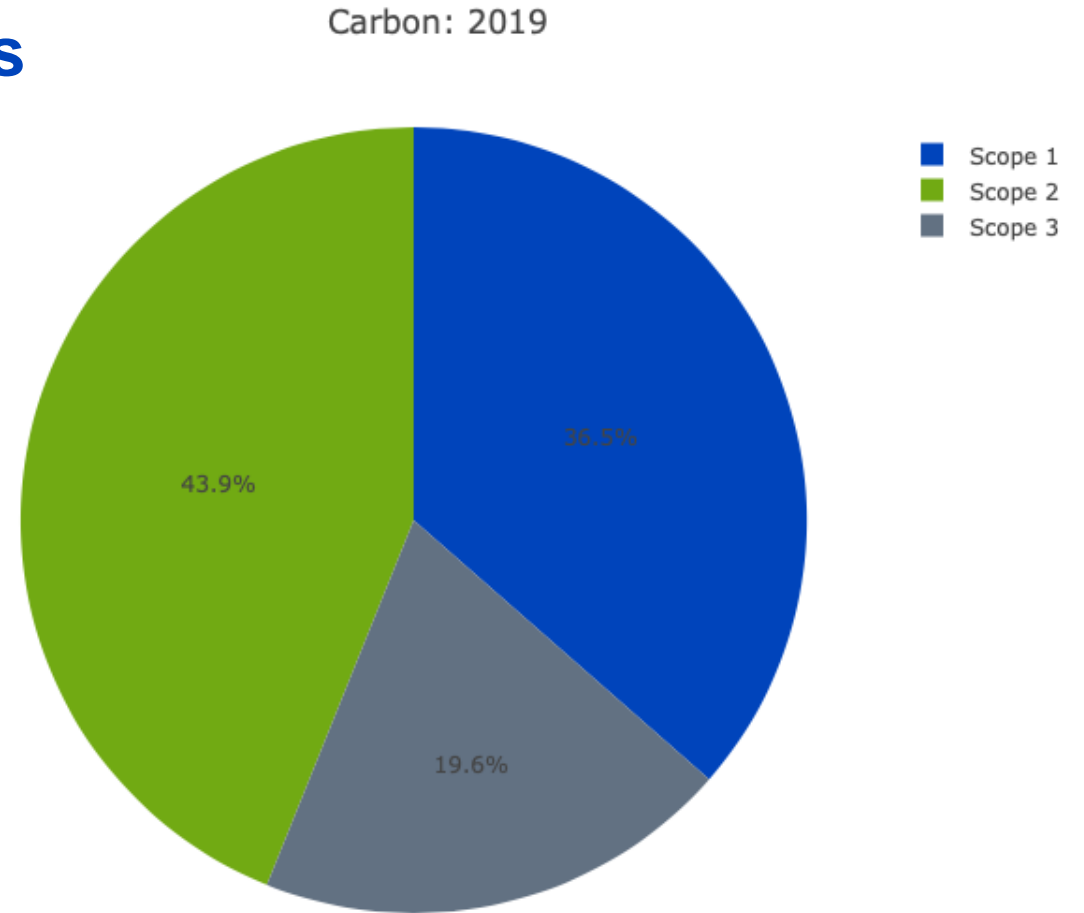
2019 Cost of Energy

Electricity \$ Nat. Gas \$



Our emissions

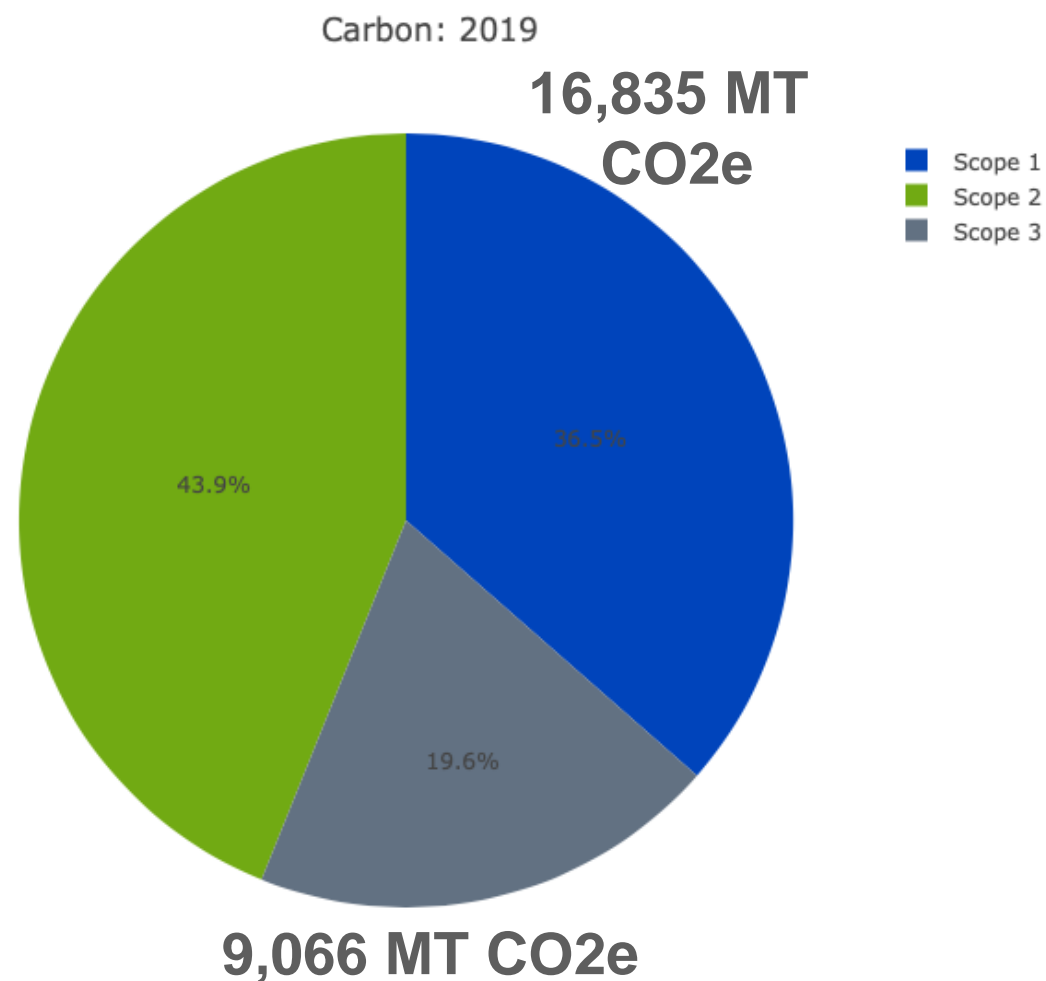
- **Scope 1 - Stationary sources**
(Heating Plant) + Campus Fleet
- **Scope 2 - Purchased Electricity**
- **Scope 3 - Transportation**
(Commuters, employee travel, etc.)



Our emissions

- 36% - **Heating Plant (Scope 1)**
- 44% - **Purchased Electricity (Scope 2)**
- 20% - **Transportation (Scope 3)**

20,276 MT CO₂e



Sustainable UW Oshkosh

- Taking Action:
 - Scope 1: Heating Plant and Chiller plant Conversion, Geothermal or Electrified heat pump system
 - Scope 2: Purchased Electricity
 - Virtual Power Purchase Agreement, on-site solar electric panels (PV panels)
 - Scope 3: Commuting - Alternative transportation to fossil fuel powered vehicles, purchase offsets, plant trees

Sustainable UW Oshkosh

- Taking Action:
 - Energy Conservation
 - Turn off lights, unplug your electronics
 - Focus on Energy
 - \$400,000 in potential incentives

Sustainable UW Oshkosh

- Climate Action Committee
 - Climate Action Plan
 - Facilities Master Plan
 - Signatory requirement of Second Nature, Resiliency Assessment
 - Synergy with the Strategic Plan

Earth Day 2022 at UWO

- Winner of the Dept. Of Education's Green Ribbon Schools award
- Climate Commitment, Second Nature
 - Neutral by 2030
 - Previously Carbon Commitment
 - Community Resiliency Assessment
- Facilities Master Plan, Synergy with the Strategic Plan

- Sustainability & Strategic Planning



Biogas heat connection project

- UWO received a grant from the Public Service Commission for a biogas heat connection project. Heat produced at the digester will be piped into the immediately adjacent Campus Services Building.

- Sustainability & Strategic Planning

The future of Sustainable
UWO

- Proactive, not reactive
- Sustainability as Brand
- Building a ‘Culture of Sustainability’



Sustainability Journey at 4imprint

Curtis Rohr, SVP-Finance



Curtis Rohr

SVP—Finance

4imprint

- B.S. in Accounting from Marquette University
- Current role since 2015
- Other roles:
 - Auditor, Arthur Andersen
 - Manufacturing Site Finance Manager, Plexus
 - Assistant Corporate Controller / Treasury Manager, Banta
 - Assistant Controller / Director of Finance / Director of Furniture Operations, School Specialty

Discussion Topics:

- Cost?
- SMART Team
- CarbonNeutral[®] Certification
- Renewable Energy Initiatives
- Products
- Supply Chain

Cost?

- To do it or not to do it...
- Significant Risks
 - Environmental
 - Reputational
 - Competitive
 - Compliance
- Company Culture



- Company-wide Engagement – Started in 2018
- Continuous improvements in recycling of waste materials – composting project in conjunction with UWO
- LED lighting project – full retrofit of office and production facilities
- Team Members participate in Green Masters Program
- Host events and internal chat forum

#SMARTWeek22 Activity Card

(4/18-4/22)

Join SMART on Yammer and complete FIVE (or more!) activities to be eligible for prizes (details on back).

S	M	A	R	T
SPREAD THE WORD	MY COMMUNITY	AT HOME	READY FOR WORK	TEAM/FAMILY
Share Outagamie recycle video on your Facebook/Instagram/Twitter account	Use reusable bags for groceries	Save grease from cooking and mix with lard/oil for your birds	Carpool instead of meeting there	Collect trash at your local park and take home to recycle. Post pictures to SMART Yammer
Don't toss – Donate and post a picture on SMART Yammer of you donating instead	Ride your bike or walk instead of using a car	Post a picture on SMART Yammer of you reusing an item instead of recycling or toss that item	Use your computer sticky notes instead of paper and pen	Upgrade all lights (desk too) to an LED bulb and recycle the old bulbs.
Start a conversation with your family about what you can do better at home	Start a neighborhood or personal compost bin or share your garden space	SMART WEEK 2022 Sustainability. Making A Renewable Tomorrow.	Power down your computer at night instead of "sleep mode"	Clean out your car and recycle what you remove. Don't forget if you have a tank in there for an emergency coffee stop!
Get a Co-Worker to "Like" the SMART team on Yammer	Id hard to recycle items and post a picture to SMART Yammer to share this information	Use cooking water to water your plants after it's cooled (No Salt)	Turn off your desk heater and cover up with a blanket instead	Look in your house and find 5+ items to offer for free. If no one wants them take them to a local thrift store to reuse.
Call a company about junk mail to remove your name from the mailing list <small>(Don't call just because you're not in it or just "I don't need it")</small>	Carry a reusable straw and/or container instead of using a doggie bag at a restaurant	Reuse egg cartons for fire starters or give to chicken farmers	No single use cups for water or coffee. Have a couple at your desk	Stock reusable cutlery at your desk



- Began measuring and reporting Scope 1 & Scope 2 emissions in 2013
- Achieved CarbonNeutral® certification in October 2021 based on 2020 GHG Assessment (RSK) – Relying on US/global emissions reduction projects
- Included mix of Recommended/Required Scope 3 (mostly transportation)
- Engaged in UPS Carbon Neutral Shipping Program in 2021 – similar reduction projects
- Current focus on transitioning to renewable energy to offset Scope 2 emissions
- Intensity Metrics?

- **Project to install a 1MW solar array at the Oshkosh Distribution Center**
 - 2,660 panel array generating more than 40% of the site's current power requirements
 - Power consumption is our largest source of scope 1 & 2 GHG; important step in moving towards reducing our own operational footprint and significantly increasing the proportion of our energy derived from renewable sources
 - ~\$2M project, due to be operational late Q3/early Q4 2022





- Major project designed to enable customers to easily find an increasing range of products with a variety of verified sustainability, environmental impact and/or workplace culture characteristics
- Includes clear information as to why a product is in the programme with links to information about the organisations and third-party certifications that make better choices possible
- Approximately 7,000 products to start; will actively seek to grow the range over time as we gather customer feedback and work with our supplier partners to increase awareness of and grow the market for these products

24 Hour Rush
Only at 4imprint
Hot Products
New Products
On Sale
Outlet

Lynette with 4imprint 3 years
Jim with 4imprint 11 years

better choices™

With Better Choices™, we invite you to join us on the journey to a more relevant, sustainable, and effective future.

When you choose promotional products, you consider how style, color and imprint fit both your audience and brand. If characteristics like sustainability, environmental impact and workplace culture are also important to you. Better Choices™ now makes products with these characteristics easier to find with clear, precise explanations about why products are part of the program. Better Choices™ also introduces the leading organizations and third-party certifications we've aligned with to make Better Choices™ possible.

Products may earn Better Choices™ designations in multiple categories, helping you find products that best fit your organization.

☐ 5 or more (6)
☐ 7 or more (6)
☐ 9 or more (4)

better choices™
☒ Better Materials (52)
☐ Better Workplaces (5)
☐ Standards & Certifications (3)

Better Materials
☐ Recycled Materials (46)
☐ Sustainable Cotton (25)

Sustainable Cotton
☐ Organic Cotton (4)
☐ Recycled Cotton (18)

Recycled Materials
☐ Recycled Paper & Board (2)
☐ Recycled Polyester (41)
☐ Reprint (1)

Better Workplaces
☐ Fair Labor Association (5)

Standards and Certifications

Simplicity Cotton Grocery Tote - 24 hr
★★★★☆
Prices from \$4.75 to \$6.45
Personalized cotton grocery bags are durable and reusable alternatives - 2446
Order as few as 50
Ships within 1 day*
Item #105257-2446

Field & Co. Fireside Utility Tote
Prices from \$27.75 to \$49.45
Utilize these totes and get your brand recognized
Order as few as 6
Ships within 1 day*
Item #162852

Field & Co. Fireside Utility Tote - Embroidered
Prices from \$24.35 to \$52.95
Utilize these totes and get your brand recognized
Order as few as 6
Ships within 3 days*
Item #162852-E

Gusseted Cotton Sheetting Tote - Organic
★★★★☆
Prices from \$3.29 to \$5.99
Demonstrate your company support with these custom tote
Order as few as 50
Ships within 2 days*
Item #102682-4

Kermit 8 oz. Cotton Grocery Tote
OUT OF STOCK
Prices from \$2.45 to \$3.99
Store your groceries in these

Wallace U-Handle Tote
OUT OF STOCK
Prices from \$1.89 to \$3.15

Wallace Pocket Tote
OUT OF STOCK
ON SALE
up to 12% off

Cotton Sheetting Economy Tote - Organic
★★★★☆
Prices from \$2.45 to \$3.95

Supply Chain Considerations

- Responsibly sourced paper/packaging
- Transportation partners
- Collaborate with Tier 1 product suppliers
 - Where are they at in their own journey?
 - How are they collaborating with their suppliers?
 - Onto Tier 2, 3, etc.



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ORBIS Corporation's Sustainability Overview

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Bre Herbert

Product Manager &
Marketing Sustainability
Lead

Who is ORBIS?

- Recognized leader in reusable packaging
- Supply chain insight and expertise in services
- Comprehensive product selection
- Proven successes with today's leading companies
- Proven solutions for industrial/automotive and retail supply chain applications
 - Strong packaging innovation
- 50+ sales, design and manufacturing locations in North America and Europe
- 2,500+ employees
- 160+ year history, family-owned



Top Customers

The Coca-Cola logo, featuring the brand name in its signature red script with a white outline.

HONDA

The Walmart logo, featuring the word 'Walmart' in blue with a yellow six-pointed starburst to its right.The Amazon logo, featuring the word 'amazon' in black with a yellow curved arrow underneath it.

JOHN DEERE

Our commitment to sustainability

97%

products are recyclable
at end of service life



99%

water used in manufacturing
operations is reused



100%

products eliminate the need
for single-use packaging








reusable packaging products
are designed for sustainability

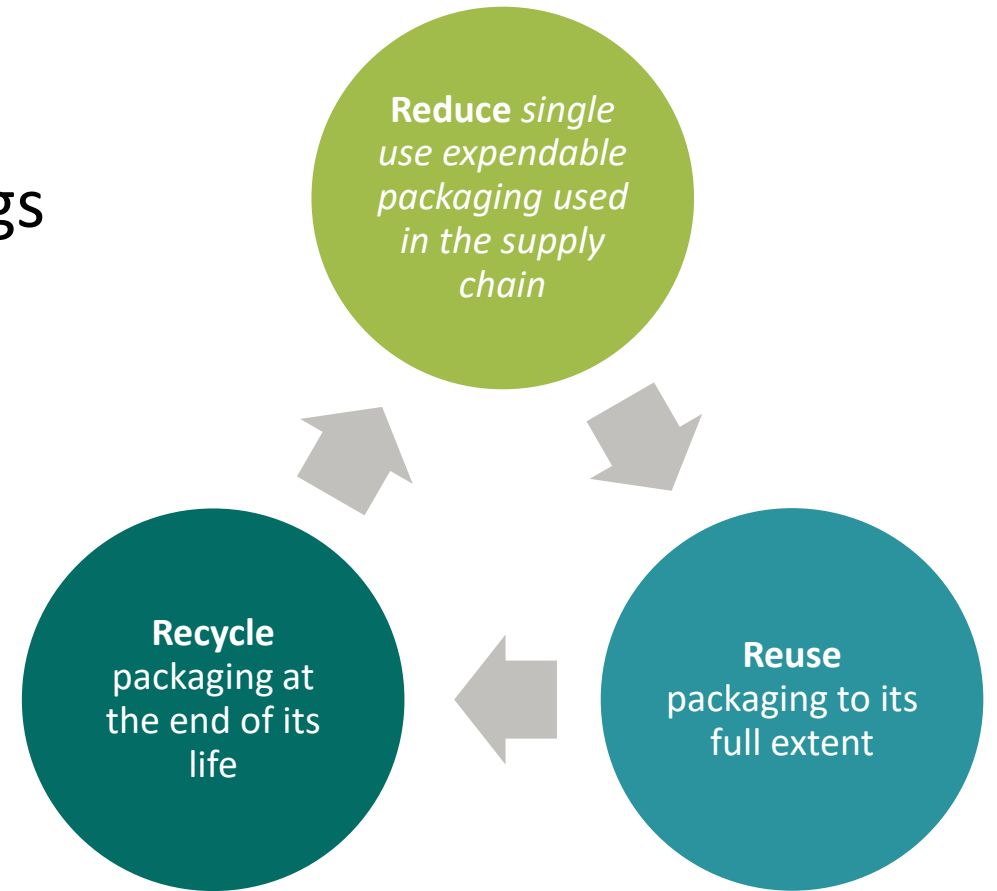


ORBIS®

Powered by Menasha Corporation

Why Reusables?

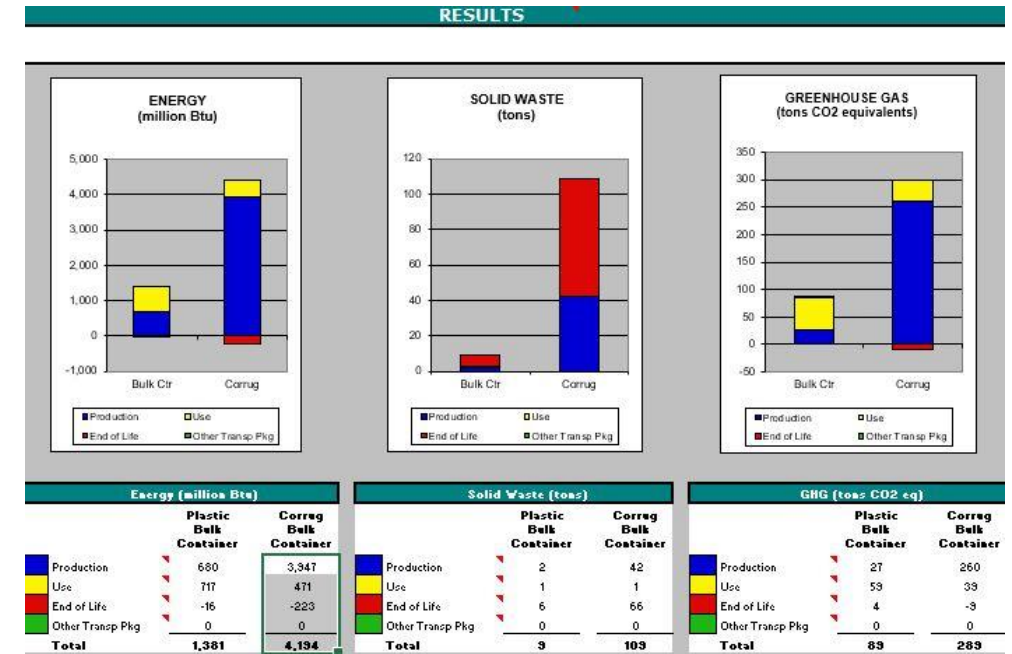
-  Reduced waste
-  Drives supply-chain wide cost savings
-  Improved efficiency
-  Standardized workflow
-  Optimized transportation



ORBIS can run a Life Cycle Analysis specific to customers Supply Chain


Packaging Design Considerations

- Cube Utilization (full packaging)
 - Right-size packaging to maximize trailer cube utilization
More pcs / shipment = less shipments = less fuel/emissions
- Light-Weighting
 - Appropriate packaging for application (sleeve-pack vs. bulk-bin vs. steel)
 - Less weight on truck = less fuel/emissions
- Collapsibility/Nestability
 - Maximizing cube utilization for empty return shipments
- Recycled/Alternative Materials
 - Eliminate need to extract or mine for virgin materials



ORBIS Material Innovation Center

- In-house material testing
- Creation of material blends
- Material trialing services
- Packaging performance testing
 - Stack tests
 - Impact tests
 - Compression tests



ORBIS' Material Innovation Center serves as the centralized hub for material testing, material development and product performance evaluation to help customers buy with confidence."

-Presley Neuman, MIC Manager

Recycled Packaging Material Choices

- Differentiate with recyclable material in all plastic products
 1. Recovered post-consumer and post-industrial plastic
 2. Recovered plastic at risk of entering the oceans



Ocean in Mind Program

- Reduces ocean plastic pollution by repurposing ocean-bound plastic into reusable packaging solutions
- Collection of single-use plastic waste near major waterways
- Recycling of collected plastic into reusable packaging solutions



REPURPOSING PLASTIC WITH THE

OCEAN IN MIND

Questions