

Environmental Justice

- Focuses on the inequitable distribution of environmental qualities and risk exposure among various human groups



Environmental Justice

- Began in the 1980s
- Recognition that polluting industries are disproportionately located in low-income and minority communities
- “Whether by conscious design or institutional neglect, communities of color in urban ghettos, in rural ‘poverty pockets,’ or on economically impoverished Native American reservations face some of the worst environmental devastation in the nation.

- Robert Bullard



Environmental Justice

- “Cancer Alley” - “About two-thirds of St. Gabriel’s 7,300 residents are black. Many families have been rooted here for centuries, brought as slaves and forced to cut and process sugar cane on the vast plantations that once dominated the river parishes. After the Civil War, many stayed on as sharecroppers, free but still beholden to white landlords.”



A plant looms behind apartments in St. Gabriel, Louisiana, which lies in “Cancer Alley,” the stretch of the Mississippi River between New Orleans and Baton Rouge where a high concentration of petrochemical facilities contributes to some of the nation’s worst toxic air pollution. (Sophia Germer/The Times-Picayune and The Advocate)

[Louisiana Toxic Air](#)



Environmental Justice

- Farm workers who are disproportionately Hispanic are exposed to high levels of pesticides, fertilizers, and other ag chemicals



- Native American reservation lands are targeted possible sites for disposing of nuclear waste

High-Level Atomic Waste Dump
Targeted at Skull Valley Goshute
Indian Reservation in Utah



Environmental Justice

- “By the 1930s, half of St. Paul’s black population lived in Rondo.”
- “Construction of Interstate-94 (I-94) between 1956 and 1968 cut the neighborhood in half and fractured its identity as a cultural center.”

Before it was cut in half by I-94, St. Paul’s Rondo was a thriving African-American cultural center

The neighborhood ran roughly between University Avenue to the north, Selby Avenue to the south, Rice Street to the east, and Lexington Avenue to the west.

By [Ehsan Alam](#)



Interstate I-94 facing downtown St. Paul



Environmental Justice

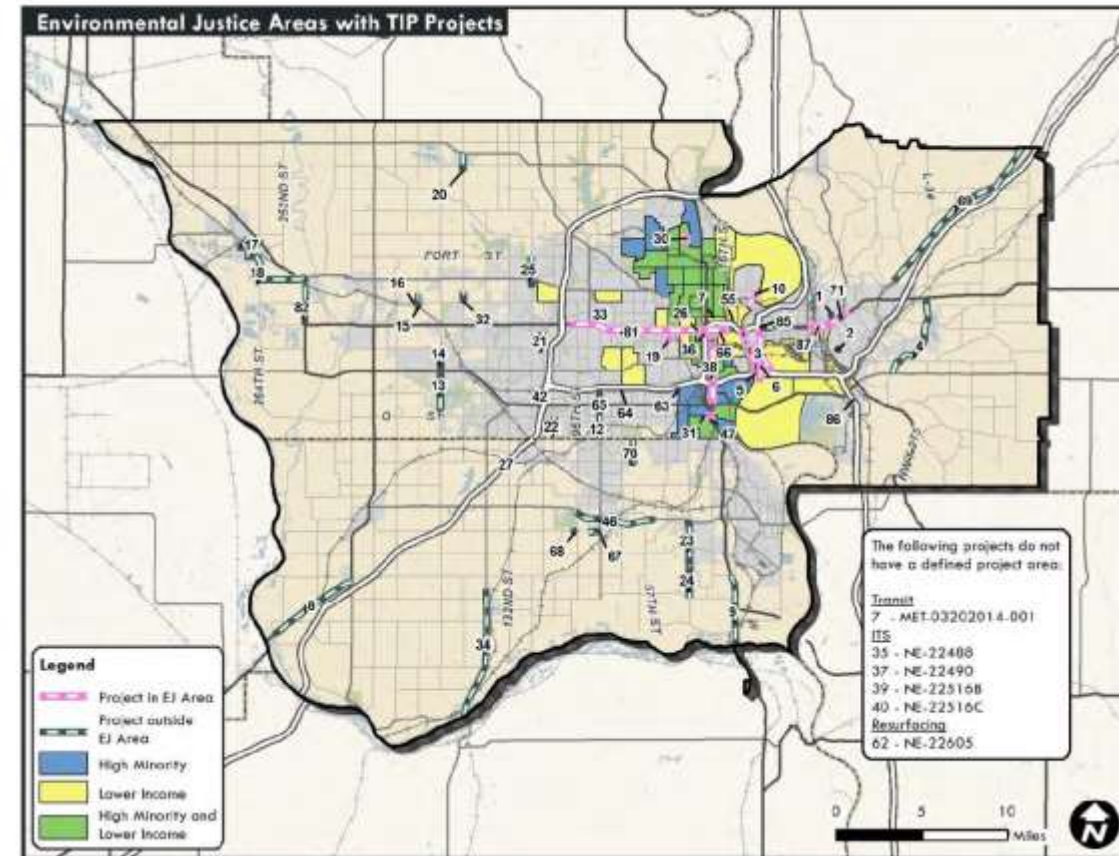
- “Ernie Chambers referred to the freeway as a “knife, cutting through the artery in the heart of the Black community” (Kotok, 1983)



Environmental Justice

- “NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.”
- “Using the NEPA process, agencies evaluate the environmental and related social and economic effects of their proposed actions. Agencies also provide opportunities for public review and comment on those evaluations.” (EPA.gov)

Figure 4.2 – TIP Projects in EJ Areas



Federal Highway Administration Environmental Justice Reference Guide – Guides the planning process with the goal of ensuring environmental justice



Ecopsychology

- Ecopsychology applies ecological and psychological theories and research methodology to study the relationship between people and the natural world. There is a focus on wellbeing. (Palmer, 2014; 2015:2)

Taking the brain out for a walk

A recent study shows that spending time outdoors has a positive effect on our brains



JULY 15, 2021

Health

If you're regularly out in the fresh air, you're doing something good for both your brain and your well-being. This is the conclusion reached by researchers at the Max Planck Institute for Human Development and the Medical Center Hamburg-Eppendorf (UKE). The longitudinal study recently appeared in *The World Journal of Biological Psychiatry*.



If you're regularly out in the fresh air, you're doing something good for both your brain and your well-being.

© Emma Simpson / Unsplash



Ecopsychology

- [The Science of Happiness Podcast](#)

Episode 93: Noticing Nature in the City

JUNE 10, 2021

When was the last time you stopped to admire a tree? Our guest finds that paying attention...

▶ 0:00 / 22:03 — 🔊 ⋮



Episode 110: Why You Should Snap Pictures of Nature

FEBRUARY 17, 2022

A NYT restaurant critic puts down her pen and grabs her camera to capture the beauty of the...

▶ 0:00 / 18:57 — 🔊 ⋮



Biomimicry

- “Biomimicry is an approach to innovation that seeks sustainable solutions to human challenges by emulating nature’s time-tested patterns and strategies.”
- *"The best ideas might not be ours, they might already have been invented"* - Janine Benyus



Biomimicry

- Billy Almon, an expert in biomimicry — the practice of learning from and mimicking strategies found in nature to solve human design challenges — was a keynote speaker at Metro Vancouver's Zero Waste conference this week.
- He hopes to inspire politicians, industry leaders and residents to look at the natural world around their own region with fresh eyes for how humans can adapt to our changing earth.

[Link](#)

British Columbia

Futurist advises B.C. decision-makers, residents to look to coastal ecosystems for climate, waste solutions



Billy Almon, who studies how technology can adopt natural phenomena, inspired by intertidal zones

Chad Pawson · CBC News · Posted: Oct 31, 2021 9:00 AM PT | Last Updated: October 31, 2021

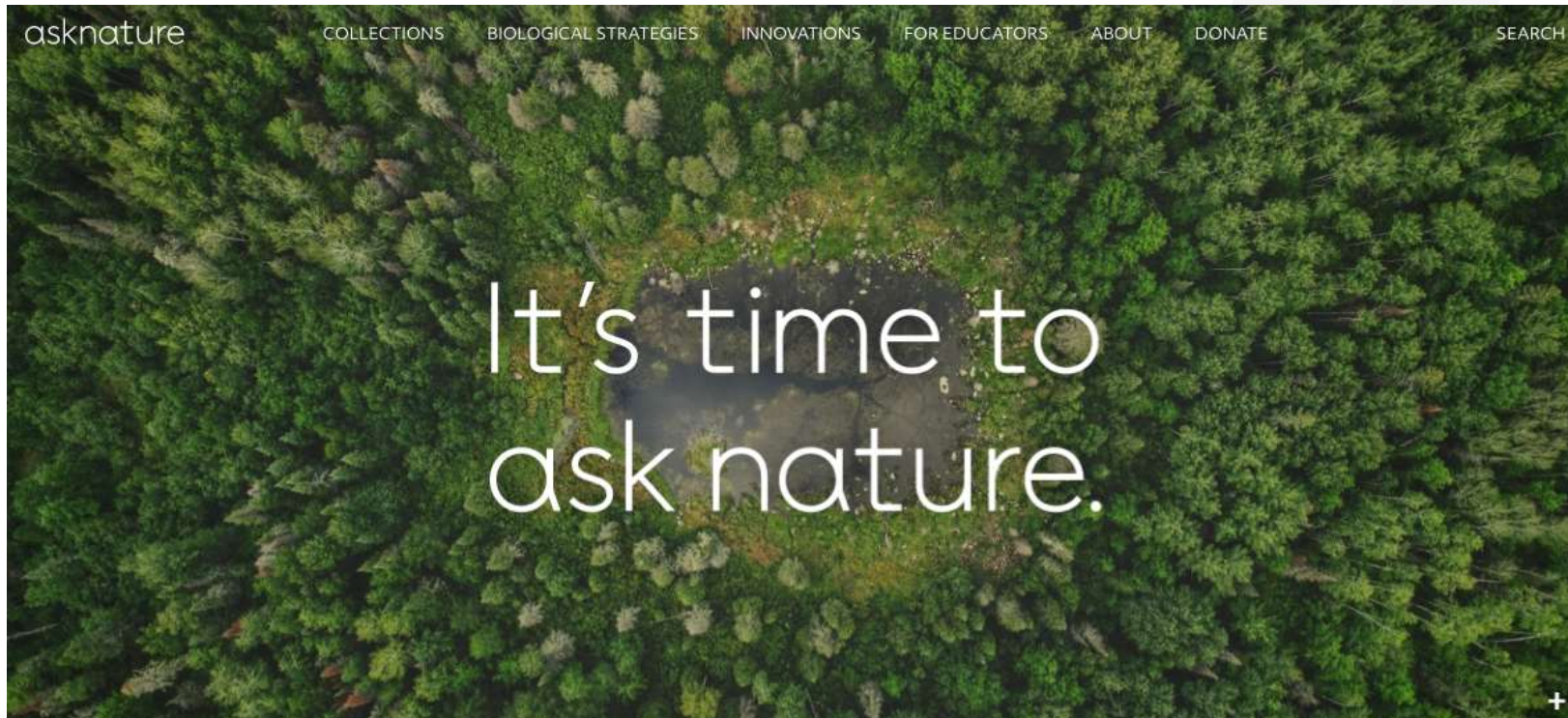


Billy Almon studies how organisms and species in the natural world can help humans design new technologies to address problems such as climate change and waste. (Billy Almon)



Biomimicry

- [“Ask Nature” website](#)



Ecological Economics

- “It is a stark and arresting fact that, since the middle of the 20th century, humankind has consumed more natural resources than in all previous human history. “
 - Margaret Beckett, UK Sustainable Development Strategy



Ecological Economics

- Running the Numbers: An American Self-Portrait

Chris Jordan photographic arts

[artworks](#) [information](#) [books](#) [contact](#)

Running the Numbers: An American Self-Portrait
(2006 - Current)



Shipping Containers, 2007 60x120"

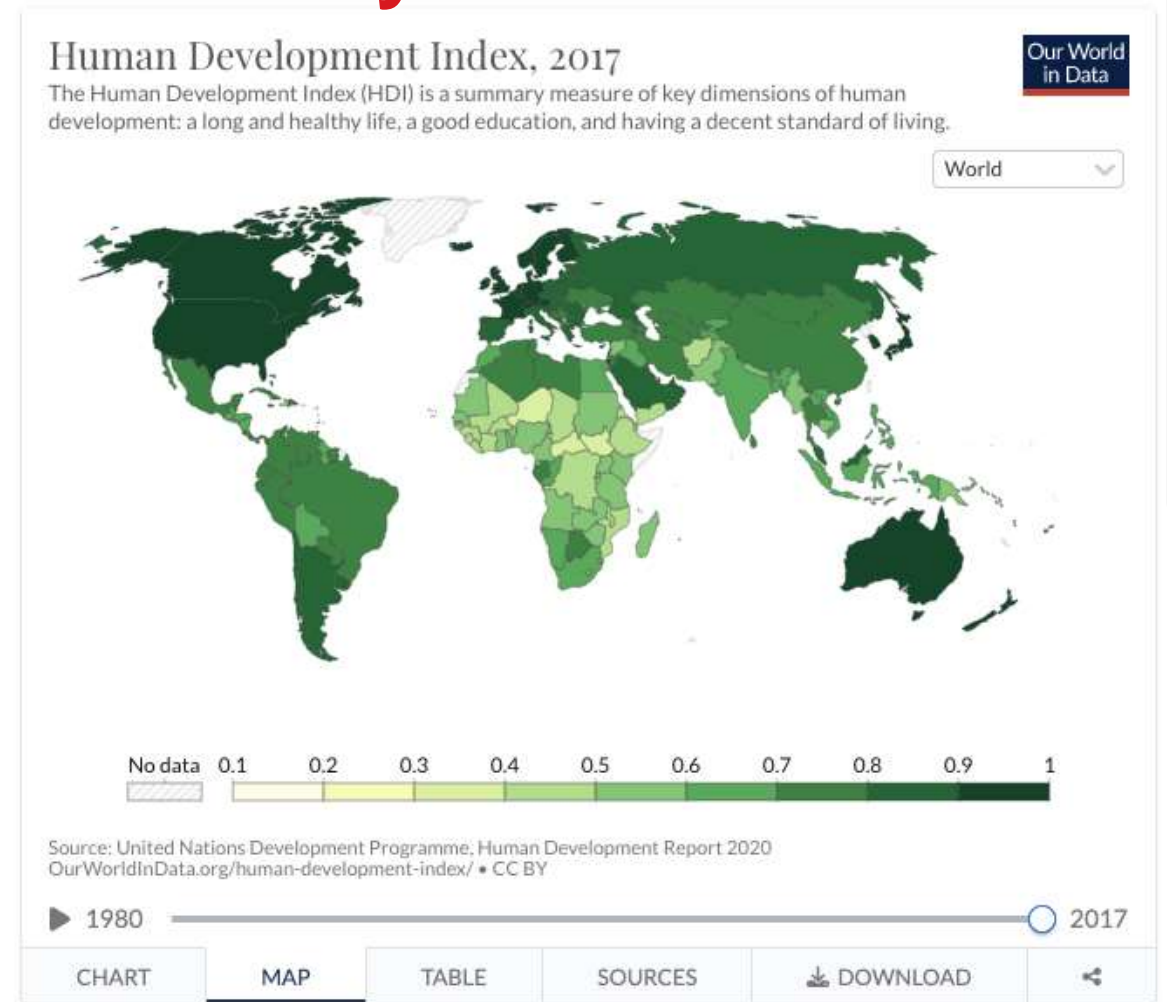
Depicts 38,000 shipping containers, the number of containers processed through American ports every twelve hours.

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What Would a Sustainable Economy Look Like?

- Human Development Index (HDI)
 - Index that measures life expectancy, access to education, decent standard of living
 - HDI data published by the United Nations Development Programme



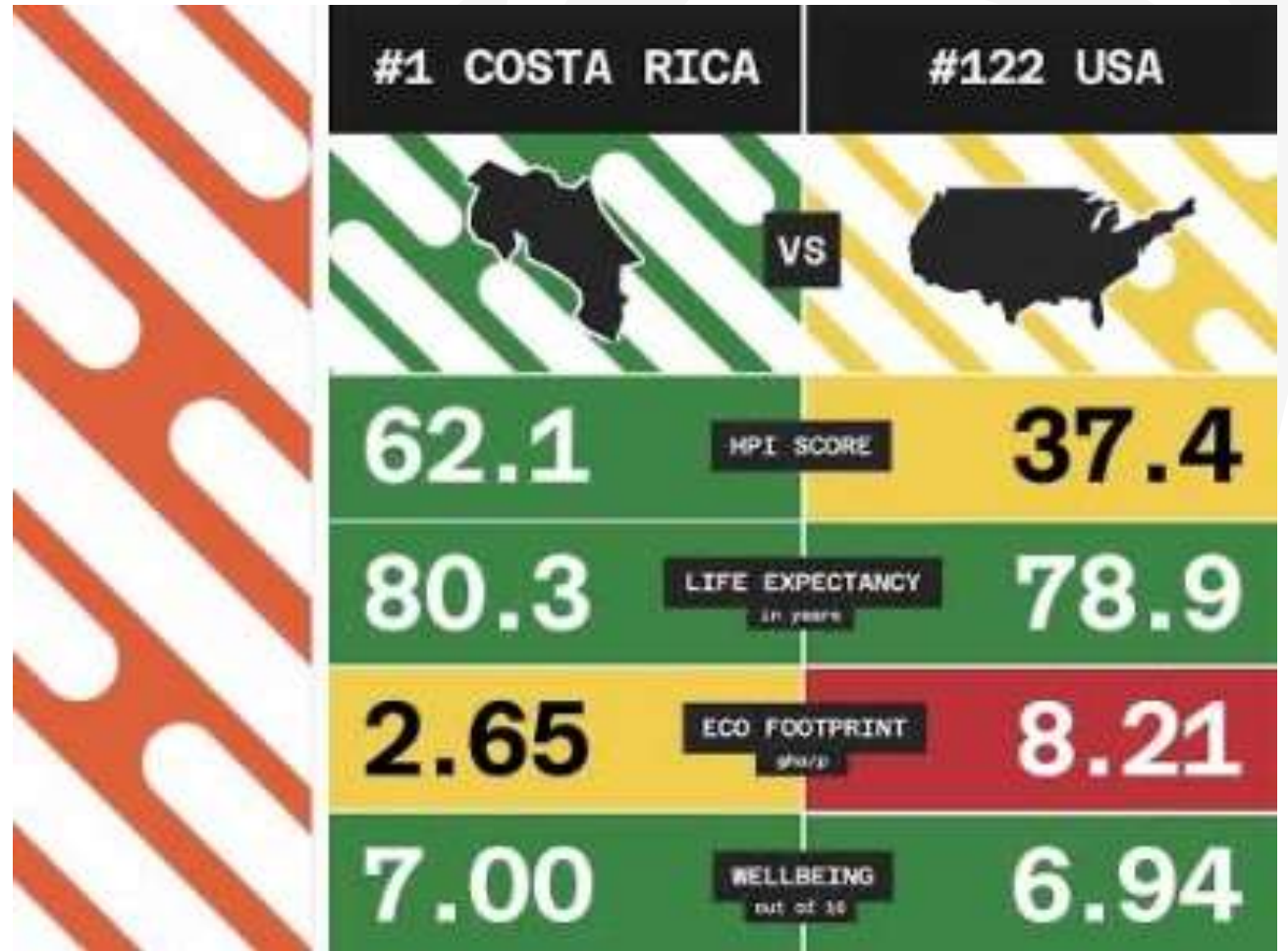
What Would a Sustainable Economy Look Like?

- Gross National Happiness (GNH)
 - Coined in 1972 by the 4th King of Bhutan
 - 9 Domains

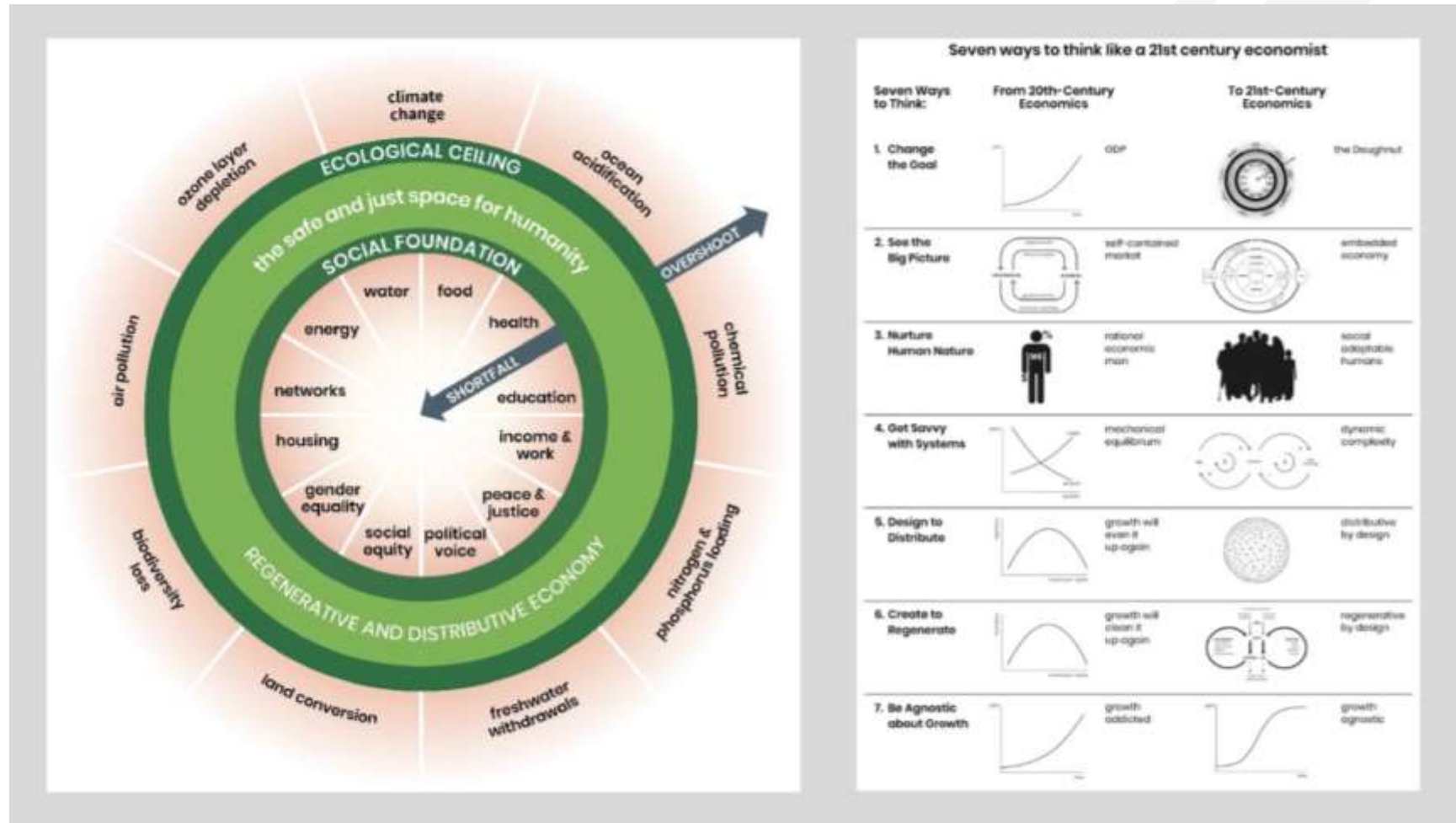


What Would a Sustainable Economy Look Like?

- Happy Planet Index (HPI)
 - Index that measures life expectancy, well-being, ecological footprint



Doughnut Economics



Doughnut Economics

No nation is living in the Doughnut
Every nation must transform



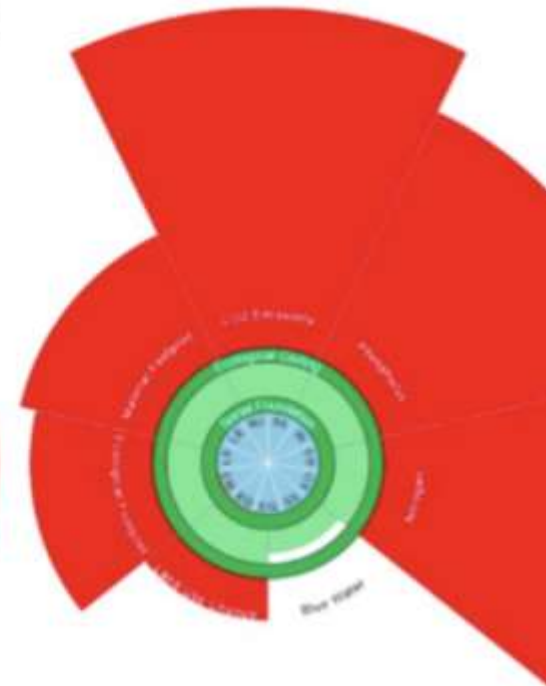
Ethiopia
\$2,600 pc



China
\$17,200 pc



Spain
\$38,600 pc



Australia
\$47,600 pc GNI



goodlife.leeds.ac.uk



Class Goals

- Promote understanding without doom and gloom.
- Focus on solutions.
- Empower students to make positive changes, moving from analysis to systemic action

<https://serc.carleton.edu/sisl/pedagogies.html>



Integrating Sustainability in Existing Classes

- Realize that sustainability is not an "add-on" content area; rather, sustainability is easy to integrate into already existing lessons as in-class examples of concepts and as a context for activities and problem sets.
- When teaching a core course concept, use sustainability-related examples.
- Add in every course, "How can you use what we are learning to make the world a better place?"
- Add into every course, "How could we create these products and processes without polluting?"
- Create a real world problem/solving project so students can help their communities become more environmentally sound and sustainable.
- Add sustainability-related learning outcomes into your course objectives.



Students' Learning Outcomes

The InTeGrate Project

1. Students will be able to define sustainability.
2. Students will be able to explain how sustainability relates to their lives and their values, and how their actions impact issues of sustainability.
3. Students will be able to utilize their knowledge of sustainability to change their daily habits and consumer mentality
4. Students will be able to explain how systems -- ecosystems, individual humans in society -- are interrelated.
5. Students will learn change agent skills.
6. will learn how to apply concepts of sustainability to their campus and community by engaging in the challenges and solutions of sustainability on their campus.
7. will learn how to apply concepts of sustainability globally by engaging in the challenges and the solutions of sustainability in a world context.

Source: Magdalena Svanström, Francisco J. Lozano-García, Debra Rowe, (2008). "[Learning outcomes for sustainable development in higher education,](#)" International Journal of Sustainability in Higher Education, Vol. 9 Iss: 3 pp. 339 – 351.



Questions & Discussion



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