

WSU Extension Presents



Sustainability Series

Learning to Live on Just One Earth

Patricia Townsend and Edwin Stafford

Needs versus wants

“Earth provides
enough to satisfy
every man’s need,
but not every man’s
greed.”

— Mahatma Gandhi

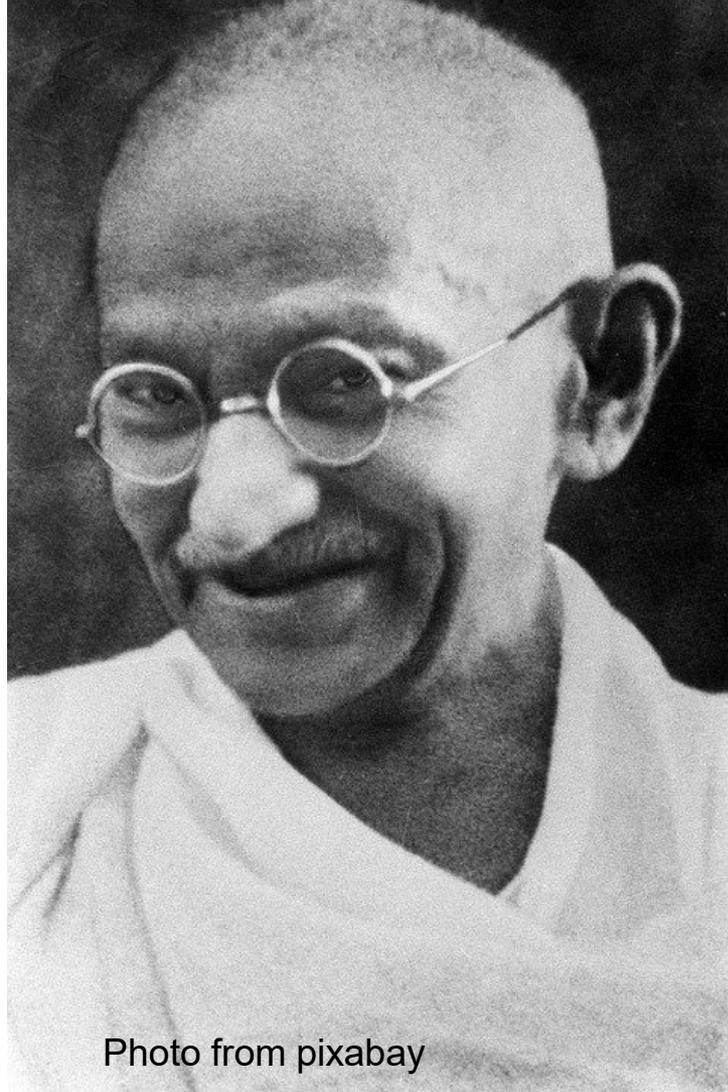


Photo from pixabay



What is an ecological footprint?

Food and water



Fiber for shelter and clothing



Photo by Irena Carpaccio



WHALER'S HAT
Nuu-chah-nulth/Ahousat



Modern ecological footprints



Photo by Peter Gonzalez



Photo by Robin Sommer

Busting our biocapacity budget



73%
biocapacity used



160%
biocapacity used

1.6 Earths is worldwide average

Measuring my footprint

- Solutions
 - City
 - Energy
 - Food
 - Population
 - Planet

<https://www.footprintcalculator.org/result2>

RESULTS

Your personal Earth Overshoot Day is:

25. Aug 

If everyone lived like you, we would need

1.5 Earths 



Why can't I get my Footprint score within the means of one planet? 

[See Details](#)



Personal footprint



Shocked



Inspired



Helpless



Intrigued



Worried

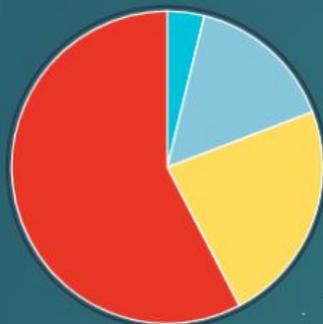


Embarrassed



Confused

By Land Type



-  Built-Up Land
-  Forest Products
-  Cropland
-  Grazing Land
-  Fishing Grounds
-  Carbon Footprint



By Consumption Category



2.6

Your Ecological Footprint (global hectares or gha) 

4.2

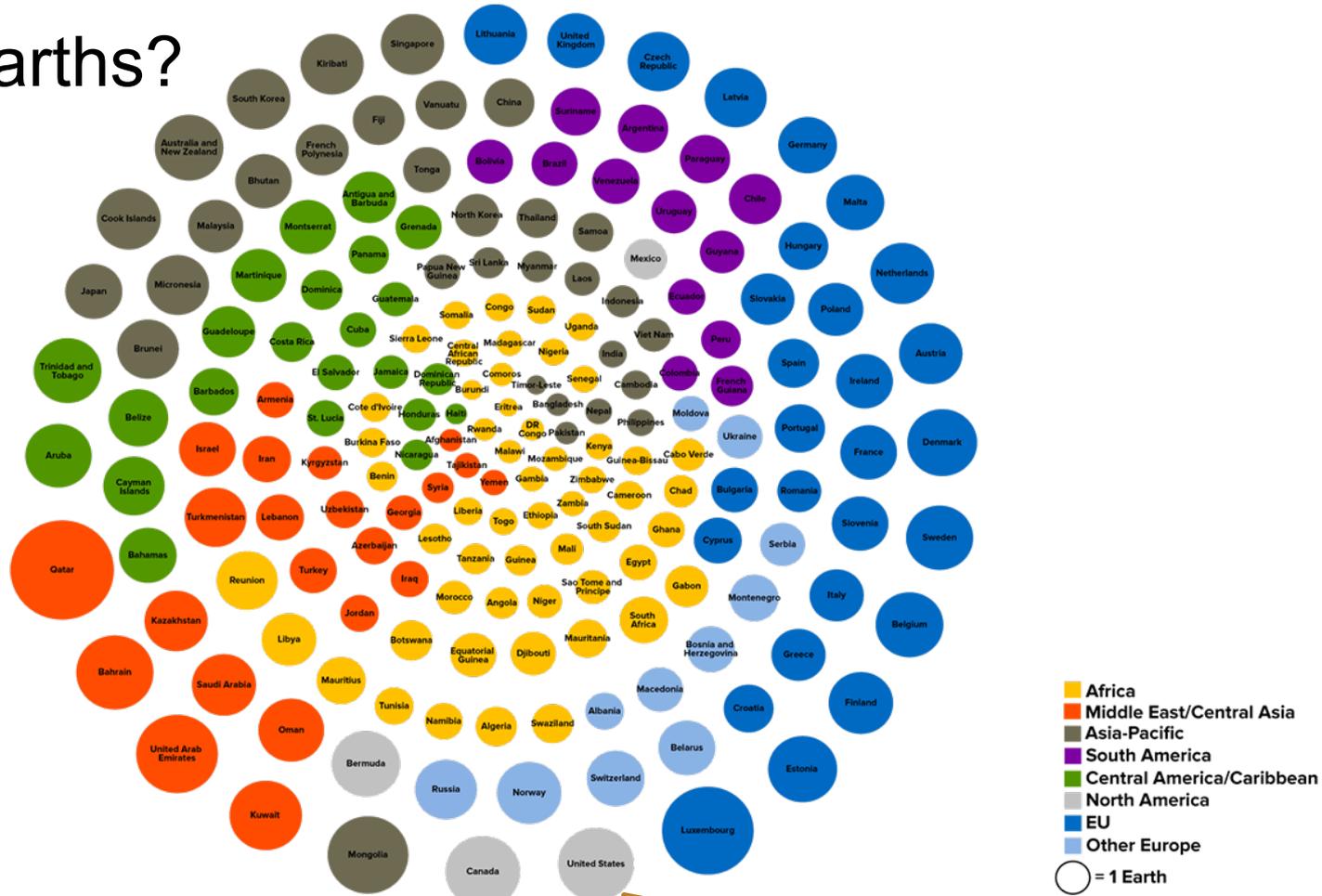
Your Carbon Footprint (CO₂ emissions in tonnes per year) 

55.

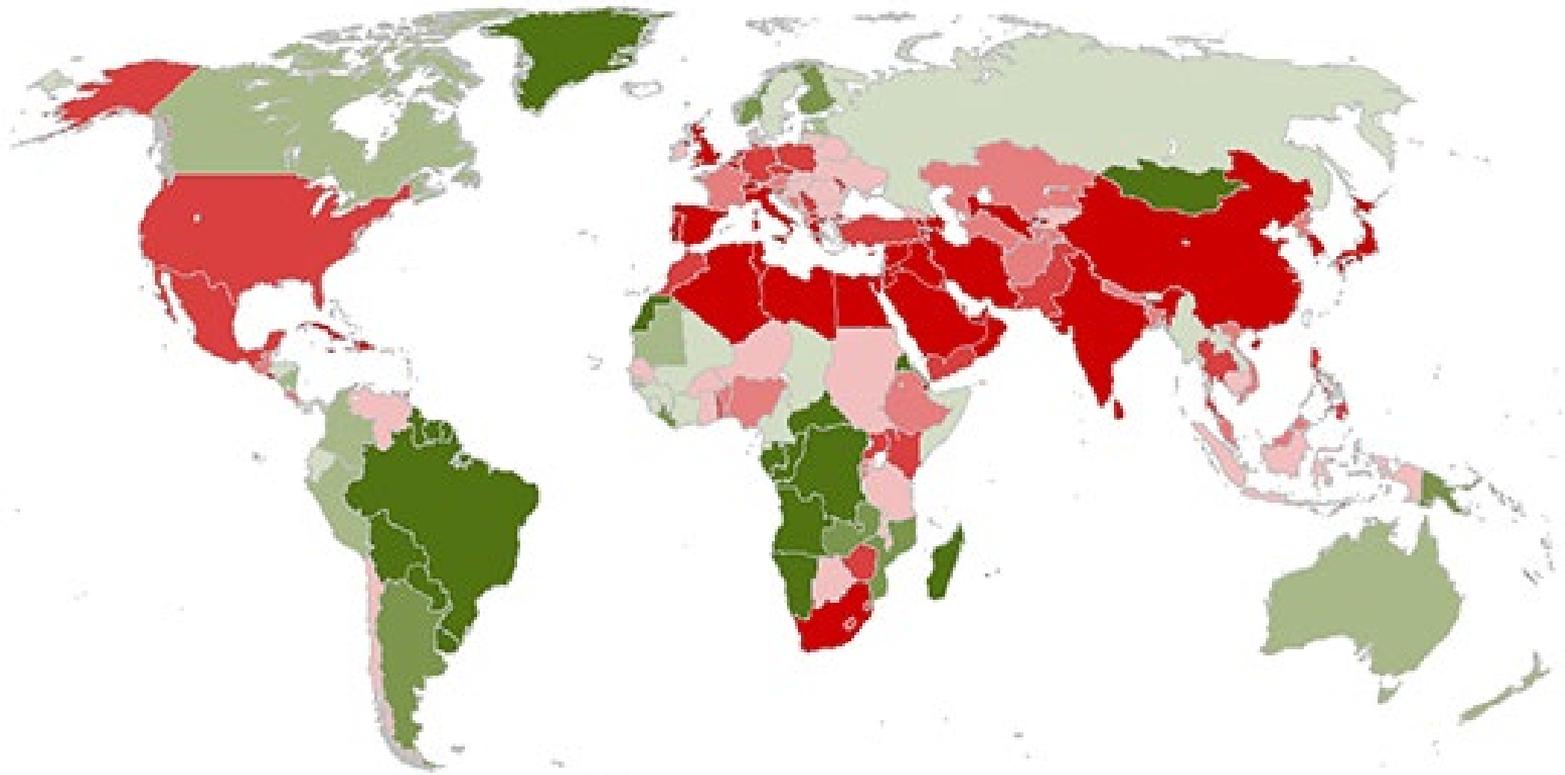
Your Carbon Footprint (% of your total Ecological Footprint)

<https://www.footprintnetwork.org/resources/footprint-calculator/>

How many earths?



From: Global Footprint Network <https://www.footprintnetwork.org/>



Ecological Footprint of consumption exceeds biocapacity

- > 150 %
- 100 - 150 %
- 50 - 100 %
- 0 - 50 %

Biocapacity exceeds Ecological Footprint of consumption

- 0 - 50 %
- 50 - 100 %
- 100 - 150 %
- >150 %

Data from the National Footprint Accounts
2016 Edition

<http://data.footprintnetwork.org/#/>

What is the ecological footprint in the US?

BIG – 5 earths

How many Earths do we need if the world's population lived like...





Changing house size



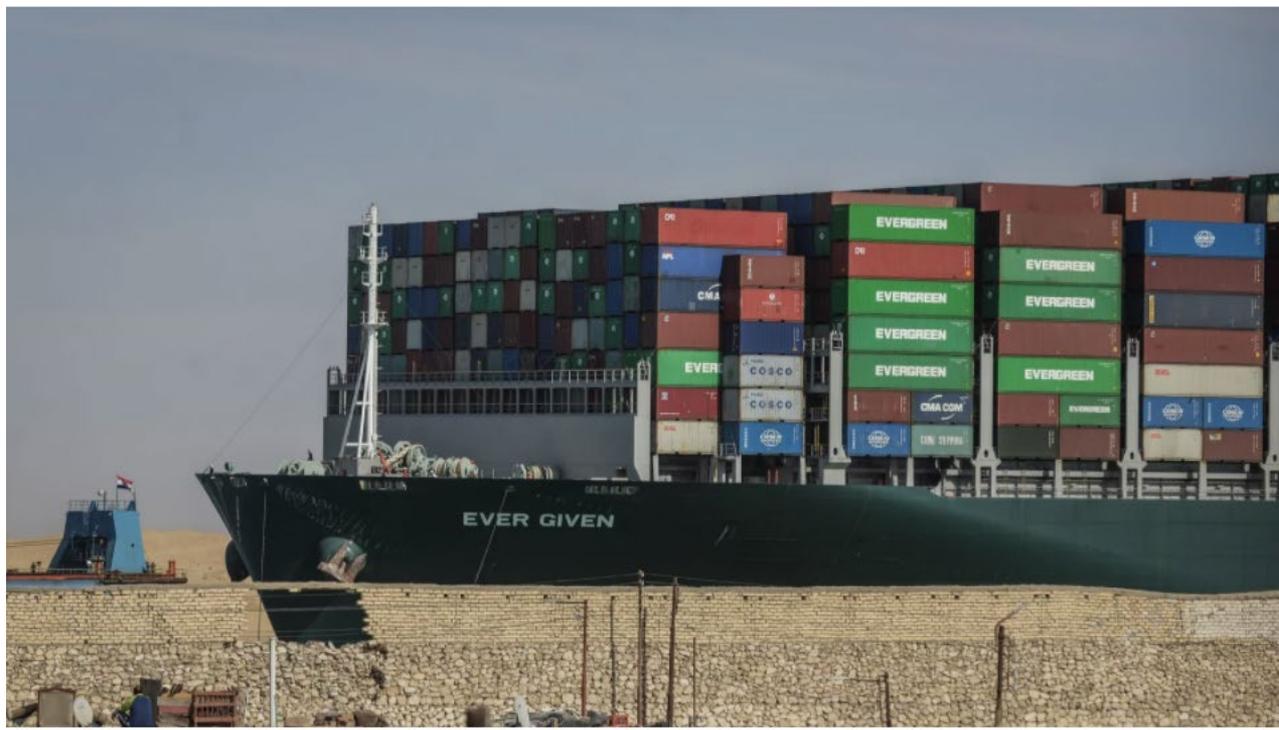
Photo by Phil Hearing



Photo by Stephen Leonardi, Davis, CA

Container ships – Ever Given

- 20,000 cargo containers
- 20 years ago – 6,000 was the max
- Rose George --Inside the secret shipping industry
 - Sea blindness
 - 90% of everything
 - Carbon emissions
 - Marine impacts



New trends: Storage units!

- First opened in 1960's
- Expanded in 1990's
- Today 49,00 facilities in US



https://www.nytimes.com/2009/09/06/magazine/06self-storage-t.html?pagewanted=2&_r=1



Photo by Adam Winger

- “We buy things we do not need with money we do not have to impress people we do not like.”
Dave Ramsey, [The Total Money Makeover: A Proven Plan for Financial Fitness](#)
- Jane Fonda's Signature Red Coat Is the "Last Piece of Clothing" She'll Ever Buy
 - <https://www.harpersbazaar.com/celebrity/latest/a29741997/jane-fonda-red-coat/>

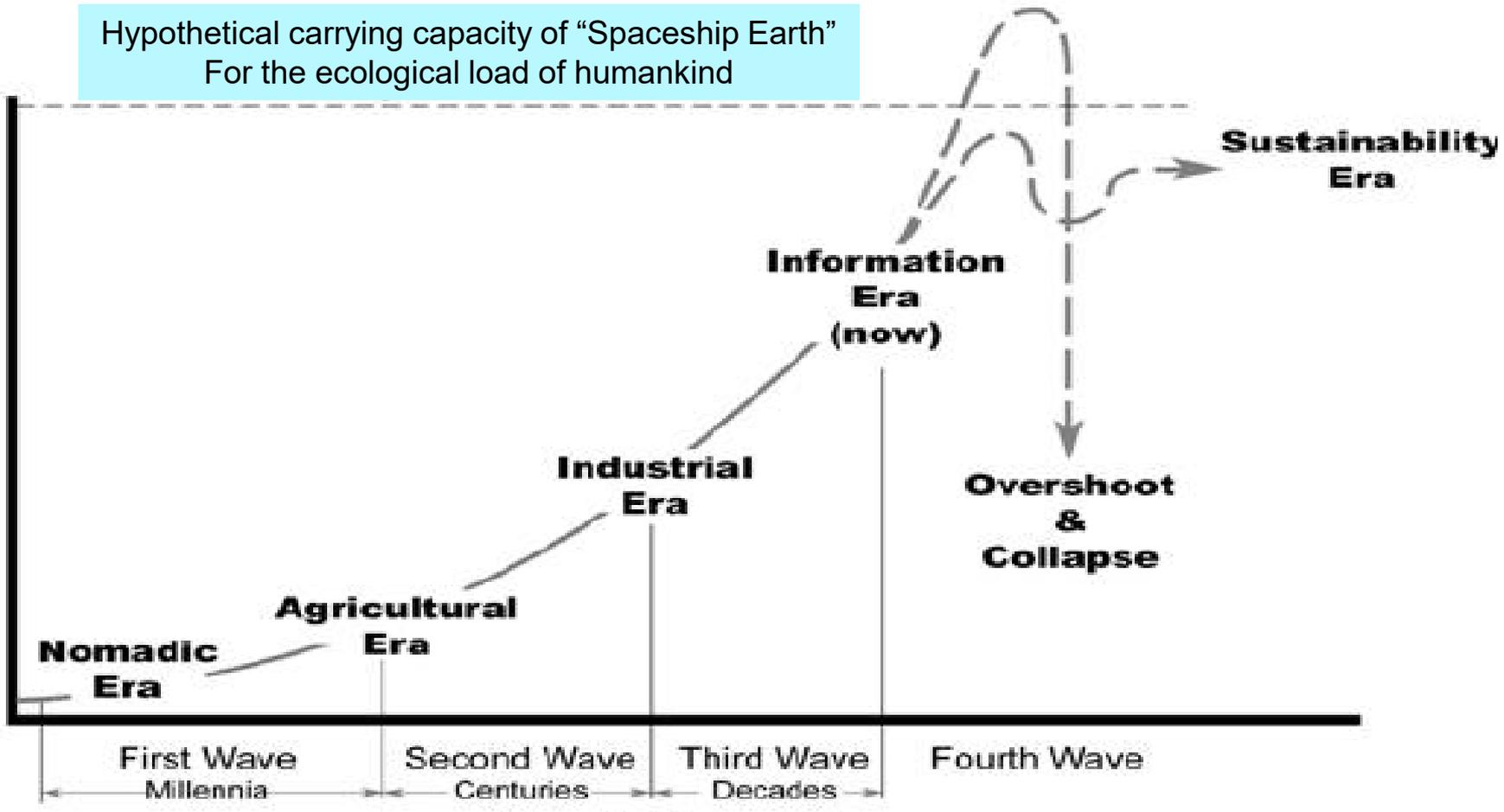


Jane Fonda October 18, 2019



Hypothetical carrying capacity of "Spaceship Earth"
For the ecological load of humankind

Ecological load

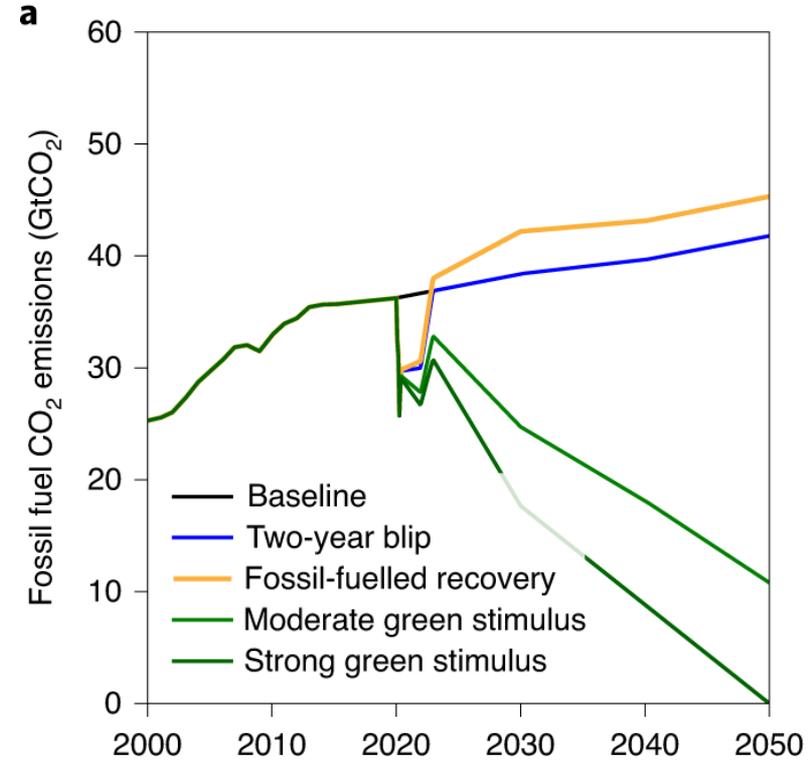


Time (not to scale)

A post pandemic world



Photo by Science in HD: Photovoltaic dual-use research project at the UMass Crop Animal Research and Education Center in South Deerfield, MA.

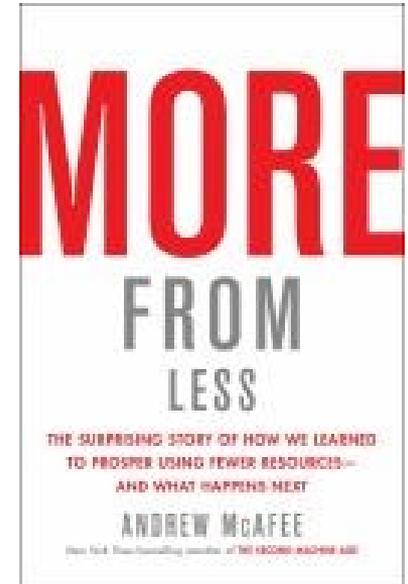


Forster et al. 2020 Nature Climate Change



More from Less

- The surprising story of how we learned to prosper using fewer resources and what happens next
- Four horsemen of the optimist
 - Tech progress
 - Capitalism
 - Public awareness
 - Responsive government
- “ I believe by far that the most important thing we can do for the planet is to inform ourselves, and to use the best available information to guide our actions and decisions.”



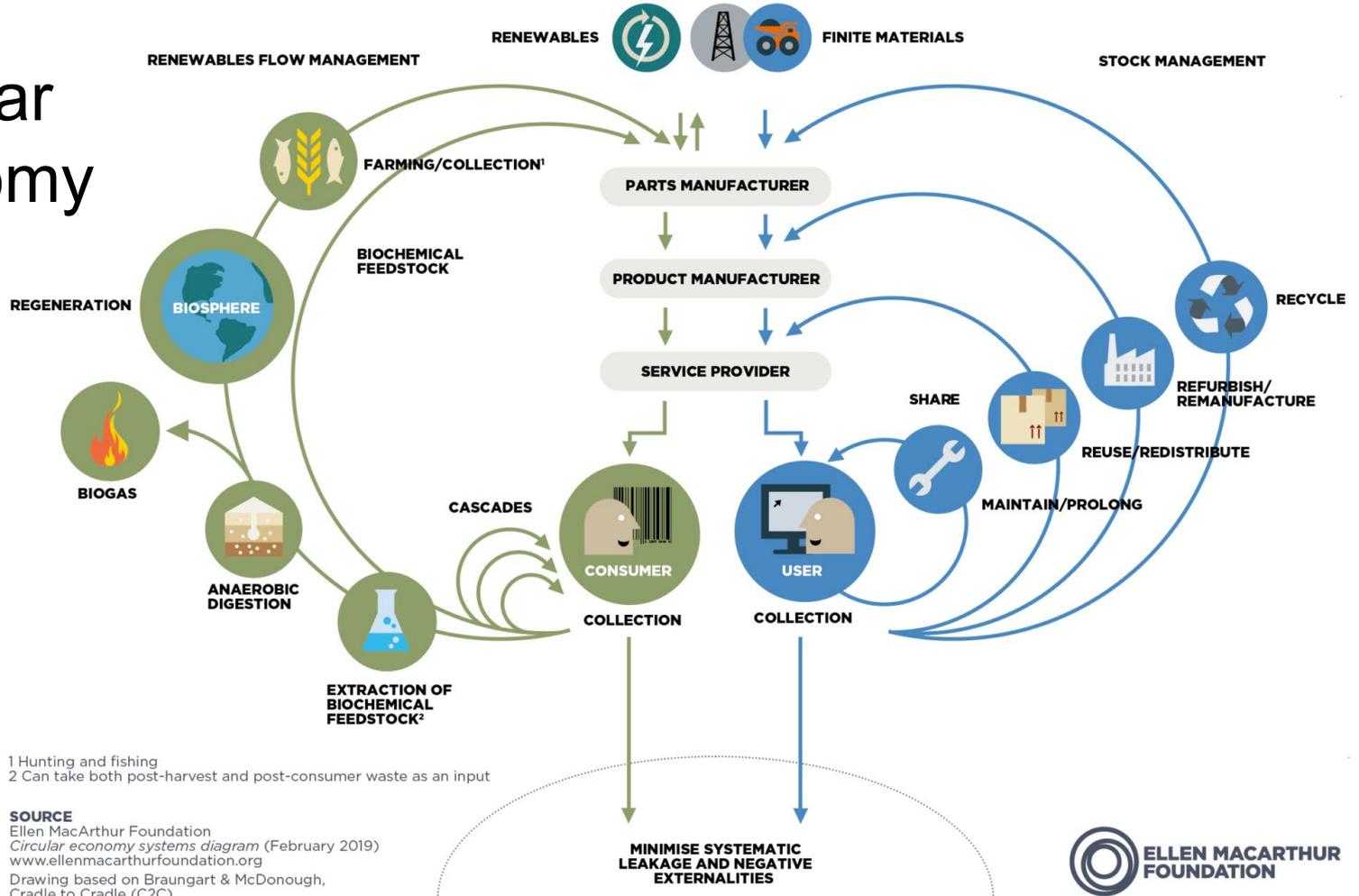
Wakanda Doesn't Have Suburbs

by *Kendra Pierre-Louis*



A view of Wakanda, in the movie 'Black Panther'.
Walt Disney Studios Motion Pictures/Everett Collection

Circular economy



1 Hunting and fishing
2 Can take both post-harvest and post-consumer waste as an input

SOURCE
Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough,
Cradle to Cradle (C2C)



Sharing economy



Little Free Library
Friday Harbor, WA

Photo by Islander Images



Public Library

Photo by Devon Divine



Tool Library

Wangari Maathi

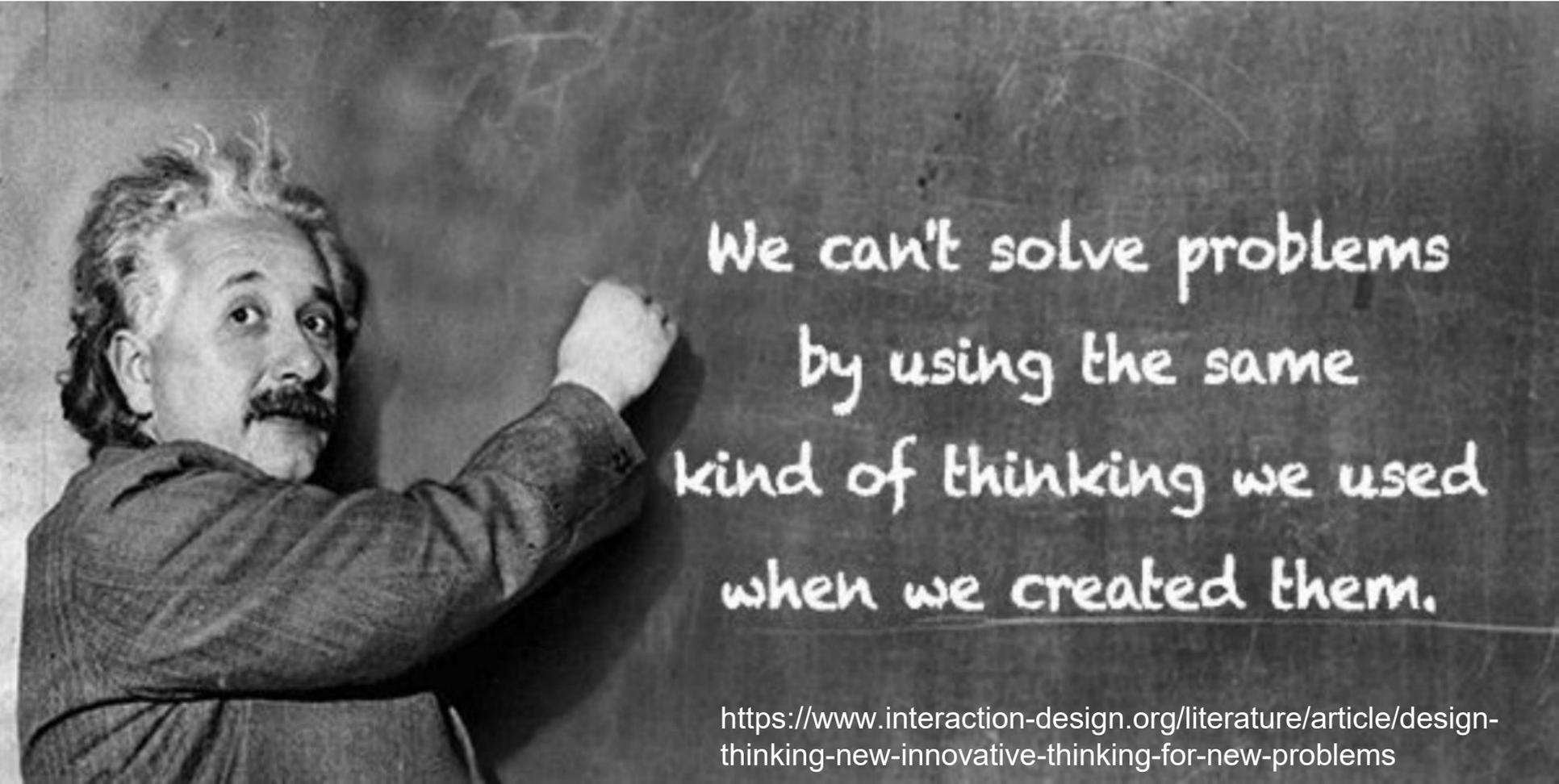
- First African woman to win a Nobel Peace Prize
- First East African woman to receive a Ph D
- Started The Greenbelt Movement



“It's the little things citizens do. That's what will make the difference.”



Moving to “We”

A black and white photograph of Albert Einstein, with his characteristic wild hair and mustache, looking towards the camera while writing on a chalkboard. He is wearing a dark, long-sleeved jacket. The chalkboard is dark and has some faint, illegible markings. The text on the board is written in a white, hand-drawn font.

We can't solve problems
by using the same
kind of thinking we used
when we created them.

<https://www.interaction-design.org/literature/article/design-thinking-new-innovative-thinking-for-new-problems>



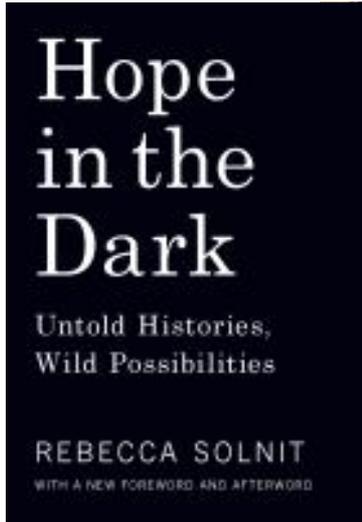
Greta strikes – August 2018



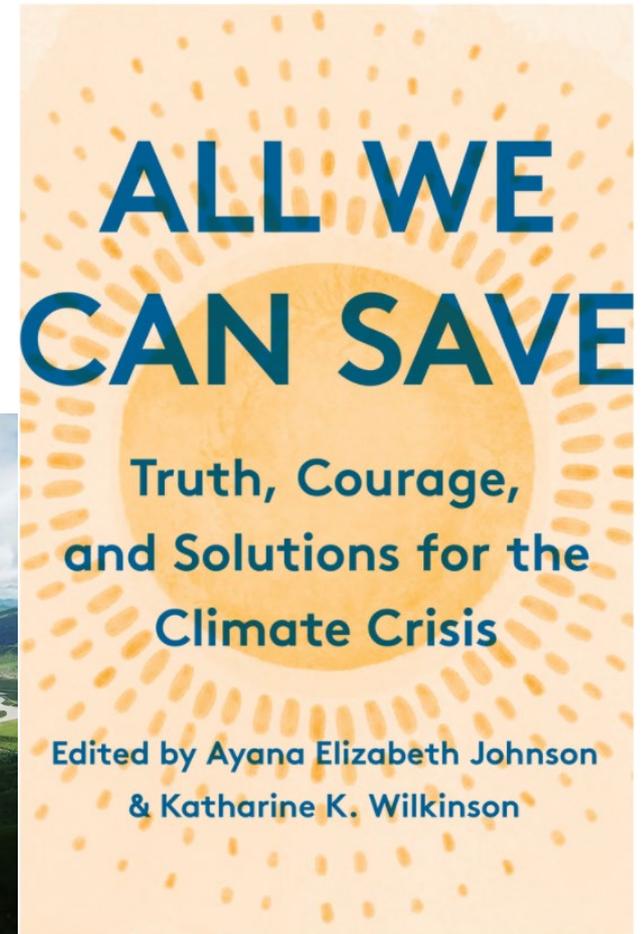
Photo by Katie Rodriguez, 2019 Global Climate Strikes in NYC

Inspiration to read

We “must be the change” we “wish to see in the world.”



‘Our biggest challenge? Lack of imagination’: the scientists turning the desert green



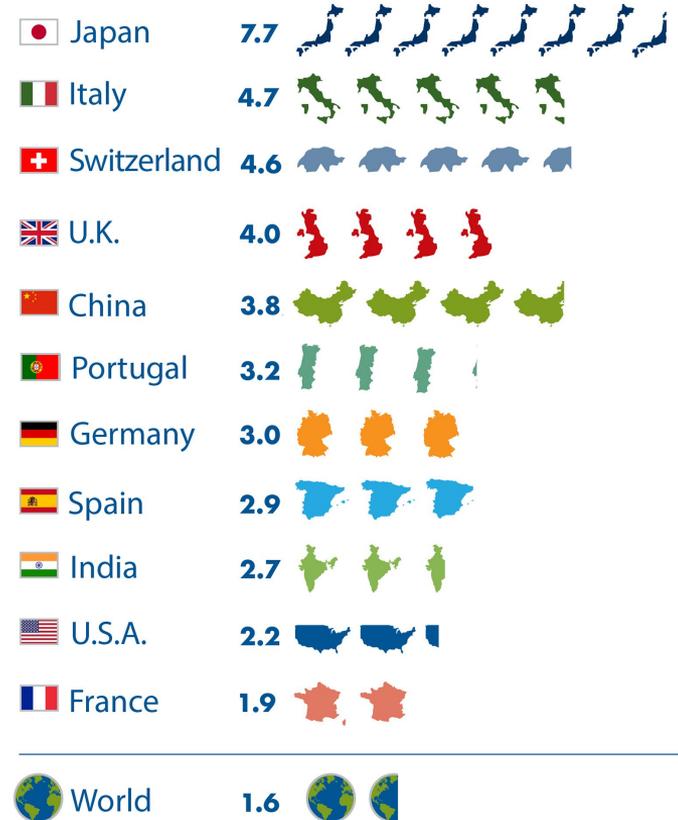
Overshoot Day in US

March 14, 2020



Photo by Markus Spiske

How many countries are required
to meet the demand of its citizens...



Source: Global Footprint Network National Footprint and Biocapacity Accounts 2019
data.footprintnetwork.org