

# NATURAL CAPITALISM SOLUTIONS

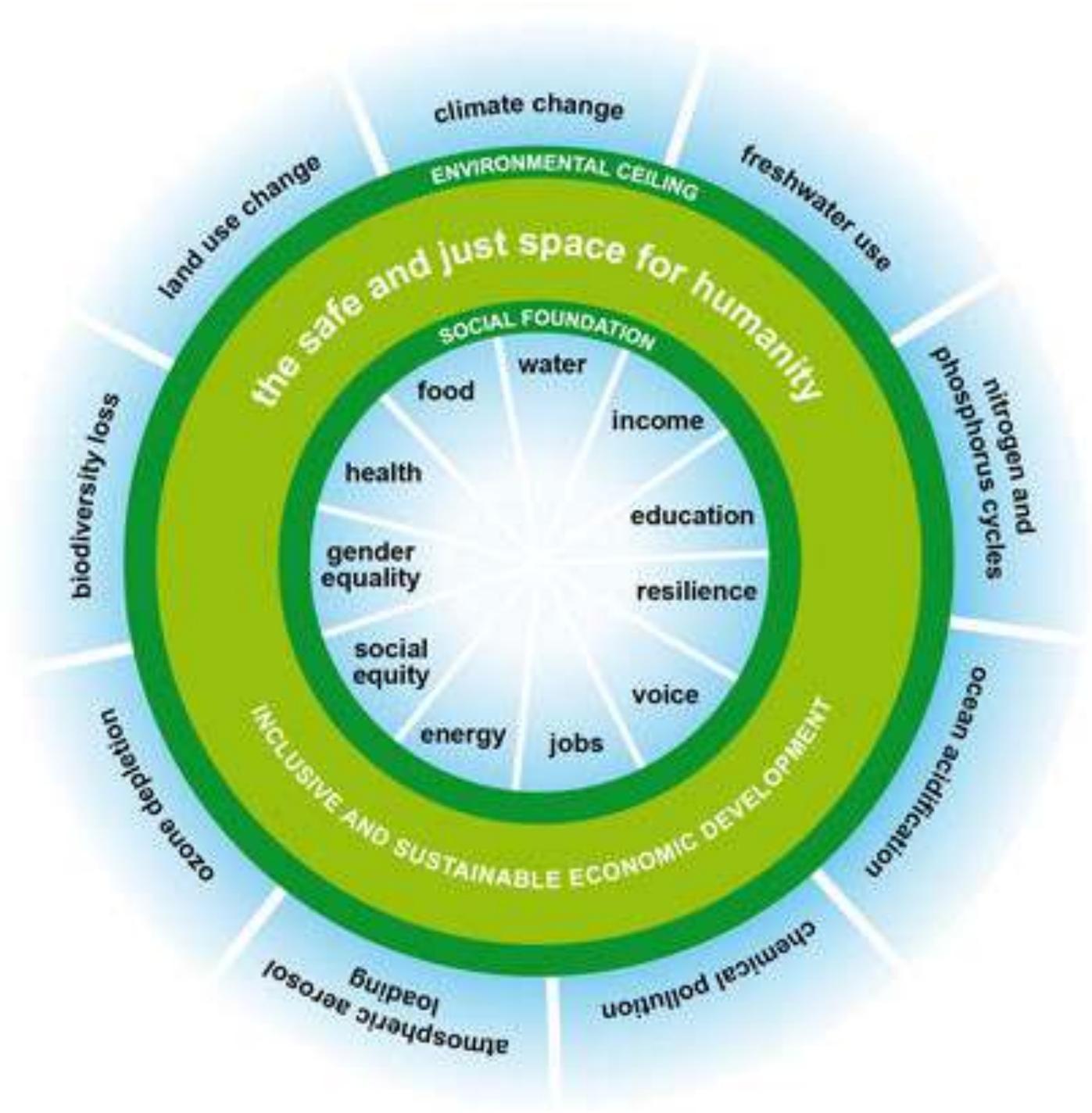


INVESTMENT FOR AN ECONOMY  
IN SERVICE TO LIFE

Humanity stands  
on the edge of a  
crumbling cliff.

Most of the  
world's people  
live on  
precarious  
edges of one  
sort or another,  
watching it all  
unravel

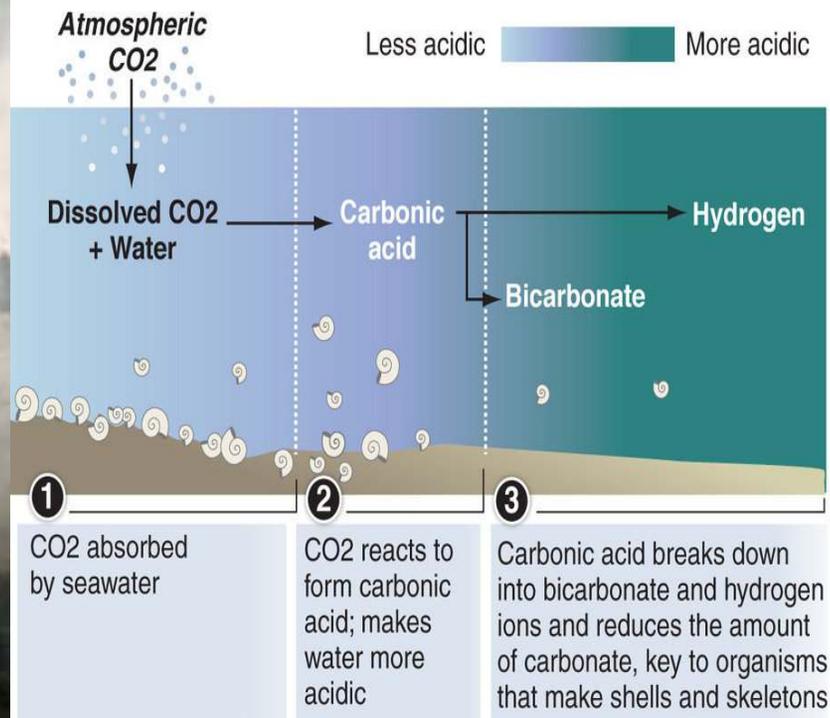




# Global Biodiversity Outlook Three -

## Oceans turning acidic

Higher carbon dioxide (CO<sub>2</sub>) emissions from human activity are acidifying the oceans and could harm everything from plankton to whales.



### How acidity affects marine life

- Depletes oceans of compound that clams, coral, plankton, other creatures need to build shells, skeletons
- Fish, other organisms can develop metabolic, immune, reproductive problems
- Kills off food for animals at higher end of food chain

Source: University of Maryland, Center for Biological Diversity

© 2010 MCT

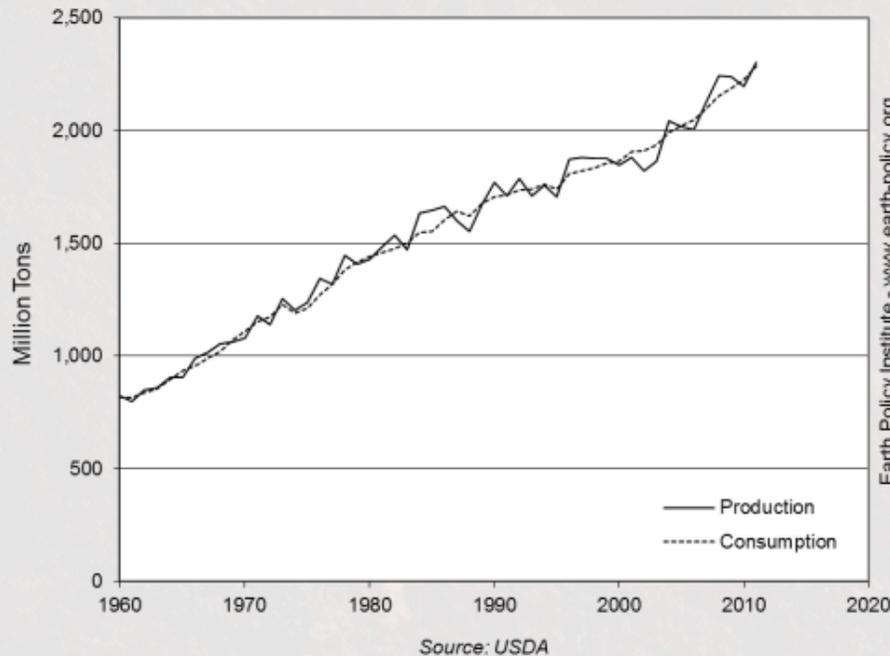


2011, a new record: 14 weather related disasters with damages over \$1 billion.  
2013 6<sup>th</sup> year in a row with weather related damages over \$10 billion



# Precarious Global Food Situation

**World Grain Production and Consumption, 1960-2011**



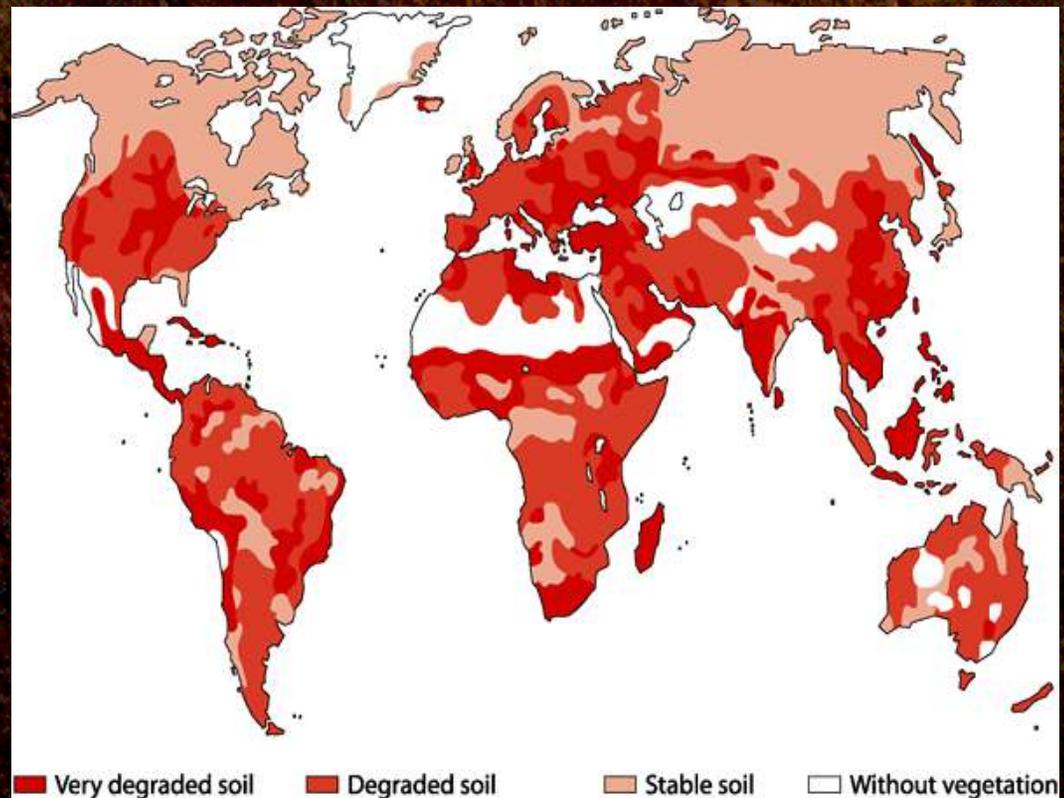
- Dangerously small margin between grain consumption and grain production
- Now we face long-term trends that:
  - increase food demand
  - limit food production

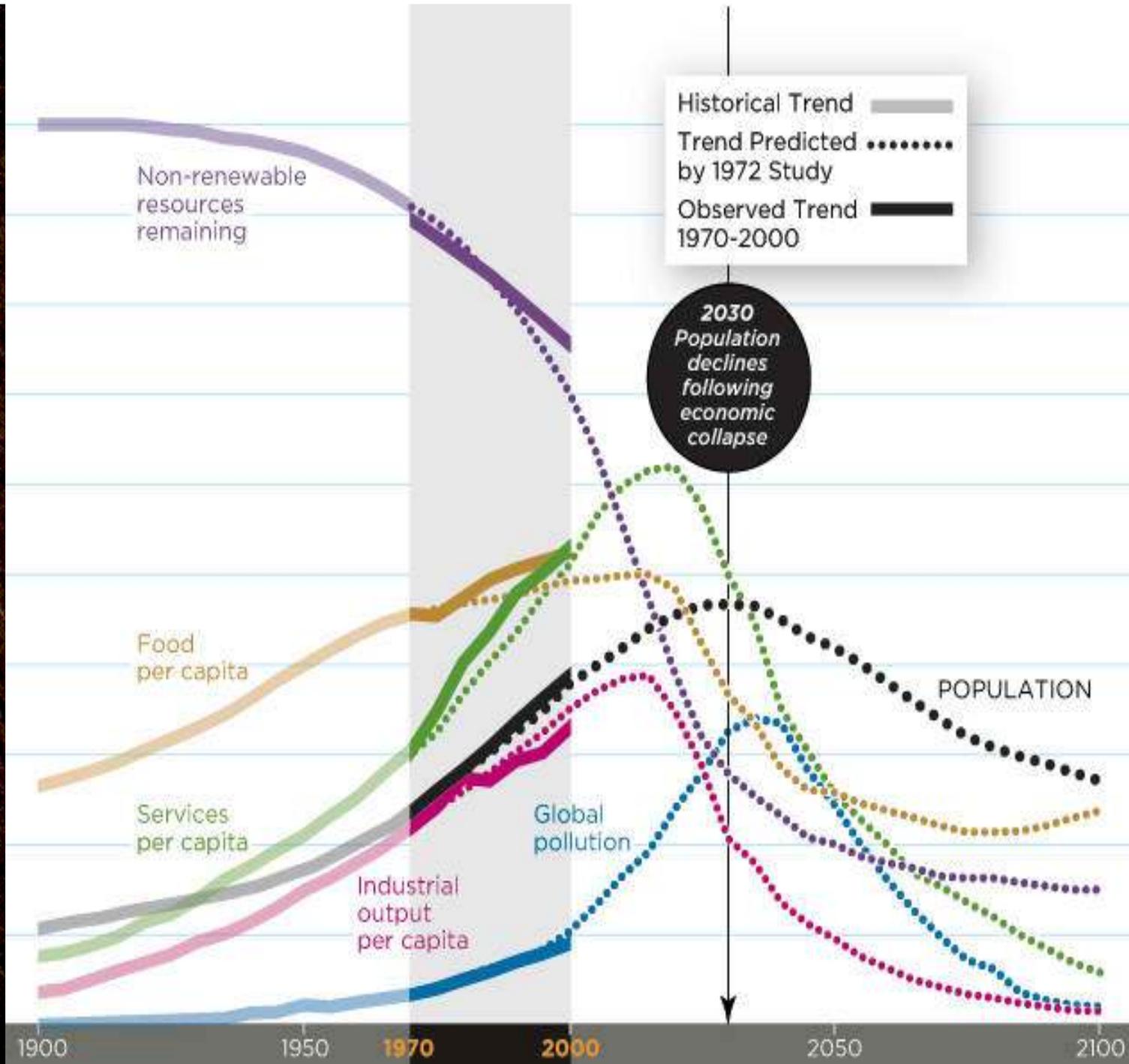
***We are only one poor harvest away from chaos in world grain markets.***

# Food and Water Scarcity

More than 33 countries around the world face potential social unrest due to spikes in food prices.

An estimated one-third of the world's cropland is now losing topsoil at a rate that reduces its productivity





Non-renewable resources remaining

Food per capita

Services per capita

Industrial output per capita

Global pollution

POPULATION

1900

1950

1970

2000

2050

2100

Over the last 50 years, the amount of global arable land per capita shrank by roughly 45 percent, and it is expected to continue declining, if more moderately, to 2050

40% of farm land is leased now in the US. China and others are buying farmland around the globe



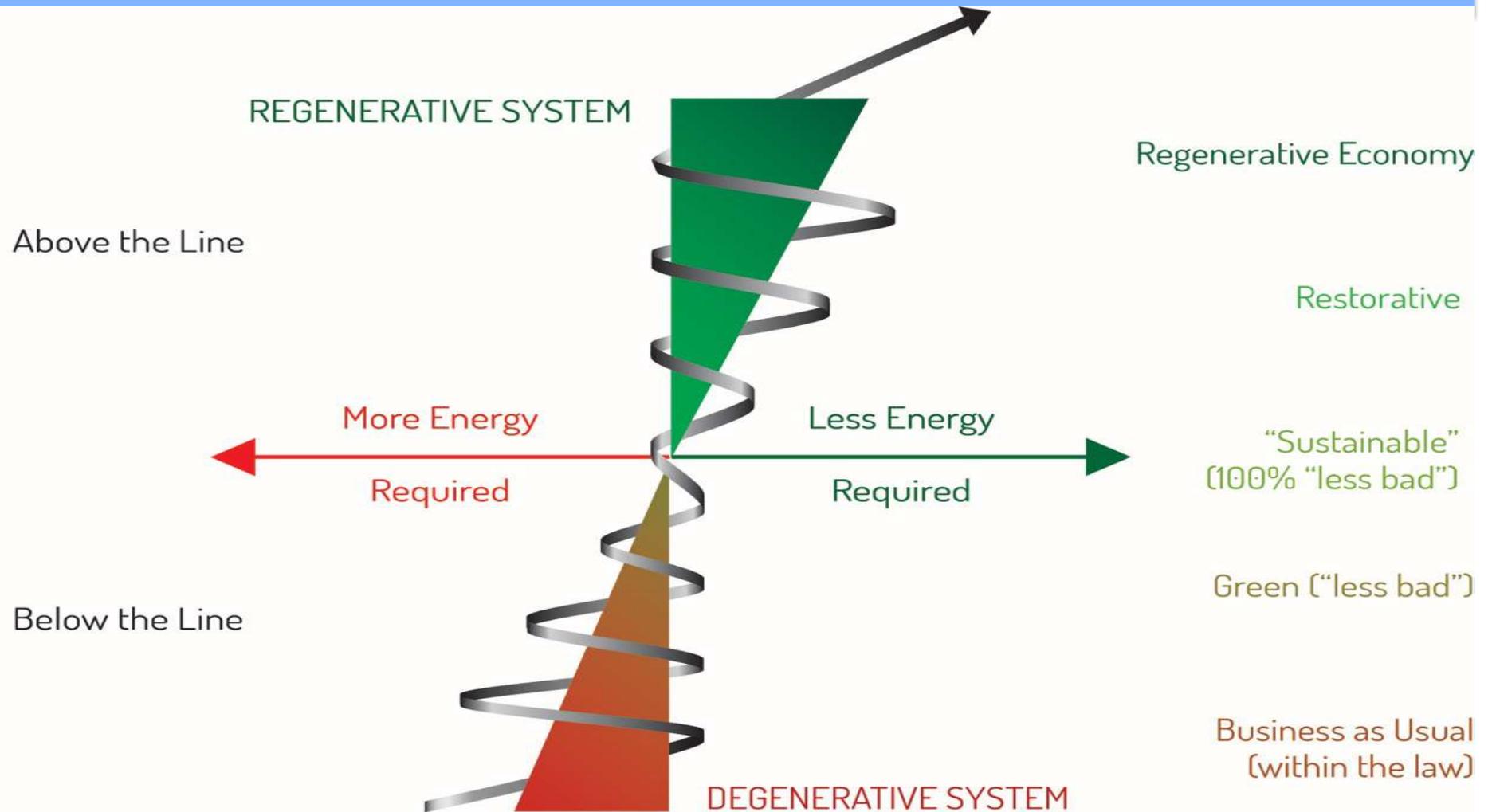
Who would you trust more to navigate these challenges sustainably—farmers looking to pass on productive land to their kids, or financial managers operating under pressure to deliver short-term profits to investors?

Humanity  
is in the  
muck



Natural systems are sustainable

because they are **Regenerative**



Derived from Bill Reed, Regenesi Group







Desired Outcome

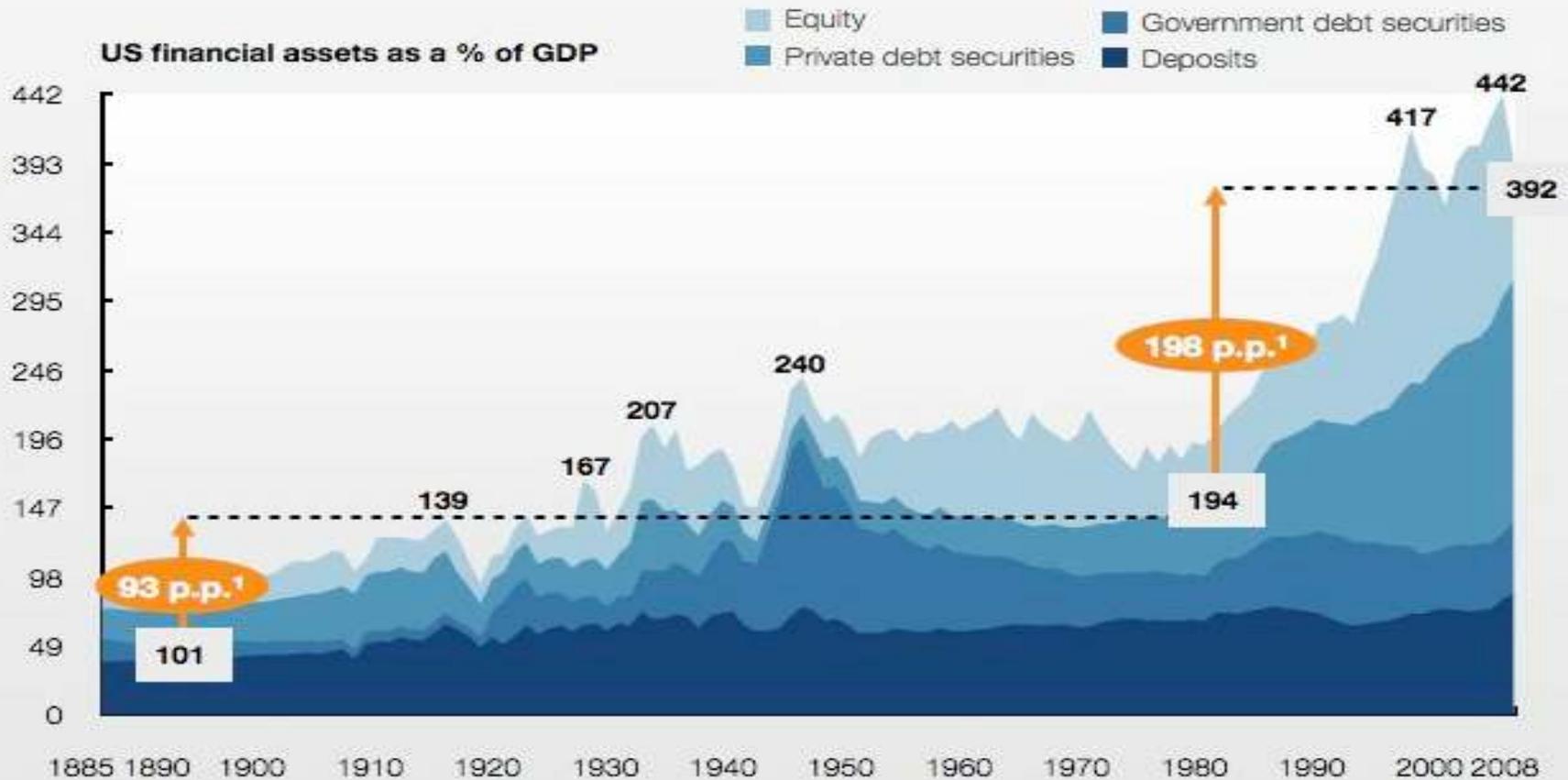
Finance

Economy



# Financial Overshoot?

After 1980, financial asset growth accelerated

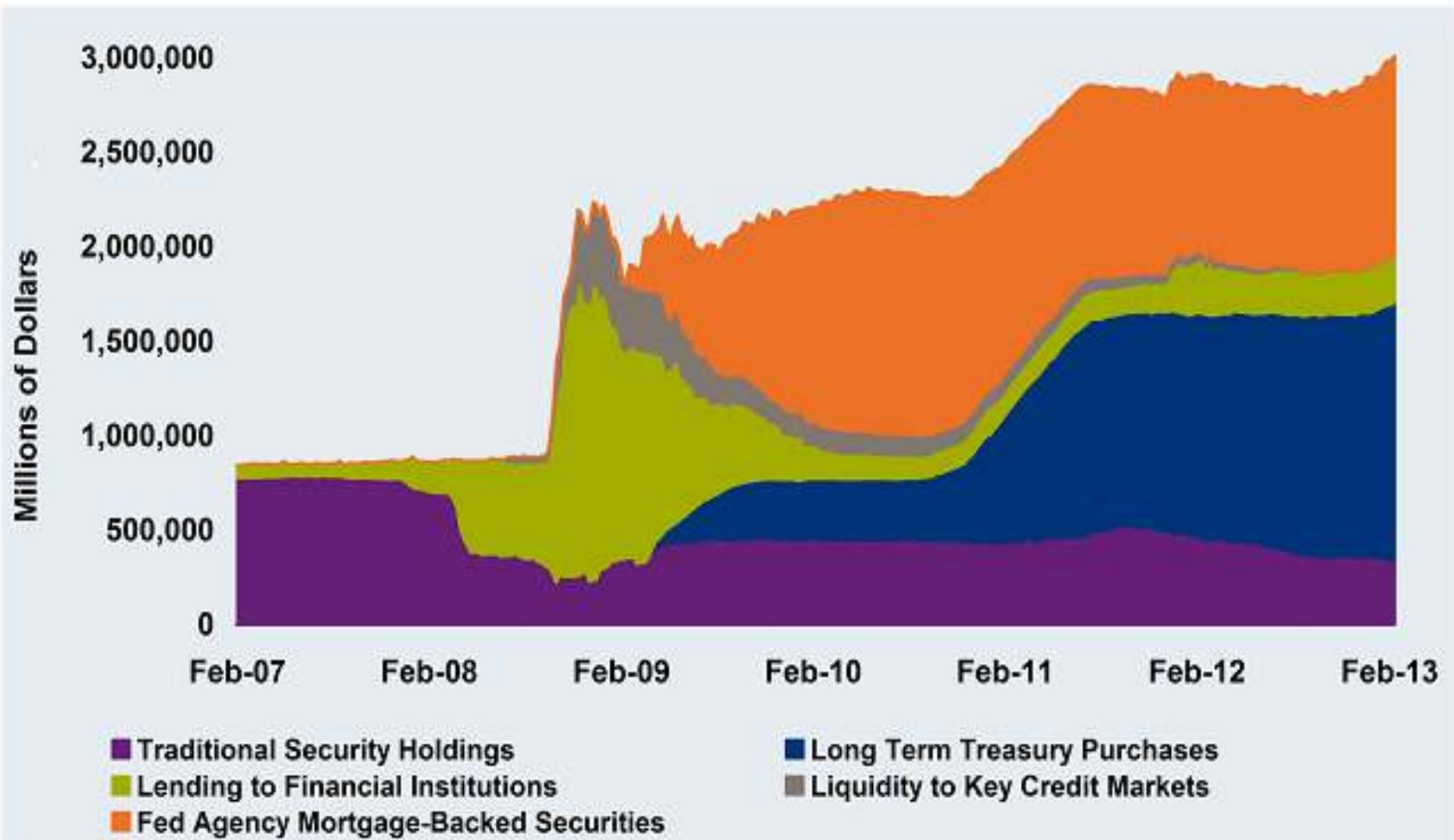


1 Percentage points of GDP

SOURCE: Federal Reserve; National Bureau of Economic Research; Robert Shiller; McKinsey Global Institute analysis

[www.capitalinstitute.org](http://www.capitalinstitute.org)

# What financial system triage looks like



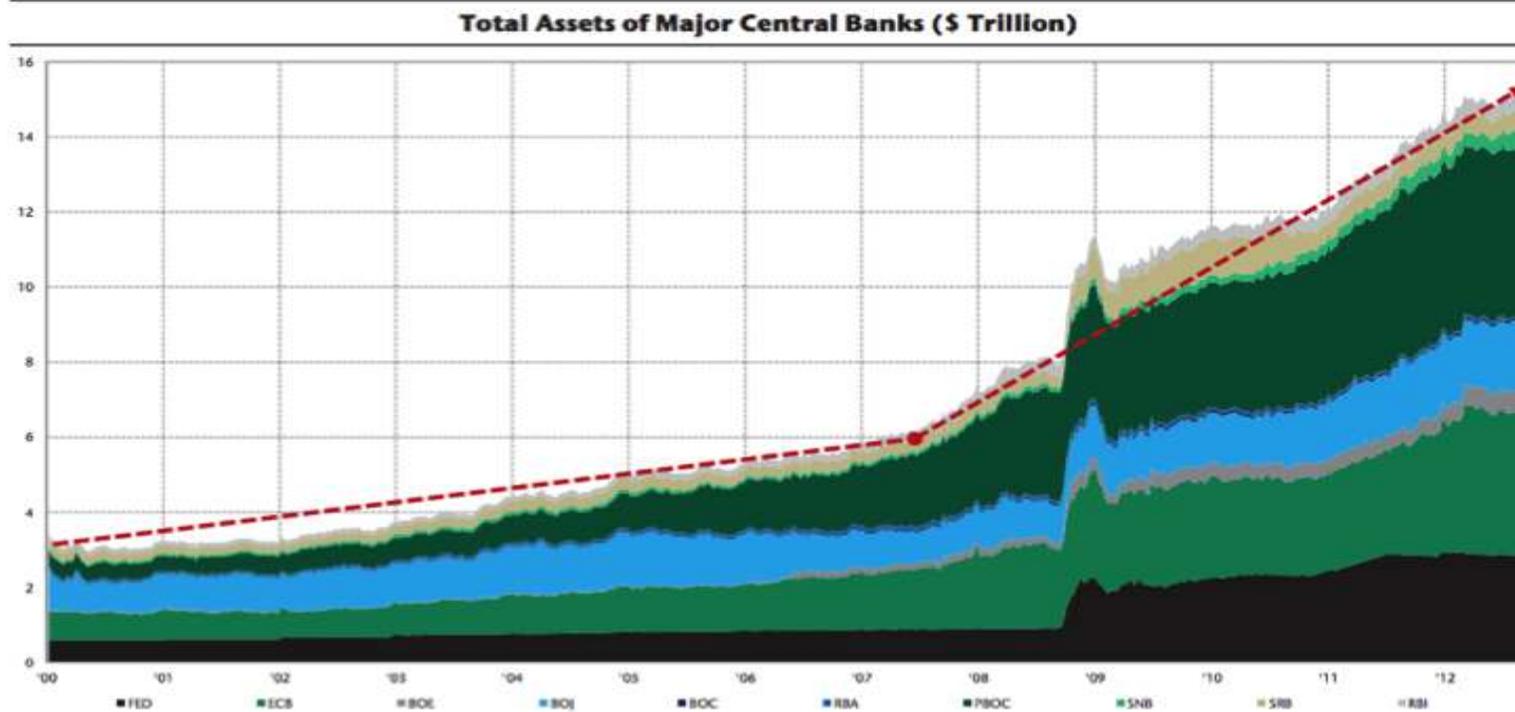
# Major Central Bank Balance Sheets

## Expansion Of Central Bank Balance Sheets In Dollar Terms

**“Since the crisis began, the major central banks have expanded their balance sheets by over USD 9 trillion...GIDDY UP!!!”**

—David Zervos, Managing Director at Jefferies

BUSINESS  
INSIDER



Total Assets, Source: NCBI through both Bloomberg and Haver

WE WILL ASK NOTHING  
WE WILL DEMAND NOTHING  
WE WILL TAKE NOTHING  
OCCUPY, OCCUPY, OCCUPY



What is our theory of change?



We need an  
antidote to the  
Russell Brand  
video calling for  
revolution - now  
the most  
watched You  
Tube video for  
all of 2013.





# The investment players we need

G 1000 +

G 20 +

C 40 +

B 10 (give or take)

We need a new way to think

Holism is the universal principle  
that explains matter, life, and spirit.

- Jan Smuts

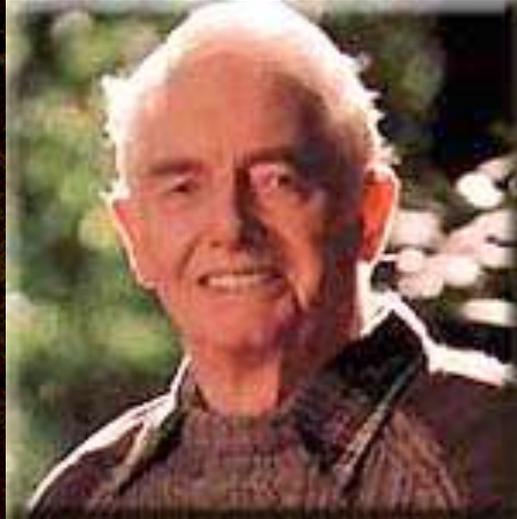


Wisdom, when standing on a crumbling cliff, is to turn around to see what is behind us - all the intactness of the natural world, of human community, and build from there.

Turning, we can see the remnants of our intact and beautiful world, the ancient wisdom we forgot, the brilliant experiments at the edges can help us regain safety, the sacred and our sense of home again.

Our job is to roll the edges back up into a new center, to bring those from the margin into the conversation, into the solutions.

We're changing stories. We're giving people a place to stand, a place to hold on to



## David Brower:

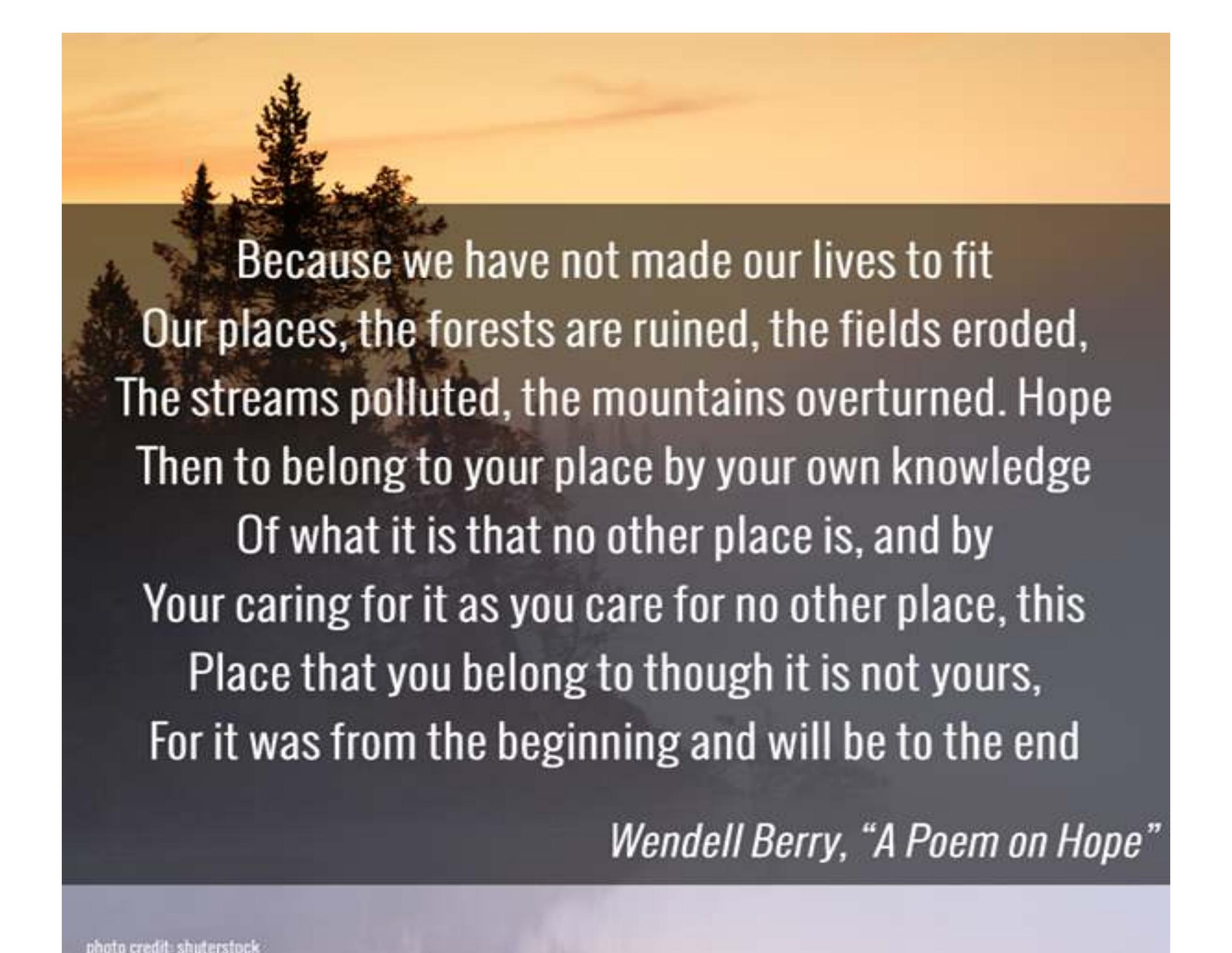
What do we want the earth to be like fifty years from now? Let's do a little dreaming.

Aim high! Navigators have aimed at the stars for centuries. They haven't hit one yet, but because they aimed high they found their way

Island of Eigg -  
crowdsourced  
movement  
funded the  
purchase of the  
island, and its  
conversion to  
100%  
renewable  
energy.

Now the only  
place in  
Scotland with  
net in-migration





Because we have not made our lives to fit  
Our places, the forests are ruined, the fields eroded,  
The streams polluted, the mountains overturned. Hope  
Then to belong to your place by your own knowledge  
Of what it is that no other place is, and by  
Your caring for it as you care for no other place, this  
Place that you belong to though it is not yours,  
For it was from the beginning and will be to the end

*Wendell Berry, "A Poem on Hope"*



## Holistic Management<sup>®</sup> Model

★	Statement of Purpose						
Whole Under Management	Decision Makers		Resource Base			Money	
Holistic Goal	Quality of Life		Forms of Production			Future Resource Base	
Ecosystem Processes							
Tools for Managing Ecosystem Processes							
Testing Guidelines	Cause & Effect	Weak Link • Social • Biological • Financial	Marginal Reaction	Gross Profit Analysis	Energy/Money Source & Use	Sustainability	Society & Culture
Management Guidelines	Learning & Practice	Organization & Leadership	Marketing	Time	Stock Density & Herd Effect	Cropping	Burning Population Management
Planning Procedures	Financial Planning		Land Planning			Grazing Planning	
Feedback Loop							

A photograph of a sunset over the ocean. The sun is a bright yellow-orange orb on the horizon, casting a shimmering path of light across the water. The sky transitions from a deep blue at the top to a lighter orange near the horizon. The foreground shows the dark silhouette of a beach and the gentle waves of the ocean.

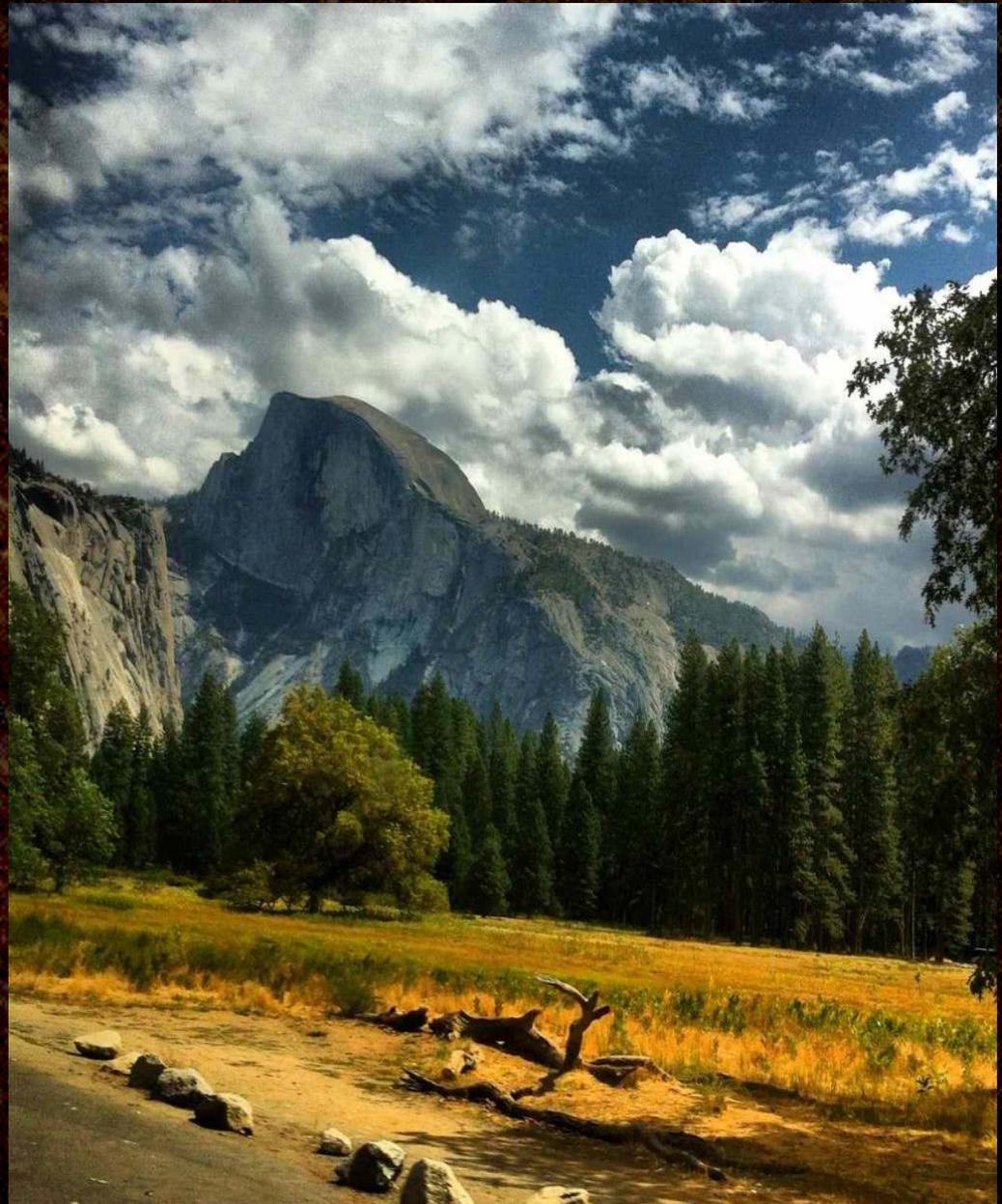
**“The key to the future  
of the world is finding  
the optimistic stories  
and letting them be  
known.”**

**- Pete Seeger, 1919-2014.**

## Building Real Wealth

Edges of ecosystems are where the greatest abundance lives.

Where two ecosystem converge is where the diversity and fertility is found in nature - as where a meadow meets the forest or a river enters the ocean



We celebrate the real economy, an economy in service to life.

We seek the creatives, the disruptive, the heretics, the dispossessed, all the people who have been told to shut up: the people from the margins who now hold the greatest promise for saving our asses.

The ones to whom we now need to listen are all of us who would have been burned at stake 500 years ago, for whom they would have come with their little cage wagon



**ALLANSAVORY**





UGA002104





# Planned grazing at Milkwood





# Programs to reclaim land using animals



*With six inches of rain a year*

# Even on acid mine tailings





Kamloops BC Canada

First Nations run organization currently  
servicing over 30 retailers

Family of aboriginal-owned ranches  
keeping jobs and economic vitality in the  
community

TOP STORIES IN LIFE & CULTURE 1 of 12



The Power of the Doodle: Improve Your F...

2 of 12



Tech Timeout for Grown-Ups

3 of 12



One Notch Better Than Organic?



A Platform for Moving Bodies

LIFE & STYLE

# Grass-Fed Milk Is Taking Off With Health-Conscious Shoppers

At Almost \$6 a Half-Gallon at Whole Foods and Other Stores, Milk From Cows That Don't Eat Grain Is Considered Healthier Than Organic



By SARAH NASSAUER [CONNECT](#)

Updated July 29, 2014 8:58 p.m. ET

For some shoppers, organic isn't enough. They want grass-fed milk.

The pricey milk isn't only organic. It comes from cows fed mostly grass, and never corn and soy.



MASSACHUSETTS  
GENERAL HOSPITAL  
CANCER CENTER  
Everyday Amazing

There IS a round economy out there - a circular economy, a sharing economy - to counter the liquidation economy now ravaging the planet.

This is the entrepreneurial challenge of sailing off over the edge of the flat economy to find new lands, new hope, to counter flat climate denialism and those who reject planned grazing.



Our work is to stitch together a narrative that shows how all of us who are working for a world that works, in Bucky Fuller's framing, for 100% of humanity, are in this together, how the foundational work of stopping bad stuff and saving intact bits has as much essence as green business and visionary thinking.

Our work is to change the story and give people a place to stand, to hold on to. People are afraid, confused - they need a new story about an economy that doesn't trash the joint. In the the artistic, creative, entrepreneurial edges that are where the magic is.

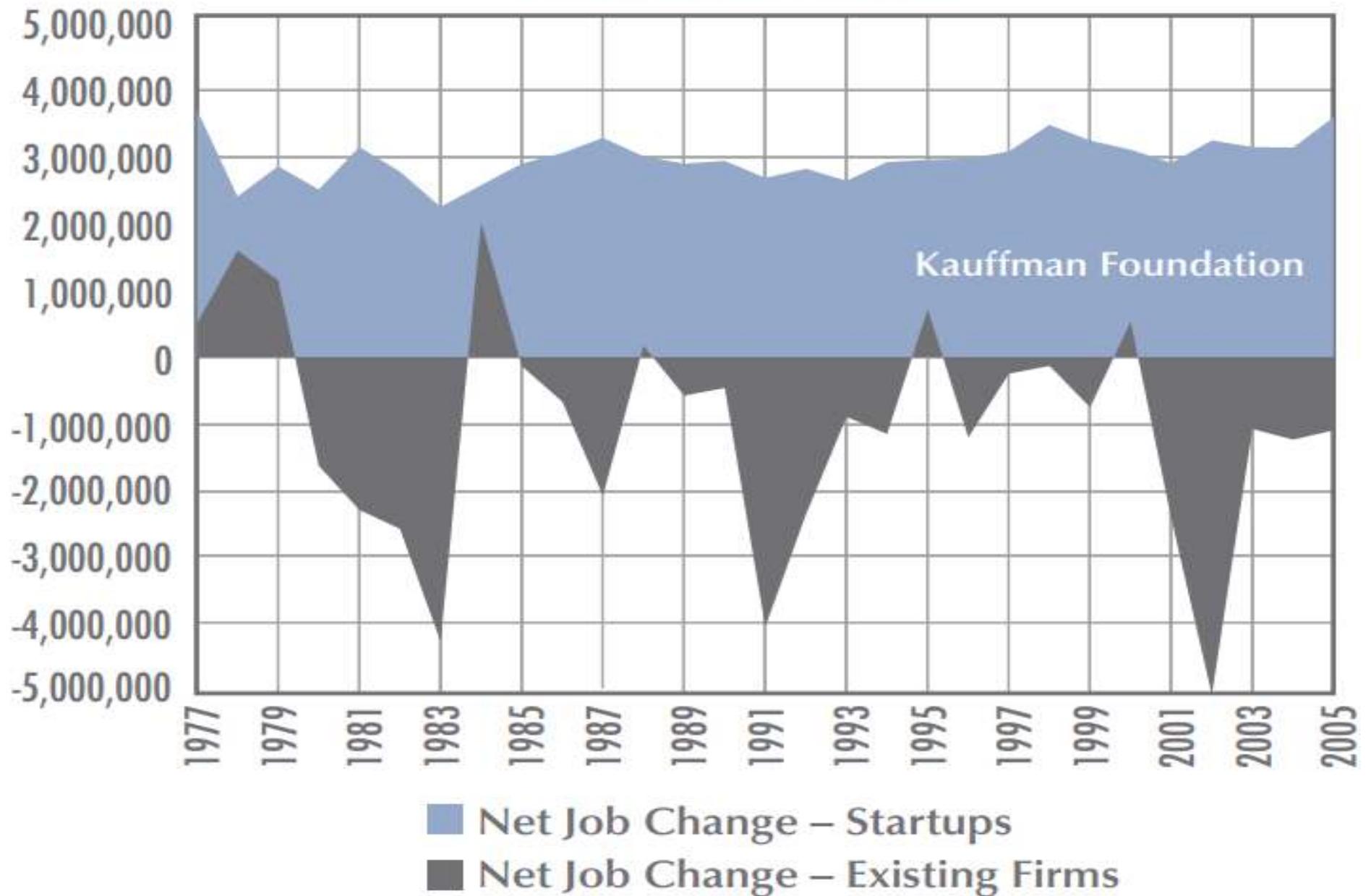
# GROW FOOD, NOT LAWN

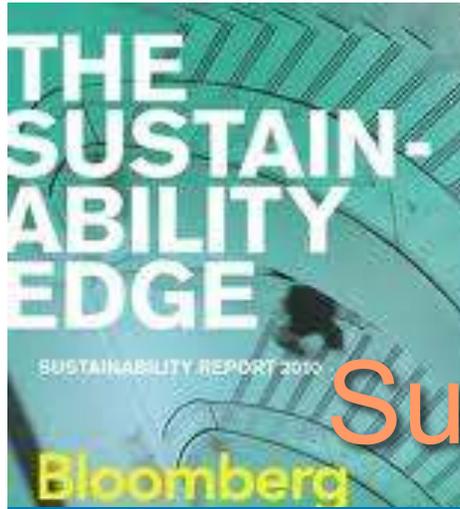


FB.COM/GROWFOODNOTLAWNS



## Startups Create Most New Net Jobs in the United States





Sustainability is happening



# Harvard Business Review

“Sustainability **isn't the burden on bottom lines** that many executives believe it to be. It can lower your costs and increase your revenues. That's why **sustainability should be a touchstone for all innovation.**

In the future, **only companies that make sustainability a goal will achieve competitive advantage.** That means rethinking business models as well as products, technologies and processes.”

Why Sustainability is Now the Key Driver of Innovation

# Sustainability pays

Companies in the Dow Jones sustainability Index outperform the general market

Goldman Sachs report July 2007: Companies that are leaders in environmental, social and governance (ESG) policies **outperform competitors in stock performance—by an average of 25%**.

72% of the companies on the DJSI outperformed industry peers

# Reinvent the global economy



# We need to manage the transition to REGENERATIVE CAPITALISM!

## THE EIGHT ELEMENTS OF REGENERATIVE CAPITALISM

**1. Right Relationship:** Holds the continuation of life sacred; recognizes that the human economy is embedded in human culture and the biosphere.

**2. Entrepreneurialism:** Draws on the innate ability of human beings to innovate and "create anew" across all sectors of society.

**3. Wealth Viewed Holistically:** True wealth defined in terms of the well-being of the "whole," achieved through the harmonization of the multiple forms of capital.

**4. Democratized Financial Wealth:** Financial wealth equitably (although not necessarily equally) distributed in the context of an expanded view of true wealth.

**5. Real Economy Circularity:** A continual striving to minimize energy, material, and resource throughput at all phases of the production cycle.

**6. Edge Effect Abundance:** Creative collaborations increasing the possibility of value adding wealth creation through relationship, exchanges, and resiliency.

**7. Resiliency:** Long run ability to recover from shocks and adaptability to change valued over brittle concentrations of power and hyper-efficiency in the present.

**8. Honors Place:** Operates to nurture healthy, stable communities and regions, both real and virtual, in a connected mosaic of place-centered economies.



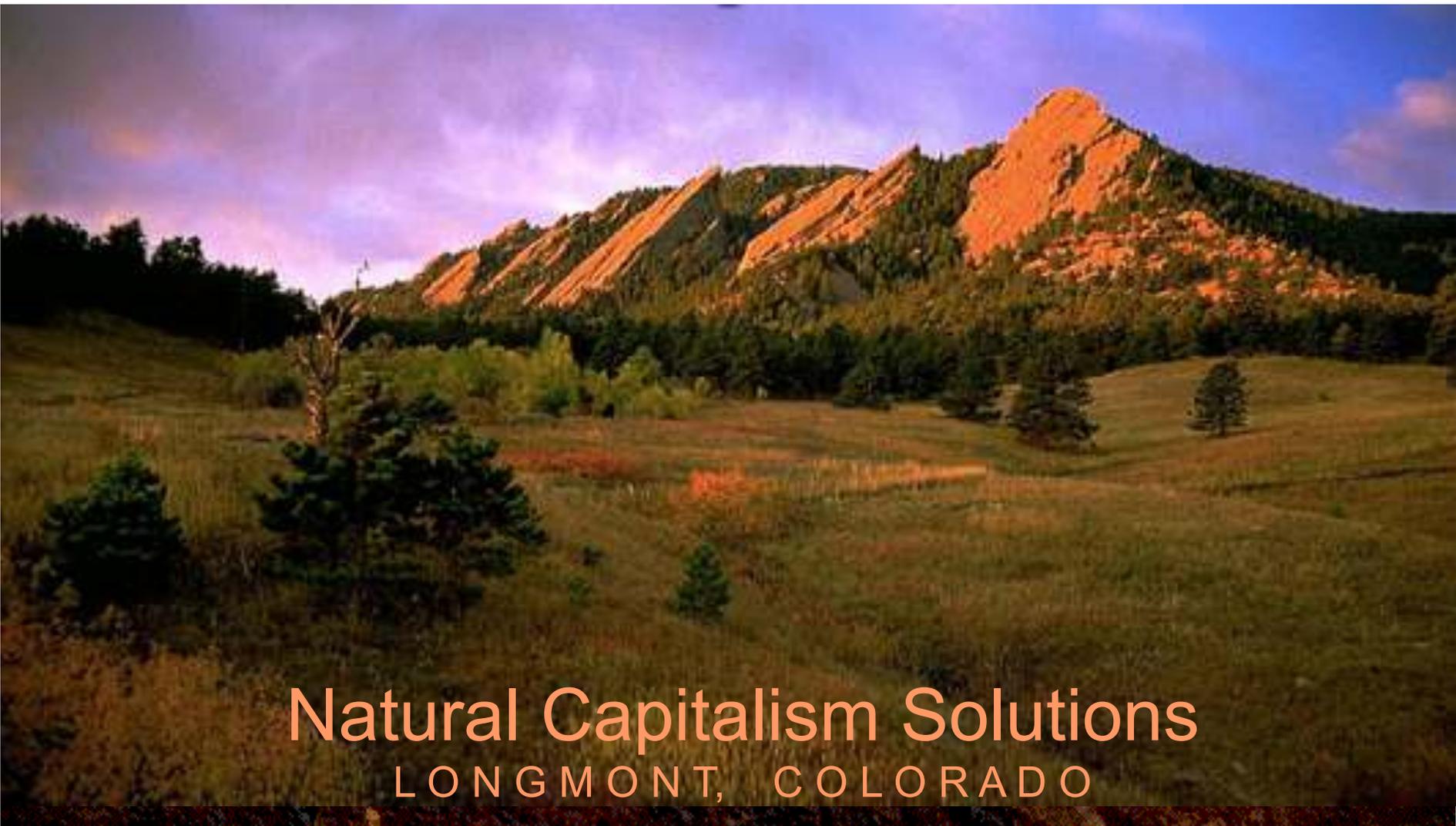
Each person must see himself as though the entire world were held in balance and any deed he may do could tip the scales

Maimonides



We are called to be architects of the future, not its victims.

Buckminster Fuller



# Natural Capitalism Solutions

LONGMONT, COLORADO

Email: [solutions@natcapsolutions.org](mailto:solutions@natcapsolutions.org)

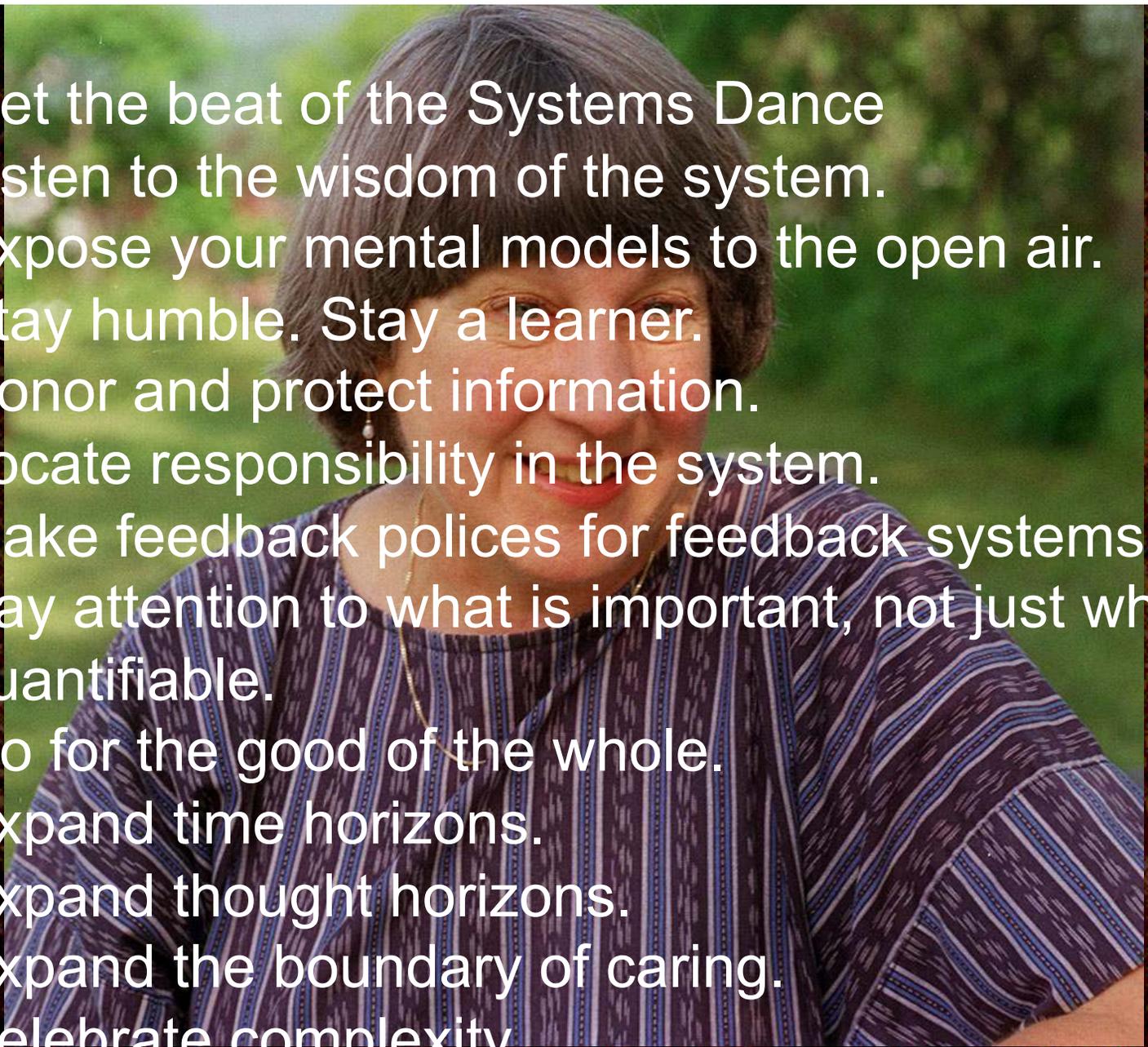
Visit: [www.natcapsolutions.org](http://www.natcapsolutions.org)

# Economy on Edge

Article by Hunter Lovins, Dr Robert Costanza,  
Dr Ida Kubiszewski, Donna Morton

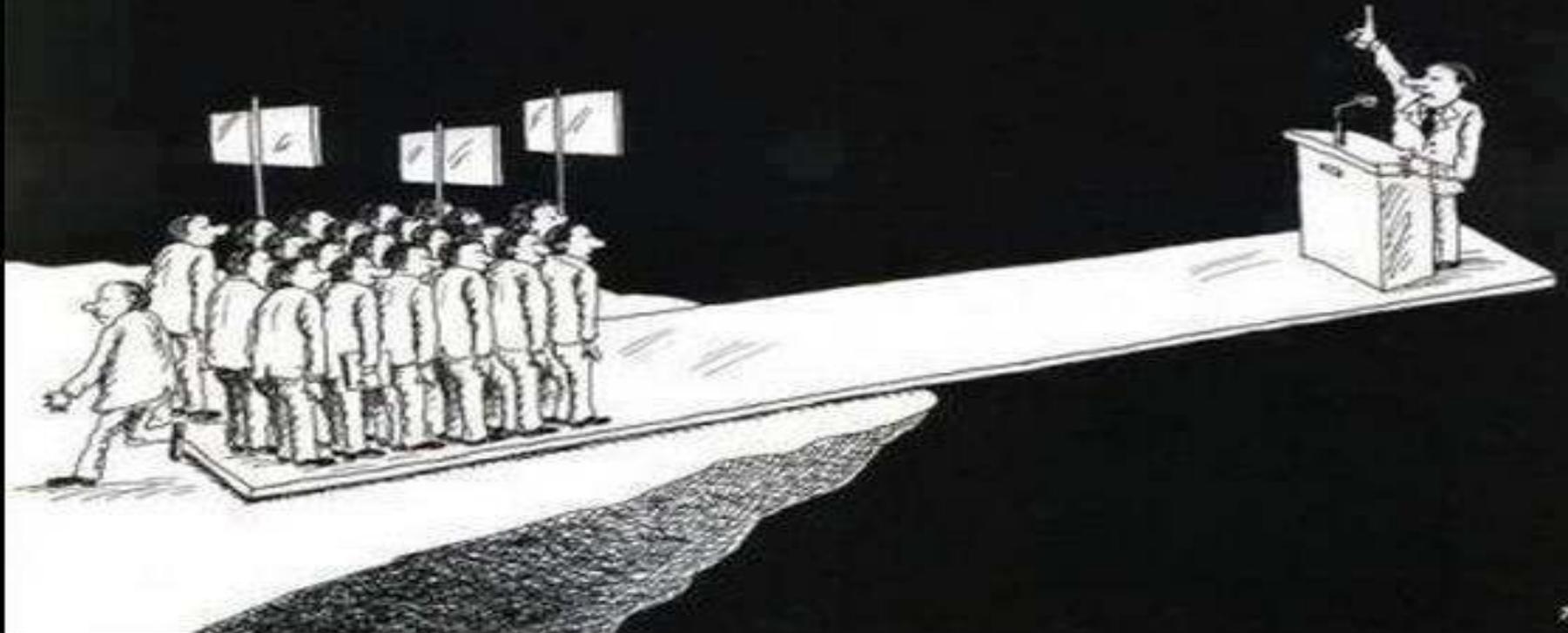
<http://www.theguardian.com/sustainable-business/blog/2014/jun/06/global-economy-on-edge-create-world-for-100-percent>



- 
1. Get the beat of the Systems Dance
  2. Listen to the wisdom of the system.
  3. Expose your mental models to the open air.
  4. Stay humble. Stay a learner.
  5. Honor and protect information.
  6. Locate responsibility in the system.
  7. Make feedback polices for feedback systems.
  8. Pay attention to what is important, not just what is quantifiable.
  9. Go for the good of the whole.
  10. Expand time horizons.
  11. Expand thought horizons.
  12. Expand the boundary of caring.
  13. Celebrate complexity.
  14. Hold fast to the goal of goodness

Organizations that lose legitimacy collapse very quickly

**THE PEOPLE DON'T KNOW  
THEIR TRUE POWER.**



# Edge Economy in U.S.

Employs almost 3 million - more than fossil fuel

Outperformed general economy in recession

Offers better opportunities, higher pay for low and middle skilled workers median wages 13% higher

Green jobs increased five times faster than jobs in any other industry

Green economy is on track to reach \$10 trillion in investments by 2020

A greener economy could create between 15 million to 60 million jobs worldwide over the next two decades

At least half of the global workforce will be affected in some way by 2030



CORPORATION  
2020

TRANSFORMING BUSINESS  
FOR TOMORROW'S WORLD



PAVAN SUKHDEV

# Electricity Grid

**Traditionally, electricity has flowed one way; from a power station to a customer.**



**Renewable energy enters the network from multiple locations, through distributed generation.**



“Utilities are in danger of being FedExed, Chu said, like the Post Office got FedExed, as rooftop solar modules drop in price”



**BAVARIA HAS MORE INSTALLED SOLAR CAPACITY  
THAN THE ENTIRE UNITED STATES.**



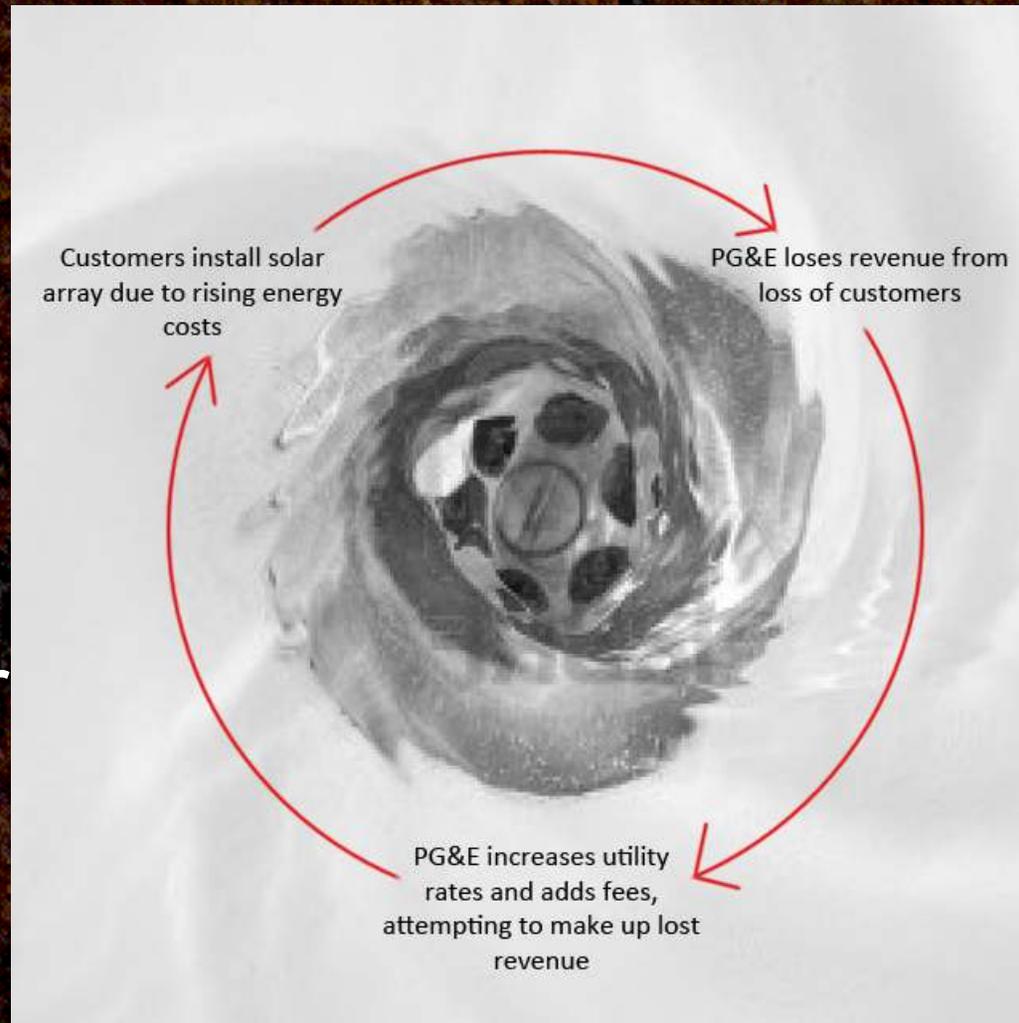
**DID WE FORGET  
HOW TO AMERICA?**

Source: Slate

**OILCHANGE**  
INTERNATIONAL

# THE DEATH SPIRAL

Top 20 European utilities have lost \$600 billion in value over the past 5 years



Tesla is valued at more than half of GM – despite producing 300 times fewer cars

Bottom up replacement theory of change  
 Shut down but start good

What is theory of change

collapse  
 Muddle thru  
 soft landing/abundance

- Categories
- Energy/Climate
  - Water
  - Food
  - Housing
  - Transportation
  - Health Care
  - Sanitation

our model  
 vision  
 levers that drive  
 change

framework of work  
 plan/assignments

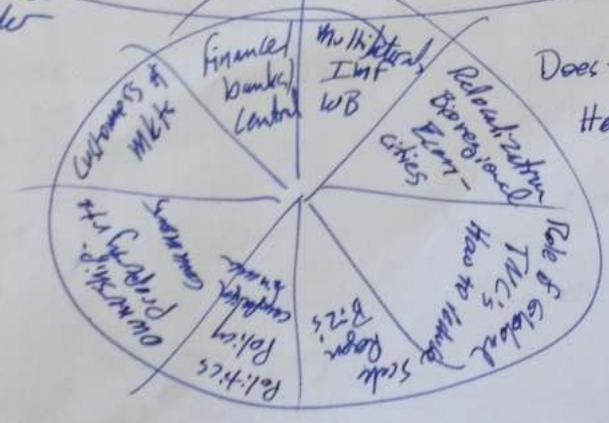
Tools Resources  
 what

Key Allies

Existing efforts - what's working  
 where are they?

social safety net  
 infant/elder  
 Education

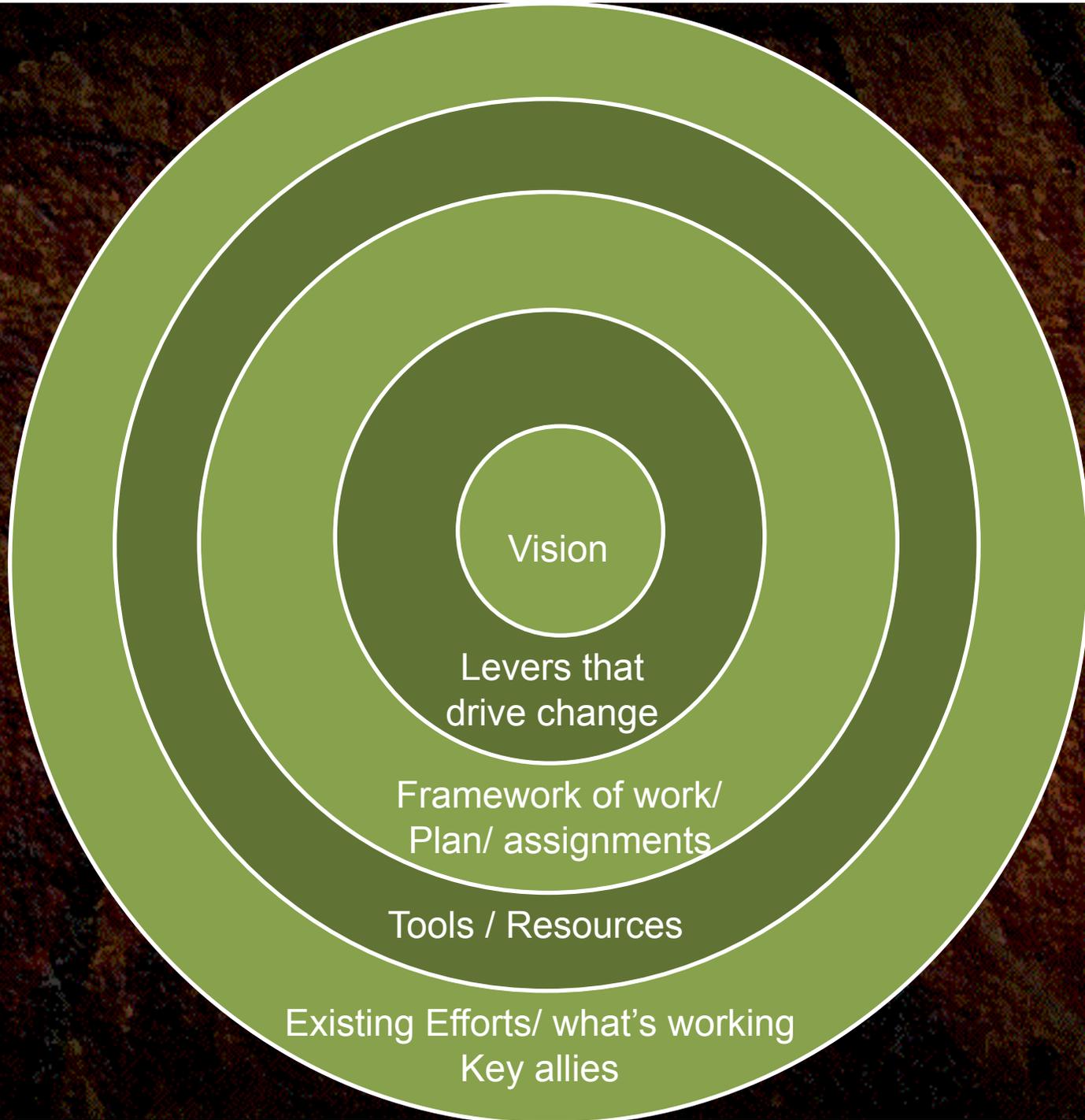
Does this need new institutions  
 How to factor growth B.Z  
 of bioeconomy



## Job 1:

Create a strategy of change - how does the work that we are all doing fit in to serving this larger vision?







# Edge Principles

Start with the arc of transition of Natural Capitalism

Buy time – thru efficiency

Redesign how we make and deliver goods and services

Manage all institutions to be regenerative of human and natural capital

Tell the truth – that we are on the edge – we need to feel the fear

Explore the Edge – take stock, feel the exhilaration, opportunity

Accept the call – let it guide your life – we can solve climate crisis but we are not the hero – the heroes are the little people

Enter the territory of the heretic – business heretics: Steve Jobs, Ray Anderson, Paul Polman, artists - “My people will sleep for 100 years and when they wake up it is the artists that will give them their spirit back.”

Take it to scale – it has to work in Afghanistan, in rural Liberia – those who have survived have the resilience – the life artistry - the genius the planet needs are kids in slums and favellas

Balance. Balance the old wisdom with the new: Old wisdom: don't pee in drinking water, don't eat every brown mushroom, if it is bigger than you it could eat you. Maps of world that show intact deep biologic resources are indigenous areas - the human edge is freedom and feminism, and respect for every living being

Move from the edge to wholeness – we need to knit the fractured edges into wholeness - whole people and whole societies that understand history, and powerful desire to make future finer than where we came from

## Elements of a strategy of change

Move the money

Business schools - and key professions: Engineering,

ID leverage points - they shift so keep shifting - Dana's places to intervene

All hands on deck strategy - social media - Bring Back Our Girls - Yesallwomen - world saying it - since when does world care about 300 girls in Africa - too little too late, but it gives a glimpse of power of us as species - Avaaz