

# Harvest Song

“The Play is an attempt to find a value above all price for the smallest events in our daily life.” (Thorton Wilder about his play “Our Town”)

## Harvest Song

Long ago  
we were sown  
now we're here  
hear our song



by Stefan Pasti, Founder and Resource Coordinator  
The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative  
[www.cpcsi.org](http://www.cpcsi.org)

## Welcome--and Kind Greetings to All Who Have Come Here

We are at one of the most critical crossroads humanity has faced since the dawn of civilization.

The first two chapters of "Harvest Song" provide what this writer considers sufficient evidence that there is now a convergence of unprecedented challenges. However much we may move forward with the technology pieces needed to limit global warming to 1.5°C, there are many other pieces to the unprecedented cultural transformation which we must also achieve--*and failure to also reach positive tipping points on the many other pieces may cause us to lose positive traction, and slide downhill into cynicism.*

In Chapter #3 and Chapter #4 of "Harvest Song", this writer provides some examples of what he believes are significant movement towards our best chances of avoiding catastrophic climate breakdown. He also includes key steps he advocates for to reach positive tipping points on climate breakdown, *and on many other unprecedented challenges.*

Each chapter begins with the cover page, and an identical introductory page, as a way of emphasizing the themes therein.

Tweets from people who are clearly identified have been included in this book; and though hopefully done respectfully, and towards a worthy goal, such tweets were included without asking for permission (as "Educational Fair Use"--since this book is not published for monetary compensation). If there are any questions, or requests, from readers, or from the people whose tweets have been used, they can be addressed to this writer (Stefan Pasti) at [stefanpasti@gmx.com](mailto:stefanpasti@gmx.com), and a respectful and courteous response will be made as soon as possible.

Executive Size (7.25" X 10.5") was chosen for the Word document to make the pages more compact, though that choice had a downside--as much of the text in the text boxes had to be 9 point font. If this font issue, or any other issues, turn out to be too much of an inconvenience, the book can be re-made.

While readers are encouraged to add comments to the various tweets made to introduce this book, use of a more organized and centralized format for comments --The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative Discussion Forum (at <http://cpcsdiscussionforum.freeforums.net/>)--is also encouraged.

Stefan Pasti  
Fulton, MO  
December, 2018

## Table of Contents

Chapter 1	
Evidence of a Convergence of Unprecedented Challenges.....	4
Chapter 2	
More Evidence of a Convergence of Unprecedented Challenges.....	25
Chapter 3	
Evidence for a Convergence of Unprecedented Solutions.....	43
Chapter 4	
More Evidence for a Convergence of Unprecedented Solutions.....	62

## Chapter #1

# Harvest Song

“The Play is an attempt to find a value above all price for the smallest events in our daily life.” (Thornton Wilder about his play “Our Town”)

### Harvest Song

Long ago  
we were sown  
now we're here  
hear our song



## Introduction to Chapter #1 of the “Harvest Song”

We are at one of the most critical crossroads humanity has faced since the dawn of civilization.

The first two Chapters of “Harvest Song” provide what this writer considers sufficient evidence that there is now a convergence of unprecedented challenges. However much we may move forward with the technology pieces needed to limit global warming to 1.5oC (2.7oF), there are many other pieces to the unprecedented cultural transformation which we must also achieve--*and failure to also reach positive tipping points on the many other pieces may cause us to lose positive traction, and slide downhill into cynicism.*

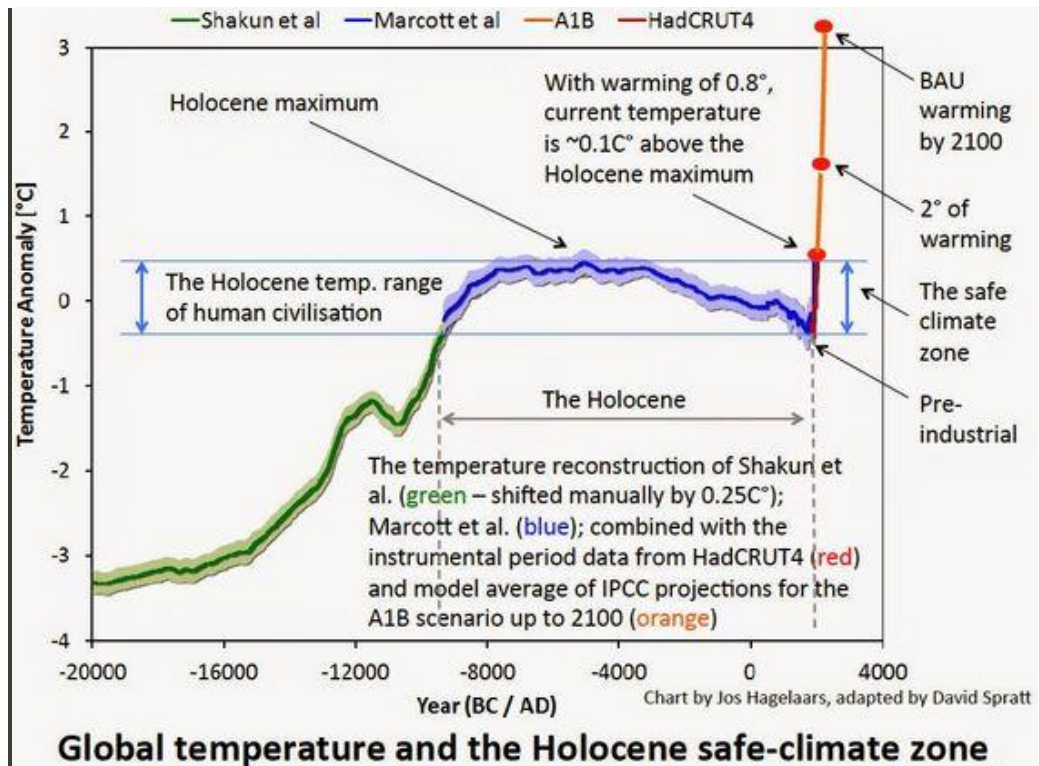
In Chapter #3 and Chapter #4 of “Harvest Song”, this writer provides some examples of what he believes are significant movement towards our best chances of avoiding catastrophic climate breakdown. He also includes key steps he advocates for to reach positive tipping points on climate breakdown, *and on many other unprecedented challenges.*

Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the unprecedented challenges ahead. Confidence will be built up when people believe that the efforts of everyone working together is a greater force than the challenges they are facing.



**Eric Holthaus** [Verified account](#) @EricHolthaus Nov 1 2018

Your periodic reminder of the news story of the millennium: We have left the 10,000-year climate "safe zone" that gave rise to human civilization.



72 replies 2,984 retweets 3,093 likes



**Svein T veitdal** @tveitdal Sep 27 2018

**World 'nowhere near on track' to avoid warming beyond 1.5C target**

[https://www.theguardian.com/environment/2018/sep/26/global-warming-climate-change-targets-un-report ...](https://www.theguardian.com/environment/2018/sep/26/global-warming-climate-change-targets-un-report...)

Key UN report says limiting temperature rise would require enormous, immediate transformation in human activity

@olaelvestuen



3 replies 86 retweets 64 likes

--"Shindell would not share exact details of the IPCC report (which will be released in October), but he said that the more ambitious 1.5C goal would require a precipitous drop in greenhouse emissions triggered by a rapid phaseout of fossil fuels, particularly coal, mass deployment of solar and wind energy and the eradication of emissions from cars, trucks and airplanes."

--"Even then, emerging technology will be required on a global scale to capture emissions at the source and bury them in the ground or remove carbon directly from the air."

[Source: "World 'nowhere near on track' to avoid warming beyond 1.5C target" by Oliver Milman @olliemilman Guardian Thu 27 Sep 2018 <http://bit.ly/2zN0Bhq> ]



**Nik Hubbard** @NikiHubbard Oct 8 2018

"This is the largest clarion bell from the science community and I hope it mobilises people and dents the mood of complacency." We have 12 years to limit climate change catastrophe, warns UN



**We have 12 years to limit climate change catastrophe, warns UN**

Urgent changes needed to cut risk of extreme heat, drought, floods and poverty, says IPCC

[theguardian.com](http://theguardian.com)

--"The world's leading climate scientists have warned there is only a dozen years for global warming to be kept to a maximum of 1.5C, beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people."

--"Carbon pollution would have to be cut by 45% by 2030--compared with a 20% cut under the 2C pathway--and come down to zero by 2050, compared with 2075 for 2C."

--"Climate change is occurring earlier and more rapidly than expected. Even at the current level of 1C warming, it is painful," he told the Guardian.".... "There is a growing recognition that 2C is dangerous."

[Source: "We have 12 years to limit climate change catastrophe, warns UN" by Jonathan Watts, Global Environment Editor Guardian Mon 8 Oct 2018 <http://bit.ly/2SzfWsJ> ]

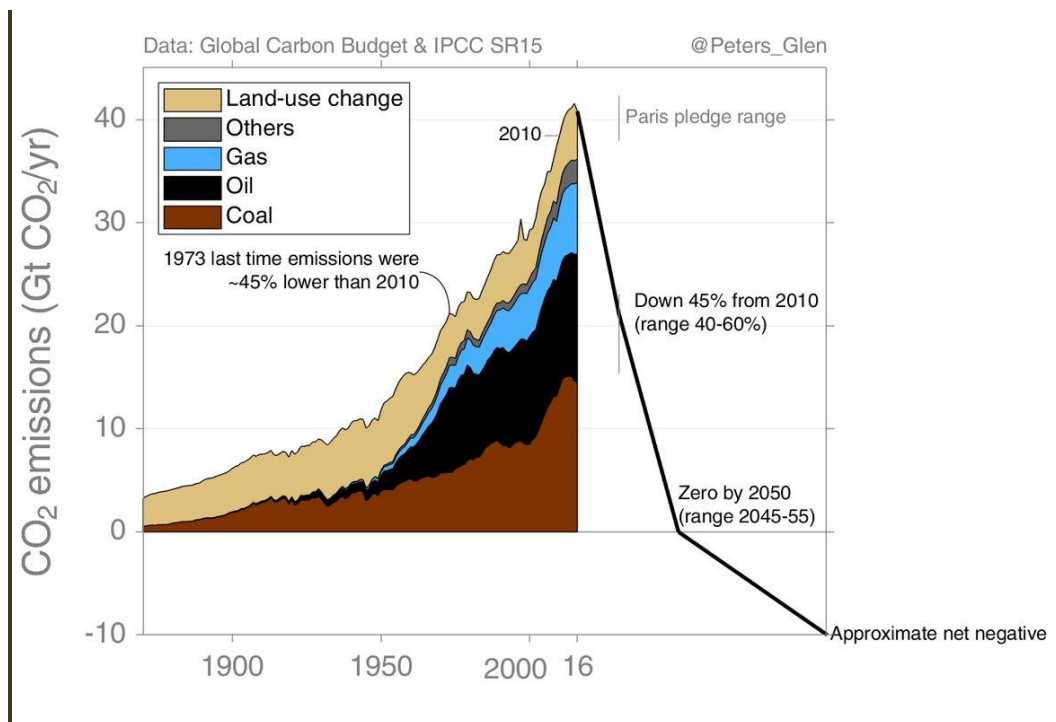




**Glen Peters** @Peters\_Glen Oct 12 2018

According to [#SR15](#), pathways with limited overshoot of 1.5°C require global net CO<sub>2</sub> emissions to decline by ~45% from 2010 levels by 2030 (40–60% interquartile), reaching net zero around 2050 (2045–2055 interquartile), & go negative thereafter (my estimate).

This is not easy...



22 replies 248 retweets 249 likes



[Svein T veitdal](#) @tveitdal Oct 30 2018

(More than) **90% of world's children are breathing toxic air, WHO study finds** [https://www.theguardian.com/environment/2018/oct/29/air-pollution-worlds-children-breathing-toxic-air-who-study-finds ...](https://www.theguardian.com/environment/2018/oct/29/air-pollution-worlds-children-breathing-toxic-air-who-study-finds...) Report says **air** pollution is having a devastating impact on **children** worldwide, storing up a public health time bomb



5 replies 66 retweets 59 likes

“... and 93% (of children worldwide) are exposed to one of the most damaging pollutants-- PM2.5. In poorer countries, 98% of all children under five are exposed to PM2.5 above WHO guidelines.”

[Source: “90% of world's children are breathing toxic air, WHO study finds” by Matthew Taylor in Guardian Mon 29 Oct 2018 <http://bit.ly/2Gjswv9> ]



Guardian Environment [Verified account](#) @guardianeco May 22 2018

## Humans just 0.01% of all life but have destroyed 83% of wild mammals – study



**Humans just 0.01% of all life but have destroyed 83% of wild mammal...**

Groundbreaking assessment of all life on Earth reveals humanity's surprisingly tiny part in it as well as our disproportionate impact

[theguardian.com](http://theguardian.com)

7 replies 237 retweets 188 likes

--“The new work reveals that farmed poultry today makes up 70% of all birds on the planet, with just 30% being wild. The picture is even more stark for mammals – 60% of all mammals on Earth are livestock, mostly cattle and pigs, 36% are human and just 4% are wild animals.”

--“The destruction of wild habitat for farming, logging and development has resulted in the start of what many scientists consider the sixth mass extinction of life to occur in the Earth’s four billion year history. About half the Earth’s animals are thought to have been lost in the last 50 years.”

[Source: “Humans just 0.01% of all life but have destroyed 83% of wild mammals – study” Damian Carrington, Environment Editor; Guardian @dpcarrington Mon 21 May 2018 <http://bit.ly/2rtcLaA> ]

“Some might assume that bond markets are shielded from effects of climate change, eco-degradation, and water scarcity. With more than \$40 trillion sovereign debt in global markets at any given time, that is very high-risk game.”

[Above quote from “Sovereign Environmental Risk” (Oct, 2012 in Project Syndicate) by Achim Steiner UN Under-Secretary General and Executive Director of the UN Environment Programme and Susan Burns, founder of the Global Footprint Network November 5, 2012 <http://bit.ly/2EjEROp> ]

### U.S. Debt; Costs for Weather Damages; Global Debt

From the Wikipedia webpage for “National Debt of the United States”

“As of October 28, 2018, debt held by the public was \$15.8 trillion and intragovernmental holdings were \$5.8 trillion, for a total or ‘National Debt’ of \$21.6 trillion.”

“The U.S. government is obligated under current law to make mandatory payments for programs such as Medicare, Medicaid and Social Security. The Government Accountability Office (GAO) projects that payouts for these programs will significantly exceed tax revenues over the next 75 years.... The present value of these deficits or unfunded obligations is an estimated \$45.8 trillion.... Adding this to the national debt and other federal obligations would bring total obligations to nearly \$62 trillion.”

From article “2017 American Household Credit Card Debt Study” at the website Nerdwallet

“U.S. Credit Card Debt = \$927 billion; U.S. Mortgage Debt = \$9 trillion;  
U.S. Auto Loan Debt = \$1.24 trillion; U.S. Student Loans = \$1.41 trillion  
(Total U.S. Household Debt = \$13.29 trillion)”

From the webpage “Billion-Dollar Weather and Climate Disasters: Overview” (NOAA)

“The U.S. has sustained 238 weather and climate disasters since 1980 where overall damages/costs reached or exceeded \$1 billion (including CPI adjustment to 2018). The total cost of these 238 events exceeds \$1.5 trillion. (2018 in Progress...) In 2018 (as of October 9), there have been 11 weather and climate disaster events with losses exceeding \$1 billion each across the United States.”

From article “Global Debt Jumped to Record \$237 Trillion Last Year” by Alexandre Tanzi (April 9, 2018) at the Bloomberg website

“Global debt (calculated from ‘Non-Financial Corporates’; ‘Governments’; ‘Financial Corporates’; and ‘Households’) rose to a record \$237 trillion in the fourth quarter of 2017, more than \$70 trillion higher from a decade earlier, according to an analysis by the Institute of International Finance.”

During the 3 to 8 decades of unprecedented cultural transformation needed to achieve carbon neutral economies, this writer believes many serious blind spots will be discovered.... “We are now witnessing the highest levels of displacement on record.” (Refugee Statistics; UNHCR)

### Migration, Displacement, and Humanitarian Assistance

- 1) “Overall, more than 134 million people across the world need humanitarian assistance and protection-- and more funding than ever before is required to help them. [Financial Requirements (\$25.2b); Funded Amount (\$14.1b); Unmet Requirements (\$11.1b)]” [Global Humanitarian Overview (2018); United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)]
- 2) “In 2017, there were 30.6 million new displacements associated with conflict and disasters across 143 countries and territories.” [Global Humanitarian Overview (2018); United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)]
- 3) “By the end of 2017, 68.5 million individuals were forcibly displaced worldwide as a result of persecution, conflict, violence or human rights violations.... We are now witnessing the highest levels of displacement on record.” [Refugee Statistics; United Nations High Commissioner for Refugees (UNHCR)]
- 4) “Of the 33 cities that will have at least 8 million residents by 2015, 21 are in coastal areas.” [From publication “Disaster Through a Different Lens”; United Nations International Strategy for Disaster Reduction (UNISDR)]
- 5) “Hundreds of millions, perhaps billions, of people will be exposed to coastal sea level rise and shifts in extreme weather that will cause mass migrations away from the most vulnerable locations. We know from human history that such migrations often lead to conflict and war, with devastating consequences. The huge potential costs of migration-related conflict are usually omitted from economic models of climate change impacts in the future.” (Bob Ward, policy and communications director at the Grantham Research Institute on Climate Change and the Environment; London School of Economics and Political Science)
- 6) “In each of the world's crises, aid agencies providing food, shelter, and medicine helped to save and sustain countless lives. And while aid workers faced growing risks to their personal safety, they continued to provide aid to people in need. Nonetheless, humanitarian aid is not a solution to the world's crises. Aid workers can address humanitarian needs; but they cannot solve underlying political, economic and social problems that cause and perpetuate these crises.” (From “Humanitarian Appeal 2004; UN)

“(est.) 842,000 deaths per year are attributable to unsafe water supply, sanitation and hygiene...” “1/3 of the world’s biggest groundwater systems are already in distress.” “... by 2050 global food production would need to increase by 50% to feed more than 9 billion people....”

### Water, Sanitation, and Food Security

From the UN Water webpage for “Scarcity” (in Section “Facts and Figures”)

“3.6 billion people worldwide (nearly half the global population) are already living in potential water-scarce areas at least one month per year and this could increase to 4.8–5.7 billion in 2050.” (UNESCO, 2018)

“With the existing climate change scenario, by 2030, water scarcity in some arid and semi-arid places will displace between 24 million and 700 million people.” (UNCCD)

“A third of the world’s biggest groundwater systems are already in distress.” (Richey et al., 2015).

From the World Health Organization section on “Water, Sanitation, Hygiene” on the webpage “Diseases and Risks”

“It is estimated that 842,000 deaths per year, are attributable to unsafe water supply, sanitation and hygiene—including 361,000 deaths of children under age five, mostly in low-income countries (WHO 2014).”

From the World Health Organization (WHO) webpage for “Sanitation” (Facts Sheets)

“2.3 billion people still do not have basic sanitation facilities such as toilets or latrines.”

“Of these, 892 million still defecate in the open, for example in street gutters, behind bushes or into open bodies of water.”

“At least 10% of the world’s population is thought to consume food irrigated by wastewater.”

“Poor sanitation is linked to transmission of diseases such as cholera, diarrhea, dysentery, hepatitis A, typhoid and polio.”

From the UN Water webpage for “Food, Energy, and Water” (in Section “Facts and Figures”)

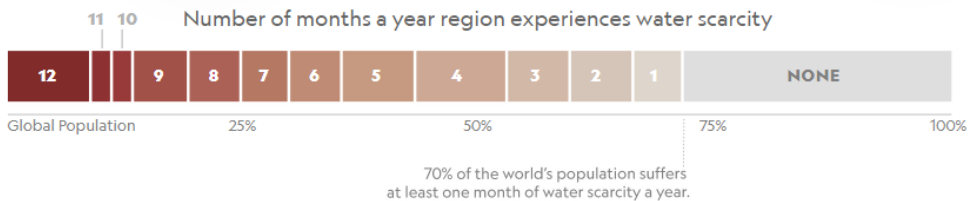
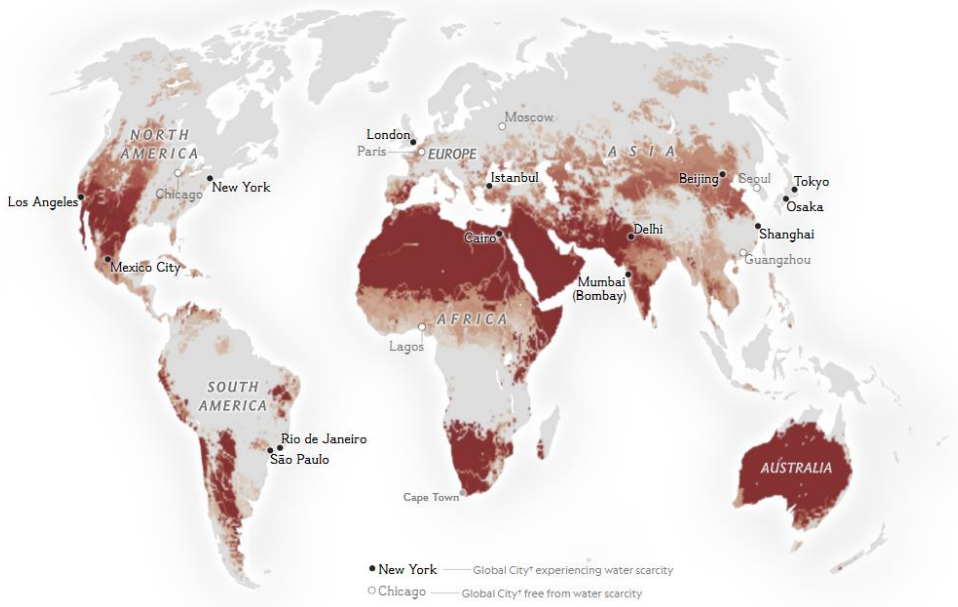
“Agriculture accounts for 70% of global water withdrawal.” (FAO)

“While almost 800 million people are currently hungry, by 2050 global food production would need to increase by 50% to feed the more than 9 billion people projected who live on our planet.” (FAO/IFAD/UNICEF/WFP/WHO; 2017)

Chart below illustrates “Number of months/year region experiences water scarcity”, w/ the darkest end being 12 months. “70% of world pop suffers at least 1 month/yr of water scarcity” [From “...The World’s Water Crisis Explained” (Stephen Leahy; National Geographic March 22, 2018 <http://bit.ly/2SjwC7n> )

## GLOBAL WATER SCARCITY

Many people are living with less water than they need, whether in the world’s most prosperous cities or in its bountiful agricultural heartlands.



\*GLOBAL CITIES ARE DEFINED BY TRUCOST ESG ANALYSIS AS THOSE THAT ARE GROWING FASTEST AND HAVE A COMBINATION OF THE LARGEST ECONOMIES AND HIGHEST POPULATIONS.

SOREN WALLJASPER, NG STAFF  
SOURCE: MESFIN M. MEKONNEN, ARJEN Y. HOEKSTRA, SUSTAINABILITY, 2016

Water issues (continued): water scarcity; aquifers getting depleted; extreme weather (which displaces many people); floods risks; migration; damage costs from extreme weather; “not only does it take water to grow anything, it also takes water to make most things”

### From “... The Water Crisis Explained” by Stephen Leahy

(published March 22, 2018 in National Geographic <http://bit.ly/2SjwC7n> )

#### Water Scarcity

“Fourteen of the world’s 20 megacities are now experiencing water scarcity or drought conditions. As many as four billion people already live in regions that experience severe water stress for at least one month of the year.... With populations rising, these stresses will only mount.”

“Brazil’s São Paulo, a megacity of 20 million, faced its own Day Zero in 2015. The city turned off its water supply for 12 hours a day, forcing many businesses and industries to shut down.”

#### Extreme Weather

“Last year, the costs of extreme weather--floods, droughts, wildfires, storms--in the U.S. reached a record-topping \$300 billion. These events displaced more than one million Americans from their homes.”

“Rapid population growth, building on floodplains or low-lying coastal regions, and climate change are the biggest reasons why flooding is affecting more people and causing ever greater damage, warns Gleick.”

“More than half of the United States must at least double their protection level within the next two decades if they want to avoid a dramatic increase in river flood risks,” says lead-author Sven Willner from Germany’s Potsdam Institute for Climate Impact Research (PIK).

#### Water Management or Mismanagement?

“... the region’s (South Africa) 2016 wine exports involved the net consumption of 113.2 billion gallons (428.5 billion liters) of water. This is water that is lost to the region. South Africa already has 7 million people without access to water. Meeting their needs would require 33.3 billion gallons (126 billion liters) per year, one third of the amount the wine industry consumes.”

“Not only does it take water to grow anything, it also takes water to make most things: cars, furniture, books, electronics, buildings, jewelry, toys, and even electricity.”

“... the most important water management strategy: grow and produce things in the right place. In other words, water-intensive crops like rice and cotton should be grown in water-rich regions.”





[EDF](#) Verified account @EnvDefenseFund Feb 9 2018

**Floods are getting worse, and 2,500 chemical sites lie in the water's path.**

This fascinating map shows you **the** areas most at risk.



**Floods Are Getting Worse, and 2,500 Chemical Sites Lie in the Water'...**

Extreme weather linked to climate change has increased the frequency and severity of flooding, amplifying the risk of toxic spills at chemical sites.

[nytimes.com](#)

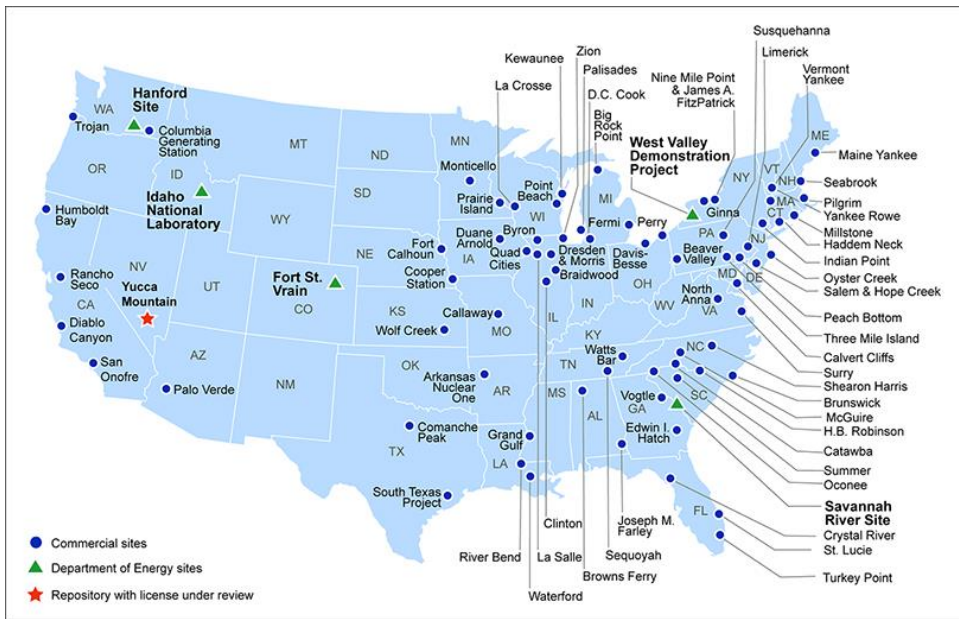
0 replies 24 retweets 21 likes

“As flood danger grows--the consequence of a warming climate--the risk is that there will be more toxic spills like the one that struck Baytown, Tex., where Hurricane Harvey swamped a chemicals plant, releasing lye. Or like the ones at a Florida fertilizer plant that leaked phosphoric acid and an Ohio refinery that released benzene.”

[“Floods Are Getting Worse, and 2,500 Chemical Sites Lie in the Water's Path”  
by Hiroko Tabuchi, Nadja Popovich, Blacki Migliozi and Andrew W. Lehren in the New York Times February 6, 2018 <https://nyti.ms/2Psj2ga> ]

“U.S. has over 90,000 metric tons of nuclear waste which requires disposal... This highly radioactive waste is currently stored on-site at nuclear power plants in 35 states (see map below) because there is no permanent site for this waste.”

**Current Storage Sites for High-Level Radioactive Waste and Spent Nuclear Fuel and Repository with License under Review**



Source: Department of Energy. | GAO-17-174

“The Nuclear Waste Policy Act of 1982 directed DOE to investigate candidate sites for disposing of spent nuclear fuel and high-level radioactive waste. It also directed the President to consider whether a separate disposal facility would be required for the defense-related nuclear waste. Since then, several decisions have affected U.S. disposal plans.” (Included is a timeline of key U.S. Government decisions, from 1985 to 2017.)

[Source: the webpage titled “Disposal of High-Level Nuclear Waste” at the website of the U.S. Government Accountability Office (GAO) <http://bit.ly/2QtCTjL> ]

“In Energy Department facilities around the country, there are 54 metric tons of surplus plutonium.” “Plutonium... has radioactive half-life of 24,000 years.” “The federal government now has **no solution in sight to dispose of the plutonium permanently.**” <https://reut.rs/2PDVkw>

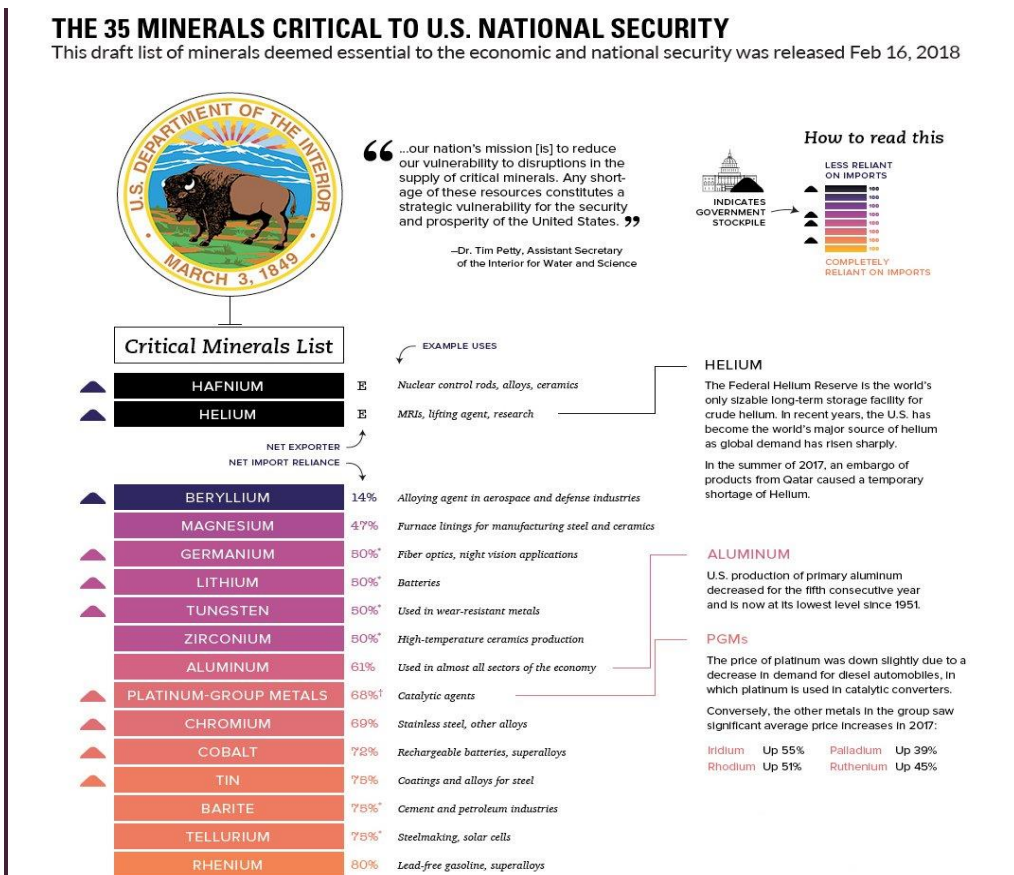
“Washington has not even begun to take the steps needed to acquire additional space for burying plutonium more than 2,000 feet below ground-- the depth considered safe.”

- 1) “In Energy Department facilities around the country, there are 54 metric tons of surplus plutonium.” (paragraph 3)
- 2) “Plutonium must be made permanently inaccessible because it has a radioactive half-life of 24,000 years.” (paragraph 6)
- 3) “Under an agreement with Russia, the United States was to convert 34 metric tons of plutonium into fuel for civilian reactors that generate electricity. The fuel is known as MOX, for “mixed oxide fuel.” Plutonium and uranium are converted into chemical compounds called oxides, and mixed together in fuel rods for civilian nuclear power plants. The two metals are converted into oxides because these can’t cause nuclear explosions. But the U.S. effort has run into severe delays and cost overruns.” (paragraph 10)
- 4) “The alternative method is known as dilute-and-dispose. It involves blending plutonium with an inert material and storing it in casks. The casks, however, are projected to last only 50 years before beginning to leak, and so would need to be buried permanently deep underground.” (paragraph 11)
- 5) “Washington has not even begun to take the steps needed to acquire additional space for burying plutonium more than 2,000 feet below ground - the depth considered safe.” (paragraph 8)
- 6) “An Energy Department panel reported in 2016 that there is no US market for MOX. To use MOX fuel rods, civilian power plants would have to modify their reactors, requiring lengthy relicensing by the Nuclear Regulatory Commission. The report said the best the Energy Department could hope for was to give the stuff away.” (paragraph 34)
- 7) “The federal government now has no solution in sight to dispose of the plutonium permanently.” (paragraph 16)

[Source: “America's nuclear headache: old plutonium with nowhere to go” by Scot J. Paltrow Reuters April 20, 2018 <https://reut.rs/2PDVkw> ]

**35 Minerals Absolutely Critical to U.S. Security** (See full infographic: [visualcapitalist.com/35-minerals-cr...](http://visualcapitalist.com/35-minerals-cr...))

“The challenge, as U.S. federal authorities realize, is that many of these raw materials are produced in limited amounts domestically. In fact, according to the USGS, the country sources at least 31 of the aforementioned materials chiefly through imports.”



2 replies 45 retweets 74 likes

[Source: “35 Minerals Absolutely Critical to U.S. National Security” by Jeff Desjardins at the website Visual Capitalist February 23, 2018 <http://bit.ly/2BYnhwp> ]

Widespread cynicism that many of the critical challenges of our times will not be resolved could become a crippling factor--which may undermine many constructive solution-oriented initiatives that would have otherwise led to positive tipping points.

### Violence, Corruption, and Cynicism

have become so common that many of us accept such as inevitable.

"The global drugs trade and the global arms trade are integral to violence in both developing and industrialized countries. Even modest progress on either front will contribute to reducing the amount and degree of violence suffered by millions of people. To date, however--and despite their high profile in the world arena--no solutions seem to be in sight for these problems"

["World Report on Violence and Health" (2002); World Health Organization]

"There are over 1 billion firearms in the world today, including 857 million in civilian hands--with American men and women the dominant owners, according to a study released Monday. The Small Arms Survey says 393 million of the civilian-held firearms, 46 percent, are in the United States, which is 'more than those held by civilians in the other top 25 countries combined.'"

(Chicago Tribune; June 18, 2018)

"Most economic development and growth strategies encouraged rapid accumulation of physical, financial and human capital, but at the expense of excessive depletion and degradation of natural capital.... Existing policies and market incentives have contributed to this problem of capital misallocation because they allow businesses to run up *significant, largely unaccounted for, and unchecked social and environmental externalities.*" ["Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication" (2011); United Nations Environment Programme]

Unfortunately, there are many people in our communities who--regardless of the difficulties and urgencies associated with resolving multiple crises--choose to focus their attention on trying to make money by preying on people's fears, manipulating people's trust, and/or encouraging people to abandon hope in higher aspirations, and indulge in unhealthy, or immoral behavior. Widespread cynicism that many of the critical challenges of our times will not be resolved could become a crippling factor--which may undermine many constructive solution-oriented initiatives that would have otherwise led to positive tipping points.



[Conrad Hackett](#) Verified account @conradhackett Feb 15 2018

**In America, there have been 290 school shootings since 2013**

[everytownresearch.org/school-shootin...](https://everytownresearch.org/school-shootin...)

Article has interactive map for the years 2013-2018, and a list with date; city, state; school name/school type; and category (of shooting) for each year 2013-2018



81 replies 863 retweets 465 likes

“Everytown for Gun Safety started tracking incidents of gunfire on school grounds in 2013 to gain a better understanding of how often children and teens are affected by gun violence at their schools and colleges, and in response to a lack of research and data on the issue.”

[Source: “Gunfire on school grounds in the United States” at the website of Everytown for Gun Safety Support Fund May 25, 2018 <https://every.tw/2SH4P19> ]

13 of the most representative and well-known critical challenge assessments and solutions guides from the past 50 years *do not give serious attention to variations in human morality as a significant factor affecting the nature of the challenges of our times.*

### *Human Morality is not a Constant...*

It should be clear to most readers that the virtuous conduct (the discipline, restraint, wisdom, understanding, compassion, forgiveness, etc.) necessary—to transform examples of cultures of violence, greed, corruption, and overindulgence into examples of the treasured wisdom of our human heritage being more fully appreciated, and applied in the everyday circumstances of community life—would inspire “waves” of additional goodwill. And yet... if readers carefully explore the following critical challenge assessments and solution guides (which are offered here as representative and well-known examples from the past 50 years)--

1) “The Limits to Growth” report (1972; updated 2004); 2) “Gaia: An Atlas of Planetary Management” (1984; updated 2005); 3) Worldwatch Institute--annual “State of the World” Reports, and “Worldwatch Reports” (formerly “Worldwatch Papers”); 4) UN-Habitat “State of the World’s Cities” Reports, and (formerly annual) “Global Reports on Human Settlements”; 5) UNEP (United Nations Environment Programme)--annual “Human Development” Reports; 6) United Nations--Millennium Development Goals (MDGs) Progress Reports, and Sustainable Development Goals (SDGs) Updates; 7) IPCC (Intergovernmental Panel on Climate Change)--ongoing reports; 8) International Monetary Fund--bi-annual “World Economic Outlook” Reports; 9) World Bank--“World Development Reports”; 10) World Economic Forum--annual “Outlook on the Global Agenda” Reports; 11) International Energy Agency--annual “World Energy Outlook” Reports; 12) Earth Policy Institute (Lester Brown)--including “Plan B 4.0: Mobilizing to Save Civilization”, “World on the Edge: How to Prevent Environmental and Economic Collapse”, “Full Planet, Empty Plates: The New Geopolitics of Food Scarcity”; 13) “Pathways to Deep Decarbonization” [Published by Sustainable Development Solutions Network (SDSN), Sept. 2014]

--they will find that these critical challenge assessments and solution guides *do not give serious attention to variations in human morality as a significant factor affecting the nature of the challenges of our times.*

This writer believes *that human morality is not a constant*; it is not something which is the same throughout the centuries of human existence--and thus it is something which can become degraded or raised up, depending on the leanings of human aspirations.

However much we may move towards limiting global warming to 1.5°C, there are many other pieces to the unprecedented cultural transformation which we must achieve--*and failure to also reach positive tipping points on the many other pieces may cause us to lose traction, and slide downhill into cynicism.*

Genuine Treasured Wisdom of Religious, Spiritual, and Moral Traditions  
Needs to be Re-discovered

This writer believes that much of the genuine treasured wisdom of religious, spiritual, and moral traditions now seems to be hidden--and thus in need of being re-discovered. These "hidden" resources include teachings which inspire and encourage people to:

- 1) sacrifice personal desires for the greater good of the whole
- 2) find contentment and quality of life while consuming less material goods and ecological resources
- 3) prefer peacebuilding which supports and actualizes mutually beneficial understandings, forgiveness, and reconciliation—and which abstains from violent conflict resolution—as a way of bringing cycles of violence to an end
- 4) use resources carefully, so that there is surplus available for emergency assistance
- 5) support community life and cultural traditions which "... bring to the fore how many good people there are, how many ways there are to do good, and how much happiness comes to those who extend help, as well as to those who receive it".

*If we have serious concerns about the nature and reliability of our moral compasses at this critical time, and let those serious concerns go unresolved--*

- 1) we may lose significant traction and critical momentum on challenges for which there is an urgent need to reach positive tipping points
- 2) we may do more to create widespread cynicism, rather than confidence, about our collective capacity to resolve the unprecedented challenges we face.

*We need plans for action which will help people discover for themselves how much we all need to be learning so that we can be part of the solutions... and how much we really need to be on the same side, helping each other.*



## Chapter #2

# Harvest Song

“The Play is an attempt to find a value above all price for the smallest events in our daily life.” (Thornton Wilder about his play “Our Town”)

### Harvest Song

Long ago  
we were sown  
now we're here  
hear our song



## Introduction to Chapter #2 of the “Harvest Song”

We are at one of the most critical crossroads humanity has faced since the dawn of civilization.

The first two Chapters of “Harvest Song” provide what this writer considers sufficient evidence that there is now a convergence of unprecedented challenges. However much we may move forward with the technology pieces needed to limit global warming to 1.5°C (2.7°F), there are many other pieces to the unprecedented cultural transformation which we must also achieve--*and failure to also reach positive tipping points on the many other pieces may cause us to lose positive traction, and slide downhill into cynicism.*

In Chapter #3 and Chapter #4 of “Harvest Song”, this writer provides some examples of what he believes are significant movement towards our best chances of avoiding catastrophic climate breakdown. He also includes key steps he advocates for to reach positive tipping points on climate breakdown, *and on many other unprecedented challenges.*

Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the unprecedented challenges ahead. Confidence will be built up when people believe that the efforts of everyone working together is a greater force than the challenges they are facing.



[Climate Central](#) Verified account @ClimateCentral Mar 7 2018

## Cities emit 60 percent more carbon than we thought

<https://buff.ly/2tvx7nB> via @NatGeo



Boxes of fruits and veggies sit at the Hunts Point Terminal Produce Market in New York City, the largest distribution center of its kind in the world. New analysis suggests that cities need to do a better job counting the embodied carbon of the products they import.

0 replies 10 retweets 9 likes

“The world’s cities emit 70 percent of the world’s carbon dioxide--and that’s likely higher when consumption emissions are included....” “Wealthy ‘consumer cities’ such as London, Paris, New York, Toronto, or Sydney that no longer have large industrial sectors have significantly reduced their local emissions. However, when the emissions associated with their consumption of goods and services are included, these cities’ emissions have grown substantially and are among the highest in the world on a per person basis, the report says.”

[Source: “Cities Emit 60% More Carbon Than Thought” by Stephen Leahy in National Geographic March 6, 2018 <http://bit.ly/2UsHq7> ]

**Global food system is broken**, radical overhaul in farming and consumption, with less meat eating, needed to avoid hunger and climate catastrophe

<https://bit.ly/2zwUIVo> via @guardian



0 replies 1 retweet 10 likes

--“The global food system is responsible for a third of all greenhouse gas emissions, which is more than all emissions from transport, heating, lighting and air conditioning combined. The global warming this is causing is now damaging food production through extreme weather events such as floods and droughts.”

--“Whether you look at it from a human health, environmental or climate perspective, our food system is currently unsustainable and given the challenges that will come from a rising global population that is a really [serious] thing to say,’ Benton said. Reducing meat and dairy consumption is the single biggest way individuals can lessen their impact on the planet, according to recent research.”

[Source: “Global food system is broken, say world’s science academies” by Damian Carrington, Environment Editor Guardian Wed 28 Nov 2018 <http://bit.ly/2rr598j> ]

United States (U.S.); Canada; European Union (EU); Brazil; Argentina; Australia; New Zealand--“...account for 43% of total global emissions from meat and dairy production... These are the parts of the world where steep reductions in emissions from meat and dairy production are most necessary.” <http://bit.ly/2JENOQ6>

From “Emissions impossible: How **big meat and dairy are heating up the planet**”

by GRAIN and the Institute for Agriculture and Trade Policy (IATP) 18 July 2018

<http://bit.ly/2JENOQ6>

- 1) “On 25 March 2014--World’s largest producer of meat had triumphant message for Wall Street: global meat consumption going up and JBS going to profit immensely from this growth. Brazil-based company told shareholders a pillar of its strategy is projected 30% increase in per capita global meat consumption to 48 kg by 2030, up from 37 kg per person in 1999.... JBS neglected to tell its investors about critical problem w/ growth strategy: climate change. If global meat production were to expand to 48 kg per capita, it would become impossible to keep global temperatures from rising to dangerous levels. JBS numbers in perspective: new Greenpeace report finds avg per capita meat consumption must fall to 22 kg by 2030, then to 16 kg by 2050, to avoid dangerous climate change.” (Section “Profits versus the planet”; para 1,2)
- 2) “If we are to reach the 1.5 °C goal, total global emissions must rapidly decline from 51 gigatons to 13 gigatons by 2050.... Under a business-as-usual scenario, the livestock sector could eat up over 80% of the budget....” (Section “Profits versus the planet”; para 4)
- 3) “Tyson expects annual growth of 3–4% from beef and poultry sales, while Marfrig targeted 7.5–9.5% annual growth for 2015–2018.... Danish dairy giant Arla plans to add 2 billion kg of milk to its European supply chain between 2015–2020 – a 14% increase... Fonterra projects a stunning 40% increase in its processed milk volume for 2015–2025.” (Section “Growth at all costs”; par 1)
- 4) “The main culprits are major meat and dairy exporting regions: United States (US)-Canada; the European Union (EU); Brazil-Argentina; Australia-New Zealand. (These) “surplus protein” regions have surplus production and high per capita consumption of meat and dairy. These countries account for 43% of total global emissions from meat and dairy production, even though they are home to only 15% of the world’s population. (Section “Do some countries and regions matter more than others?”; para 1) “These are the parts of the world where steep reductions in emissions from meat and dairy production are most necessary. This includes exports that fuel overconsumption amongst the more affluent middle and upper classes of developing countries.” (from Section “Profits versus the planet”, paragraph 6)
- 5) “There are several possible pathways to bringing emissions from meat and dairy production down to levels that are compatible with global efforts to prevent dangerous climate change. All of them, however, require significant reductions in meat and dairy production and consumption in the overproducing and overconsuming countries.” (from section “How do we get out of this?”, paragraph 1)



**Enid Borden** @EnidBorden Aug 30 2018

**Food waste:** alarming rise will see 66 tonnes thrown away every second



**Food waste: alarming rise will see 66 tonnes thrown away every seco...**

New analysis warns food loss is set to increase by a third by 2030 unless urgent action is taken

[theguardian.com](http://theguardian.com)

0 replies 0 retweets 1 like

“The amount of food that is wasted each year will rise by a third by 2030, when 2.1bn tonnes will either be lost or thrown away, equivalent to 66 tonnes per second, according to new analysis.”

“As wealth grows, people are demanding more food, more diverse food, food that is not grown locally. That’s going to increase food loss and waste.”

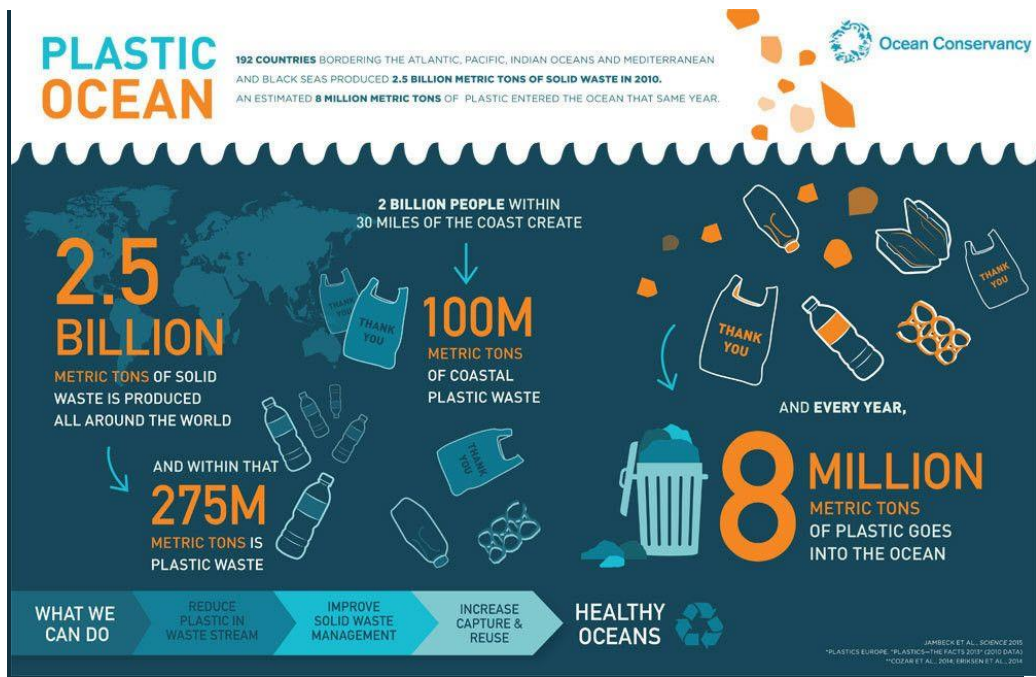
[Source: “Food waste: alarming rise will see 66 tonnes thrown away every second” by Rebecca Ratcliffe for Guardian Mon 20 Aug 2018 <http://bit.ly/2B3g1O5> ]

“In low-income countries, over 90% of solid waste is mismanaged. This increases emissions and disaster risk.” <http://bit.ly/2KLHZIX> (contaminated water, disease)(see also--in Chapter #1 “Floods Are Getting Worse, and 2,500 Chemical Sites Lie in the Water’s Path--U.S.”)



[Source: “What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050” Infographic at the website for The World Bank September 20, 2018 <http://bit.ly/2KLHZIX> ]

Here are 5 of the biggest threats to our oceans, and how we can solve them  
[wef.ch/2JEFqUJ](http://wef.ch/2JEFqUJ) #WorldOceansDay



0 replies 62 retweets 66 likes

--“Imagine how poorly a fish in an aquarium would fare if we turned up the heat, dripped in acid, and pulled out the oxygen bubbler. This is slowly but surely what we are doing to our oceans.”

--“For every pound of tuna we are taking out of the ocean, we are putting two pounds of plastic back in.”

--“Almost a third of global fish stocks are overfished.”

[Source: “Here are 5 of the biggest threats to our oceans, and how we can solve them” by Douglas McCauley at World Economic Forum 08 Jun 2018 <http://bit.ly/2G4VKh5> ]



“Microplastics in our food chain and in bottled water; “dead whale had 1,000 pieces of plastic in stomach”; “Most countries that I work in, you can’t even get it off the street”; “... at this rate, there will be more plastic than fish in the ocean by 2050.”

### Plastic Pollution--A Cautionary Tale

From article “90% of plastic polluting our oceans comes from just 10 rivers” (World Economic Forum) (at <http://bit.ly/2PxRhTm> )

“More than 8 million tons of it ends up in the ocean every year. If we continue to pollute at this rate, there will be more plastic than fish in the ocean by 2050.”

“By analyzing the waste found in the rivers and surrounding landscape, researchers were able to estimate that just 10 river systems carry 90% of the plastic that ends up in the ocean. Eight of them are in Asia: the Yangtze; Indus; Yellow; Hai He; Ganges; Pearl; Amur; Mekong; and two in Africa--the Nile and the Niger.”

From article “The plastics crisis is more urgent than you know. Recycling bottles won’t fix it.” (Guardian) (at <http://bit.ly/2C59bt6> )

“When exposed to sunlight, oxygen or the action of waves, it doesn’t biodegrade but simply fragments into smaller and smaller bits, until microscopic or nano-sized particles enter the food chain, the air, the soil and the water we drink.... In the past few years, minute microplastics and fibres, measuring the width of a human hair or far less, have been found in an extraordinary range of products, such as honey and sugar, shellfish, bottled and tap water, beer, processed foods, table salt and soft drinks.”

From article “Indonesia: dead whale had 1,000 pieces of plastic in stomach” (Guardian)

“... the park’s conservation academy found about 5.9kg (13lbs) of plastic waste in the animal’s stomach (115 plastic cups, four plastic bottles, 25 plastic bags, two flip-flops, a nylon sack and more than 1,000 other assorted pieces of plastic).” (at <http://bit.ly/2QpQDwM> )

From article “We made plastic. We depend on it. Now we’re drowning in it.” (National Geographic) (at <https://on.natgeo.com/2EhaUNQ> )

“... 9.2 billion tons of the stuff to deal with (and) more than 6.9 billion tons have become waste”

“Nearly 700 species (of marine animals), including endangered ones, are known to have been affected...”

“... roughly 40 percent of the now more than 448 million tons of plastic produced every year is disposable, much of it used as packaging intended to be discarded within minutes after purchase.”



**Mike Hudema** Verified account @MikeHudema Nov 22 2018

One palm oil company has destroyed an area of forest half the size of Paris. PepsiCo, Mars, Nestle, Unilever--companies that have promised not to buy palm oil from forest destroyers--are all supporting the destruction.

That needs to stop.

[#deforestation](#) [#PalmOil](#)



5 replies 234 retweets 203 likes

“London, UK – A palm oil supplier to Mars, Nestlé, PepsiCo and Unilever is destroying rainforests in Papua, Indonesia, a new investigation by Greenpeace International has revealed. Satellite analysis suggests that around 4,000ha of rainforest were cleared in PT Megakarya Jaya Raya concession between May 2015 and April 2017--an area almost half the size of Paris.”

[Source: “New deforestation revealed as Indonesian minister arrives in EU to defend palm oil industry” by Greenpeace International 27 April 2018 <http://bit.ly/2zOQAQw> ]



[Stephen Trew](#) @stephentrew Sep 14 2018

Read this, it's very important and great stuff from [@CarbonBrief](#) - **Q&A: Why cement emissions matter** for climate change [buff.ly/2NHbE3E](https://buff.ly/2NHbE3E) #climatechange #emissions @GlobalCement @CementReview



0 replies 0 retweets 1 like

--“If the cement industry were a country, it would be the third largest emitter in the world. In 2015, it generated around 2.8bn tonnes of CO<sub>2</sub>, equivalent to 8% of the global total--a greater share than any country other than China or the US.

--“Cement use is set to rise as global urbanisation and economic development increases demand for new buildings and infrastructure. Along with other parts of the global economy, the cement industry will need to dramatically cut its emissions to meet the Paris Agreement’s temperature goals. However, only limited progress has been made so far.”

[Source: “Q&A: Why cement emissions matter for climate change” by Jocelyn Timperly for Carbon Brief September 13, 2018 <http://bit.ly/2Eagmll> ]

SUSCI

[Columbia SuSci](#) @columbia\_susci Jan 18 2018

**Why Thawing Permafrost Matters** [Photo: Steve Jurvetson]

[blogs.ei.columbia.edu/2018/01/11/tha...](https://blogs.ei.columbia.edu/2018/01/11/tha...)



0 replies 0 retweets 0 likes

--“Permafrost covers about 24 percent of the exposed landmass of the Northern Hemisphere--about 9 million square miles. It is found at high latitudes and high altitudes, mainly in Siberia, the Tibetan Plateau, Alaska, Northern Canada, Greenland, parts of Scandinavia and Russia. The continental shelves below the Arctic Ocean, which were exposed during the last ice age, also contain permafrost. However, polar and high altitude regions are some the most climate-sensitive places on the planet. The Arctic is warming twice as fast as the rest of the planet, at a rate of temperature change that has not been observed in at least the last 2,000 years....”

--“Many scientists are concerned that thawing permafrost could be a tipping point that triggers an irreversible cycle: when permafrost releases its carbon as CO<sub>2</sub> or methane, it will accelerate warming, which will then precipitate more permafrost thaw, and so on.”

[Source: “Why Thawing Permafrost Matters” by Renee Cho Earth Institute, Columbia University January 11, 2018 <http://bit.ly/2BZ2Xen> ]



[Reuters Top News](#) Verified account @Reuters 21 Oct 2017

**U.S. warns public about attacks on energy, industrial firms** [reut.rs/2xcBT6w](https://reut.rs/2xcBT6w)



25 replies 243 retweets 139 likes

“U.S. authorities have been monitoring the activity for months, which they initially detailed in a confidential June report first reported by Reuters. That document, which was privately distributed to firms at risk of attacks, described a narrower set of activity focusing on the nuclear, energy and critical manufacturing sectors.”

[Source: “U.S. warns public about attacks on energy, industrial firms” by Jim Finkle Reuters October 21, 2017 <https://reut.rs/2PwvXOo> ]

[see also “Hackers attacking US and European energy firms could sabotage power grids” by Alex Hern for Guardian Wed 6 Sept 2017 <http://bit.ly/2UuNVoa> ]



**Bob Zahradnik** @rbzahradnik Nov 1 2018

## States Jump at Chance to Boost Revenue With Sports Betting

[pew.org/2AxJJMi](https://pew.org/2AxJJMi) via [@pewtrusts](https://twitter.com/pewtrusts)



### States Jump at Chance to Boost Revenue With Sports Betting

Rhode Island lawmakers acted quickly after the U.S. Supreme Court on May 14 overturned a 1992 federal law barring sports betting. The next day, two ...

[pewtrusts.org](https://pewtrusts.org)

0 replies 2 retweets 1 like

--“Leaders in Rhode Island saw an opportunity. ‘Sports wagering provides the state with a revenue stream that supports critical priorities, such as investing in roads and schools, without increasing the tax burden....’”

--“To tap into that revenue, the governor, lawmakers, and private gaming companies had to hash out the specifics of tax structure and revenue distribution. They set Rhode Island’s share at 51 percent of net sport-gaming revenue; the operator, International Game Technology, will get 32 percent, and the casinos 17 percent. The two towns with casinos will receive \$100,000 a year.”

--“Delaware, Mississippi, New Jersey, New Mexico, New York, Pennsylvania, and West Virginia also have legalized sports gambling this year.”

[Source: “States Jump at Chance to Boost Revenue With Sports Betting” By: Stephen Fehr, Adam Levin & Alexandria Zhang for Pew Trusts October 30, 2018 <http://bit.ly/2QI1c43> ]

“... through the countless hours of media programming that repeat, directly or indirectly, the cultural script.... the media do not merely reflect or reinforce culture, but in fact shape attitudes, values, behavior, preoccupations, and myths.”

## Media Literacy

[All excerpts below (except the last one) are from “International Communications: A Media Literacy Approach” (2004) by Art Silverblatt and Nikolai Zlobin]

“Media literate individuals have learned to develop a critical distance from the information they receive through the media, so that they are in a position to make independent judgments about 1) what programming they choose to watch, read, or hear 2) how to interpret the information that they receive through the channels of communication.” (p. 7)

“A country’s educational curriculum--what subjects students are exposed to--affects their ability to interpret the information being conveyed through the channels of mass media.” (p. 157)

“Popular programming reflects a level of acceptance and shared values among large numbers of people. People tend to watch programs that meet their approval. If they are truly offended by violent programs, they would not watch them. In that sense, media programming can be regarded as a text that reflects the attitudes, values, behaviors, preoccupations, and myths that define a culture.” (p. 66)

“At the same time, media programming reinforces cultural attitudes, values, behaviors, preoccupations, and myths. Media messages are communicated through the countless hours of media programming that repeat, directly or indirectly, the cultural script.” (p. 68)

“Finally, the media do not merely reflect or reinforce culture, but in fact shape attitudes, values, behavior, preoccupations, and myths.” (p. 68)

**“Global advertising expenditure is predicted to reach \$581 billion at the end of 2018**, with most of the growth coming from sponsored content in search engines and social media ads, according to industry forecaster Zenith. “ [From article “Global advertising expenditure to grow 4.5 percent in 2018: Zenith” (Reuters) September 23, 2018 <https://reut.rs/2A0hcy6> ]

And thus, even analysis supported by much credible evidence--*that there are many danger signs flashing now (involving unprecedented threats to ecological stability and social cohesion)*--can be easily lost amidst a swirl of misinformation, other more trivial information, and the “siren song” of multiple entertainment venues.

“Another concern is the ‘contamination’ of useful information  
with information that might not be entirely accurate”

From the Wikipedia webpage for “**Information Overload**”--

(Paraphrasing Wikipedia here) Information overload: when a decision maker faces a set of information so mind-wobbling--of such size and complexity, and consisting of so many contradictions and inconsistencies--that by its very nature it confounds the decision maker’s ability to figure out what it all means.

“One concern in this field is that massive amounts of information can be distracting and negatively impact productivity and decision-making and cognitive control. Another concern is the ‘contamination’ of useful information with information that might not be entirely accurate (Information pollution).”

“We are now in danger of becoming dependent on this method of access to information (Internet, Social Media) where risks of the perpetuation of misinformation are greatly increased.”

From the opening statement of Sen. Claire McCaskill at Permanent Subcommittee on Investigations (Senate Committee on Homeland Security and Governmental Affairs) during the fourth in its series of hearings on the causes and consequences of the financial crisis. The series of hearings were titled “Wall Street and the Financial Crisis: The Role of Investment Banks”. This program, the fourth hearing in the series was titled: “Investment Banks and the Financial Crisis, Directors”--on April 27, 2010 (at <http://www.c-spanvideo.org/program/293196-1> ) (Sen. McCaskill’s comments run from 39:50 to 42:40)

**“I think that if we had to put the odds on this hearing today you guys would probably have odds in your favor, because the jargon is complicated, the transactions are complicated--you’ve relied on that complicated situation to avoid a lot of scrutiny. “**

And thus, even analysis supported by much credible evidence--*that there are many danger signs flashing now (involving unprecedented threats to ecological stability and social cohesion)*--can be easily lost amidst a swirl of misinformation, other more trivial information, and the “siren song” of multiple entertainment venues. (from this writer)



Brief summary (below) of this writer's two page assessment from February 2017 <http://bit.ly/2kiaEjZ> This writer believes we have now gone beyond emergency circumstances, and are now at one of the most critical crossroads humanity has faced since the dawn of civilization.

### *Convergence of Unprecedented Challenges*

*which will require problem solving on a scale most of us have never known before*

*"Unpreced Challenges Ahead--Feb. 2017" (2p. brief w/ evidence, links)*

- 1) Global Warming and Reducing Greenhouse Gas Emissions—"The world's leading climate scientists have warned there is only a dozen years for global warming to be kept to a maximum of 1.5°C."
- 2) A Marginalization of the Treasured Wisdom of Religious, Spiritual, and Moral Traditions—teachings which inspire and encourage people to:
  - a) sacrifice personal desires for the greater good of the whole
  - b) find contentment and quality of life while consuming less material goods and ecological resources
- 3) "Cultures" of violence, greed, corruption, and overindulgence—which have become so common that many of us accept such as inevitable
- 4) The End of the Fossil Fuel Era—During the three to eight decades of unprecedented cultural transformation needed to achieve carbon neutral economies, this writer believes many serious blind spots will be discovered--issues which are far from being fully appreciated now, and issues which are serious enough to cripple our best efforts, if not remedied.
- 5) The increasing world population and its implications relating to widespread resource depletion
- 6) We are creating more and more "urban agglomerations"—(cities with a population of more than one million people)--which are the least appropriate models when it comes to implementing resolutions to many of the other challenges in this ten point assessment.
- 7) Global inequities and the tragic cycles of malnutrition, disease, and death
- 8) Significant progress towards positive tipping points for the other challenges cited in this list will almost certainly make it impossible for the U.S., and many other countries, to resolve unprecedented public debt
- 9) Deterioration of trust/confidence in institutions responsible for guiding public discourse—and the related loss of social and spiritual cohesion
- 10) Sorting out what are real challenges and what are sound and practical solutions is becoming more and more difficult--as significant threats to ecological stability and social cohesion can be easily lost amidst a swirl of misinformation, other more trivial information, and the "siren song" of multiple entertainment venues.

However much we may move towards limiting global warming to 1.5°C, there are many other pieces to the unprecedented cultural transformation which we must achieve—and *failure to also reach positive tipping points on the many other pieces may cause us to lose traction, and slide downhill into cynicism.*

### Genuine Treasured Wisdom of Religious, Spiritual, and Moral Traditions Needs to be Re-discovered

This writer believes that much of the genuine treasured wisdom of religious, spiritual, and moral traditions now seems to be hidden--and thus in need of being re-discovered. These “hidden” resources include teachings which inspire and encourage people to:

- 1) sacrifice personal desires for the greater good of the whole
- 2) find contentment and quality of life while consuming less material goods and ecological resources
- 3) prefer peacebuilding which supports and actualizes mutually beneficial understandings, forgiveness, and reconciliation—and which abstains from violent conflict resolution—as a way of bringing cycles of violence to an end
- 4) use resources carefully, so that there is surplus available for emergency assistance
- 5) support community life and cultural traditions which “... bring to the fore how many good people there are, how many ways there are to do good, and how much happiness comes to those who extend help, as well as to those who receive it”.

*If we have serious concerns about the nature and reliability of our moral compasses at this critical time, and let those serious concerns go unresolved--*

- 1) we may lose significant traction and critical momentum on challenges for which there is an urgent need to reach positive tipping points
- 2) we may do more to create widespread cynicism, rather than confidence, about our collective capacity to resolve the unprecedented challenges we face.

*We need plans for action which will help people discover for themselves how much we all need to be learning so that we can be part of the solutions... and how much we really need to be on the same side, helping each other.*

## Chapter #3

# Harvest Song

“The Play is an attempt to find a value above all price for the smallest events in our daily life.” (Thornton Wilder about his play “Our Town”)

### Harvest Song

Long ago  
we were sown  
now we're here  
hear our song



### Introduction to Chapter #3 of the “Harvest Song”

We are at one of the most critical crossroads humanity has faced since the dawn of civilization.

The first two Chapters of “Harvest Song” provide what this writer considers sufficient evidence that there is now a convergence of unprecedented challenges. However much we may move forward with the technology pieces needed to limit global warming to 1.5°C (2.7°F), there are many other pieces to the unprecedented cultural transformation which we must also achieve--*and failure to also reach positive tipping points on the many other pieces may cause us to lose positive traction, and slide downhill into cynicism.*

In Chapter #3 and Chapter #4 of “Harvest Song”, this writer provides some examples of what he believes are significant movement towards our best chances of avoiding catastrophic climate breakdown. He also includes key steps he advocates for to reach positive tipping points on climate breakdown, *and on many other unprecedented challenges.*

Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the unprecedented challenges ahead. Confidence will be built up when people believe that the efforts of everyone working together is a greater force than the challenges they are facing.



**Cathrine G Jahnsen** @cathrinejahnsen Sep 18 2018

**Nearly 400 investor with \$32 trillion in assets step up action** on climate change #TheInvestorAgenda @SusanneOslo @ThinaSaltvedt @FeinerAndreas



**Nearly 400 investors with \$32 trillion in assets step up action on clim...**

The Investor Agenda launched today in San Francisco will support investors in accelerating and scaling-up the actions that are critical to tackling climat...

[ceres.org](http://ceres.org)

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"The Investor Agenda provides a way for investors to directly report actions they are taking, and scale-up their commitment to act, across four key focus areas: Investment, Corporate Engagement, Investor Disclosure, and Policy Advocacy."

"Investment highlights 120 investors pursuing new and existing investments in low carbon and climate resilient portfolios, funds, strategies or assets such as renewable energy and energy efficiency projects...."

"Corporate Engagement highlights 650 investors with US \$87 trillion in assets backing the CDP's environmental disclosure request; and 296 investors from 29 countries with US \$31 trillion in assets that are signatories to Climate Action 100+."

[Source: "Nearly 400 investors with \$32 trillion in assets step up action on climate change" at Ceres website September 12, 2018 <http://bit.ly/2RJMPt> ]

“Today, 985 institutional investors with \$6.24 trillion in assets under management have committed to divest from fossil fuels, up from \$52 billion four years ago”.... “In July, Ireland became the first nation in the world to divest.” (DivestInvest; 9/11/18)

“2018 is a year of many firsts for the Divestment Movement...”

- 1) “Earlier this year, Mayor Bill de Blasio and Comptroller Scott Stringer announced a plan to divest New York City's \$189 billion pension funds from fossil fuel companies within five years. This announcement follows similar actions in Berlin, Paris, Copenhagen, New Zealand and Sydney in previous years.”
- 2) “In July, Ireland became the first nation in the world to divest.”
- 3) “The leaders of the American Medical Association pledged to fossil fuel divestment for the organization's assets, but also to help guide all organizations and all health professionals' investments towards divestment.” (Dr. Todd Sack, member of the AMA and Board of Physicians for Social Responsibility)
- 4) “Another vital new trend is amplifying divestment: insurance companies are not only divesting their portfolios from fossil fuels, but also enacting policies to stop underwriting fossil fuel projects. Banks are increasingly ending financing for fossil fuel projects, particularly coal. Without insurance or financing, the industry cannot go on.”
- 5) “The fossil fuel sector is shrinking financially, and the rationale for investing in it is untenable. The financial case for fossil fuel divestment is strong.” (Tom Sanzillo, Director of Finance at Institute for Energy Economics and Financial Analysis.)
- 6) “In addition to the declining fortunes of the fossil fuel industry, the rapid growth and competitiveness of renewable energy is speeding the transition. Investment in climate solutions at scale is necessary to achieve the Paris Agreement goals and keep the planet under two degrees of warming. Today, investors are increasingly marrying pledges to divest with commitments to invest in climate solutions.”

[Source: “Global Fossil Fuel Divestment Movement Reaches \$6.24 Trillion in Assets Under Management, 120x Increase From Four Years Ago, Report Says” Cision PR Newswire September 11, 2018 <https://prn.to/2ACVM9U> ]

Guardian article below <http://bit.ly/2AJadsY> refers to a December 6, 2009 newspaper collaboration (before COP15). *We are now at one of the most critical crossroads humanity has faced since the dawn of civilization. We need News Media to fulfill their community service role: to resolve a convergence of unprecedented challenges we need a convergence of unprecedented solutions.*

## More than 50 papers join in front-page leader article on climate change

Opinion piece to be published in 56 papers across 45 countries - including the Guardian, Le Monde and two Chinese papers

**In pictures: Climate change front pages**

**The papers that will carry the Copenhagen editorial**

**Ian Katz: How the editorial project came about**

**Jon Vidal: A perfect storm**



The Guardian has teamed up with more than 50 papers worldwide to run the **same front-page leader article calling for action** at the climate summit in Copenhagen, which begins tomorrow.

This unprecedented project is the result of weeks of negotiations between the papers to agree on a final text, in a process that mirrors the diplomatic wrangling likely to dominate the next 14 days in Copenhagen.

Fifty-six papers in 45 countries published in 20 different languages have joined the initiative, and will feature the leader in some form on their front pages.

--"The leader was the work of team of Guardian writers and editors and went through three drafts to arrive at a text that satisfied all the editors involved."

--"Alan Rusbridger, editor-in-chief of the Guardian, said: 'Newspapers have never done anything like this before but they have never had to cover a story like this before. No individual newspaper editorial could hope to influence the outcome of Copenhagen but I hope the combined voice of 56 major papers speaking in 20 languages will remind the politicians and negotiators gathering there what is at stake – and persuade them to rise above the rivalries and inflexibility that have stood in the way of a deal.'"

Along with voting in elections, and contributing volunteer service work to local organizations, people can come to understand making positive contributions to their local newspaper to be a part of the civic and social responsibilities that come with being a part of the community.

### Neighbor to Neighbor Community Education (NTNCE) Project proposal for a new section in local newspapers

The Neighbor to Neighbor Community Education (NTNCE) Project advocates for a new section in local newspapers. The new section (NTNCE section) would be used to highlight and accumulate stories, personal experiences, and other forms of reader contributions which identify helpful people and valuable resources, and reinforce important community goals.

Along with voting in elections, and contributing volunteer service work to local organizations, people can come to understand making positive contributions to their local newspaper to be a part of the civic and social responsibilities that come with being a part of the community.

In this "Harvest Song" book, readers have been provided with credible evidence-based information about a convergence of unprecedented challenges happening now-- and guidelines for many solutions which can be implemented in local communities.

We need many plans of action, in communities around the world--

- a) which will exponentially increase solution-oriented activity
- b) *which people from every variety of circumstances can trust*
- c) *which will help people discover for themselves how much we all need to be learning so that we can be part of the solutions... and how much we really need to be on the same side, helping each other.*

There are now many ways for people to learn and share information--television, radio, websites, social networks on the Internet (maybe even too many ways....) Having established, reliable, and local sources--the local newspaper being one--to act as a key hub for the community (and an arbitrator on what information is valid, and what is misinformation) can be critical, especially if circumstances change rapidly.





**Peter Gleick** [Verified account](#) @PeterGleick Apr 26 2018

**Do people understand the magnitude of this? This is the power equivalent of 10 giant nuclear plants brought on line in three months.**



**China Installs Nearly 10 Gigawatts Of Solar In First Quarter, Up 22% | ...**  
China's National Energy Administration announced on Tuesday that the country installed an impressive 9.65 gigawatts (GW) of new solar PV  
[cleantechnica.com](http://cleantechnica.com)

228 replies 4,674 retweets 7,050 likes

“China’s National Energy Administration announced on Tuesday that the country installed an impressive 9.65 gigawatts (GW) of new solar PV capacity in the first quarter of 2018, up 22% on the same period a year earlier and up on analysts’ projections.”

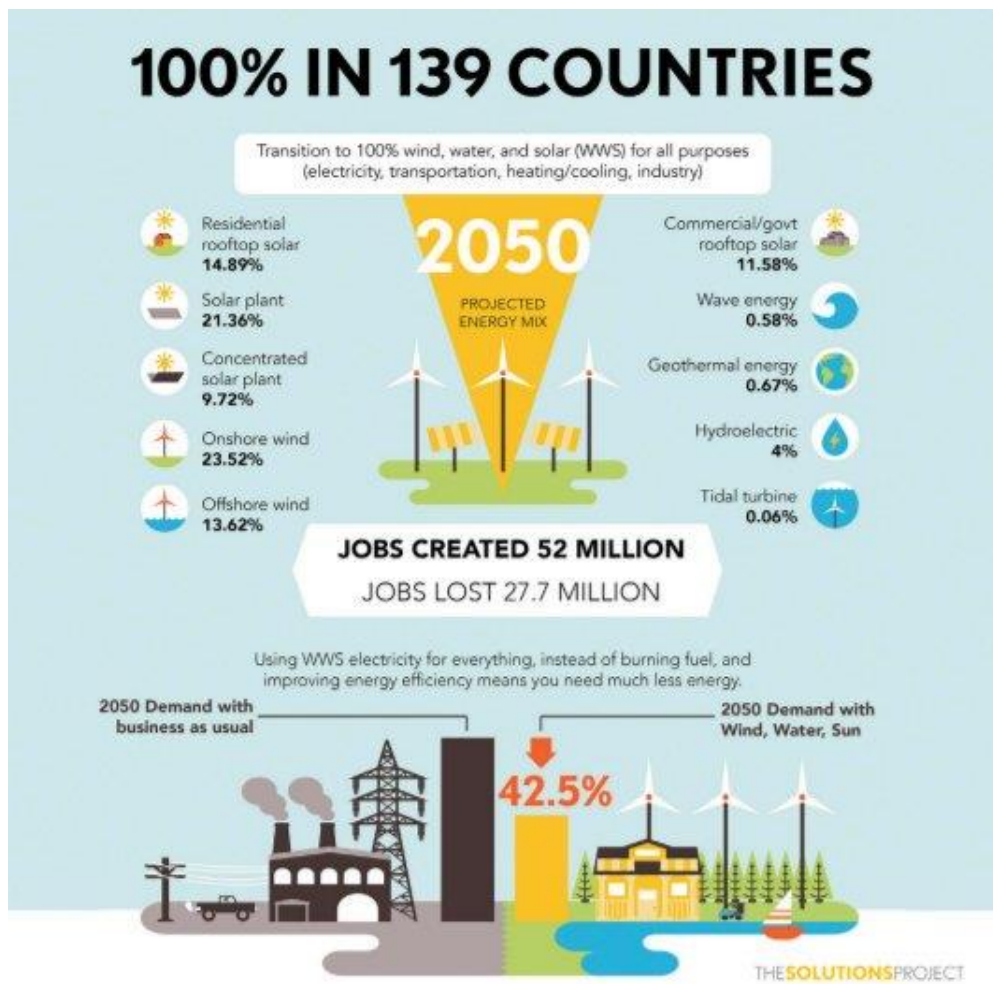
“The data comes to us courtesy of Asia Europe Clean Energy (Solar) Advisory, (AECEA), based in Beijing, which covers the Chinese solar industry closer than many non-Chinese analysts are capable of doing.”

[Source: “China Installs Nearly 10 Gigawatts Of Solar In First Quarter, Up 22%” by Joshua S. Hill for Clean Technica April 24, 2018 <http://bit.ly/2RRF0vi> ]

## “100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World”

[Sources: “100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World” Mark Z. Jacobson (Stanford University, CA) et al. in Joule 1 (energy journal) (p. 108-121) September 6, 2017 <http://bit.ly/2rylhE3> ; referred to Joule article by “Most of the world’s countries could run on 100% renewable energy by 2050, says study” by John McKenna at World Economic Forum September 18, 2017 <http://bit.ly/2B48Sx9> . Additional Source: The Solutions Project (for link to Interactive Map)]

Summary: Getting to 100% Renewables for All Purposes--[the infographic below was on the cover page (p. 107) for article “100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World” in Joule 1 (September 6, 2017)]



(continued from previous page)

[Note: All quotes below are from the “100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World” article in Joule.]

*“The seriousness of air-pollution, climate, and energy-security problems worldwide requires a massive, virtually immediate transformation of the world’s energy infrastructure to 100% clean, renewable energy producing zero emissions.”* (p. 108)

“The roadmaps [illustrated by charts via the Interactive Map at <http://thesolutionsproject.org/why-clean-energy/> (which also illustrates roadmaps for cities worldwide, and states in the U.S.)) describe a future where all energy sectors are electrified or use heat directly with existing technology, energy demand is lower due to several factors, and the electricity is generated with 100% wind, water, and sunlight (WWS).” (p. 108-109)

“... most of the electric technologies that we propose for replacing fossil-fuel technologies are already commercial on a large scale today (e.g., electric heat pumps for air and water heating, induction cooktops, electric passenger vehicles, electric induction furnaces, electric arc furnaces, dielectric heaters), but a few are still being designed for commercial use (e.g., electric aircraft and hybrid hydrogen fuel cell-electric aircraft).” (p. 109)

“Whether the roadmaps are implemented rapidly, however, depends on social and political factors.” (p. 110)

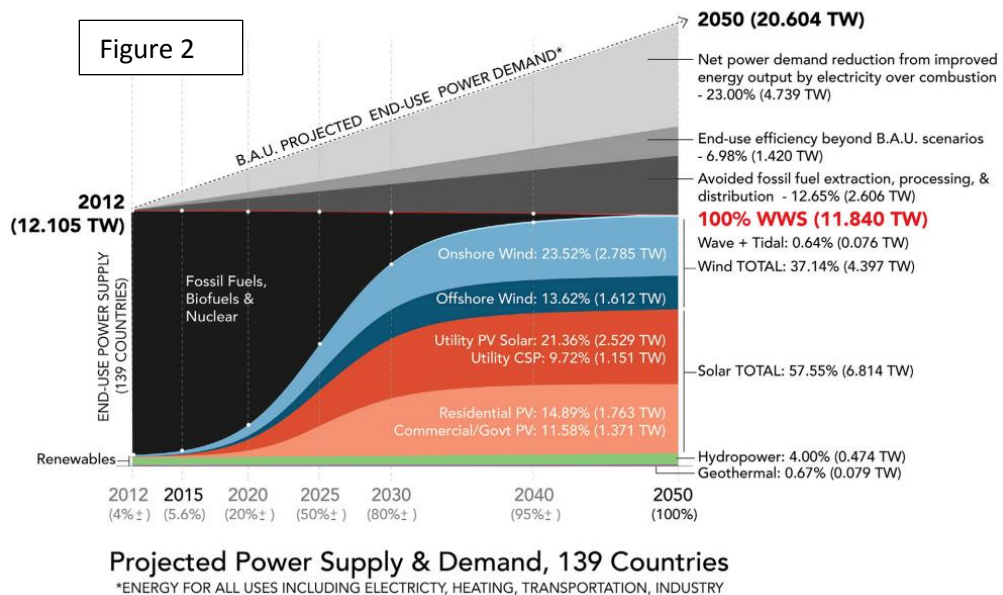
“Table 2 indicates that 4.26% of the 2050 nameplate capacity required for a 100% all-purpose WWS (Wind, Water, and Sunlight) system among the 139 countries was already installed as of the end of 2015.” (p. 113)

[In other words, in 2015, we had reached 4.26% of the capacity needed to reach 100% renewable (by WWS). There is still 95.74% of the capacity remaining for us to achieve, before we can reach the 100% goal.]

(continued on next page)

[Note: “Nameplate capacity, also known as the rated capacity, nominal capacity, installed capacity, or maximum effect, is the intended full-load sustained output of a facility such as a power plant, electric generator, a chemical plant, fuel plant, metal refinery, mine, and many others.” Wikipedia]

Figure 2 (on p. 118) is a proposed WWS transformation timeline for the 139 countries. It assumes 80% conversion to WWS by 2030 and 100% by 2050. The rate of transformation is based on what is necessary to eliminate air-pollution mortality as soon as possible, what is needed to avoid 1.5C net global warming, and what we estimate is technically and economically feasible. (p. 117)



“Air heating and cooling are powered by ground-, air-, or water-source electric heat pumps. Water heat is generated by heat pumps with an electric resistance element for low temperatures and/or solar hot water preheating. Cook stoves are electric induction. Electric arc furnaces, induction furnaces, and dielectric heaters are used to power high-temperature industrial processes directly.” (p. 120)

(end of references to “100% Clean and Renewable Wind, Water, and Sunlight...” Roadmap information.)

“This brief prepared for COP24, the 24<sup>th</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) (Dec. 2018), highlights the sharply falling costs of solar, wind and other renewable power-generation options, along with the growing viability of energy storage technologies.” [From the webpage for information about the brief “Renewable Power: Climate-safe energy competes on cost alone” (<http://bit.ly/2G7tUkf>)]

### Brief from IRENA on Renewable Power

“Recent and often rapid cost declines for electricity from solar photovoltaics (PV) have allowed this technology to compete head-to-head against conventional power sources, without financial support.... The outlook for solar and wind electricity costs to 2020 presages the lowest costs yet seen for these modular technologies, which can be deployed around the world.”

#### Facilitating the Next Phase of Global Energy Transformation

“With the growth of the variable renewable electricity technologies, meaning solar and wind power, significant progress is being made in decarbonising the global electricity sector.

Experience in leading markets has demonstrated the viability of integrating high shares of these sources smoothly into existing power grids, with smart technologies helping to manage daily and seasonal variations in power supply. However, the focus must now shift to how to integrate renewables in the end-use sectors (heating, cooling, transport, etc.). *Efforts to integrate renewables into the end-use sectors, meanwhile, have brought into sharp relief the potential importance of electricity storage.* Rapidly improving batteries and other storage technologies will also permit greater system flexibility, a key asset as the share of variable renewables increases. More directly, storage makes possible a transport sector dominated by electric vehicles, enables effective, 24-hour off-grid solar home systems, and supports 100% renewable mini-grids.

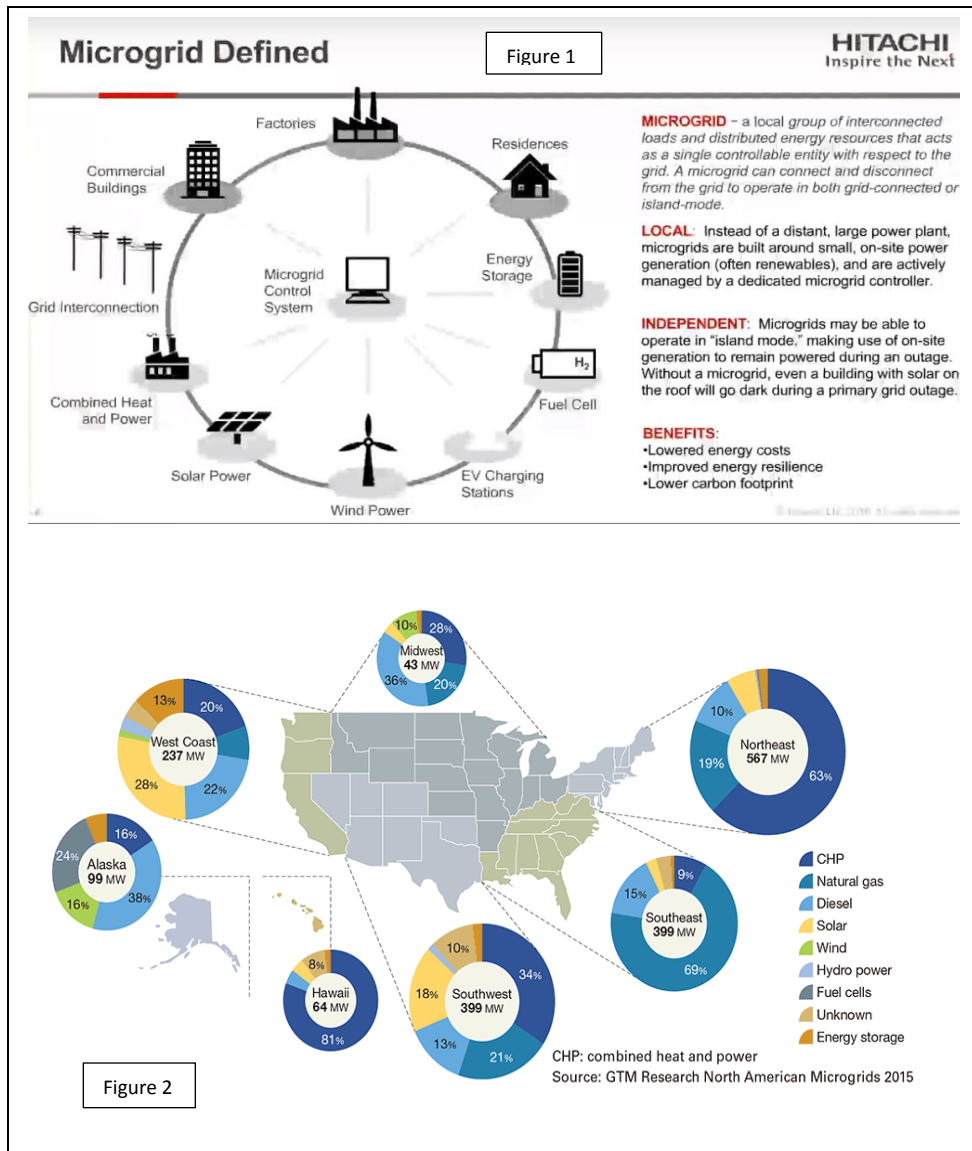
#### Cost reduction potential in the crucial years until 2030

“Total electricity storage capacity could triple in energy terms by 2030. This, in tandem with rapid uptake of renewable power technologies, would suffice to double the share of renewables in the global energy mix in less than a decade and a half.... The cost reduction potential for new and emerging electricity storage technologies is significant.... This would open up new economic markets for electricity storage, as well as increase their role in providing flexibility services to the grid.”

[Source: Brief by IRENA (International Renewable Energy Agency) for COP 24 in Katowice, Poland (Dec. 2018) titled “Renewable Power: Climate-safe energy competes on cost alone” (8 pages)--PDF file can be downloaded at above link. ]

Figure 1 from “What Susty Executives Need to Know about Microgrids” [on screen in background from 5:15-8:54 in Hitachi Webcast presented by GreenBiz (December 16, 2016)] <http://bit.ly/2AGeg9n> (Educational Fair Use);

Figure 2 “Microgrid Deployments in the USA” in article “Microgrid Market in the USA” by Alireza Aram, Hitachi America <http://bit.ly/2RtfJHs> (Educational Fair Use)



**“Community Microgrids** represent a new approach for designing and operating the electric grid, relying heavily on DER (Distributed Energy Resources) to achieve a more sustainable, secure, and cost-effective energy system while generally providing renewables-driven power backup for prioritized loads over indefinite durations.”

[Source: An introduction to Community Microgrids on the webpage “Community Microgrids” at the CleanCoalition website <http://www.clean-coalition.org/our-work/community-microgrids/>

What is a Community Microgrid?

“A Community Microgrid is a coordinated local grid area served by one or more distribution substations and supported by high penetrations of local renewables and other distributed energy resources (DER) such as energy storage and demand response. Community Microgrids represent a new approach for designing and operating the electric grid, relying heavily on DER to achieve a more sustainable, secure, and cost-effective energy system while generally providing renewables-driven power backup for prioritized loads over indefinite durations. The substation-level foundation of a Community Microgrid ensures that the approach can be readily extended throughout a utility’s service territory and replicated across utilities.”

Why we need Community Microgrids

“The United States’ power system, built on century-old technology and approaches, was designed to deliver electricity from large, remote power plants across significant distances to the cities and towns where electricity is actually used. Now, however, locally sited renewable energy generation has become economically competitive with centralized generation and offers a superior approach for a vastly improved power system.”

“In addition, our centralized power system is highly vulnerable to extreme weather events, which are occurring more frequently. In fact, 2017 was the most costly year for domestic disasters in US history, with 16 weather or climate events with losses exceeding \$1 billion, and a total estimated cost of \$306 billion.”

(continued on next page)

[Source: An introduction to Community Microgrids on the webpage “Community Microgrids” at the CleanCoalition website <http://www.clean-coalition.org/our-work/community-microgrids/>

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“Yet, utility executives and policymakers are reluctant to embrace local renewables due to fears that the existing power system cannot reliably integrate distributed energy generation. These grid reliability concerns have effectively limited local renewables to providing no more than 15% of peak power needs. Without empirical proof that the power grid can integrate greater amounts of local renewables in a cost-effective manner, this 15% limit will continue to slow the nation’s transition toward our clean energy future.”

To overcome this reluctance, and to demonstrate the technical and economic feasibility of high penetrations of local renewables, the Clean Coalition established the Community Microgrid Initiative. Working in partnership with electric utilities, the Community Microgrid Initiative is designed to achieve Community Microgrid demonstration projects that prove local renewables connected to the distribution grid can provide at least 25% of the total electric energy consumed while maintaining grid reliability and power quality. These demonstration projects will serve as models for modernizing America’s electrical system in the most intelligent manner possible.

**Features:**

- Leverages **high penetrations of local renewables** and other distributed energy resources to achieve desired level of grid reliability, power quality, and resilience.
- Uses **efficient load design**, including local balancing and load flattening, to reduce costly peaks and transmission costs.
- Includes the ability to **island critical loads**.
- Establishes a **scalable solution** spanning one or more substations.

**Benefits:**

- Creates a more **sustainable, reliable, secure grid**.
- Achieves the desired level of local renewable generation and grid reliability, power quality, and resilience in the **most cost-effective manner**.
- Establishes a foundation for **more precise and efficient grid operations**.
- Provides a **pathway for utilities to thrive** in the distributed energy future.
- Takes a system-wide approach to **reduce dependence** on vulnerable, inefficient, and expensive remote generation and associated transmission infrastructure.



*“Changing how billions of people live on Planet Earth is very special kind of problem- as the forces that shape our lives exist on many different levels. Rather than an unresolved technical challenge, it is increasingly accepted that we face a mix of economic, cultural and psychological barriers.”*

The Centre for Alternative Technology (CAT) in Powys, mid-Wales, UK

(<http://www.cat.org.uk/index.html> )

“We offer solutions to some of the most serious challenges facing our planet and the human race... Leading by example, we aim to show that living more sustainably is not only easy to attain but can provide a better quality of life. Our site is a unique and valuable practical demonstration centre, which includes: photovoltaics; solar thermal; a micro-grid; off-grid and grid-connected systems; biomass combined heat and power (CHP); hydro; air source heat pumps; a community heat main; a range of small to medium wind turbines; two reed bed systems; off-mains water supply; and extensive organic gardens.... Our day-to-day activities include a) running a visitor centre which is open 7 days a week, with 7 acres of interactive displays d) providing curriculum-based education to visiting schools, colleges and universities.”

“Since its inception in 2007, the Zero Carbon Britain project (also by CAT) has offered the hard data and confidence required for visualising a future where we have risen to the demands of climate science. It has helped to reduce fear and misunderstandings and open new, positive, solution-focused conversations....

“We can provide a reliable energy supply for the UK with 100% renewable energy sources and flexible carbon neutral back up.

“We can grow the vast majority of the food we need for a healthy, low carbon diet, and manage our land to capture carbon, nurture biodiversity and increase the health and resilience of our ecosystems.

“We can deliver a modern lifestyle, create employment, improve our wellbeing, and ensure that the future we leave for our children and generations to come is safe and sustainable.”

**(However)** *“Changing how billions of people live on Planet Earth is a very special kind of problem, as the forces that shape our lives exist on many different levels. Rather than an unresolved technical challenge, it is increasingly accepted that we face a mix of economic, cultural and psychological barriers.”*

[Sources: From the webpage “What Do We Do?” at the website for the Centre for Alternative Technology (at <https://content.cat.org.uk/index.php/about-cat-what-do-we-do> ) and from the homepage for the CAT flagship project “Zero Carbon Britain” (at <http://www.zerocarbonbritain.org/en/> )]

“... we take an in-depth look at 18 case studies of scenarios. These are drawn from 130 scenarios that model net zero, deep decarbonisation, and using up to 100% renewable energy.” (Zero Carbon Britain is the flagship research project from the Centre for Alternative Technology)

From Executive Summary of  
“Raising Ambition: Zero Carbon Scenarios from Across the Globe” (2018)  
(Zero Carbon Britain/INFORSE-Europe)  
(at [http://www.zerocarbonbritain.org/images/pdfs/raising\\_ambition\\_exec\\_summary\\_web.pdf](http://www.zerocarbonbritain.org/images/pdfs/raising_ambition_exec_summary_web.pdf) )

“Raising Ambition: Zero Carbon Scenarios...’ collects and highlights the work of hundreds of people around the world to develop snapshots and deep visions of possible futures at the global, regional, national and sub-national scales.”

“... we take an in-depth look at 18 case studies of scenarios. These are drawn from 130 scenarios that model net zero, deep decarbonisation, and using up to 100% renewable energy.”

“All emissions that can go to zero must go to zero--as rapidly as possible. Not just in electricity, but also in heat, transport, industry and land-use.”

“Game Over For Wasteful Energy Use: Current high-energy consumer lifestyles were designed before we understood the very serious nature of the climate challenge....”

“We recommend that multi-solving should become a vital part of all zero carbon scenario development, acting as a tool to identify and optimise cobenefits, and help build coalitions across a range of sectors.”

*“It is an ethical imperative that all scenarios also embrace climate equity.* How the remaining global carbon budget is distributed between nations is a complex and contested issue. The way we share this out must embrace developing country needs to lift citizens out of poverty and to increase quality of life.”

“By developing evidence-based scenarios and unleashing practical projects, particularly at a local scale where there is flexibility to experiment and innovate, we can begin to normalise new and better relationships with transport, buildings, food and energy.”

Ecovillages, Permaculture, Transition Towns can provide key insights and innovations; however, this writer believes many communities are going to have to “improvise on the fly”--with collaborative problem solving, community education, basic human morality providing the traction.

From the webpage for the course

**“Applied Ecovillage Living: Co-creating a Regenerative Culture”**

Saturday 11th February to 10th March 2017- by Craig Gibsone and Vera Franco

(website redesigned; link no longer exists)

Related Link: <https://www.findhorn.org/programmes/applied-ecovillage-living-2019/>

Related Link: Global Ecovillage Network (GEN) Trainings Tailor-made workshops for ecovillage implementation <https://ecovillage.org/our-work/education/gen-trainings/>

“Findhorn Ecovillage is an ever-evolving, living demonstration of creative solutions for the future.”

“A pioneering ecovillage since 1985, receiving Best Practice designation from the United Nations Centre for Human Settlements (Habitat). A major centre for holistic learning serving 9,000 visitors a year from over 50 countries. The Findhorn Foundation has one of the lowest recorded ecological footprints for any community in the industrialized world, just half the UK national average, and has birthed more than 50 businesses and social ventures in the local region.”

“● Over 60 ecologically benign buildings ● Numerous solar water heating systems ● Three wind turbines with total capacity = 675kW; Biomass boiler heating system total capacity = 250 kW ● Biological Living Machine sewage treatment system ● Comprehensive recycling and composting scheme ● Our own community currency and community investment fund ● Served by a car-sharing club that includes zero-emissions electric vehicles”

“You will learn:

Social tools for personal and group transformation, empowerment and community building

Urban and rural solutions for transitioning to a resilient society

Local organic food production and right livelihood

Comprehensive Permaculture design introduction

Renewable energy systems and energy efficiency models

Cooperative social economies and complementary currencies

Holistic decision-making processes, including nature and deep ecology

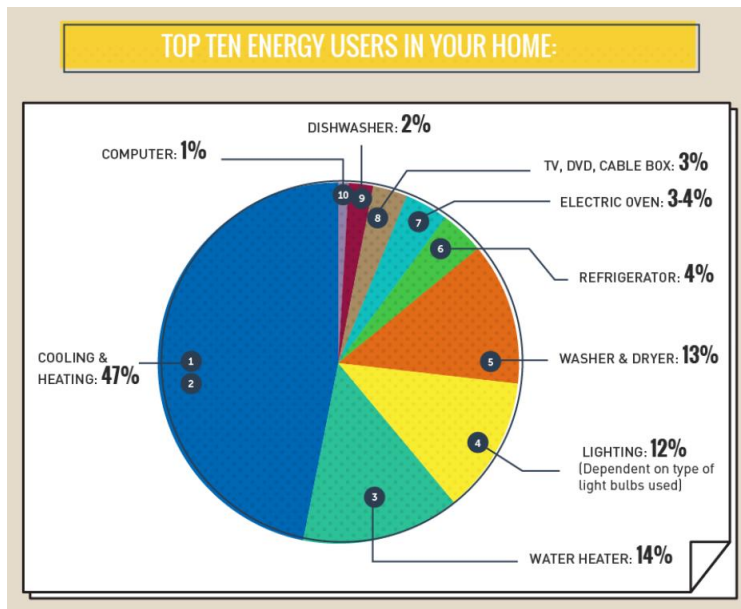
Earth restoration projects and biological waste water treatments

Ecological building and community design”

“Modern comfort comes at a price, and keeping all those air conditioners, refrigerators, chargers, and water heaters going makes household energy the third-largest use of energy in the United States.”

“In practically every house in America, capital is being wasted on energy consumption. That’s because the average electricity spend per year is \$1,368.36 per year, and 35% of the power used is actually wasted. This is neither good for your bank account or the environment.”

**What Uses Most Energy in the Home?**



Average Costs per Household:

- 1) Heating--\$662/year
- 2) Cooling--\$394/year
- 3) Water Heater--\$317/year
- 4) Washer, Dryer--\$143/year
- 5) Refrigerator--\$95
- 6) Electric Oven--\$95/year (based on one hour at 350° per day)
- 7) TV, DVD, Cable Box--\$57/year
- 8) Dishwasher--\$49/year
- 9) Computer--\$28/year
- 10) Lighting--\$28/year

[Source: What Uses the Most Energy in Your Home? by Jeff Desjardins at Visual Capitalist November 14, 2016 <https://www.visualcapitalist.com/what-uses-the-most-energy-home/>  
 Related Links: <https://www.directenergy.com/learning-center/energy-efficiency/what-uses-most-electricity-in-my-home> (which has good tips for saving energy and <https://www.energy.gov/energysaver/save-electricity-and-fuel/appliances-and-electronics/estimating-appliance-and-home> (which has formulas for calculating annual costs))]

“(1/31/08) Univ of CA, Berkeley, will join more than 1,500 institutions--most of them colleges and universities --across the U.S. in hosting an all-day symposium called ‘Focus the Nation: Global Warming Solutions for America.’” <http://bit.ly/2E5cwdh>  
(That was then... what now?)

## Press Release

### Campus joins national Focus the Nation "teach-in" with Jan. 31 global warming symposium

By Cyril Manning, College of Natural Resources | 28 January 2008

**BERKELEY** – This Thursday (Jan. 31), the University of California, Berkeley, will join more than 1,500 institutions - most of them colleges and universities - across the United States in hosting an all-day symposium called "Focus the Nation: Global Warming Solutions for America."

At UC Berkeley, faculty presentations, panel discussions and student-led working sessions will aim to channel participants' concerns about global warming into solutions and political engagement. Public officials and noted climate scientists from UC Berkeley will take part, along with many students, faculty and staff members, administrators and guests.

The nationwide event, with hundreds of schools holding simultaneous gatherings, is being described as the largest "teach-in" in the country's history by Focus the Nation's national organizer, Eban Goodstein, an economics professor at Lewis & Clark College in Portland, Ore. Classes, documentaries, performances, energy-saving competitions and discussions with political leaders are among the activities being offered from coast to coast.

UC Berkeley Chancellor Robert J. Birgeneau said the campus is proud to take part in Focus the Nation because it is "an important event addressing climate change through the lens of research and policy as well as the frame of collective and individual action...."

... Birgeneau said UC Berkeley is a fitting venue for "Focus the Nation" because the campus has a long and rich history of pioneering knowledge and action on the most urgent issues, including climate change.

"We are moving quickly forward on a number of crucial projects to help the environment, including the Energy Biosciences Institute (EBI) and research on climate change, aimed at developing solutions to global energy challenges and reducing the contribution of fossil fuels to global warming," he said.

## Chapter #4

# Harvest Song

“The Play is an attempt to find a value above all price for the smallest events in our daily life.” (Thornton Wilder about his play “Our Town”)

### Harvest Song

Long ago  
we were sown  
now we're here  
hear our song



## Introduction to Chapter #4 of the “Harvest Song”

We are at one of the most critical crossroads humanity has faced since the dawn of civilization.

The first two Chapters of “Harvest Song” provide what this writer considers sufficient evidence that there is now a convergence of unprecedented challenges. However much we may move forward with the technology pieces needed to limit global warming to 1.5°C (2.7°F), there are many other pieces to the unprecedented cultural transformation which we must also achieve--*and failure to also reach positive tipping points on the many other pieces may cause us to lose positive traction, and slide downhill into cynicism.*

In Chapter #3 and Chapter #4 of “Harvest Song”, this writer provides some examples of what he believes are significant movement towards our best chances of avoiding catastrophic climate breakdown. He also includes key steps he advocates for to reach positive tipping points on climate breakdown, *and on many other unprecedented challenges.*

Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the unprecedented challenges ahead. Confidence will be built up when people believe that the efforts of everyone working together is a greater force than the challenges they are facing.

(2008)--“1,500 colleges and universities across the U.S. hosting an all-day symposium called ‘Focus the Nation’” (more details on p. 61).

(2020?)--Colleges and universities assisting with local **Community Visioning Initiatives** + supporting Neighborhood Learning Centers = exponential increase in solution activity.



[Source of Screen Capture: “Chattanooga: A Community with a Vision” 13 minute video documentary at <http://bit.ly/2uE1XX5> . This writer’s interest in Community Visioning Initiatives was inspired instantly when, in 1994, he watched “Chattanooga: A Community with a Vision”. The video includes many interviews and how-to details, and documents two very successful Community Visioning Initiatives organized by the non-profit organization Chattanooga Venture (Chattanooga, Tennessee USA)--one in 1984, and a follow-up in 1993. The 1984 Chattanooga Community Visioning Project (“Vision 2000”) attracted more than 1,700 participants, and produced 40 community goals--which resulted in the implementation of 223 projects and programs, and a total financial investment of 793 million dollars.]



1000 time-intensive Community Visioning Initiatives--in communities around the world--would create an exponential increase in solution-oriented investment, an exponential increase in solution-oriented employment, and an exponential increase in our collective capacity to overcome the challenges of our times.

### Catalyzing Solution Activity with Community Visioning Initiatives, etc.

1) Community Visioning Initiatives (CVIs) are series of community meetings designed to maximize citizen participation in identifying challenges, and in identifying solution-oriented activity--which can help people discover for themselves how much we need to be learning so we can be a part of the solutions, and how much we really need to be on same side, helping each other. The 13 minute documentary "Chattanooga: A Community with a Vision" <http://bit.ly/2uE1XX5> is highly recommended as an inspiring example of the potential of Community Visioning Initiatives.

2) Neighborhood Learning Centers (NLCs): can be a) multi-purpose support centers for implementing CVIs b) neighborhood meeting places and workshop centers c) a critical part of a low cost lifelong learning education system. NLCs can provide places for discussion, information sharing, mutual support, encouragement, and friendship--so that exchanging of information, and resources also includes building close-knit communities of people with healthy appreciation for each other's strengths.

3) Further: results from well thought out preliminary surveys (administered to at least 150 key leaders from a significant variety of fields of activity in the community) can help residents appreciate the need for a Community Visioning Initiative (CVI), and for many "Neighborhood Learning Centers" (NLCs)--and provide starting points for topics to be covered by workshops in the NLCs. The job fairs which come at the end of the Community Visioning Initiative process provide opportunities for all key stakeholders in the community (businesses, organizations, institutions, government, etc.) to demonstrate their upgraded awareness--and their interest in the welfare of the community--by offering and facilitating new employment opportunities. In addition, people (especially unemployed people) who volunteer their time and energy to assist with the CVI, with NLCs--and/or advance the resulting action plans--could receive, as compensation, local currency. Also, there are many opportunities for local newspapers to contribute valuable community services associated with the visioning process (making preliminary survey results accessible, providing analysis of resources in the Neighborhood Learning Centers, reporting on different phases of the Visioning Initiative, etc).

4) Many Colleges, Universities assisting with carrying out local Community Visioning Initiatives + many supporting Neighborhood Learning Centers = exponential increase in solution-oriented activity.

Successful Community Visioning Initiative pilot projects in ten or so of the most progressive communities and regions would be most helpful to encourage communities/regions where there are many conflicting world views, and conflicting cultural practices.

#### Community Visioning Initiatives/Neighborhood Learning Centers (continued)

1) The Community Visioning Initiative (CVI) approach to collaborative problem solving and community education advocated by this writer is described in a “15 Step Outline” <http://bit.ly/2AWpDKL> , and further illustrated by details in “Chattanooga: A Community with a Vision”--a 13 minute documentary <http://bit.ly/2uE1XX5> . Although the 15 Step outline was written in 2008, it will help people to visualize how a face-to-face visioning takes place (face-to-face being preferred by this writer over website oriented, because we now need as much collaborative activity with our fellow community residents as possible).

2) Appreciating Community Visioning Initiatives and Neighborhood Learning Centers--

a) such collaborative problem solving processes can help people “become stakeholders”, with the faith that as they do so, and become involved in education at the level of Neighborhood Learning Centers (and “voting” on priority challenges and priority solutions), *they will discover for themselves just how much we all need to be learning to so that we can be part of the solutions... and how much we really need to be on the same side, helping each other.*

b) through workshops and other informal education (and associated local learning networks), citizens can gain greater awareness of how all the “little events” in everyday community life have a positive and cumulative effect on the challenges-solutions-investment-training-employment sequence... and thus how all the investments of time, energy, and money (the “votes”) each of us make in our everyday circumstances become the larger economy. Citizens from every variety of circumstances can learn how to wisely cast such “votes”. Wisely directed, such “votes” can result in countless ways of earning a living which contribute to 100% renewable energy, carbon neutral and socially responsible local economies, living lightly and practicing wisdom and compassion, and the basic common sense necessary to drastically reduce Greenhouse Gas Emissions, and minimize other related challenges.

Successful Community Visioning Initiative pilot projects in ten or so of the most progressive communities and regions around the world can provide detailed confirmation of how the process would work. Such confirmation would be most helpful to encourage communities/regions where there are many conflicting world views, conflicting moral compasses, and conflicting cultural practices.

It's not like mobilizing for war, where there will be drill sergeants and basic training, but people should begin to realize: creating the knowledge base and skill sets necessary to resolve the challenges of our times means there is a lot of work to do.

### Even More about Neighborhood Learning Centers

Creating the knowledge base and skill sets necessary to resolve the challenges of our times will require encouraging as much formal and informal meetings as possible between neighbors--and people living in the same local community. Creating many Neighborhood Learning Centers (NLCs) can provide places--in local neighborhoods--for discussion, information sharing, mutual support and encouragement, fellowship and friendship—so that the exchanging of information and resources will also include the building of a close-knit community of people with a healthy appreciation for each other's strengths (repeated from p. 67, for emphasis).

The Neighbor to Neighbor Community Education (NTNCE) Project (overview in Chapter #3, on p. 48, and p. 68) advocates for a new section in local newspapers--which would be used to highlight and accumulate stories, personal experiences, and other forms of reader contributions that identify helpful people and valuable resources, and reinforce important community goals. Partnerships between the NTNCE Project and the many Neighborhood Learning Centers in the community/region would surely accelerate community awareness about challenges identified and solution activity.

Educational institutions, and other organizations, could increase their existing efforts, or take up the call, to develop related curriculum and offer classes, workshops, and teacher training, to support the development of Neighborhood Learning Centers. Many Colleges, Universities assisting with carrying out local Community Visioning Initiatives + many supporting Neighborhood Learning Centers = exponential increase in solution-oriented activity. The 13 minute documentary "Chattanooga: A Community with a Vision" <http://bit.ly/2uE1XX5> is highly recommended as an inspiring example of the potential of Community Visioning Initiatives (repeated, for emphasis).

*If the goal is to resolve the unprecedented challenges ahead, then it would seem necessary to exponentially increase the number of actively engaged citizens--citizens who (thus) have a much more comprehensive sense of civic duty. It's not like mobilizing for war, where there will be drill sergeants and basic training, but people should begin to realize: problem solving on a scale most of us have never known before means there is a lot of work to do.*

Partnerships between the Neighbor to Neighbor Community Education (NTNCE) Project and the many Neighborhood Learning Centers (NLCs) in the community/region would surely accelerate community awareness about challenges identified and solution activity.

### Neighbor to Neighbor Community Education (NTNCE) Project proposal for a new section in local newspapers

The Neighbor to Neighbor Community Education (NTNCE) Project advocates for a new section in local newspapers. The new section (NTNCE section) would be used to highlight and accumulate stories, personal experiences, and other forms of reader contributions which identify helpful people and valuable resources, and reinforce important community goals.

In this "Harvest Song" book, readers have been provided with credible evidence-based information about a convergence of unprecedented challenges happening now-- and guidelines for many solutions which can be implemented in local communities.

We need many plans of action, in communities around the world--

- a) which will exponentially increase solution-oriented activity
- b) *which people from every variety of circumstances can trust*
- c) *which will help people discover for themselves how much we all need to be learning so that we can be part of the solutions... and how much we really need to be on the same side, helping each other.*

*If the goal is to resolve the unprecedented challenges ahead, then it would seem necessary to exponentially increase the number of actively engaged citizens--citizens who (thus) have a much more comprehensive sense of civic duty. It's not like mobilizing for war, where there will be drill sergeants and basic training, but people should begin to realize: problem solving on a scale most of us have never known before means there is a lot of work to do.*

There are now many ways for people to learn and share information--television, radio, websites, social networks on the Internet (maybe even too many ways....) Having established, reliable, and local sources--the local newspaper being one--to act as a key hub for the community (and an arbitrator on what information is valid, and what is misinformation) can be critical, especially if circumstances change rapidly.

People (especially unemployed people) who deliberately direct their investments of time, energy, and money towards assisting with Community Visioning Initiatives, Neighborhood Learning Centers--and supporting and sustaining the solutions identified by the Community Visioning Initiative--could receive, as encouragement, **local currency**. Such local currency can, in its turn, be spent in ways which are particularly helpful to building stable and sustainable local economies.

## Local Currencies

(while there are many local currencies, this overview focuses on Berkshares)

From the "What are Berkshares?" subsection of the Berkshares website (at

[http://www.berkshares.org/what\\_are\\_berkshares](http://www.berkshares.org/what_are_berkshares)

"... local currencies are once again being recognized as a tool for sustainable economic development. The currency distinguishes the local businesses that accept the currency from those that do not, fostering stronger relationships between the responsible business community and the citizens of the region. The people who choose to use the currency make a conscious commitment to buy local, and in doing so take a personal interest in the health and well-being of their community by laying the foundation for a truly vibrant, thriving economy."

From the "Local Currency" webpage at the website for the Schumacher Center for a New Economics (at <http://www.centerforneweconomics.org/content/local-currencies> )

"Launched in the fall of 2006, BerkShares had a robust initiation, with over one million BerkShares circulated in the first nine months and over 4.3 million to date. Currently, more than four hundred businesses have signed up to accept the currency. Five different banks have partnered with BerkShares, with a total of thirteen branch offices now serving as exchange stations."

--From the "What are Berkshares?" subsection of the Berkshares website (at

[http://www.berkshares.org/what\\_are\\_berkshares](http://www.berkshares.org/what_are_berkshares) )

"The members of BerkShares, Inc. envision a diverse and resilient regional economy that supports and prioritizes responsible production and consumption, wherein community members rely on the land and each other to fulfill the basic needs of food, culture, clothing, shelter, and energy."

From the "Local Currency Resources" webpage at the website for Berkshares, Inc (see

<http://berkshares.org/resources> )

"The Schumacher Center for a New Economics has been an innovator for over 30 years in the issuing of place-based non-profit currencies. The Local Currency section of their website is a resource for people interested in building local currencies in their own region." (see <http://www.centerforneweconomics.org/content/local-currencies> for resources)

- 1) We are at the one of the most critical crossroads in the history of life on Planet Earth.
- 2) 1000 Community Visioning Initiatives supported by many Neighborhood Learning Centers = exponentially accelerating solution activity at this critical time.
- 3) Here are seven different ways of looking at where 10 billion dollars might come from, so that 1000 communities could carry out Community Visioning Initiatives

### Can We Afford 1000 Community Visioning Initiatives?

The more comprehensive Community Visioning Initiatives require steering committees; preliminary surveys or assessments; workshops; task forces; and collaboration between many organizations, government agencies, businesses, and educational institutions--and seek to build up consensus in the community for specific goals and action plans by encouraging a high level of participation by all residents.

This writer offers a rough estimate of \$10 million to carry out one (1) time-intensive (possibly 18 months) Community Visioning Initiative of the kind he advocates for [see pages 66-69, "15 Step Outline" <http://bit.ly/2AWpDKL> referred to on p. 68; and the 13 minute documentary "Chattanooga: A Community with a Vision" <http://bit.ly/2uE1XX5> (highly recommended)].

Here are 7 different ways of looking at where 10 billion dollars might come from, so that 1000 communities could carry out Community Visioning Initiatives (Note: although these statistics were originally sourced in 2011-2012, the points that they make will still be valid).

- 1) \$10 billion is only .005% of the \$207 trillion in personal wealth held by the richest 10 percent.
- 3) \$10 billion is only .57% (a little more than half of 1%) of \$1,750 billion in military expenditures in 2012.
- 4) \$10 billion is 1.8% of (est.) \$557 billion in worldwide advertising spending in 2012.
- 5) \$10 billion is 2.4% of the \$419 billion of worldwide gambling revenues in 2011.
- 6) \$10 billion is 6% of the \$162 billion people in the United States spent on beer, wine, and liquor in 2011.
- 7) If 18% of cable TV subscribers in the United States unsubscribed from cable TV, they could re-direct that money to finance 1000 Community Visioning Initiatives.

We are at the one of the most critical crossroads in the history of life on Planet Earth. Confidence will be built up when people believe that the efforts of everyone working together is a greater force than the challenges they are facing.

Village Technology Handbook, Small Scale Foundries for Developing Countries, Foot Powered Thresher, Village Water Systems, Water Treatment and Sanitation, Charcoal Making for Small Scale Enterprises, Micro Hydro Electric Power, Wind Resistant Block Houses....

### Appropriate Technology Library--1050 Books on 1 USB Drive

by Village Earth

From the webpage "Appropriate Technology Library" at the Village Earth website (at <https://www.villageearth.org/> under the "Publications" tab)

1) "The Appropriate Technology (AT) Library contains the full text and images from over 1050 of the best books dealing with all areas of self-reliance, do-it-yourself technology--over 150,000 pages. Portable and easy to use on 1 USB drive. The AT Library is currently in use in over 74 countries worldwide."

2) "The AT Library gives you the knowledge to solve real-world problems such as: harvesting clean drinking water, making tools, growing your own crops, building and maintaining an irrigation system, preserving crops, reforesting a denuded watershed, starting a small fish hatchery, building a small-scale hydropower scheme, building and maintaining pumps, treating human and animal waste, utilizing solar energy, improving rural cookstove efficiency, constructing energy efficient structures, caring for the sick, non-formal education, preparing for a natural disaster, etc."

3) "The AT Library is the complete text and graphics of each book, digitally scanned into Adobe PDF format.... Each book is summarized and indexed in the Appropriate Technology Sourcebook, included with each library. This format is easy to use and navigate and can be read on virtually any computer operating system. It can also be used with the most basic hardware including low MHz laptops, tablets or smartphones."

4) A complete list of the 1050 books included in the AT Library is accessible on the webpage for the Appropriate Technology Library. Here is a sampling of the titles included in the AT Library: Technologies for Basic Needs, How to Make Twelve Woodworking Tools, Permaculture II, Animal Power in Farming Systems, Small Scale Solar Powered Irrigation Pumping Systems, Water-Pumping Devices, Compost Toilets, Hot Water, The Wind Power Book, Small Scale Hydropower Technologies, Low Cost Passive Solar Greenhouses, Low Cost Country Home Building, Small Scale Papermaking, etc.

"Village Earth helps reconnect communities to the resources that promote human well-being by enhancing social and political empowerment, community self-reliance and self-determination."

“Many rural and urban development schemes have overlooked the importance of locally specific ways of meeting needs for food, health, shelter, energy, education and other fundamental human needs.” “**Food sovereignty**’ is an alternative paradigm for food, fisheries, agriculture, pastoralism and forest use that is emerging in response to this democratic deficit.”

#### Locally Specific Ways of Meeting Basic Human Needs and Food Sovereignty

- 1) “The knowledge, priorities and aspirations of small-scale producers, and other citizens whose livelihoods depend on food provisioning, are rarely included in policy debates on the future of food, farming and development (Edelman, 2003). When governments do decide to hold public consultations to help guide their decisions... (and) when policy think tanks and academics organise discussions to inform the choices of decision-makers, it is striking that the voices of farmers, pastoralists, fisherfolk, food workers and indigenous peoples are largely absent from such processes (Pimbert *et al.*, 2006). (Chpt. 3 p. 39)
- 2) “Subsistence farmers, pastoralists, indigenous peoples, fisherfolk and artisanal food processors are seen as poor if they wear home-made garments of natural fibre rather than synthetics. They are perceived as poor if they live in houses constructed from natural materials like bamboo, thatch and mud rather than concrete. They are backward and poor if they farm without hybrid seeds, chemical fertilisers and weed-free monocultures. The ideology of development declares them to be so because they neither fully participate in the market economy nor consume commodities produced for and distributed by the market, even though they may be satisfying their fundamental needs themselves. This neglect of human ingenuity and diversity ultimately reinforces the dominant model of development based on uniformity, centralisation and control.” (Chpt. 4.6 p.55)
- 3) “‘Food sovereignty’ is an alternative paradigm for food, fisheries, agriculture, pastoralism and forest use that is emerging in response to this democratic deficit. This alternative policy framework for food and agriculture is also a citizens’ response to the multiple social and environmental crises induced by modern food systems everywhere. Indeed, many proposals for food sovereignty directly seek to reverse the socially and ecologically destructive nature of industrial farming, fisheries, forestry and livestock management, and the wider food systems they are part of. *Self sufficiency and autonomy are now political demands, well rooted in the experience of millions of Indians, campesinos, ‘urban marginals’ and many other groups in the southern part of the globe. Rerooting and regenerating themselves in their own spaces, they are creating effective responses to ‘the global forces’ trying to displace them* (Esteva and Prakash, 1998).” (Chpt. 3 p. 39)

[Source: “Towards Food Sovereignty: Reclaiming Autonomous Food Systems” by Michel Pimbert Accessible from IIED website (International Institute for Environment and Development) London UK 2009 (Table of Contents and downloadable chapters at <http://www.iied.org/towards-food-sovereignty-reclaiming-autonomous-food-systems> ). Excerpts above are from Chapter 3 “Food sovereignty: a citizens’ vision of a better world” and Chpt. 4.6 “The need to strengthen local organisations for food sovereignty”.]



Local Food Policy Councils: “Many organizations, both local and national in scope, have developed tools, informational resources, or successful model policies that support an integrated, sustainable and equitable food system at the city or regional level. We have collected a sample of those experiences and resources....”

“Cutting Through the Red Tape:  
A Resource Guide for **Local Food Policy** Practitioners and Organizers”

“Levers of change exist in municipal and county governments around the U.S. Community organizations are using local policy to develop a better food system through farm to school programs, local business incubation and food policy councils, and citizen advisory boards to city and state governments. This document is a collection of resources for local food policy assembled from groups across the U.S. Many organizations, both local and national in scope, have developed tools, informational resources, or successful model policies that support an integrated, sustainable and equitable food system at the city or regional level. We have collected a sample of those experiences and resources to provide community advocates with practical tools and ideas for creating local food policy change.”

“This document is organized with policies and tools for each area of the food system: production, processing, distribution, consumption, and food waste recovery.... Each of (these) five sections contains ‘toolkits’ created by a range of non-profits, universities, or think tanks.... In regards to production, they offer model language for zoning ordinances that establish or expand protections for both community gardens and farmers’ markets, as well as how neighborhood groups can organize to create a community garden. With food processing, the available toolkits describe how to start a community kitchen incubator and supporting network. Toolkits related to distribution explain how to start a farm-to-school program, establish a sustainable food purchasing policy, improve school food policy rules and help local farmers market their products to local institutions. In regards to consumption, the featured toolkits cover city zoning ordinances that encourage healthy eating choices and how to organize a healthy corner store project. The waste recovery toolkits explain how city officials can implement food and yard waste recycling programs and on-site food reduction and composting for businesses.”

[Source: From Food First Policy Brief #19 “Cutting Through the Red Tape: A Resource Guide for Local Food Policy Practitioners and Organizers” by Beth Sanders, MPH Intern and Annie Shattuck Research Fellow--Food First/Institute for Food and Development Policy December 2011 (at the webpage for “Cutting Through the Red Tape....” <https://foodfirst.org/publication/cutting-through-the-red-tape-a-resource-guide-for-local-food-policy-practitioners-organizers/> (from introduction to the report--p. 1, paragraphs 2, 6-7; pdf file of complete report accessible at bottom of page)]

*There is now a great responsibility on people who are in any way representatives of religious, spiritual, and/or moral traditions--to demonstrate what is possible along the lines of wisdom and compassion, to provide genuine instruction when sincere efforts are being made, to contribute to the greater good of the whole, and to help restore confidence in the higher values of life.*

### Interfaith Prayer Vigils

The news media tend to focus more on conflict than on cooperation--especially in stories about religious, spiritual, and moral traditions. However, if the leaders of religious, spiritual, and moral traditions cannot cooperate and work together to 1) reverse the marginalization of the treasured wisdom which has accumulated over the many centuries of human experience and 2) *provide more evidence that such wisdom does exist*, they may contribute more to creating widespread cynicism rather than confidence, and we may lose significant traction and critical momentum on issues which require urgent solutions.

One way leaders of religious, spiritual, and moral traditions could make a significant contribution to positive tipping points is by encouraging and supporting Interfaith Prayer Vigils. One possible goal for an Interfaith Prayer Vigil would be for communities to have at least one person from the community participating in the Prayer Vigil at all times (24/7)(in such time intervals as they choose). With an emphasis on silence, participants could silently recite prayers for peace, forgiveness, and reconciliation--and/or carry on with any kind of silent practice or silent spiritual discipline which is relevant and appropriate for a sacred space dedicated to praying for help when we are at one of the most critical crossroads humanity has faced since the dawn of civilization.

One inspiration for this kind of silent effort in a sacred place is the 24 Hour Prayer Vigil for World Peace at Kunzang Palyul Choling (KPC), a Tibetan Buddhist Temple in Poolesville, Maryland (USA). The Prayer Vigil at Kunzang Palyul Choling (KPC) began in April, 1985 and continued 24/7 all year round until February, 2015. At that time it became a prayer vigil for 12 hours on Wednesdays. Some details about the KPC's Prayer Vigil (from the webpage "Prayer Vigil") are at <http://www.tara.org/ourprojects/prayer-vigil/> ).

This writer personally believes Faith helps move belief from "it hardly seems possible" to "it must be possible" (since Faith believes Love will prevail). And he believes "God can do anything".

Now would be a good time for people of Faith to join in "Interfaith Prayer Vigils"--which could be formed, and maintained (24/7 if possible), by members of any local places of worship and/or local spiritual fellowships with the desire to serve in this way.

“The most advanced societies are the ones which are successful at \_\_\_\_\_.”  
(Please list 5-10 responses which you believe would best fill in the blank. Then please rank those responses, with #1 being most important, #2 being second most important, etc.

### Questionnaires and Surveys Can Help Identify Challenges and Solutions and Build Consensus for Collective Action

- 1) What is your definition of “the good life?”
- 2) During the course of any given day, each of us consciously or unconsciously places our faith in a variety of people, institutions, organizations, businesses, beliefs, principles, practices, commonly agreed upon codes of conduct, etc. Consider carefully the ‘things you do in the everyday circumstances of your life’-- and then list 10 people, institutions, etc. which you personally place your faith in. Then, please mark or arrange the list so that #1 is the most significant person, institution, etc. which you personally place your faith in, #2 is the second most significant, and so on.
- 3) Who are the most valuable peacebuilders in your local community? Please name 5-10 people you would identify to others as the most valuable peacebuilders--and then please describe five qualities, skills, experiences, knowledge, etc. which you believe are essential to identifying someone as a most valuable peacebuilder.
- 4) The investments of time, energy, and money (the “votes”) each of us make---  
---in our everyday circumstances---  
---can result in countless ways of earning a living which contribute to, rather than impair---  
---the peacebuilding, community revitalization, and ecological sustainability efforts---  
---necessary to reach positive tipping points on many critical challenges at the same time.  
Question: Do you agree with the above statement, or do you disagree? Please explain why you agree or disagree.
- 5) The challenges of our times are such that it is now critical---  
--- for us to access the storehouses of wisdom---  
---which have accumulated over the many centuries of human experience---  
---and which have been confirmed again and again as essential to individual well-being and social harmony---  
---by the saints, sages, spiritual leaders, and sincere practitioners of all religious, spiritual, and moral traditions.  
Question: Do you believe such wisdom exists? [Please rate your level of belief or doubt in response to the question “Do you believe such wisdom exists?” on the following scale: “Strongly believe it exists—Somewhat certain it exists—Would like to believe it exists, but there isn’t much evidence to support it--Am Somewhat Skeptical about its existence--Seriously Doubt that it exists”

*There is now a great responsibility on people who are in any way representatives of religious, spiritual, and/or moral traditions--to demonstrate what is possible along the lines of wisdom and compassion, to provide genuine instruction when sincere efforts are being made, to contribute to the greater good of the whole, and to help restore confidence in the higher values of life. (repeated for emphasis)*

### Living Lightly and Practicing Wisdom and Compassion

in carbon neutral and sustainable small cities, towns and villages  
can resolve many challenges at the same time

From Worldwatch Institute "State of the World 2004: Special Focus--The Consumer Society"

a) "The energy invested in a particular thing, during its life from cradle to grave, is called the 'embodied energy' of that object. The amount of embodied energy that an item contains depends on the technology used to create it (the origin of materials inputs, how they were created and transported, etc.), the nature of the production system, and the distance the item travels from inception to purchase."

b) "By supporting items and processes that have lower embodied energy, as well as the companies that produce them, consumers can significantly reduce society's energy use."

From "Why the Village Movement?" by J.C. Kumarappa (economist who worked with Gandhi)

"... every article in the bazaar has moral and spiritual values attached to it... if we feel it is beyond us to guarantee the concomitant results of all our transactions, it necessarily follows that we must limit our transactions to a circle well within our control. This is the bed rock of swadeshi. *The smaller the circumference, the more accurately can we gauge the results of our actions, and (the) more conscientiously shall we be able to fulfill our obligations as trustees.*"

*\*\*\*There is now a great responsibility on people who are in any way representatives of religious, spiritual, and/or moral traditions--to demonstrate what is possible along the lines of wisdom and compassion, to provide genuine instruction when sincere efforts are being made, to contribute to the greater good of the whole, and to help restore confidence in the higher values of life.*

*\*\*\*If many people can learn to find contentment and quality of life while consuming much less, this limiting of desires at the 'root' will save much trouble trying to respond to the symptoms of unrestrained desires--as they materialize worldwide. This part of the value and benefit of spiritual teachings is often overlooked.*

*\*\*\*"Were I to have the least bit of knowledge, in walking on a Great Road, it's only going astray that I would fear. The Great Way is very level; but people greatly delight in tortuous paths."*

(Lao Tzu)

We have the knowledge and wisdom to create, support, and sustain smaller cities, towns, and villages which can keep global warming below 1.5°C (2.7°F)--and which represent what a significant majority of community residents surveyed would describe as a high quality of life. (273)

### 13 Steps for Long Term Culture Change

1) Community Good News Networks 2) Community Faith Mentoring Networks 3) Spiritual Friendships 4) Interfaith Peace Vigils 5) Recalibrating Our Moral Compasses (ROMC) Surveys 6) Community Visioning Initiatives (CVIs) 7) Neighborhood Learning Centers (NLCs) 8) Spiritually Responsible Investing 9) Ecological Sustainability/Permaculture/ECOVillages 10) Appropriate Technology 11) Food Sovereignty/Food Waste/Obesity/Local Food Councils/Community Supported Agriculture 12) Local Currency 13) Neighbor to Neighbor Community Education (NTNCE) Projects in Local Newspapers

Community Visioning Initiatives (CVIs) are a series of community meetings designed to maximize citizen participation in identifying challenges, and solution-oriented activity. Neighborhood Learning Centers (NLCs) are multi-purpose support centers for implementing CVIs, meeting places, workshop centers, and part of low cost lifelong learning education system. Initially, surveys of key informants globally on challenges/solutions would inspire similar local surveys, and both surveys would highlight the need for CVIs and NLCs--and provide key starting points for topics to cover in workshops at NLCs. Progressive communities following this approach will recognize the need for increasing the reliability of our "moral compasses", and Steps 1-4 and 8 (and possibly Step 5) will help provide starting points for positive interfaith cooperation along such lines. Colleges and universities assisting with carrying out local Community Visioning Initiatives + many supporting Neighborhood Learning Centers = an exponential increase in solution-oriented activity. (Ex: CVI 13m documentary <http://bit.ly/2uE1XX5> ).

Concluding Comments: This writer prefers that priorities (for urgently and drastically cutting global emissions) be given to small cities, towns, and villages--as more sustainable-friendly in the long run; having less complex vulnerabilities; creating more emphasis on downsizing and focusing on what basic necessities are most needed; where it is easier to see the results of our actions; and where a truly natural circular economy (sewage treatment; food miles; less packaging; zero waste; etc.) is much easier to implement, and more likely to actually happen. He also believes that it is possible for local communities and regions to use Community Visioning Initiatives and Neighborhood Learning Centers to do ongoing collaborative problem solving and community education, and to make profound changes in less than ten years. ("13 Steps for Long Term Culture Change"-- <http://bit.ly/2GFaVJ4> )

Agrarian Reform; Appropriate Technology; Circular Economy; Civic Responsibility; Community Visioning Initiatives; Food Security; Forgiveness; Gender Equality; Hard Work; Honesty; Inspiring Role Models; Interfaith Peace Vigils; Local Currency; Mentoring; Permaculture; Wisdom....

### 178 Related Fields of Activity

This writer has identified 178 fields of activity related to the collaborative problem solving, community peacebuilding, ecological sustainability, and community education efforts he advocates most strongly for to resolve the convergence of unprecedented challenges which now exists. Crowdsourcing efforts would surely result in a much longer list; however this list should be sufficient to suggest that we--collectively--have the knowledge and wisdom to create, support, and sustain communities which can keep global warming below 1.5°C (2.7°F); minimize resource requirements; maintain ecological sustainability; maintain a high level of compassion for fellow human beings--and which represent what a significant majority of community residents surveyed would describe as a high quality of life.

Here are 65 fields of activity which this writer will highlight, as a sample of what is included in the list (complete list in 6 page "178 Related Fields of Activity" <http://bit.ly/2rsNeOE>):

Agrarian Reform; Alleviating Hunger; Appropriate Technology; Biological Sewage Treatment Systems; Circular Economy; Civic Responsibility; Community Education; Community Land Trusts; Community Peacebuilding; Community Supported Agriculture; Community Supported Manufacturing; Community Visioning Initiatives; Compassion; Cooperation; Divest/Invest; Ecological Sustainability; Ecovillages; Emergency Humanitarian Aid; Employment Training (esp. Transitional); Energy Descent Pathways; Energy Returned On Energy Invested (EROEI); Energy Storage Systems; Faith; Food Security; Forgiveness; Gender Equality; Hard Work; Holistic Education; Holistic Health Care; Honesty; Hydropower; Inspiring Role Models; Interfaith Peace Vigils; Justice; Lifelong Education; Local Currency; Mentoring; Microgrids; Neighbor to Neighbor Community Education (in newspapers/newsletters); Neighborhood Learning Centers; Permaculture; Plant-Based Protein; Prayer; Questionnaires/Surveys; Relocalization; Renewable Energy; Right Livelihood; Small-Scale Farming; Socially Engaged Spirituality; Socially Responsible Investing; Solar Energy; Spiritual Discipline/Spiritual Practice; Spiritual Diversity (Religious Pluralism); Spiritual Friendships; Sympathetic Resonance; Transition Towns; Village Industries/Cottage Industries; Village Support Centers; Violence Prevention; Voluntary Simplicity; Wind Power; Wisdom; Zero Waste