

# Large Cities are Not Sustainable

and will not help us get to Zero Carbon ASAP

by Stefan Pasti, Founder

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative

(148 pages; May, 2022)

Executive Summary provided by (long) Table of Contents (16 pages) in Appendix 5 (link)

28 page powerpoint also provided, as Educational Resource (in Appendix 6) (link)

(short) Table of Contents (link) after Introduction

## Introduction

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FOR IMMEDIATE RELEASE

May 16, 2022

### Accelerating Positive Indicators

is the goal of new report

“Large Cities are Not Sustainable--  
and will not help us get to Zero Carbon ASAP”

(May 15) Very strong waves of Accelerating Positive Indicators will stabilize social cohesion, and bring great relief around the world.

Such a fortunate turn of events may not be the first impressions readers have...

when they glance through a new report titled “Large Cities are Not Sustainable--and will not help us get to Zero Carbon ASAP”. But that is the hope of its author, Stefan Pasti.

---There are many negative indicators in this “Large Cities are Not Sustainable....” report

“I am a person of Faith,” said Mr. Pasti, who is founder and resource coordinator for The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative (at [www.cpcsi.org](http://www.cpcsi.org) ). “And, although there are

many negative indicators, and they are very serious, I believe there will be a future which offers high quality of life for a significant majority of human life on Earth. So I work towards Accelerating Positive Indicators.”

“Even so,” said Mr. Pasti, “to know where to best invest our time, energy, and money, we need to know the full dimensions of our challenges.”

There are many negative indicators in this “Large Cities are Not Sustainable....” report. The Climate Emergency, and the Sustainable BioDiversity Emergency are only two indicators of a convergence of unprecedented challenges which have been researched and documented in numerous papers by Stefan Pasti, over the last four decades (links to 12 papers are accessible in Appendix 4) (many writings by Stefan Pasti are accessible at <https://www.cpcsi.org/collected-writings-stefan-pasti> ).

Here is a list of negative indicators which are documented in this “Large Cities....” report--

(all of which can be found by way of a key word search)

1. Climate Emergency
2. Sustainable BioDiversity Emergency (key word “ecosystems”)
3. Marginalization of the Treasured Wisdom associated with religious, spiritual, and moral traditions
4. cultures of violence, greed, corruption, and overindulgence
5. the ever increasing World Population [as of May 13, 2022 = 7,946,838,917 (source p. 18)]
6. the end of the Fossil Fuel Era
7. megacities (cities with populations over 1 million) are running massive ecological deficits  
(resource consumption and waste discharge...in excess of locally/regionally sustainable natural production and assimilative capacity)
8. Global Inequities
9. cycles of malnutrition, disease, and death
10. the continued exploitation of flaws and weaknesses in human nature, fragile ecosystems, and already significantly depleted natural resources
11. Deterioration of trust/confidence in institutions responsible for guiding public discourse
12. loss of social and spiritual cohesion
13. significant, largely unaccounted for, and unchecked **social and environmental externalities**
14. misinformation, other more trivial information, and the “siren song” of multiple entertainment venues.
15. television violence
16. commercialism on television

17. moral decay
18. physical decadence
19. global drugs trade
20. global arms trade
21. uncharted territory, in the most complex cultural landscapes ever created
22. Planetary Life Support Systems are unravelling
23. our planet is flashing red warning signs of systems failure
24. The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever
25. Food Loss and Food Waste-- About 1/3 of the food produced in the world for human consumption every year; approximately 1.3 billion tonnes gets lost or wasted.
26. Transport emissions
27. 2021 Report Card for America's Infrastructure (GPA = C-)
28. ...the unpaid and underpaid care work done primarily by women and girls around the world
29. There are an estimated 35 million tons of hazardous materials managed annually in the United States
30. In low-income countries, over 90% of solid waste is mismanaged
31. one highly toxic chemical--something that kills large fish quickly and we think is probably found on every single busy road in the world.
32. Some 827,000 people in low- and middle-income countries die as a result of inadequate water, sanitation, and hygiene each year
33. ... 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.
34. global ad spend growth of 5.8% in 2021, amounting to USD 579 billion.
35. The top five meat and dairy companies emit more greenhouse gases than ExxonMobil, Shell, and BP
36. More than 8 million tons of plastic end up in the ocean every year
37. (In the U.S.) Commercially spent nuclear fuel is stored at reactor sites where the electricity was generated. High-level radioactive waste and spent fuel from national defense activities is stored at several DOE managed sites. While this temporary storage is safe in the near-term, we need a sustainable, long-term solution
38. As of 2015, 29 percent of people globally suffer from lack of access to safely managed drinking water
39. There is a water main break every two minutes, and an estimated 6 billion gallons of treated water lost each day in the U.S
40. Forcibly Displaced--as a result of persecution, conflict, violence, human rights violations or events seriously disturbing public order

41. The interplay between climate, conflict, hunger, poverty and persecution creates increasingly complex emergencies
42. more than \$40 trillion of sovereign debt in global markets at any given time
43. key drivers of emissions such as economic growth and population growth.
44. Mapping the PFAS contamination crisis: New data show 2,854 sites in 50 states and two territories.
45. There are currently 770 individually listed chemicals and 33 chemical categories covered by the Toxics Release Inventory (TRI) Program.
46. ... more than 90% of the world's young people – 1.8 billion children – are breathing toxic air, storing up a public health time bomb for the next generation.
47. Nearly two-thirds of the 500,000 deaths of infants documented were associated with indoor air pollution, particularly arising from solid fuels such as charcoal, wood, and animal dung for cooking.
48. Today, 1.42 billion people--including 450 million children--live in areas of high or extremely high water vulnerability. (UNICEF, 2021)
49. Today, 1 in 4 people--2 billion people--around the world lack safe drinking water. (WHO/UNICEF 2021)
50. Almost half of the global population--3.6 billion people--lack safe sanitation. (WHO/UNICEF 2021)
51. The 14 percent of energy used in the food system to move goods from farmer to consumer is equal to two thirds of the energy used to produce the food.
52. Earth's environmental degradation, including the loss of precious topsoil and forest cover, the encroachment of deserts, the depletion of fisheries and aquifers, the loss of habitat and the extinction of species, etc.
53. the glaring and increasing disparity between rich and poor leading to exploitation, poverty, and the associated regimen of malnutrition and over-population
54. the disintegration of families, communities, even entire cultures
55. unrestrained urbanization resulting in social alienation, displacement, and feelings of disconnection with the natural world
56. the dimming of a sense of spiritual awareness and purpose
57. \$546.2 billion spent worldwide on alcoholic beverages in 2021
58. \$465.76 billion of worldwide gambling revenues in 2020
59. Are you loyal to the truth?
60. When pressure is brought to bear upon you to lower your standards, are you prepared to resist it?
61. toxic waste

And-- where to best invest our time, energy, and money if we *do know* the full dimensions of our challenges?

“It may be a difficult format for some people--so much information; but with the added resources of a long Table of Contents (15 pages) (p. 117), and a 28 page PowerPoint presentation (p. 133),

I believe it will be possible for educators and activists to use this “Large Cities....” report to

a) catalyze public discussion on this very topic--what kind of habitats are best suited for the Zero Carbon ASAP, Ecosystem Restoration, biodiversity regeneration all around, and peaceful relations among all cultures and societies?

b) catalyze local Community Visioning and other local collaborative problem solving approaches,” said Mr. Pasti.

---More About the Structure of this “Large Cities” Report

The negative indicators are concentrated in the first two sections:

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Then, we have Section C:

C. Visualizing a Reversal of the Urbanization Trend: 572 large cities to 41,700 ecologically sustainable small cities and towns [41,700 = how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability-- if there was a significant migration from megacities to small cities and towns. (2.085 billion people relocating in such a migration)

On the topic of Section C, Mr. Pasti said: “We need doable goals. And making large cities sustainable, and useful in our Zero Carbon strategies, is not possible. And--it would misdirect a lot of time, energy and money. So, I’ve suggested a transition from large cities over 1 million people to small cities, towns, and villages as a starting point for discussing more constructive goals.”

Here is an excerpt from the introduction to Section C--

(begin excerpt)

There is very significant, reliable, and conclusive evidence in this “Large Cities are not sustainable, and will not help us get to Zero Carbon ASAP” document which is pointing towards a need for:

- a) a significant increase of people who can find contentment and quality of life while consuming much less material goods and ecological services (directed specifically to people who have much more wealth than they need)
- b) a significant reversal of the trend toward urbanization, and a transition towards ecologically sustainable small cities, towns, and villages
- c) a significant increase in initiatives working to redesign the human economy so that such activity supports the sustainability of associated ecosystems, instead of damaging the sustainability of such ecosystems (as in the “leanings of human aspirations” summary in Section B)

Such evidence brings forward the questions:

- i) If there might be a significant reversal of the urbanization trend, and a significant transition from megacities to ecologically sustainable cities, towns, and villages--what would such a transition look like?
- ii) And specifically: how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns?

[Note: There are now 572 cities with over 1 million people [according to the webpage [“World City Populations 2022”](#) (using data from [“World Urbanization Prospects”](#) publications, from the United Nations Department of Economic and Social Affairs, Population Dynamics)]

(end excerpt)

And although such a suggestion--urban flight, so to speak--might seem even more unrealistic than making large cities sustainable...

the comprehensive nature--of The CPCS Initiative’s “constellations of initiatives” approach (in Section F) to exponentially accelerating solution activity in the direction of small cities, towns, and villages --*does make it seem doable.*

## Educational Resources for Local Teachers, Organizers, and Activists

Even further, there is Section E

- E. There are many movements, and key organizations--and much urgency. Some examples of positive tipping point activity working along similar lines [The entire Section C. from [“Do We Have Moral Compasses We Can Rely On?”](#) (April, 2021)]

which includes very helpful overviews of work being done along similar lines.

Section E. outlines how very resilient, and very bioregionally self-reliant, we can be. These, and many other approaches, have inspired Mr. Pasti's vision of small cities, towns, and villages achieving Zero Carbon, Sustainable Biodiversity, and countless other positive tipping points.

There are also excellent workshop and discussion questions in section H--

#### H. The Kind of Truthful Public Discussion We Really Need to be Having

--questions which call for very thoughtful responses, questions which seek comments, and questions which are fill in the blank.

[Examples: 1) Evaluating Community Resilience; Questions: Arriving at Working Definitions of "Right Livelihood"; Cultivating Sympathy and Compassion in Your Community; Identifying the Most Important Elements of Community Life and Cultural Traditions; and 14. Large Cities vs. Small Cities, Towns, and Villages]

And further--there is the suggestion, in Section D

D. A Table with "Currently" and "in your Zero Carbon town" (key appropriate technology and culture change highlighted in the latter)--to help people visualize that the territory we are now setting out to explore has many positive features to recommend it  
[Crowdsourcing to make this Table into a Visual Aid for presentations--not yet underway; hopefully forthcoming](contributions are welcome)]

Mr. Pasti said this about the role of the Table:

1) we "brainstorm" through Crowdsourcing, and social media, on what the above Table would look like for 100 or so of the things we currently have to do to have quality of life in the present time--including what key appropriate technology and culture change would be necessary "in your Zero Carbon town"--if we even need to do that thing. And the results would surely be a very valuable resource (the Table) for group discussion

2) we begin to see that *for our goals*--for problem solving the many challenges we have--and for overcoming the many negative indicators (above), *it is much more practical and doable* to focus our time, energy, and money in small cities, towns, and villages.

So, when Mr. Pasti suggests a survey of 150 key local leaders, as a way of moving such leaders views to the front of public discussion--and as a way of catalyzing local Community Visioning Initiatives--*it is possible* to imagine that local teachers, organizers, and activists will have more than enough educational resources to reach consensus on urgent collaborative problem solving action.

#### --A Matter of Faith and Responsibility

But perhaps most important of all, for Mr. Pasti, this is a matter of faith, and responsibility.

"I have had close contact with the Teachings of Sri Sathya Sai Baba since 1991--and especially since I completed ["An Arrangement of Quotations from 'Sathya Sai Speaks' \(Vol. 1-15\)"](#) (301 pages; 1997, 2006). And I have found that these Teachings create in me a kind of sympathetic resonance for the storehouses of wisdom and compassion 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," said Mr. Pasti.

"And one of our most difficult challenges, is that such treasured wisdom is now marginalized--and in need of being re-discovered, so that we can appreciate the value of such special treasures of our cultural heritage."

Mr. Pasti continued--"And it is much more realistic and practical to be learning about wisdom and compassion in smaller, more responsible habitats. But even further, when we focus on small cities, towns, and villages as our future habitats, because they--

- 1) are more sustainable-friendly in the long run
- 2) have less complex vulnerabilities
- 3) create more emphasis on downsizing and focusing on what basic necessities are most needed and
- 4) where it is easier to see the results of our actions
- 5) 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.

and use "constellations of initiatives" to do local community education and collaborative problem solving, in communities around the world,

--we will be creating more and more sympathetic resonance with the treasured wisdom (which is now marginalized)... and it will become more visible, more universal, and more beneficial."



## ---A Brief Overview of One Example of a “Constellations of Initiatives” Approach

Here is a brief overview of the “constellations of initiatives” community education and collaborative problem solving the CPCS Initiative is trying to catalyze.

[Note: this overview includes most of Section F. Logistics (p. 82)]

1) There are thousands of positive tipping point organizations and institutions, which are--

a) making significant contributions in their fields (especially Climate Mitigation and Sustainable Biodiversity, but also many other fields)

b) well known in their fields for the integrity and reliability of their work.

[Note: I have listed 616 positive tipping point organizations and institutions (with Twitter profiles) in 30 categories in Appendix 10 of my 157 page paper [“Brainstorming Zero Carbon ASAP Campaign”](#)--and have also created a [sample list of 231 such organizations and institutions](#)).

As a way to exponentially accelerate solution activity on many key positive indicators at the same time, The CPCS Initiative advocates for accumulating 5-10 page overviews on how to achieve Zero Carbon ASAP (in small cities, towns, and villages)--*and also how their field of activity can contribute to resolving other critical challenges*--from thousands of such positive tipping point organizations and institutions (overviews which will be updated as needed, for the duration of the emergency)--and making such overviews accessible for free on a number of clearinghouse websites.

2) Such 5-10 page overviews, organized for easy access on clearinghouse websites, can--

a) provide a clear visualization of transformations needed in every aspect of our lives--since different organizations will focus on priorities in their fields of activity (food systems; water scarcity; migration, housing; land rights; biodiversity; civic engagement; peacebuilding; emergency assistance, etc.)

b) provide the equivalent of a needs assessment for local communities, of the kind which precedes local Community Visioning ([many overviews of visioning best practices](#); [excellent example of visioning in 13 minute documentary](#)) [Note: Community Visioning Initiatives can be described as a series of community meetings designed to maximize citizen participation in identifying challenges, and in solution-oriented activity.]

c) provide focus and urgency for local surveys of key leaders (prior to Visioning; surveys which identify local-specific challenges and local-specific solutions)--the responses to which can demonstrate the need for Community Visioning, and many Neighborhood Learning Centers

d) open up many new lines of discussion on how people can work through differences, get on the same side, and help each other

e) build awareness that everyone's investments of time, energy, and money ("votes" which are made more frequently than election votes) can have a positive and cumulative effect on the solutions-investment-training-employment sequence--and create countless solution-oriented jobs

f) be a great asset to the ["over 2006+ local governments that have declared a Climate Emergency"](#) (as of July 1, 2021)

[Note: This writer's interest in Community Visioning Initiatives was inspired instantly when, in 1994, he watched a video documentary titled "[Chattanooga: A Community With A Vision](#)" (13 minutes)<sup>5</sup> (*highly recommended*). 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, the creation of 1,300 permanent jobs, and a total financial investment of 793 million dollars.<sup>6</sup>

3) Thousands of local Community Visioning Initiatives, in communities around the world, can activate the most possible human participation (by way of 6-12 months of workshops, meetings, brainstorming, and prioritizing challenges and solutions) (with the process repeated periodically in the future), and help build a high level of consensus for specific action plans in the shortest amount of time, with support from--

a) Universities, colleges, and thousands of positive tipping point related organizations and institutions creating related curriculum--and offering resources, classes, workshops, and teacher training to maximize the identification of challenges and solutions during the Community Visioning process

b) Neighborhood Learning Centers helping to create the necessary knowledge base and skill sets by providing accessible space for workshops, discussion, information sharing, mutual support, encouragement, fellowship, and friendship

c) Local newspapers supporting this multi-faceted solution-oriented path with ongoing coverage--and a new section for reader contributions which identify helpful people and valuable resources, and reinforce important community goals

d) Residents (especially those who are unemployed) volunteering time and energy to assist with Community Visioning and Neighborhood Learning Centers, and to advance resulting action plans--who then could receive, as compensation, local currency (which, because it can only be spent in local community businesses, helps support the local economy)

e) Job fairs at the end of the Community Visioning Initiative process, which 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.

- f) Local leaders of religious/spiritual traditions stepping up on every frontline possible to help people understand the urgent need to
  - i) sacrifice personal desires for the greater good
  - ii) choose forgiveness, reconciliation--and *abstaining from violent conflict resolution*--as a way of bringing cycles of violence to an end
  - iii) create 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"

4) 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. Carrying out local Community Visioning, and creating many Neighborhood Learning Centers 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 closeknit community of people with a healthy appreciation for each other's strengths.

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. If many colleges and universities assisted with carrying out local Community Visioning Initiatives—with many supporting Neighborhood Learning Centers—the positive multiplier effects would be visible around the world.

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. People 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 the peacebuilding, community revitalization, and ecological sustainability efforts necessary to drastically reduce Greenhouse Gas Emissions, and minimize other related challenges. As the ancient Chinese proverb says: "Many hands make much work light."

5) 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.

The NTNCE Project is an example of community service work which can be done by local newspapers, which:

- a) highlights what is valuable and important in everyday community life
- b) encourages positive neighbor to neighbor relations
- c) provides records of community life which can be used by future historians
- d) helps increase consensus for local specific, commonly agreed upon definitions of “the greater good”.

#### 6) Interfaith Prayer Vigils

One possible goal for an Interfaith Prayer Vigil would be for all the different faith traditions in a local community to have at least one person participating in the Prayer Vigil at all times designated for the Prayer Vigil (in such time intervals as they choose).

With an emphasis on silence, participants could silently pray for a compassionate response to all forms of suffering; forgiveness, reconciliation and abstaining from violent conflict as a way of bringing cycles of violence to an end; pathways for attaining wisdom and compassion which are accessible to all--and/or bring into being any kind of silent practice or silent spiritual discipline which is relevant and appropriate for--

--a sacred space dedicated to appealing to a Spiritual Entity higher than ourselves when we are at one of the most critical crossroads humanity has faced since the dawn of civilization.

[Note: There is a webpage at The Community Peacebuilding and Cultural Sustainability website titled “Interfaith Prayer Vigils”, which provides more detail about this facet of the “constellation of initiatives” (see <https://www.cpcsi.org/interfaith-prayer-vigils> )]

Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the critical 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.

---Getting By “With Much Less”, and Still Having High Quality of Life.

One of the keys to achieving the cultural transformation to Zero Carbon ASAP is for a significant majority of the people who have “way too much” to understand that they can get by “with much less”, and still have high quality of life.

For example, how many of us--who are aware of how urgently we need to achieve Zero Carbon--would be really most appreciative to arrive in the year 2050, and find out we are living in places which have--

- A clean and beautiful environment
- Adequate provision of clean drinking water
- Adequate provision for safe sanitation
- Minimal supplies of clothing
- Adequate and balanced nutrition
- Simple housing
- Basic health care
- Basic communication facilities
- A minimal supply of energy
- Holistic education
- Satisfaction of intellectual and cultural needs

[Above list of 11 items is from an overview of the development model of the Sarvodaya Shramadana Movement (at <https://www.sarvodaya.org/2004/12/27/the-development-model> )]

“People may wonder whether this kind of problem solving is possible,” said Mr. Pasti. “For those who are wondering... I ask them to look around. We now live in a complex world where collaboration at many levels of society has created awe inspiring achievements in energy production and transmission (oil wells, power plants, electric power transmission), engineering and construction (large cities); communication (Internet, cell phones); transportation (both private and public); medical treatments (critical medical assistance for common diseases is becoming more and more accessible); etc.

We just need that kind of collaboration to create habitats which have the highest probability for establishing Zero Carbon Resilience, Sustainable BioDiversity, gender equitable, socio-cultural equitable (carbon footprints, eco-footprints and water footprints), equal justice, requisite emergency aid, and peaceful outcomes.

(short)

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## A. Context: Many Unprecedented Challenges Ahead

1) One of the most critical crossroads in the history of life on Planet Earth

a) The Climate Emergency

The Climate Emergency Era has begun, and it is not currently known how long it will last, *or if it will end.*

[Reference: [“Global Warming Awareness, Climate Change Awareness, and Climate Emergency Action--A Survey: 1961-2020”](#) (240 highlights) (316 pages; November, 2020) Compiled and Edited by Stefan Pasti, Founder and Resource Coordinator The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative [www.cpcsi.org](http://www.cpcsi.org) ]

b) 6<sup>th</sup> Extinction

a) “Nature is declining globally at rates unprecedented in human history--and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely....”

b) “... around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history.”

[from article [“UN Report: Nature’s Dangerous Decline ‘Unprecedented’; Species Extinction Rates ‘Accelerating’”](#)--about the new report from The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (May 6, 2019) (paragraphs 1 and 10)]

c) Human Morality

We are at one of the most critical crossroads in the history of life on Planet Earth... and human nature, with its flaws and shortcomings throughout the ages, is now being asked to look at itself a little more closely than before.

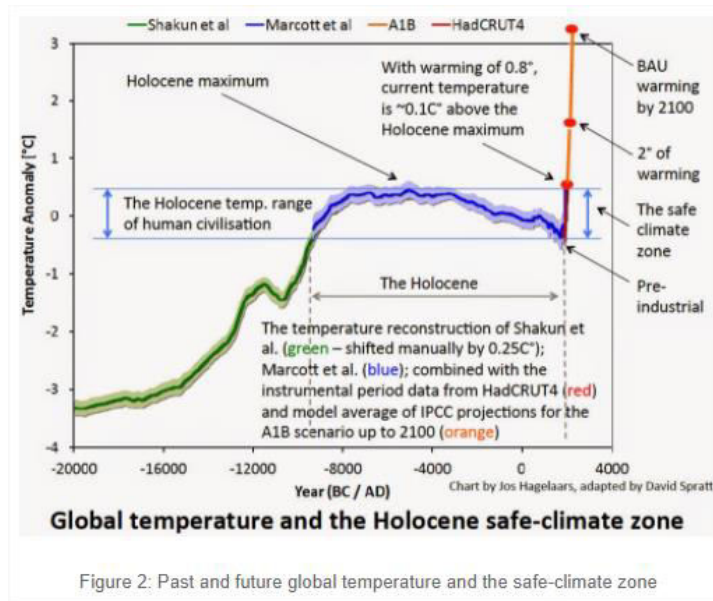
[Reference: [“Do We Have Moral Compasses We Can Rely On?”](#) (147 pages; April, 2021) Compiled and Edited by Stefan Pasti, Founder and Resource Coordinator The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative [www.cpcsi.org](http://www.cpcsi.org) (with supplemental copy "Table of Contents" (13 pages)

(Section B: Concerns about the Leanings of Human Aspirations; Section C: “The smaller the circumference, the more accurately can we gauge the results of our actions....”)]

[Note: The above three points are also at the beginning of [“Becoming a Greater Force Than the Challenges We Are Facing”](#) (by Stefan Pasti) (6 pages; August, 2021)]

2) We are in a Climate Emergency!--Emphasized!!!

a) We have left the 10,000-year climate "safe zone" that gave rise to human civilization.



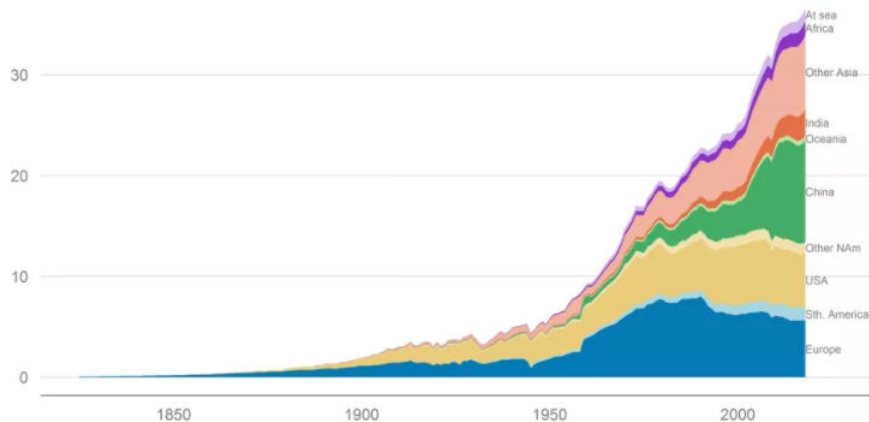
[From article "The real budgetary emergency and the myth of 'burnable carbon'" (by David Spratt) (May 22, 2014) at <http://www.climatecodered.org/2014/05/the-real-budgetary-emergency-burnable.html> ]

b) --and-- while it has taken approximately 170 years to get to this point...

Exhibit 4:

#### Annual carbon emissions, by region

In billions of tonnes of CO<sub>2</sub>, 1825-2018



Morgan Stanley

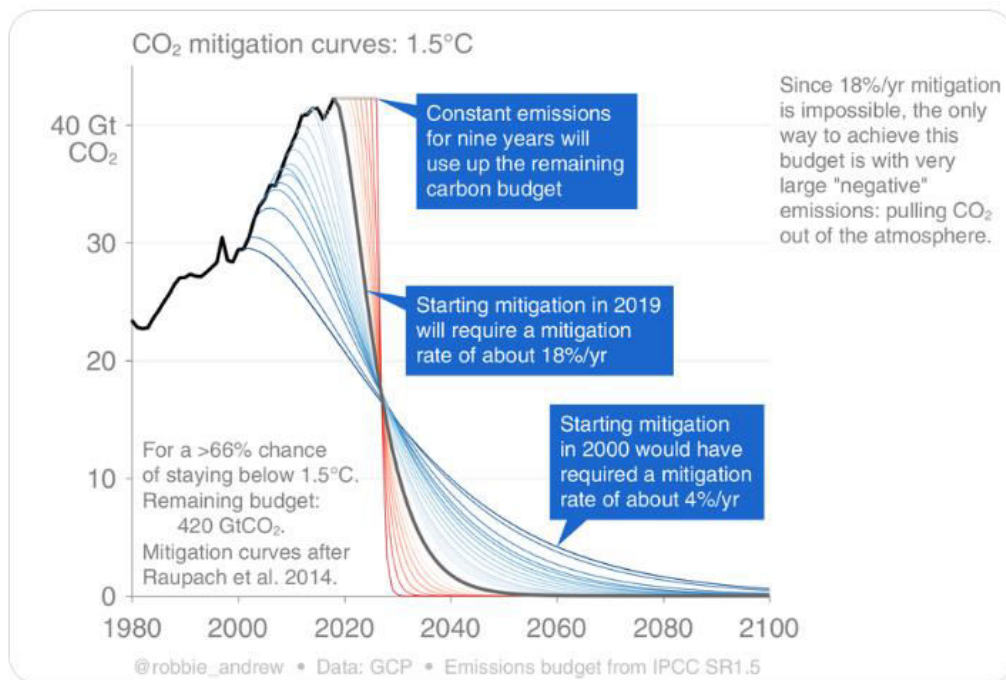


[From article “What’s causing climate change, in 10 charts: Different ways of looking at the problem.” (by David Roberts) (October 16, 2020) at the website Vox (at <https://www.vox.com/energy-and-environment/21428525/climate-change-cause-charts-china-us-responsible> )]

c) ... we now have less than 10 years--

[due to increasing concerns about negative tipping points--see “Climate tipping points--too risky to bet against: The growing threat of abrupt and irreversible climate changes must compel political and economic action on emissions” (November 27, 2019) (at <https://www.nature.com/articles/d41586-019-03595-0> ), and keeping in mind that the graph below was from a December 6, 2018 tweet (by Robbie Andrews, CICERO) (at [https://twitter.com/robbie\\_andrew/status/1070565844307075078](https://twitter.com/robbie_andrew/status/1070565844307075078) ) --and gigatons of emissions have not yet peaked as of early 2022....]

--to get to Zero Carbon.



d) “Climate limit of 1.5C close to being broken, scientists warn” (Guardian) (May 9, 2022)

“The year the world breaches for the first time the 1.5C global heating limit set by international governments is fast approaching, a new forecast shows.

“The probability of one of the next five years surpassing the limit is now 50%, scientists led by the UK Met Office found. As recently as 2015, there was zero chance of this happening in the following five years. But this surged to 20% in 2020 and 40% in 2021. The global average temperature was 1.1C above pre-industrial levels in 2021.

“It is also close to certain – 93% – that by 2026 one year will be the hottest ever recorded, beating 2016, when a natural El Niño climate event supercharged temperatures. It is also near certain that the average temperature of the next five years will be higher than the past five years, as the climate crisis intensifies.

“The 1.5C figure is not some random statistic. It is rather an indicator of the point at which climate impacts will become increasingly harmful for people and indeed the entire planet,” said Prof Petteri Taalas, head of the World Meteorological Organization, which published the new report.

“For as long as we continue to emit greenhouse gases, temperatures will continue to rise,” said Taalas.

[From “Climate limit of 1.5C close to being broken, scientists warn” by Damian Carrington (Environment Editor, Guardian) (May 9, 2022) at the Guardian website (at <https://www.theguardian.com/environment/2022/may/09/climate-limit-of-1-5-c-close-to-being-broken-scientists-warn>) (paragraphs 1-5)]

e) “While cities occupy only two percent of the world's landmass, they have an enormous climate footprint with more than 70% of global CO2 emissions. With 90 percent of the world's urban areas situated on coastlines, cities are also at high risk from some of the devastating impacts of climate change, such as rising sea levels and powerful coastal storms.”

“For millennia, cities have helped nurture some of mankind's greatest ideas, and it is no surprise that New York City is rolling out 'OneNYC2050: Building a Strong and Fair City.' I commend and welcome this paradigm shift that will not only result in emissions reduction of 40% by 2030 from a 2005 baseline - while generating tens of thousands of green new jobs, but also offer a scale model for other cities around the world to benefit from and emulate,” said Satya S. Tripathi, United Nations Assistant Secretary General and Secretary of the UN Environment Management Group.

[From article “Action on Global Warming: NYC's Green New Deal” from the Office of the Mayor (of New York City Bill de Blasio) (April 22, 2019) (at the Official Website for the City of New York (at <https://www1.nyc.gov/office-of-the-mayor/news/209-19/action-global-warming-nyc-s-green-new-deal#/0>) (69 community leaders, advocates, elected officials, and policy experts, etc. offer commentary on this article, at the end of the article. Sathya S. Tripathi's statement is #34)]

f) “The Solar Boom Will Create Millions of Tons of Junk Panels” (Wall Street Journal) (May 5, 2022)



“The solar-energy boom will trigger a landslide of electronic waste in the coming decades. Some companies are already preparing for the recycling challenge.

“**Solar panels are typically built to last between 25 and 30 years.** Most in use today have many years of life left in them, and the few that are scrapped due to damage or age often end up in trash heaps. Experts say the small waste volumes mean it isn’t yet profitable to harvest the glass, aluminum, copper, silicon, silver and lead from old panels, but the breakneck expansion of solar power is expected to change that.”

(rest of article behind subscription wall)

[From “The Solar Boom Will Create Millions of Tons of Junk Panels” by Dieter Holger (Updated May 5, 2022) at the Wall Street Journal website (at [https://www.wsj.com/articles/the-solar-boom-will-create-millions-of-tons-of-junk-panels-11651658402?mod=hp\\_minor\\_pos17](https://www.wsj.com/articles/the-solar-boom-will-create-millions-of-tons-of-junk-panels-11651658402?mod=hp_minor_pos17)) (paragraphs 1 and 2)]

3)

## “Unprecedented Challenges Ahead--December, 2021”

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

[Note: The supporting evidence included below is only a representative fraction of the evidence accumulated in longer documents compiled by this writer (for two examples of longer documents, see near the bottom of the webpage [“Key Documents \(with descriptions\)”](#)). Source references for most quoted passages (below) can be found (see Section 2 p. 9-20, or do phrase search) in the CPCS Initiative Summary Paper [“Recalibrating Our “Moral Compasses”: to resolve unprecedented challenges, and discover our collective spiritual destiny”](#) (85 pages; June, 2015)(minor revisions, links updated; June, 2016). Three other key CPCS Initiative risk assessment documents created since 2016: a) [“Harvest Song”](#) 78 pages (3.9 MB); December, 2018] c) [“17 Tweet Series as a Document”](#) (10 pages; June, 2020) c) [“Do We Have Moral Compasses We Can Rely On?”](#) (147 pages; April, 2021)]

**1. The Climate Emergency and the urgent necessity to achieve Zero Carbon economies ASAP**--the unprecedented cultural transformation needed to limit global warming to 1.5°C means we have to achieve significant positive tipping points before negative tipping points in many areas---[climate change disasters; epidemics and pandemics (Ex: COVID 19); cultures of violence, greed, corruption, and overindulgence; a disorganized and only marginally effective ASAP transition to Zero Carbon economies; the ongoing 6<sup>th</sup> extinction event; global inequities, malnutrition, and disease; religiously motivated violence; loss of trust in institutions responsible for guiding public discourse; etc.]---destabilize social cohesion.

**2. A marginalization of the treasured wisdom associated with religious, spiritual, and moral traditions**—these “hidden” resources include 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 services
- c) *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*
- d) use resources carefully, so that there is surplus available for emergency assistance
- e) 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”.

**3. Cultures of violence, greed, corruption, and overindulgence**--which have become so common that many of us accept such as inevitable. a) “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” b) 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 of people’s fears, manipulating people’s trust, and/or encouraging people to abandon hope in higher aspirations, and indulge in unhealthy, or immoral behavior c) *“The satisfaction of one’s physical needs must come at a certain point to a dead stop before it degenerates*

*into physical decadence*” d) “... media programming can be regarded as a text that reflects, reinforces, and shapes the attitudes, values, behaviors, preoccupations, and myths that define a culture.”

**4. The increasing world population and its implications relating to widespread resource depletion--** with special focus on the increasing number of people who are consuming material goods and ecological resources *indiscriminately*—a) In 1960, the world population was 3 billion. As of December, 2021, the world population was 7.867 billion b) *“It would be foolish to underestimate the challenge of checking the consumption juggernaut...”* c) “More than half the world’s people live in countries where water tables are falling as aquifers are being depleted...” d) toxic air in cities ([“90% of world's children are breathing toxic air, WHO study finds”](#) in Guardian October 29, 2018) e) 6th extinction event [“Nature is declining globally at rates unprecedented in human history--and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely...” [UN IPBES Report \(May 6, 2019\)](#) ]

**5. The end of the Fossil Fuel Era--**a) “Our industrial societies and our financial systems were built on the assumption of continual growth--growth based on ever more readily available cheap fossil fuels”. However, “limiting global warming to an agreed U.N. ceiling ‘means that three quarters of the fossil fuel reserves need to stay in the ground’...” and yet: lifestyles and habitats are still very much dependent on high fossil fuel input infrastructures b) *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.*

**6. Current trends indicate that we are creating more and more “urban agglomerations”--**(megacities with a population of more than 1 million people--which require extremely complex and energy intensive infrastructures, where it is extremely difficult to trace the consequences of our individual investments of time, energy, and money--and which are the least appropriate models when it comes to implementing resolutions to many of the other challenges in this ten point assessment b) *Almost all megacities (cities with populations over 1 million) are running massive “ecological deficits” (“resource consumption and waste discharge...in excess of locally/regionally sustainable natural production and assimilative capacity”)*

**7. Global inequities and the tragic cycles of malnutrition, disease, and death--**a) “Hunger and malnutrition are in fact the number one risk to health worldwide—greater than AIDS, malaria and tuberculosis combined” b) “65 percent of the world’s population live in countries where overweight and obesity kills more people than underweight and malnutrition” c) *“...the bottom half of the global population own less than 1 percent of total wealth. In sharp contrast, the richest 10 percent hold 86*

*percent of the world's wealth, and the top 1 percent alone account for 46 percent of global assets"*

d) "12 percent of the world's population uses 85 percent of its water, and none of the 12 percent lives in developing countries."

**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--**

a) Unfortunately, too much of "economic growth" is debt-based, and *too much of such debt-based "economic growth" requires the continued exploitation of flaws and weaknesses in human nature, fragile ecosystems, and already significantly depleted natural resources* b) "Some might assume that bond markets are shielded from the effects of climate change, ecosystem degradation, and water scarcity. With more than \$40 trillion of sovereign debt in global markets at any given time, that is a very high-risk game."

**9. Deterioration of trust/confidence in institutions responsible for guiding public discourse—and the related loss of social and spiritual cohesion--**

a) "Most economic development and growth strategies encouraged rapid accumulation of physical, financial and human capital, but at the expense of... depleting the world's stock of natural wealth--often irreversibly ..... 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*" b) Confidence (not just confidence in financial markets, but confidence in our viability as a species) will be dimmed by a lack of clarity until there is widespread public discourse on the full dimensions of the critical challenges ahead.

**10. Sorting out what are real challenges and what are sound and practical solutions is becoming more and more difficult—**

as there are now, in most communities of the world, a multitude of ideas of all kinds coming to the fore in personal, family, community, and cultural life--all at the same time. Thus, even analysis supported by much credible evidence—that *there are many danger signs flashing now (involving 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. *People who are not sufficiently informed about critical issues are everywhere, and they are investing their time, energy, and money--voting--all the time.*

## B. Large Cities are not sustainable, and will not help us get to Zero Carbon ASAP

1) "... first civilizations, emerged around 3000 BC...."

a) "The earliest known city is Çatalhöyük, a settlement of some 10,000 people in southern Anatolia (a major part of modern day Turkey) that existed from approximately 7100 BC to 5700 BC. Hunting, agriculture and animal domestication all played a role in the society of Çatalhöyük."

(from Section 2.1 "Mediterranean and Mesopotamia", paragraph 1)

b) "The more complex human societies, called the first civilizations, emerged around 3000 BC in the river valleys of Mesopotamia, Minoan Crete, India, China, and Egypt. An increase in food production led to the significant growth in human population and the rise of cities."

(from Section 2 "Ancient Times", paragraph 1)

[a] and b) above from the Wikipedia webpage "History of the City" at

[https://en.wikipedia.org/wiki/History\\_of\\_the\\_city](https://en.wikipedia.org/wiki/History_of_the_city) ]

2) 2600 BC--Mohenjo-daro of the Indus Valley Civilization--"population of 50,000 or more and a sophisticated sanitation system"

a) "Among the early Old World cities, Mohenjo-daro of the Indus Valley Civilization in present-day Pakistan, existing from about 2600 BC, was one of the largest, with a population of 50,000 or more and a sophisticated sanitation system."

b) "Alexandria, Rome, or Baghdad may have been the first city to have 1,000,000 people, as early as 100 BCE or as late as 925 AD. They were later surpassed by Constantinople, Chang'an, Kaifeng, Hangzhou, Jinling, Beijing, Edo, London (the first city to reach 2 million), and New York (the first to top 10 million)."

[a] is from the Wikipedia webpage for "History of the City" (at [https://en.wikipedia.org/wiki/History\\_of\\_the\\_city](https://en.wikipedia.org/wiki/History_of_the_city) )

(in the Section "ancient Times", subsection "Asia", paragraph 1); b) is from the Wikipedia webpage for "List of Largest Cities Throughout History" (at

[https://en.wikipedia.org/wiki/List\\_of\\_largest\\_cities\\_throughout\\_history](https://en.wikipedia.org/wiki/List_of_largest_cities_throughout_history) ) (paragraph 1)]

3) "The 50 Greatest Breakthroughs Since the Wheel" (Atlantic Monthly)

"The Atlantic asked a dozen scientists, historians, and technologists to rank the top innovations since the wheel. Here are the results."

1. The printing press, 1430s
2. Electricity, late 19th century
3. Penicillin, 1928
4. Semiconductor electronics, mid-20th century
5. Optical lenses, 13th century
6. Paper, second century
7. The internal combustion engine, late 19th century
8. Vaccination, 1796
9. The Internet, 1960s
10. The steam engine, 1712
11. Nitrogen fixation, 1918
12. Sanitation systems, mid-19th century
13. Refrigeration, 1850s
14. Gunpowder, 10th century
15. The airplane, 1903
16. The personal computer, 1970s
17. The compass, 12th century
18. The automobile, late 19th century
19. Industrial steelmaking, 1850s
20. The pill, 1960
21. Nuclear fission, 1939
22. The green revolution, mid-20th century
23. The sextant, 1757
24. The telephone, 1876
25. Alphabetization, first millennium b.c.
26. The telegraph, 1837
27. The mechanized clock, 15th century
28. Radio, 1906
29. Photography, early 19th century
30. The moldboard plow, 18th century
31. Archimedes' screw, third century b.c.
32. The cotton gin, 1793



33. Pasteurization, 1863
34. The Gregorian calendar, 1582
35. Oil refining, mid-19th century
36. The steam turbine, 1884
37. Cement, first millennium b.c.
38. Scientific plant breeding, 1920s
39. Oil drilling, 1859
40. The sailboat, fourth millennium b.c.
41. Rocketry, 1926
42. Paper money, 11th century
43. The abacus, third millennium b.c.
44. Air-conditioning, 1902
45. Television, early 20th century
46. Anesthesia, 1846
47. The nail, second millennium b.c.
48. The lever, third millennium b.c.
49. The assembly line, 1913
50. The combine harvester, 1930s

[from article “The 50 Greatest Breakthroughs Since the Wheel” by James Fallow (November 2013 issue of the Atlantic) at the website for the Atlantic Monthly (at <https://www.theatlantic.com/magazine/archive/2013/11/innovations-list/309536/#list> )]

4) “The growth of modern industry from the late 18th century onward led to massive urbanization and the rise of new great cities, first in Europe and then in other regions, as new opportunities brought huge numbers of migrants from rural communities into urban areas.”

[From the section “Industrial Cities” (17.3C) at the website Social Science--LibreTexts (at [https://socialsci.libretexts.org/Bookshelves/Sociology/Introduction\\_to\\_Sociology/Book%3A\\_Sociology\\_\(Boundless\)/17%3A\\_Population\\_and\\_Urbanization/17.03%3A\\_Urbanization\\_and\\_the\\_Development\\_of\\_Cities/17.3C%3A\\_Industrial\\_Cities](https://socialsci.libretexts.org/Bookshelves/Sociology/Introduction_to_Sociology/Book%3A_Sociology_(Boundless)/17%3A_Population_and_Urbanization/17.03%3A_Urbanization_and_the_Development_of_Cities/17.3C%3A_Industrial_Cities) ) (paragraph 1) (Note: “Welcome to the Social Sciences Library. This Living Library is a principal hub of the LibreTexts project, which is a multi-institutional collaborative venture to develop the next generation of open-access texts to improve postsecondary education at all levels of higher learning.” from <https://socialsci.libretexts.org/> )]

a) “Only 3 percent of the world’s population lived in urban areas in 1800.”

“Only 3 percent of the world’s population lived in urban areas in 1800. By a century later in 1900, 14 percent of the world’s population lived in urban areas, and twelve cities had populations over 1 million. Just a half-century later in 1950, the world’s urban population had doubled to 30 percent, and the number of cities over 1 million grew six times to eighty-three cities.

“Today, more than half the world’s population lives in urban areas....” (and there are now 572 cities with a population of 1 million people, or more--source, p. 47 in this paper)

[From the webpage “14.1 A Brief History of Urbanization” at the website OER Services (at <https://courses.lumenlearning.com/suny-socialproblems/chapter/14-1-a-brief-history-of-urbanization/> )]

[Note: this webpage is part of an online learning resource “Social Problems: Continuity and Change”--“a realistic but motivating look at the many issues that are facing our society today. As this book’s subtitle, Continuity and Change, implies, social problems are persistent, but they have also improved in the past and can be improved in the present and future, provided that our nation has the wisdom and will to address them.” (Table of Contents at <https://courses.lumenlearning.com/suny-socialproblems/> ) “Social Problems: Continuity and Change’ is adapted from a work produced and distributed under a Creative Commons license (CC BY-NC-SA) in 2010 by a publisher who has requested that they and the original author not receive attribution. This adapted edition is produced by the University of Minnesota Libraries Publishing through the eLearning Support Initiative.” (from “Publisher Information” webpage at <https://courses.lumenlearning.com/suny-socialproblems/front-matter/publisher-information/> )]

b) "In 1900 only 4,192 passenger cars (and no trucks or buses) were built in the United States."

[From the webpage “Number of Cars” at the website of The Physics Factbook (at <https://hypertextbook.com/facts/2001/MarinaStasenko.shtml> ) (first entry, which identifies source reference as "The Automobile." New Book of Popular Science 6th ed. Republic of China: Grolier, 1978)]

c) “The automotive industry caused a massive shift in the industrial revolution....”

“The automotive industry caused a massive shift in the industrial revolution because it accelerated growth by a rate never before seen in the U.S. economy. The combined efforts of innovation and industrialization allowed the automotive industry to take off during this period and it proved to be the backbone of United States manufacturing during the 20th century.”

[From the Wikipedia webpage “Automotive industry in the United States” (at [https://en.wikipedia.org/wiki/Automotive\\_industry\\_in\\_the\\_United\\_States](https://en.wikipedia.org/wiki/Automotive_industry_in_the_United_States) ) (in section “Development History”, in the subsection “Production”, paragraph 2)]

d) “... it was the internal combustion engine combined with cheap oil that provided mobility for people and freight that fueled the phenomenal urban growth of the twentieth century.”

“The evolution of modern cities was tied to advances in transport, initially for ships and trains. But it was the internal combustion engine combined with cheap oil that provided mobility for people and freight that fueled the phenomenal urban growth of the twentieth century.”

From “Plan B 4.0: Mobilization to Save Civilization” by Lester R. Brown (Earth Policy Institute) (see Chapter 6 “Designing Cities for People: The Ecology of Cities”—accessible at [http://www.earth-policy.org/books/pb4/PB4ch6\\_ss2](http://www.earth-policy.org/books/pb4/PB4ch6_ss2)) (first paragraph)

e) “The world vehicle population passed the 500 million-unit mark in 1986, from 250 million motor vehicles in 1970. Between 1950 and 1970, the vehicle population doubled roughly every 10 years.”

“The US publisher Ward's estimates that as of 2010, there were 1.015 billion motor vehicles in use in the world.”

“Navigant Consulting forecasts that the global stock of light-duty motor vehicles will reach 2 billion units in 2035.”

[From the Wikipedia webpage “Motor Vehicles” (at [https://en.wikipedia.org/wiki/Motor\\_vehicle](https://en.wikipedia.org/wiki/Motor_vehicle)) (in section “Ownership Trends”, paragraph 1)]

5) In the years 1939--1941, 7,000 television sets were sold in the United States.  
By 1954, there were 35,472,466 television sets sold in the United States.  
And by 1959, the number sold was 67,145,000.

a) Annual Television Set Sales in the USA (1939--1959) (Table)

<b>Annual Television Set Sales in USA</b>		
<b>Year</b>	<b>Total</b>	<b>Cumulative Total</b>
<b>1939 - 1941</b>	<b>7,000 Sets - All Makes &amp; Models</b>	
<b>1942-49</b>	<b>—</b>	<b>3,602,872</b>
<b>1950</b>	<b>6,132,000</b>	<b>9,734,872</b>
<b>1951</b>	<b>5,905,000</b>	<b>15,639,872</b>
<b>1952</b>	<b>6,144,989</b>	<b>21,784,861</b>
<b>1953</b>	<b>6,370,571</b>	<b>28,155,432</b>
<b>1954</b>	<b>7,317,034</b>	<b>35,472,466</b>
<b>1955</b>	<b>7,421,084</b>	<b>42,893,550</b>
<b>1956</b>	<b>6,804,783</b>	<b>49,698,333</b>
<b>1957</b>	<b>6,560,220</b>	<b>56,258,553</b>
<b>1958</b>	<b>5,140,000</b>	<b>61,396,000</b>
<b>1959</b>	<b>5,749,000</b>	<b>67,145,000</b>

[From the webpage “Television History: The First 75 Years” at the TV History website (at <http://www.tvhistory.tv/facts-stats.htm>) (Table 10, counting from top of webpage)]

b) Number of TV Households in America (1950--1978) (Table)

<b>Number of TV Households in America</b>					
<b>Year</b>	<b>Number of TV Households</b>	<b>% of American Homes with TV</b>	<b>Year</b>	<b>Number of TV Households</b>	<b>% of American Homes with TV</b>
1950	3,880,000	9.0	1964	51,600,000	92.3
1951	10,320,000	23.5	1965	52,700,000	92.6
1952	15,300,000	34.2	1966	53,850,000	93.0
1953	20,400,000	44.7	1967	55,130,000	93.6
1954	26,000,000	55.7	1968	56,670,000	94.6
1955	30,700,000	64.5	1969	58,250,000	95.0
1956	34,900,000	71.8	1970	59,550,000	95.2
1957	38,900,000	78.6	1971	60,900,000	95.5
1958	41,920,000	83.2	1972	62,350,000	95.8
1959	43,950,000	85.9	1973	65,600,000	96.0
1960	45,750,000	87.1	1974	66,800,000	97.0
1961	47,200,000	88.8	1975	68,500,000	97.0
1962	48,855,000	90.0	1976	69,600,000	97.0
1963	50,300,000	91.3	1977	71,200,000	97.0
			1978	72,900,000	98.0

[From the webpage “Television History: The First 75 Years” at the TV History website (at <http://www.tvhistory.tv/facts-stats.htm>) (Table 14, counting from top of webpage)]

c) “Data gathered on the global television market showed that there were 1.7 billion TV households worldwide in 2019, up from 1.67 billion in the previous year.”

[From the webpage “Number of TV households worldwide from 2010 to 2026 (in billions)” at the Statista website (at <https://www.statista.com/statistics/268695/number-of-tv-households-worldwide/#:~:text=Number%20of%20TV%20households%20worldwide%202010%2D2026&text=Data%20gathered%20on%20the%20global,the%202020%20to%202021%20season>) (paragraph 1)]

d) Additional Television Statistics

“Number of murders seen on TV by the time an average child finishes elementary school: 8,000.”

“Number of violent acts seen on TV by age 18: 200,000.”

“Number of 30-second TV commercials seen in a year by an average child: 20,000”

(above from Television Statistics--below)

[from "Internet Resources to Accompany the Sourcebook for Teaching Science" (copyright 2007) (at the webpage "Television Statistics") (The "Sourcebook" homepage at <http://www.csun.edu/science/index.html> is a project of Norman Herr, Ph.D of the California State University, Northridge)]

#### i) FAMILY LIFE

Percentage of households that possess at least one television: 99  
 Number of TV sets in the average U.S. household: 2.24  
 Percentage of U.S. homes with three or more TV sets: 66  
 Number of hours per day that TV is on in an average U.S. home: 6 hours, 47 minutes  
 Percentage of Americans that regularly watch television while eating dinner: 66  
 Number of hours of TV watched annually by Americans: 250 billion  
 Value of that time assuming an average wage of \$5/hour: \$1.25 trillion  
 Percentage of Americans who pay for cable TV: 56  
 Number of videos rented daily in the U.S.: 6 million  
 Number of public library items checked out daily: 3 million  
 Percentage of Americans who say they watch too much TV: 49

#### ii) CHILDREN

Approximate number of studies examining TV's effects on children: 4,000  
 Number of minutes per week that parents spend in meaningful conversation with their children: 3.5  
 Number of minutes per week that the average child watches television: 1,680  
 Percentage of day care centers that use TV during a typical day: 70  
 Percentage of parents who would like to limit their children's TV watching: 73  
 Percentage of 4-6 year-olds who, when asked to choose between watching TV and spending time with their fathers, preferred television: 54  
 Hours per year the average American youth spends in school: 900 hours  
 Hours per year the average American youth watches television: 1500

#### ii) VIOLENCE

Number of murders seen on TV by the time an average child finishes elementary school: 8,000  
 Number of violent acts seen on TV by age 18: 200,000  
 Percentage of Americans who believe TV violence helps precipitate real life mayhem: 79

#### iv) COMMERCIALISM

Number of 30-second TV commercials seen in a year by an average child: 20,000  
 Number of TV commercials seen by the average person by age 65: 2 million  
 Percentage of survey participants (1993) who said that TV commercials

aimed at children make them too materialistic: 92

Rank of food products/fast-food restaurants among TV advertisements to kids: 1

Total spending by 100 leading TV advertisers in 1993: \$15 billion

v) GENERAL

Percentage of local TV news broadcast time devoted to advertising: 30

Percentage devoted to stories about crime, disaster and war: 53.8

Percentage devoted to public service announcements: 0.7

Percentage of Americans who can name The Three Stooges: 59

Percentage who can name at least three justices of the U.S. Supreme Court: 17

Compiled by TV-Free America (no longer active)

1322 18th Street, NW

Washington, DC 20036

e) "On a nightly basis, the publicly-owned airwaves are a toxic environment awash with depictions of violence and gun violence."

"The conclusion is clear and unavoidable: On a nightly basis, the publicly-owned airwaves are a toxic environment awash with depictions of violence and gun violence. Despite the spate of tragic events in recent years, violence and gun violence on prime time broadcast television have actually increased proportionally since the horrific shootings at Newtown five years ago. And that is not even taking into account the far greater violence routinely visible on cable, satellite, and internet streaming offerings, which typically are far more heavily-laden with violent content. As a result, the problem of television violence is even greater than this report suggests."

[From "A Dress Rehearsal for Tragedy: Violence, Gun Violence, and TV Content Ratings on Prime-Time Broadcast Television" Parents Television Council Mini-Study (Released March 2018) (at <https://www.parentstv.org/resources/2018GunStudy.pdf>) (p. 11)]

6) "The industrial revolution, starting in the nineteenth and going into the twentieth century, is seen as the force that changed the economic family and is basically responsible for the 'modern family'."

[From the Wikipedia webpage for "Family Economy" (at [https://en.wikipedia.org/wiki/Family\\_economy](https://en.wikipedia.org/wiki/Family_economy) (in paragraph 5, last sentence))]

a) "... the family in highly industrialized countries has 'progressively ceased to function as a unit of production, and has instead become primarily a unit of consumption'."

"First, we need to acknowledge that the family in highly industrialized countries has 'progressively ceased to function as a unit of production, and has instead become primarily a unit of consumption.'" (Berger, 1968) This development has had two related consequences:

i) "The declining importance of home production of most goods and services, far from strengthening the family, seems to be leading to further reductions in its most intimate and most central functions. It is not unusual today for men and women to purchase child care services from institutions or other individuals, seek advice about education, health, and careers from professionals, depend on the workplace for emotional support and assistance with smoking and drinking problems, and delegate care of dying relatives to hospital and nursing home personnel." (Fuchs, 1983)

ii) "It is even possible that (because of unforeseen costs associated with our 'rising standard of living') there is today more economic pressure on the family than there was when it was still geared to production." (Berger, 1968)

[From paper (for "Family Studies" course at University of Maryland, College Park--1994) "Community Visioning and Sustainability: Policy Recommendations for Families and Communities" (by Stefan Pasti) (in [Part 1 of scanned document](#), page 9; Part 2 is #7 at <https://www.cpcsi.org/collected-writings-stefan-pasti> ). Sources cited: Berger, Brigitte "Societies in Change" Basic Books New York 1971; Fuchs, Victor R. "How We Live: An Economic Perspective on Americans from Birth to Death" Harvard University Press Cambridge MA 1983]

b) "... anthropologists have often described what happens to a primitive society when its spiritual values are exposed to the impact of modern civilization. It's people lose the meaning of their lives, their social organization disintegrates, and they themselves morally decay."

[From "Man and His Symbols" by Carl Jung (paperback) Doubleday (1964) (accessible with key word search at google books [https://www.google.com/books/edition/Man\\_and\\_His\\_Symbols/g\\_10NtfzVeOC?hl=en&gbpv=0](https://www.google.com/books/edition/Man_and_His_Symbols/g_10NtfzVeOC?hl=en&gbpv=0)) (p. 84)]

7) World Population Milestones

- “1 billion in 1804
- 2 billion in 1927 (123 years later)
- 3 billion in 1960 (33 years later)
- 4 billion in 1974 (14 years later)
- 5 billion in 1987 (13 years later)
- 6 billion in 1999 (12 years later)
- 7 billion in 2011 (12 years later)”

[From the “World Population Milestones” webpage at the website for “Information Please” (at <https://www.infoplease.com/world/population/world-population-milestones> ) (Source: United Nations Population Division)]

As of May 13, 2021, the world population was 7,946,838,917.

[From the webpage “Current World Population” at the worldometers website (at <https://www.worldometers.info/world-population/> )]

8) From the Table of Contents for Section B (pages xii-xvii) in [“Do We Have Moral Compasses We Can Rely On?”](#) (147 pages; April, 2021)

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ii) "The NRC [Nuclear Regulatory Commission (USA)] believes spent fuel pools and dry casks both provide adequate protection for public health and safety and the environment." .....	51
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i) “This radioactivity is often pulled to the surface when oil and gas is extracted--carried largely in the brine.” .....	57
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vi) “The richest 5% (c. 315 million people) were responsible for over a third (37%) of the total growth in emissions.” .....	64

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## 9) More About Toxic Chemicals in the United States

a) “Nearly 60% of children’s textiles labeled ‘waterproof’, ‘stain-resistant’, or ‘environmentally friendly’ that were tested as part of a new study contained toxic PFAS substances known as ‘forever chemicals’ due to their persistence in the environment.

“Among products checked were clothing, pillow protectors, bedding and furniture.”

“It’s definitely a concern because these toxic chemicals can make their way into children’s bodies, said Laurel Schaidler, one of the study’s authors.

“PFAS, or per- and polyfluoroalkyl substances, are a class of more than 9,000 compounds typically used across dozens of industries to make products water-, stain- or heat-resistant. They’re in thousands of everyday consumer products such as stain guards, cookware, food packaging and waterproof clothing. The chemicals are linked to cancer, birth defects, liver disease, thyroid disease, decreased immunity, hormone disruption and a range of other serious health problems. They’re dubbed “forever chemicals” because they do not naturally break down, and they accumulate in humans.

“The peer-reviewed study was conducted by the public health advocacy group Silent Spring Institute and published in the Environmental Science and Technology journal.”

[from article “‘Forever chemicals’ found in nearly 60% of children’s ‘waterproof’ or ‘stain-resistant’ textiles” by Tom Perkins (May 7, 2022) at the Guardian website (at <https://www.theguardian.com/environment/2022/may/07/pfas-forever-chemicals-children-textiles> ) (paragraphs 1,2, 4-6)]

b) “Mapping the PFAS contamination crisis: New data show 2,854 sites in 50 states and two territories.”

[From the webpage “PFAS Contamination in the U.S. (October 4, 2021)” at the Environmental Working Group (EWG) website (at [https://www.ewg.org/interactive-maps/pfas\\_contamination/](https://www.ewg.org/interactive-maps/pfas_contamination/) )]

c) “PFAS-tainted sewage sludge is used as fertilizer in fields and report finds that about 20 million acres of cropland could be contaminated.”

“About 20m acres of cropland in the United States may be contaminated from PFAS-tainted sewage sludge that has been used as fertilizer, a new report estimates.

“PFAS, or per- and polyfluoroalkyl substances, are a class of about 9,000 compounds used to make products heat-, water- or stain-resistant. Known as “forever chemicals” because they don’t naturally break down, they have been linked to cancer, thyroid disruption, liver problems, birth defects, immunosuppression and more.

“Dozens of industries use PFAS in thousands of consumer products, and often discharge the chemicals into the nation’s sewer system.

“The analysis, conducted by the Environmental Working Group (EWG), is an attempt to understand the scope of cropland contamination stemming from sewage sludge, or biosolids. Regulators don’t require sludge to be tested for PFAS or closely track where its spread, and public health advocates warn the practice is poisoning the nation’s food supply.”

“Sludge is a byproduct of the wastewater treatment process that’s a mix of human excrement and industrial waste, like PFAS, that’s discharged from industry’s pipes. Sludge disposal can be expensive so the waste management industry is increasingly repackaging it as fertilizer because excrement is rich in plant nutrients.”

“All sewage sludge is thought to contain the dangerous chemicals, and the compounds have recently been found to be contaminating crops, cattle, water and humans on farms where biosolids were spread.”

“We don’t know the full scope of the contamination problem created by PFAS in sludge, and we may never know, because EPA has not made it a priority for states and local governments to track, test and report on,” said Scott Faber, EWG’s legislative policy director.”

[From “Forever chemicals’ may have polluted 20m acres of US cropland, study says” by Tom Perkins (May 8, 2022) at the Guardian website (at <https://www.theguardian.com/environment/2022/may/08/us-cropland-may-be-contaminated-forever-chemicals-study> )(paragraphs 1-4, 7, 6, and 5)]

d) “There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list doesn't include all toxic chemicals used in the U.S.”

“In general, chemicals covered by the TRI Program are those that cause:

Cancer or other chronic human health effects  
 Significant adverse acute human health effects  
 Significant adverse environmental effects”

[From the webpage “Toxics Release Inventory (TRI) Program” at the Environmental Protection Agency (U.S. Government) (at <https://www.epa.gov/toxics-release-inventory-tri-program/what-toxics-release-inventory> ) (in Section “What are TRI Toxic Chemicals?”, paragraphs 2 and 1)

## 10) More about Air Pollution

a) “... more than 90% of the world’s young people – 1.8 billion children – are breathing toxic air, storing up a public health time bomb for the next generation.”

“Poisonous air is having a devastating impact on billions of children around the world, damaging their intelligence and leading to hundreds of thousands of deaths, according to a report from the World Health Organization.

“The study found that more than 90% of the world’s young people – 1.8 billion children – are breathing toxic air, storing up a public health time bomb for the next generation.

“The WHO said medical experts in almost every field of children’s health are uncovering new evidence of the scale of the crisis in both rich and poor countries – from low birth weight to poor neurodevelopment, asthma to heart disease.”



“The study found that 600,000 children die from acute lower respiratory infections caused by dirty air and 93% 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.”

“Today’s report found that both indoor and outdoor air pollution was causing significant health problems. It said burning fuel such as wood or paraffin for heating, cooking and light in poorer countries was having a drastic impact on children’s health and called on governments to promote the clean alternatives as a matter of urgency.

“Neira said there were ‘many straightforward ways to reduce emissions of dangerous pollutants’, including ‘accelerating the switch to clean cooking and heating fuels and technologies, [and] promoting the use of cleaner transport, energy-efficient housing and urban planning. We are preparing the ground for low-emission power generation, cleaner, safer industrial technologies and better municipal waste management.’”

[From the article “90% of world's children are breathing toxic air, WHO study finds” by Matthew Taylor (October 29, 2018) at the Guardian website (at <https://www.theguardian.com/environment/2018/oct/29/air-pollution-worlds-children-breathing-toxic-air-who-study-finds>) (paragraph 1-3, 8, 13-14)]

b) “Nearly two-thirds of the 500,000 deaths of infants documented were associated with indoor air pollution, particularly arising from solid fuels such as charcoal, wood, and animal dung for cooking.”

“Air pollution last year caused the premature death of nearly half a million babies in their first month of life, with most of the infants being in the developing world, data shows.

“Exposure to airborne pollutants is harmful also for babies in the womb. It can cause a premature birth or low birth weight. Both of these factors are associated with higher infant mortality.

“Nearly two-thirds of the 500,000 deaths of infants documented were associated with indoor air pollution, particularly arising from solid fuels such as charcoal, wood, and animal dung for cooking.

“The discovery is reported in the State of Global Air 2020 report, which examined data on deaths around the world alongside a growing body of research that links air pollution with health problems.

“At least 6.7 million deaths globally in 2019 were from long-term exposure to air pollution, a factor raising the risk of stroke, heart attack, diabetes, lung cancer and other chronic lung diseases. Air pollution is now the fourth highest cause of death globally, just below smoking and poor diet.

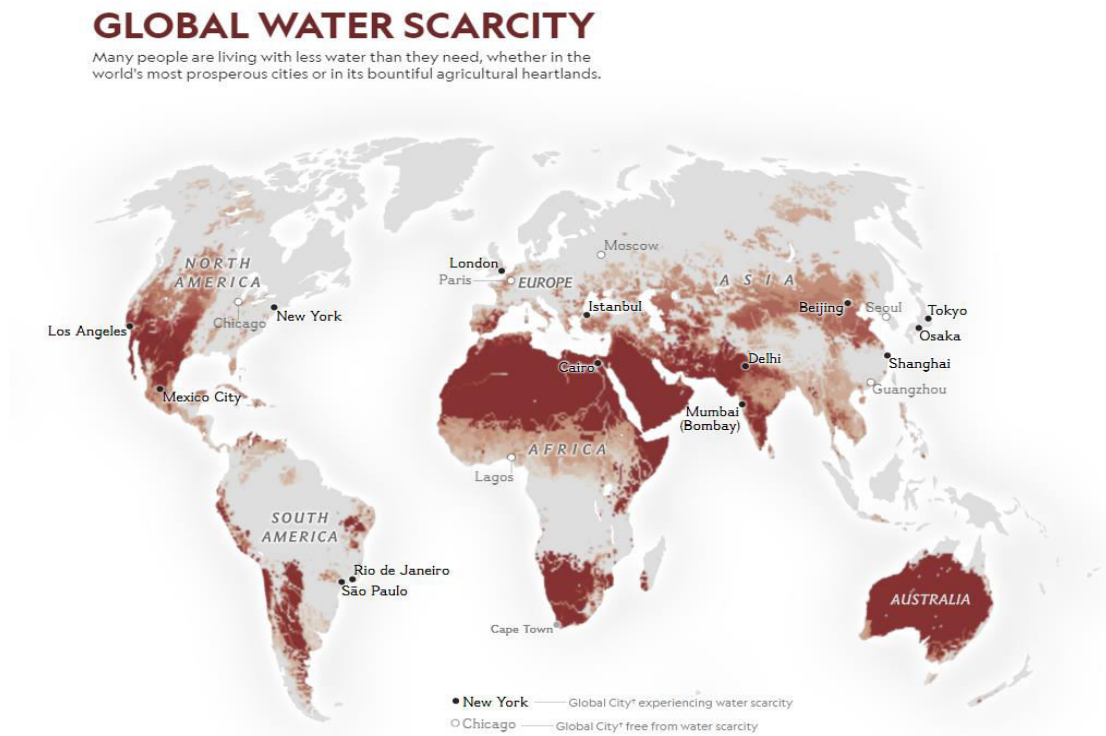
[From article “Polluted air killing half a million babies a year across globe” by Fiona Harvey (October 21, 2020) (at <https://www.theguardian.com/environment/2020/oct/21/polluted-air-killing-half-a-million-babies-a-year-across-globe>) (paragraphs 1-4, and 19)]

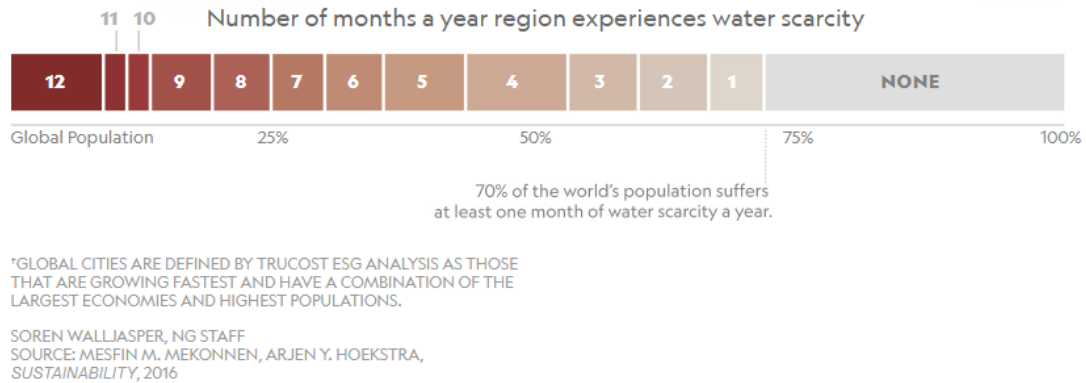
## 11) More about Water Scarcity, Sanitation, and Food Security

a) “70% of world population suffers at least 1 month/year of water scarcity” (graph)

Chart below illustrates “Number of months/year region experiences water scarcity”, with the darkest end being 12 months.

[From article “...The World’s Water Crisis Explained” by Stephen Leahy (March 22, 2018) at the National Geographic website (at <https://www.nationalgeographic.com/science/article/world-water-day-water-crisis-explained>) (“70% of world population suffers at least 1 month/year of water scarcity” statement in key (below) to chart)]





b) “Today, 1.42 billion people – including 450 million children – live in areas of high or extremely high water vulnerability.” (UNICEF, 2021)

[From the webpage for “Water Scarcity” at the UN Water website (at <https://www.unwater.org/water-facts/scarcity/>) (in Section “Facts and Figures”, bullet #5)]

c) “Today, 1 in 4 people – 2 billion people – around the world lack safe drinking water. “(WHO/UNICEF 2021) “Almost half of the global population – 3.6 billion people – lack safe sanitation.” (WHO/UNICEF 2021)

[From the webpage for “Water, Sanitation, and Hygiene” at the UN Water website (at <https://www.unwater.org/water-facts/water-sanitation-and-hygiene/>) (in Section “Facts and Figures”, bullets #1 and 2)]

d) “In 2020, 45% of the household wastewater generated globally was discharged without safe treatment.” and “At least 10% of the world’s population is thought to consume food irrigated by wastewater.” [World Health Organization (WHO)]

[From the webpage for “Sanitation” at the World Health Organization (WHO) website (at <https://www.who.int/news-room/fact-sheets/detail/sanitation>) (in Section “Key Facts”, bullets #4 and #5)]

e) “Some 829 000 people in low- and middle-income countries die as a result of inadequate water, sanitation, and hygiene each year, representing 60% of total diarrhoeal deaths. Poor sanitation is believed to be the main cause in some 432 000 of these deaths and is a major factor in several neglected tropical diseases, including intestinal worms, schistosomiasis, and trachoma. Poor sanitation also contributes to malnutrition.... Diarrhoea remains a major killer but is largely preventable. Better water, sanitation, and hygiene could prevent the deaths of 297 000 children aged under 5 years each year.”

[From the webpage for “Sanitation” at the World Health Organization (WHO) website (at <https://www.who.int/news-room/fact-sheets/detail/sanitation> ) (in Section “Overview”, paragraph 1 and 3)]

f) “72% of all water withdrawals are used by agriculture, 16% by municipalities for households and services, and 12% by industries.” (UN-Water 2021)

[From the webpage for “Water Scarcity” at the UN Water website (at <https://www.unwater.org/water-facts/scarcity/> ) (in Section “Facts and Figures”, bullet #1)]

g) “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).

[From report “Nature Based Solutions for Water: Facts and Figures” (2018) by UNESCO World Water Assessment Programme at the UNESCO Digital Library website (at <https://unesdoc.unesco.org/ark:/48223/pf0000261579> ) (p. 7, paragraph 2)]

h) “Cities require a concentration of food, water, energy, and materials that nature cannot provide.”

“Cities require a concentration of food, water, energy, and materials that nature cannot provide. Collecting these masses of materials and later dispersing them in the form of garbage, sewage, and pollutants in air and water is challenging city managers everywhere.

“Early cities relied on food and water from the surrounding countryside, but today cities often depend on distant sources for basic amenities. Los Angeles, for example, draws much of its water from the Colorado River, some 600 miles away. Mexico City’s burgeoning population, living at an altitude of over 9,000 feet, depends on the costly pumping of water from 100 miles away that must be lifted over 3,000 feet to augment inadequate water supplies. Beijing is planning to draw water from the Yangtze River basin some 800 miles away.

“Food comes from even greater distances, as illustrated by Tokyo. While the city still gets its rice from the highly productive farmers in Japan, with their land carefully protected by government policy, its wheat comes largely from the Great Plains of North America and from Australia. Its corn supply comes largely from the U.S. Midwest. Soybeans come from the U.S. Midwest and the Brazilian *cerrado*.

“The oil used to move resources into and out of cities often comes from distant oil fields. Rising oil prices will affect cities, but they will affect even more the suburbs that surround them. The growing scarcity of water and the high energy cost of transporting it over long distances may begin to constrain the growth of some cities.”

[From “Plan B 4.0: Mobilization to Save Civilization” by Lester R. Brown (Earth Policy Institute) (see Chapter 6 “Designing Cities for People: The Ecology of Cities”—accessible at [http://www.earth-policy.org/books/pb4/PB4ch6\\_ss2](http://www.earth-policy.org/books/pb4/PB4ch6_ss2) ) (paragraphs 2-5)]

i) “Today some 18 countries, containing half the world’s people, are overpumping their aquifers. Among these are the big three grain producers—China, India, and the United States—and several other populous countries, including Iran, Pakistan and Mexico.”

“Today roughly 40 percent of the world grain harvest comes from irrigated land. It thus comes as no surprise that irrigation expansion has played a central role in tripling the world grain harvest over the last six decades.

“During the last half of the twentieth century, the world’s irrigated area expanded from close to 250 million acres (100 million hectares) in 1950 to roughly 700 million in 2000. *This near tripling of world irrigation within 50 years was historically unique.* But since then the growth in irrigation has come to a near standstill, expanding only 10 percent between 2000 and 2010.

“In looking at water and our future, we face many questions and few answers. Could the world be facing peak water? Or has it already peaked?”

“Tapping underground water resources helped expand world food production, but as the demand for grain continued climbing, so too did the amount of water pumped. Eventually the extraction of water began to exceed the recharge of aquifers from precipitation, and water tables began to fall. And then wells begin to go dry. In effect, overpumping creates a water-based food bubble, one that will burst when the aquifer is depleted and the rate of pumping is necessarily reduced to the rate of recharge.

“Today some 18 countries, containing half the world’s people, are overpumping their aquifers. Among these are the big three grain producers—China, India, and the United States—and several other populous countries, including Iran, Pakistan and Mexico.”

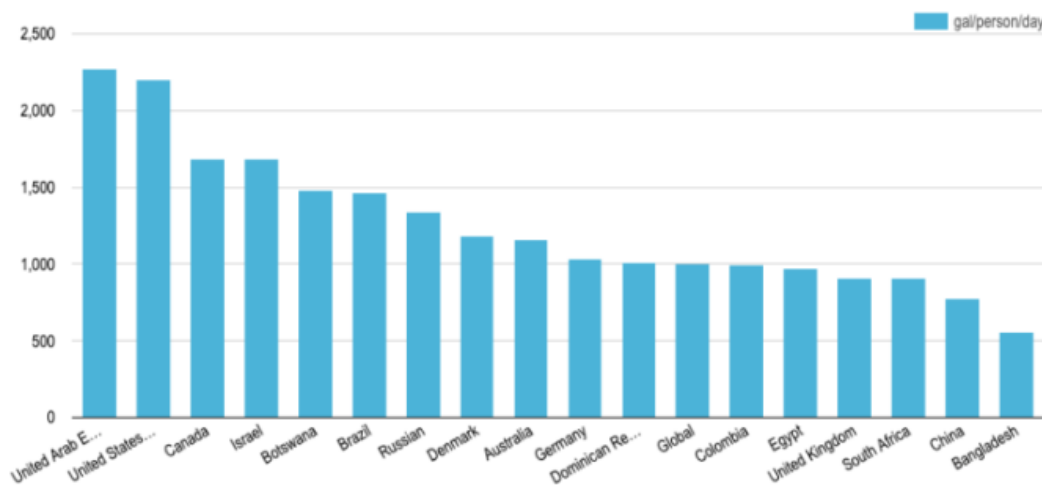
[From article “Peak Water: What happens when the wells go dry?” by Lester R. Brown (July, 2013) at the Earth Policy Institute website (at [http://www.earth-policy.org/plan\\_b\\_updates/2013/update115](http://www.earth-policy.org/plan_b_updates/2013/update115)) (paragraphs 3-5, 8, and 9)]

j) “Where virtually all water has been claimed, cities can typically get more water only by taking it from irrigation. Countries then import grain to offset the loss of irrigated grain production. Since it takes 1,000 tons of water to produce one ton of grain, importing grain is the most efficient way to import water.”

[From article “Peak Water: What happens when the wells go dry?” by Lester R. Brown (July, 2013) at the Earth Policy Institute website (at [http://www.earth-policy.org/plan\\_b\\_updates/2013/update115](http://www.earth-policy.org/plan_b_updates/2013/update115)) (paragraph 41)]

### k) Water Footprint

i) “Global Water Usage: How do Countries Compare?”



[From the webpage “Water Footprint Comparisons by Country” (5/22/2017) at the Water Footprint Calculator website (at <https://www.watercalculator.org/footprint/water-footprints-by-country/>) (first chart)]

ii) “Differences in the internal and external water footprint of consumption are also large.”

“In the USA, the average water footprint per year per capita... is an average of 7,786 litres of water per person per day. In China, the average water footprint is 1,071 cubic metres per year per capita, or 2,934 litres of water per person per day.

“Differences in the internal and external water footprint of consumption are also large. In the Netherlands, 95% of the water footprint of consumption lies somewhere else in the world through imported goods, whereas in India and Paraguay only 3% of the national water footprint of consumption is external.

[From the webpage “National water footprint” at the Water Footprint Network website (at <https://waterfootprint.org/en/water-footprint/national-water-footprint/#:~:text=In%20the%20Netherlands%2C%2095%25%20of,in%20the%20places%20of%20origin> ) (paragraphs 10 and 11)]

iii) “Identifying sustainable diets that promote health and minimize environmental impacts is increasingly important...”

“Food security depends on the availability of freshwater resources for agricultural production. Globally, ~70% of freshwater is used annually for agricultural (food and nonfood) production. Climate change is projected to alter rainfall patterns and increase the occurrence of extreme weather events including more frequent droughts and floods. A growing human population and rapidly changing diets, including greater consumption of animal source foods (ASFs), has resulted in increasing global water use in agriculture. *Identifying sustainable diets that promote health and minimize environmental impacts is increasingly important, and in this context, understanding the impact of food production and population-level dietary patterns on water use is critical for sustainable water management.*”

[From the article “The Water Footprint of Diets: A Global Systematic Review and Meta-analysis” by Francesca Harris et al. (September 6, 2019) at the Oxford Academic website (re Advances in Nutrition; An International Review Journal) (at <https://academic.oup.com/advances/article/11/2/375/5564833> ) (in “Introduction”, paragraph 1)]

12) “The 14 percent of energy used in the food system to move goods from farmer to consumer is equal to two thirds of the energy used to produce the food.”

“As people migrate from rural areas to cities, it becomes more difficult to recycle the nutrients in human waste back into the soil, requiring the use of more fertilizer. Beyond this, the growing international food trade can separate producer and consumer by thousands of miles, further disrupting the nutrient cycle. The United States, for example, exports some 80 million tons of grain per year—grain that contains large quantities of basic plant nutrients: nitrogen, phosphorus, and potassium. The ongoing export of these nutrients would slowly drain the inherent fertility from U.S. cropland if the nutrients were not replaced in chemical form.”

“In the United States, close to 19 percent of farm energy use is for pumping water. And in some states in India where water tables are falling, over half of all electricity is used to pump water from wells.”

“Although attention commonly focuses on energy use on the farm, agriculture accounts for only one fifth of the energy used in the U.S. food system. Transport, processing, packaging, marketing, and kitchen preparation of food are responsible for the rest. The U.S. food economy uses as much energy as the entire economy of the United Kingdom.

“The 14 percent of energy used in the food system to move goods from farmer to consumer is equal to two thirds of the energy used to produce the food. And an estimated 16 percent of food system energy use is devoted to canning, freezing, and drying food—everything from frozen orange juice concentrate to canned peas.”

“Food miles—the distance that food travels from producer to consumer—have risen with cheap oil. At my local supermarket in downtown Washington, D.C., the fresh grapes in winter typically come by plane from Chile, traveling almost 5,000 miles. One of the most routine long-distance movements of fresh produce is from California to the heavily populated U.S. East Coast. Most of this produce moves by refrigerated trucks. In assessing the future of long-distance produce transport, one writer observed that the days of the 3,000-mile Caesar salad may be numbered.”

“Packaging is also surprisingly energy-intensive, accounting for 7 percent of food system energy use. It is not uncommon for the energy invested in packaging to exceed that in the food it contains. Packaging and marketing also can account for much of the cost of processed foods. The U.S. farmer gets about 20 percent of the consumer food dollar, and for some products, the figure is much lower. As one analyst has observed, an empty cereal box delivered to the grocery store would cost about the same as a full one.

“The most energy-intensive segment of the food chain is the kitchen. Much more energy is used to refrigerate and prepare food in the home than is used to produce it in the first place. The big energy user in the food system is the kitchen refrigerator, not the farm tractor. While oil dominates the production end of the food system, electricity dominates the consumption end.

“In short, with higher energy prices and a limited supply of fossil fuels, the modern food system that evolved when oil was cheap will not survive as it is now structured.”

[From article “The Oil Intensity of Food” by Lester R. Brown (in “Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble”, Chapter 2 “Beyond the Oil Peak: The Oil Intensity of Food”) (at [http://www.earth-policy.org/books/pb2/pb2ch2\\_ss3](http://www.earth-policy.org/books/pb2/pb2ch2_ss3)) (paragraphs 7, 9, 12-13, 15, 17-19) (also posted July 4, 2009 at the Oil Drum website (at <http://www.theoil Drum.com/node/5533>))]



13) Food Waste--“One-third of food produced for human consumption is lost or wasted globally.”/ “If wasted food were a country, it would be the third-largest producer of carbon dioxide in the world, after the USA and China.”

“All the food produced but never eaten would be sufficient to feed two billion people. That's more than twice the number of undernourished people across the globe.

“If wasted food were a country, it would be the third-largest producer of carbon dioxide in the world, after the USA and China.”

“In developing countries, 40 per cent of losses occur at post-harvest and processing levels.

“In industrialized countries, more than 40 per cent of losses happen at retail and consumer levels.”

[From article “5 facts about food waste and hunger” (June 2, 2020) at the World Food Programme website (at <https://www.wfp.org/stories/5-facts-about-food-waste-and-hunger> ) (paragraph 6--numbers 1-3, and 5)]

14) “China’s Great Uprooting: Moving 250 Million into Cities”

[“‘If half of China’s population starts consuming, growth is inevitable,’ said Li Xiangyang, vice director of the Institute of World Economics and Politics, part of a government research institute. ‘Right now they are living in rural areas where they do not consume.’”]

[Note: “Articles in this (New York Times) series look at how China’s government-driven effort to push the population to towns and cities is reshaping a nation that for millenniums has been defined by its rural life.”]

“China is pushing ahead with a sweeping plan to move 250 million rural residents into newly constructed towns and cities over the next dozen years — a transformative event that could set off a new wave of growth or saddle the country with problems for generations to come.

“The government, often by fiat, is replacing small rural homes with high-rises, paving over vast swaths of farmland and drastically altering the lives of rural dwellers. So large is the scale that the number of brand-new Chinese city dwellers will approach the total urban population of the United States — in a country already bursting with megacities.

“This will decisively change the character of China, where the Communist Party insisted for decades that most peasants, even those working in cities, remain tied to their tiny plots of land to ensure political and economic stability. Now, the party has shifted priorities, mainly to find a new source of growth for a slowing economy that depends increasingly on a consuming class of city dwellers...”

“...The broad trend began decades ago. In the early 1980s, about 80 percent of Chinese lived in the countryside versus 47 percent today, plus an additional 17 percent that works in cities but is classified as rural. The idea is to speed up this process and achieve an urbanized China much faster than would occur organically.

“The primary motivation for the urbanization push is to change China’s economic structure, with growth based on domestic demand for products instead of relying so much on export. In theory, new urbanites mean vast new opportunities for construction companies, public transportation, utilities and appliance makers, and a break from the cycle of farmers consuming only what they produce. ‘If half of China’s population starts consuming, growth is inevitable,’ said Li Xiangyang, vice director of the Institute of World Economics and Politics, part of a government research institute. ‘Right now they are living in rural areas where they do not consume.’”

[From article “China’s Great Uprooting: Moving 250 Million into Cities” by Ian Johnson (June 15, **2013**) at the New York Times website (at <https://www.nytimes.com/2013/06/16/world/asia/chinas-great-uprooting-moving-250-million-into-cities.html?hp&r=3&> ) (paragraphs 1-3, 18 and 19)]

#### 15) How Sustainable are America’s Infrastructures?

[Note: As this paper highlights, there are many “social and environmental” externalities which are currently not being taken into account (in many ways). That we need to downsize in overdeveloped countries is understood by many, even if not yet wisely and comprehensively acted upon. Unfortunately, the primary focus of our mitigation efforts, on many issues, is to try and find solutions within dysfunctional cultures and infrastructures designed during an era of inexpensive fossil fuels. This writer’s view: maintaining dysfunctional cultures, and energy intensive infrastructures which are profoundly inappropriate for Zero Carbon habitats, will profoundly weigh down our efforts to establish functioning cultures, and low impact sustainable habitats.]

a) “2021 Report Card for America’s Infrastructure” [American Society of Civil Engineers (ASCE)]



[Above graph is from the Executive Summary of “2021 Report Card on America’s Infrastructure” (A Comprehensive Assessment of America’s Infrastructure) by the America Society of Civil Engineers (ASCE) (at <https://infrastructurereportcard.org/wp-content/uploads/2020/12/2021-IRC-Executive-Summary-1.pdf>) (p. 4)]

[Note: About the Report Card for America’s Infrastructure--

“Every four years, America’s civil engineers provide a comprehensive assessment of the nation’s 17 major infrastructure categories in ASCE’s Report Card for America’s Infrastructure. Using a simple A to F school report card format, the Report Card examines current infrastructure conditions and needs, assigning grades and making recommendations to raise them. The ASCE Committee on America’s Infrastructure, made up of 31 dedicated civil

engineers from across the country with decades of expertise in all categories, volunteers their time to work with ASCE Infrastructure Initiatives staff to prepare the Report Card.” (from p. 5, Executive Summary cited above)]

b) “Cumulative Investment Needs By System (America’s Infrastructure) Based on Current Trends, 2020--2029” [American Society of Civil Engineers (ASCE)]

**CUMULATIVE INVESTMENT NEEDS BY SYSTEM BASED ON CURRENT TRENDS, 2020 TO 2029**  
ALL VALUES IN BILLIONS

Infrastructure System	Total Needs	Funded	Funding Gap
Surface Transportation <sup>1</sup>	\$2,834	\$1,619	\$1,215
Drinking Water / Wastewater / Stormwater <sup>2</sup>	\$1,045	\$611	\$434
Electricity <sup>2</sup>	\$637	\$440	\$197
Airports <sup>2</sup>	\$237	\$126	\$111
Inland Waterways & Marine Ports <sup>2</sup>	\$42	\$17	\$25
Dams <sup>3</sup>	\$93.6	\$12.5	\$81
Hazardous & Solid Waste <sup>4</sup>	\$21	\$14.4	\$7
Levees <sup>5</sup>	\$80	\$10.1	\$70
Public Parks & Recreation <sup>6</sup>	\$77.5	\$9.5	\$68
Schools <sup>7</sup>	\$870	\$490	\$380
<b>Totals</b>	<b>\$5,937</b>	<b>\$3,350</b>	<b>\$2,588</b>

In the “Investment Needs” graphic (on left), the inevitable shrinking of the global economy to eliminate GHG emissions (=less revenues)--and the absolute necessity for “on point” investing to support and sustain functioning Zero Carbon cultures--will very likely create more and more Funding Gaps for unsustainable energy intensive infrastructure. When will we--collectively--see the diminishing returns of such investment, and change our focus?

[from the Executive Summary of “2021 Report Card on America’s Infrastructure” (A Comprehensive Assessment of America’s Infrastructure) by the America Society of Civil Engineers (ASCE) (at <https://infrastructurereportcard.org/wp-content/uploads/2020/12/2021-IRC-Executive-Summary-1.pdf>) (p. 7)]

[Note: **The following six excerpts** are also from the Executive Summary of “2021 Report Card on America’s Infrastructure” (A Comprehensive Assessment of America’s Infrastructure) by the America Society of Civil Engineers (ASCE) (at <https://infrastructurereportcard.org/wp-content/uploads/2020/12/2021-IRC-Executive-Summary-1.pdf>) ]

## c) Bridges (C)

“There are more than 617,000 bridges across the United States. Currently, 42% of all bridges are at least 50 years old, and 46,154, or 7.5% of the nation’s bridges, are considered structurally deficient, meaning they are in “poor” condition. Unfortunately, 178 million trips are taken across these structurally deficient bridges every day. In recent years, though, as the average age of America’s bridges increases to 44 years, the number of structurally deficient bridges has continued to decline; however, the rate of improvements has slowed. A recent estimate for the nation’s backlog of bridge repair needs is \$125 billion. Estimates show that we need to increase spending on bridge rehabilitation from \$14.4 billion annually to \$22.7 billion annually, or by 58%, if we are to improve the condition. At the current rate of investment, it will take until 2071 to make all of the repairs that are currently necessary, and the additional deterioration over the next 50 years will become overwhelming.” (p. 9)

## d) Drinking Water (C-)

“Our nation’s drinking water infrastructure system is made up of 2.2 million miles of underground pipes that deliver safe, reliable water to millions of people. Unfortunately, the system is aging and underfunded. There is a water main break every two minutes and an estimated 6 billion gallons of treated water lost each day in the U.S., enough to fill over 9,000 swimming pools.” (p. 10)

## e) Hazardous Materials (D-)

“There are an estimated 35 million tons of hazardous materials managed annually in the United States. In general, there is adequate capacity for the treatment and disposal of these materials through the year 2044. However, progress toward mitigating legacy sites where hazardous waste was produced and improperly disposed of has stalled. There are approximately 1,300 Superfund sites where cleanup activities are either incomplete or not yet begun, roughly the same number as four years ago. Meanwhile, the Superfund budget has remained essentially flat at around \$1.1 billion over the last 10 years. The two other hazardous waste programs — one for brownfields and one for hazardous waste regulated under the Resource Conservation and Recovery Act — are also in a steady state. In general, grant funding for the Brownfields Program has increased, but the program is still oversubscribed, with just 30% of applicants receiving funding. Meanwhile, resilience is a growing concern at many hazardous waste sites. Around 60% of all nonfederal Superfund sites are located in areas that may be impacted by flooding, storm surge, wildfires, or sea level rise related to climate change effects.” (p. 11)

## f) Roads (D)

“America’s roads are critical for moving an ever increasing number of people and goods. However, these vital lifelines are frequently underfunded, and over 40% of the system is now in poor or mediocre condition. As the backlog of rehabilitation needs grows, motorists are forced to pay over \$1,000 every

year in wasted time and fuel. Additionally, while traffic fatalities have been on the decline, over 36,000 people are still dying on the nation's roads every year, and the number of pedestrian fatalities is on the rise." (p. 14)

g) Solid Waste (C-)

"The U.S. produced approximately 268 million tons of municipal solid waste (MSW) in 2017, or 4.51 pounds per person per day. This is a modest increase from the 4.4 pounds of MSW generated per person per day in 2014. Overall, 53% of waste is deposited in landfills, 25% is recycled, 10% is composted, and 13% is combusted for energy. The transport and disposal of MSW remains largely funded and managed by the private sector. However, the U.S. MSW management system faces a growing number of challenges such as plateauing recycling rates, emerging contaminants found in legacy landfills, and significantly changing global markets." (p. 15)

h) Wastewater (D-)

"The nation's more than 16,000 wastewater treatment plants are functioning, on average, at 81% of their design capacities, while 15% have reached or exceeded it. Growing urban environments signal a trend that these facilities will increasingly accommodate a larger portion of the nation's wastewater demand. Though large-scale capital improvements have been made to systems experiencing sanitary sewer overflows, efforts have slowed in recent years. As many treatment plants and collection networks approach the end of their lifespans, the financial responsibilities for operation and maintenance will become more costly. Estimates indicate that utilities spent over \$3 billion in 2019, or more than \$18 per wastewater customer, to replace almost 4,700 miles of pipeline nationwide." (p. 17)

16) "Existing policies and market incentives... allow businesses to run up significant, largely unaccounted for, and unchecked *social and environmental externalities*."

"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, which includes the endowment of natural resources and ecosystems. By depleting the world's stock of natural wealth--often irreversibly--this pattern of development and growth has had detrimental impacts on the wellbeing of current generations and presents tremendous risks and challenges for the future. The recent multiple crises are symptomatic of this pattern. *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.*"

[From “Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication” United Nations Environment Programme, (2011) (at [https://docs.google.com/gview?url=http://sustainabledevelopment.un.org/content/documents/126GER\\_synthesis\\_en.pdf&embedded=true](https://docs.google.com/gview?url=http://sustainabledevelopment.un.org/content/documents/126GER_synthesis_en.pdf&embedded=true)) (in Introduction, see section “An Era of Capital Misallocation”--insufficient numbering, see the first and second pages of the introduction)]

17) “...the unpaid and underpaid care work done primarily by women and girls around the world”

“Economic inequality is out of control. In 2019, the world’s billionaires, only 2,153 people, had more wealth than 4.6 billion people. This great divide is based on a flawed and sexist economic system that values the wealth of the privileged few, mostly men, more than the billions of hours of the most essential work--the unpaid and underpaid care work done primarily by women and girls around the world. Tending to others, cooking, cleaning, fetching water and firewood are essential daily tasks for the wellbeing of societies, communities and the functioning of the economy. The heavy and unequal responsibility of care work perpetuates gender and economic inequalities.”

[From Summary Publication for “Time To Care: Unpaid and Underpaid Care Work and The Global Inequality Crisis” Report Oxfam January, 2020 (at <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620928/bp-time-to-care-inequality-200120-summ-en.pdf>) (see “Oxfam Summary--January 2020” on p. 2, in paragraph 1)]

18) 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.” (p. 60)  
(From “Why the Village Movement?” by J.C. Kumarappa)

“... every article in the bazaar has moral and spiritual values attached to it... hence it behooves us to enquire into the antecedents of every article we buy.... (Yet this) is an arduous task, and it becomes almost impossible for ordinary persons to undertake it when the article comes from far off countries. Therefore, it is that we have to restrict our purchase to articles made within our cognizance. This is the moral basis of Swadeshi.” (p. 53-54)

“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.” (p. 60)

“A business transaction does not begin and end with the transfer of goods and payment of money; in addition, it involves the consideration of one’s duties to one’s fellow men.” (p. 117)

“We do not live unto ourselves, and the more we realize the repercussions of our actions on our neighbors and strive to act according to the highest we are capable of, the more shall we advance in our spiritual development.” (p. 55)

[From “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819> ) (using page numbers in the book)]

19) “... there are truths which none can be free to ignore, if one is to have that wisdom through which life can become useful. These are the truths concerning the structures of the good life and concerning the factual conditions by which it may be achieved...”

[From “General Education in a Free Society” (The Harvard Committee, 1945)] (accessible in “American Higher Education Transformed 1940-2005: Documenting the National Discourse” Ed. Wilson Smith and Thomas Bender (accessible at google books through key word search, or see p. 20)]

20) From introduction to course offering “Applied Ecovillage Living” (Findhorn Foundation)

“The Findhorn Foundation, community, and ecovillage has a long history of facilitating and teaching sustainability practices. During the programme, participants will engage with these resources and get to meet and learn from inspiring teachers and facilitators with wide-ranging experience and expertise. We will also have self-organised time where we explore arising topics and share perspectives from our different countries and cultures.”

“Together we will learn about:

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

Cultural and Spiritual diversity practices”



[From the webpage “Applied Ecovillage Living” at the website for Findhorn Foundation (at <https://www.findhorn.org/programmes/applied-ecovillage-living-2019/>) (paragraphs 3-4)]

21) “Current high-energy consumer lifestyles were designed before we understood the very serious nature of the climate challenge....”

[from [“Raising Ambition: Zero Carbon Scenarios from Across the Globe”](#) ]

a) “There is no shortage of evidence that humanity is entering a very serious place.” (on p. 7, paragraph 1)

b) “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.” (on p. 7, in Section “Why do we mean by Zero?”, paragraph 1)

“Game Over For Wasteful Energy Use: Current high-energy consumer lifestyles were designed before we understood the very serious nature of the climate challenge....” (on p. 9, in Section “Game Over For Wasteful Energy Use”, paragraph 1)

c) “... 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.”

“‘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.” (on p. 7, paragraph 2)

“... 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.” (on p. 7, paragraph 2)

“We recommend that multi-solving should become a vital part of all zero carbon scenario development, acting as a tool to identify and optimise co-benefits, and help build coalitions across a range of sectors.” (on p. 11, in Section “The benefits beyond emissions--multi-solving”, paragraph 1)

“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.” (on p. 9, in Section “Scenarios can help overcome carbon lock-in”, paragraph 2)

d) “*It is an ethical imperative that all scenarios also embrace climate equity....* The way we share this out must embrace developing country needs to lift citizens out of poverty and to increase quality of life.”

“*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.” (on p. 10, in Section “Scenario building processes must reflect a fair and inclusive future”, paragraph 2)

[From the Executive Summary of “Zero Carbon Britain: Raising Ambition” Centre for Alternative Technology (2018) (at <https://cat.org.uk/info-resources/zero-carbon-britain/research-reports/zero-carbon-britain-raising-ambition/>) (Main authors: Paul Allen and Isabel Bottoms)]

22) A Key Role for Philanthropy--“... the Rosenwald Fund spent over four million dollars to help build 4,977 schools, 217 teachers' homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas.” (1917--1948)

a) [The two paragraphs below are from blog entry “This Week in Halls Hill History: The Origin of Langston School” (August 9, 2020) at the Halls Hill Community website (at <https://hallshill.com/tag/rosenwald-fund/>) (paragraphs 3-4)]

“A collaboration between Booker T. Washington and Julius Rosenwald created the project to build ‘Rosenwald Schools,’ to educate Black students to attempt to allay the chronic underfunding of schools in the Southern states. Booker T. Washington was an educator and philanthropist, and the founder of the Tuskegee Institute. Julius Rosenwald was a clothier who became a part-owner and president of Sears, Roebuck, and Company. Their collaboration required both the Black community and the white local government to contribute to funding the school construction. The local school board was required to operate and maintain the schools. Almost 5,000 schools were built in the former Confederate states and Maryland, Oklahoma, Kentucky, and Missouri. These schools educated almost one-third of black students in the country.”

“The school building program was one of the largest programs administered by the Rosenwald Fund. Using state-of-the-art architectural plans designed by professors at Tuskegee Institute, the fund spent more than four million dollars to build 4,977 schools, 217 teacher homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas. The Rosenwald Fund was based on a system of matching grants, requiring white school boards to commit to maintenance and black communities to aid in construction’.”

**C. Visualizing a Reversal of the Urbanization Trend:** 572 large cities to 41,700 ecologically sustainable small cities and towns [41,700 = how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns. (2.085 billion people relocating in such a migration)]

1) ... further investment in mega-cities... clear risks on the horizon of severely diminishing returns

Although most of the expert practitioners associated with planning, funding, and building the communities of the future still seem to believe that cities with a population over 1 million can be made into models of sustainability--

--the Climate Emergency is an Emergency, a crisis of worldwide proportions... and we have an urgent need for solution-oriented activity in communities around the world, which decreases carbon emissions. At such a time as this, the prospect of further investment in mega-cities--which have such complex infrastructures to maintain; which require massive energy transport of food and other products, and extensive transport and processing of water and waste; where there is such extensive waste of food products; and where the prospects of reducing indiscriminate consumption, reducing carbon emissions, and achieving “zero waste” are least likely to occur--seems to be looking longer in the odds from month to month, with clear risks on the horizon of severely diminishing returns. So....

2) There are 572 cities with populations of 1 million... how many small cities and towns would have to add 50,000 people....?

There are alternatives. There is significant, reliable, and conclusive evidence in this “Large Cities are not sustainable, and will not help us get to Zero Carbon ASAP” document which is pointing towards a need for:

- a) a significant increase of people who can find contentment and quality of life while consuming much less material goods and ecological services (directed specifically to people who have much more wealth than they need)
- b) a significant reversal of the trend toward urbanization, and a transition towards ecologically sustainable small cities, towns, and villages
- c) a significant increase in initiatives working to redesign the human economy so that such activity supports the sustainability of associated ecosystems, instead of damaging the sustainability of such ecosystems (as in the “leanings of human aspirations” summary in Section B)

Such evidence brings forward the questions:

i) If there might be a significant reversal of the urbanization trend, and a significant transition from megacities to ecologically sustainable cities, towns, and villages, what would such a transition look like?

ii) And specifically: how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns?

[Note: There are now 572 cities with over 1 million people [according to the webpage [“World City Populations 2022”](#) (using data from [“World Urbanization Prospects”](#) publications, from the United Nations Department of Economic and Social Affairs, Population Dynamics)]

3) The following “thought experiment” is one exploration of what such a transition might look like. [The result: 41,700 = how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns.]

[Note: The calculations here will be a rough estimate, offered more to provide a “visual picture” than to provide a comprehensive analysis. (Readers may suggest more refined calculations).]

Of the 572 cities in the world with over 1 million inhabitants, there are approximately 32 cities with over 10 million people, approximately 51 cities with between 5 million and 10 million people, and approximately 489 cities with between 5 million and 1 million people.  
(see Note below for source of these figures)

For our calculations, we will supply a rough average for each category:

32 cities with a rough average of 15 million people = 480 million people  
 51 cities with a rough average of 7.5 million people = 382.5 million people  
 489 cities with a rough average of 2.5 million people = 1,222.5 million people

Total = 2,085 million people

2,085 million divided by 50,000 = 41,700 = how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns.

[The figures “approximately 32 cities with over 10 million people, approximately 51 cities with between 5 million and 10 million people, and approximately 489 cities with between 5 million and 1 million people” were derived as rough averages from the city populations listed at the webpage “World City Populations 2022” at the World Population Review website (at <https://worldpopulationreview.com/world-cities> )]

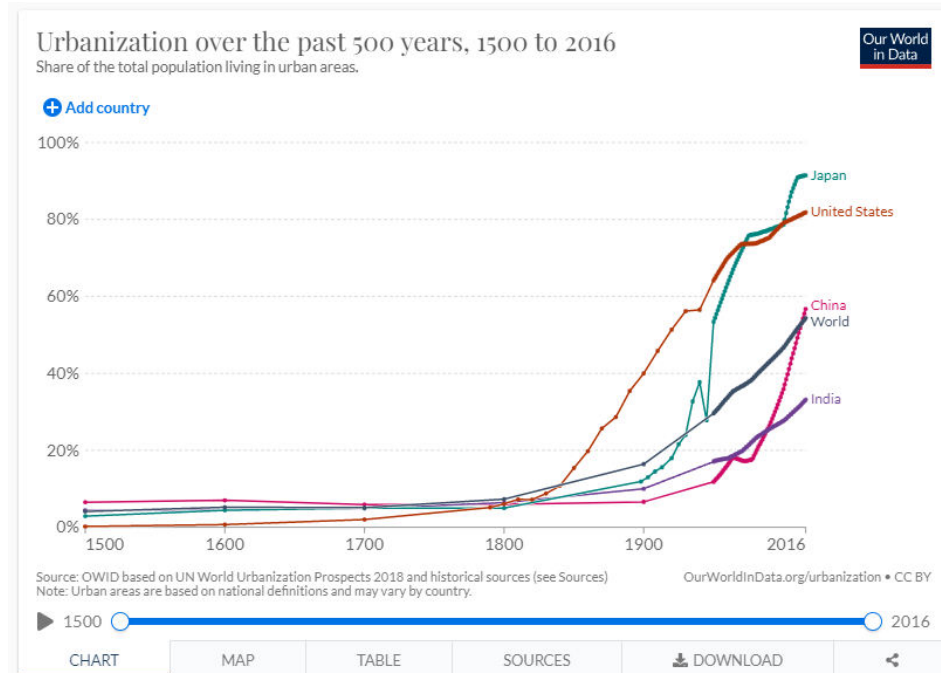
Further Commentary to help with Visualizing a Reversal of the Urbanization Trend...

4) “Migration to towns and cities is very recent – mostly limited to the past 200 years.”  
and “The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever.”

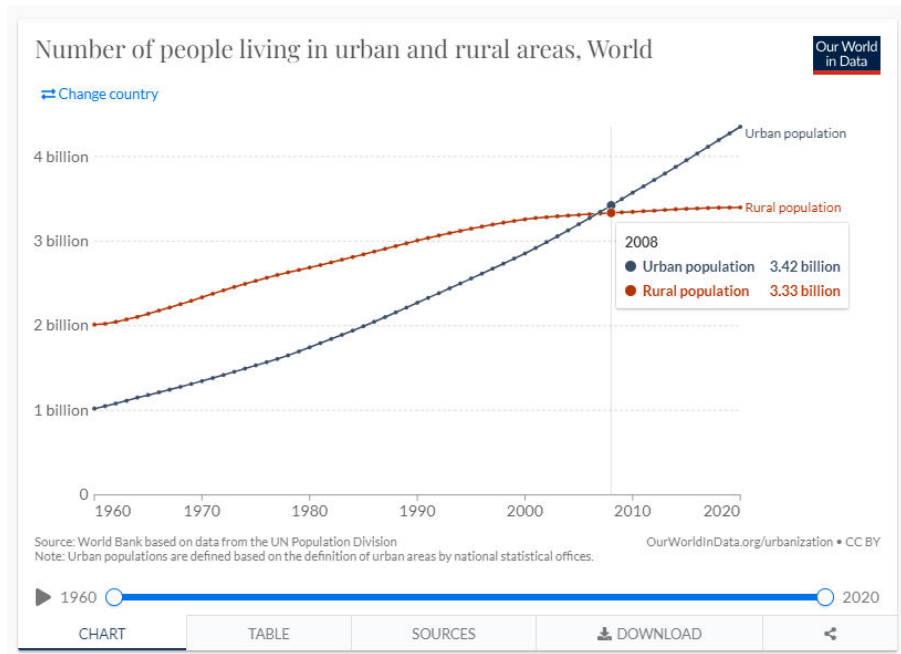
a) “Migration to towns and cities is very recent – mostly limited to the past 200 years.”

[Both charts below from the webpage “Urbanization” at the Our World in Data website (at <https://ourworldindata.org/urbanization> ) [ a) first chart in the section “Long-run History of Urbanization”, and b) first chart on webpage]]

i)



ii)



5) “Twentieth century cities and industrial regions are dependent for survival and growth on a vast and increasingly global hinterland of ecologically productive landscapes.”

“... as a result of high population densities, the enormous increase in per capita energy and material consumption made possible by (and required by) technology, and universally increasing dependencies on trade, the ecological locations of human settlements no longer coincide with their geographic locations. Twentieth century cities and industrial regions are dependent for survival and growth on a vast and increasingly global hinterland of ecologically productive landscapes.”

[from section “Appropriating Carrying Capacity and Ecological Footprints” (p. 204, paragraph 4)]

[From article “Revisiting Carrying Capacity: Area-Based Indicators of Sustainability” by William E. Rees--which was published in the January 1996 issue of “Population and Environment” [17(3):195-215]] [from downloaded file via ResearchGate website (at

[https://www.researchgate.net/publication/226184045\\_Revisiting\\_Carrying\\_Capacity\\_Area-](https://www.researchgate.net/publication/226184045_Revisiting_Carrying_Capacity_Area-Based_Indicators_of_Sustainability)

[Based\\_Indicators\\_of\\_Sustainability](https://www.researchgate.net/publication/226184045_Revisiting_Carrying_Capacity_Area-Based_Indicators_of_Sustainability) ) (from section “Appropriating Carrying Capacity and Ecological Footprints”, p. 204, paragraph 4)]

6) “The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever.”

a) “...*nature is unravelling and that our planet is flashing red warning signs of systems failure.*”

“The Living Planet Report 2020 underlines how humanity’s increasing destruction of nature is having catastrophic impacts not only on wildlife populations but also on human health and all aspects of our lives,’ said Marco Lambertini, Director General, WWF International.”

“We can’t ignore the evidence--these serious declines in wildlife species populations are an indicator that *nature is unravelling and that our planet is flashing red warning signs of systems failure.* From the fish in our oceans and rivers to bees which play a crucial role in our agricultural production, the decline of wildlife affects directly nutrition, food security and the livelihoods of billions of people.”

[From article “WWF’s Living Planet Report reveals two-thirds decline in wildlife populations on average since 1970” (World Wildlife Federation) (September 9, 2020) at the World Wildlife Federation website (at [https://wwf.panda.org/wwf\\_news/press\\_releases/?793831/WWF-LPR--reveals-two-thirds-decline-in-wildlife-populations-on-average-since-1970](https://wwf.panda.org/wwf_news/press_releases/?793831/WWF-LPR--reveals-two-thirds-decline-in-wildlife-populations-on-average-since-1970)) (paragraphs 3 and 4)]

b) “We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.”

“The overwhelming evidence of the IPBES Global Assessment, from a wide range of different fields of knowledge, presents an ominous picture,’ said IPBES Chair, Sir Robert Watson. ‘The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.’”

[From the webpage “Media Release: Nature’s Dangerous Decline ‘Unprecedented’; Species Extinction Rates ‘Accelerating’” (May, 2019) at the website for IPBES (at <https://ipbes.net/news/Media-Release-Global-Assessment>) (paragraph 2)]

7) The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative believes that priority actions—for urgently and drastically cutting Global Greenhouse Gas Emissions—would be more constructive if they were focused on small cities, towns, and villages, which--

- a) are more sustainable-friendly in the long run
- b) have less complex vulnerabilities
- c) create more emphasis on downsizing and focusing on what basic necessities are most needed and
- d) where it is easier to see the results of our actions
- e) 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.

The CPCS Initiative also believes that it is possible for local communities and regions to include the recommendations of the CPCS Initiative into their local specific “constellation of initiatives”, and for all continents, countries, regions, and local communities to achieve Zero Carbon in ten years.

8) One of the keys to achieving this kind of cultural transformation is for a significant majority of the people who have “way too much” to understand that they can get by “with much less”, and still have high quality of life.

For example, how many of us--who are aware of how urgently we need to achieve Zero Carbon--would be really most appreciative to arrive in the year 2050, and find out we are living in places which have--

- A clean and beautiful environment
- Adequate provision of clean drinking water
- Adequate provision for safe sanitation
- Minimal supplies of clothing
- Adequate and balanced nutrition
- Simple housing
- Basic health care
- Basic communication facilities
- A minimal supply of energy
- Holistic education
- Satisfaction of intellectual and cultural needs?

[Above list of 11 items is from an overview of the development model of the Sarvodaya Shramadana Movement (at <https://www.sarvodaya.org/2004/12/27/the-development-model> )]



9) “The function of work should be to practice our ideal of life”

a) “A wise person notices that inner harmony is disturbed when the mind lets itself be lured into indiscriminately sampling the world of phenomena.”

[from “Light on the Yoga Sutras of Patanjali” by B.K.S. Iyengar (full pdf accessible from the Stillness in Yoga website--at [https://www.stillnessinyoga.com/wp-content/uploads/2020/10/B.K.S.\\_Iyengar\\_Light\\_on\\_the\\_Yoga\\_Sutras\\_of\\_Patanz-lib.org\\_.pdf](https://www.stillnessinyoga.com/wp-content/uploads/2020/10/B.K.S._Iyengar_Light_on_the_Yoga_Sutras_of_Patanz-lib.org_.pdf) (p. 124)]

b) “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.”

[From report “State of the World 2004--Special Focus: The Consumer Society” (Worldwatch Institute) (2004) at the website of Green Economics (at <http://www.greeneconomics.net/StateOfWorld-2004.pdf> ) (in Chapter 2 “Making Better Energy Choices” by Janet L. Sawin (p. 36, paragraph 5)]

c) “... every article in the bazaar has moral and spiritual values attached to it... hence it behooves us to enquire into the antecedents of every article we buy.... (Yet this) is an arduous task, and it becomes almost impossible for ordinary persons to undertake it when the article comes from far off countries.”

[from “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819> ) (p. 54, using page numbers in the book)]

d) “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.*” (SP italics)

[from “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819> ) (p. 60, using page numbers in the book)]

e) “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 report “State of the World 2004--Special Focus: The Consumer Society” (Worldwatch Institute) (2004) at the website of Green Economics (at <http://www.greeneconomics.net/StateOfWorld-2004.pdf>) (in Chapter 2 “Making Better Energy Choices” by Janet L. Sawin) (p. 37, paragraph 6)]

f) 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 as they materialize worldwide. This is part of the ‘spiritual teachings’ element which often gets overlooked. (Stefan Pasti)

g) “We do not live unto ourselves, and the more we realize the repercussions of our actions on our neighbours and strive to act according to the highest we are capable of, the more shall we advance in our spiritual development.”

[from “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819>) (p. 55, *using page numbers in the book*)]

h) “Work absorbs most of our waking hours, and many of the problems connected with work and our dealings with our fellow man are what determine the nature of our life. Therefore, it behooves us to sit up and take note of what our work makes of us....”

[from “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819>) (p. 48, *using page numbers in the book*)]

i) “The function of work should be to practice our ideal of life.”

[from “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819>) (p. 138, *using page numbers in the book*)]

D. A Table with “Currently” and “in your Zero Carbon town” (key appropriate technology and culture change highlighted in the latter)--to help people visualize that the territory we are now setting out to explore has many positive features to recommend it.

Crowdsourcing to make this Table into a Visual Aid for presentations--  
not yet underway; hopefully forthcoming  
(contributions are welcome)

Below are some examples of what would go into the Table--

1) in the “Currently” section, we are focusing on Daily Activities in the Everyday Circumstances of Community Life--like your family life; how you earn a living; what kind of everyday tasks you have; what happens when someone is sick or hurt; how are disputes and injustices settled; how do the young learn how to be adults in society; what kind of government you live in; how much freedom or slavery or in between happens; what are people’s views on various topics--such as the most challenging problems, and the most important achievements... in other words, we need to take a close look at what we are doing, every day.

2) in the “in your Zero Carbon town” section, we are either reporting (as some of us are living very wholistic lives, and are already very near having a Zero Carbon footprint); making intelligent guesses (as some of us know more about how it might look than others); imagining (because we really can think about this, and make wise decisions)--or many of us are not able to respond, for various reasons.

Examples--(I’m imagining. I had thought of cataloguing the field of appropriate technology (relating to Zero Carbon ASAP), and learn about it in the process... but it seemed like something we could learn together.

Currently	“in my Zero Carbon town”
food shopping at Walmart by local bus service	our food comes from community supported permaculture areas
hot and cold running water and flush toilets	decreasing water supply problems composting toilets
cars powered by battery/electricity heating and air conditioning	no need to travel as much habitat modification, appropriate tech

This Table is an opportunity for us (the stakeholders) to really get down to the “nuts and bolts” of how Zero Carbon will happen; by learning in classrooms, in workshops, in discussion groups, in social media, (and maybe even with a little help from mass media)--and by doing it. Very soon we can have many very valuable details about “Currently” (and see for ourselves what we need to change), and many very valuable details about “in your Zero Carbon town”. That’s good--because very soon we need to be able to point to at least 20 Zero Carbon towns, and say “that’s how we did it there”.

Even before we have 20 Zero Carbon towns though, I think many people will “get the picture” about what the Table is going to show. We thought large cities had the economies of scale--for example, so that distribution of resources, and especially energy, could be concentrated in one large area. Unfortunately, there is a limit to how light on GHG emissions any one person can be in a large city; and even further, there may be no way to ever know, because of complexity of measuring it. And, among much other evidence in this paper, we have already “blown through” our limits on carbon footprints, ecological footprints, water footprints, and possibly our “tolerance for other cultures” footprints--and we could easily “blow through” many other footprints, the way we are going.

*So although we might want to be adventurous in our projections of what kind of habitats are best for Zero Carbon, it would probably be wise to limit ourselves to very basic and healthy lives in much smaller Ecosystems Sustainable/Permaculture small cities, towns, and villages... over many generations... and get some healthy perspective about what is most important in life, and how to grow societies and cultures which support wisdom, compassion, sustainable ecosystems, friendly relations, and so on.*

E. There are many movements, and key organizations--and much urgency. Some examples of positive tipping point activity working along similar lines [The entire Section C. from [“Do We Have Moral Compasses We Can Rely On?”](#) (April, 2021)]

This section provides clear actions which can result in our regions being very resilient, and as self-reliant as we can be. These, and many other approaches, have inspired my belief that small cities, towns, and villages are essential to achieving Zero Carbon, Sustainable Biodiversity, and countless other positive tipping points.

(Here begins the long excerpt from Section C--  
with the outline numeration changed to accommodate this papers' format)

1) From “Why the Village Movement?” by J.C. Kumarappa

[we have responsibilities for how much (or how little)  
truth, virtue, love, and peace we contribute to the world.]

“... every article in the bazaar has moral and spiritual values attached to it... hence it behooves us to enquire into the antecedents of every article we buy....“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 guage the results of our actions, and (the) more conscientiously shall we be able to fulfill our obligations as trustees.”

[Note: Indicators of Zero Carbon and Sustainable BioDiversity might include a size indicator based on being able to “guarantee the concomitant results of all our transactions”.]

(and sources)

“... every article in the bazaar has moral and spiritual values attached to it... hence it behooves us to enquire into the antecedents of every article we buy.... (Yet this) is an arduous task, and it becomes almost impossible for ordinary persons to undertake it when the article comes from far off countries. Therefore, it is that we have to restrict our purchase to articles made within our cognizance. This is the moral basis of Swadeshi.” (p. 53-54)

“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, (the) more conscientiously shall we be able to fulfill our obligations as trustees.” (p. 60)

“A business transaction does not begin and end with the transfer of goods and payment of money; in addition, it involves the consideration of one’s duties to one’s fellow men.” (p. 117)

“We do not live unto ourselves, and the more we realize the repercussions of our actions on our neighbors and strive to act according to the highest we are capable of, the more shall we advance in our spiritual development.” (p. 55)

[From “Why the Village Movement?” by J.C. Kumarappa The All India Village Industries Wardha, C.P, 1946 (at <https://archive.org/details/in.ernet.dli.2015.118819>) (using page numbers in the book)]

2) “... Ecovillage Design Education (EDE) curriculum, which draws from the experience and expertise of a network of some of the most successful ecovillages and community projects across the Earth....”

a) “... a new kind of global education, specifically designed to meet the challenges and opportunities of the 21<sup>st</sup> century...”

“We live in a rapidly changing world that is transforming before our very eyes. Humanity is now being challenged as never before to grow in wisdom, maturity, and understanding. A plethora of deep and pressing concerns is calling for our immediate attention, concerns such as: Earth's environmental degradation, including the loss of precious topsoil and forest cover, the encroachment of deserts, the depletion of fisheries and aquifers, the loss of habitat and the extinction of species, etc.; the glaring and increasing disparity between rich and poor leading to exploitation, poverty, and the associated regimen of malnutrition and over-population; the disintegration of families, communities, even entire cultures; unrestrained urbanization resulting in social alienation, displacement, and feelings of disconnection with the natural world; the dimming of a sense of spiritual awareness and purpose; global warming and ozone depletion; etc. And now, looming on the horizon is “peak oil,” with its coming adjustments and retrofits, including the probability of ongoing conflict over access to the remaining energy reserves.

“All of these problems are quite real and, by now, well-documented; but gaining awareness of the extent of the problems is only half the project of becoming educated these days.

“Amidst these intense challenges, and largely catalyzed by them, lies the prospect for tremendous growth in human potential and consciousness. People and communities all over the globe are coming together to reclaim responsibility for creating their own living situations – at local and regional levels. In

the process, they are overcoming prior limitations and developing new talents, skills, knowledge and approaches. Paradoxically, many of the most innovative solutions rely on a timeless, perennial kind of wisdom that seems to have been disregarded recently. The potential for a refreshed, renewed, revitalized humanity goes hand-in-hand with meeting the challenges of our present Age.

“The Global Ecovillage Network (GEN) believes the most promising and effective way to deal with all these issues is through education not a typical education but a new kind of global education, specifically designed to meet the challenges and opportunities of the 21<sup>st</sup> century:

“This is an education where a thorough and objective assessment of the state of the planet is followed by regional, community, and place-based solutions;

an education that empowers individuals and communities with the knowledge for shaping their worlds and becoming more self-reliant;

an education that is universal in scope but local in application, directed toward preserving precious cultural diversity;

an education where investigating theory is followed by practical application;

an education that imparts useful and instrumental life-skills as part of the curriculum;

an education relevant to peoples of both developed and developing countries, rural and urban regions;

an education focused on the complexly interwoven, transdisciplinary issues pertaining to the transition to sustainable culture;

an education promoting and facilitating healthful planetary evolution;

an education exploring and expanding the perceived limits of human potential;

an education identifying and reconnecting all these essential considerations to a meaningful, dignified, high-quality life for all the world’s people.

“This is the **Ecovillage Design Education (EDE)** – an education preparing the way for a sustainable future.

“The EDE is being introduced to the world at this time to complement, correspond with, and assist in setting a standard for, the United Nations’ “Decade of Education for Sustainable Development: 2005-2014.”

[Note: The preamble (above) is from a previous version of the “Ecovillage Design Curriculum” (Version 4.0 March 31, 2006), which is accessible at [http://www.rivendellvillage.org/Ecovillage\\_Design\\_Education.pdf](http://www.rivendellvillage.org/Ecovillage_Design_Education.pdf) (p. 2-3). In the latest version (Version 5, 2012) of “Ecovillage Design Curriculum” at <http://www.gaiaeducation.org/wp-content/uploads/2017/02/EDE-Curriculum-English.pdf>, the “Foreword” (there is no preamble) describes some of the history of Gaia Education, and is included below)]

b) “The EDE curriculum is a free resource for anyone wishing to learn about sustainability principles, and especially for those who might like to teach the EDE in their local area.”

“In 1998, 55 ecovillage educators, members of the Global Ecovillage Network with academic and professional backgrounds in a wide range of disciplines, were invited by Gaia Trust to Denmark to discuss new transdisciplinary approaches of sustainability education, building upon the experiences of the ecovillage movement.”

“Gaia Education was created over a series of meetings among these international ecovillage educators. The group decided to call itself the GEESE - Global Ecovillage Educators for a Sustainable Earth - to acknowledge the importance of collaboration and roving leadership as it is exhibited by the migration behaviour of a flock of geese. The GEESE were united in the effort to make the knowledge and skills developed in ecovillages accessible to a wide audience.”

“Major achievement and milestones of Gaia Education to date have been:

First, the development of the groundbreaking **Ecovillage Design Education** (EDE) curriculum, which draws from the experience and expertise of a network of some of the most successful ecovillages and community projects across the Earth. The EDE was officially launched during the 10th anniversary of the Global Ecovillage Network at the Findhorn Ecovillage in October 2005. The curriculum has a wide range of practical application and is full of innovative materials, ideas and tools that have been developed and tested in communities acting as laboratories of sustainable living.”

“The EDE curriculum is a free resource for anyone wishing to learn about sustainability principles, and especially for those who might like to teach the EDE in their local area.”

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c) “The EDE is consistent with, and representative of, key values in the greater ecovillage movement, values that include: honouring unity through diversity; celebrating diverse cultures and creeds; practicing racial, cultural, and gender equality; promoting social justice and environmental awareness; striving for peace and local self-determination; empowering individuals and local actors; raising consciousness and human potential; and, generally, respecting the living Earth as our planetary home.”

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[Above b) and c) from the “Foreword” of “Ecovillage Design Curriculum” (Version 5, Gaia Education 2012) by the GESEE-- Global Ecovillage Educators for a Sustainable Earth (at <http://www.gaiameducation.org/wp-content/uploads/2017/02/EDE-Curriculum-English.pdf>) (paragraphs 1-4, 8, and 14)]

3) “It’s not a single idea, but many ideas and attitudes, including a reverence for nature and a preference for country life; a desire for maximum personal self-reliance and creative leisure; a concern for family nurture and community cohesion....”

“On *Countryside’s* contents page, Jd Belanger outlines what he sees are the essential elements of the back-to-the-country state of mind.

#### OUR PHILOSOPHY

“It’s not a single idea, but many ideas and attitudes, including a reverence for nature and a preference for country life; a desire for maximum personal self-reliance and creative leisure; a concern for family nurture and community cohesion; a certain hostility toward luxury; **a belief that the primary reward of work should be well-being rather than money**; a certain nostalgia for the supposed simplicities of the past and an anxiety about the technological and bureaucratic complexities of the present and the future; and a taste for the plain and functional. *Countryside* reflects and supports the simple life, and calls its practitioners *homesteaders*.”

#### Notes and Source References:

“In September, 1972, *Countryside*, *Rabbit World*, and *Dairy Goat Guide* were consolidated into one magazine. I had been printing all three myself, as well as being the editor and publisher, and it became humanly and economically impossible to continue that kind of schedule. Each section of the “new” magazine had as many pages as the magazine the section sprang from had, so anybody who was interested in all three really got three for the price of one. The name was changed to *Countryside* and *Small Stock Journal*.” --from article “The History of *Countryside* and *Small Stock Journal*” by Jd Belanger (March 13, 2019) (at <https://www.iamcountryside.com/homesteading/the-history-of-countryside-and-small-stock-journal/>).

From the information I can find on the Internet, Jd Belanger continued to be the editor of *Countryside* and *Small Stock Journal* until 2001 (Jd Belanger at LinkedIn--at <https://www.linkedin.com/in/j-d-belanger-9a0b6b41>). When Jd Belanger was editor of *Countryside* and *Small Stock Journal*, the “Our Philosophy” section was always on the contents page, as mentioned by the quote above. However, since *Countryside* and *Small Stock Journal* was bought by Swift Communications (I can find no online record of when that occurred), the issues are behind a pay wall. And I could find no references to the philosophy online, except through Google Books. Thus, the source reference I chose for the above quote is the book “*New Pioneers: The Back-To-The-Land Movement and the Search for a Sustainable Future*” by Jeffrey Jacob (2010) (at [https://www.google.com/books/edition/New\\_Pioneers/QoXKzfWcuQkC?hl=en&gbpv=0](https://www.google.com/books/edition/New_Pioneers/QoXKzfWcuQkC?hl=en&gbpv=0)) (which can be searched using key words--quote is on p. 28-29)

## 4) Permaculture

a) “It should be possible to design land use systems which approach the solar energy harvesting capacities of natural systems while providing humanity with its needs. This was the original premise of the permaculture concept.”

[From the article “Energy and Permaculture” by David Holmgren (originally published by The Permaculture Activist April 29, 1994) at the website of Resilience (at <https://www.resilience.org/stories/1994-04-29/energy-and-permaculture/#:~:text=The%20permaculture%20strategy%20of%20using,solar%20energy%20is%20precisely%20adaptive.&text=The%20critical%20issue%20of%20the,net%20energy%20availability%20to%20humanity>) (from the last section)]

b) “Carefully observing natural patterns characteristic of a particular site, the permaculture designer gradually discerns optimal methods for integrating water catchment, human shelter, and energy systems with tree crops, edible and useful perennial plants, domestic and wild animals and aquaculture.”

From a Bay Area Permaculture Group brochure, published in West Coast Permaculture News & Gossip and Sustainable Living Newsletter (Fall 1995):

“Permaculture is a practical concept which can be applied in the city, on the farm, and in the wilderness. Its principles empower people to establish highly productive environments providing for food, energy, shelter, and other material and non-material needs, including economic. Carefully observing natural patterns characteristic of a particular site, the permaculture designer gradually discerns optimal methods for integrating water catchment, human shelter, and energy systems with tree crops, edible and useful perennial plants, domestic and wild animals and aquaculture. Permaculture adopts techniques and principles from ecology, appropriate technology, sustainable agriculture, and the wisdom of indigenous peoples. The ethical basis of permaculture rests upon care of the earth--maintaining a system in which all life can thrive. This includes human access to resources and provisions, but not the accumulation of wealth, power, or land beyond their needs.”

[From the webpage “What is Permaculture?” at the Permaculture Design quarterly (at <https://www.permaculturedesignmagazine.com/what-is-permaculture>) (in Section “Permaculture Defined”, #6)]

c) “Water collection, management, and reuse systems like Keyline, greywater, rain catchment, constructed wetlands, aquaponics (the integration of hydroponics with recirculating aquaculture), and solar aquatic ponds (also known as Living Machines) play an important role in permaculture designs.”

“Farming systems and techniques commonly associated with permaculture include agro- forestry, swales, contour plantings, Keyline agriculture (soil and water management), hedgerows and windbreaks, and integrated farming systems such as pond-dike aquaculture, aquaponics, intercropping, and polyculture. Gardening and recycling methods common to permaculture include edible landscaping, keyhole gardening, companion planting, trellising, sheet mulching, chicken tractors, solar greenhouses, spiral herb gardens, swales, and vermicomposting. Water collection, management, and reuse systems like Keyline, greywater, rain catchment, constructed wetlands, aquaponics (the integration of hydroponics with recirculating aquaculture), and solar aquatic ponds (also known as Living Machines) play an important role in permaculture designs.”

[From the webpage “What is Permaculture?” at the Permaculture Design quarterly (at <https://www.permaculturedesignmagazine.com/what-is-permaculture> ) (in Section “Characteristics of Permaculture”, paragraph 4)]

#### d) 12 Design Principles of Permaculture

“Twelve Permaculture design principles articulated by David Holmgren in his *Permaculture: Principles and Pathways Beyond Sustainability*:

1. *Observe and interact*: By taking time to engage with nature we can design solutions that suit our particular situation.
2. *Catch and store energy*: By developing systems that collect resources at peak abundance, we can use them in times of need.
3. *Obtain a yield*: Ensure that you are getting truly useful rewards as part of the work that you are doing.
4. *Apply self-regulation and accept feedback*: We need to discourage inappropriate activity to ensure that systems can continue to function well.
5. *Use and value renewable resources and services*: Make the best use of nature's abundance to reduce our consumptive behavior and dependence on non-renewable resources.
6. *Produce no waste*: By valuing and making use of all the resources that are available to us, nothing goes to waste.
7. *Design from patterns to details*: By stepping back, we can observe patterns in nature and society. These can form the backbone of our designs, with the details filled in as we go.
8. *Integrate rather than segregate*: By putting the right things in the right place, relationships develop between those things and they work together to support each other.
9. *Use small and slow solutions*: Small and slow systems are easier to maintain than big ones, making better use of local resources and producing more sustainable outcomes.
10. *Use and value diversity*: Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides.

11. *Use edges and value the marginal*: The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system.
12. *Creatively use and respond to change*: We can have a positive impact on inevitable change by carefully observing, and then intervening at the right time.”

[From the Wikipedia webpage “Permaculture” at <https://en.wikipedia.org/wiki/Permaculture> (in the section “Theory”, and in the subsection “Twelve Design Principles”)]

e) To Summarize... (from the article “Energy and Permaculture” by David Holmgren)

To summarize...

- \* Reduce, Reuse, Recycle (in that order).
- \* Grow a garden and eat what it produces.
- \* Avoid imported resources where possible.
- \* Use labor and skill in preference to materials and technology.
- \* Design, build, and purchase for durability and repairability.
- \* Use resources for their greatest potential use (e.g. electricity for tools and lighting, food scraps for animal feed).
- \* Use renewable resources wherever possible even if local environmental costs appear higher (e.g. wood rather than electricity for fuel and timber rather than steel for construction).
- \* Use non-renewable and embodied energies primarily to establish sustainable systems (e.g. passive solar housing, food gardens, water storage, forests).
- \* When using high technology (e.g. computers) avoid using state of the art equipment.
- \* Avoid debt and long-distance commuting.
- \* Reduce taxation by earning less.
- \* Develop a home-based lifestyle, be domestically responsible.

[From the article “Energy and Permaculture” by David Holmgren (originally published by The Permaculture Activist April 29, 1994) at the website of Resilience (at <https://www.resilience.org/stories/1994-04-29/energy-and-permaculture/#:~:text=The%20permaculture%20strategy%20of%20using,solar%20energy%20is%20precisely%20adaptive.&text=The%20critical%20issue%20of%20the,net%20energy%20availability%20to%20humanity>) (from the last section)]

f) “The transition from an unsustainable fossil fuel-based economy back to a solar-based (agriculture and forestry) economy will involve the application of the embodied energy that we inherit from industrial culture: This embodied energy is contained within a vast array of things, infrastructure, cultural processes and ideas, mostly inappropriately configured for the ‘solar’ economy. It is the task of our age to take this great wealth, reconfigure and apply it to the development of sustainable systems.”

“Mollison almost in passing points to three guidelines we should observe in this task.

- \* The systems we construct should last as long as possible and take least maintenance.
- \* These systems, fueled by the sun should produce not only for their own needs, but the needs of the people creating and controlling them. Thus they are sustainable as they sustain both themselves and those who construct them.
- \* We can use non-renewable energy to construct these systems providing that in their lifetime, they store or conserve more energy than we use to construct or maintain them.”

[From the article “Energy and Permaculture” by David Holmgren (originally published by The Permaculture Activist April 29, 1994) at the website of Resilience (at <https://www.resilience.org/stories/1994-04-29/energy-and-permaculture/#:~:text=The%20permaculture%20strategy%20of%20using,solar%20energy%20is%20precisely%20adaptive.&text=The%20critical%20issue%20of%20the,net%20energy%20availability%20to%20humanity>) (in section “Mollison”, paragraphs 4 and 5)]

g) Permaculture Global: A growing list of permaculture projects worldwide

“This is the premier place to find out who is doing what, and where, in the permaculture world. You can search for projects by keyword, and/or filter to specific project types. You can even constrain your search by climate zone, so you can find others working in similar conditions as yourself. As you search, you’ll see pins on the world map below appear or disappear to reflect your search results, and you can either browse the project cards or click on map pins to go to individual project profiles.”

[From the webpage “Worldwide Permaculture Projects” at the Permaculture Global website (at <https://permacultureglobal.org/projects>) (paragraph 1)]

## 5) Transition Network

a) “It’s an approach that has spread now to over 50 countries....”

“Transition is a movement that has been growing since 2005. It is about communities stepping up to address the big challenges they face by starting local. By coming together, they are able to crowd-source solutions. They seek to nurture a caring culture, one focused on supporting each other, both as groups or as wider communities.”

“In practice, they are reclaiming the economy, sparking entrepreneurship, reimagining work, reskilling themselves and weaving webs of connection and support. It’s an approach that has spread now to over 50 countries, in thousands of groups: in towns, villages, cities, Universities, schools. One of the key ways it spreads is through telling inspiring stories, and that’s what we aim to do on this website. We really hope you feel inspired to take part, we’d be honoured if you did.”

[From the webpage “What is Transition?” at the Transition Network website (at <https://transitionnetwork.org/about-the-movement/what-is-transition/>) (paragraphs 1 and 2)]

b) Essential Guide to Doing Transition

“This guide will give you everything you need to know to start Transition in your community and outlines the processes and activities needed to make it a success. We are thrilled to be able to offer it here in English, Chinese, French, German, Hebrew, Hungarian, Italian, Japanese, Polish, Portuguese, Russian, Swedish and Spanish. If you would like to translate it into another language then please get in contact.”

“It is essential reading for all people involved in Transition, as it explains the 7 essential ingredients of Transition that will give you all you need to get Transition started and established in your community. We hope you find it useful and good luck.”

[Note: There is a “download” button on this webpage for the “The Essential Guide to Doing Transition - English V1.2 application/pdf 9 MB”.]

[From the webpage “Essential Guide to Transition” (by Mike Thomas 22nd August 2018) at the Transition Network website (at <https://transitionnetwork.org/resources-essential-guide-transition/>) (paragraphs 1 and 2)]

c) “7 Essential Ingredients: Healthy Groups, Vision, Community Involvement, Networks and Partnerships, Practical Projects, Part of a Movement, Reflect and Celebrate”

These seven essential ingredients will enable you to develop and embed Transition within your community.

“Healthy Groups, Vision, Community Involvement, Networks and Partnerships, Practical Projects, Part of a Movement, Reflect and Celebrate”

[From the webpage “7 Essential Ingredients” at the Transition Network website (at <https://transitionnetwork.org/do-transition/starting-transition/7-essential-ingredients/> )]

[Note: The above “7 Essential Ingredients” webpage is a starting point from which people can click on “read more” buttons for each of the seven ingredients, and access more resources.]

d) Campaign--“From What Is to What If: Reimagining and Rebuilding Our World”

“Now, more than ever, it’s essential for us to come together to connect with each other, envision positive futures, rethink our national strategy, and take practical action to build community resilience everywhere.”

***From What Is to What If***  
*Reimagining and Rebuilding Our World*

A new, year-long national campaign exploring how we can come together now to cultivate a more just, sustainable, and regenerative future.

- Positive Visioning (The Heart)
- Movement Strategy (The Head)
- Stories to Action (The Hands)

LEARN MORE AND SHARE YOUR VISIONS, IDEAS, AND STORIES ONLINE AT [TRANSITIONUS.ORG/WHATIF](https://transitionus.org/whatif)

**TRANSITION**  
UNITED STATES

“To facilitate this process, Transition US is inviting all of our friends, supporters, partners, and members of hundreds local, regional, and national Transition Initiatives throughout this country to participate in a new campaign we’re calling ‘From What Is to What If: Reimagining and Rebuilding Our World.’”

“Named after [Transition Movement founder Rob Hopkins’ 2019 book](#) about ‘Unleashing the power of the imagination to create the future we want,’ this campaign will consist of three overlapping phases. Please click on the phases below to learn more and get involve—“

[From the webpage “From What Is to What If: Reimagining and Rebuilding Our World” at the Transition US website (at <https://www.transitionus.org/whatif/>) (paragraphs 1-4, and one poster-like graphics)]

6) “The Findhorn Ecovillage is a tangible demonstration of the links between the spiritual, social, ecological and economic aspects of life and is a synthesis of the very best of current thinking on human habitats.”

a) “... a constantly evolving model used as a teaching resource by a number of university and school groups as well as by professional organisations and municipalities worldwide.”

“The Findhorn Ecovillage is a tangible demonstration of the links between the spiritual, social, ecological and economic aspects of life and is a synthesis of the very best of current thinking on human habitats. It is a constantly evolving model used as a teaching resource by a number of university and school groups as well as by professional organisations and municipalities worldwide.”

b) “The Findhorn Ecovillage--

is at the heart of the largest single intentional community in the UK

is a pioneering ecovillage that evolved at The Park from 1985

is a major centre for holistic learning serving thousands of visitors each year from around the world

has an ecological footprint that is around half the national (UK) average

features more than 100 ecologically-benign buildings

supplies energy from four wind turbines

boasts a biological Living Machine waste water treatment system

installed a 250kW biomass boiler in 2010 to serve the central Park area, reducing carbon emissions by around 80 tons a year

includes numerous solar water heating systems

is part of a comprehensive recycling system

is the publisher of the UK’s first technical guide to ecological housing



has a share-issuing community co-operative and a local currency  
is served by a car-sharing club that includes zero-emissions electric vehicles”

[From the webpage “Ecovillage Findhorn: New Frontiers for Sustainability” at the website for Findhorn Ecovillage (at <https://www.ecovillagefindhorn.com/index.php/ecovillage-findhorn> ) (paragraphs 1 and 4)]

c) From introduction to course offering “Applied Ecovillage Living”

“The Findhorn Foundation, community, and ecovillage has a long history of facilitating and teaching sustainability practices. During the programme, participants will engage with these resources and get to meet and learn from inspiring teachers and facilitators with wide-ranging experience and expertise. We will also have self-organised time where we explore arising topics and share perspectives from our different countries and cultures.”

“Together we will learn about:

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

Cultural and Spiritual diversity practices”

[From the webpage “Applied Ecovillage Living” at the website for Findhorn Foundation (at <https://www.findhorn.org/programmes/applied-ecovillage-living-2019/> ) (paragraphs 3-4)]

d) Detailed overview of a course on “Ecovillage Design Curriculum”

“Gaia Education Design for Sustainability Incorporating Transition Towns Training

5 October - 8 November 2013”

“Presented by the Findhorn Foundation College in partnership with the Findhorn Foundation, Global Ecovillage Network and Gaia Education

“Based on the Ecovillage Design Curriculum - an official contribution to the United Nations Decade of Education for Sustainable Development

“You are invited to join this five-week comprehensive training based on the four core pillars of the Ecovillage Design Curriculum: the social, worldview, ecological and economic dimensions of sustainability.

“The Gaia Education curriculum draws on the experience and expertise developed in a network of some of the most successful ecovillages and community projects across the Earth.

“Design for Sustainability Training is an advanced training course based at the Findhorn Ecovillage providing a practical forum for learning and developing skills needed to work effectively with design for sustainability at all levels. The fifth week of the programme offers practice in facilitation skills, for personal growth, spiritual enrichment and sustainable social action.

“Facilitated by

May East - Chief Executive, Gaia Education

Jonathan Dawson - Head of Economics, Schumacher College

Michael Shaw - Director, Ecovillage International

Pracha Hutunuwatr - Director, Right Livelihood Foundation, Thailand

Jane Rasbash - Director, Gaia Education

Daniel Wahl - Research & Innovation, International Futures Forum  
and Findhorn Ecovillage experts

#### “Social Design - Week 1: Oct 5 - Oct 11

Topics include--

Building Community & Embracing Diversity

Communication Skills and Feedback

Facilitation and Decision-Making Processes

Conflict Facilitation

Personal Empowerment and Leadership

Celebrating Life: Creativity and Art

#### “Ecological Design - Week 2: Oct 12 - Oct 18

Topics include--

Whole Systems Approach to Ecological Design & Bioregionalism

Water

Organic Agriculture and Local Food

Appropriate Technology: Energy  
Green Building

“Economic Design - Week 3: Oct 19 - Oct 26

Topics include--

Shifting the Global Economy to Sustainability

How Money Works: Community Banks and Currencies

Right Livelihood

Social Enterprise

Legal and Financial Issues

“Worldview - Week 4: Oct 26 - Nov 1

Topics include--

Holistic Worldview

Listening to and Reconnecting with Nature

Awakening & Transformation of Consciousness

Personal Health, Planetary Health

Socially Engaged Spirituality and Bioregionalism

“Facilitation Skills and Empowerment - Week 5: Nov 2 - Nov 8

Topics include--

Practice in facilitation skills for personal growth

Spiritual enrichment

Sustainable social action”

[(Editor’s Note--SP) Unfortunately, the link for this overview of Ecovillage Design Curriculum no longer exists... but I had this overview in a less recent paper--and it provides a kind of “older snapshot” of how many educational resources have been available, and for how long. Also, in Version 5 (2012) of “Ecovillage Design Education” (at <http://www.gaiameducation.org/wp-content/uploads/2017/02/EDE-Curriculum-English.pdf>), the four sections of Ecovillage Design (Social Design, Ecological Design, Economic Design, and Worldview and the topics included in each, are presented in an overview on p. 1, and then explored in depth in the rest of the book.]

7) “From the very beginning, at Tuskegee, I was determined to have the students do not only the agricultural and domestic work, but to have them erect their own buildings.”

(Booker T. Washington)

[Here are some of excerpts from Booker T. Washington’s autobiography “Up From Slavery” (first published in 1901). (online Table of Contents at <http://xroads.virginia.edu/~HYPER/WASHINGTON/toc.html> )]

[Note: For those readers who do not know of Booker T. Washington, he was born into slavery. By a remarkable struggle in his early life, and on his way to Virginia--and by a very fortunate “entrance exam”--he gained the benefits of an education at the Hampton Normal and Agricultural Institute (Hampton, Virginia). During his post graduate work there, he was recommended by its founder and president (former Union General Samuel C. Armstrong) to be the founder of an educational institution in Tuskegee, Alabama (in 1881).]

a) “... in the teaching of civilization, self-help, and self-reliance, the erection of buildings by the students themselves would more than compensate for any lack of comfort or fine finish.”

(From paragraphs 1-3 in the Chapter 10 “A Harder Task Than Making Bricks Without Straw”)

“From the very beginning, at Tuskegee, I was determined to have the students do not only the agricultural and domestic work, but to have them erect their own buildings. My plan was to have them, while performing this service, taught the latest and best methods of labour, so that the school would not only get the benefit of their efforts, but the students themselves would be taught to see not only utility in labour, but beauty and dignity; would be taught, in fact, how to lift labour up from mere drudgery and toil, and would learn to love work for its own sake. My plan was not to teach them to work in the old way, but to show them how to make the forces of nature--air, water, steam, electric, horsepower—assist them in their labor.

“At first many advised against the experiment of having the buildings erected by the labour of the students, but I was determined to stick to it. I told those who doubted the wisdom of the plan that I knew that our first buildings would not be so comfortable or so complete in their finish as buildings erected by the experienced hands of outside workmen, but that in the teaching of civilization, self-help, and self-reliance, the erection of buildings by the students themselves would more than compensate for any lack of comfort or fine finish.”

“I further told those who doubted the wisdom of this plan, that the majority of our students came to us in poverty, from the cabins of the cotton, sugar, and rice plantations of the South, and that while I knew it would please the students very much to place them at once in finely constructed buildings, I felt that it

would be following out a more natural process of development to teach them how to construct their own buildings. Mistakes I knew would be made, but these mistakes would teach us valuable lessons for the future.”

b) “Many white people who had had no contact with the school, and perhaps no sympathy with it, came to us to buy bricks because they found out that ours were good bricks. They discovered that we were supplying a real want in the community.”

(From paragraphs 8, 11 and 12) in Chapter X “A Harder Task Than Making Bricks Without Straw”)

“When it came to brickmaking, their distaste for manual labour in connection with book education became especially manifest. It was not a pleasant task for one to stand in the mud-pit for hours, with the mud up to his knees. More than one man became disgusted and left the school...”

“...Brickmaking has now become such an important industry at the school that last season our students manufactured twelve hundred thousand of first-class bricks, of a quality suitable to be sold in any market. Aside from this, scores of young men have mastered the brickmaking trade - both the making of bricks by hand and by machinery - and are now engaged in this industry in many parts of the South.

“The making of these bricks taught me an important lesson in regard to the relations of the two races in the South. Many white people who had had no contact with the school, and perhaps no sympathy with it, came to us to buy bricks because they found out that ours were good bricks. They discovered that we were supplying a real want in the community. The making of these bricks caused many of the white residents of the neighbourhood to begin to feel that the education of the Negro was not making him worthless, but that in educating our students we were adding something to the wealth and comfort of the community. As the people of the neighbourhood came to us to buy bricks, we got acquainted with them; they traded with us and we with them. Our business interests became intermingled. We had something which they wanted; they had something which we wanted. This, in a large measure, helped to lay the foundation for the pleasant relations that have continued to exist between us and the white people in that section, and which now extend throughout the South.”

c) “As an additional result, hundreds of men are now scattered throughout the South who received their knowledge of mechanics while being taught how to erect these buildings.”

(From paragraph 4 in Chapter X “A Harder Task Than Making Bricks Without Straw”)

“During the now nineteen years' existence of the Tuskegee school, the plan of having the buildings erected by student labour has been adhered to. In this time forty buildings, counting small and large,

have been built, and all except four are almost wholly the product of student labour. As an additional result, hundreds of men are now scattered throughout the South who received their knowledge of mechanics while being taught how to erect these buildings. Skill and knowledge are now handed down from one set of students to another in this way, until at the present time a building of any description or size can be constructed wholly by our instructors and students, from the drawing of the plans to the putting in of the electric fixtures, without going off the grounds for a single workman.”

d) “The people with whom he lives and works are going to think twice before they part with such a man.”

(From paragraph 15 in Chapter X “A Harder Task Than Making Bricks Without Straw”)

“The same principle of industrial education has been carried out in the building of our own wagons, carts, and buggies, from the first. We now own and use on our farm and about the school dozens of these vehicles, and every one of them has been built by the hands of the students. Aside from this, we help supply the local market with these vehicles. The supplying of them to the people in the community has had the same effect as the supplying of bricks, and the man who learns at Tuskegee to build and repair wagons and carts is regarded as a benefactor by both races in the community where he goes. The people with whom he lives and works are going to think twice before they part with such a man.”

[End of excerpts from Booker T. Washington’s autobiography “Up From Slavery” (first published in 1901). (online Table of Contents at <http://xroads.virginia.edu/~HYPER/WASHINGTON/toc.html> ) ]

[Note: The three paragraphs below are from blog entry “This Week in Halls Hill History: The Origin of Langston School” (August 9, 2020) (more on source reference below)]

e) “... the Rosenwald Fund. Using state-of-the-art architectural plans designed by professors at Tuskegee Institute, the fund spent more than four million dollars to build 4,977 schools, 217 teacher homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas. The Rosenwald Fund was based on a system of matching grants, requiring white school boards to commit to maintenance and black communities to aid in construction.”

“A collaboration between Booker T. Washington and Julius Rosenwald created the project to build ‘Rosenwald Schools,’ to educate Black students to attempt to allay the chronic underfunding of schools in the Southern states. Booker T. Washington was an educator and philanthropist, and the founder of the Tuskegee Institute. Julius Rosenwald was a clothier who became a part-owner and president of Sears, Roebuck, and Company. Their collaboration required both the Black community and the white

local government to contribute to funding the school construction. The local school board was required to operate and maintain the schools. Almost 5,000 schools were built in the former Confederate states and Maryland, Oklahoma, Kentucky, and Missouri. These schools educated almost one-third of black students in the country.”

“As noted in Wikipedia, ‘The school building program was one of the largest programs administered by the Rosenwald Fund. Using state-of-the-art architectural plans designed by professors at Tuskegee Institute, the fund spent more than four million dollars to build 4,977 schools, 217 teacher homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas. The Rosenwald Fund was based on a system of matching grants, requiring white school boards to commit to maintenance and black communities to aid in construction’.”

[The three paragraphs above are from blog entry “This Week in Halls Hill History: The Origin of Langston School” (August 9, 2020) at the Halls Hill Community website (at <https://hallshill.com/tag/rosenwald-fund/>) (From “About my Hall’s Hill Family” webpage (at <https://hallshill.com/about-my-halls-hill-family/>): “But there are other stories from the neighborhood that are not as well known. Here on the website we will share some of those stories on the blog every week.”)]

f) From the Wikipedia webpage for “Rosenwald School”

“Julius Rosenwald and his family established the Rosenwald Fund in 1917 for ‘the well-being of mankind’. Unlike other endowed foundations, which were designed to fund themselves in perpetuity, the Rosenwald Fund was intended to use all of its funds for philanthropic purposes. It donated more than \$70 million (equivalent to \$789,488,000 in 2021) to public schools, colleges, universities, museums, Jewish charities, and black institutions before the funds were depleted in 1948.

“The school building program was one of the largest programs administered by the Rosenwald Fund. Using state-of-the-art architectural plans designed by professors at Tuskegee Institute, the fund spent more than \$4 million to build 5,388 schools, 217 teacher homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas. The Rosenwald Fund was based on a system of matching grants, requiring white school boards to commit to maintenance and black communities to aid in construction. Fulfilling the goals of the match grant program, African American communities contributed \$4.8 million to the building of 5,338 schools throughout the South.”

[From the Wikipedia webpage for “Rosenwald School” (at [https://en.wikipedia.org/wiki/Rosenwald\\_School](https://en.wikipedia.org/wiki/Rosenwald_School)) (in Section “Rosenwald Fund”, paragraphs 1 and 2)]

8) Appropriate Technology Library--1050 Books on 1 USB Drive (by Village Earth)

a) “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.”

b) “The AT Library gives you the knowledge to solve real-world problems such as: building and maintaining an irrigation system; starting a small fish hatchery; building a small-scale hydropower scheme; building and maintaining pumps

“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.”

c) For a complete list of the 1050 books included--

“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.”

[Note: For a complete list of the 1050 books included--at the bottom of the Appropriate Technology Library webpage (at <https://villageearth.org/home-2/resources/appropriate-technology-library/>), click on the “Books in the AT Library” tab. 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.]

d) “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.”

[a), b), c), and d) above are from the webpage “Appropriate Technology Library” at the Village Earth website (at <https://villageearth.org/home-2/resources/appropriate-technology-library/>)--paragraph a) is from the banner just below the title of the webpage; paragraphs b) and c) are paragraphs 2 and 3 in the “About the ATL” tab, at the bottom of the page; and the last paragraph above (d) is the Village Earth Mission Statement, which is in the right hand bottom corner of the above linked ATL page]



[Note: In addition to the excerpts from Section C. here--and especially as a “huge resource bank” which includes many appropriate technologies, and skills for low impact living--

The **Low Impact Living Initiative** website has a very comprehensive webpage with overviews of many appropriate technologies--at the webpage “Low-Impact Living” (at <https://www.lowimpact.org/>).

From that webpage: “Lowimpact.org is a huge resource bank for living sustainably and re-skilling for career change, supported by a network of like-minded people, businesses & organisations. Browse the categories below for 230+ topics with frequently updated info, books, magazines, news, videos, courses, products, services & specialists to answer your queries.”]

(Excerpts from Section C. continued)

9) Excerpt from a “Farmer Seeking Apprentice” Application Form—“We feel we have a broad education to offer to an apprentice.”

(received by this writer from a “Organic Farm Apprentice Placement Service”)

“We have a diversified mixed crop and livestock farm from which we earn our living, both of us working at it full-time and year around. As market crops go we raise Certified Seed and tablestock potatoes, greenhouse tomatoes, and over 30 types of vegetables. Our young orchard of 300 apple trees is beginning to bear fruit. We make and sell apple cider and maple syrup. Our livestock include a flock of sheep (15 ewes and ram) from which we sell freezer lamb and wool; two Belgian draftmares which we work in our woodlot and on our fields along with a tractor; a Jersey milk cow that supplies us with daily milk and a yearly calf; 20 laying hens, a pig, sheep dogs, and barn cats.”

“Along with the daily tending of livestock and crops, there are on-going projects of brush clearing and bringing new land into production, and fencing. Seasonally there is horse work (maple sap gathering, logging, crops), apple tree pruning; lambing, sheep shearing; wool spinning and felting; buttermaking, canning, and pickling. We also fit in construction projects: in 1991 finishing up a 20’ x 66’ vegetable storage/packing shed and greenhouse. We market our crops in three ways: Community Supported Agriculture (CSA) subscription garden, mail order operation, and wholesale to stores and distributors.”

“We have had our farm for 15 years and run it as a commercial operation that sustains us both spiritually and financially. Farming is our life and we love the discipline, the opportunity to live and work simply, independently, and ecologically. We work hard and it is a true labor of love. We raise most all of The food and firewood we need, and construct our own buildings. We produce our 12 volt electricity from photovoltaic panels. We feel we have a broad education to offer to an apprentice. Call us if our farm interests you.”

[From a copy “Farmer Seeking Apprentice” Form on file (among five others) sent to me from an Organic Farming Association in New England (USA), as I was, at that time, considering doing such an apprenticeship. My only source for this is earlier documents of mine, where I made reference to the original. I did not save the copy I had of the actual piece of paper with the typewritten answers on it. Note: I offer the above, and all of Section C, as an example that, to me personally, as part of the kind of foundation which has a high probability for making the cultural transformation to Zero Carbon Resilience, Sustainable BioDiversity, gender equitable, socio-cultural equitable (carbon footprints, eco-footprints and water footprints), equal justice, requisite emergency aid, and peaceful outcomes... and suggests a way to re-focus our attention from meeting projected rises in energy demand, to downsizing our energy needs, and re-discovering life in small cities, towns, and villages.]

10) Local Food Policy--“Many organizations, both local and national in scope, have developed tools, informational resources, or successful model policies

Local Food Policy--“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.”

“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)]

11) "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."

"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." (p. 36, paragraph 5)

"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." (p. 37, paragraph 6)

[From report "State of the World 2004--Special Focus: The Consumer Society" (Worldwatch Institute) (2004) at the website of Green Economics (at <http://www.greeneconomics.net/StateOfWorld-2004.pdf>) (in Chapter 2 "Making Better Energy Choices" by Janet L. Sawin]

12) Local Currency--"Federal currency is exchanged for BerkShares at nine branch offices of three local banks and spent at 400 locally owned participating businesses."

a) “The people who choose to use the (local) 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.”

“... 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>) (paragraph 2)]

b) “Federal currency is exchanged for BerkShares at nine branch offices of three local banks and spent at 400 locally owned participating businesses.”

[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)) (paragraph 3)]

13) “This embodied energy is contained within a vast array of things, infrastructure, cultural processes and ideas, mostly inappropriately configured for the ‘solar’ economy. It is the task of our age to take this great wealth, reconfigure and apply it to the development of sustainable systems.”

“The transition from an unsustainable fossil fuel-based economy back to a solar-based (agriculture and forestry) economy will involve the application of the embodied energy that we inherit from industrial culture: This embodied energy is contained within a vast array of things, infrastructure, cultural processes and ideas, mostly inappropriately configured for the ‘solar’ economy. It is the task of our age to take this great wealth, reconfigure and apply it to the development of sustainable systems.”

“Mollison almost in passing points to three guidelines we should observe in this task.

- \* The systems we construct should last as long as possible and take least maintenance.
- \* These systems, fueled by the sun should produce not only for their own needs, but the needs of the people creating and controlling them. Thus they are sustainable as they sustain both themselves and those who construct them.
- \* We can use non-renewable energy to construct these systems providing that in their lifetime, they store or conserve more energy than we use to construct or maintain them.”

[From the article “Energy and Permaculture” by David Holmgren (originally published by The Permaculture Activist April 29, 1994) at the website of Resilience (at <https://www.resilience.org/stories/1994-04-29/energy-and-permaculture/#:~:text=The%20permaculture%20strategy%20of%20using,solar%20energy%20is%20precisely%20a%20daptive.&text=The%20critical%20issue%20of%20the,net%20energy%20availability%20to%20humanity>) (in section “Mollison”, paragraphs 4 and 5)]

14) 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 as they materialize worldwide. This is part of the ‘spiritual teachings’ element which often gets overlooked. (Stefan Pasti)

15) [“Growing Wisdom and Compassion in Small Communities \(13 Steps\)”](#) (78 pages)  
by Stefan Pasti

[Summary paper, with overviews of seven steps originally published in the [“IPCR Journal/Newsletter Spring 2005](#) (p. 3-6) at the website of The Interfaith Peacebuilding and Community Revitalization (IPCR) Initiative-- a predecessor (also founded by Stefan Pasti) to The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative--and archived at <https://www.cpcsi.org/about-the-ipcr-initiative.html> . The list below is the Table of Contents for the “Growing Wisdom....” paper above. The “Growing Wisdom....” paper is also accessible the “Key Documents (with Descriptions)” webpage (of the CPCS Initiative), <https://www.cpcsi.org/key-documents-with-descriptions> (see #7)]

#### Growing Wisdom and Compassion in Small Communities (13 Steps)

- 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/Local Food Councils/Community Supported Agriculture
- 12) Local Currency
- 13) Neighbor to Neighbor Community Education (NTNCE) Projects in Local Newspapers

16) “The Great Way is very level, but people greatly delight in tortuous paths.”

“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.”

[From Chapter 53 of “Te-Tao Ching” (by Lao Tzu) (possibly 6th Century BCE) translation by Robert G. Hendricks Ballantine Books 1992 --accessible through a key word search (if you are signed in) at [17\) From article “Gandhi’s Swadeshi--The Economics of Permanence” by Satish Kumar \(originally a chapter in "The Case Against the Global Economy - and for a turn toward the local" edited by Jerry Mander and Edward Goldsmith\)](https://www.amazon.com/Lao-Tzu-Translation-Discovered-Ma-wang-tui/dp/0345370996?ref =nav_signin&https://www.amazon.com/Lao-Tzu-Translation-Discovered-Ma-wang-tui/dp/0345370996?ref =nav_signin& ]</a></p>
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“In India, people have lived for thousands of years in a relative harmony with their surroundings: living in their homesteads, weaving homespun clothes, eating homegrown food, using homemade goods; caring for their animals, forests, and lands; celebrating the fertility of the soil with feasts; performing the stories of great epics, and building temples. Every region of India has developed its own distinctive culture, to which travelling storytellers, wandering 'saddhus', and constantly flowing streams of pilgrims have traditionally made their contribution.

“According to the principle of swadeshi, whatever is made or produced in the village must be used first and foremost by the members of the village. Trading among villages and between villages and towns should be minimal, like icing on the cake. Goods and services that cannot be generated within the community can be bought from elsewhere.

“Swadeshi avoids economic dependence on external market forces that could make the village community vulnerable. It also avoids unnecessary, unhealthy, wasteful, and therefore environmentally destructive transportation. The village must build a strong economic base to satisfy most of its needs, and all members of the village community should give priority to local goods and services.

“Every village community of free India should have its own carpenters, shoemakers, potters, builders, mechanics, farmers, engineers, weavers, teachers, bankers, merchants, traders, musicians, artists, and priests. In other words, each village should be a microcosm of India--a web of loosely inter-connected communities. Gandhi considered these villages so important that he thought they should be given the status of "village republics".

“The village community should embody the spirit of the home--an extension of the family rather than a collection of competing individuals. Gandhi's dream was not of personal self-sufficiency, not even family self-sufficiency, but the self-sufficiency of the village community...

“...In communities practising swadeshi, economics would have a place but would not dominate society. Beyond a certain limit, economic growth becomes detrimental to human well-being. The modern worldview is that the more material goods you have, the better your life will be. But Gandhi said, "A certain degree of physical comfort is necessary but above a certain level it becomes a hindrance instead of a help; therefore the ideal of creating an unlimited number of wants and satisfying them, seems to be a delusion and a trap. The satisfaction of one's physical needs must come at a certain point to a dead stop before it degenerates into physical decadence.”

[article accessible in booklet “The 15<sup>th</sup> Annual Gandhi Peace Festival” (“Towards a Culture of Nonviolence, Peace, and Justice; 2007 Theme: Building Sustainable Communities”) from the webpage “Global Peace and Social Justice” of the website “McMaster University” (<https://gpsj.humanities.mcmaster.ca/gandhi-peace-festival/gandhi-peace-festival-booklets/>)(and directly from <https://gpsj.humanities.mcmaster.ca/wp-content/uploads/sites/18/2021/06/2007-Building-Sustainable-Communities.pdf> ) (p. 12, paragraphs 2-6 and p. 13 (paragraph 3)]

## F. Logistics

[Excerpt from “Becoming a Greater Force Than the Challenges We Are Facing” (6 pages; August, 2021)--also accessible at <https://www.cpcsi.org/recommendations> (Note: letters and numbers in organization are different from the original)]

The CPCS Initiative believes that priority actions—for urgently and drastically cutting Global Greenhouse Gas Emissions—be more constructive if they were focused on small cities, towns, and villages, which--

- 1) are more sustainable-friendly in the long run
- 2) have less complex vulnerabilities
- 3) create more emphasis on downsizing and focusing on what basic necessities are most needed and
- 4) where it is easier to see the results of our actions
- 5) 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.

The CPCS Initiative also believes that it is possible for local communities and regions to include the recommendations of the CPCS Initiative into their local specific “constellation of initiatives”—and for all continents, countries, regions, and local communities to achieve Zero Carbon in ten years.

Here is one example of a “constellation of initiatives” approach to community education and collaborative problem solving which can exponentially accelerate our efforts to do everything we can to improve our circumstances.

1) Fortunately, there are thousands positive tipping point organizations and institutions, which are--

- a) making significant contributions in their fields (especially Climate Mitigation and Sustainable Biodiversity, but also many other fields)
- b) well known in their fields for the integrity and reliability of their work.

[Note: I have listed 616 positive tipping point organizations and institutions (with Twitter profiles) in 30 categories in Appendix 10 of my 157 page paper [“Brainstorming Zero Carbon ASAP Campaign”](#)--and have also compiled a paper [“Sample List of 231 Positive Tipping Point Organizations and Institutions”](#) (12 pages; December, 2020)]

As a way to exponentially accelerate solution activity on many key positive indicators at the same time, I advocate for **accumulating 5-10 page overviews** on how to achieve Zero Carbon ASAP (in small cities, towns, and villages)--*and also how their field of activity can contribute to resolving other critical*



*challenges*--from thousands of such positive tipping point organizations and institutions (overviews which will be updated as needed, for the duration of the emergency)--and make such overviews accessible for free on a number of clearinghouse websites.

2) Such 5-10 page overviews, organized for easy access on clearinghouse websites, can--

- a) provide a clear visualization of transformations needed in every aspect of our lives--since different organizations will focus on priorities in their fields of activity (food systems; water scarcity; migration, housing; land rights; biodiversity; civic engagement; peacebuilding; emergency assistance, etc.)
- b) provide the equivalent of a needs assessment for local communities, of the kind which precedes local Community Visioning ([many overviews of visioning best practices](#); [excellent example of visioning in 13 minute documentary](#)) [Note: Community Visioning Initiatives can be described as a series of community meetings designed to maximize citizen participation in identifying challenges, and in solution-oriented activity.]
- c) provide focus and urgency for local surveys of key leaders (prior to Visioning; surveys which identify local-specific challenges and local-specific solutions)--the responses to which can demonstrate the need for Community Visioning, and many Neighborhood Learning Centers
- d) open up many new lines of discussion on how people can work through differences, get on the same side, and help each other
- e) build awareness that everyone's investments of time, energy, and money ("votes" which are made more frequently than election votes) can have a positive and cumulative effect on the solutions-investment-training-employment sequence--and create countless solution-oriented jobs
- f) be a great asset to the ["over 2006+ local governments that have declared a Climate Emergency"](#) (as of July 1, 2021)

3) Local Community Visionings can--

- a) actively engage local residents in identifying challenges and solutions, prioritizing solutions, and creating action plans
- b) provide a process by which residents can find common ground and work together
- c) provide local newspapers, and other news sources, with numerous positive ways of reporting on this Accelerating Climate Emergency Action process
- d) be a sign of hope to many people who are feeling despair, as this "Brainstorming" project highlights how many truly valuable resources we can leverage to resolve the many unprecedented challenges we are now facing

[Note: While there are advantages to in-person Community Visioning/stakeholder engagement (especially in local communities), there are many online stakeholder engagement platforms with very helpful tools and resources (as may be necessary for a prolonged COVID pandemic). (Ex: online engagement features available thru Engagement Hub at <https://engagementhub.com.au/software-features> ).]

[Note: The “[17 Tweet Series](#)” (as a document) also summarizes the “constellation of initiatives” approach of the The CPCS Initiative (and summarizes the unprecedented challenges)--and is also accessible on the homepage of The CPCS Initiative at [www.cpcsi.org](http://www.cpcsi.org) ]]

[In addition, Appendix 1 (p. 100) provides overviews in more detail of Community Visioning Initiatives, Neighborhood Learning Centers, and Neighbor to Neighbor Community Education sections in local newspaper.]

4) Thousands of local Community Visioning Initiatives, in communities around the world, can...

Thousands of local Community Visioning Initiatives, in communities around the world, can activate the most possible human participation (by way of 6-12 months of workshops, meetings, brainstorming, and prioritizing challenges and solutions) (with the process repeated periodically in the future), and help build a high level of consensus for specific action plans in the shortest amount of time, with support from--

- a) Universities, colleges, and thousands of positive tipping point related organizations and institutions creating related curriculum--and offering resources, classes, workshops, and teacher training to maximize the identification of challenges and solutions during the Community Visioning process
- b) Neighborhood Learning Centers helping to create the necessary knowledge base and skill sets by providing accessible space for workshops, discussion, information sharing, mutual support, encouragement, fellowship, and friendship
- c) Local newspapers supporting this multi-faceted solution-oriented path with ongoing coverage--and a new section for reader contributions which identify helpful people and valuable resources, and reinforce important community goals
- d) Residents (especially those who are unemployed) volunteering time and energy to assist with Community Visioning and Neighborhood Learning Centers, and to advance resulting action plans--who then could receive, as compensation, local currency (which, because it can only be spent in local community businesses, helps support the local economy)
- e) Job fairs at the end of the Community Visioning Initiative process, which 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.
- f) Local leaders of religious/spiritual traditions stepping up on every frontline possible to help people understand the urgent need to
  - i) sacrifice personal desires for the greater good
  - ii) choose forgiveness, reconciliation--and *abstaining from violent conflict resolution*--as a way of bringing cycles of violence to an end

iii) create 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"

and help people understand the benefits of

#### 5) Interfaith Prayer Vigils

One possible goal for an Interfaith Prayer Vigil would be for all the different faith traditions in a local community to have at least one person participating in the Prayer Vigil at all times designated for the Prayer Vigil (in such time intervals as they choose).

With an emphasis on silence, participants could silently pray for a compassionate response to all forms of suffering; forgiveness, reconciliation and abstaining from violent conflict as a way of bringing cycles of violence to an end; pathways for attaining wisdom and compassion which are accessible to all--and/or bring into being any kind of silent practice or silent spiritual discipline which is relevant and appropriate for--

--a sacred space dedicated to appealing to a Spiritual Entity higher than ourselves when we are at one of the most critical crossroads humanity has faced since the dawn of civilization.

[Note: There is a webpage at The Community Peacebuilding and Cultural Sustainability website titled "Interfaith Prayer Vigils", which provides more detail about this facet of the "constellation of initiatives" (see <https://www.cpcsi.org/interfaith-prayer-vigils> )]

Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the critical 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.

**G. Cost of Community Visioning Initiatives**—rough estimate: \$10 million for a time-intensive (year or more) Community Visioning Initiative (introduced by Preliminary Surveys, and supported by many Neighborhood Learning Centers). Thus, 1000 Community Visioning Initiatives, in communities around the world, would cost \$10 billion. In this section, the figure of \$10 billion is compared to many other kinds of wealth accumulation and human expenditures.

1) A rough estimate by this writer for a time-intensive (year or more) Community Visioning Initiative (introduced by Preliminary Surveys, and supported by many Neighborhood Learning Centers) is \$10 million (10 million in U.S. dollars).

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative advocates organizing and implementing Community Visioning Initiatives in 1000 communities (communities—or segments of rural areas, towns, or cities—with populations of 50,000 or less) around the world.

Thus, 1000 Community Visioning Initiatives, in communities around the world, would cost \$10 billion.

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.

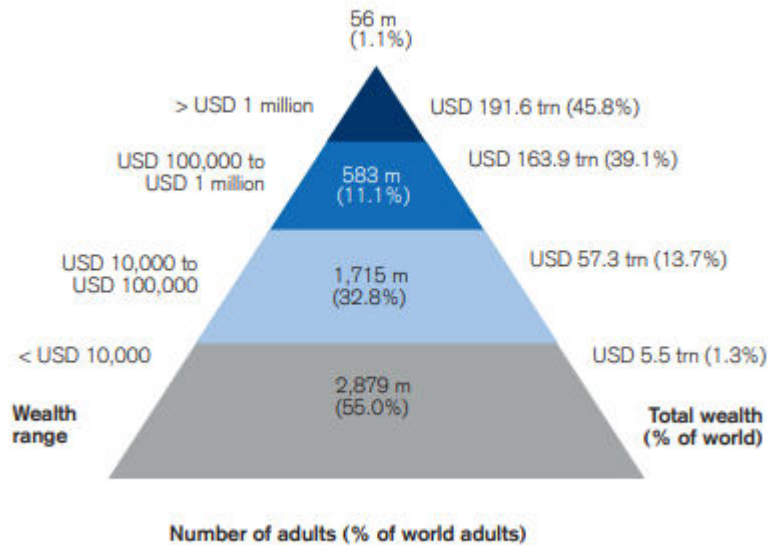
2) Here's 6 different ways of looking at where 10 billion dollars might come from, so that 1000 communities could carry out Community Visioning Initiatives.

**a) \$10 billion is only .0028% of the \$355 trillion in personal wealth held by the richest 12.2 percent.**

[Pyramid Graph (below) from “Global Wealth Report 2021” (by Credit Suisse) (at <https://www.credit-suisse.com/about-us/en/reports-research/global-wealth-report.html>) (p. 17)]

Calculations: Referring to the Pyramid Graph below, we can calculate that the richest 12.2% of global adults (639 million) hold USD 355 trillion in wealth--while the remaining 87.8% of global adults (4.594 billion) hold USD 62.8 trillion.

**Figure 1: The global wealth pyramid 2020**



Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2021

[Graphic from “The Global Wealth Report 2021” --accessible from the webpage “Why Wealth Matters: The Global Wealth Report” (2021) at <https://www.credit-suisse.com/about-us/en/reports-research/global-wealth-report.html> (link provides way for free download of “Global Wealth Report 2021”, and the above Figure 1 is on p. 17)]

**b) \$10 billion is only .005% of \$1,981 billion in world military expenditures in 2020.**

(Stockholm, 26 April 2021) “Total global military expenditure rose to \$1981 billion last year, an increase of 2.6 per cent in real terms from 2019, according to new data published today by the Stockholm International Peace Research Institute (SIPRI). The five biggest spenders in 2020, which together accounted for 62 per cent of global military expenditure, were the United States, China, India, Russia and the United Kingdom.”

[From article “World military spending rises to almost \$2 trillion in 2020” at the website of the Stockholm International Peace Research Institute (SIPRI) (paragraph 1) (at <https://www.sipri.org/media/press-release/2021/world-military-spending-rises-almost-2-trillion-2020> )]

**c) \$10 billion is .014% of \$700 billion in worldwide advertising spending in 2021.**

“Three prominent global ad agencies (Magna, Zenith and GroupM) recently issued their final forecast for the ad marketplace in 2021 and a look at 2022. Forecast were provided for both the U.S. and global markets. In 2021 the ad marketplace was driven by digital media, specifically social, search and video which was more robust than anticipated midyear. While there are several factors to consider, strong ad spending growth is expected to continue in 2022. The U.S. ad market is forecast to exceed \$300 billion and the global ad market over \$700 billion.”

[from article “Agencies Agree; 2021 Was A Record Year For Ad Spending, With More Growth Expected In 2022” by Brad Adgate (Contributor, Independent Media Consultant) (December 8, 2021) at the Forbes website (at <https://www.forbes.com/sites/bradadgate/2021/12/08/agencies-agree-2021-was-a-record-year-for-ad-spending-with-more-growth-expected-in-2022/?sh=23fb090c7bc6>) (paragraph 1)]

**d) \$10 billion is .018% of the \$546.2 billion spent worldwide on alcoholic beverages in 2021.**

“The global alcoholic - beverages market is expected to grow from \$499.74 billion in 2020 to \$546.15 billion in 2021 at a compound annual growth rate (CAGR) of 9.3%.”

[From the webpage for the report “Alcoholic - Beverages Global Market Report 2021: COVID-19 Impact and Recovery to 2030” at the Research and Markets website (at [https://www.researchandmarkets.com/reports/5240352/alcoholic-beverages-global-market-report-2021?utm\\_source=BW&utm\\_medium=PressRelease&utm\\_code=mbskvh&utm\\_campaign=1577498+-+Alcoholic-Beverages+Global+Market+Report+2021%3a+COVID-19+Impacts+and+Forecasts+to+2030&utm\\_exec=chdo54prd](https://www.researchandmarkets.com/reports/5240352/alcoholic-beverages-global-market-report-2021?utm_source=BW&utm_medium=PressRelease&utm_code=mbskvh&utm_campaign=1577498+-+Alcoholic-Beverages+Global+Market+Report+2021%3a+COVID-19+Impacts+and+Forecasts+to+2030&utm_exec=chdo54prd)) (paragraph 1)]

**e) \$10 billion is .021% of the \$465.76 billion of worldwide gambling revenues in 2020.**

“The global gambling market is expected to grow from \$465.76 billion in 2020 to \$516.03 billion in 2021 at a compound annual growth rate (CAGR) of 10.8%.”

[From the article “Global Gambling Market Report 2021: Market to Grow from \$465.76 Billion in 2020 to \$516.03 Billion in 2021 - Forecast to 2030” (News provided by Research and Markets (Feb 09, 2021) at the Cision PR Newswire website (at <https://www.prnewswire.com/news-releases/global-gambling-market-report-2021-market-to-grow-from-465-76-billion-in-2020-to-516-03-billion-in-2021---forecast-to-2030--301224701.html>) (paragraph 3)]

**f) \$10 billion is .056% of \$177 billion spent by Pay TV subscribers in the world in 2020.**

“Pay TV, which refers to subscription-based cable or satellite television services, has long been one of the leading sources for news and entertainment worldwide. In recent years, however, the wave of technological advancements, over-the-top (OTT) video content, and online streaming services have challenged and transformed the global pay TV industry like never before. Global pay TV revenue dropped from 186 billion in 2019 to 177 billion U.S. dollars in 2020, and according to the latest projections, this downward trend is unlikely to reverse in light of the proliferation of on-demand content. But while the streaming revolution is visibly accelerating cord-cutting in mature digital markets, pay TV is thriving in other parts of the world. In 2020, the number of pay TV subscribers worldwide reached a record 1.03 billion, and moderate growth is forecast for at least another five years.”

[From the webpage “Pay TV worldwide - statistics & facts” by Julia Stoll (April 23, 2021) at the Statista website (<https://www.statista.com/topics/4985/pay-tv-worldwide/#dossierKeyfigures>) (paragraph 1)]

## H. The kind of truthful public discussion we really need to be having

Even if we--collectively--succeed in limiting Global Heating to 1.5°C, there will be many serious disruptions ahead, associated with both our efforts to adapt to what kind of habitats and resources we must have to achieve Zero Carbon, and Sustainable BioDiversity--and associated with our efforts to adapt other emergencies and challenges still not resolved (see Introduction, p. ii-iv). One way or another, there will be significant changes in energy accessibility; food production; transportation options; migration and displacement; the nature of local, regional, and international economies; employment opportunities; water accessibility; waste disposal; etc.

We need to think about the people we will need to cooperate with in our local communities, and how likely it is that our fellow human beings will think carefully, act honestly, work diligently, and have compassion for their fellow human beings for the duration of the emergencies. [see also [“Growing Wisdom and Compassion in Small Communities \(13 Steps\)”](#) (78p; May, 2017)]

Hopefully, the 14 questions in this survey can contribute to re-defining and clarifying our understandings about community resilience, cultural sustainability--and what will be necessary for us to “hold together” during what could be *decades of cultural transformation*.

### 1. Evaluating Community Resilience

[Note: this question has many serious implications; and may take some time, and careful consideration, for participants in this survey to answer--as in give estimates regarding Community Resilience Planning. And yet... we really must think about these questions, and discuss these matters in local meetings--everywhere. There are many unprecedented challenges ahead--all of which will directly or indirectly impact Global Heating mitigation and achieving Sustainable BioDiversity, and all of which are either Emergencies in themselves, or will require urgent attention during the unprecedented cultural transformation which we must make in the coming decades.]

#### 15 Very Serious Challenges Ahead

[Note: for more details and evidence about most of the challenges listed below, see Section B in [“Do We Have Moral Compasses We Can Rely On?”](#) (147 pages; April, 2021) and [“Unprecedented Challenges Ahead--December, 2021”](#) (2 pages)]

Global Heating and Climate Emergency

Cultures of Violence, Greed, Corruption, and Overindulgence

Beginning of 6th Extinction Event

Global Inequities (Ex: gender inequality; Ex: water footprint, eco-footprint, carbon-footprint inequality)



Cycles of Malnutrition, Disease, and Death  
 Toxic Air Pollution and Toxic Waste  
 Radioactive Waste Disposal  
 Basic Health Care and Education Accessibility  
 Basic Electricity Accessibility (including mini-grid, micro-grid, and off-grid)  
 Migration and Displacement (related to Climate Change, violent conflicts, persecution, etc.)  
 Water Shortages  
 Sanitation Issues (water quality; sewage treatment; etc.)  
 Reducing Cyber Threats  
 Misinformation and Media Literacy  
 Marginalization of Wisdom and Compassion

Please choose three statements (one from each of the three categories below)--

which most closely represent **your view** of **your community's plans** to mitigate or resolve each of the 15 Very Serious Challenges listed above. Then write the letter associated with the category, and the letter associated with your choices, next to the challenges listed above.

[Ex: Cultures of Violence, Greed, Corruption, and Overindulgence Rc, Pd, Cc]

Resources (R) (category)

- a) I believe we have more than enough resources to resolve this challenge.
- b) I believe we have sufficient resources to resolve this challenge.
- c) I am not sure if we have enough resources to resolve this challenge.
- d) I am sure we do not have enough resources to resolve this challenge.

Plans (P) (category)

- a) I believe we have a relevant, practical, and doable action plan for resolving this challenge.
- b) I believe we are taking the steps necessary to develop a relevant, practical, and doable action plans for resolving this challenge.
- c) I am not sure if we know how to resolve this challenge.
- d) I do not believe we know how to resolve this challenge.

Confidence (C) (category)

- a) I am confident we can resolve this challenge
- b) I believe we are moving in the right direction to resolve this challenge.
- c) I am not sure if we will be able to resolve this challenge.
- d) I have no confidence in our ability to resolve this challenge.

## **2. Questions: Arriving at Working Definitions of “Right Livelihood”**

Please consider what ways of earning a living you would identify as “right livelihood”.

Now imagine a local community resource guide relating to employment, apprenticeships, training, and volunteer opportunities associated with ‘right livelihood.’

And further: imagine a committee commissioned to produce such a ‘right livelihood’ resource guide....

And the individuals who make up the committee commissioned to produce such a resource guide....

- a) What background (qualifications, experiences, etc.) would you like such individuals to have?
- b) What local institutions would you consider most appropriate to commission such a resource guide, and oversee its production?”

## **3. The concept of "Community Queries" introduced here is simply an expansion of the use of "Queries" by the Religious Society of Friends (Quakers).... (with 13 specific examples)**

The concept of "Community Queries" introduced here is simply an expansion of the use of "Queries" by the Religious Society of Friends (Quakers), so that the concept applies to the geographical area sense— and the most inclusive sense— of the word "community." Here are 13 specific examples of "Queries" (from sets of queries used by three different Quaker meetings)(in one of my earlier newsletters

- a) "Does our Meeting prepare all its members and children for worship, and for a life consistent with the principles of the Religious Society of Friends?"
- b) "Do you seek employment consistent with your beliefs, and in service to society?"
- c) "Do you weigh your day-to-day activities for their effect on peace-keeping, conflict resolution and the elimination of violence?"
- d) "Are you concerned for responsible use of natural resources and their nurture for future generations?"
- e) "Do you try to avoid wasteful consumption and pollution?"
- f) "Are you working towards the removal of social injustices? Have you attempted to examine their causes objectively, and are you ready to abandon old prejudices and think again?"
- g) "Do any of your interests, important though they may appear to you, unduly absorb your time and energy to the hindrance of your growth in grace and of your service to God?"
- h) "Are you loyal to the truth?"
- i) "When pressure is brought to bear upon you to lower your standards, are you prepared to resist it?"

- j) "Do all adults and children in our Meeting receive our loving care and encouragement to share in the life of our Meeting, and to live as Friends?"
- k) "When a members conduct or manner of living gives cause for concern, how does the Meeting respond?"
- l) "Are you sufficiently conversant with our Christian Discipline to be able, when difficult questions arise, to consider them with an informed mind as well as a loving and tender spirit?"
- m) "Do you live in accordance with your spiritual convictions?"

[From "The IPCR Newsletter/Journal Spring 2005" in the "About the IPCR Initiative" section of The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative (at <https://nebula.wsimg.com/ee2a6e257c340130e1c8eca9588e4031?AccessKeyId=238D35F9602A8D5BA6F3&disposition=0&alloworigin=1>) (p. 4) (which includes source references for all the above queries on p. 10)]

#### 4. People, Institutions, etc. Which You Personally Place Your Faith In

[Note: this question may also take participants some time to answer; however, given our circumstances, with all the emergencies we are facing--we need to get into the practice of thinking more carefully about what we are doing... literally, and in the most practical sense.... ]

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.

a) Consider carefully the 'things you do in the everyday circumstances of your life'--and then list 10 people, institutions, businesses, beliefs, principles, practices, commonly agreed upon codes of conduct, 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.

b) Please check the box below which best represents your view of the following statement: "There is a profound and critical need for as many people as possible to be exercising as much love, understanding, and forgiveness as possible--in as many ways as possible."--(and contribute comments)

- |                          |                          |  |                          |                          |
|--------------------------|--------------------------|--|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| agree                    | agree in some ways       | have different view--<br>or different way of<br>understanding our<br>present circumstances | disagree in<br>some ways | disagree                 |

Your different view, or different way of understanding our present circumstances:

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### **5. Cultivating Sympathy and Compassion in Your Community**

- a) Please name five (5) people who live in your community--who you know personally, and/or who you have been influenced by--who have inspired in you the qualities of sympathy for the suffering of others, and willingness to express compassion in ways which might alleviate some of such suffering.
- b) What does your local community do--specifically, as a community--to nurture, encourage, support, and inspire--to cultivate--such sympathetic and compassionate persons?

### **6. Trust Among People from Different Faith Communities and Cultural Traditions**

Please consider the following statement:

“There will be a noticeable increase in trust among people from different faith communities and cultural traditions (i.e. Christian, Muslim, Hindu, Buddhist, Jewish, etc.; Asian, African, Hispanic, American, etc.) in the next 20 years.”

Please choose the phrase(s) below which best represent(s) your view of the statement above.

- would actively contribute to making it happen
- with some assistance it could happen
- it would take a lot of effort to make it happen
- even with a lot of effort it might never happen
- it will never happen
- would actively prevent it from happening

**7. There is a profound need for not just schools (and other educational institutions)—but all citizens—to recognize their social responsibilities to identify and reinforce only those cultural “building blocks” which help create and support commonly agreed upon definitions of “the greater good”.**

**(seeking comments)**

a) Little pitchers have big ears.

“I can, right?”

“You can, but it’s not nice.”

[While working on an earlier “arrangement of quotations” (“Developing a Tao Compass”--80 pages, 1986), I visited a day care center (ages 2-5) for one month, and made a [5 page collection](#) of what the “little pitchers” there had on their minds.]

b) Widespread access to the search engines on the Internet; Wikipedia; YouTube; Social Media (Facebook, Twitter, etc.); professional networks, etc. on Ning Platforms; iPhones and iPads; television networks; cable networks; newspapers; and radios mean....

Widespread access to the search engines on the Internet; Wikipedia; YouTube; Social Media (Facebook, Twitter, etc.); professional networks, etc. on Ning Platforms; iPhones and iPads; television networks; cable networks; newspapers; and radios mean that however carefully schools—and other educational institutions—attend to their social responsibilities, there are countless ways in which unworthy features of our complex world can counteract, rather than reinforce, important educational goals.

It is in such a context, in the most complex cultural landscapes ever created, that the Neighbor to Neighbor Community Education (NTNCE) Project suggests there is a profound need for not just schools (and other educational institutions)—but all citizens—to recognize their social responsibilities to identify and reinforce only those cultural “building blocks” which help create and support commonly agreed upon definitions of “the greater good”.

### **8. If Only There Was a Way....**

Please complete the following sentence in as many ways as you believe may help others who will read your responses:

If only there was a way to \_\_\_\_\_.

### **9. The Person Who Will Help Me the Most....**

Please complete the following sentence in as many ways as you believe may help others who will read your responses:

The person who will help me the most is the person who will \_\_\_\_\_.

### **10. Identifying the Most Important Elements of Community Life and Cultural Traditions**

Please complete the following statement--in as many ways as you can.

In the best of times, even the most profound challenges can be overcome; for in the best of times, \_\_\_\_\_ is/are nurtured, supported, and sustained by family, teachers, mentors, elders, and the everyday influences of community life and cultural traditions.

### **11. Excerpts from a paper "The Relation of Moral and Religious Education" by Father Michael Maher, S.J., which was presented at the First International Moral Education Congress, University of London, (1908) (seeking comments)**

"By moral education I understand the whole process of aiding and directing the development of the child as a moral being. Its outcome should be the creation, in the individual mind, of an elevating and sustaining moral ideal, and the formation of strong moral character. It includes instruction of the intellect in the knowledge of our duty and its grounds, the cultivation of moral conscience and moral sensibility in the easy discernment of duty, and the building up of habits of virtue, or permanent dispositions in the will to act according to the dictates of moral reason. (p. 177-178)

"Religion itself I take to mean a body of truths or beliefs respecting God and our relations to Him; and flowing from these a collection of duties which have God for their primary object. These are, in the

main, functions of the will in the form of exercises of internal and external worship. Out of these beliefs and volitions there emerge feelings and emotions, which we call religious sentiments. They include love, gratitude, sorrow, joy, fear, hope, awe, veneration and allied forms of consciousness.” (p. 178)

“Some writers seem to deprecate the appeal to the ethical sanctions of reward or punishment for observance or violation of duty presented to us in the Christian creed. But as long as human nature--and especially human nature as exhibited in youth--remains what it is, the reasonable use of these motives, after the example of the great ethical Teacher Himself, will be approved by the practical experience of the vast majority of those engaged in the actual work of moral education. Furthermore, whatever aid can be derived from the religious sentiments and feelings awakened by Divine worship, and from the spiritual yearnings, aspirations and impulses of the soul, which are both fostered and satisfied by the exercises of religion, is assuredly, even on the merest psychological grounds, a most valuable reinforcement in the early struggles for the formation of virtuous habits and the difficult conquests of the passions of youth.” (p. 179)

“To sum up in brief: I hold that religious instruction provides the best vehicle for introducing to the intelligence of the young the most important part of the moral truths and principles at present generally accepted as the basis of our social life. Further, I would contend that the mental attitude fostered by the exercises of religion and the ideas and feelings associated with religious topics, when properly handled, are best suited for the fruitful apprehension of ethical truths. I would argue also that the great fundamental conceptions of natural religion--the notions of God and His relations to man--provide a rational and intelligible foundation and an adequate authority and sanction of duty and self-sacrifice, and I would content that such an intelligible foundation and adequate authority are of specially vital importance when inculcating moral precepts and establishing moral habits which often come into conflict with the passions and inclinations of our lower nature. Further I would urge that the human life and character of Christ, as revealed in the Gospel story, offers us in definite and concrete form the most attractive and potent as well as incomparably the most perfect ethical ideal that can be held up before the mind of the young. Finally, I would maintain that the more thoroughly ethical conduct can be animated by religious motive, and the more efficaciously ethical instruction can be strengthened by the authority which religion carries to the soul of the child, the stronger and more enduring will be the adhesion to moral principle in the future hour of trial and temptation.” (p. 180)

[Excerpts from a paper “The Relation of Moral and Religious Education” by Father Michael Maher, S.J., which was presented at the First International Moral Education Congress, University of London, 1908 (Note: a complete collection of the papers presented at this Moral Education Congress is in the public domain, and at Google Books--at

[https://www.google.com/books/edition/Papers\\_on\\_Moral\\_Education/xoBCAAAAIAAJ?hl=en&gbpv=1&bsq=First%20International%20Moral%20Education%20Congress,%20University%20of%20London,%201908](https://www.google.com/books/edition/Papers_on_Moral_Education/xoBCAAAAIAAJ?hl=en&gbpv=1&bsq=First%20International%20Moral%20Education%20Congress,%20University%20of%20London,%201908) ; and this particular paper by Father Maher can be found by a key phrase search.]

**12. “The meaning of life, therefore, of its purposes and values as understood by the educator, primarily determines the nature of his work.”**

**(seeking comments)**

Catholic Encyclopedia (online):

“The meaning of life, therefore, of its purposes and values as understood by the educator, primarily determines the nature of his work. Education aims at an ideal, and this in turn depends on the view that is taken of man and his destiny, of his relations to God, to his fellowmen, and to the physical world. The content of education is furnished by the previous acquisition of humankind in literature, art, and science, in moral, social, and religious principles. The inheritance, however, contains elements that differ greatly in value, both as mental possessions and as means of culture; hence a selection is necessary, and this must be guided largely by the educational ideal.”

[From the webpage for “Education” at the website of the Catholic Encyclopedia (at <https://www.newadvent.org/cathen/05295b.htm> ) (paragraph 1)]

**13. “How to find suitable teachers is, therefore, the really important question with which we are confronted....”**

**(seeking comments)**

“How to find suitable teachers is, therefore, the really important question with which we are confronted. And I doubt whether they can be found--at least in sufficient numbers. They will have to be made; and *how this is to be done* is the real problem that faces those interested in moral education at the present time.” (p. 227-228) (italics by SP)

[Excerpts from a paper “Systematic Moral Teaching” by Prof. J. S. Mackenzie, which was presented at the First International Moral Education Congress, University of London, **1908** (Note: a complete collection of the papers presented at this Moral Education Congress is in the public domain, and at Google Books--at [https://www.google.com/books/edition/Papers\\_on\\_Moral\\_Education/xoBCAAAAIAAJ?hl=en&gbpv=1&bsq=First%20International%20Moral%20Education%20Congress,%20University%20of%20London,%201908](https://www.google.com/books/edition/Papers_on_Moral_Education/xoBCAAAAIAAJ?hl=en&gbpv=1&bsq=First%20International%20Moral%20Education%20Congress,%20University%20of%20London,%201908) ; and this particular paper by Prof. J. S. Mackenzie can be found by a key phrase search.)]



#### 14. Large Cities vs. Small Cities, Towns, and Villages

a) Please consider the following statement--

“It is possible to create, support, and sustain (**large cities**) which can minimize resource requirements, achieve Zero Carbon, 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.”

Please choose the phrase below which best represents your response to the above statement with “large cities” in it.

- I believe it, and there is much evidence to support it
- I believe it, and there is sufficient evidence to support it
- I would like to believe it, but there isn't much evidence to support it
- It is difficult to believe, with the way things are going now
- I don't believe it, there is no evidence to support it

b) Please consider the following statement--

“It is possible to create, support, and sustain (**small cities, towns, and villages**) which can minimize resource requirements, achieve Zero Carbon, 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.”

Please choose the phrase below which best represents your response to the above statement with “small cities, towns, and villages” in it.

- I believe it, and there is much evidence to support it
- I believe it, and there is sufficient evidence to support it
- I would like to believe it, but there isn't much evidence to support it
- It is difficult to believe, with the way things are going now
- I don't believe it, there is no evidence to support it

## Appendix 1

Community Visioning Initiatives, Neighborhood Learning Centers,  
and Neighbor to Neighbor Community Education sections in local newspaper--in more detail

### A. Community Visioning Initiatives

[Note: There is a 68 page section titled “A Constellation of Initiatives Approach to Collaborative Problem Solving and Citizen Peacebuilding” in the Community Peacebuilding and Cultural Sustainability (CPCS) Initiative document [“Invitation Package for Possible Board of Advisors”](#) (November, 2013; 589 pages) which provides much more detail about the potential of Community Visioning Initiatives—and “constellation of initiatives” approaches to accelerating solution-oriented activity at this critical time.]

Community Visioning Initiatives can be described as a series of community meetings designed to maximize citizen participation in identifying challenges, and in solution-oriented activity.

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’s interest in Community Visioning Initiatives was inspired instantly when, in 1994, he watched a video documentary titled [“Chattanooga: A Community With A Vision”](#) (13 minutes) (*highly recommended*). 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, the creation of 1,300 permanent jobs, and a total financial investment of 793 million dollars. What this writer saw in the documentary was a way of revitalizing the sense of working together with our neighbors for the greater good, so that there would be an electrifying feeling about what going to happen next—a collective revitalization of the belief that many good things would be happening in the community, and that many people who lived in the same community would have a part in it.

[Here is a [15 step outline](#) for a Community Visioning Initiative (by Stefan Pasti; 28 pages; 2008) which would require 18 months to complete, and which has a primary focus of maximizing citizen participation in identifying

challenges, and solution-oriented activity. Note: while all links in the “15 Step” document (created in 2008) are out-of-date, the outline still has much to offer as a way to help readers visualize the potential of Community Visioning Initiatives.]

One of the special features of the 15 step outline (link above) is that it gives much emphasis to both job fairs and local currency as a way of minimizing “transformation unemployment”-- [“a special form of structural unemployment that can evolve as a result of profound changes in transformation countries”<sup>8</sup>]

a) 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.

b) the introduction of a local currency (especially as payment to those who are unemployed)—for assisting with the implementing of a Community Visioning Initiative, and for assisting with workshops in Neighborhood Learning Centers supporting the Community Visioning Initiative—can begin a cycle of volunteer assistance, workshops, solution-oriented action plans, careful and deliberate investment by local residents, and new employment opportunities which can minimize upfront and overhead educational expenses, and maximize citizen employment in solution-oriented activity.”

This Community Visioning Initiative approach to collaborative problem solving and community education described here--and reinforced by the details in the [“Chattanooga: A City with a Vision”](#) video documentary--emphasizes “asking for ideas”; personal and civic responsibility; maximizing citizen participation in identifying challenges, and in solution-oriented activity; giving people an opportunity to become actively involved in a solution-charged environment, and minimizing the risk of “transformation unemployment”—and provides local residents with many new ways to encourage and support each other in the everyday circumstances of community life.

The “constellation of initiatives” approach to collaborative problem solving and community education (overview in Section 5. Logistics and in the “Recommendations” section of the CPCS Initiative website-- at <https://www.cpcsi.org/recommendations> ) can assist with creating affordable education systems with numerous associated local learning networks; assist with outreach, partnership formation, project development, and service capacity for both existing (and forming) organizations and businesses; and will inevitably create increasing numbers of solution-oriented and sustainable jobs.

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.

One of the keys to appreciating the value of Community Visioning Initiatives: such collaborative problem solving processes can help people “become stakeholders”, with the faith that as they do so, and become involved in the 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.

One very important advantage of Community Visioning Initiative model advocated by this writer is that it does not seek to “frontload” a specific issue-related agenda/insist on a preconceived set of goals. Organizers of collaborative problem solving processes who believe the unprecedented culture change that needs to happen will eventually happen, and the urgency and awareness that needs to come will come, would be focusing more on building a collaborative problem solving approach which people with many different backgrounds and agendas could trust and believe in... could trust and believe will make best use of the knowledge and skills each person has to contribute.

Many cities and towns in the United States have carried out visioning initiatives or strategic planning exercises (see “Google” results for the key words “community visioning”)—and many organizations specializing in stakeholder engagement have facilitated stakeholder engagement processes involving multiple stakeholders, and very complex issues. However, this writer does not know of any particular examples which are meant to be responses to most of the negative indicators in the introduction (to this paper). And this writer also does not know of any particular examples of time-intensive (even up to 18 months long) Community Visioning Initiatives which have given such emphasis to international positive tipping point organizations and institutions; Neighborhood Learning Centers; and Neighbor to Neighbor Community Education (NTNCE) Projects (associated with local newspapers) as a way of accelerating solutions in a time of multiple Emergencies. Surely, one of the reasons why there haven’t been more “constellation of initiatives” approaches to collaborative problem solving and community education created—which represent problem solving on a scale most of us have never known before—is that *the need for such a level of problem solving has not yet become a well-known fact.*

If many people could see and feel the practical value of carrying out of carrying out the kind of collaborative problem solving and community education initiatives advocated for by this paper, such collaborative, solution-oriented activity could become a common experience... a common cultural tradition... a cultural tradition which can link many diverse communities of people together, in a fellowship of people working towards the greater good of the whole... and a cultural tradition which can help pass on to future generations the most treasured wisdom human beings have accumulated in more than 5,000 years of human history.

## B. Neighborhood Learning Centers

[Note: There is a 68 page section titled “A Constellation of Initiatives Approach to Collaborative Problem Solving and Citizen Peacebuilding” in the Community Peacebuilding and Cultural Sustainability (CPCS) Initiative document [“Invitation Package for Possible Board of Advisors”](#) (Nov., 2013; 589 pages) which provides much more detail about the potential of Neighborhood Learning Centers (which are referred to as “Community Teaching and Learning Centers” in that document).]

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.

Neighborhood Learning Centers can be:

- 1) a multi-purpose support center for implementing Community Visioning Initiatives
- 2) a neighborhood meeting place and workshop center
- 3) a critical part of a low cost lifelong learning education system (which would include questionnaires and surveys, Community Visioning Initiatives, Neighborhood Learning Centers and neighborhood learning networks, local newspapers primarily focused on community service, etc)
- 4) a critical part of making best use of the knowledge and abilities each of us has to exponentially accelerate solution-oriented activity at this time of unprecedented challenges

What we need more of now are collaborative problem solving processes which help citizens understand that the investments of time, energy, and money (the “votes”) each of us make in our everyday circumstances become the larger economy. And that wisely directed, such “votes” 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. Citizens from every variety of circumstances can learn how to wisely cast such “votes”—through workshops and meetings at Neighborhood Learning Centers during a Community Visioning Initiative, and through other local learning experiences.

Creating many Neighborhood Learning Centers can provide places—in local neighborhoods—for discussion, information sharing, mutual support and encouragement, and fellowship and friendship, so that the exchanging of information and resources can make significant contributions to the process of building “close-knit” communities of people... communities with a healthy appreciation for each others strengths, communities with a well-developed capacity to resolve even the most difficult challenges— and communities which demonstrate a high level of compassion for their fellow human beings.

Yes, most of the challenges ahead are very complex, and thus it will be best if people making decisions at the local community level sift through some of the evidence (with the assistance of local “teacher-leaders”). But their motive for sifting through some of the evidence need not be understood as part of studying for a Ph.D on the subject, or as part of deciding how to “vote” for a particular candidate in elections. From this writer’s point of view, it would be best if their motive was *so they can make informed decisions regarding how they invest their time, energy, and money in the everyday circumstances of their daily lives.*

Regarding affordability, it is possible to imagine workshops being offered at a rate of \$100 for a 2 hour workshop (Note: this example uses the current value of the U.S. dollar), with the number of teachers and participants varying. An important part of workshop affordability is that as the number of participants goes up (towards a reasonable limit) the cost per participant would go down. Thus, if there were two teachers and 25 participants for a two hour workshop, the participants would only pay \$4 each, and the teachers would earn \$50 each. (And even the \$4 cost to the participants could be paid in “local currency”, if there was a process by which residents could earn “local currency” by making “solution-appropriate” investments of time, energy, and money in their local community.)

Time-intensive Community Visioning Initiatives, supported by many Neighborhood Learning Centers, are one way people at the local community level can learn how to make wise choices about how they use their time, energy, and money... so that all the “little events” in the circumstance of everyday community life have a positive and cumulative effect on the challenges they have identified as priority challenges.

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.

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. If many colleges and universities assisted with carrying out local Community Visioning Initiatives—with many supporting Neighborhood Learning Centers—the positive multiplier effects would be visible around the world.

### C. Neighbor to Neighbor Community Education (NTNCE) Projects

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.

The NTNCE Project is an example of community service work which can be done by local newspapers, which:

- a) highlights what is valuable and important in everyday community life
- b) encourages positive neighbor to neighbor relations
- c) provides records of community life which can be used by future historians
- d) helps increase consensus for local specific, commonly agreed upon definitions of “the greater good”.

Why is a Neighbor to Neighbor Community Education (NTNCE) Project Needed?

Consider the following two quoted passages:

1) “... it is the business of the school environment to eliminate, so far as possible, the unworthy features of the existing environment from influence on mental habitudes.... Every society gets encumbered with what is trivial, with dead wood from the past, and with what is positively perverse. The school has the duty of omitting such things from the environment which it supplies, and thereby doing what it can to counteract their influence in the ordinary social environment. By selecting the best for its exclusive use, it strives to reinforce the power of the best. As a society becomes more enlightened, it realizes that it is responsible not to transmit and conserve the whole of its existing achievements, but only such as to make for a better future society. The school is its chief agency for the accomplishment of this end.”

[From “Democracy and Education: An Introduction to the Philosophy of Education” by John Dewey (1916)

(complete public domain book at google books--

[https://www.google.com/books/edition/Democracy\\_and\\_Education/8P0AAAAAYAAJ?hl=en&gbpv=0](https://www.google.com/books/edition/Democracy_and_Education/8P0AAAAAYAAJ?hl=en&gbpv=0) ) (key word search shows above excerpt on p. 24)]

2) "... there are truths which none can be free to ignore, if one is to have that wisdom through which life can become useful. These are the truths concerning the structures of the good life and concerning the factual conditions by which it may be achieved...."

[From "General Education in a Free Society" (The Harvard Committee, 1945) Quote accessible in "American Higher Education Transformed 1940-2005: Documenting the National Discourse" Ed. Wilson Smith and Thomas Bender (accessible at google books, see [https://www.google.com/books/edition/American\\_Higher\\_Education\\_Transformed\\_19/KFNy-BIExW8C?hl=en&gbpv=0](https://www.google.com/books/edition/American_Higher_Education_Transformed_19/KFNy-BIExW8C?hl=en&gbpv=0)) (p. 20)]

The passage by Mr. Dewey suggests that enlightened societies should recognize their social responsibilities to identify, preserve, and transmit only those cultural "building blocks" which contribute to "making a better future society". And that "the school is its chief agency for the accomplishment of this end".

However, we now live in the most complex cultural landscapes ever created on Planet Earth. The world we live in now is profoundly different from what the world was like when Mr. Dewey wrote the above passage (1916).

Widespread access to the search engines on the Internet; Wikipedia; YouTube; Social Media (Facebook, Twitter, etc.); professional networks, etc. on Ning Platforms; iPhones and iPads; television networks; cable networks; newspapers; and radios mean that however carefully schools—and other educational institutions—attend to their social responsibilities, there are countless ways in which unworthy features of our complex world can counteract, rather than reinforce, important educational goals.

It is in such a context—in the most complex cultural landscapes ever created—that the Neighbor to Neighbor Community Education (NTNCE) Project suggests there is a profound need for not just schools (and other educational institutions)—but all citizens—to recognize their social responsibilities to identify and reinforce only those cultural "building blocks" which help create and support commonly agreed upon definitions of "the greater good".

While there is no financial compensation for local residents who contribute personal experience stories, etc. to the Neighbor to Neighbor Community Education (NTNCE) section of a local newspaper, there is the possibility that many people will see how initial contributions to the section could inspire more and more contributions--

--and thus result in highlighting and accumulating countless numbers of experiences, information, and resources which make positive contributions to important community goals.



Further, it seems possible that many people can understand making such contributions to their local newspapers to be a part of the civic and social responsibilities that come with being a part of the community. Thus, rather than confining our definition of civic duty to voting in elections, or to contributing to the service work of one organization (important as such civic duty and community service work is), many people may—as a result of the NTNCE Project—come to the realization that even the smallest events in everyday community life can be positive contributions to:

- 1) the education goals of the local public school system
- 2) increasing consensus on a local specific, commonly agreed upon, and revitalized “moral compass”
- 3) the greater good of all residents in the local community and region

## Appendix 2

## The CPCS Initiative Vision

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative believes that priority actions—for urgently and drastically cutting Global Greenhouse Gas Emissions—be more constructive if they were focused on small cities, towns, and villages, which--

- 1) are more sustainable-friendly in the long run
- 2) have less complex vulnerabilities
- 3) create more emphasis on downsizing and focusing on what basic necessities are most needed  
and
- 4) where it is easier to see the results of our actions
- 5) 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.

The CPCS Initiative also believes that it is possible for local communities and regions to include the recommendations of the CPCS Initiative into their local specific “constellation of initiatives”—and for all continents, countries, regions, and local communities to achieve Zero Carbon in ten years.

## Appendix 3

## 30 Propositions and Premises of The CPCS Initiative

by Stefan Pasti, Founder

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative

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

- 1) As a result of the unprecedented opportunities created by the expansion of the Internet, we have now arrived at a very auspicious moment in time... for at no other time in the course of history has so many people had access to so much in the way of time-tested guidelines, inspiring role models, and service-oriented initiatives relevant to peace, prosperity, and happiness for all humanity.
- 2) There are countless numbers of “things people can do in the everyday circumstances of their lives” which will contribute to peacebuilding, community revitalization, and ecological sustainability efforts, in their own communities and regions--and in other parts of the world.
- 3) Even now, as you are reading this, truly inspiring contributions of genuine goodwill are being generated in a variety of ways--and in a variety of circumstances--by countless numbers of people in communities around the world.
- 4) (However) “There can be no culture without contact with relevant problems.” (J.C. Kumarappa)
- 5) The CPCS Initiative believes that we are at a critical point in the evolution of spiritual understanding--and we are also at the most critical crossroads humanity has faced since the dawn of civilization
- 6) The CPCS Initiative believes we have an urgent need to make unprecedented progress towards resolving timeless shortcomings of human nature--*even though such shortcomings are perceived as so much a part of who we are that most of us accept such as inevitable.*
- 7) The CPCS Initiative believes there is no culture or association of societies that ever existed on planet Earth which has had to resolve the kind of challenges the next few generations of people will have to resolve.
- 8) The challenges of our times are not something the experts will resolve while the rest of us are doing something else.

9) Everyone is involved when it comes to determining the markets which supply the “ways of earning a living”.

10) All of us have important responsibilities associated with resolving a significant number of very serious challenges in the months and years ahead.

11) Human morality is not a constant--it is not something which is the same throughout the centuries of human existence; human morality is something which can become degraded or raised up, depending on the leanings of human aspirations.

12) The ways we “invest” our time, energy, and money have a direct impact on the “ways of earning a living” that are available.

13) The investments of time, energy, and money that each of us make in our everyday circumstances becomes the larger economy.

14) Communities of people can deliberately create countless “ways of earning a living” which contribute to the peacebuilding, community revitalization, and ecological sustainability efforts necessary to overcome the challenges of our times.

15) We need plans for action--

- a) which goes beyond the efforts currently in progress
- b) which will exponentially increase the likelihood of success
- c) which can assure us that wisdom and compassion will be “coming through the mist as much as they should be”
- d) *which people from every variety of circumstances can trust*

16) We need collaborative problem solving and community education initiatives which carefully and continuously (through ongoing monitoring) seek to achieve a meaningful balance between the urgent need to “frontload” specific issue-related agendas, and an even more serious priority: for all of us to understand--

- a) how much we need to be learning to so that we can be part of the solutions
- b) how much we need to be making best use of the knowledge and skills each one of us has
- c) how much we need to be on the same side, helping each other

d) that--wisely directed--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.

17) The CPCS Initiative believes that a “constellation of initiatives” approach similar to the one outlined in [“Becoming a Greater Force Than the Challenges We Are Facing”](#), applied with faith, patience, and due diligence, can succeed in turning polarizing circumstances into collaborative efforts; making best use of the knowledge and skills each one of us has; and creating, developing, and accelerating a full array of solution-oriented activity.

18) Confidence will be dimmed by a lack of clarity until there is truthful public discourse on the full dimensions of the critical challenges ahead.

19) 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.

20) The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative is an effort to apply the accumulated wisdom now accessible to us towards the general goal of integrating spiritual wisdom into the everyday circumstances of community life--and towards the specific goal of generating practical responses to the challenges of our times.

21) The CPCS Initiative encourages and supports the belief that that if we are to overcome the challenges of our times we will need not only the resources which innovators can prove the existence of by scientific method; we will also need the resources which people of faith believe exist as a result of inner experience.

22) The CPCS Initiative supports the belief that there is a more advanced and more benevolent spiritual entity (“energy”), with a kind of existence which is beyond what we can know or understand--and that such an entity (“energy”) does actually count for something in overcoming the difficult challenges ahead.

23) The CPCS Initiative supports the belief that “God can do anything”.

24) If many people can learn to find contentment and quality of life while consuming much less material goods and ecological services, this limiting of desires at the “root” will save much trouble trying to respond to the symptoms (of unrestrained, or unexamined desires) as they materialize worldwide. This is one of the benefits of spiritual teachings which often gets overlooked.

25) Faith helps move from “it hardly seems possible” to “it must be possible” (since faith believes Love will prevail).

26) The CPCS Initiative believes that the most advanced societies are the ones which are successful at integrating spiritual wisdom into the everyday circumstances of community life.

27) The CPCS Initiative believes that if many people could see and feel the practical value of carrying out the kind of collaborative problem solving and community education initiatives brought forward in [“Becoming a Greater Force Than the Challenges We Are Facing”](#) (6 pages; August, 2021), such collaborative, solution-oriented activity could become a common experience... a common cultural tradition... a cultural tradition which can link many diverse communities of people together, in a fellowship of people working towards the greater good of the whole... and a cultural tradition which can help pass on to future generations the most treasured wisdom human beings have accumulated in more than 5,000 years of human history.

28) “By the examples of your lives, you have to restore confidence among the people in the higher values of life.... Have the picture of the happy, united, love filled human community in your heart. That will give you enough encouragement in your mission.” [from p. 51 [“An Arrangement of Quotations from ‘Sathya Sai Speaks’ \(Vol. 1-15\)”](#) (301 pages) compiled by Stefan Pasti (1997; 2006) (also accessible on website homepage of The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative at [www.cpsi.org](http://www.cpsi.org) .]

29) The CPCS Initiative supports the following definition of world peace: a universal feeling of *sympathetic resonance* between the examples of leaders (as seen in the wise and equitable administration of cultural and natural resources); the personal cultivation of virtue throughout society; the ecological stability and sustainability of natural resources; and the current of Divine Grace.

30) “In light of the urgent need to build bridges and increase collaboration between communities of people, all of the documents, information, resources, etc. created by The CPCS Initiative are viewed as resources which ought to be made as accessible as possible to people who can make good use of them. Therefore, all such documents and information (including this document) may be reproduced without permission, and distributed in any way the user believes will be consistent with restoring confidence among our fellow human beings in the higher values of life. [Please note: Quotes, statistics, and other copyrighted material used in CPCS documents have been appropriately attributed to their copyrighted sources. Readers may thus be assured that The CPCS Initiative encourages and supports the proper referencing of copyrighted material to their copyrighted sources.]

## Appendix 4

## About The CPCS Initiative and Stefan Pasti

## A. About The CPCS Initiative

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative ([www.cpcsi.org](http://www.cpcsi.org)) provides research and analysis for critical challenge alerts, and research and support for collaborative problem solving, community education, and citizen peacebuilding initiatives which seek to maximize citizen participation, and accelerate solution-oriented activity.

and

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative is an effort to apply the accumulated wisdom now accessible to us towards the general goal of integrating spiritual wisdom into the everyday circumstances of community life--and towards the specific goal of generating practical responses to the challenges of our times.

[Note: "Key Documents" of the CPCS Initiative are listed (with links) at the end of this Appendix 4.]

## B. About Stefan Pasti

I am the Founder and Resource Coordinator for The CPCS Initiative, and currently the sole organizational person.

Beginning in the early 1980's, I developed a "compilation of excerpts" (from books, articles, etc.) style as a way of synthesizing complex information into an organized format which seemed to make "connecting the dots" moments more likely to occur. From the start, there was an activism element and an educational element to it [examples: "Disarmament Times" (1984), and "When a Village is tended, a Toxic Waste Dump Cannot Grow (1991) (both scanned documents, and best accessed at <https://www.cpcsi.org/collected-writings-stefan-pasti> )]. And that "compilation of excerpts" style has continued on thru "[Growing Wisdom and Compassion in Small Communities \(13 Steps\)](#)", "[Do We Have Moral Compasses We Can Rely On?](#)", and this paper.

My advocacy for ecologically sustainable communities begin in 1984 with the first version of the short story “The Spirit of the Sacred Hoop” [here is the [current version](#) (2014) of that 11 page short story)]. The newsletter/pamphlet “Where a Village is Tended, a Toxic Waste Dump Cannot Grow” (16 pages; 1991) (mentioned above) includes a 51 point list titled “How modern agriculture-based villages can contribute to the continuity of peaceful human settlements” (pages 3-5)(which is still very relevant).

My interest in Community Visioning Initiatives was inspired instantly when, in 1994, I watched a video documentary titled “[Chattanooga: A Community With A Vision](#)” (<https://vimeo.com/9653090>) (13 minutes). 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, the creation of 1,300 permanent jobs, and a total financial investment of 793 million dollars.

I learned about Community Teaching and Learning Centers from the organization “Teaching without Borders (and later changed my description of it to Neighborhood Learning Centers). Creating many Neighborhood Learning Centers can provide places—in local neighborhoods—for discussion, information sharing, mutual support and encouragement, and fellowship and friendship; so that the exchanging of information and resources can also make significant contributions to the process of building “close-knit” communities of people... communities with a healthy appreciation for each other’s strengths, communities with a well-developed capacity to resolve even the most difficult challenges--and communities which demonstrate a high level of compassion for their fellow human beings.

We have the resources necessary to overcome the challenges of our times. What we need more of now are collaborative problem solving processes which help citizens understand that the investments of time, energy, and money (the “votes”) each of us make in our everyday circumstances become the larger economy. And that wisely directed, such “votes” 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. Citizens from every variety of circumstances can learn how to wisely cast such “votes”—through workshops and meetings at Neighborhood Learning Centers during a Community Visioning Initiative, and through other local learning experiences.

Even as recently as mid-2018, it seemed that there would be decades of time to respond to the challenges identified in numerous risk assessments. And especially since I had the opportunity to access



the teachings of Sri Sathya Sai Baba (first, in 1991; completed [301 page compilation of quotations from Baba's discourses](#) in 1997), it seemed like my work was to focus on the “marginalization of the world’s treasured wisdom” piece (i.e. as I had experienced--through Baba’s Teachings--how much of that treasured wisdom had been marginalized).

However, the IPCC Special Report on 1.5C, when it came out in October, 2018, was a very abrupt awakening for many people [see Guardian article [“We have 12 years to limit climate change catastrophe, warns UN”](#) by Jonathan Watts (October 8, 2018)]. From that time on, I have changed the focus of my work to

- a) highlighting risk assessments specific to Global Warming (while still emphasizing other challenges)
- b) highlighting the potential of the “constellation of initiatives” approaches to maximizing citizen participation in solution-oriented activity.

I have found spiritual inspiration from many sources and traditions; however, the Teachings of Sri Sathya Sai Baba (1926-2011) (which I first learned about in 1991) have had the most influence on my life path. Those teachings sparked profound insights into the potential benefits of integrating spiritual wisdom into the everyday circumstances of community life. Contributing whatever I can to realizing such profound potential, regardless of whether or not such potential is realized in my lifetime, has been the central motivating spirit in my life for decades.

To make the contributions I believe are uniquely mine to make, I have, over the years, had to find other work as a way of earning a living than my writing (which I understand as a service work, as a donation--because I quote so many excerpts from other peoples’ work--i.e. for educational purposes). Thus, I have been employed in many different settings, including retail bookstore clerk, mail clerk, door-to-door canvasser for citizen action groups, dishwasher, cook, stone mason helper, field worker/truck driver on an organic farm, driver/warehouse, bus driver/program assistant, activities director for elders with special needs, and delivery driver. Earlier, in the “Inspiring Educational Experiences” section of my [“Autobiographical Sketch”](#), I mentioned that “Since I began to see that my life path was going to be more of an ‘organic process’ than an exercise in ‘career development’ (and that I would again and again find myself making unusual choices for employment, choices that possibly only someone else in a similar set of shoes could easily understand), knowing something of the ‘Tao’ was helpful” [The Chinese people who developed the I Ching discovered that reflecting on these patterns of experience was of great value in aligning themselves with the Tao. The Tao has been defined as “the only reasonable and harmonious path for the individual through the cosmos, given his nature and the nature of the cosmic forces at a given moment in time.” (R.L. Wing) (for further reading re “Tao”, see [“Notes on the I Ching”](#) (5 pages; 2006)]. Here I will add that, while it may be a stretch for some people, I believe I have some personal experience with parts of the following quote [from the article [“Open Source Social Solutions”](#) by Charlie Brown at the Watermark website (p. 126, in paragraphs 2 and 3)

“... the most promising innovations are often lost to view and lacking the resources to take effect; these innovators are working away quietly at a small-scale, local level, unknown to the much broader community that could benefit from them. They are ‘needles’ lost in the societal haystack. This isolation, often a major stumbling block for social innovators, is no coincidence: *innovators often deliberately isolate themselves in order to realize a vision that may be at odds with existing norms or received wisdom*” (my italics). And I will also add a “why” to this kind of isolation: If I am going to be careful about protecting my capacity to move forward in adverse and unsupportive circumstances, I have to avoid getting entangled in activities which drain my energy to no constructive end. So I tend towards waiting quietly in environments where I am not required to sort out important issues (thus minimizing misunderstandings and conserving energy for what work I believe is constructive), and where it is acceptable for me to be inconspicuous, and in the background--and I do what “building work” I can in my spare time. (Each person has to decide for themselves what will work best when they are trying to *adapt* to adverse and unsupportive cultural influences.)

I believe that if many people could see and feel the practical value of carrying out the kind of collaborative problem solving and community education initiatives advocated for by this paper, such collaborative, solution-oriented activity could become a common experience... a common cultural tradition... a cultural tradition which can link many diverse communities of people together, in a fellowship of people working towards the greater good of the whole... and a cultural tradition which can help pass on to future generations the most treasured wisdom human beings have accumulated in more than 5,000 years of human history.

I gladly and willingly contribute time, energy, and money to make the resources and documents of The CPCS Initiative accessible to those people who might benefit from them.

Key Documents of The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative  
(all compiled, and edited by Stefan Pasti--with added commentary)

- 1) [“Global Warming Awareness, Climate Change Awareness, and Climate Emergency Action” A Survey: 1961-2020](#) (240 highlights from reports, websites, articles, books, etc.) (316 pages; November, 2020)
- 2) [“Quick Reference to 10 Key Graphs and Charts”](#) (6 pages) (last six pages from “Survey” in #1 above)
- 3) [“Unprecedented Challenges Ahead--December, 2021”](#) (2 pages)
- 4) [“17 Tweet Series”](#) (on Twitter platform) (summarizes unprecedented challenges and the CPCS Initiative’s “constellations of initiatives” approach to accelerating solution activity)

- 5) ["Do We Have Moral Compasses We Can Rely On?"](#) (147 pages; April, 2021) (very concise and comprehensive compilation-of-excerpts overview of global challenges--and overview of an array of pathways for accelerating cultural transformation)
- 6) ["What are Cultural and Spiritual Tipping Points?"](#) (Op-Ed, 4 pages, 1273 words; February, 2022)
- 7) ["Becoming a Greater Force Than the Challenges We Are Facing"](#) (6 pages; August, 2021)
- 8) ["Sample List of 231 positive tipping point organizations and institutions"](#) (12 pages; December, 2020)
- 9) ["Growing Wisdom and Compassion in Small Communities \(13 Steps\)"](#) (78 pages; May, 2017)
- 10) ["Key Sources of Inspiration"](#) (51 pages; September, 2021)
- 11) ["An Arrangement of Quotations from 'Sathya Sai Speaks' \(Vol. 1-15\)"](#) (301 pages) (September, 1996--February, 1997) [permission to publish received 2004; revised page references to new editions of 'Sathya Sai Speaks" (2006)] ["Sathya Sai Speaks" Vol. 1-15 are collections of discourses made by Sri Sathya Sai Baba (1926-2011) during the years 1953-1982.] ([5 page Table of Contents](#))
- 12) ["The Spirit of the Sacred Hoop"](#) (11 pages, short story) (First version Fall, 1984; first revision Spring, 2004; minor changes Summer, 2006; Winter 2013-14) The story is about a tribe of people who are experiencing great challenges, and who go on a great journey to find the tree at the center of the sacred hoop.

## Appendix 5

(long)

## Table of Contents

(Executive Summary) (16 pages)

(for "Large Cities are Not Sustainable:  
and will not help us get to Zero Carbon ASAP")

## A. Context-- Many Unprecedented Challenges Ahead

1) One of the most critical crossroads in the history of life on Planet Earth

2) We are in a Climate Emergency!--Emphasized!

a) We have left the 10,000-year climate "safe zone" that gave rise to human civilization.

b) --and-- while it has taken approximately 170 years to get to this point...

c) ... we now have less than 10 years----to get to Zero Carbon.

d) "Climate limit of 1.5C close to being broken, scientists warn" (Guardian) (May 9, 2022)

e) "While cities occupy only two percent of the world's landmass, they have an enormous climate footprint with more than 70% of global CO2 emissions. With 90 percent of the world's urban areas situated on coastlines, cities are also at high risk from some of the devastating impacts of climate change, such as rising sea levels and powerful coastal storms."

f) "The Solar Boom Will Create Millions of Tons of Junk Panels" (Wall Street Journal) (May 5, 2022)

3) From "Unprecedented Challenges Ahead" (2 pages; December, 2021)

## B. Large Cities are not sustainable, and will not help us get to Zero Carbon ASAP

1) "... first civilizations, emerged around 3000 BC..."

2) 2600 BC--Mohenjo-daro of the Indus Valley Civilization--

"population of 50,000 or more and a sophisticated sanitation system"

3) "50 greatest breakthroughs since the wheel."

4) "The growth of modern industry from the late 18th century onward led to massive urbanization and the rise of new great cities, first in Europe and then in other regions, as new opportunities brought huge numbers of migrants from rural communities into urban areas."

- a) "Only 3 percent of the world's population lived in urban areas in 1800."
- b) "In 1900 only 4,192 passenger cars (and no trucks or buses) were built in the United States."
- c) "The automotive industry caused a massive shift in the industrial revolution...."
- d) "... it was the internal combustion engine combined with cheap oil that provided mobility for people and freight that fueled the phenomenal urban growth of the twentieth century."
- e) "The world vehicle population passed the 500 million-unit mark in 1986, from 250 million motor vehicles in 1970. Between 1950 and 1970, the vehicle population doubled roughly every 10 years."

5) In the years 1939--1941, 7,000 television sets were sold in the United States.

By 1954, there were 35,472,466 television sets sold in the United States.

And by 1959, the number sold was 67,145,000.

- a) Annual Television Set Sales in the USA (1939--1959) (Table)
- b) Number of TV Households in America (1950--1978) (Table)
- c) "Data gathered on the global television market showed that there were 1.7 billion TV households worldwide in 2019, up from 1.67 billion in the previous year."
- d) Additional Television Statistics
- e) "On a nightly basis, the publicly-owned airwaves are a toxic environment awash with depictions of violence and gun violence."

6) "The industrial revolution, starting in the nineteenth and going into the twentieth century, is seen as the force that changed the economic family and is basically responsible for the 'modern family'."

- a) "... the family in highly industrialized countries has 'progressively ceased to function as a unit of production, and has instead become primarily a unit of consumption'."
- b) "... anthropologists have often described what happens to a primitive society when its spiritual values are exposed to the impact of modern civilization. It's people lose the meaning of their lives, their social organization disintegrates, and they themselves morally decay."

7) World Population Milestones

8) Concerns about the Leanings of Human Aspirations

[From the long Table of Contents for Section B (pages xii-xvii)

in ["Do We Have Moral Compasses We Can Rely On?"](#) (147 pages; April, 2021)]

## 9) More About Chemicals in Everyday Products

- a) Nearly 60% of children’s textiles labeled “waterproof”, “stain-resistant”, or “environmentally friendly” that were tested as part of a new study contained toxic PFAS substances known as “forever chemicals” due to their persistence in the environment.
- b) Mapping the PFAS contamination crisis: New data show 2,854 sites in 50 states and two territories
- c) “PFAS-tainted sewage sludge is used as fertilizer in fields and report finds that about 20 million acres of cropland could be contaminated” (Guardian) (May 8, 2022)
- d) “There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list doesn't include all toxic chemicals used in the U.S.”  
[Environmental Protection Agency (USA)]

## 10) More about air pollution

- a) “... more than 90% of the world’s young people – 1.8 billion children – are breathing toxic air, storing up a public health time bomb for the next generation.”
- b) “Nearly two-thirds of the 500,000 deaths of infants documented were associated with indoor air pollution, particularly arising from solid fuels such as charcoal, wood, and animal dung for cooking.”

## 11) More about Water scarcity, Sanitation, and Food Security

- a) “70% of world population suffers at least 1 month/yr of water scarcity” (graph)
- b) “Today, 1.42 billion people – including 450 million children – live in areas of high or extremely high water vulnerability.” (UNICEF, 2021)
- c) “Today, 1 in 4 people – 2 billion people – around the world lack safe drinking water. “(WHO/UNICEF 2021) “Almost half of the global population – 3.6 billion people – lack safe sanitation.” (WHO/UNICEF 2021)
- d) “In 2020, 45% of the household wastewater generated globally was discharged without safe treatment.” and “At least 10% of the world’s population is thought to consume food irrigated by wastewater.” [World Health Organization (WHO)]
- e) “Some 829 000 people in low- and middle-income countries die as a result of inadequate water, sanitation, and hygiene each year, representing 60% of total diarrhoeal deaths. Poor sanitation is believed to be the main cause in some 432 000 of these deaths and is a major factor in several neglected tropical diseases, including intestinal worms, schistosomiasis, and trachoma. Poor sanitation also contributes to malnutrition.... Diarrhoea remains a major killer but is largely preventable. Better water, sanitation, and hygiene could prevent the deaths of 297,000 children aged under 5 years each year.” (WHO)

- f) 72% of all water withdrawals are used by agriculture, 16% by municipalities for households and services, and 12% by industries. (UN-Water 2021)
- g) 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).
- h) “Cities require a concentration of food, water, energy, and materials that nature cannot provide.”
- i) “Today some 18 countries, containing half the world’s people, are overpumping their aquifers. Among these are the big three grain producers—China, India, and the United States—and several other populous countries, including Iran, Pakistan and Mexico.”
- j) “Where virtually all water has been claimed, cities can typically get more water only by taking it from irrigation. Countries then import grain to offset the loss of irrigated grain production. Since it takes 1,000 tons of water to produce one ton of grain, importing grain is the most efficient way to import water.”
- k) Water Footprint--There are large differences in the water footprint of consumption of nations
  - i) Global Water Usage: How do Countries Compare?
  - ii) “Identifying sustainable diets that promote health and minimize environmental impacts is increasingly important....”

12) “The 14 percent of energy used in the food system to move goods from farmer to consumer is equal to two thirds of the energy used to produce the food.”

13) Food Waste--“One-third of food produced for human consumption is lost or wasted globally.”/ “If wasted food were a country, it would be the third-largest producer of carbon dioxide in the world, after the USA and China.”

14) “China’s Great Uprooting: Moving 250 Million into Cities”

[“‘If half of China’s population starts consuming, growth is inevitable,’ said Li Xiangyang, vice director of the Institute of World Economics and Politics, part of a government research institute. ‘Right now they are living in rural areas where they do not consume.’”]

15) How Sustainable are America’s Infrastructures? (American Society of Civil Engineers report)

- c) Bridges (C)
- d) Drinking Water (C-)
- e) Hazardous Materials (D-)
- f) Roads (D)
- g) Solid Waste (C-)
- h) Wastewater (D-)

- 16) “Existing policies and market incentives... allow businesses to run up significant, largely unaccounted for, and unchecked *social and environmental externalities*.”
- 17) “... the unpaid and underpaid care work done primarily by women and girls around the world.”
- 18) 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.” (p. 60)  
(From “Why the Village Movement?” by J.C. Kumarappa)
- 19) “... there are truths which none can be free to ignore, if one is to have that wisdom through which life can become useful. These are the truths concerning the structures of the good life and concerning the factual conditions by which it may be achieved....”
- 20) From introduction to course offering “Applied Ecovillage Living” (Findhorn Foundation)
- 21) “Current high-energy consumer lifestyles were designed before we understood the very serious nature of the climate challenge....” (Centre for Alternative Technology)
- 22) A Key Role for Philanthropy--“... the Rosenwald Fund spent over four million dollars to help build 4,977 schools, 217 teachers' homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas.” (1917--1948)
- C. Visualizing a Reversal of the Urbanization Trend: 572 large cities to 41,700 ecologically sustainable small cities and towns [41,700 = how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns. (2.085 billion people relocating in such a migration)]
- 1) “further investment in mega-cities... clear risks on the horizon of severely diminishing returns”
  - 2) There are 572 cities with populations of 1 million... how many small cities and towns would have to add 50,000 people....?
  - 3) The following “thought experiment” is one exploration of what such a transition might look like.  
41,700 = how many small cities and towns would have to add 50,000 people--and still remain on track for Zero Carbon, and Ecological Sustainability--if there was a significant migration from megacities to small cities and towns.
  - 4) “Migration to towns and cities (i.e. the rural to urban transition) is very recent – mostly limited to the past 200 years.”



- 5) "Twentieth century cities and industrial regions are dependent for survival and growth on a vast and increasingly global hinterland of ecologically productive landscapes."
- 6) "The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever."  
 a) "...nature is unravelling and that our planet is flashing red warning signs of systems failure."  
 b) "We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide."
- 7) The CPCS Initiative believes that priority actions--for urgently and drastically cutting Global Greenhouse Gas Emissions--would be more constructive if they were focused on small cities, towns, and villages, which....
- 8) One of the keys to achieving this kind of cultural transformation is for a significant majority of the people who have "way too much" to understand that they can get by "with much less"--and for much of that "way too much" to go to "have not got the basics".

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For example, how many of us--especially those who are aware of how urgently we need to achieve Zero Carbon--would be really most appreciative to arrive in the year 2050, and find out we are living in places which have--

- A clean and beautiful environment
  - Adequate provision of clean drinking water
  - Adequate provision for safe sanitation
  - Minimal supplies of clothing
  - Adequate and balanced nutrition
  - Simple housing
  - Basic health care
  - Basic communication facilities
  - A minimal supply of energy
  - Holistic education
  - Satisfaction of intellectual and cultural needs?
- 

- 9) "The function of work should be to practice our ideal of life"  
 (J.C. Kumarappa, economist who worked with Mahatma Gandhi)

- a) "A wise person notices that inner harmony is disturbed when the mind lets itself be lured into indiscriminately sampling the world of phenomena."
- b) "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."
- c) "... every article in the bazaar has moral and spiritual values attached to it... hence it behooves us to enquire into the antecedents of every article we buy.... (Yet this) is an arduous task, and it becomes almost impossible for ordinary persons to undertake it when the article comes from far off countries."
- d) "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.*" (SP italics)
- e) "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."
- f) 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 as they materialize worldwide. This is part of the 'spiritual teachings' element which often gets overlooked. (Stefan Pasti)
- g) "We do not live unto ourselves, and the more we realize the repercussions of our actions on our neighbours and strive to act according to the highest we are capable of, the more shall we advance in our spiritual development."
- h) "Work absorbs most of our waking hours, and many of the problems connected with work and our dealings with our fellow man are what determine the nature of our life. Therefore, it behooves us to sit up and take note of what our work makes of us...."
- i) "The function of work should be to practice our ideal of life."

D. A Table with “Currently” and “in your Zero Carbon town” (key appropriate technology and culture change highlighted in the latter)--to help people visualize that the territory we are now setting out to explore has many positive features to recommend it.

Crowdsourcing to make this Table into a Visual Aid for presentations--not yet underway;  
hopefully forthcoming

(contributions are welcome)

E. The entire Section C. from “Do We Have Moral Compasses We Can Rely On?” (147 pages; April, 2021)

There are many movements, and key organizations, --and much urgency. Some examples of positive tipping point activity working along similar lines.

This section outlines how very resilient, and very regionally self-reliant, we can be. These, and many other approaches, have inspired my vision of small cities, towns, and villages achieving Zero Carbon, Sustainable Biodiversity, and countless other positive tipping points.

1) From “Why the Village Movement?” by J.C. Kumarappa

“... every article in the bazaar has moral and spiritual values attached to it... hence it behooves us to enquire into the antecedents of every article we buy....“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.”

2) “... Ecovillage Design Education (EDE) curriculum, which draws from the experience and expertise of a network of some of the most successful ecovillages and community projects across the Earth....”

a) “... a new kind of global education, specifically designed to meet the challenges and opportunities of the 21<sup>st</sup> century...”

b) “The EDE curriculum is a free resource for anyone wishing to learn about sustainability principles, and especially for those who might like to teach the EDE in their local area.”

c) “The EDE is consistent with, and representative of, key values in the greater ecovillage movement, values that include: honouring unity through diversity; celebrating diverse cultures and creeds; practicing racial, cultural, and gender equality; promoting social justice and environmental awareness; striving for peace and local self-determination; empowering individuals and local actors; raising consciousness and human potential; and, generally, respecting the living Earth as our planetary home.”

3) “It’s not a single idea, but many ideas and attitudes, including a reverence for nature and a preference for country life; a desire for maximum personal self-reliance and creative leisure; a concern for family nurture and community cohesion....”

#### 4) Permaculture

a) “It should be possible to design land use systems which approach the solar energy harvesting capacities of natural systems while providing humanity with its needs. This was the original premise of the permaculture concept.”

b) “Carefully observing natural patterns characteristic of a particular site, the permaculture designer gradually discerns optimal methods for integrating water catchment, human shelter, and energy systems with tree crops, edible and useful perennial plants, domestic and wild animals and aquaculture.”

c) “Water collection, management, and reuse systems like Keyline, greywater, rain catchment, constructed wetlands, aquaponics (the integration of hydroponics with recirculating aquaculture), and solar aquatic ponds (also known as Living Machines) play an important role in permaculture designs.”

“Farming systems and techniques commonly associated with permaculture include agro- forestry, swales, contour plantings, Keyline agriculture (soil and water management), hedgerows and windbreaks, and integrated farming systems such as pond-dike aquaculture, aquaponics, intercropping, and polyculture. Gardening and recycling methods common to permaculture include edible landscaping, keyhole gardening, companion planting, trellising, sheet mulching, chicken tractors, solar greenhouses, spiral herb gardens, swales, and vermicomposting. Water collection, management, and reuse systems like Keyline, greywater, rain catchment, constructed wetlands, aquaponics (the integration of hydroponics with recirculating aquaculture), and solar aquatic ponds (also known as Living Machines) play an important role in permaculture designs.”

#### d) 12 Design Principles of Permaculture

“Twelve Permaculture design principles articulated by David Holmgren in his *Permaculture: Principles and Pathways Beyond Sustainability*:

e) To Summarize... (from the article “Energy and Permaculture” by David Holmgren)

- \* Reduce, Reuse, Recycle (in that order).
- \* Grow a garden and eat what it produces.
- \* Avoid imported resources where possible.
- \* Use labor and skill in preference to materials and technology.
- \* Design, build, and purchase for durability and repairability.
- \* Use resources for their greatest potential use (e.g. electricity for tools and lighting, food scraps for animal feed).
- \* Use renewable resources wherever possible even if local environmental costs appear higher (e.g. wood rather than electricity for fuel and timber rather than steel for construction).
- \* Use non-renewable and embodied energies primarily to establish sustainable systems (e.g. passive solar housing, food gardens, water storage, forests).
- \* When using high technology (e.g. computers) avoid using state of the art equipment.
- \* Avoid debt and long-distance commuting.
- \* Reduce taxation by earning less.
- \* Develop a home-based lifestyle, be domestically responsible.

f) “The transition from an unsustainable fossil fuel-based economy back to a solar-based (agriculture and forestry) economy will involve the application of the embodied energy that we inherit from industrial culture: This embodied energy is contained within a vast array of things, infrastructure, cultural processes and ideas, mostly inappropriately configured for the ‘solar’ economy. It is the task of our age to take this great wealth, reconfigure and apply it to the development of sustainable systems.”

“Mollison almost in passing points to three guidelines we should observe in this task.

- \* The systems we construct should last as long as possible and take least maintenance.
- \* These systems, fueled by the sun should produce not only for their own needs, but the needs of the people creating and controlling them. Thus they are sustainable as they sustain both themselves and those who construct them.
- \* We can use non-renewable energy to construct these systems providing that in their lifetime, they store or conserve more energy than we use to construct or maintain them.”

g) Permaculture Global: A growing list of permaculture projects worldwide

## 5) Transition Network

- a) "It's an approach that has spread now to over 50 countries...."
- b) Essential Guide to Doing Transition
- c) "7 Essential Ingredients: Healthy Groups, Vision, Community Involvement, Networks and Partnerships, Practical Projects, Part of a Movement, Reflect and Celebrate"

These seven essential ingredients will enable you to develop and embed Transition within your community.

"Healthy Groups, Vision, Community Involvement, Networks and Partnerships, Practical Projects, Part of a Movement, Reflect and Celebrate"

- d) Campaign--"From What Is to What If: Reimagining and Rebuilding Our World"

"Now, more than ever, it's essential for us to come together to connect with each other, envision positive futures, rethink our national strategy, and take practical action to build community resilience everywhere."

6) "The Findhorn Ecovillage is a tangible demonstration of the links between the spiritual, social, ecological and economic aspects of life and is a synthesis of the very best of current thinking on human habitats."

- a) "... a constantly evolving model used as a teaching resource by a number of university and school groups as well as by professional organisations and municipalities worldwide."
- b) "The Findhorn Ecovillage--

is at the heart of the largest single intentional community in the UK

is a pioneering ecovillage that evolved at The Park from 1985

is a major centre for holistic learning serving thousands of visitors each year from around the world

has an ecological footprint that is around half the national (UK) average

features more than 100 ecologically-benign buildings

supplies energy from four wind turbines

boasts a biological Living Machine waste water treatment system

installed a 250kW biomass boiler in 2010 to serve the central Park area, reducing carbon emissions by around 80 tons a year

includes numerous solar water heating systems

is part of a comprehensive recycling system

is the publisher of the UK's first technical guide to ecological housing  
has a share-issuing community co-operative and a local currency  
is served by a car-sharing club that includes zero-emissions electric vehicles"

c) From introduction to course offering "Applied Ecovillage Living"

"The Findhorn Foundation, community, and ecovillage has a long history of facilitating and teaching sustainability practices.

d) Detailed overview of a course on "Ecovillage Design Curriculum"

"Gaia Education Design for Sustainability Incorporating Transition Towns Training  
5 October - 8 November 2013"

7) "From the very beginning, at Tuskegee, I was determined to have the students do not only the agricultural and domestic work, but to have them erect their own buildings." (Booker T. Washington)

a) "... in the teaching of civilization, self-help, and self-reliance, the erection of buildings by the students themselves would more than compensate for any lack of comfort or fine finish."

b) "Many white people who had had no contact with the school, and perhaps no sympathy with it, came to us to buy bricks because they found out that ours were good bricks. They discovered that we were supplying a real want in the community."

c) "As an additional result, hundreds of men are now scattered throughout the South who received their knowledge of mechanics while being taught how to erect these buildings."

d) "The people with whom he lives and works are going to think twice before they part with such a man."

e) "... the Rosenwald Fund. Using state-of-the-art architectural plans designed by professors at Tuskegee Institute, the fund spent more than four million dollars to build 4,977 schools, 217 teacher homes, and 163 shop buildings in 883 counties in 15 states, from Maryland to Texas. The Rosenwald Fund was based on a system of matching grants, requiring white school boards to commit to maintenance and black communities to aid in construction."

f) From the Wikipedia webpage for "Rosenwald School"

8) Appropriate Technology Library--1050 Books on 1 USB Drive (by Village Earth)

a) "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."

- b) “The AT Library gives you the knowledge to solve real-world problems such as: building and maintaining an irrigation system; starting a small fish hatchery; building a small-scale hydropower scheme; building and maintaining pumps
- c) For a complete list of the 1050 books included--
- d) “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.”

Note: Addition to the excerpts from Section C.

The website Low Impact Living Initiative also has a very comprehensive webpage with overviews of many appropriate technologies--at the webpage “Low-Impact Living” (at <https://www.lowimpact.org/>). From that webpage: “Lowimpact.org is a huge resource bank for living sustainably and re-skilling for career change, supported by a network of like-minded people, businesses & organisations. Browse the categories below for 230+ topics with frequently updated info, books, magazines, news, videos, courses, products, services & specialists to answer your queries. “

- 9) Excerpt from a “Farmer Seeking Apprentice” Application Form—“We feel we have a broad education to offer to an apprentice.”
- 10) Local Food Policy--“Many organizations, both local and national in scope, have developed tools, informational resources, or successful model policies
- 11) “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.”
- 12) Local Currency--“Federal currency is exchanged for BerkShares at nine branch offices of three local banks and spent at 400 locally owned participating businesses.”
- 13) “This embodied energy is contained within a vast array of things, infrastructure, cultural processes and ideas, mostly inappropriately configured for the ‘solar’ economy. It is the task of our age to take this great wealth, reconfigure and apply it to the development of sustainable systems.”
- 14) 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 as they materialize worldwide. This is part of the ‘spiritual teachings’ element which often gets overlooked.
- 15) “Growing Wisdom and Compassion in Small Communities (13 Steps)” (78 pages)
- 16) “The Great Way is very level, but people greatly delight in tortuous paths.”
- 17) From article “Gandhi’s Swadeshi--The Economics of Permanence” by Satish Kumar (originally a chapter in "The Case Against the Global Economy - and for a turn toward the local" edited by Jerry Mander and Edward Goldsmith)



## F. Logistics

[Excerpt from “Becoming a Greater Force Than the Challenges We Are Facing” (6 pages; August, 2021)--also accessible at <https://www.cpcsi.org/recommendations> (Note: letters and numbers in organization are different from the original)]

- 1) Fortunately, there are thousands positive tipping point organizations and institutions, which are--
  - a) making significant contributions in their fields (especially Climate Mitigation and Sustainable Biodiversity, but also many other fields)
  - b) well known in their fields for the integrity and reliability of their work.

[Note: I have listed 616 positive tipping point organizations and institutions (with Twitter profiles) in 30 categories in Appendix 10 of my 157 page paper “[Brainstorming Zero Carbon ASAP Campaign](#)”--and have also created a [sample list of 231 such organizations and institutions](#)).

As a way to exponentially accelerate solution activity towards “Economies with no social and environmental externalities”, I advocate for accumulating 5-10 page overviews on how to achieve Zero Carbon ASAP (in small cities, towns, and villages)--*and also how their field of activity can contribute to resolving other critical challenges*--from thousands of such positive tipping point organizations and institutions (overviews which will be updated as needed, for the duration of the emergency)--and make such overviews accessible for free on a number of clearinghouse websites.

- 2) Thousands of local Community Visioning Initiatives, in communities around the world, can...

Thousands of local Community Visioning Initiatives, in communities around the world, can activate the most possible human participation (by way of 6-12 months of workshops, meetings, brainstorming, and prioritizing challenges and solutions) (with the process repeated periodically in the future), and help build a high level of consensus for specific action plans in the shortest amount of time, with support from--

- a) Universities, colleges, and thousands of positive tipping point related organizations and institutions creating related curriculum--and offering resources, classes, workshops, and teacher training to maximize the identification of challenges and solutions during the Community Visioning process
- b) Neighborhood Learning Centers helping to create the necessary knowledge base and skill sets by providing accessible space for workshops, discussion, information sharing, mutual support, encouragement, fellowship, and friendship
- c) Local newspapers supporting this multi-faceted solution-oriented path with ongoing coverage--and a new section for reader contributions which identify helpful people and valuable resources, and reinforce important community goals

- d) Residents (especially those who are unemployed) volunteering time and energy to assist with Community Visioning and Neighborhood Learning Centers, and to advance resulting action plans--who then could receive, as compensation, local currency (which, because it can only be spent in local community businesses, helps support the local economy)
- e) Job fairs at the end of the Community Visioning Initiative process, which 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.
- f) Local leaders of religious/spiritual traditions stepping up on every frontline possible to help people understand the urgent need to
  - i) sacrifice personal desires for the greater good
  - ii) choose forgiveness, reconciliation--*and abstaining from violent conflict resolution*--as a way of bringing cycles of violence to an end
  - iii) create 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"
 and help people understand the benefits of
  - g) Interfaith Prayer Vigils

G. Cost of Community Visioning Initiatives—rough estimate: \$10 million for a time-intensive (year or more) Community Visioning Initiative (introduced by Preliminary Surveys, and supported by many Neighborhood Learning Centers). Thus, 1000 Community Visioning Initiatives, in communities around the world, would cost \$10 billion. In this section, the figure of \$10 billion is compared to many other kinds of wealth accumulation and human expenditures.

1) A rough estimate by this writer for a time-intensive (year or more) Community Visioning Initiative (introduced by Preliminary Surveys, and supported by many Neighborhood Learning Centers) is \$10 million (10 million in U.S. dollars). 1000 Community Visioning Initiatives would cost approximately \$10 billion.

2) Here's 6 different ways of looking at where 10 billion dollars might come from, so that 1000 communities could carry out Community Visioning Initiatives.

- a) \$10 billion is only .0028% of the \$355 trillion in personal wealth held by the richest 12.2 percent.
- b) \$10 billion is only .005% of \$1,981 billion in world military expenditures in 2020.
- c) \$10 billion is .014% of \$700 billion in worldwide advertising spending in 2021.
- d) \$10 billion is .018% of the \$546.2 billion spent worldwide on alcoholic beverages in 2021.

e) \$10 billion is .021% of the \$465.76 billion of worldwide gambling revenues in 2020.

f) \$10 billion is .056% of \$177 billion spent by Pay TV subscribers in the world in 2020.

H. The kind of truthful public discussion we really need to be having

(Unfortunately, there is a profound gap between the kind of truthful public discussion we are having, and the kind of truthful public discussion we really need to be having.)

1. Evaluating Community Resilience (survey questions)
2. Arriving at Working Definitions of "Right Livelihood" (survey questions)
3. The concept of "Community Queries" introduced here is simply an expansion of the use of "Queries" by the Religious Society of Friends (Quakers).... (with 13 specific examples) (seeking comments)
4. People, Institutions, etc. Which You Personally Place Your Faith In (survey question)
5. Cultivating Sympathy and Compassion in Your Community (survey question)
6. Trust Among People from Different Faith Communities and Cultural Traditions (survey question)
7. There is a profound need for not just schools (and other educational institutions)—but all citizens—to recognize their social responsibilities to identify and reinforce only those cultural "building blocks" which help create and support commonly agreed upon definitions of "the greater good". (seeking comments)
8. If Only There Was a Way.... (fill in the blank)
9. The Person Who Will Help Me the Most.... (fill in the blank)
10. Identifying the Most Important Elements of Community Life and Cultural Traditions (fill in the blank)
11. Excerpts from a paper "The Relation of Moral and Religious Education" by Father Michael Maher, S.J., [which was presented at the First International Moral Education Congress, University of London, (1908)] (seeking comments)
12. "The meaning of life, therefore, of its purposes and values as understood by the educator, primarily determines the nature of his work." (seeking comments)
13. "How to find suitable teachers is, therefore, the really important question with which we are confronted...." (seeking comments)
14. Large Cities vs. Small Cities, Towns, and Villages (survey questions)

Appendix 1 Community Visioning Initiatives, Neighborhood Learning Centers, and Neighbor to Neighbor Community Education sections in local newspaper--in more detail

Appendix 2 The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative Vision

Appendix 3 30 Propositions and Premises of The CPCS Initiative

Appendix 4 About the CPCS Initiative, and Stefan Pasti

Appendix 5 (long) Table of Contents (Executive Summary)

Appendix 6 link to 28 page PowerPoint highlighting key points

## Appendix 6

This [Power Point presentation](#) (28 slides)(and [converted to 28 page pdf file](#))

--provide key highlights from the “Large Cities are Not Sustainable: and will not help us get to Zero Carbon ASAP” (148 pages; May, 2022) by Stefan Pasti Founder, The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative

--and can be used freely, as an educational resource, by anyone, to help discussions be productive, and to help mobilize actions which accelerate positive indicators (same with this paper).

#### Additional Commentary

In the next few decades, we will need to be very responsible, locally, so that we can be part of the solutions.

We will need to be making best use of the knowledge and skills each one of us has;

we will need to be on the same side, helping each other;

and we will need to understand that—wisely directed—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.

This writer believes that if many people could see and feel the practical value of carrying out the kind of collaborative problem solving and community education initiatives advocated for by this paper, such collaborative, solution-oriented activity could become a common experience... a common cultural tradition... a cultural tradition which can link many diverse communities of people together, in a fellowship of people working towards the greater good of the whole... and a cultural tradition which can help pass on to future generations the most treasured wisdom human beings have accumulated in more than 5,000 years of human history.

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.