

Triggering Positive Social, Environmental, Economic, and Cultural Tipping Points

by Stefan Pasti, Founder and Resource Coordinator
The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative
(www.cpcsi.org)
(20 pages; September, 2022)

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]

B. 6th 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)]

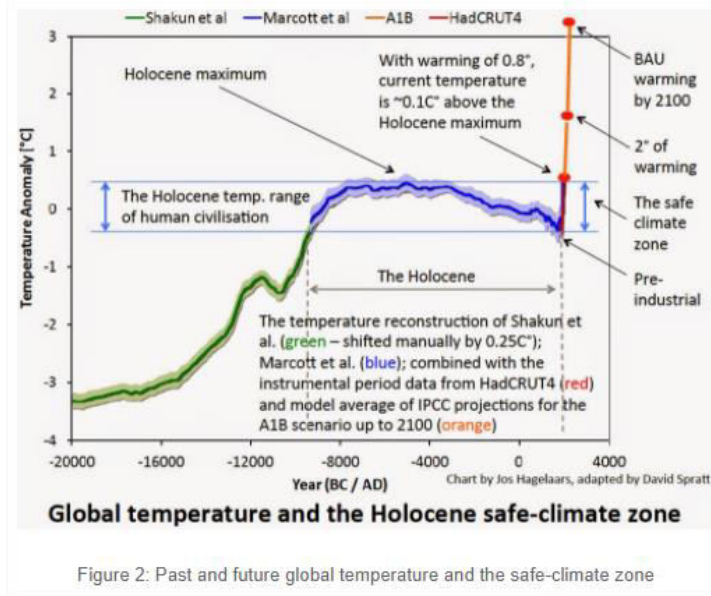
C. Human Morality

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 --with supplemental copy [“Table of Contents”](#) (13 pages) as Executive Summary (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....”)]

D. We are in a Climate Emergency!--Emphasized!!!

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



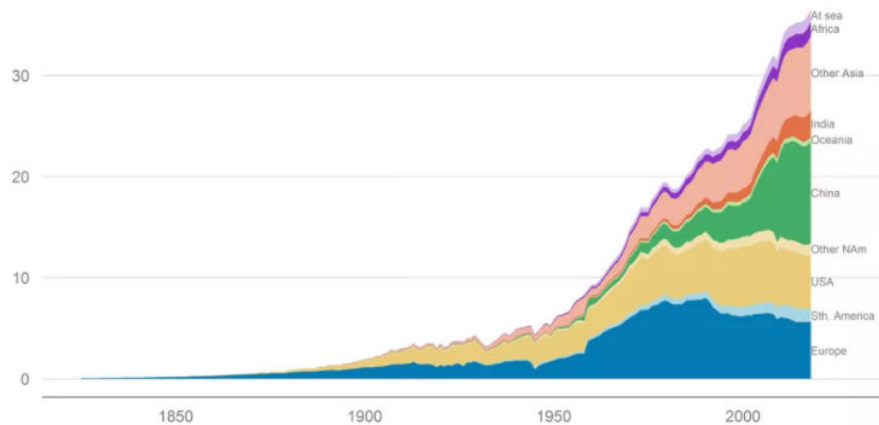
[From article "The real budgetary emergency and the myth of 'burnable carbon'" (by David Spratt) (May 22, 2014) at <http://www.climatecodered.org/2014/05/the-real-budgetary-emergency-burnable.html>]

2) --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 CO₂, 1825-2018



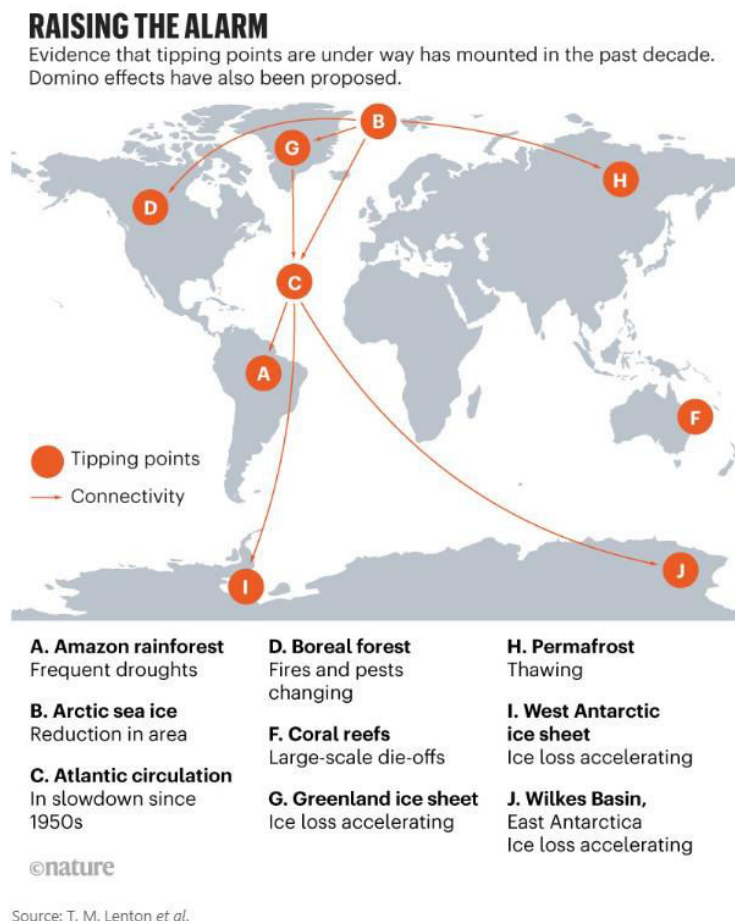
Source: Carbon Dioxide Information Analysis Center (CDIAC), Global Carbon Project (GCP)

[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>)]

3) ... we now have less than 10 years---- (sentence completed on p. 14)

a) due to increasing concerns about negative tipping points

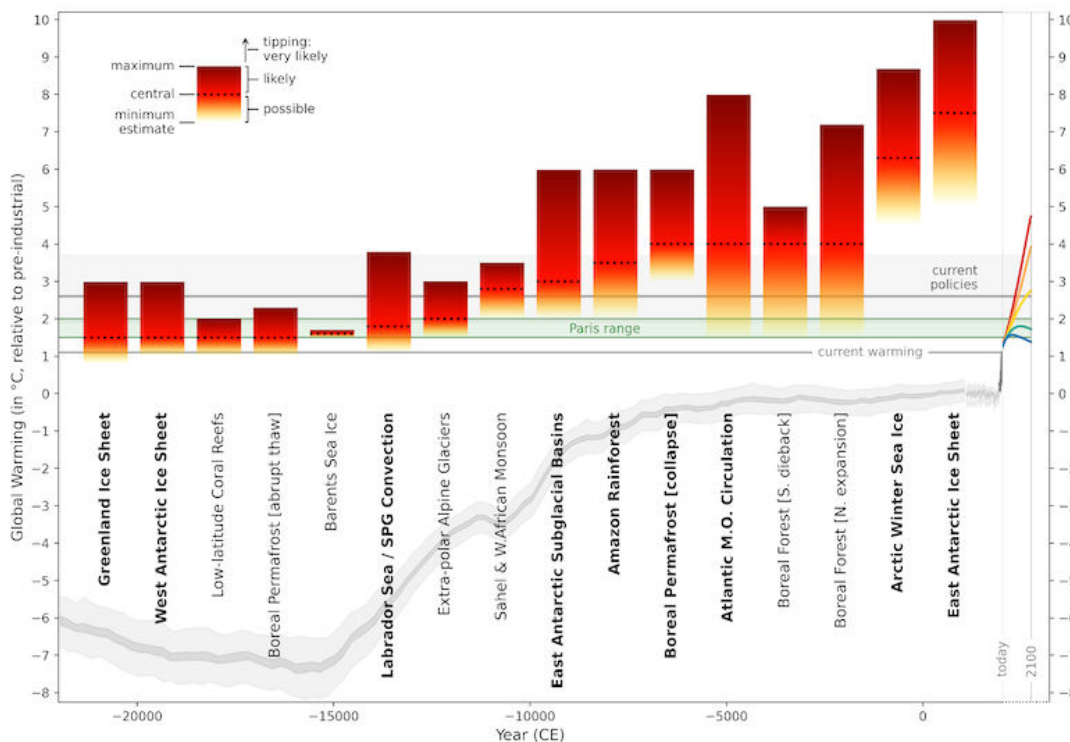
i) “In our view, the clearest emergency would be if we were approaching a global cascade of tipping points that led to a new, less habitable, ‘hothouse’ climate state.”



[From “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) by Timothy M. Lenton *et al.* (at <https://www.nature.com/articles/d41586-019-03595-0>) (text in section “Global Cascade”, paragraph 1); graphic in section “Biosphere Boundaries”)]

ii) “The authors find that human-caused warming of 1.1C has already pushed five tipping elements into the ‘possible’ range – including the collapse of the Greenland and West Antarctic ice sheets, which were possible from warming levels of 0.8C and 1.0C, respectively.”

“Meanwhile, the study finds that six tipping elements could become ‘likely’ – and a further four ‘possible’ – if global temperatures rise to 1.5C above pre-industrial temperatures. And 13 tipping elements will be either ‘likely’ or ‘possible’ if the planet warms by 2.6C, as expected under current climate policies”.



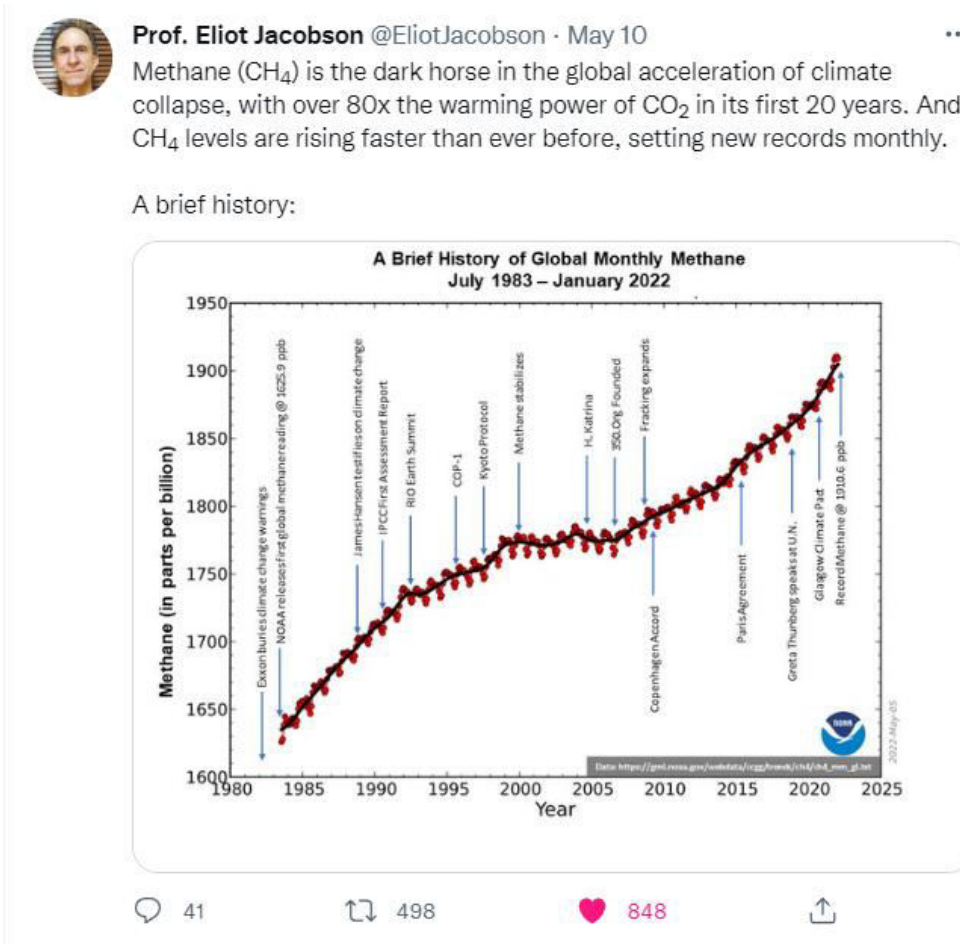
Plot showing the likelihood of crossing 15 tipping points at different warming levels (left). Expected warming (top right) and number of tipping points crossed (bottom right) at different warming trajectories. Source: McKay et al (2022).

[From article “Global warming above 1.5C could trigger ‘multiple’ tipping points” (re journal article “Exceeding 1.5°C global warming could trigger multiple climate tipping points” by David I. Armstrong McKay et al. September 9, 2022 in the journal Science--at <https://www.science.org/doi/10.1126/science.abn7950>)(Note: my test of this link was not successful; however, copying the address, and entering it into Google search was successful) by Ayesha Tandon (September 8, 2022) at the Carbon Brief website (at <https://www.carbonbrief.org/global-warming-above-1-5c-could-trigger-multiple-tipping-points/>) (both text--paragraphs 3 and 7, and graph, in section “Thresholds Crossed”)]

b) The increasing risks of wetlands methane emissions (not yet included on the lists of negative tipping points above)

--Introduction to Methane

i) "... CH₄ levels are rising faster than ever before...."



[Above tweet by Prof. Eliot Jacobson on May 10, 2022 (at <https://twitter.com/EliotJacobson/status/1524094265550200833>) (if link won't work, copy and paste into Google search)]

ii) "Methane has accounted for roughly 30 per cent of global warming since pre-industrial times and is proliferating faster than at any other time since record keeping began in the 1980s."

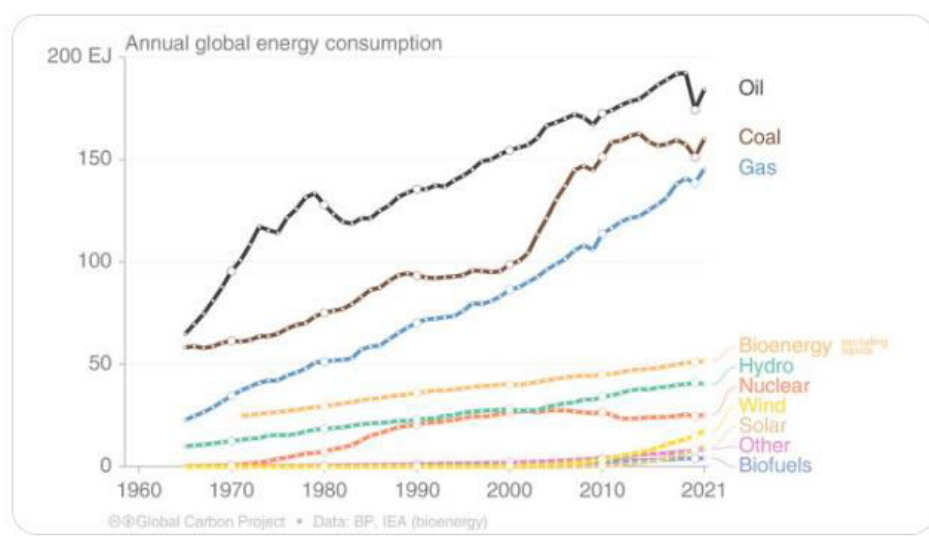
[From article "Methane emissions are driving climate change. Here's how to reduce them." (August 20, 2021) at the United Nations Environment Programme (UNEP) website (at <https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them#:~:text=Over%20a%2020%2Dyear%20period,keeping%20began%20in%20the%201980s>) (paragraph 6)]

Context:

--“Fossil fuels – coal, oil and gas – are by far the largest contributor to global climate change, accounting for over 75 per cent of global greenhouse gas emissions and nearly 90 per cent of all carbon dioxide emissions.”

[From the webpage “Causes and Effects of Climate Change” at the United Nations website (section “Climate Action”) (at <https://www.un.org/en/climatechange/science/causes-effects-climate-change>) (paragraph 1)]

--“Just your regular reminder that the energy system is still dominated by fossil fuels...”



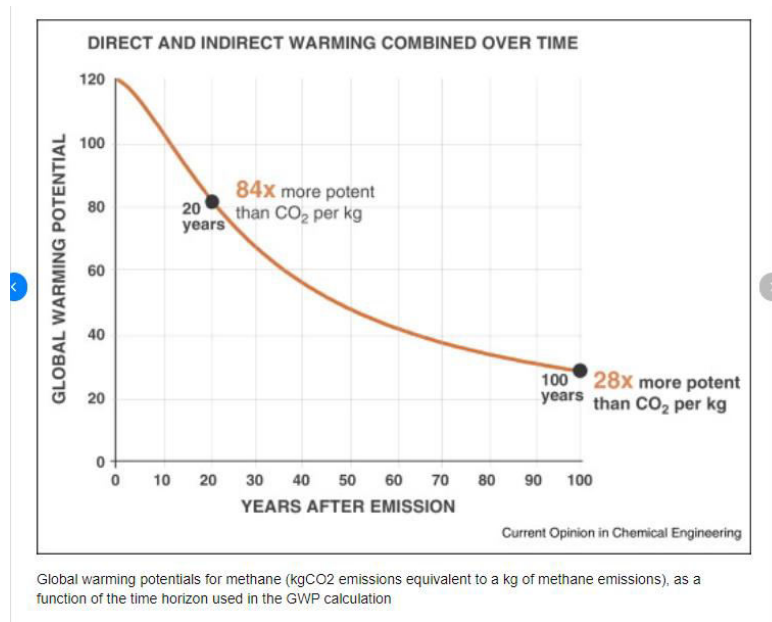
[From tweet by Glen Peters (Research Director at CICERO--Center for International Climate Research, Norway) (July 18, 2022) (at https://twitter.com/Peters_Glen/status/1548947015786270720) (Figure based on BP) (if link won't work, copy and paste into Google search)]

iii) Global Warming Potential (GWP) of Methane

--“The global warming potential (GWP) is a way of comparing the warming due to other gases to that from carbon dioxide, over a given time period. Methane's GWP₂₀ of 85 means that a ton of CH₄ emitted into the atmosphere creates approximately 85 times the atmospheric warming as a ton of CO₂ over a period of 20 years.”

[From the Wikipedia webpage for “Methane emissions” (at https://en.wikipedia.org/wiki/Methane_emissions) (in the section “Atmospheric concentration and warming influence”, paragraph 2)]

--Graph illustrating Global Warming Potential of Methane



[From the webpage

([https://www.researchgate.net/figure/Global-warming-potentials-for-methane-kgCO₂-emissions-equivalent-to-a-kg-of-methane_fig2_263283839](https://www.researchgate.net/figure/Global-warming-potentials-for-methane-kgCO2-emissions-equivalent-to-a-kg-of-methane_fig2_263283839)) Source Publication: “Methane emissions from natural gas production and use: Reconciling bottom-up and top-down measurements” by David T. Allen (August, 2014) at the ResearchGate website (at <https://www.researchgate.net/publication/263283839> Methane emissions from natural gas production and use Reconciling bottom-up and top-down measurements) (in section “Abstracts and Figures”)]

iv) “600 million tonnes of methane is released into the atmosphere annually of which 2/5ths come from natural biogenic sources like rotting vegetation in swamps with the balance or 3/5ths tied to human activity.”

[From article “Methane Acceleration Sets Record” by Robert Hunziker (March 15, 2022) at the CounterPunch website (at <https://www.counterpunch.org/2022/03/15/methane-acceleration-sets-record/?fbclid=IwAR2864vIJvy-XNT5GHbjOufYV6gGHviziUZwFOIW0QG06z69ukHToyfV-j0>) (paragraph 6)]

The Post-2006 Methane Spike

i) “Scientists can identify sources of methane by studying the proportion of carbon-12 to carbon-13 in the atmosphere. These different forms of carbon – chemically similar but with different masses – are known as isotopes. Biogenic methane, made by microbes in rotting vegetation or in cow stomachs, is relatively rich in carbon-12, while methane from fossil fuels and fires has comparatively more carbon-13.

“For two centuries, rapidly expanding gas, coal and oil industries steadily drove atmospheric methane richer in carbon-13. Since 2007, that trend has reversed, and the proportion of carbon-13 in atmospheric methane has decreased. Although fossil fuel emissions may still be growing, soaring methane emissions are now primarily the result of faster-growing biogenic sources.”

[From article “Methane in the atmosphere is at an all-time high – here’s what it means for climate change” by Euan Nisbet (Professor of Earth Sciences, Royal Holloway University of London) (January 26, 2022) at The Conversation website (at <https://theconversation.com/methane-in-the-atmosphere-is-at-an-all-time-high-heres-what-it-means-for-climate-change-174908#:~:text=As%20global%20temperatures%20increase%2C%20the,of%20warming%20feeding%20more%20warming>) (paragraphs 8 and 9)]

ii) “Most climate scientists already agreed that the post-2006 methane spike has largely not come from fossil fuel production. That’s because atmospheric methane has become ever more enriched in carbon-12, the lighter isotope of carbon, reversing what had been a multicentury trend, says Xin Lan, a carbon cycle scientist at the Earth System Research Laboratories (ESRL) of the National Oceanic and Atmospheric Administration. ‘This is a very significant signal,’ she says. It points to microbes as the source because they favor reactions that use light carbon, giving the methane they produce a distinctive light signature’. (paragraph 3)

“Yet the isotopic signal cannot distinguish between microbes in a swamp, a landfill, or a cow’s gut. ‘A cow is a walking wetland,’ says Euan Nisbet, an atmospheric chemist at Royal Holloway, University of London. Most researchers think a mix of cattle ranching and landfills in the tropics are the main driver of the post-2006 increase, because they have expanded dramatically alongside populations in the region.” (paragraph 4)

“Now, researchers are homing in on the source of the mysterious surge. Two new preprints trace it to microbes in tropical wetlands. Ominously, climate change itself might be fueling the trend by driving increased rain over the regions.” (paragraph 1)

“... the sharp acceleration in the past couple of years seemed to require some other source. Studies are now implicating the Sudd in South Sudan, the continent’s largest swamp and a region researchers have been unable to study on the ground because of the long-term conflict in the region. Using Japan’s Greenhouse Gases Observing Satellite, which measures the amount of light absorbed by methane at infrared wavelengths, Palmer and his colleagues were able to show the Sudd had grown as a methane hot spot since 2019, adding some 13 million extra tons per year to the air—more than 2% of annual global emissions. A second study, posted in late June by Harvard University researchers and submitted to Environmental Research Letters, finds nearly the same story, especially the surge in East Africa. When combined with smaller increases from the Amazon and the northern forests, it largely explains the observed rise in the atmosphere.” (paragraph 5)

[From article “In ominous sign for global warming, feedback loop may be accelerating methane emissions” by Paul Voosen (July 13, 2022) at the Science website (at <https://www.science.org/content/article/ominous-sign-global-warming-feedback-loop-may-be-accelerating-methane-emissions>)]

iii) “Xin Lan, atmospheric scientist at NOAA’s Global Monitoring Laboratory, Boulder, Colorado, says studies show that the rapid increase since 2007 is 85% due to microbes or natural sources. This, therefore, is evidence of nature’s positive feedback loop at work with nature now producing accelerating levels on its own accord, an endless acceleration fed by global warming feeding itself!....” (“...Although, climate scientist Euan Nisbet says research is still ongoing as to the primary source.”)

“... Additionally, of special note, and of special concern about future renegade methane emissions, NASA’s Arctic Boreal Vulnerability Experiment of a couple years ago identified methane hotspots via airborne sensors over nearly 12,000 square miles of Arctic landscape: ‘We detected 2 million of these hotspots over the land that we covered... mostly concentrated within about 44 yards of standing bodies of water... we found abrupt thawing of the permafrost right underneath the hotspots’. (Source: Clayton D. Elder, et al, Airborne Mapping Reveals Emergent Power Law of Arctic Methane Emissions, Geophysical Research Letters, February 10, 2020)”

[From article “Methane Acceleration Sets Record” by Robert Hunziker (March 15, 2022) at the CounterPunch website (at <https://www.counterpunch.org/2022/03/15/methane-acceleration-sets-record/?fbclid=IwAR2864vIJvy-XNT5GHbjOufYV6gGHviziUZwFOIW0QG06z69ukHToyfV-j0>) (paragraphs 10-12)]

iv) “From tropical swamps in the Amazon, Nile and Congo basins to tundra in Russia and muskeg bogs in Canada, wetlands emit roughly 200 million tonnes of methane a year. As global temperatures increase, the rate at which wetlands generate and decompose biomass grows and these environments release more methane. Methane emissions accelerate climate change and climate change causes the release of more methane – a positive feedback of warming feeding more warming.

“The microbes in the stomachs of ruminant animals like cattle, sheep, goats and camels are similar to wetland microbes. In effect, cows are walking wetlands. Ruminants produce nearly as much methane as fossil fuel emissions, roughly 115 million tonnes annually. Globally, about two-thirds of farmland is animal pasture.”

[From article “Methane in the atmosphere is at an all-time high – here’s what it means for climate change” by Euan Nisbet (Professor of Earth Sciences, Royal Holloway University of London) (January 26, 2022) at The Conversation website (at <https://theconversation.com/methane-in-the-atmosphere-is-at-an-all-time-high-heres-what-it-means-for-climate-change-174908#:~:text=As%20global%20temperatures%20increase%2C%20the,of%20warming%20feeding%20more%20warming>) (paragraphs 11 and 12)]

v) “When wetlands get wetter, it leads to more methane emissions because the microbes that produce methane have more organic matter on which to feed. The sources of the methane may be natural, but a climate warmed by human activity is fuelling these emissions. Climate change is expected to lead to more intense rainfall in east Africa; and these wetter, warmer wetlands will produce more methane. Other natural sources of methane — melting permafrost, and wildfires — are also linked to climate change.”

[From the article “Methane hunters: what explains the surge in the potent greenhouse gas?: (subtitle) Levels of the gas are growing at a record rate and natural sources like wetlands are the cause, but scientists don’t know how to curb it” by Leslie Hook and Chris Campbell (August 22, 2022) at the Financial Times website (at <https://www.ft.com/content/9ef195d6-dcc3-4378-bb35-2721981d6416?shareType=nongift>) (in section “Hunting for Clues”, paragraphs 6 and 7)]

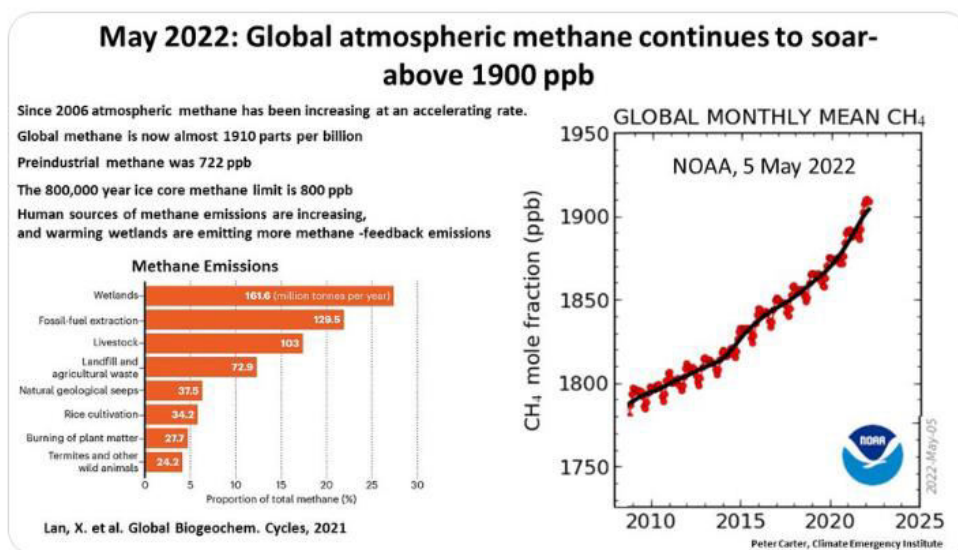
vi)



Peter D Carter
@PCarterClimate

...

May 2022: Global atmospheric methane continues to soar- above 1900 ppb. Methane is a powerful GHG over 80 times CO₂ (20 years after emission). Human sources of methane are increasing. Warming wetlands and thawing permafrost are releasing methane as feedback. [#climate](#) [#methane](#)



[From tweet by Peter D. Carter (Director Climate Emergency Institute--BC, Canada; IPCC expert reviewer) (May 18, 2022) (at <https://twitter.com/PCarterClimate/status/1526793418273239040>) (if link won’t work, copy and paste into Google search)]

The Global Methane Pledge

i) “Increasingly, countries around the world are recognizing that global warming, brought on by increased concentrations of methane in the atmosphere, poses a serious threat to their development. Approximately 50 percent of **anthropogenic** methane emissions come from the five sources targeted by the GMI:

Agriculture (animal waste management) accounts for 3 percent of **anthropogenic** methane emissions.

Coal mining accounts for 9 percent of **anthropogenic** methane emissions.

Landfills account for 11 percent of **anthropogenic** methane emissions.

Natural gas and oil systems account 24 percent of **anthropogenic** methane emissions.

Wastewater accounts for 7 percent of **anthropogenic** methane emissions.

GMI's Partner Countries represent approximately 70 percent of the world's estimated **anthropogenic** methane emissions.” (**anthropogenic** = originating in human activity)

[From the webpage “Why is Methane So Important?” at the Global Methane Initiative (GMI) website (at <https://www.globalmethane.org/methane/>) (in section “Methane Under the Scope of the Initiative”, paragraphs 1 and 2)]

ii) The Global Methane Pledge

“With over 100 countries on board, **representing nearly 50% of global anthropogenic methane emissions** and over two thirds of global GDP, we are well on our way to achieving the Pledge goal and preventing more than 8 gigatons of carbon dioxide equivalent emissions from reaching the atmosphere annually by 2030.”

[From the homepage (“Fast action on methane to keep a 1.5°C future within reach”) at the Global Methane Pledge website (at <https://www.globalmethanepledge.org/>) (in the section “About the Global Methane Pledge”, paragraph 6)]

iii) “The world’s biggest methane emitters — China and Russia — have not signed the COP26 pledge. And even if they did, it’s not clear that reductions in human-caused methane will be enough to compensate for the **increase from natural sources.**”

[From the article “Methane hunters: what explains the surge in the potent greenhouse gas?: (subtitle) Levels of the gas are growing at a record rate and natural sources like wetlands are the cause, but scientists don’t know how to curb it” by Leslie Hook and Chris Campbell (August 22, 2022) at the Financial Times website (at <https://www.ft.com/content/9ef195d6-dcc3-4378-bb35-2721981d6416?shareType=nongift>) (in section “Cutting the Gas”, paragraph 6)]

c) Increasing Impact of Floods, Wildfires, and Droughts

--Floods in Pakistan, 2022

“around "one-third" of the country was under water, affecting 33 million people” (lead paragraph) in section “Impact”

“546,288 people are living in temporary camps because of the floods” (paragraph 1)

“at least US\$30 billion (or Rs. 6.7 trillion) of damage” (paragraph 1)

“918,473 livestock have been killed” (paragraph 2)

[From the Wikipedia webpage for “2022 Pakistan floods” (at https://en.wikipedia.org/wiki/2022_Pakistan_floods) (paragraph 1; in section “Impact”)]

--Wildfires, 2021

“Wildfires emitted 1.76 billion tonnes of carbon globally in 2021, Copernicus said (European Union's Copernicus Atmosphere Monitoring Service). That's equivalent to more than double Germany's annual CO2 emissions.”

[From article “This is how much carbon wildfires have emitted this year” by Kate Abnett (Reporter, Reuters) (December 10, 2021) at the World Economic Forum website (at <https://www.weforum.org/agenda/2021/12/siberia-america-wildfires-emissions-records-2021/>) (paragraph 2)]

--Droughts (Ex: China, 2022)

“The record-breaking heat wave in China, which started back in June, has evaporated over half the hydroelectricity generation capacity in Sichuan, a southwestern province that usually gets 81% of its electricity from hydropower plants. That decreased energy supply, at a time when the need for cooling has increased demand, is putting industrial production and everyday life in the region on pause.”

[From article “China’s heat wave is creating havoc for electric vehicle drivers” by Zeyi Yang (August 26, 2022) at the MIT Technology Review website (at <https://www.technologyreview.com/2022/08/26/1058727/chinas-heat-wave-electric-vehicle/>) (paragraph 3)]

d) Emissions have not yet peaked

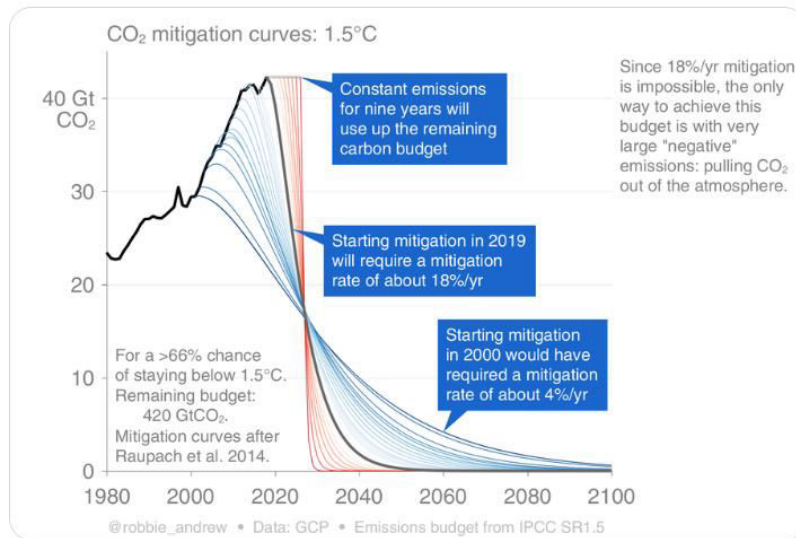
-- “Global energy-related carbon dioxide emissions rose by 6% in **2021** to 36.3 billion tonnes, their highest ever level, as the world economy rebounded strongly from the Covid-19 crisis and relied heavily on coal to power that growth, according to new IEA analysis released today”

“The increase in global CO2 emissions of over 2 billion tonnes was the largest in history in absolute terms, more than offsetting the previous year’s pandemic-induced decline, the IEA analysis shows. The recovery of energy demand in 2021 was compounded by adverse weather and energy market conditions – notably the spikes in natural gas prices – which led to more coal being burned despite renewable power generation registering its largest ever growth.”

[From Press Release by the IEA (International Energy Agency) (March 8, 2022) titled “Global CO₂ emissions rebounded to their highest level in history in 2021” (at <https://www.iea.org/news/global-co2-emissions-rebounded-to-their-highest-level-in-history-in-2021>) (paragraphs 1 and 2)]

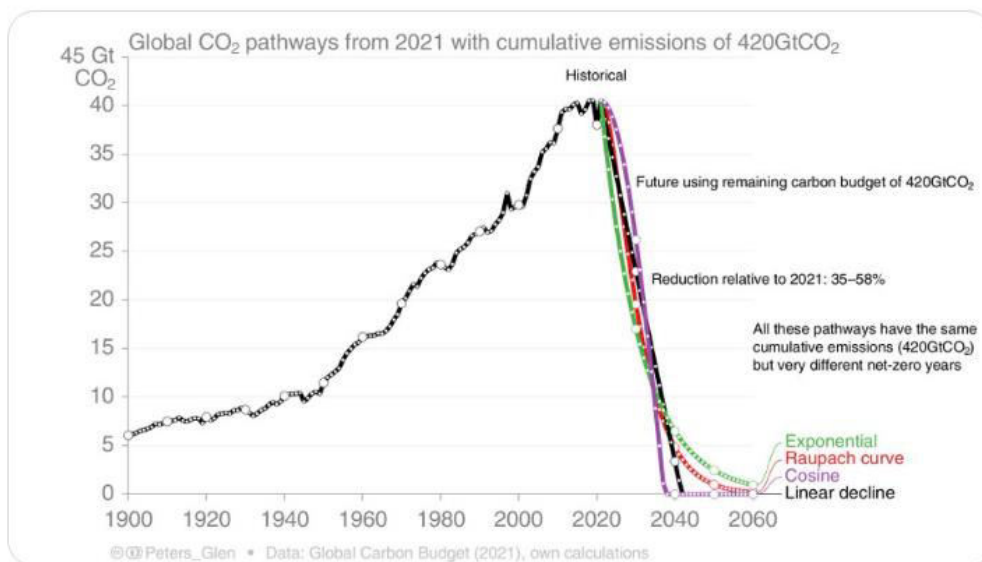
e) The opportunities for limiting Global Warming to 1.5C are quickly diminishing

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[From a December 6, 2018 tweet (by Robbie Andrews, CICERO) (at https://twitter.com/robbie_andrew/status/1070565844307075078) (if link won't work, copy and paste into Google search)]

--“A perspective on how fast global CO₂ emissions would need to decline to be consistent with 1.5°C of global warming.”



[From a tweet by Glen Peters (Research Director at CICERO--Center for International Climate Research, Norway) (May 14, 2022) (at https://twitter.com/Peters_Glen/status/1525370674965008384) (if link won't work, copy and paste into Google search)]

f) The possibilities of violence and aggression having a negative impact on decarbonization efforts (re cultures of violence, greed, corruption, and overindulgence)

[General 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 --with supplemental copy "[Table of Contents](#)" (13 pages) as Executive Summary (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...")]

----to achieve Zero Carbon soon enough to (possibly) avoid triggering too many negative tipping points. (sentence completed from start on p. 3)

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative (www.cpcsi.org)

The Community Peacebuilding and Cultural Sustainability (CPCS) Initiative recognizes the urgent need to radically accelerate decarbonization--and also recognizes many other existing emergencies and challenges.

These many other existing emergencies and challenges--

[Ecosystem Restoration; cultures of violence, greed, corruption, and overindulgence; dysfunctional (or non-existent) moral compasses; global inequities, malnutrition, and disease; water scarcity; food insecurity and food waste; increasing amounts of misinformation; loss of trust in institutions responsible for guiding public discourse; a pandemic we cannot control; media illiteracy; proliferation of firearms; toxic air pollution; sanitation challenges; solid waste mismanagement; migration and displacement; race, gender, and cultural discrimination; deforestation; solid waste mismanagement; ocean acidification; microplastic pollution; floods and chemical sites; "forever" chemicals pollution; unsafe disposal of radioactive waste; cyber insecurity; cities and infrastructure with massive energy requirements--which are the least appropriate models for implementing resolutions to most of the above challenges; and etc.]

--in addition to the Climate Emergency--

may cause us to lose significant traction and critical momentum... and *not taking them into account* may do more to create widespread cynicism, rather than confidence, about our collective capacity to resolve the

many unprecedented challenges we face. However, taking them into account means that there is much more potential for cascading negative tipping points than most people think. Thus, in so many ways, we need collaborative problem solving on a scale most of us have never experienced before.

The CPCS Initiative has been doing risk assessment, and exploring pathways for unprecedented collaborative problem solving--*and accelerating peacebuilding*--for decades. Below are some key CPCS Initiative papers--(most of the papers are also accessible on the www.cpcsi.org homepage)

- 1) ["1000Communities2 Proposal: Creating a Multiplier Effect of a Positive Nature"](#) (1 page; 2008)
- 2) ["A Four Page Summary of The IPCC Initiative"](#) (2011)
- 3) ["Recalibrating Our 'Moral Compasses': to resolve unprecedented challenges and discover our collective spiritual destiny"](#) (85 pages; June, 2015) (updated June, 2016--new preface added)
- 4) ["Convergence of Critical Challenges Alert to Peacebuilders, Chaplains--from \[cpcsi.org\]\(http://cpcsi.org\)\]"](#) (10 pages; Feb.2017)
- 5) ["Growing Wisdom and Compassion in Small Communities \(13 Steps\)"](#) (summary document)
[older CPCS Initiative document "13 Steps for Long Term Culture Change" (78 pages; May, 2017) re-titled in 2019]
- 6) ["Brainstorming 100% Reduction in GHG Emissions ASAP Campaign"](#) (157 pages; June, 2019) Appendix 10 in the 157 page paper is a list of 616 positive tipping point organizations and institutions with Twitter profiles, in 30 categories (see p. 69)] ["Press Release"](#) for the Brainstorming 100% Reduction in GHG Emissions ASAP Campaign (14 pages; September, 2019)--and related Brainstorming Zero Carbon ASAP Project ["Initial Contact Letter"](#) (6 pages; January, 2021)
- 7) ["We interrupt this broadcast...."](#) Climate Emergency Op-Ed Piece (6 pages; January, 2020) (2401 words)
- 8) ["17 Tweet Series Summarizing the 'Constellation of Initiatives' Approach"](#) (10 pages; June, 2020)
(in document form, as pdf file)]
- 9) ["Unprecedented Challenges Ahead--July 2020"](#) (2 pages)
- 10) ["Do We Have Moral Compasses We Can Rely On?"](#) (147 pages; April, 2021)
- 11) ["Maximizing Citizen Participation and Accelerating Solution Activity in a Time of Unprecedented Challenges"](#) (6 pages; December, 2021) (Draft Syllabus-short course)
- 12) ["Large Cities are Not Sustainable--and will not help us get to Zero Carbon ASAP"](#) (148 pages; May, 2022)

From all this previous work, a summary overview has been developed of the "constellations of initiatives" community education and collaborative problem solving the CPCS Initiative is currently trying to catalyze. This summary overview, below (next page), highlights the use of positive tipping point organizations and institutions as a way of triggering positive social, environmental, economic, and cultural tipping points.

Context:

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.

Triggering Positive Social, Environmental, Economic, and Cultural Tipping Points

- 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”](#) ; created a [sample list of 231 such organizations and institutions](#) document; and provided easy access to the list of 231 on a webpage at www.cpcsi.org (<https://www.cpcsi.org/231-positive-tipping-point-orgs-and-insti>)].

As a way to exponentially accelerate solution activity on many key positive tipping points 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; see [“Large Cities are Not Sustainable--and will not help us get to Zero Carbon ASAP”](#))--*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 *much 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 2120+ local governments that have declared a Climate Emergency"](#) (as of September 8, 2022)

[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) (*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. Additional note: (online stakeholder engagement and collaborative problem solving can be accomplished with features such as described at <https://engagementhub.com.au/software-features/>)]

- 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 [see 5) below]
 - 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 close-knit 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, which 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.

(more)

What Livelihoods and Habitats Are Appropriate for the Problem Solving We Must Accomplish?

One of the keys to achieving the unprecedented 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 and quickly 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>)]

One of the dangers for “developed” countries, in trying to reach Zero Carbon, is the irrational insistence on trying to maintain energy intensive lifestyles which are wholly inappropriate for the problem solving we must accomplish to achieve Zero Carbon ASAP (and further--encouraging “less developed” countries to become as “advanced” as we are).

We now live in the most complex cultural landscapes ever created on Earth--where collaboration at many levels of society has created awe inspiring innovations 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 advances for diseases, conditions, and surgery, is becoming more and more accessible); etc.

We just need that kind of collaboration and innovation to create livelihoods and habitats which have the highest probability of supporting Zero Carbon Resilience; Sustainable BioDiversity; gender equity and socio-cultural equity (Ex: carbon footprints, eco-footprints and water footprints equity); equal justice; requisite emergency aid; and peace.