

An Assessment of the Most Critical Challenges of Our Times

(May, 2015)

which:

- 1) is a compilation of quotes, statistics, and passages from a wide range of sources which provide supporting evidence for identifying ten critical challenges of our times
- 2) is complete with updated source references (Notes and Source References section is at the end of the document—beginning on p. 22)
- 3) includes a sample study question for each of the ten challenges identified

Note: This assessment is an expanded version of the “Example Challenge Assessment” in the [74 page Recalibrating Our “Moral Compasses” Survey Project Prospectus](#) [that “Example Challenge Assessment” did not include source references, but suggested the source references could be found through key word searches in a larger CPCS Initiative document [“Invitation Package for Possible Board of Advisors”](#) (589 pages; Nov. 2013)]

by

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The Ten Critical Challenges (identified in this document):

1) Global Warming and Reducing Greenhouse Gas Emissions(p. 3)

2) A Marginalization of the Treasured Wisdom of Religious, Spiritual, and Moral Traditions(p. 5)

3) “Cultures” of violence, greed, corruption, and overindulgence(p. 8)—which have become so common that many of us accept such as inevitable; which are a significant part of the current crises of confidence in financial markets; and which are in many ways slowing the restructuring of investment priorities needed to respond to an increasing number of other critical challenges

4) The End of the Fossil Fuel Era(p. 10)

5) The increasing world population and its implications relating to widespread resource depletion (p. 11)— with a special focus on the increasing number of people who are consuming material goods and ecological resources indiscriminately

6) We are creating more and more “urban agglomerations”(p. 14)—(cities with a population of more than 1 million people—more than 400), which require more and more complex and energy intensive infrastructures, where it is more and more 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

7) Global inequities and the tragic cycles of malnutrition, disease, and death(p. 15)

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(p. 18)

9) Deterioration of trust/confidence in institutions responsible for guiding public discourse—and the related loss of social and spiritual cohesion(p. 20)

10) Sorting out what are real challenges and what are sound and practical solutions is becoming more and more difficult(p. 21)—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.

Introduction

This writer has carried out much research in the areas of critical challenge assessment and solution pathways, over many years. His research is summarizing in two key Community Peacebuilding and Cultural Sustainability (CPCS) Initiative documents:

- 1) [“IPCR Critical Challenge Assessment 2011-2012: Summary Report”](#) (444 pages; January, 2012)
- 2) [“Invitation Package for Possible Board of Advisors”](#) (589 pages, Nov. 2013)

One section of the “IPCR Critical Challenge Assessment...” document focuses on the financial crises. In that section, this writer provides a compilation of excerpts timeline of articles on the financial crises (from August 3, 2011—January 18, 2012). And some of the key insights provided by the writers of those articles are of the kind which only surface to widely accessible public discourse during periods of multiple crises.

And one section in the “Invitation Package...” document focuses on global warming, and features a 28 point timeline of global warming warnings, from 1988-2013.

Many of the quoted passages in this assessment were also included in the “Invitation Package...” document. [Note: passages without quotations are by this writer.]

1) Global Warming and Reducing Greenhouse Gas Emissions

“Limiting global warming to an agreed U.N. ceiling ‘means that three quarters of the fossil fuel reserves need to stay in the ground...”

- a) “Scientists agree that countries’ current United Nations Framework Convention on Climate Change emission pledges and commitments would most likely result in 3.5 to 4°C (7.2^o F) warming. And the longer those pledges remain unmet, the more likely a 4°C world becomes.”
- b) “...we are still perfectly on track for a temperature increase up to 5.3 degrees C”(9.5^o F)...”
- c) “The report shows that emissions should peak at 44 GtCO₂e by 2020 and fall to 22GtCO₂e by 2050 to stay within a 2C target, but under a business-as-usual scenario, which includes no emissions pledges, emissions would reach 59 GtCO₂e in 2020.”
- d) “Achieving such a deep transformation of the energy, industrial, and agricultural systems over the next few decades will represent one of the greatest technical, organizational, and financing challenges that humanity has faced.” (“An Action Agenda for Sustainable Development: Report for the UN Secretary-General”; October 23, 2013)
- e) “Another way Arctic warming could have worldwide consequences is through its influence on permafrost. Permanently frozen soils worldwide contain 1400-1700 Gigatons of carbon, about four

times more than all the carbon emitted by human activity in modern times.”

f) “No more than one trillion metric tons of carbon could be burned and the resulting gases released into the atmosphere, the panel found, if planetary warming is to be kept below 3.6 degrees Fahrenheit (2 degrees Celsius) above the level of preindustrial times. That temperature is a target above which scientists believe the most dangerous effects of climate change would begin to occur. Just over a half-trillion tons have already been burned since the beginning of the Industrial Revolution, and at the rate energy consumption is growing, the trillionth ton will be burned sometime around 2040, according to calculations by Myles R. Allen, a scientist at the University of Oxford and one of the authors of the new report. More than three trillion tons of carbon are still left in the ground as fossil fuels.”

g) “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 the fossil fuels we do use must be utilized sparingly and responsibly,’ she said.” (in article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry”; April, 2014)

“This is the first time in the history of mankind that we are setting ourselves the task of intentionally, within a defined period of time to change the economic development model that has been reigning for at least 150 years....”

h) “This is the first time in the history of mankind that we are setting ourselves the task of intentionally, within a defined period of time to change the economic development model that has been reigning for at least 150 years, since the industrial revolution. That will not happen overnight and it will not happen at a single conference on climate change, be it COP 15, 21, 40 - you choose the number. It just does not occur like that. It is a process, because of the depth of the transformation.”

i) “...as the Organisation for Economic Co-operation and Development (OECD) has shifted its manufacturing to the developing world over the past few decades, coal has been the cheap energy source that has powered the rise of such manufacturing, especially in Asia. Accordingly, the extraordinary increase in global coal consumption the past decade is partly due to the OECD offshoring its own industrial production. How are most consumer goods made? Using electricity in developing world manufacturing centers, generated by coal. Only a very small portion of the global public is aware that global coal consumption has advanced by over 50% in the past decade.”

j) “Developing countries seek the same modern conveniences—dishwashers, televisions, computers, and cars—enjoyed by the developed world and which are currently powered mostly by fossil fuels. We can imagine that they can improve their standard of living without increasing their fossil fuel consumption, but what do we have to point to in order to show that it can be done?... This is why I am extremely skeptical that carbon emissions will be reined in.”

k) “The world is on the brink of the ‘largest bubble ever’ in finance, because of the undisclosed value of high-carbon assets on companies’ balance sheets, and investment managers who fail to take account of the risks are failing in their fiduciary duty to shareholders and investors, Al Gore and his investment partner, David Blood, have said.”

l) “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....” (in “Sovereign Environmental Risk” by Achim Steiner and Susan Burns; October, 2012)

Question for Discussion:

Consider the following statement:

“I believe the root causes of the unprecedented challenges ahead are so intertwined with each other, and so deeply embedded in our cultural identities, that it will take decades of problem solving on a scale most of us have never known before to reach the positive tipping points necessary to avoid catastrophic consequences.”

The above statement represents one point supporting a “constellation of initiatives” approach to collaborative problem solving and citizen peacebuilding which this writer advocates for [which is summarized in the [“Example Solutions Guide”](#) section of the 74 page “Recalibrating Our ‘Moral Compasses’ Survey Project Prospectus” (Nov., 2014)]. The question: identify three more points supporting the use of such a “constellation of initiatives” approach as a way of moving towards positive tipping points on many critical challenges at the same time (including positive tipping points associated with global warming).

2) A Marginalization of the Treasured Wisdom of Religious, Spiritual, and Moral Traditions

It has taken a lot of being confused about the cardinal directions on our “moral compasses” to get where we are....

a) “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.’”

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 on people’s fears, manipulating people’s trust, and/or encouraging people to abandon hope in higher aspirations, and indulge in unhealthy, or immoral behavior. Such behavior is clearly counterproductive to the building of caring communities; it can be very dangerous for community morale; and it can become a crippling obstacle in times of crises.

c) Unfortunately, much of the real treasured wisdom of religious, spiritual, and moral traditions now

seems to be hidden—and thus in need of being re-discovered. These “hidden” resources include teachings which inspire and encourage people to:

- i) sacrifice personal desires for the greater good of the whole
- ii) find contentment and quality of life while consuming less material goods and ecological services
- iii) use resources carefully, so that there is surplus available for emergency assistance

d) It has taken a lot of being confused about the cardinal directions on our “moral compasses” to get where we are (global warming can be understood as the cumulative result of many other unresolved issues which have, in themselves become critical challenges)—and many of the unresolved issues contributing to global warming have been around since the dawn of civilization (Ex: cultures of violence, greed, corruption, and overindulgence).

e) Human morality is not a constant—it is not something which is the same throughout the centuries of human existence; and thus it is something which can become degraded or raised up, depending on the leanings of human aspirations. However, if readers explore the following challenge assessments and

solution guides (provided here as fairly representative and well-known examples from the past 50 years)--

“The Limits to Growth” report (1972; updated 2004) (and “2052 - A Global Forecast for the Next Forty Years”, published in 2012 by one of the original authors)

“Gaia: An Atlas of Planetary Management” (1984; updated 2005)

Worldwatch Institute—annual “State of the World” Reports, and “Worldwatch Reports” (formerly “Worldwatch Papers”)

UN-Habitat (United Nations Human Settlement Programme)—“State of the World’s Cities” Reports, and (formerly annual) “Global Reports on Human Settlements”

UNEP (United Nations Environment Programme)—annual “Human Development” Reports

United Nations—Millennium Development Goals (MDGs) Progress Reports, and Sustainable Development Goals (SDGs) Updates

Earth Policy Institute—the “Plan B” Series; “World on the Edge” [from Lester R. Brown et al. (who previously founded Worldwatch Institute)]

IPCC (Intergovernmental Panel on Climate Change)—ongoing reports

International Monetary Fund—bi-annual “World Economic Outlook” Reports

World Bank—“World Development Reports”

World Economic Forum—annual “Outlook on the Global Agenda” Reports

International Energy Agency—annual “World Energy Outlook” Reports

“Pathways to Deep Decarbonization” [Published by Sustainable Development Solutions Network (SDSN) and Institute for Sustainable Development and International Relations (IDDRI), September 2014 (and presented at the United Nations Climate Summit on September 23, 2014)]

--they will find that those critical challenge assessments, and their resulting solution guides, *do not give serious attention to variations in human morality, the “leanings of human aspirations”, and a need for*

more consensus about the meanings of “the good life”, “right livelihood” and “moral compasses” as significant factors affecting the nature of the challenges of our time.

f) From the Pew Research Center’s webpage titled “Global Views on Morality”: “The Pew Research Center’s 2013 Global Attitudes survey asked 40,117 respondents in 40 countries what they thought about eight topics often discussed as moral issues: extramarital affairs, gambling, homosexuality, abortion, premarital sex, alcohol consumption, divorce, and the use of contraceptives. For each issue, respondents were asked whether this is morally acceptable, morally unacceptable, or not a moral issue.”

g) “Popular portrayals of religion often reinforce the view of religion being conflictual. The global media has paid significant attention to religion and conflict, but not the ways in which religion has played a powerful peacemaking role. This excessive emphasis on the negative side of religion and the actions of religious extremists generates interfaith fear and hostility.”

h) “We are bombarded on a nearly daily basis with news stories that portray religion as a cause of seemingly intractable conflict the world over.... What does not attract attention is the peacebuilding power of religion. This contribution is often overlooked, in part, because the secular media rarely pays attention to the role of religious peacemakers because their work is often not dramatic enough.”

i) “It is a little surprising that there has been no controversy over economics education, because economics is, in our culture, deeply controversial, often on moral and religious grounds.... A part of the problem is what the texts and the new national standards leave out. They say little about poverty, especially as a moral or spiritual problem. They are usually silent about the moral relation of the First and Third Worlds. They typically ignore the effects of economics and technology on the environment. They are oblivious to the moral and spiritual problems of consumer culture. They ask no questions about dehumanizing work. They emphasize the importance of the profit motive and competition, but say nothing about the possibility of excess profits or the possible costs of competition....”

j) “... 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....”

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

l) 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.

Question for Discussion:

Consider the statement: “The satisfaction of one's physical needs must come at a certain point to a dead stop before it degenerates into physical decadence.” (Mahatma Gandhi) And consider this ten

point assessment of the challenges of our times, as a whole.

Should learning to find contentment and quality of life while consuming less material goods and ecological services be a basic and agreed upon part of the education of a responsible citizen (of any country)? If your answer is yes, when, where, and how should such a concept be taught? If your answer is no, offer supporting points to explain why.

3) “Cultures” of violence, greed, corruption, and overindulgence—which have become so common that many of us accept such as inevitable, and which are in many ways slowing the restructuring of investment priorities needed to respond to an increasing number of other critical challenges

“... no solutions seem to be in sight for these problems.”

a) “(Stockholm, 14 April 2014) World military expenditure totalled \$1.75 trillion in 2013.... ‘The increase in military spending in emerging and developing countries continues unabated,’ said Dr Sam Perlo-Freeman, Director of SIPRI’s Military Expenditure Programme. ‘While in some cases it is the natural result of economic growth or a response to genuine security needs, in other cases it represents a squandering of natural resource revenues, the dominance of autocratic regimes, or emerging regional arms races.’”

b) “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.”

c) Intentional Homicides, Worldwide (2010)—468,000

d) “Because systems of meaning and ways of thinking differ from one culture to another, people from different cultures typically develop different ideas about morality and the best way to live. They often have different conceptions of moral authority, truth, and the nature of community.... These cultural differences become even more problematic when groups have radically different expectations about what is virtuous, what is right, and how to deal with moral conflicts.” One of the problems: “They may form negative stereotypes and attribute moral depravity or other negative characteristics to those who violate their cultural expectations, while they ignore their own vices and foibles, perceiving their own group to be entirely virtuous.”

e) “ INSKEEP: You mentioned that at one point that this character you write about, this West Indianimmigrant, is involved in the classic American story, rags to riches.

Mr. O’NEILL: Yeah.

INSKEEP: Of course, the classic American version is a very specific kind of rags to riches. It’s not that somebody suddenly makes you a prince. It’s that you strive and dig and find some scheme and do whatever you have to do to make a little bit of money. And that’s what...

Mr. O’NEILL: Yeah.

INSKEEP: And that’s what he’s doing. He’s got different businesses. He’s got different sidelines.

Mr. O'NEILL: Yeah.

INSKEEP: And when I read about that, I think about, well, so many American novels that - you go back to Mark Twain who wrote about a kind of striver and schemer in the Gilded Age and was kind of a striver and a schemer himself. He always had some idea to strike it rich. Were you thinking about - "The Great Gatsby" is another - I mean, were you thinking about so many American characters that had come before Chuck Ramkissoo when you presented this West Indian immigrant to a reader like me?

Mr. O'NEILL: Well, I think so. But I think, more specifically, Chuck Ramkissoo himself, the character, is thinking about it. He lives in the United States for a number of years. And he becomes aware of this very specific kind of narrative in American life which essentially authorizes people to do whatever it takes to climb up by their boot straps and to make something of themselves, even if that means cutting corners from time to time - which is what Chuck ends up doing - and even if it means being a bit of a rogue, because I think there's a sort of tolerance within the culture for this sort of irregular kind of self enrichment, because it's not a perfect society, the United States. It doesn't provide everyone with the same start in life. And therefore if someone wants to do better for themselves, people kind of turn a blind eye and in fact have a smile, even if they've broken a few rules along the way. And this guy, Chuck Ramkissoo, is aware of that and tries to plug into it.

INSKEEP: Well, Joseph O'Neill, I've enjoyed speaking with you.

Mr. O'NEILL: Thank you very much.

INSKEEP: And happy Thanksgiving.

Mr. O'NEILL: Happy Thanksgiving to you as well.

INSKEEP: You can read an excerpt from Joseph O'Neill's novel "Netherland" at npr.org. Our conversations on becoming American continue into the holiday. Tomorrow our three immigrant writers describe Thanksgiving as they have experienced it. This is NPR News."

f) "65 percent of the world's population live in countries where overweight and obesity kills more people than underweight and malnutrition."

g) State Lotteries in the United States—"11 states collecting more revenue from their state lottery than from their state corporate income tax during FY2009."

h) "Tailor-made derivatives, not traded on a futures exchange are traded on over-the-counter markets, also known as the OTC market. These consist of investment banks with traders who make markets in these derivatives, and clients such as hedge funds, commercial banks, government-sponsored enterprises, etc. Products that are always traded over-the-counter are swaps, forward rate agreements, forward contracts, credit derivatives, accumulators etc. The total notional amount of all the outstanding positions at the end of June 2004 stood at \$220 trillion. By the end of 2007 this figure had risen to \$596 trillion and in 2009 it stood at \$615 trillion."

i) "... every year tobacco kills more Americans than did World War II — more than AIDS, cocaine, heroin, alcohol, vehicular accidents, homicide and suicide combined."

j) "...media programming reinforces cultural attitudes, values, behaviors, preoccupations, and myths. Media messages are communicated through the countless hours of media programming that repeat, directly or indirectly, the cultural script."

k) "It would be foolish to underestimate the challenge of checking the consumption juggernaut...."

l) Most people would consider it unusual for a person to request to be excused from military service based on their religious, spiritual, or moral convictions. [Or: How many of us would qualify as someone

who could legitimately be excused from a military service requirement based on our religious, spiritual, or moral convictions?)(for example of qualifying conditions, see footnote k) for this subsection]

Question for Discussion:

Why, in your opinion, is it accepted knowledge that the challenges “cultures” of violence, greed, corruption, and overindulgence can be defined as “so common that many of us accept such as inevitable”?

4) The End of the Fossil Fuel Era

“...excessive depletion and degradation of natural capital.... (and) significant, largely unaccounted for, and unchecked social and environmental externalities.”

a) “In 1900, only 4,192 passenger cars were in existence (there were no trucks, buses, etc.)”

“In 1968, there were 169,994,128 passenger cars in the world, and 46,614,342 trucks and buses—for a total worldwide, of 216,608,470 motor vehicles.”

“In 1996, there were 485,954,000 cars registered worldwide, and 185,404,000 trucks and buses—for a total, worldwide, of 671,358,000 motor vehicles.”

“It is estimated that over 1 billion passenger cars travel the streets and roads of the world today. The 1 billion-unit mark was reached in 2010 for the first time ever.”

“Earlier this year, the OECD's International Transport Forum forecast that the number of cars worldwide would reach 2.5 billion by 2050.”

b) “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.”

c) “Nearly a quarter of total of the global energy-related carbon dioxide emissions can be attributed to the transport sector. Globally, carbon dioxide emissions from transport have increased 85 per cent between 1973 and 2007.”

d) “‘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 the fossil fuels we do use must be utilized sparingly and responsibly,’ she said.” (in article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry”; April, 2014)

e) “With some confidence, I can tell you that the age of oil out of 8,000 years of recorded history will occupy about 300 years.... Do you know what we should have done when we found this incredible wealth under the ground, a barrel of which equaled the work output of 12 people working all year? We should have stopped to ask ourselves, what can we do with this to provide the most good for the most people for the longest time? That clearly is not what we did.”

f) “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.”

g) “Biro: Yes, one day it will definitely end. And I think we should leave oil before it leaves us. That should be our motto. So we should prepare for that day - through research and development on alternatives to oil, on which living standards we want to keep and what alternative ways we can find.”

Question for Discussion:

Consider the statements:

a) “With some confidence, I can tell you that the age of oil out of 8,000 years of recorded history will occupy about 300 years....Do you know what we should have done when we found this incredible wealth under the ground (oil), a barrel of which equaled the work output of 12 people working all year? We should have stopped to ask ourselves, what can we do with this to provide the most good for the most people for the longest time? That clearly is not what we did.”

b) “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 the fossil fuels we do use must be utilized sparingly and responsibly,’ she said.” (in article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry”; April, 2014)

What recommendations would you offer for how *we—collectively—should use our* remaining reserves of the fossil fuel oil?

5) The increasing world population and its implications relating to widespread resource depletion— with a special focus on the increasing number of people who are consuming material goods and ecological resources indiscriminately

“Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history....”

a) *World Population Milestones*

“In 1804, the world population was 1 billion.
In 1927, the world population was 2 billion (123 years later).”

In 1960, the world population was 3 billion (33 years later).
In 1974, the world population was 4 billion (14 years later).
In 1987, the world population was 5 billion (13 years later).
In 1999, the world population was 6 billion (12 years later).
In 2011, the world population was 7 billion (12 years later)."

"As of Feb 11, 2015 01:48 UTC (+6), the world population was estimated to be 7,223,651,000.

b) "The planet's ecological systems are on the verge of catastrophic change for which few societies are prepared. So far, responses by governments to this emergency are inadequate, or counterproductive. We call it the "Triple Crisis," the convergence of three advancing conditions:

- i) Planet-wide climate chaos and global warming
- ii) The end of the era of cheap energy ("peak oil")
- iii) The depletion of many of the world's key resources: water, timber, fish, fertile soil, coral reefs; and the expected extinction of 50% of the world's species.

"All are rooted in the same systemic problem—massive overuse of fossil fuels and the Earth's resources; all driven by an economic ideology of hyper growth and consumption that's beyond the limits of the planet to sustain."

c) "Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fiber and fuel. This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth."

d) "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.

e) "Many of the world's ecosystems are in danger and might not support future generations unless radical measures are implemented to protect and revive them, according to the most comprehensive analysis ever conducted of how the world's oceans, dry lands, forests and species interact and depend on one another." (Millennium Ecosystem Assessment)

f) "London – October 3rd 2013: An international panel of marine scientists is demanding urgent remedial action to halt ocean degradation based on findings that the rate, speed and impacts of change in the global ocean are greater, faster and more imminent than previously thought."

g) "53% of the world's fisheries are fully exploited, and 32% are overexploited, depleted, or recovering from depletion"

h) "The world is incurring a vast water deficit—one that is largely invisible, historically recent, and growing fast. Half the world's people live in countries where water tables are falling as aquifers are

being depleted. And since 70 percent of world water use is for irrigation, water shortages can quickly translate into food shortages.”

i) “At least 80% of the developed world's diet originated in the tropical rainforest.”

j) “...the last remaining rainforests could be consumed in less than 40 years.”

k) “The new reality,” says Brown, “is that the world is only one poor harvest away from chaos. It is time to redefine security. The principal threats to our future are no longer armed aggression but instead climate change, population growth, water shortages, spreading hunger, and failing states. What we now need is a mobilization to reverse these trends on the scale and urgency of the U.S. mobilization for World War II. The challenge is to quickly reduce carbon emissions, stabilize population, and restore the economy's soils, aquifers, forests, and other natural support systems. This requires not only a redefining of security but a corresponding reallocation of fiscal resources from military budgets to budgets for climate stabilization, population stabilization, water conservation, and other new threats to security.”

“It would be foolish to underestimate the challenge of checking the consumption juggernaut....”

l) “All told, our overheated consumption regime is putting unprecedented demands upon the environment—exhausting non-renewable resources, shrinking wetlands, decimating forests, draining aquifers, driving thousands of plant and animal species to extinction, degrading soil, and generating levels of pollution and waste far beyond the natural world's capacity to assimilate.”

m) “The Living Planet Index (LPI) (World Wildlife Fund), which measures trends in thousands of vertebrate species populations, shows a decline of 52 per cent between 1970 and 2010.”

n) “...A strategy for eradicating poverty will not succeed if an economy's environmental support systems are collapsing.” Brown says, “This means putting together an earth restoration budget—one to reforest the earth, restore fisheries, eliminate overgrazing, protect biological diversity, and raise water productivity to the point where we can stabilize water tables and restore the flow of rivers.”

o) “Worldwide advertising spending grew by 3.2% year-over-year in 2012 to reach \$557 billion, per data from Nielsen's latest quarterly Global AdView Pulse report.”

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

q) “Developing countries seek the same modern conveniences—dishwashers, televisions, computers, and cars—enjoyed by the developed world and which are currently powered mostly by fossil fuels. We can imagine that they can improve their standard of living without increasing their fossil fuel consumption, but what do we have to point to in order to show that it can be done?... This is why I am extremely skeptical that carbon emissions will be reined in.”

r) “How are most consumer goods made? Using electricity in developing world manufacturing centers, generated by coal. Only a very small portion of the global public is aware that global coal consumption has advanced by over 50% in the past decade.”

s) *“It would be foolish to underestimate the challenge of checking the consumption juggernaut....”*

Question for Discussion:

Consider the statement:

There is significant evidence that we—collectively (at 7.2 billion people)—have arrived at a point where all of us cannot consume resources indiscriminately.

At this point—or when this point occurs in the near future—how should decisions be made regarding who gets to consume resources indiscriminately, and who does not?

6) We are creating more and more “urban agglomerations”—(cities with a population of more than 1 million people—more than 400), which require more and more complex and energy intensive infrastructures, where it is more and more 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

“... which are the least appropriate models when it comes to implementing resolutions to many of the other challenges in this ten point assessment....”

a) “In 1800, only 3 percent of the world's population lived in urban areas.”

“By 1900, almost 14 percent were urbanites, although only 12 cities had 1 million or more inhabitants.”

“In 1950, 30% of the world’s population resided in urban centers. The number of cities with over 1 million people had grown to 83.”

“In 2008, for the first time, the world's population was evenly split between urban and rural areas. There were more than 400 cities over 1 million and 19 over 10 million.”

“By 2030, China and India will have more than 221 cities and 68 cities, respectively, with populations of more than one million people each, according to research by the McKinsey Global Institute.”

b) “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.”

c) “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.”

d) “Today some 18 countries, containing half the world’s people, are overpumping their aquifers.”

e) “Nearly a quarter of total of the global energy-related carbon dioxide emissions can be attributed to the transport sector. Globally, carbon dioxide emissions from transport have increased 85 per cent between 1973 and 2007.”

f) "About 1/3 of the food produced in the world for human consumption every year; approximately 1.3 billion tonnes gets lost or wasted. Industrialized and developing countries waste roughly the same quantities of food – respectively 670 and 630 million tonnes."

g) "... 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."

h) "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 bedrock 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."

i) U.S. Infrastructure Funding Gap (2013) (calculated by ASCE)--\$1.611 trillion

Question for Discussion:

Consider the two following two alternatives (not offering as exact representations of alternatives, but as examples):

10,000 villages, towns, and small cities with an average population of 50,000 people

400 megacities with an average population of 1 million people

Which example alternative would have the most potential for achieving carbon neutral and ecologically sustainable economies? Provide points/evidence to support your choice.

7) Global inequities and the tragic cycles of malnutrition, disease, and death

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

a) "Taken together, 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."

b) "Poor nutrition causes nearly half (45%) of deaths in children under five – 3.1 million children each year. That is 8,500 children per day."

c) "Hunger and malnutrition are in fact the number one risk to health worldwide — greater than AIDS, malaria and tuberculosis combined."

d) "65 percent of the world's population live in countries where overweight and obesity kills more people than underweight and malnutrition."

e) "One of the main reasons Americans eat as poorly as we do may be the ubiquity of low-priced,

unhealthy foods and their promotion - not only everywhere, but at all times of day. From the processed food sold in grocery stores to the prepared food sold in fast food restaurants, we are surrounded with tempting options that aren't good for us." [Note: from video : "The Weight of the Nation: Confronting the Obesity Epidemic" (Part 4:Challenges)(Highlights--*highly recommended*: 16:00—20:35 The modern food industry—and automated society—has caused changes in our lifestyle)(see "Notes and Source References" at end of this paper for link)]

f) "People in industrialized countries comprise only about 20% of the global population, yet they consume 81% of the world's paper and 76% of its timber."

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

h) "The average American individual uses 100 to 176 gallons of water per day; in contrast, the average African family uses 5 gallons of water per day."

i) "Amount of water it would take, per day, to support 4.7 billion people at the UN daily minimum: 2.5 billion gallons. Amount of water used, per day, to irrigate the world's golf courses: 2.5 billion gallons."

"The Great Way is very level...."

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."

"Fearing they might not be able to buy needed grain from the market, some of the more affluent countries, led by Saudi Arabia, China, and South Korea, then took the unusual step of buying or leasing land long term in other countries on which to grow food for themselves. These land acquisitions have since grown rapidly in number. Most of them are in Africa. Among the principal destinations for land hunters are Ethiopia, Sudan, and South Sudan, each of them countries where millions of people are being sustained with food donations from the U.N. World Food Programme.

"As of mid-2012, hundreds of land acquisition deals had been negotiated or were under negotiation, some of them exceeding a million acres. A 2011 World Bank analysis of these "land grabs" reported that at least 140 million acres were involved—an area that exceeds the cropland devoted to corn and wheat combined in the United States. This onslaught of land acquisitions has become a land rush as governments, agribusiness firms, and private investors seek control of land wherever they can find it."

k) "About 1/3 of the food produced in the world for human consumption every year; approximately 1.3 billion tonnes gets lost or wasted. Industrialized and developing countries waste roughly the same quantities of food – respectively 670 and 630 million tonnes."

l) "Supermarkets, restaurants and other nonresidential establishments in Montgomery County throw away 96 million pounds of food a year."

m) "...A strategy for eradicating poverty will not succeed if an economy's environmental support

systems are collapsing.”

n) “The knowledge, priorities and aspirations of small-scale producers, and other citizens whose livelihoods depend on food provisioning, are rarely included in policy debates on the future of food, farming and development (Edelman, 2003). When governments do decide to hold public consultations to help guide their decisions, policy experts as well as representatives of large farmers and agri-food corporations are usually centre stage in these debates, rather than small-scale producers, foodworkers, small food businesses and other citizens. Similarly, when policy think tanks and academics organise discussions to inform the choices of decision-makers it is striking that the voices of farmers, pastoralists, fisherfolk, food workers and indigenous peoples are largely absent from such processes (Pimbert *et al.*, 2006).

“‘Food sovereignty’ is an alternative paradigm for food, fisheries, agriculture, pastoralism and forest use that is emerging in response to this democratic deficit. This alternative policy framework for food and agriculture is also a citizens’ response to the multiple social and environmental crises induced by modern food systems everywhere. Indeed, many proposals for food sovereignty directly seek to reverse the socially and ecologically destructive nature of industrial farming, fisheries, forestry and livestock management, and the wider food systems they are part of.”

o) “Many reports – the landmark International Assessment of Agricultural Knowledge, Science, and Technology for Development (IAASTD), Food and Agriculture: The Future of Sustainability, and the U.N. Food and Agriculture Organization’s Save and Grow, to name a few – have found that the answer to a more food secure world isn’t bound to complicated or sophisticated technology. Rather, it lies in organic, environmentally conscious farming practices that nourish the Earth. Many case studies from around the world have shown that small-scale farmers using organic practices are able to achieve yields that are equal to, and often in excess of, those of conventional farming operations.”

p) “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.”

Question for Discussion:

Consider the statement:

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

- i) sacrifice personal desires for the greater good of the whole
- ii) find contentment and quality of life while consuming less material goods and ecological services

iii) use resources carefully, so that there is surplus available for emergency assistance

Imagine these “hidden” resources were re-discovered, and the above values were much more internalized and actualized in a majority of the world population. Choose four statistics from the above quotations (associated with #7 “Global Inequities....”) which, if positive tipping points were reached, would have the greatest multiplier effects on other challenges, and rank those choices from #1 priority to #4 priority.

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

Unfortunately, the kind of “economic growth” which is most often being referred to includes....

a) “Using accounting principles that approximate how publicly traded companies are required to calculate their obligations, at the close of its 2013 fiscal year, the (U.S.) federal government had about \$71.0 trillion in debts, liabilities, and unfinanced obligations.” [Note: The Gross Domestic Product of all countries added together is approximately \$102 trillion, according to the Wikipedia webpage titled “List of countries by GDP (PPP)” (which uses data from the International Monetary Fund and the World Bank as its sources.)]

b) American consumers are \$11.74 trillion in debt, including (December, 2014 data):

\$882.6 billion in credit card debt

\$8.14 trillion in mortgages

\$1.13 trillion in student loans

c) “‘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 the fossil fuels we do use must be utilized sparingly and responsibly,’ she said.” (in article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry”; April, 2014)

d) “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....” (in “Sovereign Environmental Risk” by Achim Steiner and Susan Burns; October, 2012)

e) Again and again, in references to the debt crises, there is mention of the need for ‘economic growth’.... Unfortunately, the kind of “economic growth” which is most often being referred to includes a vast array of “enterprises” which require the continued exploitation of flaws and weaknesses in human nature, fragile ecosystems, and already significantly depleted natural resources—and which are much of the reason why cultures of violence, greed, and corruption have become so common that most people believe they are inevitable.

f) “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.”

f) “Ecological Deficit—The level of resource consumption and waste discharge by a defined economy or population in excess of locally/regionally sustainable natural production and assimilative capacity (also, in spatial terms, the difference between that economy/population’s ecological footprint and the geographic area it actually occupies.”

g) “If you believe the rate of growth of our economy is going to be what it was in the prior two decades, then there is arguably some justification for kicking the can forward and using borrowed money to cover today’s expenses. If you don’t believe that growth rate is going to be that great, then you have to ask yourself some very fundamental questions....”

h) (repeated, for emphasis) “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 the fossil fuels we do use must be utilized sparingly and responsibly,’ she said.” (in article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry”; April, 2014)

Question for Discussion:

Consider the following passage (from :

“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; (in [Introduction](#), see section “An Era of Capital Misallocation”)]

a) What are five examples of “depleting the world’s stock of natural capital”, and five examples of “(allowing) businesses to run up significant, largely unaccounted for, and unchecked social and environmental externalities”?

b) What are five examples of increasing the world's stock of natural capital", and five examples of businesses running up significant, transparent, and well appreciated contributions to cultural and environmental sustainability?

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

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.

a) "What is basic is that advertising, as such, with all its vast power to influence values and conduct, cannot ever lose sight of the fact that it ultimately regards man as a consumer and defines its own mission as one of stimulating him to consume or to desire to consume."

b) "Worldwide advertising spending grew by 3.2% year-over-year in 2012 to reach \$557 billion, per data from Nielsen's latest quarterly Global AdView Pulse report."

c) "Entrepreneurs" 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.

d) "Taken together, 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."

e) "The new reality," says Brown, "is that the world is only one poor harvest away from chaos. It is time to redefine security. The principal threats to our future are no longer armed aggression but instead climate change, population growth, water shortages, spreading hunger, and failing states. What we now need is a mobilization to reverse these trends on the scale and urgency of the U.S. mobilization for World War II."

f) "... it cannot be ruled out that the people's confidence in state institutions as well as politics would be considerably shaken. This confidence is likely to dwindle even more in societies in which it is already weak – *in particular if it is becoming obvious in crisis regions that governments have in the past failed to develop suitable solution strategies and provide orientation for society during this period of transition* (this writer's italics). (from a German Military Futures Division Report on "peak oil", but also highly relevant in the context of this document)

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

h) 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.

Question for Discussion:

How important is it that cynicism—that we will never overcome the challenges of our times—does not become widespread?

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 red 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.

a) “... 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.”

b) “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 bedrock 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.”

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

d) *People who are not sufficiently informed about critical issues are everywhere, and they are investing their time, energy, and money—voting—all the time.*

Question for Discussion:

What are we “voting” for?

Consider keeping a record of all of your “investments” of time, energy, and money (your “votes”) for one month. And then, after one month, make a list of what goals receive the most significant

“investments” of time, energy, and money—and rank each most significant, next most significant, etc., using 1 as most significant, 2 as next most significant, and so on.

Notes and Source References

1) Global Warming and Reducing Greenhouse Gas Emissions

“Limiting global warming to an agreed U.N. ceiling ‘means that three quarters of the fossil fuel reserves need to stay in the ground....”

a) [From “Foreword” of report “Turn Down the Heat: Why a 4⁰ Warmer World Must Be Avoided” November, 2012A Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics (84 pages)—Foreword by Dr. Jim Yong Kim President, World Bank Group (in “Executive Summary”, at http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/12/20/000356161_20121220072749/Rendered/PDF/NonAsciiFileName0.pdf (see p. ix) (confirmed February 23, 2015)]

b) From the “Redrawing the Energy-Climate Map” report launch –Video Presentation(10 June 2013) by Dr. Fatih Birol, Chief Economist and Director of Global Energy Economics at the International Energy Agency. (Note: “He designs and develops the annual World Energy Outlook, which is recognised as the most authoritative source for strategic analysis of global energy markets.”--Wikipedia) The video presentation is at <http://www.iea.org/multimedia/video/name,38829,en.html>] (confirmed February 25, 2015)

c) From article in Guardian online “Warsaw climate talks warned time is running out to close 'emissions gap'” by Jessica Shankleman (November 5, 2013) (paragraphs 4) (at <http://www.theguardian.com/environment/2013/nov/05/warsaw-climate-talks-emissions-gap>), which refers to the United Nations Environment Programme “Emissions Gap Report 2013” (information quoted appears in “Emissions Gap Report 2013” Press Release (at http://www.unep.org/publications/ebooks/emissionsgapreport2013/portals/50188/emissionsgapreport_pressrelease.pdf) (both confirmed February 25, 2015)

d) From “An Action Agenda for Sustainable Development: Report for the UN Secretary-General” prepared by the Leadership Council of the Sustainable Development Solutions Network (October 23, 2013) (in Chapter 4 “Ten Priority Challenges for Sustainable Development”; subsection 8 “Curb Human Induced Climate Change and Ensure Clean Energy for All”; p.20)

(at <http://www.unfoundation.org/assets/pdf/sustainable-development.pdf>) (confirmed March 9, 2015)

- e) [From article “Why the Arctic sea ice death spiral matters” by Neven Acropolis with Kevin McKinney (originally published by Climate Progress, August, 31, 2012)(paragraph 5) at the Resilience website (see <http://www.resilience.org/stories/2012-08-31/why-arctic-sea-ice-death-spiral-matters>)](confirmed February 25, 2015)
- f) From article “U.N. Climate Panel Endorses Ceiling on Global Emissions” by Justin Gillis (September 27, 2013) (paragraphs 6 and 7) at the New York Times website (see http://www.nytimes.com/2013/09/28/science/global-climate-change-report.html?_r=4&hp=&adxnnl=1&adxnnlx=1382451554-nYj7y10KkOX33UlijvgyAg] (confirmed March 9, 2015)
- g) From article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry” by Alister Doyle, Environment Correspondent posted at Huffington Post April 3, 2014 (paragraph 4) (at http://www.huffingtonpost.com/2014/04/03/un-climate-chief-figueres-oil-gas_n_5082782.html?utm_hp_ref=green&ir=Green) (confirmed February 28, 2015)
- h) From article titled “Figueres: First time the world economy is transformed intentionally” at the website for the United Nations Regional Information Centre for Western Europe (see <http://www.unric.org/en/latest-un-buzz/29623-figueres-first-time-the-world-economy-is-transformed-intentionally>)(paragraph 3) (confirmed March 9, 2015)
- i) From June 29, 2012 article “Coal: The Ignored Juggernaut” by Gregor McDonald at the Resilience website (see Section “Global Coal Picture” at <http://www.resilience.org/stories/2012-06-29/coal-ignored-juggernaut>] (confirmed March 9, 2015)
- j) From a July 2, 2012 article titled “Global Carbon Dioxide Emissions—Facts and Figures” by Robert Rapier (see last paragraph before “Conclusion” at <http://www.consumerenergyreport.com/2012/07/02/global-carbon-dioxide-emissions-facts-and-figures/>] (confirmed March 9, 2015)
- k) From article “Al Gore: world is on brink of 'carbon bubble': Gore and partner David Blood call on companies to 'do their fiduciary duty' and identify carbon risks in their portfolios” by Fiona Harvey (October 31, 2013) in the Environment section of the Guardian online newspaper (see <http://www.theguardian.com/environment/2013/nov/01/gore-warns-carbon-bubble>] (confirmed February 25, 2015)
- l) From October 27, 2012 article titled “Sovereign Environmental Risk” by Achim Steiner (under-Secretary General, United Nations and Executive Director of United Nations Environmental Programme) and Susan Burns (Founder of the Global Footprint Network) at the Project Syndicate website (paragraph 6) (see <http://www.project-syndicate.org/commentary/natural-resources-and-sovereign-credit-ratings-by-achim-steiner-and-susan-burns>) (confirmed February 25, 2015)

2) A Marginalization of the Treasured Wisdom of Religious, Spiritual, and Moral Traditions

It has taken a lot of being confused about the cardinal directions on our “moral compasses” to get where we are....

a) From article “Gandhi’s Swadeshi—The Economics of Permanence” by Satish Kumar (at <http://caravan.squat.net/ICC-en/Krrs-en/ghandi-econ-en.htm>) (confirmed February 25, 2015)

b)-e) by this writer

f) From the Pew Research Center’s webpage (on the Pew Research Center’s 2013 Global Attitudes survey) titled “Global Views on Morality” (paragraph 1) (at <http://www.pewglobal.org/2014/04/15/global-morality/>) (confirmed February 28, 2015)

g) From "Religion and Conflict." by Eric Brahm at *Beyond Intractability*. Eds. Guy Burgess and Heidi Burgess. Conflict Research Consortium, University of Colorado, Boulder. Posted: November (see paragraph 9) (at <http://www.beyondintractability.org/essay/religion-and-conflict>) (confirmed March 9, 2015)

h) From "Religion and Peace." by Eric Brahm at *Beyond Intractability*. Eds. Guy Burgess and Heidi Burgess. Conflict Research Consortium, University of Colorado, Boulder. Posted: September 2005 (see paragraph 1) (at <http://www.beyondintractability.org/essay/religion-and-peace>) (confirmed March 9, 2015)

i) From the article “Moral Disagreement, Moral Education, Common Ground” by Warren A. Nord in “Making Good Citizens: Education and Civil Society” Edited by Diane Ravitch and Joseph P. Viteritti Yale University Press 2003 (excerpt accessible at Google Books—use keyword search, or see p. 159-160) (confirmed February 28, 2015)

j) 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; search “truths which none can be free to ignore” or see p. 20) (confirmed February 25, 2015)

k)-l) by this writer

3) “Cultures” of violence, greed, corruption, and overindulgence—which have become so common that many of us accept such as inevitable

“... no solutions seem to be in sight for these problems.”

a) From an April 14, 2014 Press Release from the Stockholm International Peace Research Institute titled “Military spending continues to fall in the West but rises everywhere else, says SIPRI” (paragraphs 1 and 5) (at http://www.sipri.org/media/pressreleases/2014/Milex_April_2014) (confirmed March 16, 2015)

b) From the “World Report on Violence and Health” (World Health Organization Geneva 2002) in Chapter 9 “The Way Forward: Recommendations for Action” p. 254 (at http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf) (confirmed March 13, 2015)

Also, from the “World Report of Violence and Health: Summary (Recommendations for Action)” (by the World Health Organization, 2002): (p. 33-34) (at http://www.who.int/violence_injury_prevention/violence/world_report/en/summary_en.pdf) (confirmed February 25, 2015)

c) From the “Executive Summary” of the “Global Study on Homicide 2011” by the United Nations Office on Drugs and Crime (see paragraph 2 on p. 9) (at http://www.unodc.org/documents/data-and-analysis/statistics/Homicide/Global_study_on_homicide_2011_web.pdf) (confirmed March 9, 2015)

d) From Maiese, Michelle. “Moral or Value Conflicts.” *Beyond Intractability*. Eds. Guy Burgess and Heidi Burgess. Conflict Information Consortium, University of Colorado, Boulder. Posted: July 2003 <<http://www.beyondintractability.org/essay/intolerable-moral-differences>> (confirmed February 25, 2015)

e) Excerpt is from the transcript of a segment on the November 26, 2008 Morning Edition Show on National Public Radio. The title of the segment is “Joseph O’Neill, The New Immigrant Experience”, and in this segment NPR “Morning Edition” Host Steve Inskeep is interviewing Joseph O’Neill on the subject of his new book “Netherland” (most of quoted passages from 5:45 on) (see <http://www.npr.org/templates/story/story.php?storyId=97468340>) (confirmed March 9, 2015)

f) From HBO Series: “The Weight of the Nation: Confronting the Obesity Epidemic” (Part 4: Challenges; 1 hour and 8 minutes) (4 part series) (at <http://theweightofthenation.hbo.com/films/main-films/Challenges>) (confirmed September 8, 2013) (from paragraph 6 of text overview of Part 4) [Highlights (highly recommended): 16:00—20:35 (The modern food industry—and automated society—has caused changes in our lifestyle) 43:25—47:45] (confirmed February 25, 2015)

g) From the Wikipedia webpage for “Lotteries in the United States” (in section “State Revenues”) at http://en.wikipedia.org/wiki/Lotteries_in_the_United_States] (confirmed February 25, 2015)

h) From the Wikipedia webpage for “Derivatives Market” (see section “Over the Counter Markets” at

http://en.wikipedia.org/wiki/Derivatives_market (confirmed March 9, 2015)

i) From the American Lung Association (Colorado state subsection) webpage on “Tobacco” (paragraph 1) (see <http://www.lung.org/associations/states/colorado/tobacco/>) (confirmed February 25, 2015)

j) From “International Communications: A Media Literacy Approach” by Art Silverblatt and Nikolai Zlobin M.E. Sharpe July, 2004 (p. 68) (most content accessible at Google Books) (confirmed February 25, 2015)

k) From the Worldwatch Institute webpage titled “State of the World 2004: Richer, Fatter, and Not Much Happier” (about “State of the World 2004: Special Focus—The Consumer Society”)(in last paragraph) (at <http://www.worldwatch.org/state-world-2004-richer-fatter-and-not-much-happier>) (confirmed February 25, 2015)

l) By this writer. Here also is information he found at Wikipedia’s webpage for “Conscientious Objector” [Note: While the information below is no longer accessible, the notes below will illustrate the point. Nevertheless, an article titled “The History of Conscientious Objection”, which reproduces what Wikipedia provided, before editing changes at Wikipedia, is accessible from the website for the National Peace Museum of Conscientious Objection and Anti-War Activism (see paragraph 3 in section “Mennonite from Camp Lee , Virginia , United States , 16 July 1918” at <http://www.nationalpeacemuseum.org/history.html>) (confirmed March 16, 2015)

“During World War II, all registrants (in the United States) were sent a questionnaire covering basic facts about their identification, physical condition, history and also provided a checkoff to indicate opposition to military service because of religious training or belief.

Men marking the latter option received a DSS 47 form with ten questions.

- a) Describe the nature of your belief which is the basis of your claim.
- b) Explain how, when, and from whom or from what source you received the training and acquired the belief which is the basis of your claim.
- c) Give the name and present address of the individual upon whom you rely most for religious guidance.
- d) Under what circumstances, if any, do you believe in the use of force?
- e) Describe the actions and behavior in your life which in your opinion most conspicuously demonstrate the consistency and depth of your religious convictions.
- f) Have you ever given public expression, written or oral, to the views herein expressed as the basis for your claim made above? If so, specify when and where.
- g) Have you ever been a member of any military organization or establishment? If so, state the name and address of same and give reasons why you became a member.
- h) Are you a member of a religious sect or organization?
- i) Describe carefully the creed or official statements of said religious sect or organization as it relates to participation in war.

j) Describe your relationships with and activities in all organizations with which you are or have been affiliated other than religious or military”

4) The End of the Fossil Fuel Era

“...excessive depletion and degradation of natural capital.... (and) significant, largely unaccounted for, and unchecked social and environmental externalities.”

a) First three statements: From the webpage “Number of Cars”, from “The Physics Factbook” Edited by Glenn Elert -- Written by his students (An educational, Fair Use website) (at <http://hypertextbook.com/facts/2001/MarinaStasenko.shtml>) (confirmed February 25, 2015)

“1 billion passenger cars” statement: From the “Worldometer”.info section for “Cars” (see <http://www.worldometers.info/cars/>(confirmed February 25, 2015)

The “would reach 2.5 billion by 2050”: From article “Number Of Cars Worldwide Surpasses 1 Billion; Can The World Handle This Many Wheels?” by Daniel Tencer (August 23, 2011) (paragraph 8) (see http://www.huffingtonpost.ca/2011/08/23/car-population_n_934291.html]) (confirmed October 22, 2013)

b) From “Plan B 4.0: Mobilization to Save Civilization” by Lester R. Brown (Earth Policy Institute) (see Chapter 6 Overview “Designing Cities for People: The Ecology of Cities”—accessible at http://www.earth-policy.org/books/pb4/PB4ch6_ss2) (first paragraph) (confirmed February 25, 2015)

c) From the Press Release titled “The True Cost of Privatized Motorization” (paragraphs 4 and 5) at the in the Media Section for the (UN-Habitat) “Global Report on Human Settlements 2013 - Planning and Design for Sustainable Urban Mobility” (see <http://unhabitat.org/wp-content/uploads/2013/06/pr5.pdf>]) (confirmed February 25, 2015)

d) From article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry” by Alister Doyle, Environment Correspondent posted at Huffington Post April 3, 2014 (paragraph 4) (at http://www.huffingtonpost.com/2014/04/03/un-climate-chief-figueres-oil-gas_n_5082782.html?utm_hp_ref=green&ir=Green) (confirmed February 28, 2015)

e) From Special Order speech on floor of House of Representatives February 28, 2008 by Rep. Roscoe Bartlett (R-MD). Transcript used to be at <http://www.xecu.net/thorn/PO/PO-Feb28-2008.html> , but that webpage no longer exists. [Note: the above link, which no longer exists, provided links to special order speeches on peak oil and energy by Rep Bartlett from March 14, 2005 to July 17, 2008 (35 different special order speeches on peak oil).] Fortunately, the February 28, 2008 Special Order speech is also on C-Span (at www.c-span.org/video/?204210-1/house-session), and the quoted passages are in a section from 2:53:00 to 2:54:30 (confirmed February 25, 2015)

f) From “Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication” United Nations Environment Programme 2011; (in [Introduction](#), see section “An Era of Capital Misallocation”, p. 14-15) (confirmed February 14, 2015)

g) [From Dr. Fatih Birol (Chief Economist and Head of the Economic Analysis Division of the Paris-based International Energy Agency) Interview with Astrid Schneider (Internationale Politik) Posted at www.relocalize.net “News Postings” section on May 3, 2008 (accessible at http://old.relocalize.net/fatih_birol_interview_leave_oil_before_it_leaves_us) (begins with question 23 by Schneider)] (confirmed April 3, 2011)

5) The increasing world population and its implications relating to widespread resource depletion— with a special focus on the increasing number of people who are consuming material goods and ecological resources indiscriminately

“It would be foolish to underestimate the challenge of checking the consumption juggernaut....”

a) From www.infoplease.com at www.infoplease.com/ipa/A0883352.html; and U.S. Bureau of the Census POP Clock estimate at <http://www.census.gov/popclock/> (confirmed February 27, 2015)

b) From preconference (September, 2007) brochure for a “Teach In: Confronting the Global Triple Crises—Climate Change, Peak Oil (The End of Cheap Energy), and Global Resource Depletion and Extinction” (September 14-17, 2007 at The George Washington University Lisner Auditorium in Washington D.C.) Sponsored by The International Forum on Globalization (www.ifg.org) and The Institute on Policy Studies (preconference brochure at <http://www.tni.org/sites/www.tni.org/archives/acts/ifg-triplecrisis.pdf>) (see p. 2) (confirmed February 27, 2015)

c) An “Overview of the Millennium Ecosystem Assessment” is at the Millennium Ecosystem Assessment website (<http://www.maweb.org/en/About.aspx>) The quoted passage is from the section “What are the main findings of the MA?” (in the above overview) which can be found directly at <http://www.unep.org/maweb/en/About.aspx#2>) (see 4 “bullet” summaries) (confirmed February 27, 2015)

d) From “Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication” United Nations Environment Programme 2011; (in [Introduction](#), see section “An Era of Capital Misallocation”, p. 14-15) (confirmed February 14, 2015)

e) From Washington Post article “Report on Global Ecosystems Calls for Radical Changes: Earth’s

sustainability not guaranteed unless action is taken to protect resources” (Shankar Vedantam, March 30, 2005 p. A02 (paragraph 1)(see <http://www.washingtonpost.com/wp-dyn/articles/A10966-2005Mar29.html>) (confirmed February 27, 2015)

f) From Press Release for International Program on the State of the Ocean (IPSO) “State of the Ocean Report 2013” (October 3, 2013) (at <http://www.stateoftheocean.org/pdfs/IPSO-PR-2013-FINAL.pdf>) (confirmed February 27, 2015)

g) From the webpage “Unsustainable Fishing”, at the website for the Worldwide Fund for Nature (see http://wwf.panda.org/about_our_earth/blue_planet/problems/problems_fishing/) (confirmed February 27, 2015)

h) From “World on the Edge: How to Prevent Environmental and Economic Collapse” by Lester R. Brown Earth Policy Institute (January, 2011) (in Chapter 2 Overview “Falling Water Tables and Shrinking Harvests”) (paragraph 8)(at <http://www.earth-policy.org/books/wote/wotech2>) (confirmed February 27, 2015)

i) From the “Rainforest Stats” section of the Save the Amazon website (see 5th bullet in section “The Wealth of the Rainforests” (at <http://www.savetheamazon.org/rainforeststats.htm>) (confirmed March 12, 2015)

j) From the “Rainforest Stats” section of the Save the Amazon website (see 1st bullet in section “The Disappearing Rainforests” (at <http://www.savetheamazon.org/rainforeststats.htm>) (confirmed March 12, 2015)

k) From Press Release for “World on the Edge” by Lester R. Brown (last paragraph) at the website of the Earth Policy Institute (January, 2011) <http://www.earth-policy.org/books/wote/wotepr>) (confirmed February 27, 2015)

l) From article “Death by Consumption” by Dennis Soros A review of three books: The Worldwatch Institute, State of the World 2004. Special Focus: The Consumer Society, edited by Linda Starke (New York: W.W. Norton & Company 2004) Tim Kasser, The High Price of Materialism (Cambridge: MIT Press 2002) Michael Dawson, The Consumer Trap: Big Business Marketing in American Life (Chicago: University of Illinois Press 2003) (from paragraph 10) (see <http://www.thefreelibrary.com/Death+by+consumption.-a0132192567>) (Note: Article published in March 22, 2005 as a book review in the magazine Labour/Le Travail)] (confirmed February 27, 2015)

m) From the “Living Planet Index” webpage, at the World Wildlife Fund (see http://wwf.panda.org/about_our_earth/all_publications/living_planet_report/living_planet_index2/) (paragraph 2) (confirmed February 27, 2015)

n) From Press Release (January, 2006) for “Plan B 2.0: Rescuing a Planet Under Stress and a Civilization

in Trouble” by Lester R. Brown (Earth Policy Institute) (paragraph 20) (press release at <http://www.earth-policy.org/books/pb2/pb2pr> (confirmed February 27, 2015)

o) From article “Global Ad Spend Up 3.2% in 2012” by MarketingCharts staff April 15, 2013 at the MarketingCharts website (see <http://www.marketingcharts.com/uncategorized/global-ad-spend-up-3-2-in-2012-28665/>)(confirmed February 27, 2015)

p) From “International Communications: A Media Literacy Approach” by Art Silverblatt and Nikolai Zlobin M.E. Sharpe July, 2004 (most content accessible at Google Books at <https://books.google.com/books?id=Ife9Kg5B2BwC&printsec=frontcover&dq=International+Communications:+A+Media+Literacy+Approach&hl=en&sa=X&ei=u-rwVLvIA4mQyQsq8oK4DA&ved=0CCcQ6AEwAA#v=onepage&q=media%20programming&f=false>) (see p. 68) (confirmed February 27, 2015)

q) From a July 2, 2012 article titled “Global Carbon Dioxide Emissions—Facts and Figures” by Robert Rapier (last two paragraphs) (at <http://www.consumerenergyreport.com/2012/07/02/global-carbon-dioxide-emissions-facts-and-figures/>) (confirmed February 27, 2015)

r) From June 29, 2012 article “Coal: The Ignored Juggernaut” by Gregor McDonald at the Resilience website (in section “Global Coal Picture”) (see <http://www.resilience.org/stories/2012-06-29/coal-ignored-juggernaut>)] (confirmed February 27, 2015)

s) From the Worldwatch Institute webpage titled “State of the World 2004: Richer, Fatter, and Not Much Happier” (about “State of the World 2004: Special Focus—The Consumer Society”)(in last paragraph) (at <http://www.worldwatch.org/state-world-2004-richer-fatter-and-not-much-happier>) (confirmed February 25, 2015)

6) We are creating more and more “urban agglomerations”—(cities with a population of more than 1 million people--more than 400), which require more and more complex and energy intensive infrastructures, which are the least appropriate models when it comes to implementing resolutions to many of the other challenges in this ten point assessment, and which is a trend that will need to be reversed in favor of villages, towns, and small cities which are less carbon-intensive and more ecologically sustainable

“... which are the least appropriate models when it comes to implementing resolutions to many of the other challenges in this ten point assessment....”

a) First four statements from the website of Population Reference Bureau—see webpage titled “Human Population: Urbanization” at <http://www.prb.org/Publications/Lesson->

[Plans/HumanPopulation/Urbanization.aspx](#) (see paragraphs one and two) (confirmed February 28, 2015)

Last statement from the webpage “World Cities” at the Global Sherpa website (paragraph 10) (at <http://www.globalsherpa.org/cities-world-city>) (confirmed February 28, 2015)

b) From “Plan B 4.0: Mobilization to Save Civilization” by Lester R. Brown (Earth Policy Institute) (see Chapter 6 Overview “Designing Cities for People: The Ecology of Cities”—accessible at http://www.earth-policy.org/books/pb4/PB4ch6_ss2) (first paragraph) (confirmed February 28, 2015)

c) From “Plan B 4.0: Mobilization to Save Civilization” by Lester R. Brown (Earth Policy Institute) (see Chapter 6 Overview “Designing Cities for People: The Ecology of Cities”—accessible at http://www.earth-policy.org/books/pb4/PB4ch6_ss2) (paragraph 5) (confirmed February 28, 2015)

d) From article “Peak Water: What happens when the wells go dry?” by Lester R. Brown (in paragraph 9) at the Earth Policy Institute website (July, 2013) (see http://www.earth-policy.org/plan_b_updates/2013/update115)] (confirmed February 28, 2015)

e) From the Press Release titled “The True Cost of Privatized Motorization” (paragraphs 4 and 5) at the in the Media Section for the “Global Report on Human Settlements 2013 - Planning and Design for Sustainable Urban Mobility” ” (see <http://unhabitat.org/wp-content/uploads/2013/06/pr5.pdf>)] (confirmed February 25, 2015)

f) i) From article/infographic “Food Wastage Around the World” at the OnlyInfographic website (see <http://www.onlyinfographic.com/2011/food-wastage-around-the-world/>) (confirmed February 28, 2015)

g) From “Why the Village Movement?” by J.C. KumarappaThe edition this writer has includes the 1939 edition foreword by Mahatma Gandhi, and was printed on handmade paper in Rajchat, Kashi in 1960 (p. 72-73)

h) From “Why the Village Movement?” by J.C. KumarappaThe edition this writer has includes the 1939 edition foreword by Mahatma Gandhi, and was printed on handmade paper in Rajchat, Kashi in 1960 (p. 79)

i) From the “Grade Sheet: America’s Infrastructure Investment Needs” of the ASCE “2013 Report Card for America’s Infrastructure” at the website of the American Society of Civil Engineers (see <http://www.infrastructurereportcard.org/a/#p/grade-sheet/americas-infrastructure-investment-needs>)

7) Global inequities and the tragic cycles of malnutrition, disease, and death

The Great Way is very level...

- a) From article “Global Wealth Reaches New All-Time High” (Text: Richard Kersley, Head of Global Securities Products and Themes, Credit Suisse; Text: Michael O’Sullivan, Chief Investment Officer, UK & EEMEA, Credit Suisse; Video: Cushla Sherlock, Editor, Credit Suisse, at the “News and Videos” section of the Credit Suisse website (last sentence in last paragraph) (see <https://www.credit-suisse.com/ch/en/news-and-expertise/research/credit-suisse-research-institute/news-and-videos.article.html/article/pwp/news-and-expertise/2013/10/en/global-wealth-reaches-new-all-time-high.html>) (confirmed February 28, 2015)
- b) From the Hunger Project webpage “Know Your World: Facts about hunger and poverty” (in the “Women and Children” section) (at http://www.thp.org/learn_more/issues/know_your_world_facts_about_hunger_and_poverty) (confirmed February 28, 2015)
- c) From the “Hunger” webpage at the World Food Programme website (in paragraph 1) (see <http://www.wfp.org/hunger>) (confirmed February 28, 2015)
- d) From “The Data” webpage, at the Food Tank website (see “Obesity Facts”) (at <http://foodtank.org/the-data>) (confirmed February 28, 2015)
- e) From HBO Series: “The Weight of the Nation: Confronting the Obesity Epidemic” (Part 4:Challenges; 1 hour and 8 minutes) (4 part series) (from paragraph 6 of text overview of Part 4) (at<http://theweightofthenation.hbo.com/films/main-films/Challenges>) (confirmed September 8, 2013) [Special Note: *Highly Recommended*--Highlights from video “The Weight of the Nation: Confronting the Obesity Epidemic” (*Part 4: Challenges*)(Highlights: 16:00—20:35 The modern food industry—and automated society—has caused changes in our lifestyle) (confirmed February 28, 2015)
- f) From the “Using Less Wood Quick Fact Series” fact sheet titled “Focus on Wood Consumption” (at the website for Resource Conservation Alliance) (paragraph 2) (fact sheet at <http://woodconsumption.org/issues/wood.pdf>) (confirmed February 28, 2015)
- g) From the Hunger Project “Facts about hunger and poverty” (in section “Water”)(at http://www.thp.org/learn_more/issues/know_your_world_facts_about_hunger_and_poverty) (confirmed February 28, 2015)
- h) From the “Water Facts” webpage of The Water Information Program (see section “Water Consumption” at <http://www.waterinfo.org/resources/water-facts>) (confirmed March 12, 2015)
- i) From the “Water Facts” webpage of The Water Information Program (see section “Water and Golf Courses” at <http://www.waterinfo.org/resources/water-facts>) (confirmed March 12, 2015)

j) First paragraph: from article “Peak Water: What happens when the wells go dry?” by Lester R. Brown (paragraph 41) at the Earth Policy Institute website (July, 2013) (see http://www.earth-policy.org/plan_b_updates/2013/update115)] (confirmed February 28, 2015)

Last two paragraphs from Chapter 1 “Food: The Weak Link” in “Full Planet, Empty Plates: The New Geopolitics of Food Scarcity” (Book Chapter) by Lester Brown at the Earth Policy Institute website (October, 2012) (see paragraphs associated with footnotes 31-32) (at <http://www.earth-policy.org/books/fpep/fpepch1>] (confirmed February 28, 2015)

k) From article/infographic “Food Wastage Around the World” at the OnlyInfographic website (see <http://www.onlyinfographic.com/2011/food-wastage-around-the-world/>) (confirmed February 28, 2015)

l) From article “Montgomery County researches plan to redistribute unused food to hungry” by Rebecca Cohen (published October 9, 2012 in the Washington Post (at http://www.washingtonpost.com/local/montgomery-county-researches-plan-to-redistribute-unused-food-to-hungry/2012/10/09/831d0ee0-1252-11e2-a16b-2c110031514a_story.html) (confirmed March 12, 2015)

m) From Press Release (January, 2006) for “Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble” by Lester R. Brown (Earth Policy Institute) (press release at <http://www.earth-policy.org/books/pb2/pb2pr>]

n) From “Towards Food Sovereignty: Reclaiming Autonomous Food Systems” by Michel Pimbert (a very important source) Accessible from IIED website (International Institute for Environment and Development) London UK 2009 (see Table of Contents and downloadable chapters at <http://www.iied.org/towards-food-sovereignty-reclaiming-autonomous-food-systems> ; book incomplete, only some chapters accessible) (in Chapter 3. “Food sovereignty: acitizens’ vision of a better world”, p. 38-39)

o) From the article “14 Reasons to be Hopeful About the Future of Food” (October 10, 2013) at the Food Tank website (see Reason #14 at <http://foodtank.com/news/2013/10/fourteen-reasons-to-be-hopeful-about-the-future-of-food>) (confirmed March 13, 2015)

p) From Chapter 53 of “Te-Tao Ching” (by Lao Tzu) (possibly 6th Century B.C.E.) Translation by Robert G. Hendricks] Ballantine Books 1992

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

Unfortunately, the kind of 'economic growth' which is most often being referred to includes....

a) From article "National Debt Basics" by James D. Agresti at the Just Facts website (April 26, 2011/ Updated January 10, 2015) (in section "Quantifying the Public Debt"—third "bullet")(see <http://www.justfacts.com/nationaldebt.basics.asp>) (confirmed February 28, 2015)

b) From article "American Household Credit Card Debt Statistics: 2014" by Tim Chen, at the NerdWallet website (third set of figures—current as of December, 2014) (see <http://www.nerdwallet.com/blog/credit-card-data/average-credit-card-debt-household/>) (confirmed February 28, 2015)

c) From article "UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry" by Alister Doyle, Environment Correspondent posted at Huffington Post April 3, 2014 (paragraph 4) (at http://www.huffingtonpost.com/2014/04/03/un-climate-chief-figueres-oil-gas_n_5082782.html?utm_hp_ref=green&ir=Green) (confirmed February 28, 2015)

d) From October 27, 2012 article titled "Sovereign Environmental Risk" by Achim Steiner (under-Secretary General, United Nations and Executive Director of United Nations Environmental Programme) and Susan Burns (Founder of the Global Footprint Network) at the Project Syndicate website (paragraph 6) (see <http://www.project-syndicate.org/commentary/natural-resources-and-sovereign-credit-ratings-by-achim-steiner-and-susan-burns>) (confirmed February 25, 2015)

e) by this writer

f) From "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication" United Nations Environment Programme 2011; (in [Introduction](#), see section "An Era of Capital Misallocation", p. 14-15) (confirmed February 14, 2015)

f) From "Revisiting Carrying Capacity: Area Based Indicators of Sustainability", by William E. Rees, 1996 (see Box 3: "A Family of Area-Based Sustainability Indicators") (at www.dieoff.org/page110.htm) (confirmed February 28, 2015)

g) Commentary from Richard Ravitch (former Lt. Gov., New York) from a video accessible at cspan.org. Program was titled "Urban Institute: Challenges for New Governors: Budgets and Employment" (date of program: November 2, 2010) (timing of excerpts included at end of excerpts, video at <http://www.c-span.org/video/?296362-1/challenges-new-governors>) (confirmed March 13, 2015)

(starting at 45:05) "If you believe the rate of growth of our economy is going to be what it was in the prior two decades, then there is arguably some justification for kicking the can forward and using borrowed money to cover today's expenses. If you don't believe that growth rate is going to be that great, then you have to ask yourself some very fundamental questions" (ending at 45:40)

h) From article “UN Climate Chief Figueres Urges 'Urgent Transformation' Of Oil And Gas Industry” by Alister Doyle, Environment Correspondent posted at Huffington Post April 3, 2014 (paragraph 4) (at http://www.huffingtonpost.com/2014/04/03/un-climate-chief-figueres-oil-gas_n_5082782.html?utm_hp_ref=green&ir=Green) (confirmed February 28, 2015)

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

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.

a) From “People of Plenty: Economic Abundance and the American Character” by David M. Potter (first edition 1954) (p. 176-177)(accessible at Google Books) (confirmed February 28, 2015)

b) From article “Global Ad Spend Up 3.2% in 2012” by MarketingCharts staff April 15, 2013 at the MarketingCharts website (see <http://www.marketingcharts.com/uncategorized/global-ad-spend-up-3-2-in-2012-28665/>)(confirmed February 27, 2015)

c) by this writer

d) From article “Global Wealth Reaches New All-Time High” (Text: Richard Kersley, Head of Global Securities Products and Themes, Credit Suisse; Text: Michael O'Sullivan, Chief Investment Officer, UK & EEMEA, Credit Suisse; Video: Cushla Sherlock, Editor, Credit Suisse, at the “News and Videos” section of the Credit Suisse website (last sentence in last paragraph) (see <https://www.credit-suisse.com/ch/en/news-and-expertise/research/credit-suisse-research-institute/news-and-videos.article.html/article/pwp/news-and-expertise/2013/10/en/global-wealth-reaches-new-all-time-high.html>) (confirmed February 28, 2015)

e) From Press Release for “World on the Edge” by Lester R. Brown (last paragraph) at the website of the Earth Policy Institute (January, 2011) <http://www.earth-policy.org/books/wote/wotepr>) (confirmed February 27, 2015)

f) From report “Armed Forces, Capabilities and Technologies in the 21st Century Environmental Dimensions of Security: Sub-study 1 Peak Oil--Security Policy Implications of Scarce Resources” (112 pages) The study was produced by the Future Analysis department of the Bundeswehr Transformation Center, a branch of the German military (Lead Author: Lt. Col. Thomas Will) Bundeswehr Transformation Centre Future Analysis Branch Prötzelers Chaussee 25 15344 Strausberg November 2010 www.zentrum-transformation.bundeswehr.de[Special Note: “The original German document

(125 pgs) was approved for public release last November, yet neither the complete German version nor the partial English translation has attracted interest from mainstream media.” From article “**Complete English translation of German military analysis of peak oil now available**” by Rick Munroe Published Aug 30 2011 by Energy Bulletin (see <http://energybulletin.net/stories/2011-08-30/complete-english-translation-german-military-analysis-peak-oil-now-available>) (English translation at http://www.energybulletin.net/sites/default/files/Peak%20Oil_Study%20EN.pdf) Specific passage from Chapter 3 “Possible Developments After Global Peak Oil”; Section 3.1 “Possible Peak Oil Induced Implications”; Section 3.1 “Possible Peak Oil Induced Implications”; Subsection 3.1.4 “Intra-Societal Risks of Peak Oil”; subtitle “Loss of Confidence Amongst Society” (p. 55, paragraph 1) (confirmed February 28, 2015)

g)-h)by this writer

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.

Note on the term “siren song” (in description for #10):

(from the Wikipedia webpage for “Siren (mythology)” at http://en.wikipedia.org/wiki/Siren_%28mythology%29)

“In Greek mythology, the Sirens were dangerous yet beautiful creatures, portrayed as femmes fatales who lured nearby sailors with their enchanting music and voices to shipwreck on the rocky coast of their island.” (in paragraph 1)

“Odysseus was curious as to what the Sirens sang to him, and so, on the advice of Circe, he had all of his sailors plug their ears with beeswax and tie him to the mast. He ordered his men to leave him tied tightly to the mast, no matter how much he would beg. When he heard their beautiful song, he ordered the sailors to untie him but they bound him tighter. When they had passed out of earshot, Odysseus demonstrated with his frowns to be released.” (in section “Encounters with the Sirens”, paragraph 2)

a) From “Why the Village Movement?” by J.C. Kumarappa The edition this writer has includes the 1939

edition foreword by Mahatma Gandhi, and was printed on handmade paper in Rajchat, Kashi in 1960 (p. 72-73)

b) From “Why the Village Movement?” by J.C. KumarappaThe edition this writer has includes the 1939 edition foreword by Mahatma Gandhi, and was printed on handmade paper in Rajchat, Kashi in 1960 (p. 79)

c) From “International Communications: A Media Literacy Approach” by Art Silverblatt and Nikolai Zlobin M.E. Sharpe July, 2004 (p. 68) (most content accessible at Google Books) (confirmedFebruary 25, 2015)

d) By this writer