The Broader Perspective—a Summary Assessment of Humanity's Future

It is understandable that human beings would seek to improve their material wellbeing through industrialization. An industrialized lifestyle, such as that enjoyed by Americans and Western Europeans, provides material living standards far superior to those afforded by pre-industrial agrarian and hunter-gatherer lifestyles.

Unfortunately, the industrial lifestyle paradigm that we in the "developed" world have come to take for granted is unsustainable; moreover, it is undermining our very existence as a species.

Through our incessant pursuit of global industrialization, we are rapidly depleting the finite nonrenewable natural resources—the energy resources, metals, and minerals that enable our industrialized way of life—to levels at which they will soon become insufficient to support the economic activity levels, population levels, and material living standards associated with our global society.

So while global industrialization is an understandable human objective, it is also a physically impossible objective. Industrialization must and will end—in the not-too-distant future—as will our industrialized lifestyles.

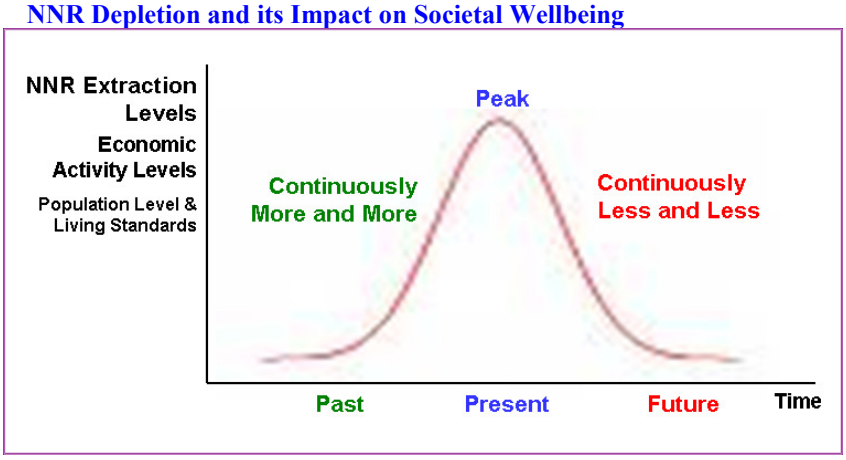
Our industrialized way of life is enabled by nonrenewable natural resources…

Our industrial lifestyle paradigm is enabled by continuous access to enormous and ever-increasing quantities of nonrenewable natural resources (NNRs)—energy resources, metals, and minerals. Both the support infrastructure within industrialized nations and the raw material inputs into industrialized economies consist almost entirely of NNRs; NNRs are the primary sources of the tremendous wealth surpluses required to perpetuate industrialized societies.

As an example, the percentage of NNR inputs into the US economy increased from less than 10% in the year 1800, which corresponds roughly with the inception of the American industrial revolution, to approximately 95% today. Between 1800 and today, America's total annual NNR utilization level increased from approximately 4 million tons to nearly 7 billion tons—an increase of over 1700 times. The result: the size of the US economy (GDP) increased from less than $8 billion (inflation adjusted) in 1800 to over $14 trillion today—an increase of over 1800 times!

As their name implies, NNRs are finite—they are not replenished by Nature; and they are scarce—economically viable NNR deposits are rare. Persistent extraction will therefore deplete recoverable NNR reserves to exhaustion. The typical NNR depletion cycle is characterized by:

NNR Depletion and its Impact on Societal Wellbeing



a period of "continuously more and more", as the easily accessible, high quality, low cost resources are extracted; followed by a "supply peak", or maximum attainable extraction level; followed by a period of "continuously less and less", as the less accessible, lower quality, higher cost resources are extracted.

Our industrialized way of life is not sustainable…

Since the inception of our industrial revolution, humanity has been the beneficiary of "continuously more and more" with respect to available NNR supplies and resulting economic activity levels, human population levels, and average material living standards.

Unfortunately, in the process of reaping the benefits associated with "continuously more and more", we have been eliminating—persistently and systematically—the very natural resources upon which our industrialized way of life depends. Supplies associated with an increasing number of NNRs are transitioning from "continuously more and more" to "continuously less and less". Our level of global societal wellbeing—the material living standards enjoyed by our ever-expanding, continuously-industrializing global population—is experiencing the same transition.

The NNR transition from "continuously more and more" to "continuously less and less" is well underway. An overwhelming majority of NNRs—including bauxite, copper, iron ore, magnesium, manganese, nickel, phosphate rock, potash, rare earth metals, tin, and zinc—have reached their domestic US peak extraction levels, and are in terminal decline. Available supplies associated with a vast majority of NNRs are becoming increasingly scarce on a global level as well.

Historically abundant and cheap NNRs are becoming increasingly scarce and expensive—most of the easily accessible, high quality, low cost deposits have been exploited over the past several centuries—as ever-tightening global NNR supplies struggle to keep pace with ever-increasing global demand. While we are not about to run out of any NNR, we are about to run critically short of many.

Because the natural resource utilization behavior that enables our "success"—our industrialized way of life—simultaneously undermines our very existence, neither our natural resource utilization behavior nor the industrial lifestyle paradigm enabled by our natural resource utilization behavior is sustainable.

Sustainability is not negotiable…

Humanity's transition to a sustainable lifestyle paradigm, within which a drastically reduced human population will rely exclusively upon renewable natural resources (RNRs)—water, soil, forests, and other naturally occurring biota—is therefore inevitable. Our choice is not whether we "wish to be" sustainable; our choice involves the process by which we "will become" sustainable.

We could choose to alter fundamentally our existing unsustainable natural resource utilization behavior and transition voluntarily to a sustainable lifestyle paradigm over the next several decades. In the process, we would utilize remaining available NNRs to orchestrate a relatively gradual transition, thereby optimizing our population level and material living standards both during our transition and at sustainability.

Regrettably, we are culturally incapable of transitioning voluntarily to a sustainable lifestyle paradigm. During the course of our industrialization epoch, we have developed a cornucopian worldview—we believe that we can achieve perpetual economic growth, population growth, and material living standard improvement through our ever-increasing utilization of the earth's "unlimited" NNRs.

Our cornucopian worldview has rendered us unable to acknowledge our predicament—that our industrial lifestyle paradigm is unsustainable precisely because recoverable NNR supplies are not unlimited—much less to face the inevitably painful consequences associated with its resolution.

Even under optimal circumstances, our voluntary transition to sustainability would involve enormous reductions in our global population level and material living standards—culminating in a few hundred million people at most, living quasi horticulturalist/hunter-gatherer lifestyles at best.

It is inconceivable that our increasingly industrialized global population would voluntarily adopt an unimaginably painful resolution to a problem that our distorted cornucopian worldview will not permit us to acknowledge in the first place—even though a voluntary transition to sustainability is infinitely superior to all available alternatives.

Instead, we will squander remaining NNR supplies in futile attempts to perpetuate our unsustainable industrial lifestyle paradigm for as long as possible, thereby depleting remaining NNR reserves to levels at which they will become insufficient to support the economic activity levels, population levels, and material living standards associated with our industrialized and industrializing nations—a scenario that is unfolding now.

We don't get it—we don't want to get it…

While we may not actually believe that global NNR supplies are truly "unlimited", we certainly behave as though we believe that there will always be "enough" to satisfy our ever-increasing global demand.

As global NNR supplies become increasingly scarce, however, we are evolving from a "demand-driven" NNR utilization paradigm in which our NNR utilization levels are determined by ever-increasing NNR demand, which is always met with ever-increasing supplies; to a "supply-constrained" NNR utilization paradigm in which our NNR utilization levels will be determined by continuously decreasing NNR supplies, which will fail increasingly to keep pace with demand.

During the next few years, increasing global NNR scarcity will foster a series of increasingly frequent and severe economic contractions punctuated by increasingly brief and anemic recoveries, a trend that will be especially pronounced for the NNR-deficient—but highly NNR-dependent—nations in the industrialized "West".

Continuously increasing NNR prices combined with decreasing willingness by the rest of the world to exchange their real wealth—NNRs and derived goods and services—for unrepayable debt and continuously devaluing currencies from the industrialized West, will cause a continuous decline in real purchasing power among Western nations.

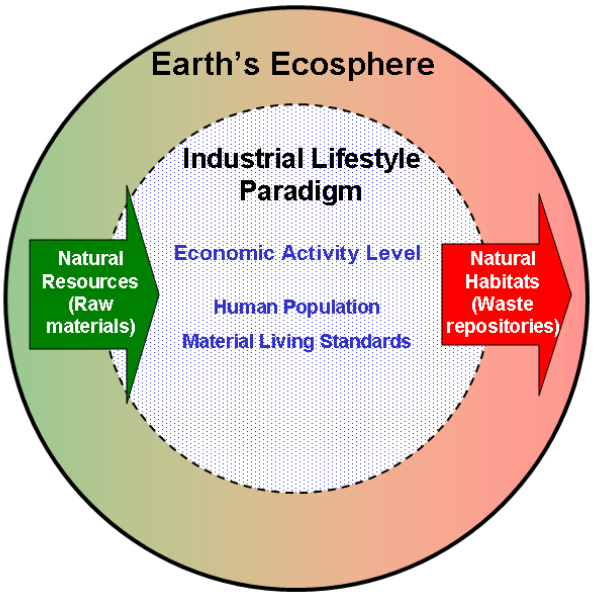
As global NNR scarcity becomes increasingly pervasive, the previously improving material living standards associated with industrializing populations will stagnate; and the material living standards associated with industrialized populations will decline toward those of industrializing populations.

Because most global "thought leaders" will view our situation from political and economic perspectives, they will erroneously attribute our ongoing decline in societal wellbeing to factors such as insufficient financial investment, insufficient technical innovation, and ineffective leadership. The prevailing view will be that our predicament can and will be "fixed" through incremental financial investment, redoubled human initiative, and sound government policies.

Our situation will continue to deteriorate, however, despite our ongoing attempts to "fix" it. NNR scarcity will devolve into increasingly severe temporary NNR supply shortfalls, as ever-tightening NNR supplies fail with increasing frequency to meet global demand. We will react with shocked disbelief—and increasing desperation—as our political and economic solutions fail dismally and completely to resolve our predicament.

By this time, our global populace will begin to assess our situation correctly, from the broader ecological perspective.

The Ecological Perspective



We will become aware of he fact that our ever-expanding industrial lifestyle paradigm is enabled by earth's finite natural resources and natural habitats; we will realize that our economic woes are actually rooted in the increasingly scarce NNR supplies that are thwarting our incessant attempts to achieve global industrialization; and we will realize that increasing NNR scarcity is a Nature-imposed, geological absolute over which we have no control and that we cannot "fix".

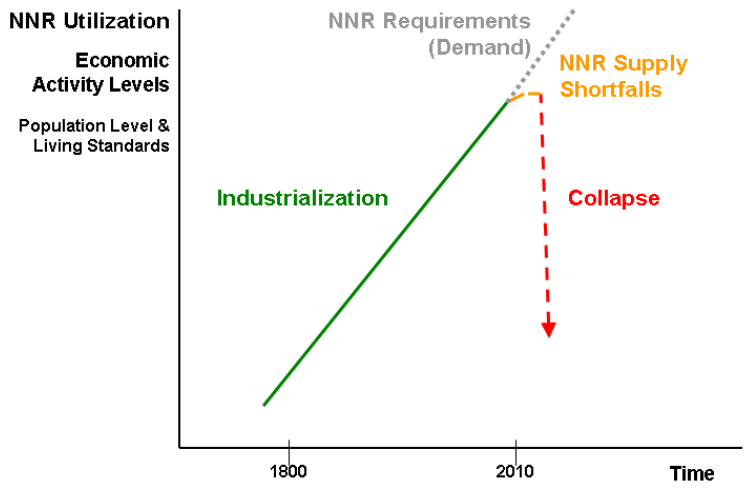
We will understand, too late, that human economics and politics are irrelevant to Nature.

There can be no happy ending…

As we come to grips with this reality, survival will become humanity's only priority and conflict will become the prevailing means by which remaining NNRs (and RNRs) are allocated, both among nations and within nations. As global natural resource grabs escalate to global natural resource wars, we will inflict increasing damage upon our societal support systems and infrastructure, thereby inducing a cascading array of permanent and fatal NNR supply shortfalls.

Lacking access to adequate NNR supplies, we will be unable to produce and provision societal essentials—clean water, food, energy, shelter, clothing, and infrastructure—at levels sufficient to support our global population. Nor will we be able to effect a voluntary transition to sustainability, should we even consider it, as excessively depleted natural resource reserves and excessively damaged societal support infrastructure will no longer permit it.

Global Societal Collapse



All industrialized and industrializing nations, irrespective of their economic and political orientations, will collapse, taking the aid-dependent, non-industrialized world with them. Nature will orchestrate our transition to sustainability—remorselessly and horrifically—through famine, disease, and pestilence.

Under the best case scenario, a surviving global human population of a few million will remain to scavenge among the remnants of decimated natural resource reserves and severely degraded natural habitats. Under the worst case scenario, we will annihilate ourselves through global nuclear war.

Ironically, the more vigorously we strive to perpetuate our unsustainable industrialized way of life through ever-increasing NNR overexploitation, the more quickly and thoroughly we will deplete NNR/RNR reserves and degrade natural habitats, thereby hastening and exacerbating our global societal collapse.

We can't give it up…

Of the myriad problems confronting humanity today, increasing global NNR scarcity is the most daunting; and it is the one problem that we cannot solve—it is our Achilles heel. We are desperately attempting to perpetuate our NNR-dependent industrial lifestyle paradigm within the confines of our increasingly NNR-constrained planet, an endeavor that is physically impossible.

We are the pathetic victims of tragic circumstances of our own inadvertent creation, which are beyond our capacity to resolve.

Most of us cope with this reality through denial and self-delusion. Our overwhelming desire to realize the benefits promised by ever-expanding global industrialization—continuously improving material living standards for ever-increasing numbers of our ever-increasing global population—overrides our capacity to acknowledge the fact that these benefits can never be realized.

Delusion: We will reduce our global NNR demand and utilization levels through conservation initiatives, green initiatives, population stabilization, increased efficiency, and productivity gains, thereby affording us time to find a "solution" to our predicament.
Reality: Notwithstanding periodic economic recessions, so long as 1.2 billion people seek to perpetuate their industrialized way of life and at least 3 times that many actively aspire to an industrialized way of life, global NNR requirements, demand, and utilization levels will increase unabated.

Any minor decreases in NNR demand accruing from human ingenuity and feel-good initiatives will be dwarfed by the unrelenting increases in NNR requirements and the resulting increases in global NNR demand and utilization levels required to perpetuate ever-expanding industrialization.

Regarding a "solution" to our predicament, our only recourse that does not culminate in global societal collapse requires humanity to acknowledge universally that our industrialized lifestyle paradigm is unsustainable, and to utilize remaining NNRs to transition voluntarily, quickly, and beginning immediately to a sustainable lifestyle paradigm—within which a drastically reduced human population would experience drastically reduced material living standards, forever.

While infinitely preferable to the alternatives, transitioning voluntarily (and cooperatively) to a sustainable lifestyle paradigm is a course of action that we will never implement. We could never agree on how to allocate increasingly scarce natural resources during our transition; nor could we agree on how to reduce our population level and material living standards rapidly and continuously during our transition.

Delusion: Through additional investment and technical innovation, we will generate sufficient new NNR supplies to enable expanding global industrialization indefinitely.
Reality: While financial investment and new technologies will certainly enable us to extract additional NNR supplies going forward, the incremental supplies will be insufficient in an increasing number of cases to offset usage-related declines associated with existing sources of supply. The net result will be continuously declining aggregate NNR supplies that will become insufficient to meet ever-increasing global demand.

We are currently transitioning from “continuously more and more” to “continuously less and less”—available supplies associated with an increasing number of NNRs are peaking and going into terminal decline—precisely because the methods by which NNR supplies are increased—new discoveries, reserve “growth”, substitution, reuse, and recycling—are experiencing diminishing marginal returns.

In an increasing number of cases, our NNR return on investment (ROI) is declining from both an economic perspective and a natural resource perspective—we are investing more and more dollars and NNRs to generate fewer and fewer dollars and NNRs. Absent a miraculous series of enormous, readily-accessible, high-quality NNR discoveries of all types—the probability of which is essentially zero—the trend toward declining NNR investment returns will continue going forward, despite ever-increasing financial investment and technical innovation.

That we must resort to increasingly complex and expensive investments and technologies in order to discover, extract, and process ever-tightening supplies of “low ROI” NNRs—the only remaining NNRs—is the most telling evidence of increasing NNR scarcity. Unfortunately, the perpetuation of our industrialized way of life depends upon ever-increasing supplies of “high ROI” NNRs.

Delusion: By stabilizing or reducing our NNR utilization levels, we can enjoy a “simpler life”—a downscaled industrialized lifestyle paradigm—and enable future generations to do the same.
Reality: Voluntarily stabilizing or reducing our NNR utilization levels—should we even consider such a course of action—would merely defer global societal collapse, not avert it. We would simply deplete remaining NNR reserves more slowly and collapse at a slightly later date.

Achieving a sustainable lifestyle paradigm through unsustainable natural resource utilization behavior is an oxymoron—it is physically impossible. Our persistent utilization of finite NNRs at any level is unsustainable. A lifestyle paradigm that is enabled by such unsustainable NNR utilization behavior, even a downscaled lifestyle paradigm, is therefore unsustainable as well.

Attempting to justify our ongoing utilization of nonrenewable natural resources—even at reduced levels—is simply self-serving hypocrisy. In truth, we hope that sufficient supplies of critical NNRs remain available to support <u>our</u> generation at comfortable material living standards through the remainder of <u>our</u> lives; future generations are on their own.

Delusion: Somebody will think of something; they always have, and they always will.
Reality: We tend to attribute our ever-improving industrialized way of life—which we achieved through our ever-increasing utilization of NNRs during our era of “continuously more and more”—almost exclusively to human resourcefulness and initiative. We therefore tend to believe that through continued human resourcefulness and initiative, we will continue to obtain sufficient NNRs to enable ever-expanding global industrialization going forward.

We seem to overlook the fact that our good fortune was enabled by the historically abundant NNR reserves that existed, completely independent of any human involvement, during our era of “continuously more and more”; and that in the absence of said NNR abundance, human resourcefulness and initiative would have availed us nothing.

Therefore, while human resourcefulness and initiative were necessary and significant facilitators of our industrialized “success” during our historic era of “continuously more and more”, human resourcefulness and initiative cannot possibly compensate for increasingly scarce NNR supplies during our new reality of “continuously less and less”.

Delusion: Even if increasing NNR scarcity proves to be a reality, global societal collapse is not inevitable; we can "contract gradually" as NNR supplies contract.
Reality: Populations of currently industrialized nations, who take for granted "continuously more and more", will not accept gracefully our new reality of "continuously less and less". Nor will the populations of nations aspiring to "continuously more and more" accept gracefully the reality that they will never realize the improved living standards associated with an industrialized way of life.

The inevitable result of the shattered hopes and dreams to come will be escalating intranational and international conflicts over remaining natural resources, which will devolve into global societal collapse.

Only through a voluntary, universally-adopted, and well-orchestrated transition process—initiated immediately and implemented quickly—can humanity possibly contract gradually to a sustainable population level and sustainable material living standards; and we will not consider such a transition process. There can be no soft landing.

Delusion: Well-prepared individuals, groups, and communities will survive our impending collapse and maintain healthy, fulfilling, and productive lives in its aftermath.
Reality: Those who survive, both during and after our collapse, will be those who can obtain sufficient life sustaining essentials—especially clean water and food—on a continuous basis. Those who store large quantities of these essentials and those who attempt to produce them either individually or in communities will be easy targets for the vast majority who have neither the foresight to store nor the skills to produce.

No matter how remote or secluded your sanctuary, somebody will know about it; and they will come to call when they become desperate; and they will be well armed and devoid of compassion. You can prepare for a last stand, but you cannot prepare for post-collapse survival.

What can we do?

Face reality. Through industrialization, humanity set out to accomplish great things; and we have accomplished great things, and continue to do so. Unfortunately, we are obviating ourselves in the process; we are the unwitting orchestrators of our own demise.

When you wish upon a star,
Makes no difference who you are;
Anything your heart desires,
Will come to you…

I don't think that Walt Disney lied to us deliberately; he just didn't understand the broader perspective.

Bibliography

As a high level synthesis of my previous work, "The Broader Perspective—a Summary Assessment of Humanity's Future" contains no specific footnotes or references. Supporting evidence, analyses, and references are contained in the following research papers and essays, which can be accessed at - www.wakeupamerika.com.

"Increasing Global Nonrenewable Natural Resource Scarcity—Prelude to Global Societal Collapse" – http://wakeupamerika.com/PDFs/Increasing-Global-Nonrenewable-Natural-Resource-Scarcity_Prelude-to-Global-Societal-Collapse.pdf

"Continuously Less and Less—the New American Reality - http://www.wakeupamerika.com/PDFs/Continuously-Less-and-Less.pdf.

"On American Sustainability—Anatomy of a Societal Collapse" - http://www.wakeupamerika.com/PDFs/On-American-Sustainability.pdf.

"'Sustainability' Defined" - http://www.wakeupamerika.com/PDFs/Sustainability-Defined.pdf.

"It's Time to Strike at the Root of Our Predicament" - http://www.wakeupamerika.com/PDFs/Time-to-Strike-at-the-Root.pdf.

The Cause of "The Great Recession—Nonrenewable Natural Resource Scarcity" - http://www.wakeupamerika.com/PDFs/The-Cause-of-the-Great-Recession.pdf.

"Proposal for a Comprehensive Analysis of Global Nonrenewable Natural Resource Scarcity" – http://wakeupamerika.com/PDFs/Comprehensive-Analysis-of-Global-Nonrenewable-Natural-Resource-Scarcity.pdf

Author Bio (Chris Clugston): For the past four years I conducted extensive independent research into the area of sustainability, the goals of which were to quantify from a combined ecological and economic perspective the extent to which both American society and humanity are currently overextended—i.e. living unsustainably beyond our means—and to understand the causes and consequences associated with our predicament.

Prior to that I spent thirty years working with information technology sector companies in marketing, sales, finance, M&A, and general management—the last twenty as a corporate chief executive and management consultant. I received an AB/Political Science, Magna Cum Laude and Phi Beta Kappa from Penn State University, and an MBA/Finance with High Distinction from Temple University in Philadelphia, PA. I can be reached at coclugston "at" comcast "dot" net.

