

Sustainability Defined and Defied

You! Yes, you!

How do *you* define *sustainable*? Does achieving sustainability merely mean that everyone should be cajoled into replacing heat-generating incandescent lights with cool and energy-efficient, squiggly compact fluorescent bulbs? Should we adopt still more efficient LEDs? Should everyone simply be coaxed into conserving water by installing low-flush toilets? Or will a serious movement toward sustainability require far more substantial changes in the entire world's social structure and consumptive behavior? Do *you*, personally, believe that the current rate of utilization of the full range of resources with which we maintain the growing human population on earth, now exceeding 7 billion, is truly *sustainable*?

Alternately, do you believe that the very idea of pursuing a seemingly undefinable goal of *sustainability* is not only unnecessary but, worse, is both misguided and an artificially contrived threat to our nation's and the world's continued economic prosperity? Do energy and material conservation measures irrationally threaten the lifestyle we currently enjoy? Instead, do you think we should rely on the expectation that future scientific discoveries will lead an unfettered free market to develop *new technology* that will once again emerge to save humankind from any current limits on global population and the depletion of earth's natural resources? If so, is there no need either to stem population growth or undertake programs to moderate the consumption of nonrenewable resources? After all, gloom-and-doom prophets calling for conservation and restraints on human behavior are deemed to have been wrong before.

Collection and Interpretation of Scientific Data

Today, we are fortunate to live in an advanced scientific and technical age. We or, at least, a handful of the world's more creative and knowledgeable scientists and engineers (presumably, the same cadre that would be called upon to develop the new technology that will save us from the burdens of conserving resources or curtailing breeding) have access to never-before attainable technical data and scientific measurements, now taken routinely on a global scale. Enhanced planetary measurements, data from orbiting satellites, plus enhanced monitoring of energy and materials consumption confirm unprecedented global resource utilization rates. Vital elements of the earth's ecosystem are clearly being depleted. Some are estimated to be approaching exhaustion, if not 'collapse'. Some analysts suggest that, viewed as a living organism, the earth itself appears to be entering senescence with respect to its ability to continue to provide the basic resources required for maintaining human civilization.

Alternately, if you are an optimistic and vocal denier, you may view these scientific projections with suspicion, even derision? If so, perhaps you should get in the game. Look up the basic data for yourself. Create your own mathematical projections and computer models. Offer them for publication and peer review critique in recognized technical journals. Would-be leaders of scientific thought and social critics should, at least, get in the game before rejecting emerging scientific consensus or, for that matter, advocating either action or inaction on environmental issues. Even a third grader can simply offer an opinion. All of us should be willing to concede that democracy and the results of public polling are not rational methods for establishing the scientific validity of forecasts which will lead to the setting of informed environmental policy.

Growth Happens - Meeting the Demands of an Increasing World Population

To get in the game, those of us who would claim to speak with authority might start by analyzing our nation's and the world's population growth. Older citizens may find it remarkable that the population of the U.S. has doubled in less than four-score years; in my case, in my lifetime. Barring disaster, the entire world's population may be continuing to double each half-century.

As a provincial example, with a current rate of increase of 3 million per year, our nation now adds the population of a *'new Missouri'* to our country almost every two years. Not surprisingly, our new companions want to eat, drink, drive, find employment, own homes, keep warm (or cool), buy large flat panel HDTVs, and have someone pick up their garbage each week. Most also want a solid education, a satisfying job, and, in retirement, financial security plus an opportunity to travel and vacation.

Even contrarians must acknowledge that current population numbers, future growth projections and the current rates of resource utilization and depletion are unprecedented in human history. Accordingly, our global population's ever-increasing pressures on basic resources are, at least, marginally related to the sheer number of people that are seeking food, water, housing, schools, jobs, mobility, security, ...

So, what does this explosive growth in population plus the associated ambitions of the world's increasing number of new residents portend for global living standards? Will rapidly expanding numbers of humans make the rest of us wealthier, more comfortable, happier? Will progressively increasing populations help reestablish the formerly robust economic growth we so fondly recall and seek to restore?

The observation has been made that human populations have not generally collapsed in those regions where there has been increasing poverty, chronic famine, land, soil and water shortages. Instead, humanity appears to be astonishingly resilient so that population growth continues, even where environmental degradation and resource depletion are most severe. Our global population problem, if we can agree that one actually exists, may not be that it is in imminent danger of collapse, but that it is not. With a shrinking resource base, it is only our affluence and the quality of our lives that may be threatened.

Our Resource Future - Will the World have more Oil tomorrow than it has today?

With respect to developing resource limitations, may we acknowledge that inexorably increasing fuel costs and operational expenses are already increasing air travel costs? With continuing increases, at some point, even after having discontinued offering complimentary peanuts, airlines may no longer be able to offer *'affordable'* air travel for the masses. In fact, if present economic trends continue, might not overseas and long distance travel become, first, less common, and then, uncommon? At the moment, we know that airlines have been consolidating into fewer, marginally profitable conglomerates. Moreover, unless subsidized for the sake of maintaining economic competitiveness, unprofitable services to smaller regional airports are being abandoned. Accordingly, in the near future, the derelict airport facilities left behind may be converted to new uses, such as parks, playing fields, low cost storage facilities,... Yet, there are those whose optimistic view of future economic prospects still leads them to advocate the addition of new runways to accommodate projections of forthcoming increases in air traffic.

On the other hand, reports of steadily increasing ridership appear to indicate that bus and rail travel are again becoming more popular transportation means, particularly for those for whom car ownership, operation and maintenance have become financially burdensome. Nevertheless, on behalf of our more fortunate citizens, so far unaffected by worsening economic conditions, community leaders continue to fund parking garages and extend municipal boundaries while declaring public transportation unaffordable.

The Home Building Industry and the Job Market

Economic analysts have projected that our nation's once-robust home building industry, crippled by mortgage malpractice for over a decade and in serious decline since 2007, will remain at low levels as millions of financially distressed families succumb to foreclosure and either move to smaller dwellings or aggregate in existing homes. And with continuing income and job losses, the population of homeless and hungry is expected to continue to increase in both rural as well as in urban areas. Doubt it? Want data? Check reports and service data from your local homeless shelters, food kitchens, and charities. Get in the game.

Especially in the U.S., full-time, satisfying jobs with traditional social benefits (health, retirement) are rapidly becoming scarcer. Increasingly, the world's poorest families must find means to be self-supporting through raising crops and maintaining foraging animals, often, on degraded, marginal land.

Around the world, scientists and technicians continue to accumulate a wide range of data. Various public and scientific interest groups monitor the availability of fresh water, the productivity of fisheries, the logging and replenishment of forests, the loss of topsoil, the formation of deserts, the extension of oceanic dead zones, the changing composition of the atmosphere, and the consumption of non-renewables, such as fossil fuel resources. At the same time, government incentives have been provided to maintain our capacity to build more automobiles as part of our national attempt to sustain an energy-intensive infrastructure as political leaders wait for the economy, like the buffalo, to *'come back'*.

So, should we actually assess the global data our advanced technology has enabled us to obtain? Based on what we, individually and collectively, envision, might we then allow ourselves to make truly rational projections of what our national and global future holds? Or do we simply hope we will not live long enough to actually experience that future?