

SUSTAINABLE GROWTH: PRINCIPLES AND POLICIES

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This report on sustainable growth is the third in a series of annual research papers from the John Locke Foundation devoted to explaining the principles of free markets and applying them to current controversies in North Carolina. The Nathaniel Macon Research Series was created with the generous financial support of David R. Carr, Jr. of Durham, in memory of his friend and business partner George W. Brumley, III, who was a strong believer in the crucial role that robust, unfettered markets play in advancing human progress and promoting a free society. The Macon Series will examine closely the fiscal and regulatory policies of the state and whether they help or hinder individuals seeking to create or expand businesses and economic opportunities in North Carolina. The series is named after Nathaniel Macon, a North Carolinian and close political ally of Thomas Jefferson who served as Speaker of the House and U.S. Senator during the first few decades of the American Republic. Macon frequently argued, "That government is best which governs least."

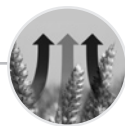


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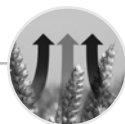
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SUSTAINABLE GROWTH: *Principles and Policies*

Since the beginning of the American republic there have been competing political and moral philosophies vying for the allegiance of policy makers. Public policy in America and consequently in the states that make it up has always been, at least in theory, an offshoot of some identifiable set of underlying principles. That is, policy makers, historically, have not viewed themselves as being part of an ad hoc enterprise of problem solving but as decision makers operating from a broad based set of principles. Indeed, the United States has its founding roots in just such a set of principles, as set forth first in the Declaration of Independence and then more concretely in the Constitution and its first ten amendments—the Bill of Rights.

But there have always been competing sets of principles at work, each of which can be traced to a well-established tradition in political economy. It is well known that the Jeffersonian tradition of individual liberty and natural law can be traced to the writings of 17th century political philosopher John Locke. These principles imply an economic system of free market capitalism based on private property and free exchange and a political system based on principles of republican democracy. The principles of egalitarianism, invoked by many modern day liberals as a foundation for policies like progressive taxation and large income transfer programs such as Social Security, Medicare, and Medicaid, can trace their roots to the 19th century socialist philosophers and modern thinkers such as the late Harvard philosopher John Rawls. A third tradition that is typically associated with economists is most famously known as utilitarianism. This approach suggests that policies should be guided by a desire to increase human wealth and social welfare—as opposed to individual liberty or social equality. This last tradition comes out of the writings of the classical political economists such as Adam Smith, Jeremy Bentham, and John Stuart Mill.

In the last twenty years, against the backdrop of these well-rooted traditions of policy espousal, a new standard has been introduced. Instead of springing forth from a well-grounded



philosophical tradition, this approach proceeded in the opposite direction. It started as a collection of policy proposals in search of a principled backdrop. Ultimately this backdrop was provided, not by great philosophers or political economists, but by the United Nations. The principle goes under several different names. These include sustainable growth, sustainable development or simply sustainability. Contained under this rubric are far-reaching and all-encompassing policies in areas as diverse as city and regional planning, transportation, energy, and farm subsidies, all of which have been part of the environmentalist agenda since the 1970s. But these policies did not coalesce under a unifying principle until the idea of “sustainable development” was officially promulgated by the United Nations in 1987.¹

The purpose of this paper is to examine the principle of sustainability, its meaning and how it is applied in a host of areas of concern to North Carolina citizens. Beyond this, the concept of sustainability will be analyzed in light of a more traditional approach to public policy that focuses on the promotion of individual liberty and economic prosperity through the advancement of free markets and entrepreneurship. Ultimately it will be argued that while the methods and moral outlook of the two approaches are quite different, a policy of private property and free markets is actually best suited for accomplishing the stated goals of sustainable development advocates.

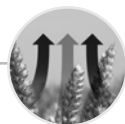
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THE ORIGINS AND MEANING OF SUSTAINABILITY

The standard definition of sustainable development was made explicit in 1987 as part of a project of the United Nations' General Assembly called "The World Commission on Environment and Development," in a report titled *Our Common Future*. According to the Commission, "Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."² This definition has been adopted by nearly everyone who makes use of it as a policy guide, including the state of North Carolina. The handy, one-line definition of sustainable development, adopted by North Carolina's Division of Environment and Natural Resources (DENR) and in academic programs such as Appalachian State University's Sustainable Development Program, is lifted directly from this United Nations report. After defining the concept, The World Commission transforms it into a policy norm in the statement that immediately follows this definition. It states, "the goals of economic and social development *must* be defined in terms of sustainability in all countries...[and] must...flow...from a broad strategic framework for achieving it" (emphasis added).

The premise behind the notion of sustainable development is that unless special efforts are taken by policy makers to reduce resource usage in the present, the ability of future generations to live well will be compromised. Resources will become increasingly scarce, and the environment will be increasingly degraded. This concern is addressed by ultimately constraining human consumption, which is accomplished primarily, but not exclusively, through centralized management of human production. Consumption is clearly seen as the villain. As stated by the World Commission: "Living standards that go beyond the basic minimum are sustainable only if consumption standards everywhere have regard for long term sustainability. Yet many of us live beyond the world's ecological means, for instance in our patterns of energy



use...sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecologically possible and to which all can reasonably aspire.”³

Implied is that public policies that are meant to promote sustainability should focus on restricting and managing human consumption and, therefore, production decisions.

The association of high levels of wealth creation and consumption with a negative impact on sustainable growth has been carried through in subsequent UN documents. In its *Report of The United Nations Conference On Environment And Development*, the UN continues to make this connection explicit: “The *developed* countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.”⁴ (emphasis added)

It is clear that economic growth and prosperity is equated with putting “non-sustainable” pressures on the environment. From this perspective production is consumption in the sense that all production consumes resources. The act of resource consumption and use, beyond some point, needs to be curtailed. And from the perspective of much of the literature in the area of sustainable development, it is clear that that point is either rapidly being approached or has already been surpassed by most developed countries.

A rule of thumb guiding the advocates of sustainable development is that the smaller the amount of natural resources consumed the more sustainable the growth. There is no emphasis on the durability or productive life span of the output that those resources are converted into during the productive process. As will be discussed below, this is why only so-called renewable sources of energy, such as wind or solar, are considered to be consistent with

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sustainable growth. With renewables, in consuming the energy they produce during the act of production, the resource is not “depleted.”

This does not mean that economic well-being is completely shunned. But clearly policy makers have to be concerned with the tradeoff. As one analyst has put it, “[sustainable development] implies reconciling economic advance, social equity, and environmental protection.”⁵ This is a perspective that ultimately

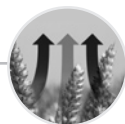
“This view ... has, in the minds of many true believers ... given rise to its own “moral code” ... unborn generations, possibly hundreds of years into the future, have an ethical claim on the way people live their lives today. [I]t is the legitimate role of government to act on behalf of these future generations by coercively restricting people’s lifestyle choices in the present.”

puts limits on growth. “[O]ne can emphasize two sorts of constraints on developmental activity embedded within the notion of sustainable development. First there are physical,

environmental constraints: beyond a certain point the erosion of environmental assets will threaten development progress.”⁶ There is an inherent danger in “too much” growth, and it is believed that there is a necessary tradeoff between the well-being of present and future generations.

Ethics, Rights, and Sustainability

There are certain premises that permeate the literature on sustainability that can help to explain, from an ethical perspective, many of the policies that are espoused. Probably the most consistent is the idea that there is a point at which additional economic growth will be greater than the available resources on earth can sustain. This quote from the book *Implementing Sustainable Development* by Lafferty and Meadowcroft captures the



premise: “[T]here are physical, environmental constraints: beyond a certain point, the erosion of environmental assets will threaten development progress. Thus the maintenance of an adequate environmental base becomes a precondition for making continuing development possible. In other words, there are ultimate limits to the burdens the environment can bear.”⁷

This view, that at any given point in history there are limits to growth established by the physical quantity of natural resources, has, in the minds of many true believers in the doctrines of sustainability, given rise to its own “moral code.” This ethic is often referred to as “intergenerational justice,” and it suggests that there needs to be “limits to the forms of development activity which can be pursued today.”⁸ In other words, unborn generations, possibly hundreds of years into the future, have an ethical claim on the way people live their lives today. Furthermore, it is the legitimate role of government to act on behalf of these future generations by coercively restricting people’s lifestyle choices in the present.

Philosophy Professor Herschel Elliot and former Colorado Governor Richard Lamm take this concept a step further. They suggest that a radical makeover of traditional Western political and ethical norms is necessary. Writing in the *Chronicle of Higher Education* they argue that the implications of a “non-sustainable world,” which they believe is a reality, imply a complete rejection of the twin principles of equal rights and justice before the law. They are worth quoting at length: “What if our present moral code is ecologically unsustainable?...If a growing population faces a scarcity of resources, then an ethics of universal human rights with equality and justice for all will fail...does it make sense to analyze the problem [of scarcity] through the lens of human rights. The flaw in an ethical system of universal human rights, unqualified moral obligations, and equal justice for all can be stated in its logically simplest form: If to try to live by those principles under conditions of scarcity causes it to be impossible to live at all, then the practice

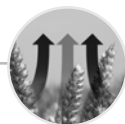
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of that ethics will cease. Scarcity renders such formulations useless and ultimately causes such ethics to become extinct.”⁹

Unfortunately neither these nor other authors actually describe what an alternative set of moral principles would look like or how they would be applied in a public policy context. As an aside, it is not clear what these authors mean by “scarcity.” The human condition is and always will be one of resource scarcity. This is the most basic assumption of all economic analysis and is the foundation of economic science. Historically, all traditionally “liberal” theories have taken this into consideration. Indeed, questions of rights, for example rights to property and the obligation to respect those rights, would be of no concern at all if we lived in a world of non-scarce resources.

Elliot and Lamm blame this predicament on “the tragedy of the commons.” This concept is from a classic 1968 article, with the same name, by ecologist Garrett Hardin.¹⁰ In this article it is argued that resources held in common will be overused and misused because of the incentives that are created in such an institutional arrangement. With common ownership there are no personal losses incurred when resources are wasted. Common ownership fosters a use it or lose it mentality. A classic example is fish in the ocean. If fishing trawlers come across a large school of fish, their incentive will be to capture as many of those fish as possible. If they don’t take them someone else will. This can be contrasted, for example, with the owner of a commercial catfish pond. The incentives in this case are to cultivate the stock; take the largest fish and leave the smaller ones to grow to a more valuable size; to make sure that the fish are well fed and the water is kept clean and well oxygenated, etc. There is no concern that if you don’t take the fish today someone else will. And if the resource, in this case catfish, is misused, then it is the owner that will have to bear the costs.

Sustainable development advocates tend to treat all natural



resources as if they are in the commons. This is why Elliot and Lamm consistently refer to “an ethics of the commons” as being necessary to govern the use of “finite” resources. But everything isn’t part of the commons. Indeed, most resources, defined as those aspects of nature that are truly useful for human wealth creation, are owned by someone. Sustainable development advocates, when they act as if all natural resources were subject to the tragedy of the commons, are painting a false picture of reality. For example, nearly all mining and energy resources come under the private control of some entity and are therefore not subject to the tragedy that Elliot and Lamm describe. Furthermore, they give no explanation as to why they ignore the traditional method of dealing with the use of resources that are found in the commons, which is private ownership and market allocation. These institutions give rise to efficient resource allocation based on the free exchange of commodities and price fluctuations that reflect scarcities through time.

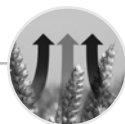
In ignoring all of this, they avoid having to come to terms with the economics of resource scarcity and the economic analysis of how scarce resources are ultimately allocated. As will be discussed below, economic theory and history suggest that even the depletion of so-called “finite resources” need not be a concern to policy makers so long as those resources are privately controlled and enter into the exchange process. To a large extent, the sustainable use of resources is at the heart of the study of economics, which is typically defined as the science of how limited resources are allocated among unlimited wants. To show that there is a sustainability problem, those who argue that there is a need for government to micro-manage consumption and production decisions in the name of sustainable development are obligated to show how economics has gotten it wrong. In fact they need to show why the entire field of analysis is no longer equipped to analyze the fundamental issue that it was designed to address—scarcity.

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SUSTAINABILITY IN PUBLIC POLICY ESPOUSAL: EXAMPLES FROM NORTH CAROLINA

The sustainability concept's overall vagueness and lack of analytical rigor makes it very difficult to map a clear course for public policy directly from its definition, as one might do using principles of equality, liberty, or economic efficiency. In spite of this, it is quite easy to detect a consistent pattern in the policies that are overwhelmingly recommended in its name. This pattern can be summed up quite neatly as use and consume less—less energy, less land, and fewer natural resources of all kinds. Its advocates see the role of public policy in promoting sustainability, as being to generate either positive or negative incentives for people to do just that—to consume and produce less in the way of goods and services.

This makes sense given that, from the point of view of sustainable growth, by using resources today you are necessarily reducing the well-being of future generations. Of course sustainability advocates are quick to point out that they favor economic growth that, “in an equitable way”, promotes “human welfare,” defined as growth that “satisfies basic human needs.” Ultimately, though, it is government central planners that define what meets these criteria.¹¹ What this implies is that any growth needs to be managed through enlightened public policy. Economic growth, and therefore the wealth and well-being of the current generation, can never be allowed to move beyond the bounds of what is “sustainable.” That is, it cannot impinge on the ability of future generations to experience similar growth. This would include growth that is not sufficiently attentive to not only traditionally defined environmental concerns, such as air and water pollution, but also issues that tend to be more subjective in nature such as the preservation of open space.



Senate Bill 3 and Sustainable Energy Policy

The concept of “sustainable energy” has been a policy guide in North Carolina for several years. In the 2003-04 annual report of the State Energy Office and the Energy Policy Council it states that: “This combination of collaboration and leadership offers a unique and powerful instrument that can propel the state forward in its quest for a sustainable energy future. The Energy Policy Council and the State Energy Office call upon all of the citizens in North Carolina to join us in this most important endeavor.”¹²

As defined by the North Carolina Sustainable Energy Association,¹³ sustainable energy policy would promote a combination of “renewable energy and energy efficiency.” This is consistent with the “use less” theme of sustainable growth discussed above. Renewable forms of energy rely on energy sources that do not get “used up” in the process of generating energy: sources like

“Energy efficiency ...in the context of sustainability, simply translates into reductions in the use of energy overall ...the traditional definition in economics ...would be defined as using less energy...while maintaining the same level of output and not increasing overall production costs.”

the wind or the sun. To the extent that energy is generated from these sources, less coal, oil, and natural gas is used. Energy

efficiency, as the expression is used in the context of sustainability, simply translates into reductions in the use of energy overall. This is in contrast with the traditional definition in economics, which would be defined as using less energy in the production process while maintaining the same level of output and not increasing overall production costs. The economics perspective would not, for example, consider changes that decrease energy usage in such a way that the cost reductions associated with less energy consumption are more than compensated for by increases in the cost of other productive inputs, i.e., land, labor, or other natural resources,

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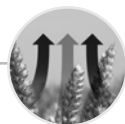
increasing the overall cost of production. Indeed this would be considered inefficient.

In 2007 North Carolina adopted energy legislation that is completely guided by principles of sustainability. The legislation, titled *Promote Renewable Energy/Baseload Generation*, referred to as SB3 (Senate Bill 3),¹⁴ focuses exclusively on electricity generation and consumption. The two pillars of the legislation match perfectly the concerns of sustainable energy advocates. It mandates that 7.5 percent of electricity used in the state be generated by renewable sources and that there be another 5 percent reduction in overall energy usage through “energy efficiency measures,” to be implemented fully by 2021. In the context of the legislation

“In 2007 North Carolina adopted energy legislation that is completely guided by principles of sustainability. The two pillars of the legislation match perfectly the concerns of sustainable energy advocates.”

energy efficiency is implicitly defined as reductions in the use of electricity, with no reference to an economic efficiency standard.

Apparently accepting the sustainability mantra of use less, there wasn't any cost/benefit analysis that accompanied passage of the legislation. In fact there appear to be no specific benefits associated with implementation of the bill other than the essentially zero-sum sustainability idea that if less is used today future generations will be made better off. The only analysis that was carried out was in terms of costs. LaCapre Associates, a consulting firm hired by the state of North Carolina, estimated that the renewable energy requirement alone could reach a cost of more than \$300 million annually by 2018.¹⁵ The benefits of using less coal or natural gas for electricity generation seemed to be taken for granted. Again this is consistent with the knee-jerk philosophy of sustainability—consume less today so the people of tomorrow will have more.



Sustainable transportation: DOT's vision


“For transportation planning and decision-making, sustainable development primarily means reducing our dependence on personal vehicles to balance mobility needs with commitments to use less energy, improve air quality, preserve land and conserve limited resources.”¹⁶

From the perspective of sustainability, transportation is seen as an umbrella issue, encompassing, not only human mobility, but land use planning, energy use management, air quality, zoning, and lifestyle management. Much of this is centered around, as noted above, “reducing dependence on personal vehicles” (automobiles) and expanding the use of public transportation, primarily light rail. In other words, the primary goal is to use land-use and other regulations, taxes, and subsidies to manipulate people out of their cars and onto forms of mass transit. As stated by the North Carolina Department of Transportation: “The new vision for transit also includes a wide range of initiatives designed to promote “transit-friendly” development and expand our choice of housing arrangements, enhance regional planning and decision-making and more effectively coordinate the activities of state, regional and local officials...The Transit 2001 vision extends far beyond public transportation. It embraces notions of how we want to live in the 21st Century and what we want our neighborhoods and communities to become.”¹⁷

It is quite clear from this and other North Carolina Department of Transportation documents that a lifestyle-planning model of government is being advocated. The overall approach is central planning of people's living arrangement in such a way that the transportation system that is deemed sustainable, i.e., mass public transportation as opposed to privately owned automobiles, is accommodated. The contrasting approach would be a decentralized

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model where, working through free markets in housing and land use, people choose the living arrangement that best suits their lifestyle preferences. State and local transportation decisions would be made with the goal of accommodating these choices.



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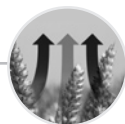
While it is claimed that the plan for sustainable transportation is to “expand our choice of housing arrangements” and “embraces

notions of how we want to live,” in reality it reduces choices and embraces a notion of how sustainable development advocates *want* people to live. *Their* ideal is described under the heading of “livable communities.” The DOT lists six goals associated with *its* vision of what makes communities “more livable.”

- Accommodate pedestrians;
- Enhance streetscapes;
- Create visually attractive public spaces;
- Preserve natural areas;
- Restrain and restrict motor vehicles and traffic in heavily developed areas and activity centers;
- Provide extensive, fully-integrated public transportation.

There is no recognition that the concept of “livable” is subjective and that different people have different lifestyle preferences. The approach seems to be that the state will define what is “livable” for all citizens and will therefore design a transportation system that is meant to manipulate people’s choices to accommodate the state’s vision.

The way that this reorganization of lifestyles in the name of



sustainable transportation is to be accomplished is through a policy approach called Transportation Demand Management (TDM).¹⁸ As its name states, TDM is not about “expanding choices,” as claimed, but managing them. The declared “mission” of TDM is “to provide citizens of North Carolina specific opportunities and strategies for sustainable economic growth...”¹⁹ TDM is an undisguised attempt, through the use of public policy, to reconstruct people’s transportation habits to conform to the doctrine of sustainability. North Carolina’s TDM plan makes this clear: “Transportation demand management (TDM) is...intended to encourage the use of alternatives to driving alone, increasing the efficiency of the transportation system by focusing on travel demand instead of supply. *Most TDM strategies deal with the modification of travel behaviors...*”²⁰ (emphasis added)

To invoke TDM as an approach to policy is to reject the idea that the purpose of transportation policy is to accommodate travel demand that is based on people’s freely chosen lifestyles, including working arrangement and preferences for particular kinds of neighborhood living arrangements. This last is particularly important because part of TDM is to promote “transit-friendly” levels of housing density in zoning and land-use planning. This typically means mandating very high-density development and living arrangements and limiting lower-density living arrangements, such as those typically found in suburban communities. For example, neighborhoods with single-family homes built on a quarter-to three-quarter-acre lots with private yards are not consistent with the sustainability vision. Yet, this is the kind of housing that most families prefer. But, as noted, TDM is not really about “expanding choices,” but narrowing or “managing” them in order to ensure that the choices that are made are consistent with the sustainable transportation model.

The idea is to expand higher-density living arrangements with dozens of units per acre to accommodate the sustainable public

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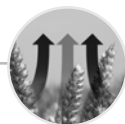
transportation vision. High-density development is absolutely necessary if mass transit, particularly light rail, is to make any sense at all as an efficient transportation model. Hence, the only way to “modify travel behaviors” in a more “sustainable” direction is central management of lifestyles and living arrangements. Hence,

“To invoke TDM as an approach to policy is to reject the idea that the purpose of transportation policy is to accommodate travel demand that is based on people’s freely chosen lifestyles.”

when the actual implementation plan is described, i.e., the TDM model—the language used to describe the policy’s

purpose changes from “expansion of choice” to “*providing specific opportunities* for sustainable economic growth” (emphasis added). This is directly at odds with goal of expanding choices. A policy that was truly meant to “expand choices” would eliminate lot size restrictions and let the density of housing developments be decided by the preferences of housing consumers, not transportation and planning bureaucrats.

The alternative approach to TDM is best viewed as the market model, which is demand driven and starts with producers adjusting the nature of housing developments to accommodate consumer wishes. The role of the state transportation apparatus in a market setting is to accommodate people’s preferences within this context, not engineer them. TDM stands this freedom-of-choice-based approach on its head. It starts with a predetermined vision of how the transportation system should function, centered around discouraging the use of automobiles and encouraging the use of mass transit, especially trains. The purpose of public policy is to encourage or even force people to change their lifestyles according to this centrally planned vision. While the market model would have supply conforming to demand, the TDM approach is to force or at the very least incentivize demand through taxes and subsidies



to conform to a bureaucratic vision of supply.

Another spoke in the sustainable transportation wheel is “open space preservation.” It is clear that the TDM model of transportation has as one of its goals to design transportation systems that force people to live in dense highly concentrated areas in order to keep space that is currently “open” free from housing and commercial use. This fits nicely with the public transportation model, which requires high-density living.

Wake County, for example, sees these goals as complimentary pieces of the sustainable growth puzzle. Wake county planners present their “Open Space Action Plan” and their “Transportation Master Plan” as working in conjunction with each other “to establish a foundation of future growth that is...sustainable.”²¹

The drive to preserve open space as part of the grand sustainability plan highlights a fundamental problem with the paradigm. In its vagueness and lack of analytical rigor, there is no way to reconcile contradictions among competing goals. In fact there is no recognition in the literature that this might even be a problem. In other words, when two policies are advocated in the name of sustainability that, in essence, are inconsistent with each other, there is no underlying analysis or set of principles that would allow policy makers to make a meaningful choice. There is no way of determining whether the sustainability lost is worth the sustainability gained.

For example, when discussing sustainable energy, particularly for electricity generation, the focus is on renewable sources, i.e., wind and solar power. When advocating sustainable transportation, and the land use policies that are advocated under this heading, we see a focus on the preservation of open space. But there is a clear contradiction between the two goals. Wind and solar energy generation are extremely land-intensive. While conventional energy sources like coal, oil, and natural gas draw on underground resources, industrial wind turbines and solar panels use significantly

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greater amounts of above-ground resources, i.e., land. Both solar and wind power use hundreds of times more land to generate the same amount of electricity as conventional sources (see Table 1). The goal of open space preservation is inconsistent with the

Table 1: Land Input for a 1,000 MW Power Plant

Conventional Resources

Coal	1,700 acres/1,000 MW
Natural Gas	110 acres/1,000 MW
Petroleum	120 acres/1,000 MW
Nuclear	500-1,000 acres/1,000 MW

"Renewable" Resources

Industrial Wind Turbines	150,000 acres/1,000 MW
Solar Photovoltaic	35,000 acres/1,000 MW

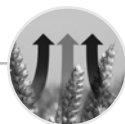
Source: United States Nuclear Regulatory Commission. Found at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/v1/index.html>

Both renewable energy and land preservation are goals of sustainability advocates. But their implementation conflict and the sustainability framework provides no metric for choosing between the two.

goal of relying on wind and solar power. Rather than developing a systematic approach to sustainability that would first recognize these kinds of tradeoffs and then offer analytical tools that would give rise to a logical, if not rational, decision-making process, the problems are ignored. Transportation and the goal of open space preservation is analyzed in one box and energy is analyzed in a separate box, without any recognition that there might be a contradiction to resolve.

Global Warming and the CAPAG proposals: the holy grail of sustainability policy

The one issue that comes closest to encompassing all of the policy concerns that are typically expressed under the heading of sustainability is global warming. Indeed, everything that has been mentioned in this paper to this point, from wind and solar power,



to the preservation of open space to mass transit and light rail have, at one time or another, been advocated in the name of stopping global warming. In North Carolina, for example, all of these goals are addressed in a list of 56 proposals recently agreed upon by the state Climate Action Plan Advisory Group.²²

Global warming could be the perfect issue for sustainability advocates both globally and in North Carolina. As a reminder, the dominant definition of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” When one accepts the more extreme predictions of global warming alarmists, like those made by former Vice President Al Gore, the problem can be seen as the ultimate compromiser of future generations’ ability to meet their needs. The basic argument is that current emissions of carbon dioxide, coming primarily from carbon-based fuels

“Any discussion of how best to deal with potential future global warming problems or how to avoid them was never discussed. In fact, the members of CAPAG were not even allowed to raise these questions under rules of the decision making process.”

like oil and coal, which dominate all advanced industrial societies, are causing catastrophic global warming. These catastrophic consequences are

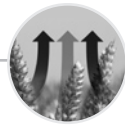
accruing primarily to future generations, a hundred or two hundred years from the present.

Since carbon dioxide is emitted as part of every aspect of our personal and commercial lives, this gives adherents to the sustainability doctrine a license to advocate far-reaching policies meant to control most production processes, power generation, auto production, auto fuel usage, and even home sizes.²³ This even includes land use and the preservation of open space, particularly forest land, since trees and plants absorb carbon dioxide in the

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process of photosynthesis. For example, the September 2006 *Wake County Open Space Plan*, with one of its basic purposes being to promote sustainable growth, also states that “open space provides the land area necessary to grow healthy stands of native trees which...moderate climate.”²⁴

As noted, the North Carolina Climate Action Plan Advisory group, a project of the North Carolina Department of Environment and Natural Resources, has arrived at 56 different proposals to head off climate change by reducing emissions of carbon dioxide. These include choices from the entire sustainable growth menu of policy options—taxes to discourage the ownership of larger automobiles; new subsidies for public transportation; regulations and even energy rationing to promote renewable forms of energy and discourage the use of coal, natural gas, and nuclear power; and land use regulations to promote open space and high-density, transit-friendly development, to name just a few. It is claimed that, when implemented, these policies will reduce CO₂ emissions to 1990 levels. Oddly enough, neither CAPAG nor the advocacy group/consulting firm that it hired to promulgate the policies, the Pennsylvania-based Center for Climate Strategies, discusses whether these policies will ameliorate climate change. In fact, there seems to be very little interest in addressing that question. Any discussion of how best to deal with potential future global warming problems or how to avoid them was never discussed. In fact, the members of CAPAG were not even allowed to raise these questions under rules of the decision-making process. The reality is that this collection of policies, even if implemented by the entire globe, will have no detectable impact on the climate. This is a scientific fact that is undisputed.²⁵ It appears that the real purpose of the CAPAG has been to implement the sustainability agenda using climate change as the proximate justification.



FREE MARKETS AND THE ALLOCATION OF RESOURCES ACROSS GENERATIONS

As discussed above, the sustainability framework rests on the view that all resources suffer from a tragedy of the commons in actual use. That is, as with ocean fishermen, resource users have no incentive, or at the very least have insufficient incentives, to manage properly resources under their control. The assumption is that resources of all kinds, if left strictly to private decision making, will be overused today, denying future generations equal opportunities for economic advancement. And the answer to this alleged problem, in every case, is government central planning of resource use.

But for most resources this is not the appropriate model. In fact these assumptions are both theoretically and factually false. The vast majority of resources are not in the commons, and there is no evidence that they are overused. As noted, most land, mining, and energy resources are under some form of individual control,



“The reality is that there is no empirical or historical evidence that any generation has been less prosperous than previous generations as a result of overuse of resources by previous generations.”

particularly in the United States. What this means is that their allocation through time is made as part of the market exchange process, which

has mechanisms that ensure sustainable usage. And while every effort should be made to remove resources from the commons, i.e., privatize them, the fact is that even the use of these resources, in most cases, has come under market pressures. They have not been depleted. For example, as will be discussed below at greater length, this was the case with whales and whale oil in the first half of the 19th century.

The reality is that there is no empirical or historical evidence

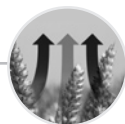
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that any generation has been less prosperous than previous generations as a result of overuse of resources by previous generations. In fact, the evidence is exactly the opposite. It is the resource usage of previous generations, and the capital formation that it generates, that gives generations to follow opportunities for prosperity that they would not have otherwise had.

Sustainability, Scarcity, and the Price System

As noted, the standard sustainability model is based on the premise that, whether or not particular resources are actually in the commons, people, if left to their own devices, will use them as if they are. In other words, they will have insufficient incentives to conserve efficiently. In the extreme, people, if left unchecked by government-imposed constraints, will mindlessly deplete resources to extinction or at least to levels of extreme scarcity. Of course, if this view of the world were accurate there would indeed be a tradeoff between the prosperity of current and future generations. But in a world where resources are privatized and allocated according to the principles of the price system, and entrepreneurs are allowed to engage their ingenuity in order to take advantage of profit opportunities, things do not work this way.

In reading much of the sustainability literature one discovers that resource scarcity is viewed as something new, something that didn't exist in the past. Sustainability advocates tend to lament the idea of "living in a world of scarcity," as if there had been some time in the past where there was superabundance, that is, a world where there was no scarcity. To an economist, this is an extremely bizarre perspective on the human condition. The science of economics is predicated on a single fact of life: the wants and needs facing humanity are unlimited while the resources available to satisfy them are not. In other words humans have always faced a world of scarcity. The science of economics is about how



people deal with this basic fact. This includes an examination of what institutional and legal conditions will best facilitate people's attempts to overcome problems related to scarcity, including problems of sustainability.

When resources are privately owned and the owners are allowed to use them for profit in market exchange and production of goods and services, a number of incentives come into play. These incentives ensure that known resources will be efficiently and "sustainably" allocated from generation to generation, and they facilitate the discovery of additional resources. And this does not simply mean additional supplies of known resources but the transformation of what were considered to be useless aspects of nature into something valuable.

This last point may need some explanation. Elements in nature that we call valuable resources have not always had these properties. Nothing found in nature is a resource unto itself. It is the human

"[T]he human mind as a resource at all tends to be ignored in much of the standard sustainable development literature ... humans are seen strictly as a consumer and not a creator of resources."

mind that transforms nature into a resource. In fact many resources that we consider to be valuable today were at one time considered

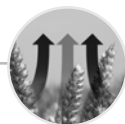
to be worthless or even to have negative value, i.e., they were not considered to be resources at all. For example, prior to the 1850s and 1860s it was not considered to be a good thing to have oil on (under) your property. Indeed, it made land less, not more, valuable. If it was so abundant that it was seeping on to the surface, it ruined the land for other purposes like agriculture. It was human ingenuity that transformed this messy, flammable, and dangerous goo into something useful and very valuable. Another example is sand. It was the human mind that figured out how to use sand for

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things like the manufacture of glass and, more recently, silicon chips and fiber optics for communications, which has replaced copper, a more scarce, valuable, and expensive resource. This kind of story can be told about everything in nature that we currently consider a resource at all. As the late resource economist Julian Simon pointed out, it is the human mind that has the power to transform what is found in nature into a resource or to figure out ways to use more abundant resources in place of less abundant resources. The human mind, therefore, is “the ultimate resource.”²⁶ Oddly enough, the human mind as a resource at all tends to be ignored in much of the standard sustainable development literature. Humans are seen strictly as a consumer and not a creator of resources and therefore wealth.

What has driven and continues to drive human discovery and creation of resources are the incentives created by the potential for profits in the context of private property and voluntary exchange. That is, in the context of a free market. In this setting resource scarcities are reflected in prices. Scarcity is the relationship of the market supply of a resource to its demand. In economics, scarcity is not about absolute quantities. So for example, simply to point to the fact that a particular resource like oil or coal is finite in quantity and is non-renewable says nothing about how scarce the resource is or will even become from an economic perspective. This simplistic view would suggest that as a resource is used it is simply drawn down, with no check on this process or the trend. But both economic theory and the history of resource use tell us otherwise.

As noted, scarcity and changes in scarcity over time relate to the supply available in the market relative to the demand. As Simon argued, “our supplies of natural resources are not finite in any economic sense.”²⁷ When resources come into market exchange and are used as part of the profit-generating market process they are economized in such a way that their “sustainable” use is guaranteed. If a resource truly becomes more scarce, in the economic sense,



then its price will rise. As price rises, several things happen in both the market for the resource itself and other related markets. This includes markets for the products that use the resource as an input into its production process and the markets for substitutes for the resource.

For example, let's assume that crude oil becomes increasingly scarce over time, as many people fear. This perspective was presented in a recent *Wall Street Journal* article where the world's oil supply was analogized to a "global oil tank" that is being drawn down and could be meaningfully depicted as being "half full" or "half empty."²⁸ Carried to its logical conclusion, the "world oil tank" perspective would imply that we eventually would run out of oil if some form of government intervention were not put in place to stem the historical tide. Enlightened government policy

"When resources come into market exchange and are used as part of the profit generating market process they are economized in such a way that their "sustainable" use is guaranteed."

is needed to keep the needle from reaching E.

A correct understanding of economics tells us this would not

be the case. This is evidenced by the fact that the world has never run out of a resource that is privately owned and whose allocation and distribution through time comes under the discipline of a free-flowing price system. The point is that the market ensures economically sustainable use.

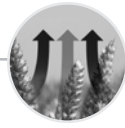
First, as the supply of oil diminished relative to demand—the economic definition of increased scarcity—the price of oil would increase. This would encourage several different kinds of responses. Remember this is not referring to a one-time event that generates a temporary increase in scarcity, such as oil embargos or political disruptions, but a long-term trend caused by continued diminishing supplies relative to demand. As price increased there

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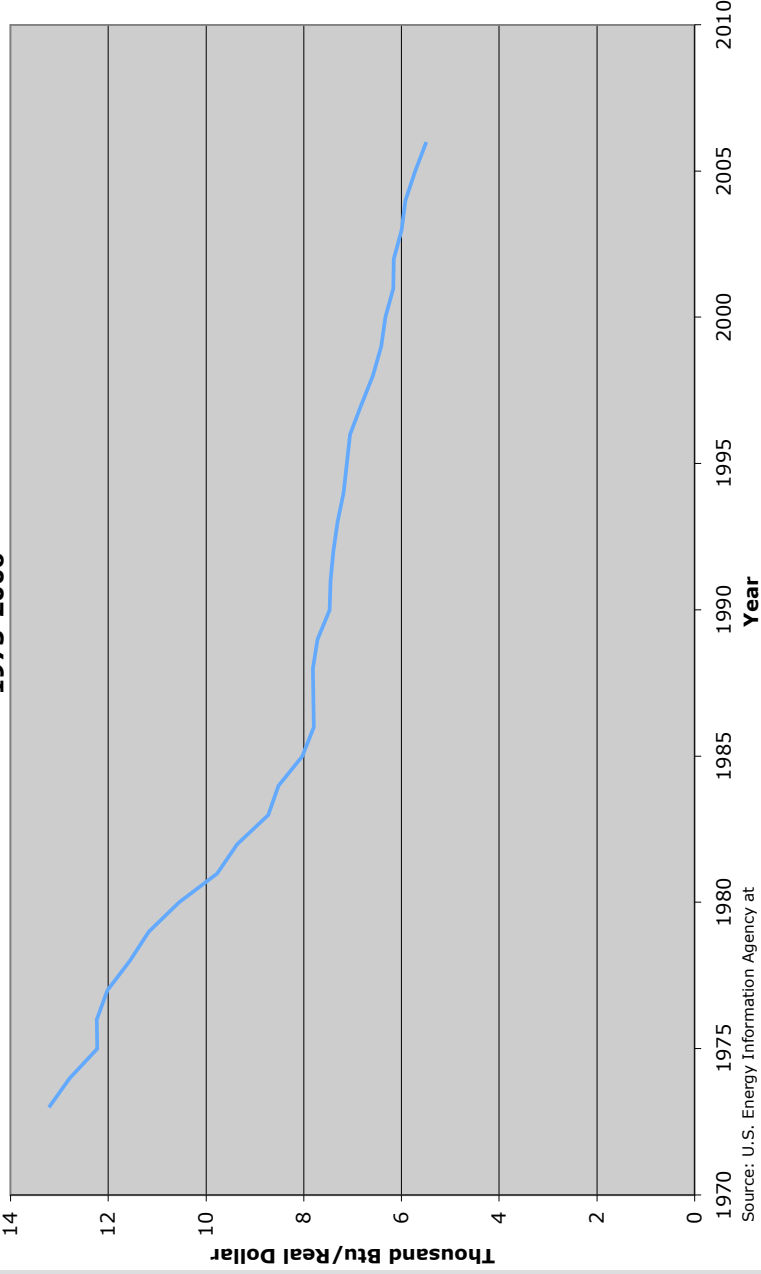
would be responses on both the supply side and demand side of the market. On the supply side the higher prices for oil will make alternatives that had been too expensive, more attractive. This might include alternative forms of oil such as shale and oil extracted from tar sand, which, for the most part, are technologically viable but not economically worthwhile to exploit. In fact this is occurring at the present time. At the current, historically high prices for crude oil, the relatively expensive method of extracting crude oil from tar sands in Canada is becoming economically viable, increasing the supply of oil beyond what it otherwise would be.

The supply-side response might also come in the form of new technologies that use alternatives to petroleum products. Furthermore the supply of oil is actually increased every time a new technology is discovered that allows us to use the same amount of oil more efficiently. Higher prices, first and foremost, encourage greater efficiency. If a new technology in an industry is discovered that allows it to get the same amount of output using 25 percent less oil, this, from the perspective of economics, effectively increases the supply of oil, making it less scarce. The amount of energy, including oil and natural gas, that is being used as a percentage of production, measured by Gross Domestic Product (GDP), has been falling for at least the last 35 years (see graph).

On the demand side, higher prices will encourage efficient levels of conservation, i.e., conservation that is consistent with people's individually determined goals in life, not the vision of sustainability advocates or government central planners. This could mean driving less, living closer to work, recreation, and shopping, etc. But just as importantly consumers, like suppliers, also look for alternatives. Indeed, the reason why entrepreneurs are motivated to innovate during these times is that this is what consumers are demanding. It is the desire of consumers for less costly ways of achieving their wants and goals that stimulates entrepreneurial action on the supply side.



Thousand Btu from Petroleum and Natural Gas per Dollar of GDP (in constant 2000 dollars) 1973-2006



Source: U.S. Energy Information Agency at <http://www.eia.doe.gov/emeu/mer/overview.html>, Table 1.8

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Higher prices and the possibility for profitable investment that they would bring unleash entrepreneurial creativity, i.e., the human mind. We can, in reality, only speculate about how this process might work in any particular instance. Different human beings with different knowledge and different insights bring different solutions to the table. It is the competitive process that determines which approaches are best. Any attempt on the part of central planners to manage the transition with subsidies and taxes will only stifle the process. It will direct this creativity away from insights and decisions based on consumer demands and toward a future conceived by government planners and engineers who face incentives and priorities that are divorced from consumer tastes and preferences.

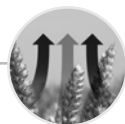
Typically, this is what is seen. Instead of allowing investment to flow to lower-cost forms of resources and technologies, government

“[W]ithout a single government program to save the whale or to subsidize alternative forms of energy whale oil was abandoned as an energy source: not because we ran out of whale oil, but because higher prices stimulated entrepreneurial ingenuity.”

planners subsidize higher-cost technologies that would otherwise be rejected in a free market. Examples include subsidies for electricity

generated from wind, solar, and biomass and ethanol as an alternative to gasoline. Indeed, the reason these technologies need to be subsidized is that they have been deemed by entrepreneurs in the market to be inefficient and economically less sustainable. The fact that all of these subsidized alternatives are more costly than traditional sources such as oil and coal suggests that the bundle of resources that go into their production are actually more, not less, scarce than the resources that go into energy generating and production processes using traditional sources.²⁹

As alluded to above, an historical example of how an



unencumbered market process works in the real world marks the origins of the current age of petroleum and the transition from the use of whale oil for lighting, beginning in the first half of the 1800s. As one writer notes: “If you think that our search for crude oil has been extensive and intense in recent decades, imagine a time when men chased whales across the oceans to meet the world’s growing energy thirst...From its rise in the 1700s to its peak in the mid 1800s...the whale hunt...was an ever more desperate search for the oil that lit our world.”³⁰

In the language of contemporary environmentalism, society was facing a serious problem of energy sustainability.

The kind of whales most in demand were sperm whales, which for various reasons, had blubber that was most desirable for the candles and lamps that were then in use. As an aside, there was a sperm oil cartel. It operated off the coast of New England where sperm whales were most common. As with OPEC, the cartel attempted to regulate supply and fix prices. Unlike OPEC, this cartel “didn’t work...the market for whale oil...was too dynamic with too many ambitious and competitive players to sustain.”³¹ The OPEC cartel is propped up by exploration restrictions on non-OPEC competitors instituted by non-member countries like the United States. These include restrictions on drilling in the Alaskan National Wildlife Reserve (ANWR), off the eastern coast of the United States, and in some parts of the Gulf of Mexico. These restrictions keep “ambitious competitive players” out of the market, enhancing the cartel’s effectiveness.

In the 1840s the supply of whales relatively close to the coast started to become depleted. This meant that whaling expeditions had to reach around the globe and new refining techniques had to be developed. The whales could not be brought back to shore for refining because, given the long distance, the carcass would rot. The oil had to be refined on the ship and stored. This also meant that ships would spend as much as a full year at sea before returning to

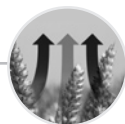
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port. This was very dangerous work with many men dying in the process. The point is that as whales became more and more scarce they became more costly to harvest, and whale oil became more expensive. By the late 1840s “the price of whale oil was extremely high, while the whales themselves were becoming more scarce.”³² In fact the price of whale oil was “extremely high” because whales were becoming increasingly scarce. These higher prices, in reflecting this increased scarcity and conveying information of its existence to consumers and producers, were desirable.

But here’s the interesting lesson: without a single government program to save the whale or to subsidize alternative forms of energy whale oil was abandoned as an energy source—not because we ran out of whale oil, but because higher prices stimulated entrepreneurial ingenuity. As the price of whale oil rose, to the point where many were finding it completely unaffordable, a new energy source was being promulgated—petroleum-based kerosene. A form of kerosene was developed from crude oil that was easily adaptable to use in whale oil lamps. Seeing the potential profits in kerosene, made possible by the high prices of whale oil, “entrepreneurs and industrialists turned minds to figuring out how they could gather [crude oil] in greater quantities to meet the world’s demand.”³³

The rest of the story is well known. It is safe to say that the entrepreneurial efforts in the crude oil industry of the 1850s and ’60s by industrial titans like Cornel E.L. Drake and John D. Rockefeller did more to save the sperm whale than any government program could have. Furthermore, none of this would have occurred if the prices of whale oil stayed low. Increased scarcity set up its own internal mechanism. Sustainable energy was guaranteed spontaneously through the price system, arising from changes in supply and demand.

As noted above, prior to this period crude oil was not even considered a resource. It was the ultimate resource, the human



mind, inspired by the profit motive, that transformed crude oil from a product of nature that had negative value to a true resource that ultimately has fueled the greatest amount of wealth creation in the shortest amount of time that the world has ever known.

So long as there is a free market system, where prices are allowed to fluctuate and entrepreneurs are free to pursue profits through creativity and innovation, sustainable development is assured. Indeed what is most likely to retard this process are government programs meant to manage and direct the timing and kinds of technological change that should be pursued. In light of all that we have learned about government planning of the economy in the 20th century, does anyone really think that massive government programs to ensure sustainable energy in 1845 would have led to anything like the growth-sustaining result that actually occurred? And yet this is what is being called for today in the name of sustainability.

Capital Accumulation—the source of economically sustainable growth

If one looks around the world it is quite clear which nations have invested in truly sustainable growth and which have not. The reason why any country is wealthy today is because it has pursued economic investments and policies in the past that advanced growth that was not only sustainable by future generations but allowed those future generations to have greater prosperity than those that came before them.³⁴

Ultimately, tomorrow's economic growth depends on the accumulation of growth-sustaining capital today. Indeed this is a basic building block of the economics of growth and wealth creation. What has allowed the wealthy countries of Western Europe and North America to become wealthy is not their consumption of natural resources over the past 200 years, as the typical sustainable development advocate would have us believe, but the way in which those resources were used. The resources were

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transformed into a lasting capital structure that could be further built upon by generations to come. What the building of a durable capital infrastructure does is make the use of natural resources more sustainable by stretching their usefulness into the future.

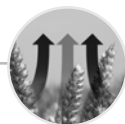
When someone has an office in a Manhattan skyscraper that was built in the 1920s, he is making use of the natural resources that went into making that building over 80 years ago. In other words, the energy resources, the steel, the sand to make the cement and concrete, the human labor, the copper, etc., were all

“The resources were transformed into a lasting capital structure that could be further built upon by generations to come. What the building of a durable capital infrastructure does is make the use of natural resources more sustainable by stretching their usefulness into the future.”

employed in the 1920s in a way that made their use sustainable for what will probably be many generations into the future. Even

resources that are not at all considered “durable,” like labor, become embedded in the structure and therefore are made useful to those who use the building long after the labor is employed and the people who supplied it are perhaps long dead.

This is also true of resources in nature that are said to be “used up” in the production process. For example, coal used to make electricity or oil that is used to power a bulldozer both physically disappear when burned, but in fact their usefulness remains embedded in the durability of the capital—buildings, bridges, roads, machinery, etc.—that they were transformed into. The services rendered by the resource, which is really what is important, are sustained and made available long after the resource is used directly in the production process. Indeed all of today’s physical capital structure is the embodiment of resources extracted in the past and then utilized in a very future-oriented, i.e., sustainable way.



This suggests an alternative view of sustainable resource use. If resources are used in a sustainable way, it implies that they will continue to render valuable services to future generations, not that they are used in smaller physical quantities. It matters not that the resource continues to exist in nature. In fact, if a hypothetical group of early to mid-20th century sustainable development advocates had succeeded at passing legislation to “preserve” resources “for future generations” that were used to build the office buildings in Manhattan; the automobile factories in Detroit; the pharmaceutical company campuses in North Carolina; or to power the cars, trucks, and airplanes that have serviced our consumption and production needs, our lives today would not be better off but much worse off. Sustainable economic growth does not mean the parsing out of a continuously depleting scarce resource over time but the effective transformation of resources into forms that are more valuable in terms of the services they provide to both current and future generations.

Policies that are typically proposed in the name of sustainable growth or development interfere with this process. This is because they have the effect of raising the cost of inputs that are essential for capital formation. For example, a policy meant to encourage the use of renewable energy sources, such as wind or solar, by taxing the use of much less expensive sources, such as coal, oil, natural gas, or nuclear, will hinder capital formation by raising energy costs. There is probably no ingredient that is more essential for the development of a sound capital structure, apart from a clearly defined and efficiently enforced property rights structure, than energy. It is the foundation upon which all other capital must be built. No country has been able to develop and establish a sustainable capital structure without relatively easy access to inexpensive sources of energy. For example, without having affordable and accessible energy that can combine with iron and other inputs to be refined further into products like steel, concrete, and plastics, a society cannot build durable buildings, bridges, roads, factories, electric power infrastructure, etc., that will

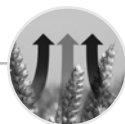
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sustain the prosperity of both present and future populations.

Any policy that raises the cost of future-oriented investment reduces the profitability of that investment and hinders capital formation and therefore real sustainable growth. Most policies that are typically aimed at sustainable growth do exactly this by regulating, taxing, or even banning the use of the basic raw materials, the exploration for oil, the mining of metals, the use of the least expensive sources of energy, the use of land, etc. To the extent that the costs of these highly durable inputs are artificially raised, the costs of creating a capital structure that will yield services further into the future are also increased.

Global warming and the importance of a sustainable capital structure

As discussed above, global warming policy has become a holy grail for those who typically emphasize sustainability in policy espousal. This is true nationally, internationally, and in the state of North Carolina. Under the rubric of global warming, policies are being proposed in all the areas typically associated with sustainable growth—alternative and renewable energy, land use, public transportation, energy efficiency, etc.³⁵ The problem is that the proposals in all of these areas, regardless of what one believes is the truth about the severity of the global warming problem, will have no impact on “climate sustainability” over any reasonable time frame, i.e., well over 100 years. There are no negative consequences being attributed to global warming that would allegedly occur any time in the next century that would even be ameliorated by the CO₂ reduction policies being considered, either in North Carolina or nationally. Indeed, there is no dispute that the 56 policy proposals to reduce CO₂ emissions in the state of North Carolina, even if adopted by the entire globe, would not have a measurable impact on the climate. This is one issue where the global warming science does seem to be settled.³⁶



On the other hand, many of these policies would cut deeply into the sustainability of capital investment, as they would raise the cost of resources needed for long-term investment in durable infrastructure. It is this kind of investment that holds the promise of best protecting society from the vagaries of future climate change, whatever it brings. It is strong capital investment and the economic wealth that it has created that has made people living today in the developed world much less susceptible to problems associated with weather than in the past. And it is the lack of this kind of investment that has put much of the developing world in the precarious position with respect to natural disasters that it now finds itself in. Air conditioning in the summer and central

"[T]hese policies would cut deeply into the sustainability of capital investment, as they would raise the cost of resources needed for long term investment in durable infrastructure."

heating in the winter; sound methods of home and other building construction that enhance durability in the face of

extreme weather events like hurricanes and heavy winter storms; inexpensive energy generation that allows these innovations to be widely affordable; the widespread availability of automobiles and relatively inexpensive fuel to make them operational, allowing people to get out of the way of oncoming storms more easily; and a vast network of well-paved, easily accessible roads to facilitate both evacuations and rescue activities are a few examples of how the development of a strong capital infrastructure has acted to sustain human well-being in the face of changing climate conditions.

This implies that carbon dioxide reduction policies will make people worse off, not better off. Not only will these policies have no impact on our climate future, but they will hinder the ability of people over the course of the next century to deal with whatever weather-related problems occur. Renewable energy mandates

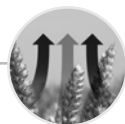
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will raise the cost of electricity, making investment in durable capital, which tends to be energy-intensive, more expensive; land use restrictions will continue to raise the cost of housing, which implies a less durable housing stock; new mandates on gas mileage and renewable sources of fuel for automobiles will raise the cost of transportation, which will in turn raise both production costs throughout the economy and raise the cost of personal mobility. Indeed, nearly all of the proposals that are typically offered in the name of climate sustainability will raise the cost of production across the economy, stifling economic growth and wealth creation. In other words, the policies being proposed both in North Carolina and internationally will not change the future course of climate change but will hinder all people's ability to deal with that change.

A POLICY FOR SUSTAINABLE GROWTH: LIBERTY, FREE MARKETS, AND REAL PROSPERITY

The public policy question for addressing sustainability issues is not one of how to use central planning for a continuously depleting natural resource base, but one of making sure that the institutional and legal structure of society is one that promotes the transformation of both natural and human resources into a sustainable capital stock and structure. That is, a capital base that will provide goods and services and help to generate wealth for both current and future generations. As noted, most policies that are typically proposed in the name of sustainability hinder rather than advance this goal.

There are several areas that policy makers should focus on. These relate to creating an environment that is conducive to capital investment, entrepreneurship, innovation, and efficient resource use. Most of these relate to removing legal barriers rather than implementing new programs.



Tax Policy

What drives capital formation and capital investment is saving. Without it, no real economic growth can occur. This is because saving, in its various forms, provides the monetary capital with which the physical capital structure is built. This means that a society whose tax laws and regulations discourage saving are in turn also discouraging sustainable economic growth. North Carolina's income tax system and the federal income tax system both have a built-in bias against saving and investment and therefore capital formation and longer-term investment. This is because the income tax, in its current form, double and in some cases triple taxes the returns to saving, i.e., interest, dividends, capital gains, and business income of all kinds. As a result there is less monetary capital available for longer-term investments and economic growth and wealth creation. Tax policy meant to further sustainable economic growth would reform the current system to make all saved income deductible from the tax base, to be taxed only when it is removed from saving and spent. This is called a consumed income tax. As part of this, the tax code should allow businesses to deduct all equipment costs in the year that they are incurred, known as expensing. The existing system of allowing deductions based on equipment depreciation over time discourages the use of capital with a longer life span, that is equipment that is more sustainable.³⁷


In addition, the taxation of natural resource usage, as is often advocated, should also be avoided. Natural resources are the basic building blocks for a durable and sustainable infrastructure. Higher taxes raise their cost and therefore raise the cost of longer-term investments, i.e., the transformation of those resources from a valueless state in nature to a valuable capital asset that can sustain economic prosperity.

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A free and efficient price system

What is most desirable is that the price system be allowed to work as freely and as unencumbered as possible. First, as noted above, this ensures that if certain resources do become more scarce over time, the correct signals will be sent to consumers, telling them to conserve more intensely, and to entrepreneurs and investors to seek out new technologies and substitute resources. But also, prices that are undistorted by taxes and subsidies will encourage resource users, both consumers and producers, to use those resources that are the least scarce. This is because people will tend to choose the lowest-cost method of achieving their objectives. Monetary resource costs are the result of the supply-and-demand-generated prices of resources. In other words, their prices and therefore their cost to users are the best measure of economic scarcity available.

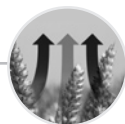
For example, the reason why electricity generated from wind is more expensive than electricity generated from coal is that, overall, the value of the resources going into wind-generated electricity is greater than the value of the resources going into coal-generated

 *“What is most desirable is that the price system be allowed to work as freely and as unencumbered as possible.”*

electricity. The implication is that, when all the resources that go into the process are considered,

including the vast amounts of land necessary for wind power, coal-generated electricity uses a bundle of resources that is less scarce than electricity that is wind-generated. A government subsidy meant to encourage wind power actually encourages the use of resources that are more, not less, scarce.

Subsidies for the purchase of hybrid cars are another example. While hybrids use less gasoline per mile to operate, the value and therefore overall scarcity of the resources used to manufacture



hybrids is much greater than the value and overall scarcity of the resources used to manufacture the equivalent standard gasoline-powered car. If in the absence of a subsidy consumers find the overall cost of hybrids, including the cost savings on gasoline, to be too high compared to standard automobiles, it implies that the market value and relative scarcity of the resources used in manufacturing and operating a hybrid is greater than that used in the production and use of a 100 percent gasoline-powered car. The subsidy actually causes people to use a bundle of resources that are more valuable and scarce than they otherwise would.³⁸

Cheap energy

Public policy should focus on keeping resource and energy prices as low as possible, consistent with actual market conditions of supply and demand. In other words, the government should not implement regulations that artificially restrict the supply of energy and natural resources. Obvious examples would be restrictions on oil exploration in places like Alaska or off the coasts of states like North Carolina or Florida. This restricts the supply of oil, driving up the cost of gasoline and oil for heating and electricity generation. Also, as already noted, regulations that are meant to combat global warming will have negative effects on sustainable capital formation. Restricting the amount of carbon dioxide that can be emitted, through any regulatory scheme, while having no effect on global climate, will drive up the cost of all production and consumption activities that use carbon-based fuels. This includes any activity that uses electricity or gasoline. In other words, such restrictions will drive up the cost of living across the board, with no compensating climate change benefits. These kinds of restrictions are equivalent to higher taxes but are politically less honest because their costs are embedded in prices and are not made explicit to consumers and producers.

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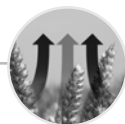
Defining and enforcing property rights

Undergirding all of these policy issues is a respect on the part of policy makers for people's private property rights. The clear definition and protection of property rights, including the right to use one's property in market exchange, is fundamental to all of the analysis to this point. Suggestions for tax reform, the emphasis on an efficient price system, and the focus on allowing energy to be as inexpensive as is consistent with real-world economic scarcities, can all be seen as implications of a system that respects people's rights to property.

While a full-blown discussion of this issue is beyond the scope of this paper, there are two basic concerns for policy makers who are interested in advancing economic sustainability. The first deals with defining property rights and the second deals with enforcement of those rights once they are defined.

Property rights to resources need to be defined clearly before market forces, and therefore actions that will lead to economic sustainability, can even come into play. As discussed, the tragedy of the commons, and the nonsustainable use of resources that it gives rise to, is the result of undefined or poorly defined property rights. In those relatively rare situations where commons problems exist, the property under question needs to be put into private hands. This may be difficult in some cases and require innovative rule making. An example of such innovative thinking would be tradable fishing quotas for ocean fish, where people are given rights to a certain "catch" with those rights being tradable in the market. But typically the problem has been government either preventing or even outlawing privately arranged property rights solutions to commons problems or actually creating commons where private property had existed previously.

For example, in the 1930s commons problems with respect to commercial shrimping in the Gulf of Mexico were being resolved



by private agreements among shrimpers who were establishing property rules for the sustainable harvesting of shrimp. But because these rules involved agreements among firms that were otherwise competing, they were declared in conflict with the antitrust laws.³⁹

Also, orthodox sustainable growth policy itself has contributed to the commons problem. It has adopted a policy of moving land out of private hands, where it is likely to be employed in an economically sustainable way, into the commons where its use is guided by political decision makers. Examples of this are so-called land preservation policies where the government purchases land from private holders, for example to establish greenways, wilderness areas, etc., with the express purpose of keeping that land from coming under the influence market exchange and use.

Once rights are clearly defined, which, as noted, may take innovative thinking, the focus should be on property rights enforcement. In a free society this is the fundamental role of government. This means that property holders should be protected from unwanted and harmful invasion by others. Harmful pollution is an example of this. If someone can demonstrate with reasonable certainty (in a common law court the threshold would be greater than a fifty percent probability) that the actions of others, for example a factory emitting some form of gas or particles, is causing them physical harm or is interfering with the enjoyment of their property, their rights should be enforced. This should be done through either compensation by the polluter and/or an injunction against the polluting activity. From the perspective of economic sustainability, pollution problems are directly related to the lack of property rights enforcement or a deficiency in how property rights are defined.

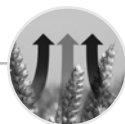
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CONCLUSION: SUSTAINABILITY AND LIBERTY

As discussed at the outset, the standard view of sustainable development is not rooted in any coherent set of philosophical principles. As such it is internally inconsistent and impossible to pursue as a rigorous approach to policy espousal. Instead, it is best seen as a collection of policies that have been advocated by the generally anti-free market environmental movement prior to the concept of sustainable development being promulgated by the United Nations. Indeed, there is nothing that is promoted in the name of sustainability that contradicts or is even different from the political agenda that has been pursued by major environmental advocacy groups since the 1970s.

While the underlying principles behind the sustainable development movement may be at best hazy, what is clear is that the orthodox approach to sustainable development is inconsistent with traditional American values of private property, limited government, and individual freedom of choice. Indeed, most sustainable development advocates envision a role for government in people's lives that embraces a central planning model for economies at every level. And, as noted, among some influential advocates, traditional American values of liberty and equality before the law are explicitly rejected as models of social and political morality as being inconsistent with sustainable development.

On the other hand, the alternative model of economic sustainability offered here is not only consistent with principles of individual liberty and a free market economy, it flows directly from these principles and reinforces them. Liberty, personal responsibility, and equality before the law do not have to be sacrificed on the altar of sustainable development. In fact, to the extent that these principles are ignored or rejected the well-being of both current and future generations will be reduced. The central planning model of sustainable development will give rise to consequences that will be the opposite of those its advocates claim to be fighting for. The choice that faces public policy makers is not between a sustainable or an unsustainable future, but one of choosing between a future that sustains both prosperity and liberty or a future that sustains neither.

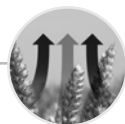


END NOTES

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- (26) Julian Simon, *The Ultimate Resource* (Princeton, N.J.: Princeton University Press) 1981.
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not include their pollution costs, referred to as “negative externality costs.” First, the same can be said for the prices associated with renewables, which also have their own negative externality costs. But the assertion has never been rigorously proven. What would have to be shown is that the pollution costs of coal, oil, nuclear, etc., are greater than the costs associated with all of the existing taxes, regulations, restrictions on oil and coal exploration, losses due to utility monopolization of electricity, plus the current subsidies for the renewables. This has not been done. Furthermore to show that the subsidies would make society better off it would have to be demonstrated that the economy-wide allocation of resources after the subsidies actually enhances overall economic well-being. Again, this analysis has not been done. For a discussion of why such claims are not rigorously defensible see Roy Cordato, *Welfare Economics and Externalities in an Open Ended Universe, 1997*. Republished as *Efficiency and Externalities...*, (Auburn, AL: Ludwig von Mises Institute) 2007.

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