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# Sustainability

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[Literature Review]

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## I. Introduction

Sustainability encompasses more than the needs ratio as expressed in the Brundtland definition (United Nations, 2007). Environmental sustainability is a topic that is being breeched with some success mainstream. A majority of people recognize that we cannot continue on the same wasteful, inefficient tendencies; however, economic and social sustainability have a great deal of catching up to do. While there are academic and professional initiatives that broach the need for the missing links of sustainability, they go unnoticed to the general public—at least in as much that the three are inherently connected and dependent on one another.

Social sustainability is lacking traction in mainstream society right now. The environmentally sustainable movement is important, but it tends to overshadow those other pivotal links of sustainability:

The idea of sustainability arose in response to the spreading gulf between rich and poor and the continued degradation of biospheric systems; and many particular concerns about the common and sometimes catastrophic failures of decision making efforts that failed to take key linked factors into account (Gibson, 2006).

Social and environmental justices are inherently linked, and we need to reevaluate the ethical underpinnings of policy and analysis (Haughten, 2009). Those who will benefit most from sustainability in action are those who socially cannot afford to fight for it in the political realm. Sustainability can further those communities whose health and behavior have suffered the most from the example of the entitled.

Environmentally sustainable development has come a long way, but it is still a novelty rather than an obligation or a responsibility. “Sustainable development is seen as much as a process as an end-product,” but it is not practiced as such (Haughten, 2009). From site selection to the efficiency of the development, environmental sustainability is considered by few, and social and economic is considered by fewer; however, consideration for one could be a means to an end for the practice of another. For instance, building efficiency goes a long way for environmental sustainability, yet it also allows better economic sustainability because the cost to maintain utilities in that structure is greatly reduced. In turn, comfortable living is available for a wider range of people.

As we make choices, individually and as a society, it is important to recognize that there is always an alternative option to seek, and we should continue to strive for the better path. Sustainability is keeping in mind that there are better, more efficient ways to live. It is important to continue changing behavior based on the review of what we are doing and what we could be doing. The concern is also bridging the gap between buzz word and practice. Then the question comes, do we hang onto this loaded word because it has such a dynamic, thought-provoking tone or do we attempt to replace it with something like resilience? Campbell (1996) identifies with an ancient proverb that westerners believe that naming something means it has been understood. There are many things that are identified as sustainable and are not, while there are many things that are not practiced as sustainability but are sustainable. Sustainability is not necessarily an attainment, but maybe a moving target. Campbell (1996) discusses

that some people seem to think our sustainable future lies within the pre-industrial path. Where he believes it is not possible to revert to that development, he sees a large difference between that past and our sustainable future—the past communities were forced into sustainability out of necessity...from natural determinants we did not have the technology to control (Campbell, 1996).

## II. Chronology of Sustainability

Many people argue that the concept of sustainability began with the Brundtland Commission in 1987, but even before the term was utilized, sustainability was a part of cultural practices. Mebratu (1998) describes aspects of sustainability beginning with religious teachings from Africa to Hawaii that promote respect of the environment. The Malthusian theory of environmental limits describes a situation where unchecked population presents environmental limits, thereby forcing down population growth. Technological advancements curb this because unproductive land is made more productive with fertilizers—reducing environmental determinants (Mebratu, 1998).

Mebratu (1998) refers to sustainability prior to the Brundtland Commission in her discussions of human history as it relates to the evolution of man from migratory patterns to stationary settlements—a response to human determinants and technological advancements that enabled us to overcome them. She asserts that humans strayed away from the respecting the environment “simply by staying put [because] the proto-farmers altered the face of the planet and the thoughts of humankind in ways they could never have foreseen” (Mebratu, 1998). She chronologies the evolution of our relationship with the environment and natural resources where our:

History from 3000 B.C. to the present witnessed the development of more advanced agriculture, increasingly complex social divisions of labor and means of exploitation, and the continual creation of tools to delve and shape the earth and its products. Part of this development also witnessed the devaluation of “nature” (Mebratu, 1998).

The degradation of the land and our environment and the adverse impacts of unchecked actions is not a recent phenomenon because “there is a growing consensus among environmental archaeologists that numerous ancient societies, including the Babylonian Empire, may have collapsed because of environmental degradation (Mebratu, 1998). While these events can be traced back to environmental conditions and an original reverence for the environment, technological advancements allowed us to forego environmental determinants that have resulted in our current regard. The modern concentration on sustainability can be traced back to the publication, *Our Common Future* to be a comprehensive, global partnership that dealt with shared resources and the preservation of those resources for future generations of the world’s poor. An earlier 1972 Conference on Human Environment was held in Stockholm to disseminate the “importance of environmental management and the use of environmental assessment as a management tool” (Mebratu, 1998). This conference is widely overshadowed by the work that was done at the 1987 conference; however, this group “produced a comprehensive report on the state of the natural environment. This report emphasized that the industrial society was going to exceed most of the ecological limits within a matter of decades” (Mebratu, 1998).

As popular opinion purports, sustainability began with the UN World Commission on Environment and Development (WCED), coined the Brundtland Commission by scholars and practitioners since, and “has been highly instrumental in developing a “global view” with respect to our planet’s future” (Mebratu, 1998). The definition of sustainability that arose from that Commission is as follows: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987). Since that point, numerous definitions have emerged and additional perspectives on sustainability have entered the discourse.

### III. Perspectives of Sustainability

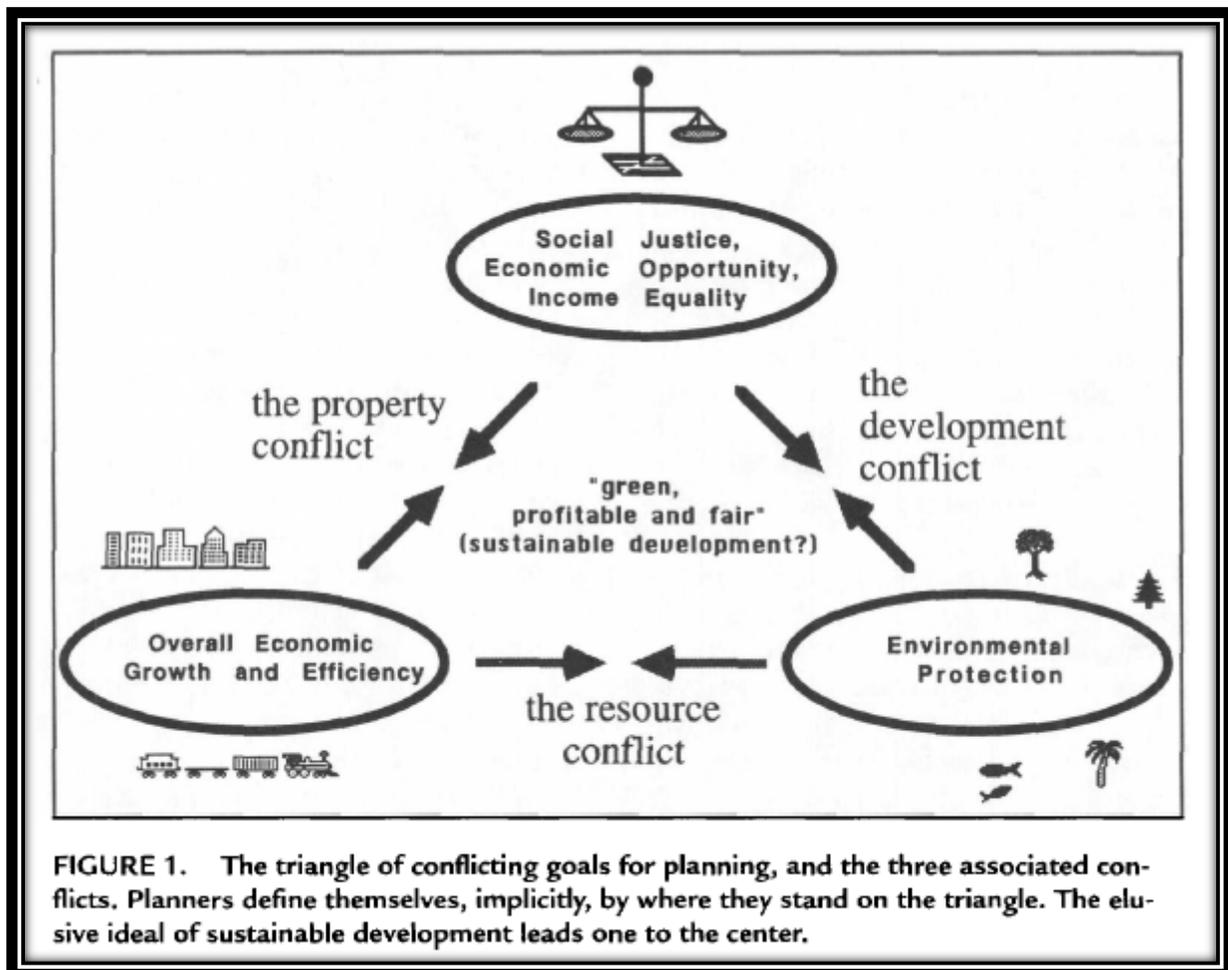
Authors critique the fixation with the term sustainability, but identify the basic idea as agreed upon and straight forward: a “sustainable system is one which survives or persists” (Costanza & Patten, 1995). However, the author questions a lot about this statement, like what is it that defines a system and how long does it have to survive, then how do you know you are going to get there until you have surpassed it. Also, a life span is different based on scale and any number of other characteristics.

Mebratu (1998) contends that while having the definition and concept remain vague promotes more political acceptance, it does dilute its effect when really trying to accomplish sustainability. The word becomes a hot, buzz term whose meaning is diminished: “although there is an emerging political consensus on the desirability of something called sustainable development, this term—touted by many and even institutionalized in some places—is *still dangerously vague*” to be used as a guide for making the desired changes.”

Similarly, Michael Gunder (2006) describes “the rise of sustainability as a diverse set of contestable discourses and practices that has come to occupy a central place within planning as the organizing principle of one of the discipline’s most important new discursive fields.” While sustainability had become a trite phrase that encompasses many facets and definitions, it basically refers to concerns with our consumptive behaviors in relation to the environment, economy, and/or society and what it may mean to perpetuity if business as usual continues unchecked by policy and behavior (Gunder, 2006). He also warns that “no planning or policy document can omit the concept these days, because sustainability or ‘sustainable development is declared as the ultimate planning goal although it is not usually specified what it means exactly and how it is to be achieved’” (Gunder, 2006).

While planning schools and professional practice focus on the environment, Campbell argues that our track record is quite the contrary—the development we have forged according to history has been destructive to the very environment we claim to protect. He identifies all three nodes as responsibility of the planner: environmental, economic, and social. The three conflicts are at the intersection of each of the three points on the triangle: property (economic and equity), resource (between environment and economics), and development (between environment and equity). Their relationship can be observed in the diagram below. The property conflict is seen as “the boundary between private interest

and the public good” (Campbell, 1996). The resource conflict occurs because of “the economic utility in industrial society and their ecological utility in the natural environment” (Campbell, 1996).

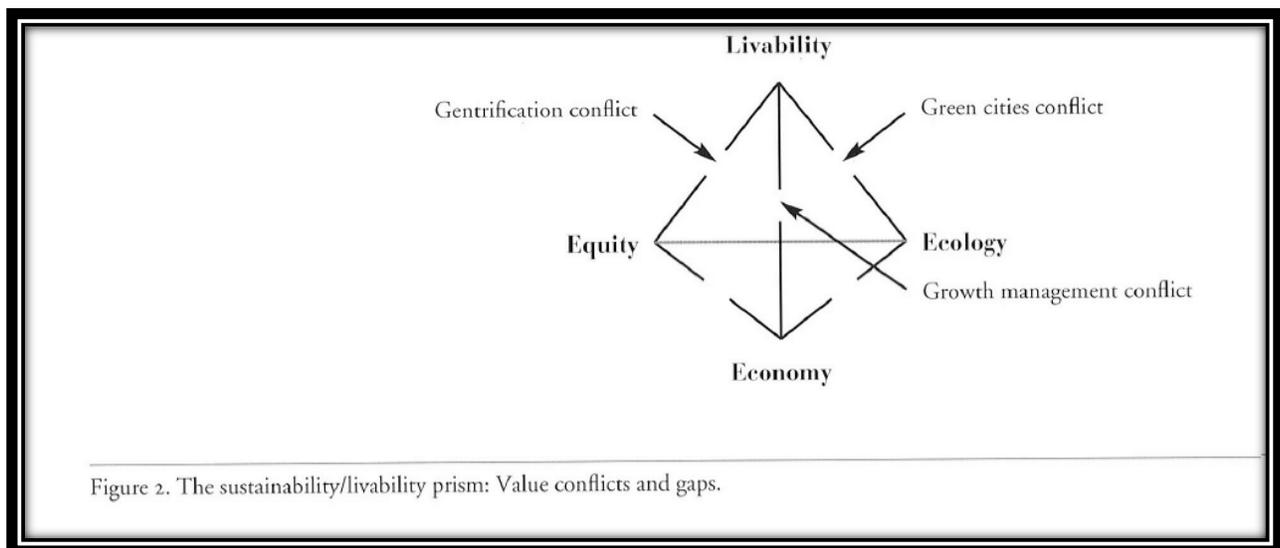


Campbell, 1996

Lastly, Campbell addresses two final aspects of sustainability—its path and outcome. He states that the outcome is relatively uncontested but it is the path toward sustainability that incites ideological debate. Campbell insists that we do not know how to get there, what to do when we do get there, and what the consequences will be. His main point of contention is that we just do not know how or what to achieve, and it seems impossible to balance the three points so as to accomplish sustainability. Campbell recognizes a parallel between planning for sustainability and the “public interest” movement of the 1950s and 60s, and this debate will result in the same contrived, regulated sustainability plans that initiated comprehensive plan policy, which will sterilize it into a public document that only serves to quell mass debate with vagueness and a lack of commitment.

Campbell offers a slightly less critical solution toward sustainability where “we should think of American society not as a corrupt, wholly unsustainable one that has to be made pure and wholly sustainable, but rather as a hybrid...our purpose, then should be to move further towards sustainable practices in an evolutionary progression” (Campbell, 1996). He calls for an “incremental, iterative approach” where the metric for sustainability will be the opposite of a crisis where the concepts of sustainable development are tested in the discourse of society rather than originating as an isolated study that assumes societal responses (Campbell, 1996). Thus, planners must enter the sustainability debate by managing and resolving conflict and promote solutions.

According to the Godschalk perspective, sustainable development is currently being framed by the desire to produce livable communities. These are manifested through the principles of New Urbanism and Smart Growth (Godschalk, 2004). While Godschalk recognizes the existing tools planners can use to forward the ideals of sustainability, he also suggests that there is not a consensus among practitioners as to how it should be implemented (2004). Rather than lamenting on that fact, he rather views it as an opportunity for emerging planners and thinkers to creatively address the need for sustainability and our inability to find a single solution as of yet. Godschalk offers a spin on Campbell’s triangle of three Es with the sustainability/livability prism where a livable urban area is at the center, offering a three-dimensional structure by which to physically plan and handle the complexity of sustainable development (2004).



Godschalk, 2004

One of the most contemporary perspectives of sustainability is offered by Bryan Norton (2005), who advocates a pragmatist approach to sustainability, whereby we should discover truth through implementation. He argues that otherwise, truth—facts and values—is lost in the process of advocating a position, so the pragmatic approach is to make a decision and reflect on its success through monitored metrics of success (Norton, 2005). The values arise from the community vision, which can be devised from the sustainability planning process to be discussed. Norton (2005) gives equal importance to the

opinions of “those who claim that elements of our environment have values intrinsic to them, and independent of us--and of the free marketers--who pursue the rhetoric of consumptive opportunity and the maximization of consumer benefits--are equally *ideological*.” He sees sustainability here, where the public discourse determines the decisions for the community that are tested empirically. Norton (2005) offers this approach as an alternative to the dichotomous debate about the nucleus of environmental sustainability—human or nonhuman. He offers environmental pragmatism as an alternative to “that begins with real-world problems, not with abstract, theory-dependent questions regarding what kind of value nature has” (Norton, 2005). This perspective is arguably one of the best perspectives to be carried out in the public realm.

#### **IV. Sustainability Plans**

Edward Jepson, Jr. (2001) purports “sustainability in the public policy realm derives from the biological sciences and particularly from the subfield of environmental science.” There are numerous drivers of sustainability in public policy, some based on ecosystem theory that is based on the human connection to the natural world (Jepson, 2001). Foundations of policy guide policymakers, whether it be Judeo-Christian philosophy that makes nature beholden to man or empiricist that allows nature to be manipulated by man for his benefit (Jepson, 2001). Since sustainability can be so politically charged, it is for this reason that Jepson suggests keeping sustainability definitions vague and imprecise. The practice of sustainability in government “typically [has] an emphasis on the importance of empowering citizens for effective participation, protecting the local environment, developing a more self-reliant regional economy, promoting inter-jurisdictional cooperation, and strengthening the sense of community” (Jepson, 2001).

A number of communities are beginning to assess the sustainability progress and metrics of their own, and there are a number of ways which that can be studied, analyzed, and conveyed. Much like comprehensive planning, communities address sustainability in planning policy through the adoption of sustainability plans that take a comprehensive look at a jurisdiction’s current resources, policies, and future goals to determine actions that can be implemented to improve sustainability 20 years into the future. The plans vary considerably in scope, process, execution, and format, and there is merit in comparing all of those to determine which are best for an individual community. It is interesting in a profession where plans are almost always contracted to private firms that almost every sustainability plan was conducted in-house. It is perhaps an indication of either the minimal importance leaders place on the plan to budget for the process or an area of the private market that has not developed yet because it is still fairly new to governmental planning. The plans considered below assess a wide range of communities with varying plan structures to eventually be able to parse out the best portions of each.

The City of Baltimore has a very graphically readable and organized plan that is color-coded throughout based on topics of sustainability. An executive summary is included that defines sustainability for the community, target groups for participation, the process taken to create the plan, and a summary of the goals they hope to accomplish. The table of contents is very informative about how the plan was developed and where a strong focus rested on environmental sustainability. Public involvement was

taken very seriously in the Baltimore Plan, which included working groups for each of the seven individual topics they chose: cleanliness, pollution prevention, resource conservation, greening, transportation, education and awareness, and green economy. This separation allowed for participants to attend meetings pertaining to their passions and offered an ample amount of public comment. Three objectives were considered at each of the public meetings: collect information on current programs, establish vision based on resource (topic) issue, and identify goals/benchmarks. Experts in each topic were brought in to conduct the topical meeting to supplement staff knowledge and gain a better understanding of the sustainability concerns. Baltimore also conducted community conversations that were free-flowing meeting about sustainability as a whole. Lastly, a youth strategy was conducted as a one day event that allowed the younger population to express their concerns and ideas through artwork, media production, graffiti walls, and surveys. Lastly, a forum was held to wrap up the public involvement effort and to gather everyone in consensus about the direction and intent of the plan. A glossary of terms provided a great framework of terminology for laymen readers.

The Oregon Department of Transportation manifests as a very utilitarian plan with very little effort at engaging the reader. It also suggests actions and goals made up of: community, environment, efficiency, and economy.

The Decatur Sustainability Plan focuses solely on environmental sustainability. An introduction indicates that there was a strategic plan task force that guided the process for the city. They identified why they were embarking on the process and set out guiding principles: serve as good stewards of the environment, utilize and foster the three Es, and align city policies to protect the environment. The process evaluated current achievements and goals, identified opportunities for improvement and also broke their concerns into seven categories: food and agriculture, natural systems, buildings and efficiency, transportation, resource conservation, waste reduction, and education and outreach. The action plan presents goals organized into tasks and performance measures for each set.

The City of Northampton developed their plan as a sustainable comprehensive plan. They integrated sustainability throughout the plan, and while it provided a comprehensive view of sustainability over all aspects of planning, it lacked some depth in sustainable principles. They did create a vision and guiding principles for the overall approach to sustainability.

The City of Flagstaff plan was relatively graphically organized and encompasses government operations and maintenance. The plan describes the groups involved in its conception and implementation: a sustainability leadership team made up of staff, employee advisory committee, a city manager's sustainability cabinet, and a sustainability commission to act as an advisory group. It utilized guiding principles and four "lenses" to organize the plan including quality of life, waste prevention, resource conservation, and climate adaptation and management. The format of each lens section was made up of goals, objectives, strategies and actions, measurement of progress, and definitions.

The City of Atlanta's official documentation toward a sustainability plan consisted of a PowerPoint detailing a sustainable project status list and a Sustainability Plan Executive Summary. The summary details the city's accomplishments and opportunities in sustainability efforts and outlines goals for many

aspects of environmental sustainability: some of them quite lofty. A sustainability report is also available for the City of Atlanta, though not easily searchable for the greater community. The report is succinct and legible and breaks the format into themes: water, energy and climate change, parks and green space, recycling and materials management, and leadership.

Santa Monica did not provide any graphic formatting to engage the reader, but it was one of the only plans that updated a former one from 1994; however, there was no indication of public involvement. The foundation of the plan was based on guiding principles that included eight goal areas where each goal had an indicator to measure its success.

Some organizations have developed programs for crafting and maintaining a sustainability plan:

ICLEI takes the position on sustainability similar to Campbell and provides an outline for all organizations to understand and implement sustainability plans. The authors suggest sustainability plans should be a means, not an end, where they are a tool for future action to develop general goals, specific objectives, and actions (milestones). Long term objectives describe the city when sustainability is achieved where short term objectives should be developed as a five year vision, has quantifiable measurements, are feasible in the timeframe, and have a resident and business focus. The topics ICLEI suggests to be addressed are: air quality; biodiversity; energy, climate change, ozone depletion; food and agriculture; hazardous materials; human health; parks, open spaces, and streetscapes; solid waste; transportation; and water and wastewater.

The Alberta Urban Municipalities Association also prescribes a method for developing and maintaining a sustainable plan. Five phases are outlined to structure the document and the process. Phase one develops the structure of the process by defining the scope, identifying resources needed for the process, and establishing staffing requirements. Phase one also introduces the need for a citizens advisory group made up of staff, citizens, and stakeholders. Phase two adopts principles and establishes a shared understanding of success through visioning, values, and goals. Phase three determines and analyzes issues to the community's success. Phase four identifies initiatives to move from the current reality to success. Lastly, phase five describes techniques for ongoing monitoring and implementation. This plan prescription is unique in that it provides specific tools and documents to prepare and implement the plan as well as flow diagrams that give a very in-depth prescription of how to successfully complete a plan.

## **V. Conclusion**

The concept of sustainability is borne out of the idea that no system can perpetuate absent of the end-goal in mind. It seems we have concluded that sustainability should be sought-after, but it is unclear what exactly makes us sustainable or how we can achieve it. If sustainability can only be measured at a system's conclusion, then it may be impossible to strive for such an indescribable, speculative end that is only known to be achieved at the point when sustainability ceases (Costanza & Patten, 1995). We may not know exactly what sustainability is or how to get there, but it is pivotal to always be seeking the answers by implementing solutions—that is how we will achieve sustainability.

The track toward sustainability begins by addressing our current methods of practice because all projections on the matter indicate that business as usual does not support any system that can be maintained indefinitely (Stern Review). The closest conclusion we can draw for the definition of the length of a sustainable system should be considered more seriously than the assumption that sustainability can only be measured at the end of a system's life-span (Stern Review). We can plan to maintain for a date uncertain by establishing what will not work. Sustainability is about finding the solutions based on what does not work and having the gall to acknowledge a change is necessary.

Sustainability is affected by a number of political, social, economic, and environmental factors. Whatever the objective system is for a sustainability effort, each system is in play concurrently, and each is constantly in a state of flux, competing against one another. The needs of one system are often contrary to the needs of others. While some flux is expected and part of the interrelatedness of the systems, the underlying issue is the way which these systems are regulated and planned—in separate, compartmentalized divisions of government.

The balance of all aspects of sustainability should be considered to truly be seeking the ultimate goal. "Sustainability has certainly become a buzzword," but it is fundamentally our moral obligation to the future (Solow, 1993). It is difficult and sometimes impossible to predict or dictate how the future shall live, and that is the very task with which we are charged. The economic perception of sustainability insists that our obligation is to conduct ourselves so that future generations have the option to be as well off as we are but that there should be no importance placed on any single resource or species (Goodin, 1992). This line of thinking is based solely on self-preservation and is unduly anthropocentric. That is not sustainability.

Sustainability is an obligation to future generations, and it is understandable to perceive that through human experience, but any loss in species, natural resource, or otherwise should be considered a tragedy and a digression from sustainability. We should not be looking to trade-off or adapt but change our behavior entirely until our actions allow future generations of any kind to be afforded the same or better odds. There is a considerable learning curve involved, and I am confident we have and will make mistakes in our sustainability efforts. First we must appropriately identify the need for sustainability and harness regulation to force the behavior change. The hope for the future would be that we, as a society, will recognize the need for action, and further regulation will be self-imposed.

The path toward sustainability will not necessarily be a path to sustainability. Rather, it is a path away from unsustainability and should be a means to an end where the ultimate goal may not be the mark of sustainability itself but it is about the path toward an accountable future. Everything we do in the name of sustainability either contributes to our sustainability or teaches us there are other options. Most importantly, through our quest for sustainability, we will discover what sustainability is not, and that will lead us closer.

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