



Sustaining God's Creation: The Role of Higher Education

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It is a great honor to be with you this morning. I would like to share some thoughts about the urgent importance of higher education in leading society to care for all of God's creation in order to ensure a healthy, just and sustainable human society now and in the future.

The earth and its ecosystems provide all the resources that make life possible, including the conversion of our waste products into useful substances. Humans can live about three minutes without breathing, three days without water and three weeks without food. Food, shelter, clothing, fuel, pharmaceuticals, water and all economic activity derive from the earth's biosphere. The earth's systems also provides an array of ecological services that we cannot do without - air, photosynthesis, soil formation & fertility, climate regulation, water cycling and cleansing, pollination, pest control and cycling of nutrients. As Senator Gaylord Nelson said, "the economy is a wholly owned subsidiary of the biosphere". Caring for all creation is intimately tied to the caring and survival of humanity. What we now call sustainability is not just about protecting the environment; it is also about finding ways to meet the basic needs of all current and future generations of humans. This can only be done by finding a better way for humans to live within the cradle of life.

Humanity at a Crossroads

Higher education plays a unique and critical role, one often overlooked, in making a healthy, just and sustainable society a reality. Higher education has been granted tax-free status, the ability to receive public and private funds, and academic freedom in exchange for educating students and producing the knowledge that will result in a thriving civil society. It prepares most of the professionals who develop, lead, manage, teach, work in, and influence society's institutions, including the most basic foundation of K-12 education.

Higher education now has a challenge bigger than any other it has ever faced because humanity is at crossroads without historical precedent. Because of the extraordinary and exponential growth of population and of the technological/economic system - especially

since the mid 20th century - humans have become pervasive and dominant forces in the health and well being of the earth and its inhabitants. No part of the earth is unaffected by humans and the scale of our impact is huge and growing exponentially. The Inuit in Alaska have the highest level of PCBs and DDT in their bodies in the world, even though they are 1000 miles from any industrial activity. All living systems (oceans, fisheries, forests, grasslands, soils, coral reefs, wetlands) are in long-term decline and are declining at an accelerating rate. Biological species are disappearing at rates a 1000 times faster than normal; with business as usual and continued global warming 50% of all species will be gone by the end of this century – a rate of extinction not seen since the dinosaurs disappeared 65 million years ago.

At the same time, we are not succeeding in many health and social goals: 2.7 billion people are without sanitation and earn less than \$2/day, over a billion have no access to clean drinking water, water shortages are rampant around the world and getting worse and there have been food riots on three continents because the price of food staples has more than doubled in 6 months. The food shortage is due to population pressure, water shortages, high fuel costs, competition between biofuels and food production and global climate change. And, of course, there are international conflicts and wars over resources such as oil and water as well as ideology that are destabilizing world society.

And the challenge that will accelerate all the negative trends is human induced global warming that is now destabilizing the earth's climate in ways that threaten to reverse human progress to date and to undermine the health, security and survival of millions of people now and in the future. The effects include melting glaciers, rising sea levels, wildly aberrant weather (drought, wildfires, hurricanes, flooding), water scarcity, reduced agricultural production, increased air pollution, spread of infectious disease and refugee migration. What is not common knowledge is that human progress has accelerated in the last 10,000 years during a time of a *relatively stable climate - according to archeological and ice core records, the longest period of climate stability in human history*. The location of our cities and communities, agriculture, ports and other transportation, businesses and other human endeavor, in large part, has been based on the predictability of the climate. Now all bets are off. The resulting climate disruption is real and is already affecting us: it is *worse* and happening *faster* than predicted by the most conservative scientists.

Moreover, global climate disruption is different than every other environmentally related challenge because it is a function of all human endeavors, particularly the success of the western, industrialized economy. The emissions of carbon dioxide (the principal heat-trapping gas from fossil fuel combustion) *today* will continue to change the climate for the next century and a half creating an ecological debt for future generations. In addition the effects on the climate are both irreversible, e.g., whole scale extinction of species, and prone to non-linear, abrupt change with very little warning – witness the rapid melting of all the earth's glaciers and extremes of weather in every part of the world.

We have a *civilizational* and *moral* crisis, not merely an *environmental* one. *Global climate disruption represents a fundamental barrier to creating a healthy, just and*

sustainable society. It is a stark (but not the only) indication of the fact that humanity is out of sync with its life support system. The scientific consensus is that society must stabilize global emissions of greenhouse gases by 2015 and reduce them by at least 80% by mid-century at the latest, in order to avert the worst impacts of global warming.

All of these impacts are happening with 25 percent of the world's population consuming 70-80 percent of the world's resources. China and India's 2.5 billion people are now big players on the planetary stage wanting to create a better quality of life for their citizens. If the Chinese get to a point of having one car for every two people (it is 3 cars for every 4 people in the U.S.) the world output of gasoline would have to more than double – an impossibility. By 2050 the world will have 9 billion people and current plans are to increase gross world product by 500 percent by 2050. As the astronauts said in Apollo 13, “Houston, we have a problem.”

While this knowledge may make us very uncomfortable, this is the reality of where we are as a human species and leads to the overarching question: ***How will society assure that all current and future humans are healthy, that there are strong, thriving and secure communities and that there is economic opportunity for everyone within the limits of a finite living planet, a planet whose capacity to sustain life is presently precarious?***

A Shift in Mindset

The cultural operating instructions of modern society are that if we just work a little harder and smarter and let the market forces run society, all these challenges will work themselves out. As Einstein said, “We can't solve today's problems at the same level of thinking at which they were created.” We currently view the array of health, economic, energy, political, security, social justice and environmental issues we have as separate, competing and hierarchical when they are really *systemic* and *interdependent*. *We have a de facto systems design failure*. The 21st century challenges must be addressed in a systemic, integrated and holistic fashion. Achieving sustainability calls on us to have a *deliberate societal strategy* to make a rapid transition to a low carbon, less auto dependent and circular production economy – the kind of transition that is bigger than the Manhattan project, bigger than the Marshall Plan for economic restructuring in Europe after WW II, bigger than the Apollo project to put a man on the moon, and bigger than the attempt to eradicate cancer - combined. In short it is the greatest human design challenge in history – an awesome responsibility **and** a great opportunity for all education, especially higher education.

In the next few minutes, join me on a journey of hope and possibility. Imagine a society in which all present and future humans are healthy and have their basic needs met. What if everyone had fair and equitable access to the Earth's resources and a decent quality of life? Imagine future scientists, engineers and business people designing technology and economic activities that sustain the natural environment and enhance human health and well-being. Imagine a future where we design our technology inspired by nature that operates completely on solar energy. Imagine a future in which the concept of "waste" is eliminated because every waste product is a raw material or nutrient

for another species or activity, or returned into the cycles of nature. This is the concept of *biomimicry* – learning from and imitating nature. Imagine that we are managing human activities in a way that uses natural resources only at the rate that they can self-regenerate – the ideas embodied in sustainable forestry, fishing and agriculture. By doing so, we could live off of nature’s “interest”, not its capital, for generations to come.

Imagine that we know where all resources come from and all waste goes. Our current ecological, health and social footprint is largely *invisible* to most of us. The average American does not know that through the economic system, we consume the equivalent of our body weight in solid materials daily, over 94 percent of which goes to waste before we ever see the product or the service. It takes about 2000 pounds of material, most of which went to waste, to make a laptop computer. Imagine that we are making all these impacts *visible*. (*One of the most important roles of education is to make positive or negative invisible health, social & environmental impacts visible*). Walmart is now requiring all its 64,000 suppliers to report on and minimize their “greenhouse gas” footprint. Manufacturers in nearly every major industry have similar supply chain environmental footprint requirements.

Imagine that we have timely and accurate economic and ecological signals: microeconomic signals for price that reflect the true social and environmental cost to society and ecological signals that we receive in time to prevent or remedy damage to humans or the environment.

Imagine a future where we have increased the education, as well as the social and economic status, of women worldwide resulting in the human population stabilizing at a level that is within the carrying capacity of the Earth.

Now, imagine that all current and future generations are able to pursue meaningful work and have the opportunity to realize their full human potential both personally and socially. Imagine that we in the U.S. have dramatically reduced resource consumption, pollution and waste so that everyone - including those in the developing world and poorer communities within the U.S. - will be healthy and have a decent quality of life. Imagine that communities are strong and vibrant because they celebrate cultural diversity, are designed to encourage collaboration and participation in governance and emphasize the quality of life over the consumption of stuff. (The latter is critical because human wants can be insatiable while the earth’s ability to meet our wants are finite and shrinking – see the August 5, 2007 New York Times story: “In Silicon Valley, Millionaires Who Don’t Feel Rich”. The road to sustainability is one of values as much as it is about scientific and technological development.) Think of what it could be like if globalization is humanized to support democracy, human rights and economic opportunity for everyone.

Consider these ideas as the design principles of a healthy, just and sustainable society - principles based on a human consciousness that moves us from consumerism, individualism and domination of nature to one that emphasizes quality of life and connectedness with people that live in distant places, *as well as* with the unborn that will live in the distant future. A consciousness that moves us to a deep reverence for the

natural world complemented by understanding our place in the web of life and our dependence on its bounty. A consciousness in which we apply the Golden Rule to our dealings with all current and unborn humans as well with the rest of life that evolved on earth. To work, these principles must become the basis for society's economic and governance framework.

Can we do this? Absolutely, because we must. As we all know, necessity is the mother of invention. For example, a clean energy economy - starting with maximizing energy efficiency - will stabilize and reduce energy costs, reduce chronic air pollution and strengthen the economy by shifting expenditures for energy to investment in innovation. It will improve national and international security by reducing reliance on fuels from unstable and sometimes hostile parts of the world. It could provide 3.3 million *net* new jobs by 2020 and add \$1.4 Trillion in GDP in the US, according to the Apollo Alliance www.apolloalliance.org. A clean, green economy will help restore US economic leadership based on new technology - the only way in which the US can compete in the world. Smart US leaders in business, government and academia see the solutions to climate change as the greatest boon to the economy in the foreseeable future. For example, DuPont has reduced heat-trapping emissions by 72% since 1990 and saved \$2 billion. Twenty-seven of the largest US corporations (e.g., Dow, DuPont, GE, Xerox, GM, Shell, Alcoa, Ford) have joined forces with the 5 of largest environmental organizations to form the US Climate Action Partnership which calls for the US Government to quickly establish cap-and-trade legislation to reduce greenhouse gas emissions (<http://www.us-cap.org/>). A metaphor for the new direction of the US economy is how General Electric is selling diesel locomotives to China and Brazil despite the fact that they are more expensive than locomotives those countries can build. GE locomotives built in a Pennsylvania employing 4700 workers are 30% more fuel efficient and more reliable and therefore desirable.

Education for the Twenty-first Century

What if higher education were to take a leadership role, as it did in the space race and the attempts to eradicate cancer, in preparing students and providing the information and knowledge to achieve a just and sustainable society? What would higher education look like? The education of all professionals would reflect a new approach to learning and practice. A college or university would operate as a fully integrated community that models social and biological sustainability itself and in its interdependence with the local, regional and global community. In many cases, we think of teaching, research, operations and relations with local communities as separate activities; they are not.

Because students learn from everything around them: these activities form a complex web of experience and learning. All parts of the college or university system are critical to achieving a *transformative* change that can only occur by connecting head, heart and hand. The educational experience of graduates must reflect an intimate connection among *curriculum* and (1) research; (2) understanding and reducing any negative ecological and social footprint of the institution; and, (3) working to improve local and

regional communities so that they are healthier, more socially vibrant and stable, economically secure and environmentally sustainable.

Just imagine if, in the twenty-first century, the educational experience of all students is aligned with the principles of sustainability. To achieve this...

The content of learning will require *interdisciplinary systems thinking, dynamics and analysis for all majors, disciplines and professional degrees*. Education would have the same *lateral rigor* across, as the *vertical rigor* within, the disciplines

The context of learning will change to make human/environment interdependence, values and ethics a seamless and central part of teaching of all the disciplines, rather than isolated as a special course or module in programs for specialists.

The process of education will emphasize active, experiential, inquiry based learning and real-world problem solving *on the campus and in the larger community*. It is widely known that for long-term retention of knowledge, skills and values, we retain 80 percent of what we do and only 10-20 percent of what we hear or read.

Higher education would **practice sustainability**. A campus would "*practice what it preaches*" and make sustainability an integral part of *operations, planning, facility design, purchasing and investments*, and tie these efforts to the formal curriculum. Because a college or university is a microcosm of the larger community, the manner in which it carries out its daily activities is an important demonstration of ways to achieve environmentally responsible living and to reinforce desired values and behaviors in the whole community.

Finally, the **learning and benefit to society** of higher education forming partnerships with local and regional communities to help make them socially vibrant, economically secure and environmentally sustainable will be a crucial part of successful higher education. The 4,100 higher education institutions in the United States are, themselves, large economic engines with annual operational budgets totaling \$350 billion annually – this is greater than the GDP of all but twenty-five countries in the world. Imagine the economic leverage if universities were modeling sustainability by purchasing sustainably preferable products and services and how much greater the benefit could be if they were doing joint purchasing with local communities.

The Higher Education Response

From Distinct Programs to Systemic Change?

Here is great news! There has been exponential growth in distinct programs related to the *environmental dimension* of sustainability in higher education in the last decade, especially in the last 3-5 years. (Education is one of the few areas in which exponential growth is desirable.) Exciting environmental studies and graduate programs in every major scientific, engineering and social science discipline, business, law, public health, ethics and religion are

abundant and growing. Progress on modeling sustainability has grown at an even faster rate. Higher education has embraced programs for energy and water conservation, renewable energy, waste minimization and recycling, green buildings and purchasing, alternative transportation, local and organic food growing and 'sustainable' purchasing - saving both the environment and money. SUNY Buffalo has saved over \$100 million from energy efficiency projects in the last 20 years. *The rate of increase in these programs is unmatched by any other sector.* The student environmental movement is the most well organized, largest and most sophisticated student movement since the anti-war movement of the 1960's. These efforts have largely been distinct programs that are helping to begin the cultural shift to making deep and comprehensive sustainability the goal of higher education.

Unfortunately, higher education is doing a poor to fair job on the health, social and economic dimensions of sustainability. The overwhelming majority of graduates know little about the importance of sustainability or how to lead their personal and professional lives aligned with sustainability principles.

In the last 2 years there have been some large and encouraging shifts in higher education that lead my colleagues and I to believe that we may be approaching a *tipping point* in the orientation of higher education at some point in the near future. One of the most significant of these shifts is the American College & University Presidents Climate Commitment.

The American College & University Presidents Climate Commitment.

In December of 2006, 12 college and university presidents, working with the Association for the Advancement of Sustainability in Higher Education (AASHE), ecoAmerica and Second Nature, launched *The American College & University Presidents Climate Commitment*. The ACUPCC is a high-visibility, *joint and individual commitment* to address global climate disruption through actions to reduce and eventually neutralize greenhouse gas emissions, and to develop the capability of students to help all of society to do the same.

The ACUPCC is governed by a 16-member Steering Committee chaired by Michael Crow, President of Arizona State University – the second largest American university with 64,000 students. The Steering Committee makes all policy decisions for the ACUPCC. The coordinating organizations provide the organization and support. Richard Cook, President of Allegheny College - a NASCUMC member – was a founder of the ACUPCC and one of the members of the Steering Committee in its first year. He is also a member of the Second Nature Board of Directors.

The participating presidents are committing their institutions to create a comprehensive institutional action plan to move towards climate neutrality through the following actions:

- Complete a greenhouse gas emissions inventory within one year. The emissions covered are from heating and cooling in buildings, electricity usage, commuting transportation and official airline travel by administrators, faculty and staff.

- Within two years set a target date and interim milestones for becoming climate neutral. *Each school has the flexibility to do it on their own schedule and in their own way.*
- Take immediate steps to reduce greenhouse gas emissions by choosing **two** from a list of **seven** short-term actions.
- Make sustainability an integral part of the curriculum and educational experience of all students. *This is important because the primary impact of higher education is its role in education. Michael Crow, ASU President, said at the Climate Leadership Summit of the ACUPCC last June, “Higher education has 100% of the educational footprint”.*
- Make the action plan, inventory and progress reports publicly available.

As of today, just 18 months later, 558 colleges and universities in all 50 states have made this unprecedented commitment. They represent 4.6 million students – about 25-30% of the student population and include every type of institution from community colleges to the biggest research universities. I am pleased to report that there are a large number of NASCUMC schools among the participating institutions and offer my congratulations to the presidents of Birmingham – Southern, Wesley, Emory & Henry, LaGrange, Ferrum, Green Mountain, Hiwassee, and Kansas Wesleyan Colleges that are here today. The goal is to have 1000 committed institutions representing 50% of the student population by the end of 2009.

The National Association of Independent Schools and the Green Schools Alliance (www.greenschoolsalliance.org) are working on a global warming initiative for K-12 schools.

Courageous leadership

The ACUPCC is an example of courageous leadership by college and university leaders. It is the first effort by any major sector of society to set a long-term goal of *climate neutrality*. These presidents realize that getting to climate neutrality may be the hardest thing that modern society will ever attempt.

These presidents believe that leading society to a low carbon, less auto-dependent and circular production economy fits squarely into the educational, research, and public service missions of higher education. Tomorrow’s architects, engineers, attorneys, business leaders, scientists, urban planners, policy analysts, cultural and spiritual leaders, journalists, advocates, activists, and politicians will need new knowledge and skills that only Higher Education can provide on a broad scale.

Moreover, presidents are making this commitment because they can best provide the moral and strategic direction and convene all the parts of a college or university - the faculty, students, financial and operational staff and trustees - and lead the *cultural shift* to embrace the education, research and operational changes needed to combat global warming.

Impact

The positive impact of *collective leadership* by a large number of colleges and universities will be huge. Global warming is a global problem requiring global solutions of immense proportions. Collaborative action toward the common goal is necessary - no one school or subset of schools can solve the problem. The scope, scale and speed of the challenge demand an unprecedented level of collaboration by all of higher education.

Finally, the American College & University Presidents Climate Commitment has fundamentally shifted higher education's attention on sustainability from a series of excellent, distinct programs to a strategic imperative – the lens for measuring success. We have numerous anecdotes on how effective the Commitment has been in raising the importance of sustainability initiatives on campus and in the classroom. This is the case on hundreds of campuses that have not yet made the commitment as well. According to presidents at dozens of colleges and universities, the ACUPCC has done more to build a vibrant community and a sense of shared purpose across the institutions than any other initiative in recent memory.

Moving Forward

The 400+ charter signatories (those that signed before September 15, 2007) began reporting on the first milestone of the Commitment last November 15th: their institutional structure for developing and implementing the climate action plans and the short term tangible actions they are taking to reduce greenhouse gas emissions in the next two years. Some results:

- 170 have adopted policies for LEED Silver or the equivalent performance for new buildings
- 177 have adopted procurement policies for Energy Star products
- 20 have programs to purchase carbon offsets for air travel
- 131 have programs to facilitate the use of public transportation
- 78 have committed to purchase at least 15% of electricity from renewable energy
- 24 have efforts for climate friendly investments
- 102 have waste reduction programs under the Recyclemania program

The organizers of the ACUPCC – AASHE, EcoAmerica and Second Nature – are actively working on strategies to support the signatories and all of higher education to make the rapid transition to making sustainability the lens through which higher education measures success.

Clinton Climate Initiative Partnership

Because of the size and profile of the ACUPCC signatory group, it recently formalized an agreement with the Clinton Climate Initiative, which has the potential to provide access to \$5 billion in low-cost/private sector financing for energy efficiency building retrofit projects for colleges and universities. 16 schools are acting as pilots for the program that will be rolled out this year.

Higher Education Associations Sustainability Consortium (HEASC)

A group of fifteen higher education associations that represent presidents, trustees, business officers, facilities managers, planners, purchasing agents, student affairs officers and others have formed the Higher Education Associations Sustainability Consortium (HEASC). They are working together to make sustainability a foundation of higher education through their organizations' operations, publications, conferences and professional development. Since the inception of HEASC in May 2006, the member organizations have engaged in dozens of programs and activities to help their constituents understand and implement the principles of sustainability. For example, NACUBO (business officers) is launching an important study on financing all sustainability related activities on campuses, complementing their 2006 book on the business case for renewable energy in higher education. APPA just released a comprehensive book entitled "The Green Campus: Meeting the Challenge of Environmental Sustainability". APPA is also working on a comprehensive guide for facilities managers on how to deal with climate change including supporting implementation of the ACUPCC.

Collaboration with the US Conference of Mayors

The US Conference of Mayors (UCM) and the ACUPCC have just agreed to launch a collaborative effort with the more than 850 cities that have signed the Mayors Climate Protection Agreement. The mayors will work with the ACUPCC signatories on joint programs to accelerate education on "green collar jobs" and the clean energy economy and action on reducing the carbon footprint of cities and colleges and universities. The potential of this collaboration is huge - the annual expenditures of communities (including K-12 schools) and higher education represents about 12% of the nation's GDP – a very influential sector in making the economy more just and sustainable.

Federal Legislation to Support Sustainability in Higher Education

ACUPCC presidents and the members of HEASC have been active in supporting the Higher Education Sustainability Act – a bill amending the Higher Education Reauthorization bill that would authorize up to \$50 million annually for sustainability education activities in higher education. This is the first federal authorization specifically for environmental and sustainability education for higher education. (**The bill was passed on July 31, 2008!**). The presidents have also been actively supporting appropriations for the Energy Independence and Security Act (EISA) that became law in December. EISA authorizes up to \$250 million in grants and \$500 million in loans annually for energy efficiency and renewable projects on college and university campuses. The collaboration through the ACUPCC and HEASC made it possible for rapid and nimble action by a large group of schools.

Summit and Annual Report

In June, the ACUPCC presidents held their second Climate Leadership Summit in Grand Rapids, Michigan. The event, hosted and cosponsored by the Wege Foundation, brought together presidents and other senior leaders from nearly 70 colleges and universities to review the progress that has been made to date and to deal with challenges and opportunities related to the education, operational and local community collaboration aspects of the Commitment as well as the aforementioned offset protocol. The feedback

from the 140 participants was extremely positive – especially the ability of to learn from and share challenges and solutions with each other.

Conclusion

It is impossible to be a leader in higher education without thinking a great deal about the future. Today’s students and their children will experience the worst effects of climate disruption if we continue business as usual. We are faced with the greatest intergenerational equity challenge in modern history. When we surveyed the presidents participating in the ACUPCC last summer, the majority said the most important reason for making the commitment was that it was the *right thing to do* for the sake of their students and their students’ children and grandchildren.

Some have argued that achieving climate neutrality and sustainability is too hard or impossible. The earth does not recognize how hard it is for us humans to change. It will respond to the physical changes we cause on its own schedule and in its own ways. It doesn’t have the cognitive ability to decide to wait for us to figure out how we can change to preserve our way of life and ourselves.

We are now in the process of breaking away from an old paradigm which, like gravitational pull, will require a great deal of energy, commitment and perseverance. We can do it if we set our minds to it. When President John F. Kennedy set a goal for man to reach the moon in a decade, our country had no way of knowing if it could be done. But because it was a goal we shared and to which we put our minds, hearts and our backs, we achieved the goal in 9 years and unleashed the scientific and technical revolution that led to so much innovation from the Internet to materials science to breakthroughs in medicine that are the basis of life today. We need that kind of leadership today from the great leaders in society, especially in higher education. There are lots of other examples of this kind of bold leadership that pushes the limits of knowledge to go beyond what is possible now. Is this not one of the primary thrusts of higher education?

Thank you for everything you are doing to help create a healthy, just and sustainable world and a *special thank you* to those schools that have taken the next important step in making the American College & University Presidents Climate Commitment. I hope that NASCUMC can become the first college and university association to have all its members become signatories of the ACUPCC, especially because creating a healthy, just and sustainable society is one of the biggest moral challenges in history. In essence it means caring for and living in harmony with all of God’s creation.

The future of humanity is depending on us. For, if higher education doesn’t lead, who will?

Sustainability in Higher Education Some Resources

Second Nature

www.secondnature.org

American College & University Presidents Climate Commitment

www.presidentsclimatecommitment.org

Key web pages:

– Breaking news (including a Summit summary, new ACUPCC policies, and news articles) -

<http://www.presidentsclimatecommitment.org/html/news.php>

– The Commitment document itself (you can download a PDF from this page as well) –

<http://www.presidentsclimatecommitment.org/html/commitment.php>

– About the Commitment (including “who’s who” and Steering Committee members) -

<http://www.presidentsclimatecommitment.org/html/about.php>

– Frequently Asked Questions -

<http://www.presidentsclimatecommitment.org/html/faq.php>

– Why sign - <http://www.presidentsclimatecommitment.org/html/whysign.php>

– List of signatories (you can sort by state or by institution using links on the right) -

<http://www.presidentsclimatecommitment.org/html/signatories.php>

– “A Call for Climate Leadership” -

<http://www.presidentsclimatecommitment.org/html/faq.php>

– Overview of climate action plans and programs at colleges and universities

<http://presidentsclimatecommitment.org/html/overview.php>

– Become an ambassador and help encourage schools to make the Commitment

<http://presidentsclimatecommitment.org/html/supporters.php#ambassador>

– Support the ACUPCC

<http://presidentsclimatecommitment.org/html/supporters.php#besponsor>

Association for the Advancement of Sustainability in Higher Education

www.aashe.org AASHE is the most comprehensive network and source of information about sustainability initiatives, actions and programs in hundreds of higher education institutions.

– The weekly *AASHE Bulletin* is an extremely effective way to learn about the latest actions by colleges and universities.

– *Sustainability Tracking, Assessment, and Rating System (STARS)*. Formal rating system for campus sustainability, with standards by which institutions may measure themselves and qualify for different levels of recognition. www.aashe.org/stars

– Biennial conference, Raleigh, NC, November 9-11, 2008. www.aashe.org/conf2008

Higher Education Associations Sustainability Consortium – www.heasc.net

HEASC is an informal network of 15 higher education associations (HEAs) with a commitment to advancing sustainability within their constituencies and within the system of higher education itself.

US Partnership for Education for Sustainable Development

www.uspartnership.org

Play A Greater Part – a resource to connect student research and action to organizations pursuing sustainability

www.playagreaterpart.org

Clean Air-Cool Planet (Greenhouse gas emission calculator for colleges and Universities)

www.cleanair-coolplanet.org

National Wildlife Federation

www.nwf.org/campusecology

Design Principles for a Healthy, Just and Sustainable Society Some Organizational Resources

Design Principles

The Natural Step - www.naturalstep.org

Natural Capitalism – www.natcap.org

Biomimicry – www.biomimicry.net

Sustainability Institute – www.sustainer.org

Cradle-to-Cradle Design – www.greenblue.org

Ecological Footprint – www.footprintnetwork.org

US Green Building Council – www.usgbc.org

Architecture 2030 – www.architecture2030.org

Precautionary Principle: Science & Environmental Health Network - www.sehn.org

Environmental Justice Network – www.ejnet.org

Center for a New American Dream – www.newdream.org

Global Sustainability Policy

Earth Policy Institute – www.earth-policy.org

World Resources Institute – www.wri.org

Worldwatch Institute – www.worldwatch.org

Sustainability and Business

World Business Council for Sustainable Development – www.wbcsd.org

US Climate Action Partnership – www.us-cap.org

GreenBiz.com – www.greenbiz.com

Creation Care

Ausable Institute of Environmental Studies – www.ausable.org

National Association of Evangelicals – www.nae.net

Evangelical Environmental Network – www.creationcare.org

Creation Care for Pastors – www.creationcareforpastors.com

Biography

Dr. Cortese is the principal founder and President of Second Nature, a nonprofit organization with a mission to develop the national capacity to make healthy, just, and sustainable action a foundation of all learning and practice in higher education. He is Co-founder and co-coordinator of the Higher Education Associations' Sustainability Consortium, a co-founder of the Association for the Advancement of Sustainability in Higher Education and a co-organizer, along with AASHE and ecoAmerica, of the American College & University Presidents Climate Commitment.

Prior to his work with Second Nature, Dr. Cortese was the Commissioner of the Massachusetts Department of Environmental Protection. He was the first dean of environmental programs at Tufts University and spearheaded the award-winning Tufts Environmental Literacy Institute and the internationally acclaimed Talloires Declaration of University Leaders for a Sustainable Future.

Dr. Cortese has BS and MS degrees in civil and environmental engineering from Tufts University and a Doctor of Science in Environmental Health from the Harvard school of Public Health.