

Education and Actions for a Sustainable Future:

Trends, Opportunities and Resources for You

Debra Rowe dgrowe@oaklandcc.edu



President **U.S.** Partnership for Education for Sustainable Development www.uspartnership.org Founder **Disciplinary Associations Network for Sustainability** www.aashe.org/dans **Co-coordinator Higher Education Associations Sustainability Consortium** www.heasc.net **Senior Advisor** Association for the Advancement of Sustainability in Higher Education www.aashe.org **Senior Fellow** Second Nature www.secondnature.org

Professor, Sustainable Energies and Behavioral Sciences Oakland Community College www.oaklandcc.edu/EST



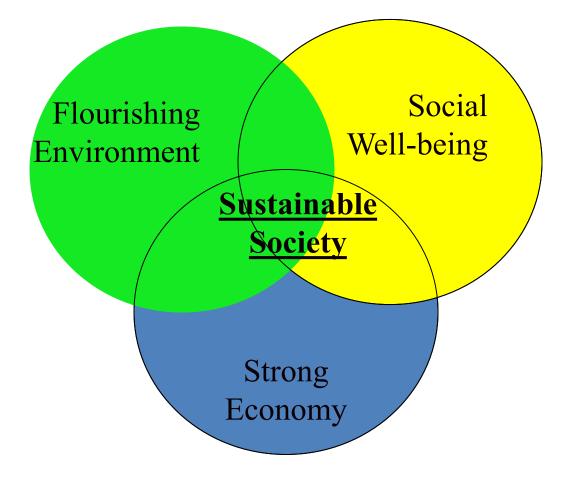
- Part I What is Sustainability and Education for Sustainability?
- Part II Challenges and Trends
- Part III Networks, Resources and Opportunities
- Part IV Strategies and Next Steps



Sustainable Development is often defined as:

"meeting the needs of the present without compromising the ability of future generations to meet their own needs"

World Commission on Env. and Development. (1987). <u>Our Common Future</u>. England: Oxford University Press.



Triple Bottom Line of Sustainability



Education for a Sustainable Society:

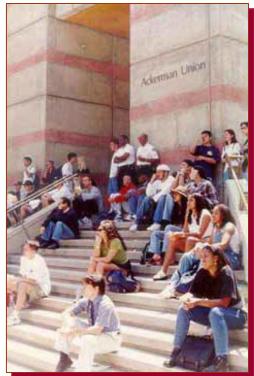
"enables people to develop the knowledge, values and skills to participate in decisions ..., that will improve the quality of life now without damaging the planet for the future."

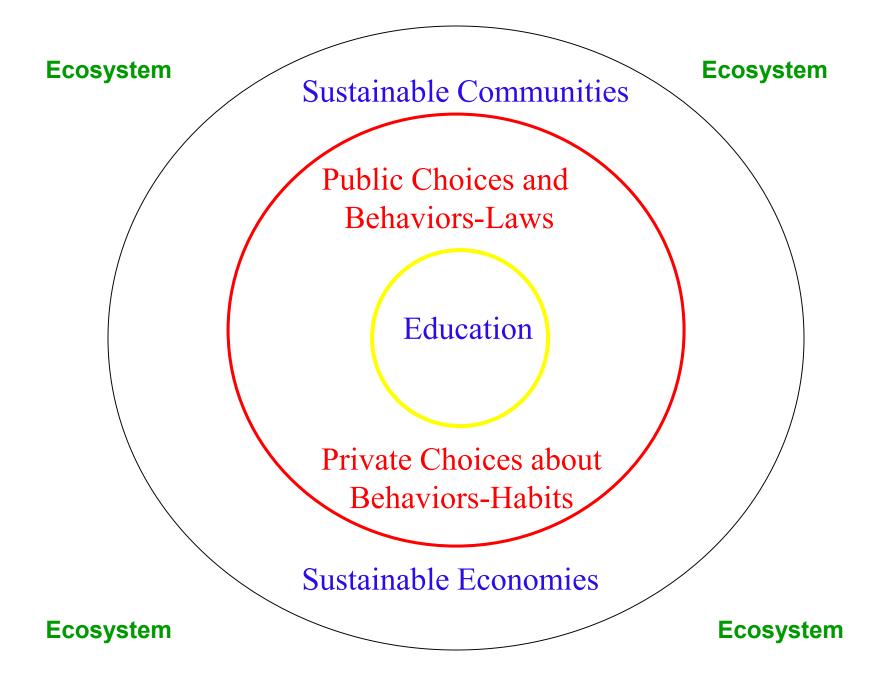
KEY THRUST

Change norms so all students and the community become:

- environmentally responsible
- socially responsible
- economically responsible

Creating sustainable abundance and higher quality of life







Why is green and sustainable such a high priority?

- Freshwater withdrawal has almost doubled since 1960 and nearly half the world's major rivers are going dry or are badly polluted (New Internationalist, no. 329)
- 11 of the world's 15 major fishing areas and 69% of the world's major fish species are in decline (State of the World, Worldwatch Institute)
- Economic ill health when sustainable business practices aren't in place.
- Climate change (global warming) exists, a major culprit is fossil fuels, and impacts are very serious. (Intergovernmental Panel on Climate Change report: Summary for Policymakers: The Science of Climate Change)
- 1 in 2 children living in poverty

Effects -Climate Change The decisions of this generation are crucial.

Disruption of food production and the food chain



- More extreme weather events, outside of the normal variability
- Disruptions of ecosystems, including water supplies
- Disease spread e.g. West Nile, Malaria, Dengue Fever
- Submersion of land masses sea level rise
 50% of world's population lives on the coasts
 = Civilization Disruption and National Security Threat

Sources: Intergovernmental Panel on Climate Change, NASA, Pentagon, and National Defense University



- 1. Unprecedented growth in population and consumption
- 2. All ecosystems are stressed or in long term decline at unprecedented and accelerating rate

Our decisions will create: more scarcity and suffering, or a future of greater abundance and higher quality of life

Global Perspective

life supporting resources declining

consumption of life supporting resources rising



Potentials for Clean Energy, Vibrant Economies and Poverty Reduction

Plan B: Mobilizing to Save Civilization

by Lester Brown

- Founder of Worldwatch Institute
- Great assignment for multiple courses and 1st year experience.
- Chapter at the end what people can do/need to do
- Downloadable for free at www.earth-policy.org



- 1. Much of the U.S. public and our students don't know that we are exceeding the carrying capacity of the planet. (<u>www.myfootprint.org</u>) and that the U.S., with under 5% of global population, consumes 25% of the world's resources
- 2. Public and students don't know we can reduce human suffering, environmental degradation and social ills now while building stronger economies
- A rapid shift in mindset is needed and <u>education to</u> <u>action is the key.</u>



- All of us engaged as effective change agents to create a sustainable future
- From apathy/overwhelmed caring, effective involvement.
- Education helping business, government and nonprofits go green and sustainable. You will tap into the healthy economic activity.
- You are already on your way with your American Democracy Project and civic engagement assignments.



• Part III Resources and Networks



U.S. Partnership for Education for Sustainable Development (www.uspartnership.org):

Convene, Catalyze and Communicate

Sector Teams: Business, Higher Education, K-12, Communities, Faith, Youth...





Trends in sectors – some examples

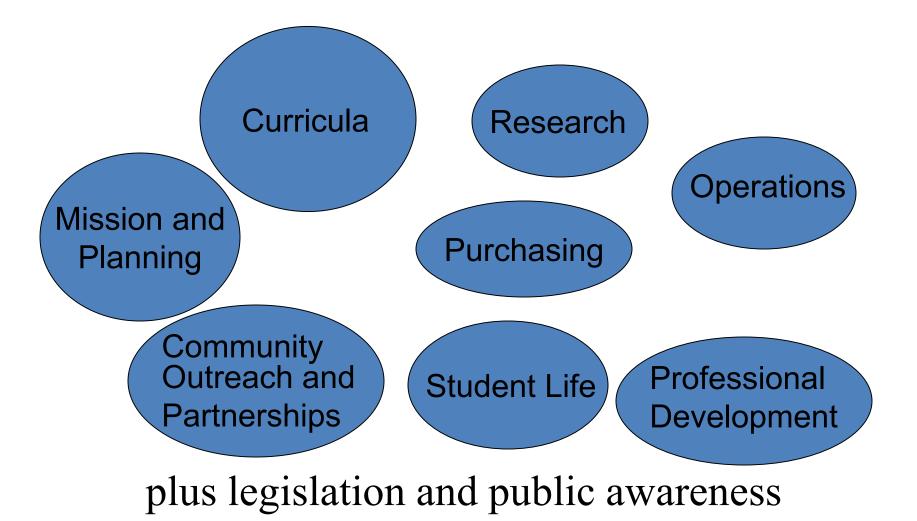
- Business LOHAS Japan, SOL Sustainability Consortium, Businesses for Social Responsibility, Shareholders, Investors (e.g. Goldman Sachs and Swiss RE)
- **Communities** Mayors Climate Protection and Smart Growth, Grand Rapids model
- K-12 –U.S. Summit and collaboration, national webinars and resources, superintendents, standards
- Faith Religious Partnership and Interfaith Alliance, Regeneration Project
- Youth 36 national youth organizations, Climate Challenge, Reduce Your Impact, Action Campaigns, Powershift, 350.org, National Teach-in...



Higher education is taking a leadership role to prepare students and provide the information and knowledge to achieve a sustainable society.

What does it look like?

For higher education, Sustainable Development is being integrated into:





HE Sustainability Examples more at <u>www.aashe.org</u> Annual Digest – Hundreds of colleges are committed!

- Systemic integration (many more)
 - University of Florida
 - Georgia Tech
 - University of North Carolina
 - Lane Community College
 - Miami Dade Comm. College
- Stellar energy examples 100% renewables and conservation

– Univ. of Minn.- Morris and LACCD and cost effective!

- Institutionalization in job descriptions and performance reviews, increasingly for all
 - Cornell
 - Arizona State University

Internationally, a taste...

- In Sweden, it is a law that all students from youth through graduate school be educated about sustainability
- High priority in higher education principles in European Union
- U.N. Global Compact PRME
- U.N. Decade and other ESD international conferences in Mexico
- Vision from Earth Charter and Bonn Declaration
- Association of Canadian Community Colleges
- Affinity Group, World Federation of Colleges and Polytechnics (http://wfcp.accc.ca/)
- Global Sustainability Group out of MIT, Chalmers,...



Many national HE associations and over twenty national disciplinary associations are creating initiatives on Education for Sustainable Development



Committed to the advancement of sustainability throughout higher education



AACC	American Association of Community Colleges
AASCU	American Association of State Colleges & Universities
AASHE	Association for the Advancement of Sustainability in Higher Education
ACCED-I	Association of Collegiate Conference & Events Directors - International
ACE	American Council on Education
ACPA	College Student Educators International
ACUHO-I	Association of College & University Housing Officers International
AGB	Association of Governing Boards of Universities & Colleges
APPA	Association of Higher Education Facilities Officers
CCCU	Council of Christian Colleges & Universities
NACA	National Association for Campus Activities
NACUBO	National Association of College & University Business Officers
NAEP	National Association of Educational Procurement
NAICU	National Association of Independent Colleges & Universities
NIRSA	National Intramural-Recreational Sports Association
SCUP	Society for College & University Planning



Higher Education Associations Sustainability Consortium www.aashe.org/heasc

- 1. ACE–Am. Council on Ed.
- 2. NAICU Independent Colleges and Universities
- 3. AACC Am. Ass. of Community Colleges
- 4. AASCU State Institutions
- 5. AGB Ass. of Governing Boards
- 6. ACPA Student Life
- 7. ACUHO-I Housing
- 8. NACA Campus Activities

- 9. APPA Facilities
- 10. NACUBO Business
- 11. SCUP College and University Planners
- 12. AASHE Sustainability
- 13. ACCED-I Events and Conference Directors
- 14. CCCU Christian Colleges and Universities
- 15. NIRSA Recreation
- 16. NAEP Educational Buyers

17. More!



Resources

- <u>Higher Education Sustainability Fellows Programs</u>
- <u>Campus Sustainability Day</u>
- HEASC News Digest
- <u>HEASC Resource Center</u>
- <u>Media Strategies for Sustainability</u>
- <u>Campus Sustainability Planning Network</u>
- 2008 HEASC Annual Report
- Publications, professional development, modeling for society
- Development of assessments such as AASHE STARS Rating system
- Socially, economically and environmentally responsible procurement, operations, planning, leadership
- Learning Outcomes in sustainability for all students



Higher Education Associations Sustainability Consortium <u>www.aashe.org/heasc</u>

See the resources page there Learning Outcomes under ACPA



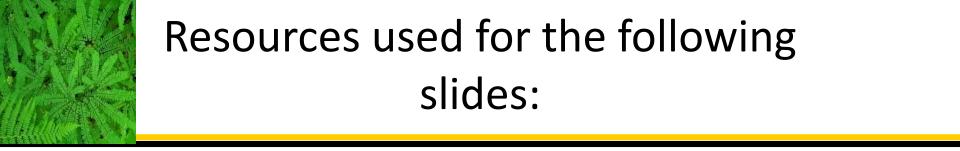
DANS – the Disciplinary Associations Network for Sustainability <u>www.aashe.org/dans</u> - click on Resources

- American Psychological Association
- Sociology
- Religion
- Philosophy
- Math
- Broadcasting
- Architecture
- Engineering (civil, mechanical, eng. ed.)
- Business AACSB
- Marketing AMA

- Ecological Economics
- Chemistry
- Biology
- American Association for the Advancement of Science
- Computer Research
- Humanities
- Women's Studies
- Political Science
- Anthropology
- More...

Academic Disciplines and U. S. Partnership created DANS, infusing sustainability into:

- 1. Curricula
- 2. Promotion and tenure and accreditation to include sustainability
- 3. Informing legislation and policy
- 4. Informing the public
- 5. Professional identity as an academic



- AASHE Bulletin (weekly, free)
- AASHE Digest (annual digest of news stories by topic)
- Explore what others are doing <u>www.aashe.org</u>

Curriculum





Curricular Initiatives

- Programs, Degrees, Institutes, Centers
 - Ex: Arizona State U PhD in Sustainability
 - Ex: Duquesne U MBA in Sustainability
 - Ex: Washington State U B.A. in Organic Agriculture
 - Ex: U Minnesota Minor in Sustainability
 - Ex: Coastal Carolina U Center for Campus & Community Sustainability
 - More very day, minors, S in schedule
- Creating Positive Futures Penn State (coal), Scenario Building and Fairs

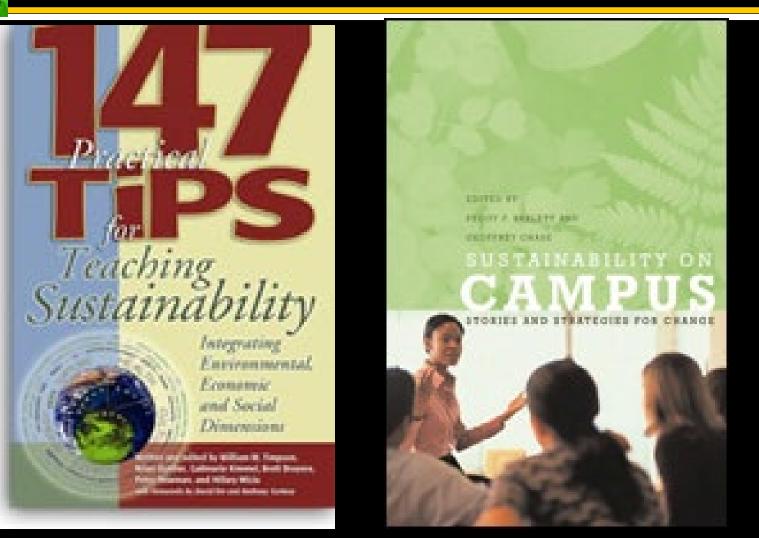
Curricular Initiatives – the big ones!

- In General Education Core
 - Ex: Univ of Wisc (Oshkosh) "Knowledge of Sustainability and its Applications" as one of the Essential Learning Outcomes
 - Ex: Oakland CC
 - Ex: Minnesota Colleges & Universities
 - Ex: CSU Chico
- Infused Throughout Curriculum
 - Ex: Northern Arizona University Ponderosa
 - Ex: Emory U Piedmont Project
 - Ex: Miami Dade College
- Interdisciplinary Assignments

Key EFS Ideas

- Recognizing the impacts of our actions on others and on the ecosystems so we can make better choices.
- Practicing sustainability on campus and in external communities, connected to student learning, and focusing on how to be systems thinkers and effective change agents
- Involve all areas of the college –
 Each area has a unique contribution to make to a sustainable future.

Curriculum & Academics



Curriculum & Academics

Sustainability can be integrated into any course and every program.

Learning outcomes and sample assignments in the next session!

Curriculum Success Stories www.ncseonline.org/EFS/DebraRowe.pdf



ENVIRONMENTAL LITERACY AND SUSTAINABILITY AS CORE REQUIREMENTS: SUCCESS STORIES AND MODELS

Debra Rowe, Ph.D. Senior Fellow, University Leaders for a Sustainable Future Oakland Community College dgrowe@oaklandcc.edu

Reprinted from <u>Teaching Sustainability at Universities</u>, 2002, Walter Leal Filho, editor, Peter Lang, New York

Keywords Civic Engagement, Environment, General Education, Literacy, Social Responsibility, Sustainability

Abstract At a number of colleges and universities, the core General Education requirements for all degrees include an in depth exposure to environmental literacy. Many colleges are also including a degree requirement in the area of social responsibility and/or civic engagement. Colleges include sustainability curricula using a variety of models. The first baseline national surveys have collected information about the percentage of institutions incorporating sustainability into curricula, course design and content, faculty development and outcomes. What does the data to date describe in terms of the models for inclusion of environmental literacy, social responsibility and sustainability in higher education?

For many colleges, it is politically difficult to add additional courses for degree requirements. Some higher education institutions have solved this dilemma by integrating environmental literacy, social responsibility and sustainability course materials into existing liberal arts and specially courses. Models have been developed that are flexible, inexpensive and fun to implement within a variety of disciplines or as part of an interdisciplinary learning community. According to research, for both teachers and students, these models reduce apathy, and instill attitudes and skills required to be positive change agents for the society.

Research results support students using these models developed an:



Community Partnerships



Community Partnerships

- Ex: Santa Fe CC (NM)
 - Center for Community Sustainability partnership w/industry, students solving real problems and implementing solutions, learning resilience
- Ex: U. Louisville
 - Energy Conservation Partnership w/city & public schools (DOE-funded), \$\$\$\$ savings
- Ex: City of Grand Rapids
 - Community Sustainability Partnership colleges, universities, K-12, mayor, business working on sustainability projects

Student Life



Campaigns

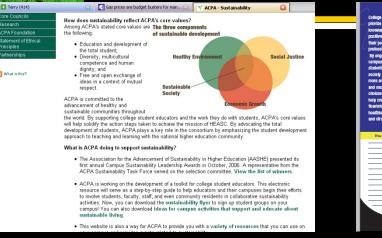
- Campus Climate Challenge
 - 30+ youth organizations for clean energy
 - MTV/ThinkMTV Break the Addiction campaign
- Sustainable Living
 - Eco-Reps, peer-to-peer sustainability outreach campaigns
- Student Green Fees
 - Renewable energy; sustainability projects
- Fair Trade (coffee, tea, sugar, choc.)
- Divestment (ex: Sudan)

Competitions, Awards and National

Activities

- Recyclemania 200+ campuses
- NWF Chill-out annual video competition and Campus Ecology Fellows
- Campus Sustainability Day
- AASHE Student Award
- National Teach In
- Powershift

Governance & Management Student Services



11 Terry (414)

rinciples



EDUCATION FOR SUSTAINABLE DEVELO

The United Nations declared a Decade of Education for Sustainable Development (2005-2014) to promote the local and global acceptance of principles of "sustainable development." ACPA is taking a leading role n a national initiative to help create the U.S. higher educ tion response to the United Nations Decade of Education for Sustainable Development This document provides the background on education for sust development; the role of U.S. higher education; and what individuals, ns, and ACPA can do to work towards a sustainable environment an equitable society, and a strong economy.

What is Sustainable Develo

From the 1987 Brundtland Commission, the most common definition of sustainable development is "meeting the needs of the present without compromising the ability of future generations to meet their own needs." In 2003, Dr. Rolf Jucker further illuminated the idea: "Sustainability is achieved when all people on Earth can live well without compromising the quality of life for future generations." (Rolf Jucker, 2003, UNESCO Teaching and ning for a Sustainable Future: A Critical Evaluation, Trumpeter, Vol. 19 No. 2)

The vision of sustainable human society resides in the simultaneous and synergistic creation of economic prowth and equity, conservation of natural resources and the natural environment, and sustainable socia and social justice. It is often visually represented as follows: inable social develope

The three compensats of sustainable development **Healthy Er**

There is an urgent need for US higher education to advocate for sustain development. The extent to which we, the people of the United States, adopt and embrace the principles of sustainable development may dete the quality of life that our country and all humanity enjoys in the decades shead. Around the world, billions of people seek what we have. As 5% of the world's population, we consume 25% of the world's resources. The Earth simply cannot tolerate billions of people following the path we chose. Now, as responsible leaders, we must demonstrate new paths economic prosperity which do not compromise our future. Many

- · We are exceeding the carrying capacity of the planet
- U.S. citizens do not know that: (www.myfootprint.org) · The ecosystems are degrading
- fhttp://www.worldwatch.org/t
- · The U.S. has approximately 5% of the world's populatio
- and is consuming 25% of the world's res We can economically reduce human suffering
- environmental degradation and social injustice now.

ACPA sustainability page, student flyer, primer, list of possible campus activities, and chart of change agent skills! www.aashe.org/heasc under resources



ACPA's Presidential Taskforce on Sustainability

Tool Kit for Creating a Better World: Ideas for Campus Activities that Support and Educate About Sustainable Living

A. Visuals to Educate about Sustainability

- Have a poster session at a prominent campus location(s) share what good work the campus is doing and 1. generate new ideas by collecting suggestions and volunteers
- 2. Build a community organic garden (plant a seed)
- 3. Develop a bio-diesel demonstration, use the fael locally
- 4. Make papercette forms (benches)



<u>The American College & University</u> <u>Presidents' Climate Commitment</u>

Climate Leadership in Higher Education

R

Resources just from the Presidents' Climate Commitment

- 2008 ACUPCC Annual Report
- <u>Education for Climate Neutrality</u> has many models!
- Energy Performance Contracting Toolkit
- <u>ACUPCC Voluntary Carbon Offset Protocol</u>
- ACUPCC Climate Action Planning Wiki
- <u>ACUPCC Reporting Tool</u>
- ACUPCC Implementation Guide
- <u>ACUPCC GHG Inventory Brief</u>
- ACUPCC Webinar Series
- <u>ACUPCC Solutions Page</u> (includes links to further resources)



Resources internal to your institution – your colleagues

Sustainability report is chock full of examples:

- Operations
- Facilities
- Academics
- Vision
- More in the report, and more to be done

http://www.greenteam.ilstu.edu/about/reporting.shtml

Your Role Challenges and Answers

Challenges

- Already busy
- Don't know all this stuff
- Putting out fires, don't have time to do the right thing

Solutions

- Don't have to create the answers. Just keep asking the sustainability questions and share the information already available.
- Sustainability is everyone's job. Doing nothing is not benign it is a destructive decision for society.
- This is good business for you, for your institution, for higher education and for society
- You have a unique and important role to play others cannot do this without you!

Core Questions for Next Steps

1. What can we implement immediately? 2. What are the key strategic actions we can take to shift to a sustainable institution and society? 3. What are the multiple ways you can empower others and create a culture of sustainability? 4. How can you institutionalize these efforts?

Changing the norms!

The Power of What You Do



• We can choose a sustainable future





Conclusions

- 1. The public is not educated enough about the energy and sustainability issues before us.
- 2. We need sustainability literacy and engagement in solutions for ALL.
- 3. You are in a unique and important role to create a sustainable future.
- 4. Successful precedents/materials can assist you in the sustainability path you choose as a private person, as higher education leaders, and as a community member.
- Congratulations for all you have done and all you will do! Let your enthusiasm show. It's contagious.
- 6. Let us assist you Debra Rowe dgrowe@oaklandcc.edu