Education and Action for a Sustainable Future: Opportunities and Resources for You

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• Part I  What is sustainability and education for sustainability?
• Part II  What are our sustainability challenges?
• Part III  Solutions and Trends
• Part IV  Resources for you!

Sustainable Development is often defined as:

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

The United Nations has declared a Decade of Education for Sustainable Development 2005-2014
**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.”

![Diagram](image)
Why is environmental responsibility 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)
- 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)
### Effects - Climate Change

- Disruption of food production and the food chain
- More extreme weather events
- Disruptions of ecosystems and the food chain, including water supplies
- Spread of disease e.g. West Nile, Malaria, Dengue Fever
- Submersion of land masses –
  - 1 to 4 foot sea level rise - now up to 80 feet
  - 50% of world’s population lives on the coasts

= Civilization Disruption

Source: Intergovernmental Panel on Climate Change

### Why is Climate Change Important?

It is outside of the normal variability of climate.

We are the first generation capable of determining the habitability of the planet for humans and other species.

The decisions of this generation are crucial.
Why climate change and other environmental issues are so important

1. Human presence on a global scale
2. All living systems in long term decline at unprecedented and accelerating rate
3. Unprecedented growth in population and consumption
4. Climate change
   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
Why is EFS such a high priority?

1. Much of the public doesn’t know that we are exceeding the carrying capacity of the planet. (www.myfootprint.org)

2. Public doesn’t know that solutions exist. We can reduce human suffering, environmental degradation and social ills now while building stronger economies.

3. A rapid shift in mindset is needed and **education to action is the key.**

Global Transition – Paradigm Shift

**From**
- Fossil powered
- Take, make, waste
- Living off nature’s capital
- Market as master
- Loss of cultural & biological diversity
- Independence
- Materialism as goal

**To**
- Non-polluting powered
- Cyclical production
- Living off nature’s income
- Market as servant
- Maintain cultural & biological diversity
- Interdependence
- Reduced human suffering and quality of life goal
Dominant Inaccurate Human Beliefs
Which ones do you have to eliminate?

- Humans dominant species separate from environment
- Resources free and inexhaustible
- Technology the answer
- Earth can assimilate all wastes
- All human needs can be met by human means
- Individual success independent of health of communities, cultures and ecosystems

Old Worldview
vs. Updated Worldview of Sustainability

Potentials for Energy Conservation and Renewable Energies

Plan B: Mobilizing to Save Civilization

by Lester Brown

Founder of Worldwatch Institute

Downloadable at www.earth-policy.org
Potentials for Renewable Energies

Can we meet all our needs with renewable energies and energy conservation?

YES

KEY THRUST – KEY OUTCOME

Staff and community members know how to and choose to be more environmentally, socially and economically responsible.

Where? In the personal, business, community and governmental spheres.

In policy and in behaviors.

Outcomes: more health, higher quality of life

“Function more knowledgeably as responsible citizens in our democratic society.”
### Residential – What you can do!!!

- **Environmentally and socially responsible purchasing** – [www.coopamerica.org](http://www.coopamerica.org), [www.newdream.org](http://www.newdream.org)
- **Environmentally and socially responsible investments** – [www.socialinvest.org](http://www.socialinvest.org)
- **Caulk and weatherstrip**
- **Parasitic power** – unplug the TV, computer, etc. when not in use!
- **Fill the freezer. Clean the coils**
- **Carpool or use bikes and buses**
- **Turn down the tank to 120 and use water conserving showerheads.**

### Residential – What you can do!!!

- **Permaculture instead of grass**
- **Eat lower and local on the food chain**
- **Buy/create renewable energy locally and offsets** (www.nativeenergy.org)
- **Be an “energy waste detective”**
- **Reduce, reuse and recycle**
“Unknowingly, the architecture and building community is responsible for more than half of all greenhouse gas emissions annually.”

Source: U.S. Energy Information Administration statistics

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**Green Design Does Not Have to Cost More**

- Studies verify this
- Can be positive cash flow from the first month
- Use experienced professionals
Solutions:

- All of us engaged as **effective change agents** in our sustainability challenges
- From apathy → caring involvement.
- Know that our daily decisions affect the quality of life of people around the globe.
- Culture of sustainability – Breaking the Addiction to Oil
- Push for appropriate policies, elected reps, regulations

Part III

Trends and Examples
U.S. Partnership for Education for Sustainable Development:

Convene, Catalyze and Communicate

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

U.S. Partnership for Education for Sustainable Development

• Non-partisan
• Multiple Sector Teams: Business, Higher Ed., K-12, Youth, Faith…

• Convene, Catalyze, Communicate

www.uspartnership.org
Business principles of sustainability:

– Cradle to Cradle (McDonough)
– Biomimicry (Benyas – Like nature, efficient and not toxic)
– World Business Council for Sustainable Development (www.wbcsd.org)
– Natural Step (Sweden and U.S.)
– Natural Capitalism (Lovins, Harvard Bus. Review)
– Ethical Markets – (Hazel Henderson)
– Calls for all graduates to be literate about our sustainability challenges and engaged in solutions
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** – Nat. Assoc. of Independent Schools, U.S. Summit, need for international alliances
- **Faith** - Religious Partnership and Interfaith Alliance, Regeneration Project
- **Youth** – Climate Challenge, Reduce Your Impact, Action Campaigns…

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:

- Curricula
- Research
- Operations
- Mission and Planning
- Community Outreach and Partnerships
- Purchasing
- Student Life
- Professional Development
- plus legislation and public awareness

Internationally, a taste…

- In Sweden, it is a law that all undergraduates be educated about sustainability
- High priority in higher education principles in European Union
- U.N. Decade and other ESD international conferences in Mexico
- Earth Charter in Costa Rica
- Association of Canadian Community Colleges
- Environmental Sust. Group, World Federation of Colleges and Polytechnics
- Global Sustainability Group out of MIT, Chalmers,…
Association for the Advancement of Sustainability in Higher Education

AASHE
(AY-shee)

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www.aashe.org

Sign up for the free bulletin
Search the resources and the digest

GREAT NEWS!!!
Growing National Trend in U.S.:

Seventeen national HE associations and twenty national disciplinary associations are creating initiatives on Education for Sustainable Development
Engaged National Associations
over 4,000 higher education institutions

1. ACE–Am. Council on Ed.–Presidency Magazine W’06
2. AACU – Ass. of American Colleges and Universities
3. AACC – Am. Ass. of Community Colleges
4. AASCU – State Institutions
5. ACUHO – Housing
6. NACAS – Aux. Officers
7. NAEP – Educational Buyers
8. NACA – Campus Activities
9. APPA – Facilities
10. NACUBO – Business
11. SCUP – College and University Planners
12. ACUI – Student Unions
13. ACPA – Student Life
14. NACUFS – Food
15. ACEED-I – Events and Conference Directors
16. NACS – Campus Stores
17. NIRSA – Recreation
18. AGB – Ass. of Governing Boards

AND MORE

Higher Education Associations Sustainability Consortium
www.heasc.net

More information on U.S. trends at www.heasc.net/sustainablefuture
Higher Education Associations

- Collaboration between higher education associations on:
  - AASHE Rating system - STARS
  - Socially and environmentally responsible procurement
  - President’s pledge on climate change – over 500 presidents in all 50 states – CONGRATULATIONS ON SIGNING!
    www.presidentsclimatecommitment.org
  - Team building on campus at VP and other levels for sustainability
  - Learning Outcomes in sustainability for all students
  - Professional development for all higher education staff

Disciplinary Associations Network for Sustainability – DANS -
www.aashe.org/dans

- American Psychological Association
- Sociology
- Religion
- Philosophy
- Math
- Broadcasting
- Architecture
- Engineering (civil, mechanical, eng. ed.)
- Ecological Economics
- Chemistry
- Biology
- American Association for the Advancement of Science
- Computer Research
- Humanities
- Women’s Studies
- Political Science
- Anthropology
- More…
DANS – Infusing s.d. into:

1. Curricula
2. Promotion and tenure and accreditation
3. Legislative briefings
4. Informing the public
5. Cross-disciplinary approaches
6. Professional identity as an academic

www.playagreaterpart.org

Imagine a country where all college students get credit for helping to solve our societal problems through their academic assignments.

Play a Greater Part
Healthier Planet, Campuses, Communities, and Economies
Play A Greater Part

Academic learning combined with real life problem solving for sustainability in all disciplines and as degree core.

Building healthier self-concepts.
We can change society for the better.
Becoming life long change agents.

Models: service learning sustainability credit in all courses, S designation in schedule of classes

Sustainable Living Practices – Higher Ed Leading the Way

Presidential Taskforce on Sustainability – ACPA
http://www.myacpa.org/task-force/sustainability/, including:
  • primer on sustainability,
  • learning outcomes,
  • sustainable living campaigns,
  • first year experience and freshman pledge,
  • orientation,
  • sustainability media festivals,
  • 2 pages of campus activities
  • downloadable poster for student organizations
HE Sustainability Examples
more at www.aashe.org Annual Digest

• Systemic integration
  • University of Florida
  • Georgia Tech
  • University of North Carolina
  • University of British Columbia
  • Arizona State
  • Lane Community College – empower everyone to act with sustainability in mind

HE Sustainability Examples
more at www.aashe.org Annual Digest

• Green Computing
  • Michigan State

• Transportation
  • UC Boulder

• Institutionalization in job descriptions and performance reviews
  • Cornell
  • Arizona State University
### HE Sustainability Examples

more at [www.aashe.org](http://www.aashe.org) Annual Digest

**• Energy Conservation, Renewable Energies & Climate Change**
  - SUNY Buffalo
  - Carleton
  - University of Minnesota Morris
  - South New Hampshire
  - Middlebury
  - UC Santa Cruz
  - LACCD – 100% renewables

### HE Sustainability Examples

more at [www.aashe.org](http://www.aashe.org) Annual Digest

**• Curriculum**
  - Northern Arizona University
  - University of Georgia – Article in ACE Presidency W ‘06
  - Comm. Colleges – Article at AACC site/sustainable (e.g. Maricopa, Miami Dade, Oakland, Moraine Valley)

**• Food**
  - University of Montana
  - Yale
HE Sustainability Examples
more at www.aashe.org Annual Digest

- Green Building
  - University of Washington
  - South Carolina universities
  - Presidents’ Climate Commitment - $2 billion in ESCO money
- Socially and Environmentally Responsible Purchasing
  - Rutgers
  - Stanford
  - OCC

Making sustainability an integral part of planning, operations, facility design, purchasing, investments, community partnerships and curricula.
More Organizations and resources to assist you:

• Second Nature – [www.secondnature.org](http://www.secondnature.org)
• Grey Pinstripes for **business schools** through the World Resources Institute and Aspen Institute
• Green Schools Listserv – almost instantaneous answers to your specific questions - send mail to
  LISTSERV@LISTSERV.BROWN.EDU with the command: SUBSCRIBE GRNSCH-L

Skills:

1) Teach/learn sustainable development literacy
2) Teach/learn optimism skills (Seligman)
3) Teach/learn efficacy; tell stories of “normal” people making a difference
4) Teach/learn interpersonal and intrapersonal intelligences – e.g. civil discourse, conflict resolution, emotional intelligence
5) Teach/learn systems thinking, futurist skills and change agent skills
Key Places to Place Sustainability:  
(Academic Assignments can include this!)

- Mission  
- Strategic Plan  
- Budget  
- Orientation  
- Campus Map and Signage  
- Building Policies  
- Operations and Purchasing Policies  
- Student Life  
- Daily Living  
- Infused throughout curricula  
- First Year Experience  
- Gen Ed Core  
- Curricula Review  
- Community Partnerships  
- Workforce Development  
- Continuing Education

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**Student Learning Outcomes**  
ACPA's Sustainability Taskforce, 2006

1. Each student will be able to define sustainability.
2. Each student will be able to explain how sustainability relates to their lives and their values, and how their actions impact issues of sustainability.
3. Each student will be able to utilize their knowledge of sustainability to change their daily habits and consumer mentality.
4. Each student will be able to explain how systems are interrelated.
5. Each student will learn change agent skills.

6. Each student will learn how to apply concepts of sustainability to their campus and community by engaging in the challenges and solutions of sustainability on their campus.

7. Each student will learn how to apply concepts of sustainability globally by engaging in the challenges and the solutions of sustainability in a world context.

The higher education community as a living lab for sustainability oriented practices and skill building.

Providing opportunities to practice behavior changes

Building values, behaviors, and identities

A community of learners.
A community of real life problem solvers.
# What You Can Do – Political Activities are Crucial!!

## Local Level

*Take it to your community – do a community sustainability plan/ energy audit.*

## Governmental Level

*Take it to your elected representatives.*

*Engage in energy and sustainability policy.*

## What is needed? Solutions:

Civic engagement – people asking for it

Political will – legislators doing it

Civic engagement – people making sure it happens
Possibilities for Next Steps
Commit to:

Utilize the media to publicize the positive steps all can take to both teach and model sustainable development.

If you feel overwhelmed or unsure, you are normal. Keep moving forward!!

Doing nothing is a destructive decision.

There are people you can talk to/email about how to create success.
Possibilities for Next Steps

1. Explicitly recognize and include ESD in the next round of mission definition and strategic planning (e.g. Illinois Wesleyan, Lane CC, Georgia Tech, ASU)

2. *Encourage your strategic planners, purchasing agent, facilities director, coordinators, and staff to join the online learning communities dedicated to education for sustainable development. (go to http://www.aashe.org/lists/lists.php )


Possibilities for Next Steps

Build Commitments to:

a. Build and renovate facilities using socially and environmentally responsible practices (e.g. LEED and Energy Star)

b. *Purchase socially and environmentally responsible products (e.g. no sweatshop products) (e.g. national initiative from NACS)

c. *Infuse sustainability throughout the disciplines via more staff development offerings and engagement strategies (e.g. Broward CC and Emory)

d. *Develop college-community partnerships for sustainable development and using those partnerships for service learning opportunities for students (e.g. Grand Rapids CC and Middlebury)

**Work with students to create this. Learn together.**
Possibilities for Next Steps
Build Commitments to:

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<td>f.</td>
<td>*Work to help create economic policies that support stronger economies via the building of healthier ecosystems and social systems (e.g. powervote.org)</td>
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<td>g.</td>
<td>*Utilize the media to publicize the positive steps your institution takes to both teach and model sustainable development.</td>
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Possibilities for Next Steps
Build Commitments to:

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<td>h.</td>
<td>Support/join your Sustainability Committee</td>
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<td>i.</td>
<td>Utilize AASHE resources</td>
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<td>j.</td>
<td>Utilize the AASHE STARS system.</td>
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<td>k.</td>
<td>What else is in your imagination? How can you institutionalize it and make it part of the culture here?</td>
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Additional resources besides www.aashe.org and the links in this presentation and the list at www.heasc.net/sustainablefuture

And

Resources

• Societal sector resources at the U.S. Partnership for Education for Sustainable Development - www.uspartnership.org
• Alliance to Save Energy – http://www.ase.org/ - internship programs
• Building solar air panels – www.oaklandcc.edu/EST
• National Wildlife Federation Campus Ecology Program
Additional Resources

1. Education in renewables – www.ceret.us and www.irecusa.org
2. Greener Buildings News at www.greenbiz.com

Careers in Energy and Sustainability – put in your Careers Office!!

- Association of Energy Engineers – www.aeecenter.org
- http://www.sustainablebusiness.com and click on "Green Dream Jobs"
- http://www.homepower.com/resources/jobs.cfm
- http://www.greenbiz.com and click on "Job Link"
- http://www.idealist.org
- www.ecojobs.com
- www.eco.org
- www.greenjobs.com
- AASHE – www.aashe.org
Challenges and Answers

Challenges
- Already busy
- Don’t know this stuff
- Putting out fires, don’t have time to do the right thing
- Issues complex and systemic
- Societal & environmental impacts invisible and ignored

Answers
- Don’t have to know the answers. Just keep asking the sustainability questions. Don’t try to get it perfect first.
- Use resources and learn from others to help you learn, grow and implement
- Sustainability is everyone’s job
- You have an important role to play

Conclusions
1. The public is not educated enough about the energy and sustainability issues before us.
2. We need sustainability literacy for ALL.
3. You are creating the future with your daily decisions.
4. Successful precedents/materials can assist you in the sustainability path you choose as a private person, as an employee, and as a community member.
5. Climate change is the highest priority with the shortest time line.
6. We can model and change consumption and investment behaviors, and institutional and civic policies to create a sustainable future.
The Power of What You Do

• We can choose a sustainable future

Congratulations for all you have done.

Congratulations for all you will do in the future.
Let your enthusiasm show!

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