

Maintaining Momentum for Climate Action: The University's Leadership Role in Climate Adaptation



NECSC Conference
April 2012

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University of Connecticut

University of Connecticut

- Established in 1881, Land & Sea Grant University
- 4,000 Acres at Main Campus in Storrs (Mansfield)
- Top 20 Public University (*U.S. News & World Report, 2011*)
- 5 Regional Campuses, Law & Medical/Dental Schools
- Enrollment of 30,000
- ACUPCC Signatory – 2010 CAP; 2012 Adaptation Amendment
- #3 - *GreenMetric World Universities* Ranking (2011)
- #16 – *Sierra Club “Cool Schools”* Ranking (2011)
- 74% of students at Storrs live on-campus
- Member of AASHE, NECSC, C2E2



Engagement: Enhancing What We Do

- Fundamental to our mission as a public research university; ethical obligation to look beyond our borders.
- UConn has a strong record on engagement (Carnegie recognition in 2011: earned the organization's "Community Engagement" classification).
- We must foster engagement more broadly at the University.
 - Good for relations with state and community; Supports the economic and workforce development missions.
 - Enhances our profile nationally and globally.
 - Feedback loops for faculty research and teaching.
 - Development/fundraising potential??

Recent (last week) UConn Example

- **CIMA** – Climate Impacts, Mitigation, Adaptation: A Reflection on Our Future
 - cima.cese.uconn.edu
- Collaboration of faculty, staff, administration and community.
- Community engagement evening last Tuesday featuring a guest speaker and highlighting the impact that individual and collective action can bring to bear on environmental change.



Engaged Research Example

- Linking the University to the Environment – commonplace in the biophysical sciences; need to explore ways for others to link into opportunities for engagement; interaction between faculty, campus leadership and communities to work together.
- National sovereignty – international law, authority, norms, and global governance.
- Globalization – challenges to governments in on-the-ground terms. Individuals and non-state actors are eroding state power.
- Transboundary issues – territorial governmental units aren't well equipped to deal with global problems.

Methodology

- Elite interviews – UConn IRB protocol approved #H10-108. Not reported directly today.
- Builds off of earlier work done by DEEP at ctclimatechange.com . Mapping of initial climate change actions in 169 CT towns. Augmenting data already collected at ct.climatechange.com.
- Proceeds from documents (mostly web-based), then follow-up with phone calls to town officials.

Patterns in Town Profiles

- Fair degree to variance in town profiles across 24.
- Urban to rural character; and in between.
- Relatively normal distribution of per capita income levels.
- Well-educated, but still variance.
- Democratic Party dominance politically. “Northeast” Republicans? Large unaffiliated groups.
- Wide variation in town staff assigned to sustainability tasks.

Adaptation Patterns: Aggregate

- High degree of engagement across 24 with adaptation.
 - 3 towns with 10 or more initiatives underway; two towns with only 3 initiatives; 13 towns engaging in at least 8 different initiatives.
- At least an initial indication that threats from climate impacts are driving policy –
 - speculation based on high degree of consistency and engagement with adaptation.
- Need/Response??

Adaptation Patterns: More Detail

- All 24 towns are FEMA compliant in their flood zone mapping; many aspire to do more (including 5 who now belong to FEMA's Community Rating System).
- Almost all the towns have integrated adaptation into POCDs. Some have gone further with town-specific planning initiatives.
- 7 towns belong to ICLEI.
- High degree of engagement with sewer and storm water management as part of adaptation plans.
- Potential for citizen push-back??

Explaining CT Coastal Climate Adaptation Policy

- **Threat** – are the Realists right? But currently at the levels of state and local government. Back to Bush quote from the beginning.
 - Adaptation requires towns to cope with local threats (“adaptation is the back door to mitigation”??)
 - Most climate-progressive states in US all have water access – West Coast, New England, Great Lakes and Florida.
- **Policy Entrepreneurs** (Rabe) – clearly as factor in CT.
- **Local Political Culture** – without overt policy threat, local political patterns push action. Governmentality?? Focus not on declining state authority, but on governance as provision of pop’ n welfare
- **On-Going Climate Policy Vacuum at Federal and Global Levels** - Towns will continue to look to state for help in various ways. Yet another unfunded, on-the-ground, threat-motivated mandate for towns?

2010 Climate Action Plan



The University of Connecticut
Climate Action Plan:
Guiding the Path toward Carbon Neutrality

AUGUST 2009



ACUPCC Signed
March 25, 2008

Climate Action Plan
(CAP) Approved
April 2010

<http://www.ecohusky.uconn.edu/pcc/climateactionplan.html>

Greenhouse Gas (GHG) Mitigation Strategies

CAP Energy Action Items

- Reduce utility costs and carbon footprint
- CAP strategies in progress:
 - Retro-commissioning for 34 buildings (“energy hogs”)
 - Lighting audits and retrofits for 70+ buildings
 - Moderated temperature set points
 - Fume hood energy conservation outreach
 - Steam (heat) distribution system repairs
 - Centralize buildings on cogen/improve efficiencies
 - Develop Renewable Energy Strategic Plan



UConn's Renewable Energy Strategic Plan



Connecticut Center for Advanced Technology, Inc.

Renewable/Sustainable Generation

- Solar – electric (PV) and thermal
- Fuel Cells
- Geothermal
- Wind
- Biomass/Biodiesel



Design for Depot Campus Fuel Cell Wrap

Strategic Plan

- Environmental/GHG benefits
- First costs
- Financial Incentives
- Payback period (ROI)
- Academic benefits
- PR/Community Involvement



Depot Campus Fuel Cell –
operational by April 2012

CAP Transportation Strategies



UConn Cycles bike sharing pilot program rolled out last Fall



**eStar delivery van:
UConn's first fleet EV**



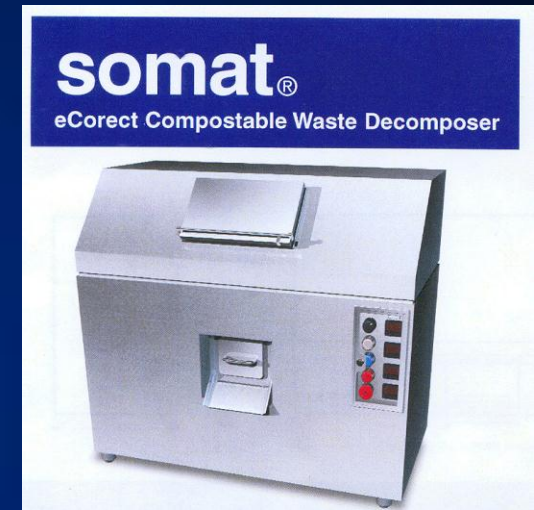
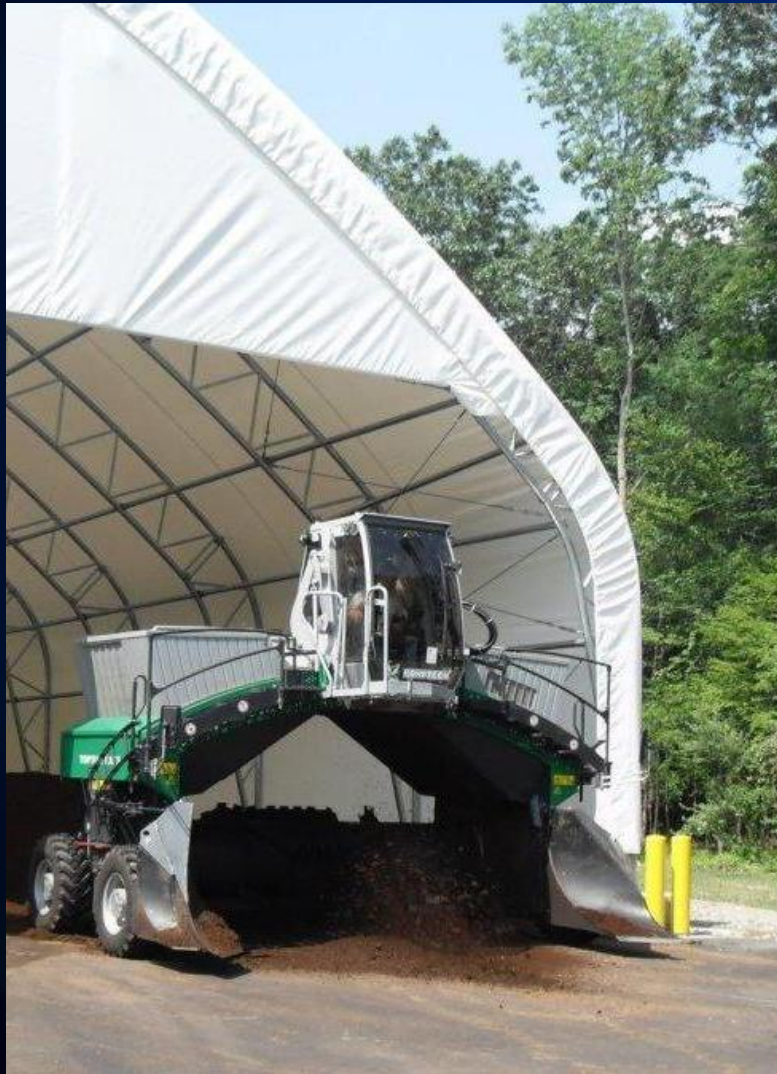
**Hertz-On-Demand , all
ULEV car-sharing
program started in
late-2011**

**New charging stations for
plug-in electric vehicle (EVs)**



**Campus Bike Plan pavement
markings and signs – this summer**

2009-2012: New Compost Facility and In-Kitchen Composters Reduce GHG Emissions





Presented by Rachael Shenyoy
OEP Sustainability Coordinator and ARE Grad Student

DEVELOPING A CLIMATE CHANGE ADAPTATION LEADERSHIP STRATEGY FOR UCONN

Climate Change Adaptation is defined as the:

- *identification of human and ecosystem risks* posed by current and projected climate change impacts; and the
- *subsequent development of* local, regional, national, and international *strategies*
- to *monitor* the effects of climate change and
- *mitigate or prevent associated risks and damages.*



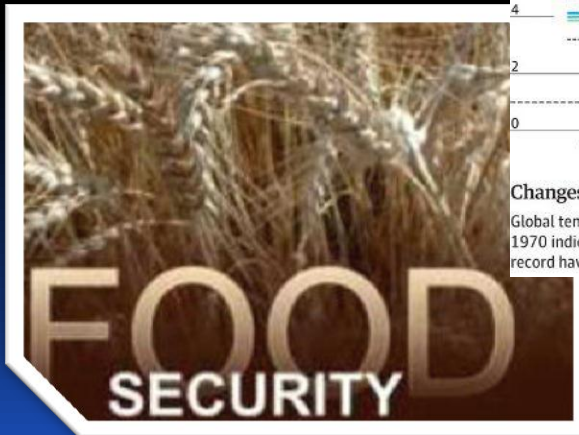
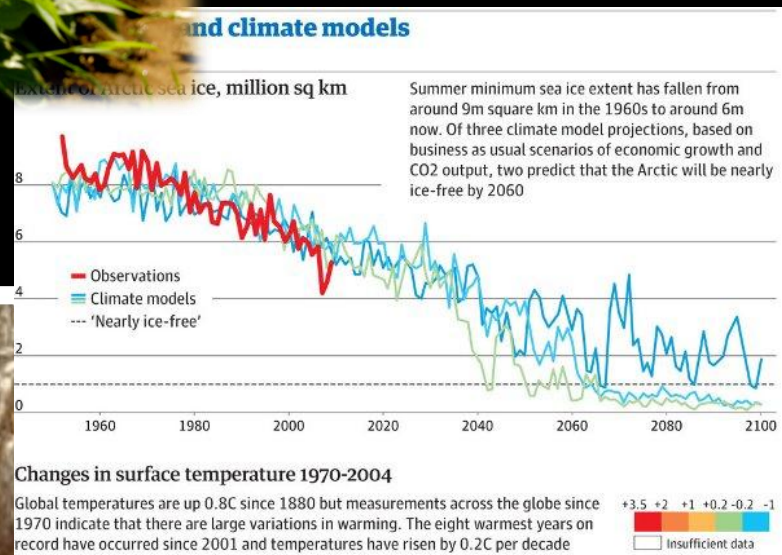
University of Connecticut Expertise:



Agricultural research and
extension



Biodiversity and
Ecological
Adaptation



Climate and impact assessment
and monitoring

Goals for these meetings:

- Goal One: Define what Climate Change Adaptation Leadership at UConn could and should look like
 - *Brainstorming at first meeting in December*
- Goal Two: Fit that definition into existing framework of University Expertise
 - *Drafted plan and outline for CAP for review today*
- Goal Three: Use this information to develop a section of action items for the existing CAP
 - *Our goal is to finalize this piece by March 26*

Reaffirming Commitment to CAP Approving Adaptation Amendment

March 26, 2012 - President Susan Herbst Signs UConn's Climate Resolution



Distinguished
Visiting Professor,
Dr. Gene Likens
(President's Special
Environmental
Advisor)

CT DEEP Commissioner Dan Esty

100+ Students,
Faculty, Staff and
Community
Members Attended



Based on the breadth of research into climate change and sea level rise by UConn's departments, centers and institutes, and the strength of the University's working relationships with government agencies and non-governmental organizations (NGOs), **expand research into topics that will advance the assessment of climate impacts**, such as:

- a. **Environmental effects** on animals, fisheries & wildlife, plants, forests, biodiversity, wetlands, watersheds and coastal regions,
- b. **Economic effects** on agriculture, industry, government, recreation & tourism, and employment,
- c. Risks and socio-economic **impacts to human health, infrastructure and property**, and
- d. Improved sophistication of **models and geospatial visualization tools for predicting and delineating impacts** and supporting adaptation decisions.

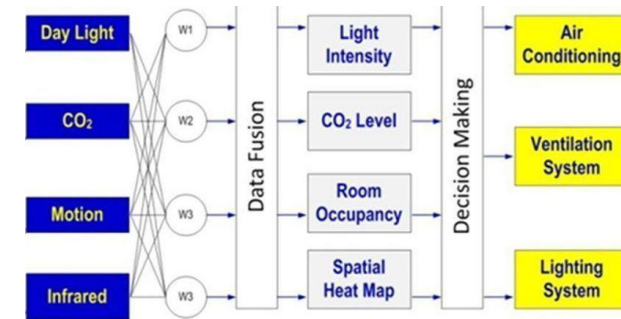


Climate Adaptation Action Item #2

Economic Growth Opportunities

Build public-private partnerships and seize opportunities by **expanding research into climate mitigation and adaptation technologies and best practices that can stimulate economic growth** in Connecticut and promote UConn's expertise, including:

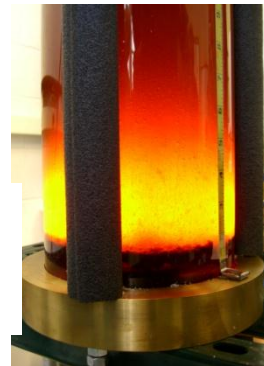
- Clean, sustainable energy and fuels,
- Smart building and smart grid systems,
- Fisheries and aquaculture,
- Habitat restoration,
- Low impact development, and
- Climate-resistance in ecosystems and agriculture.



University of Connecticut
INTEGRATED PEST MANAGEMENT



CENTER FOR
CleanEnergy
UNIVERSITY OF CONNECTICUT
ENGINEERING



Climate Adaptation Action Item #3

Public Planning & Policy-Making



Communicate and translate research findings and share expertise for public use, especially through our Extension programs, in order to ensure sound policy-making that enables communities to plan for, and adapt to, climate change through well-informed:

- Land use, coastal zone and open space management policies and regulations,
- Wildlife, fisheries and habitat management and conservation,
- Utility and infrastructure improvements,
- Agricultural and soil and water conservation practices,
- Emergency planning and response, and
- Public health services.



Climate Adaptation Action Item #4

New Institutional Structure

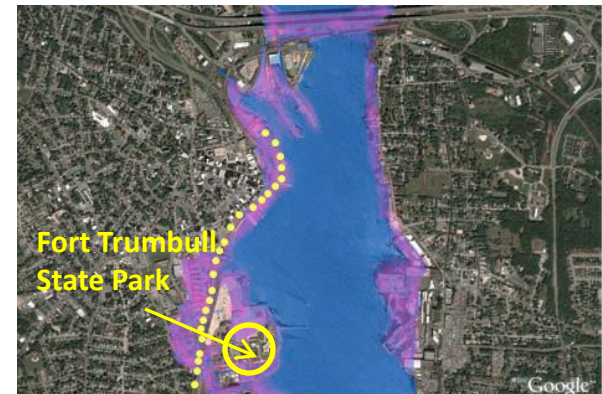
Create an institutional structure to foster integration and collaboration across all facets of the University's mission related to the environment, including research, undergraduate and graduate education, outreach and student life. Build on and integrate existing units, such as the Center for Environmental Sciences & Engineering (CESE) and Sea Grant Program. Further develop services aimed at climate change mitigation and adaptation, as initiated by UConn's Climate Resource Exchange (CRE):

- a. Web-based library of educational tools,
- b. UConn speakers' bureau for presentations,
- c. Community network for information exchange among local officials,
- d. Connections to UConn student internships for Connecticut towns and businesses,
- e. Multi-media information hub that would utilize social media such as Facebook, LinkedIn and Twitter,
- f. Informational conferences, seminars, workshops and webinars, and
- g. K-12, higher education and lifelong learning education modules on climate change, adaptation and sustainability.

Full house for Law School/Sea Grant Climate
Adaptation conference in February 2012



Waterfront condos in Milford, CT



Predicted sea level rise inundation
for Groton/New London area



Climate Adaptation Action Item #5

Local & Regional Economic Models and Financial Tools

Work with departments, centers and institutes, and NGOs involved in state and local economic analysis and budget and financial administration to develop:

- a. **Financial and environmental risk-management guidelines** for decision-makers and policy-makers pertinent to climate adaptation,
- b. **Insurance and financial services for valuing resources** and funding climate risks and adaptation measures,
- c. Plans for encouraging more sustainable **models for economic growth of local businesses and community-supported agriculture**, and
- d. **Strategies for increasing regional economic security**, including incentives for conservation-based social and behavioral change.



The University of Connecticut

Climate Impact, Mitigation and Adaptation: A Reflection on Our Future

March 26-29, 2012

<http://cima.cese.uconn.edu>

MONDAY – 26 MARCH 2012

Wilbur Cross, North Reading Room
Opening Ceremonies & Signing of
Sustainability Commitment
(3:00 to 5:00)

President Susan Herbst
University of Connecticut

Professor Gene Likens
Member of the National Academy of
Sciences & Board of Trustees
Distinguished Research Professor

Commissioner Daniel Esty
CT Department of Energy &
Environmental Protection

WEDNESDAY – 28 MARCH 2012

Student Union, North Lobby
Interactive Eco-Footprint Exhibit
(9:00 to 5:00)

Student Union, South Lobby
Research Presentations by Students &
Faculty Members (9:00 to 5:00)

Student Union, Theater
“Sustainability: What UConn Students
Should Know”
A panel discussion on science,
agriculture, and industry in sustainability.
(3:00 to 4:00)

TUESDAY – 27 MARCH 2012

Dodd Center, Konover Auditorium
Mark Hertsgaard
“How ‘Generation Hot’ Can Fight Climate
Change ... and Win”
(12:00 to 1:00)

Bishop Center, Rooms 7A & 7B
Climate Impact Expo: Actions for Cool
Communities (6:30 to 9:00)

Mark Hertsgaard
“Inspiring Our Communities To Fight
Global Warming”

Interactive Town Discussion:
Local & Regional Climate
Adaptation Strategies

THURSDAY – 29 MARCH 2012

Dodd Center, Konover Auditorium
(4:00 to 5:30)

Provost Peter Nicholls
“UConn’s Academic Plan & the Environment”

Professor Michael Mann
Pennsylvania State University-Teale Lecture
“The Hockey Stick: On the Front Lines in the
Climate Wars”



Climate Adaptation Action Item #6

Outreach Events

Involve multiple stakeholders from the University community, including faculty, staff, students, officials and volunteers from surrounding towns and community-based organizations, in events like the inaugural 2012

CIMA event – *Climate Impact, Mitigation and Adaptation: A Reflection on Our Future.*



U.S. Senator Richard Blumenthal at
Law School’s “Legal Solutions to
Coastal Climate Change Adaptation”
Conference on Feb. 10, 2012



The Nature Conservancy 
Protecting nature. Preserving life.™

 University of
Connecticut
Center for Energy and
Environmental Law

An aerial photograph of a frozen body of water, likely a lake or sea, during a golden hour. The sun is low on the horizon, creating a bright, hazy glow and a shimmering reflection on the water. The water is partially covered with large, irregular ice floes that appear white and textured. The overall scene is serene and cold.

Comments or Questions?

Breakout Groups

1. What can your college or university do, individually or collectively with peer institutions, to reverse the perceived trends about the lack of need for climate action?
2. How would your college or university take advantage of opportunities for community engagement through leadership on climate change adaptation?
3. Assume your new president named a special environmental advisor, who was a distinguished visiting professor and National Academy of Science member - what steps would you take to collaborate with this advisor and ensure maximum benefit to your sustainability program?