

SUSTAINABILITY INITIATIVE

UNIVERSITY OF MASSACHUSETTS DARTMOUTH



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ACADEMIC

Global Awareness Education Action (GAEA) Summit

The two-day Global Awareness Education Action (GAEA) climate summit held Thursday, December 3rd, and Friday, December 4th at UMass Dartmouth coincided with world leaders meeting in Paris to address global impacts of climate change.

On Thursday, speakers described in great detail a variety of climate impacts from rising sea levels—imperiled coastal wetlands, changing marine life, melting polar icecaps and a decrease in the oceans salinity—setting the stage for Friday’s policy and planning issues.

The data is irrefutable Thursday’s speakers stressed repeatedly; the effects are real and action is needed as the planet’s population rises with its temperature.

“We’re engaging in a planetary experiment—whether we choose to or not,” SMAST Dean Steven Lohrenz said, citing the uncharted territory of “a very large increasing trend in the amount of heat stored in the

ocean” and other climate factors.

“This is not just an issue ... about preserving the world for our children and our grandchildren. Things are happening now,” said keynote speaker Anthony Janetos, Earth and environment professor at Boston University.

Money matters were part of the conversation for State Rep. Patricia Haddad, D-Somerset who indicated that finances are a hurdle for clean power legislation such as a wind power proposal she’s sponsoring at the Statehouse.

“You can have the highest ideals in the world — but the reality is things cost money,” Rep. Haddad said.

Finances were on the radar of Dr. Brian Howes, a professor of ocean sciences at SMAST, as he described “over \$1 trillion in free ecological services” provided by coastal wetlands and salt marshes each year. The accelerated rise of sea level is jeopardizing salt marshes, particularly, since healthy marshes serve essential roles in carbon sequestration, a service of primary concern at current emission rates of the greenhouse gas carbon dioxide, nutrient removal and water purification.

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UMass Dartmouth Pledges Resiliency

Climate change is a threat multiplier that has the potential to exacerbate many of the challenges we are dealing with today— temperature shifts, prolonged droughts, hurricanes, floods, and severe storms, and rising sea levels.

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UMass Dartmouth is deeply concerned about the increasing pace and intensity of global climate change and its potential for unprecedented detrimental impacts. The effects of climate change are present in our communities, and these effects are projected to become more severe and damaging. In addressing extreme weather and its detrimental impact, the University will implement complimentary strategies of mitigation and adaptation for reducing and managing risks associated with climate change.

In order to better adapt and take advantage of new opportunities created by a changing climate, we must build and strengthen resilience and capacity through policies, strategies and activities focusing on infrastructure, risk management, territorial planning, technology development, agricultural development and food security.

Adaptation and resilience are also about recognizing new opportunities. Experience shows that changing conditions can create new opportunities and demand for new products and services or entirely new markets.

UMass Dartmouth believes firmly in the power, potential, and imperative of higher education's role in shaping a sustainable society by attracting excellent students and faculty, and building the support of alumni and surrounding communities. The campus is reducing greenhouse gas emissions, integrating resilience into the curriculum, conducting research, and improving campus operations to meet social mandates that are central to a wholesome quality of life and prosperous and civil society.

OPERATIONS

UMass Foundation divesting from coal companies

At the Thursday Global Awareness Education Action Summit, Chancellor Divina Grossman announced that the University of Massachusetts Foundation will divest from direct investments in coal companies. Chancellor Grossman also said the Foundation "will continue to evaluate ways to manage the endowment in a manner that promotes both environmental sustainability and socially responsible investing."

The Foundation oversees \$770 million in endowment assets for the UMass System, a small portion of the foundation's total investment portfolio; the holdings will be sold as soon as the foundation's investment managers are able. This action sends an important message about the urgency of climate change and the University's commitment to addressing it.

For several years, the UMass Fossil Fuel Divestment Campaign has been urging the UMass system to divest from fossil fuel companies, and reinvest in projects and funds that do not perpetuate racism, classism, sexism and other systems of oppression, according to the group.

The Massachusetts Society of Professors passed a resolution supporting not only divestment, but also endorsing the UMass Fossil Fuel Divestment Campaign's goal of divesting the UMass system from the fossil fuel industry.

Climate change is a threat multiplier that has the potential to exacerbate many of the challenges we are dealing with today— temperature shifts, prolonged droughts, hurricanes, floods, and severe storms, and rising

In response to student demands, the Foundation Board of Directors created a Socially Responsible Investing Advisory Committee in November 2014 that is made up of faculty, administrators, alumni and students. Based on the committee's recommendation, the board voted to divest from investments in coal.

This divestment decision signals the recognition that investment in fossil fuels is no longer morally acceptable. Divestment from coal is only the beginning towards achieving full divestment from all fossil fuel investments.

Climate change is a serious threat to the planet, and the UMass Foundation must continue to evaluate ways to reduce the carbon footprint of the endowment and pursue investment opportunities which promote environmental sustainability.

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COP21 climate conference in Paris

Bonjour from Le Bourget, France: Update on Paris climate talks: Limit global warming to 1.5 degrees Celsius.

Climate change talks had a remarkable start as many world governments aligned around a very ambitious target of limiting global warming to below 2 degrees Celsius, with an aim of 1.5 degrees, and achieving climate 'neutrality' that requires phasing out fossil fuels by 2050.

Nearly 200 countries pledged to reduce their carbon dioxide pollution, strengthen their climate commitments every five years, protect people living on the frontlines of climate impacts, and help developing nations expand their clean energy economies. These promises send a clear signal that it is time to keep fossil fuels in the



ground, and for investors to cut their ties with coal, oil and gas by divesting.

Although the

agreement has loop holes, the 2 degree pledge would require keeping 80 percent of the world's remaining fossil fuels in the ground. Paris is not the end of the story, but another chapter. Now, it is up to us to make sure agreements are kept, and we work to accelerate the transition away from fossil fuels and towards 100 percent renewable energy.

As world leaders finalized the text of the deal, thousands of people lined up in the streets and together, with flowers in hand, demonstrated their commitment to continue the fight echoing the same message: it is up to us to keep fossil fuels in the ground.

More lines are being drawn everywhere against the fossil fuel industry, which has done everything possible to weaken this deal that is already forty years late. Even as this agreement represents important progress, continued

pressure from people is vital to close the gap between the agreement signed in Paris and the action required to limit global warming to below 2 degrees Celsius.

STUDENTS

Refillable water stations so convenient on fleek

The shift to reusable plastic and glass water bottles is taking off around UMD as 27 water bottle refilling stations were installed across campus; 24 filling stations come equipped with counters. "It's part of our overall effort to increase an awareness of the amount of trash produced by disposable water bottles," said Jaime Jacquart, Assistant Director for Campus Sustainability and Residential Initiatives. Since, a paltry 20 percent of plastic water bottles are recycled; purchasing, washing and reusing refillable plastic water bottles reduces waste and landfill crowding, and minimizes pollution in streams and parks, conserves energy and means less need to manufacture new plastic bottles from virgin petroleum resin—a gallon of oil is used in the production of 128 plastic disposable water bottles. Mr. Jacquart estimates nearly 470,000 plastic water bottles, or 460 tote bins of plastic bottles will be saved from landfills.

By purchasing disposable plastic water bottles that initially costs US \$1.50 each two times a day, a student spends \$21 a week. If a student purchases a single reusable plastic water bottle and refills the bottle twice a day for a year, the student will save more than \$1,095. Buying and reusing one water bottle for a year makes financial sense; the money saved could buy a year's worth of text books.

Reusable plastic water bottles require a little care. The best way to maintain any plastic water bottle is to rinse it out after each use and to let it air dry completely. To clean—use warm, soapy water and a brush, rinse the bottle well and let it air dry completely.



Saving Water on Campus

Water conservation is important to UMass Dartmouth both as a means of reducing operating costs and reducing environmental stresses. As one of the largest consumers of fresh water in the region, the University—through specific behavioral modification and the installation of low flow shower heads—is working hard to reduce water usage.

If 7 minutes could be trimmed off the showering time of each, more than 361,000 gallons of water could be saved each week or more than 10 million gallons each school year could be saved.

With 4,300 students and each student taking an average of 8 showers per week, at 1.5 gallons per minute for an average of 13 minutes per shower = 670,800 gallons of water that is heated and dumped as sewage.



An Olympic pool measuring 164 feet X 82 feet X 6.5 feet holds 660,430 gallons of water; the water saved each school year could fill this pool 15.3 times.

Five reasons why water conservation is important

1. Water equals life. Do not be complacent when you see pollutants pour into rivers and streams each time it rains.
2. Using less water keeps money in your pocket.
3. Oceans, bays, streams and lakes are the lifeblood of local eco-systems.
4. Saving water means using less energy which reduces your carbon footprint.

5. Water conservation reduces the occurrence of sinkholes.

If we as a community commit just a little extra effort each day to water conservation, then, our collective action will make a significant difference regionally.

Winter 2016: UMASSD Magazine

The winter 2016 UMASSD Magazine will cover climate change, sustainability, and stewardship. “We have a story about the recent Global Awareness and Education Action (GAEA) Climate Summit held December 3rd and 4th, 2015,” said Sherri Miles, managing editor of the magazine. “We also have articles that illustrate a University-wide focus on environmental stewardship, including renewable energy, waste management, powering the future and sustainability initiatives across campus.”

Students, faculty and maintenance are exerting more effort into doing what they can to reduce their carbon footprints—from taking shorter showers, decreasing the amount of paper used, recycling more refuse and installing LED light bulbs.

Sustainability shaping new major at UMD

Over the next ten to twenty years, we as a society have a window of opportunity to radically redefine Earth’s trajectory and reduce the risks of dangerous global changes that could seriously degrade our planet’s life-support systems. To help ease dangerous global changes, UMD is currently working on a proposal to create a major in Environmental Science & Sustainability. “The proposed major will have two tracks, BA and BS, united by core science and non-science classes,” said Robert Darst, associate professor of political science and director of sustainability studies. “Getting a new major approved is a long process that involves various stages of consideration both on and off campus.” At this point in the process, formal on-campus approval has not been secured, though the go-ahead to put the proposal forward has been granted. According to Dr. Darst, the main task for the spring semester is to finalize the proposal.