

# **CESAS**

**Consortium for Environmental  
Stewardship and Sustainability  
Annual Report for 2009**

**December 31, 2009**

## Introduction/Overview

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The Consortium for Environmental Stewardship and Sustainability (CESAS) is a network of partner organizations choosing to work cooperatively to advance sustainability and sustainable development. This Consortium brings together cooperative groups focused on sustainability that integrate and connect multidisciplinary research, education, and engagement efforts in the areas of science, engineering, economics, and social science.

In 2009, there were many major developments related to sustainability. Highlights include:

- The Kansas Natural Resource Council gave the Bill Ward Award to Roderick Bremby, Secretary of the Kansas Department of Health and Environment, for his courageous decision to deny the air quality permit for the proposed new coal fired power plants at Holcomb, Kansas.
- At the University of Kansas, a team of 12 graduate students completed a greenhouse gas inventory for the Lawrence campus. Their work "Cap KU: The University of Kansas Climate Action Plan" is available at <http://www.sustainability.ku.edu>.
- Bethany College made significant advances related to sustainability in 2009, including having Jimmy Sjöblom, from Sweden, as the 2009 Pearson Distinguished Professor of Swedish Studies.
- The National Science Foundation provided funding for several initiatives. These include
  - a new Kansas EPSCoR award "Climate Change and Energy: Basic Science, Impacts, and Mitigation,"
  - an Integrative Graduate Education and Research Traineeship (IGERT) award "From Crops to Commuting: Integrating the Social, Technological, and Agricultural Aspects of Renewable and Sustainable Biorefining,"
  - an Industry/University Collaborative Research Center in Biofuels Research and Development, and
  - a Research Experiences for Undergraduates (REU) award "Earth, Wind, and Fire: Sustainable Energy for the 21st Century."
- In July, at K-State, President Kirk Schulz and Professor Noel Schulz spoke at the Fourth Dialog on Sustainability and demonstrated their interest and support for sustainability. Ben Champion, director of sustainability, provided leadership for the 2009 university wide K-State Sustainability Conference, prepared a Sustainability Task Force report, and spoke at the Fourth Dialog on Sustainability. The new Leadership Studies Building is on track to be the first LEED building at K-State.
- Ruth Douglas Miller, director of the Wind Applications Center at K-State, received the 2009 Outstanding Leadership in the Application of Wind for Schools Program award from the U.S. Department of Energy's Wind for Powering America program.

## Activities

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### *Funded Projects*

CESAS partners and others worked cooperatively on several new projects in 2009 to advance sustainability. The 4-H proposal to USDA "Engineering for Sustainability" was funded and work is in progress to develop materials for 4-H youth. The Research Experiences for Undergraduates proposal was funded in time to begin the program during the summer of 2009 with 10 undergraduate students conducting research on sustainable energy topics. The CHE 670 Sustainability Seminar was offered in the summer for these students with an emphasis on sustainable energy. The USDA has provided funding to develop a "Biobased Products and Bioenergy Multi-University Graduate Program" that will include a 15 credit graduate certificate. The University of Arkansas, Oklahoma State University and South Dakota State University are partner universities.

ConocoPhillips has provided funding to K-State for support for sustainable energy research and education through the Center for Sustainable Energy.

Collaboration in support of military partners continues with technology, environment, and sustainability innovation.

### *Education, Seminars and Conferences*

The number of courses offered related to sustainability continues to grow. Work is in progress to develop new courses related to sustainability for the Biobased Products and Bioenergy program and a new Sun grant. At K-State, there are courses that include significant sustainability content in the Colleges of Agriculture, Architecture, Arts and Sciences, Business, Engineering, Human Ecology, and Technology and Aviation (Salina).

There were many excellent seminars with visiting scholars and practitioners during this past year related to sustainability. Vandana Shiva, from India, was at K-State in October; David Orr and Wes Jackson spoke at the 2009 Sustainability Conference; Carlos Vaca-Garcia, from France, spoke in August as part of the effort to describe student exchange activities related to sustainability; Nancy Jackson presented a Lou Douglas lecture at K-State; Yinlun Huang, from Wayne State University, spoke on sustainability and uncertainty; Susan Brown spoke on wind and solar energy at the symposium when the REU students presented their summer research results. Winnie Gerbens-Leenes discussed energy and water footprints.

CESAS representatives participated in many conferences and symposia including EPA Sustainable Communities, African Studies Symposium, World Environmental Congress, KU Energy Council, Linda Hall Library Climate Change, EPA Brownfields.

### *Technical Assistance for a Sustainable Kansas (TASK)*

One of the goals of CESAS is to provide public education related to sustainability and sustainable development. Partner organizations are able to work cooperatively to provide public education, empower citizens to participate in policy development, help people

make personal life style changes, encourage energy conservation and efficiency, and find information and funding to advance sustainability. The partners provide non-biased technical assistance to Kansas communities, small business, and others related to climate change and sustainability. A Speakers' Bureau provides speakers on topics related to sustainability. In 2009, several of the REU students hosted a forum at the Manhattan Public Library on how individuals and families can live more sustainably. Nancy Jackson spoke in Prairie Village at the 8th Annual Community Forum on Kansas Environmental Issues on "The American Heartland: How Kansas Will Feed and Fuel the 21st Century." Craig Volland spoke on "Current Energy Issues in Kansas" at the Kansas Natural Resource Council annual meeting.

Approximately 500 people attended the Prairie Festival at The Land Institute to hear George Woodwell, Richard Harris, and Mike Phillips address carbon, climate change and renewable energy issues.

Support activities included professional facilitation and professional expertise in support of urban gardening, green roofs and rain gardens.

Partner organizations of CESAS continued to help Greensburg, Kansas with their efforts to include sustainability in rebuilding of their infrastructure, businesses, government buildings, and homes. Another community event, where support was invited, was the Eco-Camp in Salina.

An ecoliteracy proposal has been sent to EPA for funding through their environmental education program. The proposal envisions book clubs that read books related to environmental topics and sustainability.

#### Future Goals and Activities

Following the meeting in Copenhagen in December 2009, there is growing interest in greenhouse gases and climate change. K-State hosted an Intersession class/workshop "Greenhouse Gases, Carbon Taxes and Trading, and Carbon Sequestration" on January 6-8, 2010 (see <http://www.dce.k-state.edu/conf/sustainability-ghg/>). There is interest in developing an inventory of greenhouse gas emissions for Kansas State University and a program to reduce emissions and save on energy bills. There is also interest in reducing emissions at the University of Kansas.

The 2010 Sustainability Conference, "Kansas Going Green in Higher Education," will be January 29-30, at K-State; (see <http://sustainability.k-state.edu/conferences/2010/>).

CESAS leaders will participate in key sustainability education activities including the AAAS Sustainability Forum in February 2010 and the International Symposium of Sustainable Chemical Product and Process Engineering in May 2010, among others. The need for funding to support CESAS activities is growing as CESAS finds more projects to support. At the December meeting of CESAS representatives, we discussed developing a Friends of CESAS organization to help provide funding for CESAS. This proposal will be discussed further by the representatives of the partner organizations at a future CESAS meeting.

## Comprehensive Plan

There is a need for a comprehensive plan to advance sustainability at K-State and elsewhere in Kansas. The University of Kansas Sustainability Working Group and the new K-State Sustainability Task Force are timely and appropriate. The past year of activities has included an expansion of interest and events related to sustainability. There is an expectation that sustainability will be a growing interest for many students, faculty, and staff.

## Membership Update

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Consortium membership has continued to grow. Current membership includes five universities, one consortium, 13 industry members, five membership organizations, four non-profit organizations, two units of state government, and one environmental education center. Four members are international partners, representing the countries of Germany, Russia, Thailand, and Ukraine. An overview of the members is presented in the following table.

Table 1. CESAS membership in 2009.

Membership Category	Group Name
University	Bethany College Gorno-Altai State University, Russian Federation Kansas State University 4-H Youth Development, K-State Research & Extension, Agricultural Economics, Apparel and Textile Sustainability Research Lab, All-University Geographic Information Science Steering Committee, Department of Aviation, KSU-Salina, Bioprocessing and Industrial Value Added Program (BIVAP), Center for Hazardous Substance Research, Center for Science Education, College of Architecture Planning and Design, Department of Biological and Agricultural Engineering, Department of Chemical Engineering, Department of Geography, Department of Geology, Department of Grain Science and Industry, Department of Horticulture, Forestry & Recreation Resources, Department of Landscape Architecture/Regional and Community Planning, Department of Management, Engineering Extension, Food Science Institute, GRoWe, Hale Library, Institute for Civic Discourse and Democracy, Institute of Green Professionals, K-State Sustainability, Kansas Agricultural Mediation Services (KAMS), Kansas Center for Agricultural Resources and the Environment (KCARE), National Institute for Land Management and Training, Natural Resources and Environmental Sciences Secondary Major, School of Leadership Studies, Stewardship Committee, Students for Environmental Action, Student Sustainability Coalition, Women's Studies Program

Membership Category	Group Name
	King Mongkut's University of Technology, Thailand Faculty of Science; Joint Graduate School of Energy and Environment University of Kansas Center for Sustainability
Consortia	Blue Skyways Collaborative
Industry	Agriment Services Advanced Manufacturing Institute CABEM Technologies Decent Energy, Inc Diamond Solar Solutions, LLC Energy Savings Store Harmony Environmental M2 Technologies Mensch-und region, GbR Oak Grove Fabrication Technology Group Solutions, LLC (TGS) Terracon Wind Energy Consulting and Contracting, Inc.
Membership Organizations	AIChE Institute for Sustainability Friends of the Kaw ICF International Kansas Natural Resource Council New Earth
Non-Profit Organizations	American Institute of Baking (AIB) International Focus the Nation The Land Institute National Institute for Strategic Technology Acquisition and Commercialization (NISTAC)
Units of Government	Kansas Corporation Commission Kansas Department of Wildlife and Parks
Other	Center for Sustainable Development and Ecological Education, Ukraine

## Financial Update

Membership dues are voluntary. An account with the KSU Foundation is open to accept and manage financial contributions. The account number is I24260 and the name of the account is Environmental Stewardship and Sustainability. The 2009 beginning balance was \$5,503.77. Receipts for 2009 totaled \$1325 and expenditures were \$2606.25, leaving

a balance on December 31, 2009 of \$4222.52. Expenditures were primarily for cosponsored sustainability events.

In addition CESAS consortium partners have provided financial support for specific events and activities in 2009.

Voluntary dues may be sent to the KSU foundation, 2323 Anderson Avenue, Manhattan, KS 66506. Indicate that the contribution is for account I24260, Environmental Stewardship and Sustainability.

## Summary

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In 2009, CESAS continued to provide support for education, interaction, and activities related to advancing sustainability in Kansas and other parts of the world. The University of Kansas developed a greenhouse gas inventory and Bethany College addressed sustainability in inviting Jimmy Sjöblom to come from Sweden as the 2009 Pearson Professor of Swedish Studies. At K-State, there was a university-wide sustainability conference and a task force prepared a sustainability report. More than \$20 million in new research funding was awarded to Kansas universities for sustainability projects.

## Resources

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### *Events*

- Dialogs on Sustainability (DOS) at KSU, Manhattan, Kansas
  - 2009 DOS focused on sustainable energy, LEED buildings, community development, and K-State initiatives.  
<http://www.engg.ksu.edu/chsr/sustainability/Dialogs/2009DOS/>
  - 2008 DOS focused on Students, Classes and Curriculum, Operations, Research, and Engagement (SCORE).  
<http://www.engg.ksu.edu/chsr/sustainability/Dialogs/2008DOS/>
  - 2007 DOS purpose was to disseminate information on current sustainability related activities, groups and resources; and to explore opportunities for further collaboration and future funding.  
<http://www.engg.ksu.edu/chsr/sustainability/Dialogs/2007DOS/>
- Seminars and Intersession Classes
  - ICDD Public Issues Facilitation Workshop, January 12-14, 2009 Manhattan, Kansas. <http://www.k-state.edu/icdd/>
  - Renewable Energy, Food, and Sustainability, January 8-10, 2008 - Kansas State University.  
<http://www.engg.ksu.edu/CHSR/events/che670/200801/index.html>
  - Energy and Environmental Impacts Related to Sustainability, January 4-6, 2006 - Kansas State University.  
<http://www.engg.ksu.edu/CHSR/events/che650/200601/index.html>

- Conferences
  - 2010 Sustainability Conference: Kansas Advancing Sustainability in Higher Education, January 29-30, 2010 - Kansas State University.
  - <http://sustainability.k-state.edu/conferences/2010/>
  - 2009 Sustainability Conference: Leading Kansas in Sustainability, January 23, 2009 - Kansas State University.
  - <http://sustainability.k-state.edu/conferences/2009/>
  - The Future of Agriculture - Science, Stewardship, and Sustainability, August 7-9, 2006 - Sacramento, .California
  - <http://www.engg.ksu.edu/chsr/events/ag/200608/>

## Past Annual Reports

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- 2008 CESAS Annual Report  
<http://www.engg.ksu.edu/CHSR/sustainability/cesas/docs/CESAS2008Report.pdf>
- 2007 CESAS Annual Report  
<http://www.engg.ksu.edu/CHSR/sustainability/cesas/docs/CESAS2007Report.pdf>