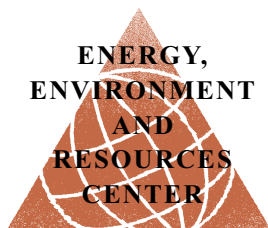


HIGHLIGHTS and INITIATIVES



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Executive Director

Center for Clean Products and Clean Technologies
Jack Geibig, Acting Director

Office of Communications
David Brill, Director

Community Partnership Center
Tim Ezzell, Director

Center for Geography and Environmental Education
Rosalyn McKeown, Director

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EEERC conducts unbiased, analytical,
and multidisciplinary research
designed to promote real-world
solutions to problems in the fields
of energy, environment, technology,
and economic development.

PUBLICATIONS. **Rosalyn McKeown**, director of EERC's Center for Geography and Environmental Education, has written an essay for "Human World," a special Web feature created by *Earth and Sky*, the syndicated science program that airs on National Public Radio. **McKeown** was one of 50 nationally renowned scientists asked to contribute to the project. **McKeown's** essay addresses global human environmental impacts, the movement of invasive species across national boundaries, Americans' gluttonous appetite for energy and natural resources, and the role of education in reversing these trends. You can find **McKeown's** essay here: <<http://www.earthsky.org/humanworld/quotes.php?id=44545>>

McKeown's *Education for Sustainable Development Toolkit* was recently translated into Urdu and distributed at a ceremony in Islamabad, Pakistan, in September to launch the United Nations Decade of Education for Sustainable Development (DESD), which runs from 2005-2014. You can access the *Toolkit* here: <<http://www.esdtoolkit.org/>>

EERC Research Scientist **Jean H. Peretz** has published several articles in state and national policy journals. With Oak Ridge National Laboratory researcher Sujit Das and **Bruce E. Tonn** (Political Science), **Peretz** published "Evaluating the Short-run Benefits of Federal R&D Expenditures" in the July 2005 edition of the *Journal of Technology Transfer* and "Benefit-Cost Analysis of Three U.S. Department of Energy Automotive Lightweighting Material Projects" in the *International Journal of Energy and Technology Policy*, volume 2, issue 4. With **Tonn** and **David H. Folz** (Political Science), she published "Explaining the Performance of Mature Municipal Solid Waste Recycling Programs" in the September 2005 edition of the *Journal of Environmental Planning and Management*. And with colleague **Catherine A. Wilt**, policy director for EERC's Center for Clean Products and Clean Technologies, **Peretz** published "Wired Waste" in the September/October 2004 edition of *Tennessee Public Works*. Athena Bradley and graduate student K. Lynn Douglass also contributed to the article.

APPOINTMENTS. **Eric Ogle**, program coordinator of EERC's Community Partnership Center, has been appointed to the board of directors of the Rural Telecommunications Congress (RTC) and was recently elected treasurer of the organization. RTC is a national organization devoted to ensuring that U.S. rural areas have the technology and telecommunications resources they need for education, healthcare, and economic development. **Ogle** currently consults with Tennessee communities on technology and telecommunications issues and was instrumental in creating a wireless community network in the city of Newport, Tennessee. Before joining UT, **Ogle** served as director of tourism for Cocke County, which contains a considerable portion of Great Smoky Mountains National Park, and he assisted the Tennessee Valley Authority in its marketing and economic development efforts.

INTERNATIONAL INITIATIVES. EERC Executive Director **Jack Barkenbus** has returned from a three-month assignment to Greece and Turkey under the auspices of the Fulbright's "Aegean Initiative" program. One of his tasks involved bringing Turkish and Greek scholars and practitioners together in a workshop setting to discuss issues of mutual interest. On May 17, **Barkenbus** convened a workshop in Istanbul, Turkey, titled "Regional Environmental Youth Initiatives for the Protection of Coastal Areas." The meeting took place at Kadir Has University, along the historic Golden Horn section of Istanbul. His summary of the workshop is available here: <<http://eerc.ra.utk.edu/Barkenbus-Fulbright2005-Report.pdf>>

REGIONAL ORGANIZATION CHAMPIONS CLEAN AIR



Each *Highlights and Initiatives* back page presents a closer look at one of our current projects or activities. This edition focuses on EERC's involvement with East Tennessee's Regional Clean Air Coalition.

(continued on back)

REGIONAL ORGANIZATION CHAMPIONS CLEAN AIR

RCAC recognizes that numerous sources contribute to East Tennessee's unhealthy air and is coordinating a partnership to help protect the health of the region's residents.

By Kris Christen

East Tennessee suffers from some of the worst air quality in the country, and in 2004 the U.S. Environmental Protection Agency (EPA) declared multiple counties in the region in noncompliance with federal clean-air regulations for ozone and fine particulate matter.

The problem stems from a variety of pollution sources, and getting a handle on these sources is going to require some tough measures from local and state governments, as well as area residents.

That's where the Regional Clean Air Coalition (RCAC) comes in, and researchers from the University of Tennessee's (UT) Energy, Environment and Resources Center (EERC) are playing a key role.

RCAC was born out of the Nine Counties, One Vision initiative, which was launched in 2000 to spur economic, environmental, and social progress in the nine-county region that makes up the heart of East Tennessee, says Jean Peretz, an EERC research leader and an RCAC board member.

"When we realized the area was going to be designated for failing to attain federal clean-air regulations," Peretz says, "air-quality matters grew in significance."

Air quality is slowly improving by a number of measures, but progress isn't occurring as fast as some had hoped, acknowledges RCAC board member Jonathan Overly, who serves as an EERC research associate and executive director of the East Tennessee Clean Fuels Coalition. "Air pollution is a problem that took time to create," says Overly, "and it won't be solved overnight."

The Knox County region experiences high amounts of ground-level ozone and fine particulate matter, especially during the summer months. In 2004, the American Lung Association ranked Knoxville and the surrounding region among the top 12 metropolitan areas nationwide with the worst ozone and particulate pollution.

These pollutants are a major source of haze that reduces visibility, particularly in the

nearby Great Smoky Mountains National Park (GSMNP), which the National Parks Conservation Association has ranked as one of the most polluted national parks in the country.

Coal-fired power plants such as those operated by the Tennessee Valley Authority (TVA), a major public utility, are by far the biggest source of sulfur dioxide (SO₂) emissions, says Jim Renfro, chief of the Air-quality Branch of GSMNP and RCAC board member.

Meanwhile, almost 60 percent of nitrogen oxide (NO_x) is coming from the transportation sector, Overly explains.

TVA is spending nearly \$1 million daily to reduce emissions from its coal-fired power plants and has dramatically reduced emissions of SO₂ and NO_x.

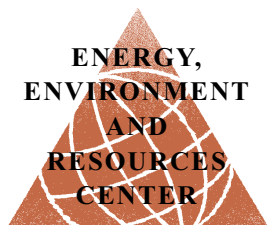
By law, nonattainment areas must submit implementation plans to EPA, demonstrating how they will meet clean-air standards. For ozone, plans are due in 2007, with attainment required in 2009. For fine particulate matter, plans are due in 2008, with attainment required between 2010–2015.

RCAC has devised various control strategies, a number of which local agencies have already adopted. Others will take more time. So far, the biggest measure adopted has been the lowering of speed limits for heavy-duty trucks to 55 and passenger vehicles to 65.

Other measures in place in Knox County and other surrounding areas include controls at fueling stations to prevent fuel vapors from escaping, anti-idling programs, and a prohibition on open burning on days with poor air quality.

Public education and outreach represent another major focus, according to Peretz, who co-chairs RCAC's education committee. The group works with UT's Extension to incorporate information about air quality into curricula and teaching materials delivered to schools in all the RCAC counties. Likewise, they send information on air-quality forecasting to area chambers of commerce to assist businesses in alerting their employees and taking steps to reduce emissions on bad air days.

"The problem stems from a variety of pollution sources, and getting a handle on these sources is going to require some tough measures from local and state governments, as well as area residents."



For more information: Contact Jean Peretz, EERC, The University of Tennessee, 311 Conference Center Building, Knoxville, TN 37996-4134, call 865-974-3803, or e-mail speretz@utk.edu. Also see: <http://www.etnrcac.org>.