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AVL researchers at Copenhagen climate talks

By Dale Neal

While scientists and leaders from around the world gather this week in Copenhagen to wrestle with climate change, time is growing short, said Tom Karl of Asheville's National Climatic Data Center.

"There's a strong recognition that we're going to have to do something. There is not an option of sitting by and waiting," Karl said.

"If we don't take any action, we're talking about temperature changes of 10 degrees warmer than we have today," he said.

Karl is in Copenhagen through Thursday as part of the U.S. delegation, giving talks on the science behind climate change.

Also representing Asheville are Tom Peterson with NCDC, Andrew Jones of the Asheville Sustainability Institute, and Ellie Johnston, a senior at UNC Asheville.

"In Asheville, we've been fortunate," Karl said. "Our changes have been small so far in comparison to the rest of the world."

Computer models show average temperatures worldwide rising through the end of the century, largely propelled by emissions of greenhouse gases into the atmosphere.

"That's so rapid. We've never seen that in the past 10,000 years, so we're going to have a major shift in ecosystems," Karl said.

For instance, that rapid rise in temperatures could trigger the collapse of shellfish populations off the coast of North Carolina as oceans grow more acidic, he said. "There is a whole lot of uncertainty as to what could happen to whole food chains."

Climate changes are already affecting many parts of the world. The Southwest U.S. is suffering from prolonged droughts and is prone to more wildfires.

Ice sheets in Greenland are melting at an alarming rate, and the Arctic Ocean may be ice free in summers in the next few years.

"If you look in the Midwest and the Northeast, we're seeing stronger precipitation, which can lead to flooding and increased erosion," Karl said.

Growing seasons may be growing longer and species may be migrating sooner or to different areas. Insect populations may be growing with an additional lifecycle each season, Karl said.

The Copenhagen conference opens as controversy still swirls around the issue of climate change.

A brouhaha over emails hacked from scientists at the University of East Anglia in England, has given ammunition to skeptics of the theory that climate change has been caused by humans.

They argue that the emails suggest scientists have manipulated data and tried to keep critical articles

out of peer-reviewed journals.

“This is more than an academic spat,” said Patrick Michaels of the Cato Institute. “If there are no data, there's no science. U.S. taxpayers deserve to know the answer.”

Government officials argue the science is solid.

“The e-mails do nothing to undermine the very strong scientific consensus ... that tells us the earth is warming, that warming is largely a result of human activity,” said Jane Lubchenco, a marine biologist and climate researcher who heads the National Oceanic and Atmospheric Administration.

Asheville's National Climatic Data Center is the climate gathering unit of the NOAA.

The e-mails don't negate, or even deal with, data from both NOAA and NASA, which keep independent climate records and show dramatic warming, Lubchenco said.

In Copenhagen, the emails have not changed any minds, Karl said. The 2,500 experts of the United Nation's Intergovernmental Panel on Climate Change reached the same conclusion along with scientific academies worldwide are in a consensus. “All are saying that the climate is changing and humans are indeed responsible for much of that change,” Karl said.

But what has not been agreed upon is how much each country is willing to limit emissions from carbon-burning power plants and automobiles worldwide.

President Obama will travel to Copenhagen before the 11-day conference concludes.
