

CLIMATE NEWS

From Sheldon Whitehouse, Barbara Boxer, and Jeff Merkley
DPCC Meeting | November 7, 2013

South Carolina Braces for Hotter Climate



A recent study pegs 2047 as the date when average yearly temperatures in South Carolina will be consistently higher than in any year since 1860 because of climate change. A University of Hawai'i research team ran 39 computer simulations and put firm dates on when higher average annual temperatures will likely become the norm in different parts of the world. On the U.S. Atlantic coast, this so-called "climate departure" is expected to occur in 2047. In subtropical South Carolina, consistently warmer years could mean more heat-related deaths, negative ramifications for agriculture and wildlife such as striped bass and brown shrimp, and the rise of diseases like mosquito-borne Dengue fever. If South Carolina reaches climate departure in less than 40 years, that doesn't mean it will be hot every day, or that it won't ever be cold. It means the average temperature for the entire year will be elevated. Without enough cold days during a South Carolina winter, species could move north from Florida, including invasive plants and animals like large constrictor snakes, as well as parasites and pathogens. (Charleston Post Courier/nature12540)

Ocean Warming Faster Now Than in 10,000 Years

A 10,000-year record of ocean temperatures measured in Indonesian seafloor cores suggests that the ocean depths may store more heat from global warming than suspected. Since 1950, Pacific Ocean waters have been warming 15 times faster than the rest of the seafloor, as reported by a new study. Because the ocean depths are thought to absorb about 90 percent of the excess heat seen from climate change, increased attention has turned to their heat-absorbing capabilities. Much of the roughly seven inches of average sea-level rise seen globally in the last century stems from "thermal expansion" of the oceans as they absorb heat. The effect is expected to add almost two feet of sea-level rise, on average, to coasts worldwide in this century. Overall, the seafloor cores tell a story of long-term cooling of ocean waters, a drop ranging from 1.5 to 2.2°C (2.7 to 3.8°F) across the depth, starting from roughly 7,000 years ago until the Middle Ages. The records also discern a bump in temperatures during a warm period around the year 1200, followed by a drop during the Little Ice Age that stretched from 1550 to 1850. "What we see is that it takes decades for the ocean to absorb changes in surface temperatures," said lead author Yair Rosenthal of Rutgers University. (NatGeo/science.1240837)

Major U.S. Pension Funds Ask for Climate Change Study

Some of the largest U.S. and global pension funds are worried that major fossil fuel companies may not be as profitable in the future because of efforts to limit climate change, and they want details on how the firms will manage a long-term shift to cleaner energy sources. Leaders of 70 funds are asking 45 of the world's top oil, gas, coal, and electric power companies to conduct detailed assessments of how efforts to control climate change could affect their businesses. Signers of the letter include the comptrollers or treasurers of California, New York, Maryland, Oregon, Vermont, and Connecticut, as well as The Church of England Pensions Board, the Scottish Widows Investment Partnership, the investment firm Rockefeller & Co., and dozens of other funds that control a total of about \$3 trillion. Jack Ehnes, head of the California State Teachers' Retirement System, said his fund is not seeking to punish fossil fuel companies but rather work with them to identify long-term options that will be good for shareholders, the environment, and the firms. (AP)

Climate Change Threatens Overseas Economic Growth

Within 12 years, nearly a third of global economic output will come from countries facing "high" to "extreme" risks from the effects of climate change, according to a new report from UK-based risk analysis firm Maplecroft. The annual Climate Change Vulnerability Index ranks the vulnerability of the world's countries—and the 50 cities deemed most economically important—to climate change by evaluating their risk of exposure to extreme climate events, the sensitivity of their populations to that exposure, and the adaptive capacity of governments to respond to the challenge. The findings are particularly bad for Bangladesh, which topped both lists. Its capital, Dhaka, ranks as the most vulnerable city because of threats like flooding, storm surge, cyclones, and landslides; its susceptible population; and weak institutional capacity to address the problem. Other global growth markets facing "extreme risk" include Nigeria, India, Pakistan, Vietnam, and the Philippines. According to the report, the combined GDP of the 67 "high" or "extreme" risk countries will nearly triple from \$15 to \$44 trillion by 2025. (CNN)

A handwritten signature in blue ink, appearing to read "Sheldon Whitehouse".