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Contact:

Ruth Teichroeb in Iqaluit – 867.979.2878 (this is a land line number), 206.450.1198 (cell), rteichroeb@pewtrusts.org

Brandon MacGillis in Washington, DC - 202.887.8830, bmacgillis@pewtrusts.org

Pew Environment Report Says Melting Arctic Could Cost \$2.4 Trillion by 2050

Iqaluit, Nunavut, Canada – 02/05/2010 –The Pew Environment Group today released a report that for the first time quantifies the global cost of the Arctic’s declining ability to cool the climate, indicating that the rapid melting of the region could carry a minimum price tag of \$2.4 trillion U.S. by 2050.

The report, issued as G7 finance ministers began a two-day meeting in this southeast Baffin Island town, estimates that this year alone the climate cooling value lost by retreating Arctic sea ice and snow and thawing permafrost could be an estimated \$61 billion U.S. to \$371 billion U.S. On the low end of its projections, the report estimates that these costs could accumulate to almost \$5 trillion U.S. by the end of the century if climate change is not abated.

“Putting a dollar figure on the Arctic’s climate services allows us to better understand both the region’s immense importance and the enormous price we will pay if the ice is lost,” said Dr. Eban Goodstein, co-author of the report and an economist who directs the Bard Center for Environmental Policy at Bard College in New York. “At the mid-range of our estimates, the cumulative cost of the melting Arctic in the next 40 years is equivalent to the annual gross domestic products of Germany, Russia and the United Kingdom combined.”

To arrive at the economic cost of Arctic melting, the report’s authors converted projected trends in snow and ice loss and methane releases into carbon dioxide emissions equivalents. Those were multiplied by the social cost of carbon, an estimate by economists of impacts from climate change on agriculture, energy production, water availability, sea level rise and flooding and other factors. This calculation produced the range of initial dollar estimates cited in the report.

The report “*An Initial Estimate of the Cost of Lost Climate Services Due to Changes in the Arctic Cryosphere*” notes that this region is warming at twice the rate of the rest of the planet. The loss of heat-reflecting sea ice and snow results in the absorption of more solar energy leading to warming. The thawing of permafrost, or permanently frozen ground, releases methane, a potent greenhouse gas. Increased warming from these effects, in turn, leads to more melting and thawing in a feedback loop.

The report calculates that this year alone, Arctic melting may warm the Earth an amount equivalent to pumping three billion metric tons of CO2 into the atmosphere. “That’s equal to forty percent of all U.S. industrial emissions this year or bringing on line more than 500 large

coal-burning power plants,” said Dr. Eugenie Euskirchen, co-author of the report and a scientist from the University of Alaska at Fairbanks’ Institute of Arctic Biology.

“The preliminary results in this report show that as the Arctic melts we are losing a hidden treasure: the far north’s crucial capacity to cool the earth,” said Scott Highleyman, international Arctic director for the Pew Environment Group. “We urge the G7 finance ministers to commission a full economic analysis of the global climate services provided by a frozen Arctic and what losing the planet’s ‘air conditioner’ will cost all of us.”

The report was released by the Pew Environment Group’s Oceans North campaign which promotes sound stewardship of the Arctic Ocean. The authors are solely responsible for its content, which was reviewed by more than a dozen economists and Arctic scientists.

Resources:

Dr. Eugenie Euskirchen, University of Alaska at Fairbanks, Institute of Arctic Biology, 907.687.3864, seeuskirchen@alaska.edu

Dr. Eban Goodstein, director, Bard Center for Environmental Policy, Bard College, New York, 503.806.6370, ebangood@bard.edu

Scott Highleyman, Pew Environment Group’s International Arctic director, 360.715.0063, shighleyman@pewtrusts.org

To view the report and background materials:

www.oceansnorth.org

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