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SUBJECT:: FYI: 20th CENTURY CLIMATE NOT SO HOT

TO:"Douglas_Onley/HQ/UIMC.UIMC"@ue.org @ inet ("Douglas_Onley/HQ/UIMC.UIMC"@ue.org
READ:UNKNOWN

TEXT:
Doug,
Another science article on climate change. These findings aren't covered in newspapers, but nonetheless are important to the debate. I thought you might want to forward it to your mother.

Kameran

>Release No: 03-10
>For Immediate Release
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>NOTE TO EDITORS: Photos of key climate indicators are available online at
>http://cfa-www.harvard.edu/press/pr0310image.html
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>20th CENTURY CLIMATE NOT SO HOT
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>Cambridge, MA -- A review of more than 200 climate studies led by
>researchers at the Harvard-Smithsonian Center for Astrophysics has
>determined that the 20th century is neither the warmest century nor
>the century with the most extreme weather of the past 1000 years. The
>review also confirmed that the Medieval Warm Period of 800 to 1300
>A.D. and the Little Ice Age of 1300 to 1900 A.D. were worldwide
>phenomena not limited to the European and North American continents.
>While 20th century temperatures are much higher than in the Little
>Ice Age period, many parts of the world show the medieval warmth to
>be greater than that of the 20th century.
>
>Smithsonian astronomers Willie Soon and Sallie Baliunas, with
>co-authors Craig Idso and Sherwood Idso (Center for the Study of
>Carbon Dioxide and Global Change) and David Legates (Center for
>Climatic Research, University of Delaware), compiled and examined
>results from more than 240 research papers published by thousands of
>researchers over the past four decades. Their report, covering a
>multitude of geophysical and biological climate indicators, provides
>a detailed look at climate changes that occurred in different regions
>around the world over the last 1000 years.
>
>"Many true research advances in reconstructing ancient climates have
>occurred over the past two decades," Soon says, "so we felt it was
>time to pull together a large sample of recent studies from the last
>5-10 years and look for patterns of variability and change. In fact,
>clear patterns did emerge showing that regions worldwide experienced
>the highs of the Medieval Warm Period and lows of the Little Ice Age,
>and that 20th century temperatures are generally cooler than during
>the medieval warmth."
>
>Soon and his colleagues concluded that the 20th century is neither
>the warmest century over the last 1000 years, nor is it the most
>extreme. Their findings about the pattern of historical climate

>variations will help make computer climate models simulate both
>natural and man-made changes more accurately, and lead to better
>climate forecasts especially on local and regional levels. This is
>especially true in simulations on timescales ranging from several
>decades to a century.
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>--Historical Cold, Warm Periods Verified--
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>Studying climate change is challenging for a number of reasons, not
>the least of which is the bewildering variety of climate indicators -
>all sensitive to different climatic variables, and each operating on
>slightly overlapping yet distinct scales of space and time. For
>example, tree ring studies can yield yearly records of temperature
>and precipitation trends, while glacier ice cores record those
>variables over longer time scales of several decades to a century.
>
>Soon, Baliunas and colleagues analyzed numerous climate indicators
>including: borehole data; cultural data; glacier advances or
>retreats; geomorphology; isotopic analysis from lake sediments or ice
>cores, tree or peat celluloses (carbohydrates), corals, stalagmite or
>biological fossils; net ice accumulation rate, including dust or
>chemical counts; lake fossils and sediments; river sediments; melt
>layers in ice cores; phenological (recurring natural phenomena in
>relation to climate) and paleontological fossils; pollen; seafloor
>sediments; luminescent analysis; tree ring growth, including either
>ring width or maximum late-wood density; and shifting tree line
>positions plus tree stumps in lakes, marshes and streams.
>
>"Like forensic detectives, we assembled these series of clues in
>order to answer a specific question about local and regional climate
>change: Is there evidence for notable climatic anomalies during
>particular time periods over the past 1000 years?" Soon says. "The
>cumulative evidence showed that such anomalies did exist."
>
>The worldwide range of climate records confirmed two significant
>climate periods in the last thousand years, the Little Ice Age and
>the Medieval Warm Period. The climatic notion of a Little Ice Age
>interval from 1300 to1900 A.D. and a Medieval Warm Period from 800 to
>1300 A.D. appears to be rather well-confirmed and wide-spread,
>despite some differences from one region to another as measured by
>other climatic variables like precipitation, drought cycles, or
>glacier advances and retreats.
>
>"For a long time, researchers have possessed anecdotal evidence
>supporting the existence of these climate extremes," Baliunas says.
>"For example, the Vikings established colonies in Greenland at the
>beginning of the second millennium that died out several hundred
>years later when the climate turned colder. And in England, vineyards
>had flourished during the medieval warmth. Now, we have an
>accumulation of objective data to back up these cultural indicators."
>
>The different indicators provided clear evidence for a warm period in
>the Middle Ages. Tree ring summer temperatures showed a warm interval
>from 950 A.D. to 1100 A.D. in the northern high latitude zones, which
>corresponds to the "Medieval Warm Period." Another database of tree
>growth from 14 different locations over 30-70 degrees north latitude
>showed a similar early warm period. Many parts of the world show the
>medieval warmth to be greater than that of the 20th century.
>
>The study -- funded by NASA, the Air Force Office of Scientific

>Research, the National Oceanic and Atmospheric Administration, and
>the American Petroleum Institute -- will be published in the Energy
>and Environment journal. A shorter paper by Soon and Baliunas
>appeared in the January 31, 2003 issue of the Climate Research
>journal.
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>Headquartered in Cambridge, Massachusetts, the Harvard-Smithsonian
>Center for Astrophysics (CfA) is a joint collaboration between the
>Smithsonian Astrophysical Observatory and the Harvard College
>Observatory. CfA scientists organized into six research divisions
>study the origin, evolution, and ultimate fate of the universe.
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