



How can you benefit with the ScholarShare® College Savings Plan?

GET THE FACTS

Fidelity Brokerage Services, Member NYSE, SIPC 543786.1



News

Articles

Videos

Images

Books

Search

Health & Medicine

Mind & Brain

Plants & Animals

Earth & Climate

Space & Time

Matter & Energy

Computers & Math

Fossils & Ruins

Science News

Share Blog Cite

Print Email Bookmark

Water Vapor Feedback Loop Will Cause Accelerated Global Warming, Professor Warns

ScienceDaily (Feb. 20, 2009) — Here's yet another reason to hate humidity: it expands global warming, says a Texas A&M University professor.

See Also:

Earth & Climate

- Environmental Issues
- Global Warming
- Climate
- Water
- Weather
- Earth Science

Reference

- Consensus of scientists regarding global warming
- Scientific opinion on climate change
- Greenhouse effect
- Dew point

Andrew Dessler, a professor in the Department of Atmospheric Sciences who specializes in research on climate, says that warming due to increases in greenhouse gases will lead to higher humidity in the atmosphere. And because water vapor itself is a greenhouse gas, this will cause additional warming. This process is known as water vapor feedback and is responsible for a significant portion of the warming predicted to occur over the next century.

"It's a vicious cycle – warmer temperatures mean higher humidity, which in turn leads to even more warming," Dessler explains.

The perspective by Dessler and co-author Steven Sherwood of the Climate Change Research Centre at

the University of New South Wales is published in the journal *Science*. In the article, they review and summarize the peer-reviewed evidence in support of a strong water vapor feedback and conclude that the evidence supporting it is overwhelming.

"For years, there was a debate over this mechanism, with some even questioning if the water vapor feedback existed at all. But recent work on this feedback has moved its existence and strength beyond argument," Dessler adds.

Predictions of significant global warming over the next 100 years by climate models require a strong water vapor feedback. Recent estimates suggest the earth will warm from 2 to 4 degrees Celsius (4 to 8 degrees Fahrenheit) over the next century – a scenario that could have devastating long-term consequences.

"Everything shows that the climate models are probably getting the water vapor feedback right, which means that unless we reduce emissions, it is going to get much, much warmer on our planet by the end of the century," he adds.

Many scientists believe such warming rates are already happening.

They can point to the summer of 2003, when a prolonged heat wave gripped Europe. According to the Earth Policy Institute, more than 35,000 people died that summer, with France recording over 14,000 deaths and Germany more than 7,000.

Additionally, warmer temperatures are having an adverse effect in the Arctic, where rapid loss of ice is now occurring.

"The only possible way future warming won't be significant is if there exists some sort of off-setting negative feedback, which has yet to be discovered," Dessler notes.

"Most scientists, myself included, judge that to be a pretty unlikely possibility."

Email or share this story:

More

Story Source:

Adapted from materials provided by Texas A&M University.

Ads by Google

AB32 Global Warming Act

Reduce Emissions & Save Energy. For Carbon Management Call 281-207-7200 www.ElementMarkets.com

Blood Pressure Discovery

Hugh Downs Reports: Artery clearing secret from Nobel Prize Winner www.bottomlinesecrets.com

Work Overseas in Science

Global careers in scientific fields Submit your resume today. www.globalcorporaterecareers.com

Video: Catastrophe Denied

The Science of the Climate Skeptic Position. Free 90-minute Movie. www.Climate-Skeptic.com

Related Stories

Water Vapor Confirmed As Major Player In Climate Change (Nov. 18, 2008)

— Water vapor is known to be Earth's most abundant greenhouse gas, but the extent of its contribution to global warming has been debated. Using recent NASA satellite data, researchers have estimated ... [> read more](#)

Water Vapor Feedback Is Rapidly Warming Europe (Nov. 9, 2005)

— A new report indicates that the vast majority of the rapid temperature increase recently observed in Europe is likely due to an unexpected greenhouse gas: water vapor. Elevated surface temperatures ... [> read more](#)

Stratospheric Water Vapor Is a Global Warming Wild Card (Feb. 1, 2010)

— A 10 percent drop in water vapor ten miles above Earth's surface has had a big impact on global warming, say researchers. The findings might help explain why global surface temperatures have not ... [> read more](#)

Cyclones Spurt Water Into Stratosphere, Feeding Global Warming (Apr. 21, 2009)

— Scientists have found that tropical cyclones readily inject ice far into the stratosphere, possibly feeding global warming. The finding provides more evidence of the intertwining of severe weather ... [> read more](#)

Toward The Design Of Greener Consumer Products (Sep. 18, 2009)

— Scientists are reporting development of a new method for screening molecules and predicting how certain materials, ranging from chemicals used in carpeting to electronics, will contribute to global ... [> read more](#)

Ads by Google

My Trip Emission

Check the CO2 emission of your car before your trip

Just In: Metamaterial Bends Light 'Wrong' Direction

Science Video News



Global Warming Equals Stronger Hurricanes

Climate change experts studying hurricanes documented a 35-year warming trend in ocean surface temperature and linked it to larger hurricanes. The ... [> full story](#)

Environmental Engineers Use Algae To Capture Carbon Dioxide

Climatologists Forecast Completely New Climates

Research Meteorologists See More Severe Storms Ahead: The Culprit -- Global Warming

[more science videos](#)

How can you benefit with the ScholarShare® College Savings Plan?

GET THE FACTS

SCHOLARSHARE college savings plan

Turn here Fidelity INVESTMENTS

Fidelity Brokerage Services, Member NYSE, SIPC 543786.1

Breaking News

... from NewsDaily.com

U.S. military tests X-37B reusable spaceship



Orcas are more than one species, gene study shows

Iceland volcano tremors stay strong, ash plume low

Volcanic ash poses little health threat so far: WHO

Volcanic ash poses little health threat so far: WHO

[more science news](#)

In Other News ...

Wash. to Wellpoint: Stop dropping breast cancer patients

G20 to say recovery on track, pace uneven: source

Oil not flowing from sunken rig or well

Belgian bishop resigns after admitting abuse

U.S. envoy Mitchell

one of the following formats:

- APA Texas A&M University (2009, February 20). Water Vapor Feedback Loop Will Cause Accelerated Global Warming, Professor Warns. *ScienceDaily*. Retrieved April 24, 2010, from <http://www.sciencedaily.com/releases/2009/02/090219152132.htm>
- MLA

Note: If no author is given, the source is cited instead.

Know More About Global Warming
Bookmarky Has All The Best Sites
Global.Warming.Bookmarky.com

Solar Energy Solutions
We make solar simple. Full solutions installed.
groSolar.com

Climate Change Policy
News, Developments & Analysis
Sign up for free email alerts
climate.bna.com

[Baghdad after al Qaeda deaths](#)
[Wall Street gives much to lawmakers in reform debate](#)
[more top news](#)

Copyright Reuters 2008. See [Restrictions](#).

Search ScienceDaily

Number of stories in archives:
84,659

Free Subscriptions ... from ScienceDaily

Get the latest science news with our free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:

[Email Newsletters](#)
[RSS Newsfeeds](#)

Find with keyword(s):

Enter a keyword or phrase to search ScienceDaily's archives for related news topics, the latest news stories, reference articles, science videos, images, and books.

Feedback ... we want to hear from you!

Tell us what you think of the new ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

Your Name:

Your Email:

Comments:

Click button to submit feedback:

[About This Site](#) | [Editorial Staff](#) | [Awards & Reviews](#) | [Contribute News](#) | [Advertise With Us](#) | [Privacy Policy](#) | [Terms of Use](#)
Copyright © 1995-2009 ScienceDaily LLC — All rights reserved — Contact: editor@sciencedaily.com
Part of the iVillage Your Total Health Network