

Climate Change Concepts, Science and Impacts - Newsletter

1. Title: These Ancient Shipwrecks hold a hidden message about Climate Change. *Washington Post, Energy and Environment.* Mooney, C. (2016, March).

Description: Inventive new research has found a surprising way of investigating the relationship between hurricanes and climate change by examining the history of Spanish shipwrecks in the Caribbean Sea during a planetary cool period in the late 17th and 18th century.

The result, based on comparisons between tree rings from the Florida Keys and a historical record of shipwrecks, finds that there were far fewer hurricanes, or tropical cyclones, from 1645 through 1715, when the planet went through what is called the "Maunder Minimum." This was an era in which very low sunspot activity correlated with relatively cooler temperatures here on the Earth (the Maunder Minimum was part of a cooler period known to climate history as the "Little Ice Age").

Retrieved from <https://www.washingtonpost.com/news/energy-environment/wp/2016/03/07/what-these-ancient-shipwrecks-could-be-telling-us-about-climate-change/>

2. Title: Antarctic Model raises prospect of Unstoppable ice collapse. *Nature.*

Tollefson, J. (2016, March 30).

Description: Choices that the world makes this century could determine the fate of the massive Antarctic ice sheet. This study finds that continued growth in greenhouse-gas emissions over the next several decades could trigger an unstoppable collapse of Antarctica's ice raising sea levels by more than a meter by 2100 and more than 15 meters by 2500.

Retrieved from http://www.nature.com/news/antarctic-model-raises-prospect-of-unstoppable-ice-collapse-1.19638?WT.ec_id=NEWS20160331&spMailingID=51044976&spUserID=Mzg0NTc4MDM2MDkS1&spJobID=883988254&spRepoId=ODgzOTg4MjU0S0

3. Title: Climate Changes can kick below 2⁰ C limit. *Climate news network.*

Radford, T. (2015, October 18).

Description: Climate change could arrive with startling speed. New research has identified at least 37 "tipping points" that would serve as evidence that climate change has happened - and happened abruptly in one particular region. And 18 of them could happen even before the world warms by an average of 2°C, the proposed "safe limit" for global warming.

Retrieved from <http://climatenewsnetwork.net/abrupt-climate-change-can-happen-below-2-warming-rise/>

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- 4. Title: Green Climate Fund vows to up its game. *Nature*.** Kumar, S. (2016, March 30).

Description: The Green Climate Fund (GCF) has had an inauspicious start to life but 2016 could be the year it springs into action. The organization, a flagship funding mechanism for the United Nations, was established in 2010 to channel billions of dollars to help developing nations to cope with climate change. But it hasn't yet handed out any money and has been widely criticized for its lack of accountability and transparency.

Retrieved from http://www.nature.com/news/green-climate-fund-vows-to-up-its-game-1.19627?WT.ec_id=NEWS-20160331&spMailingID=51044976&spUserID=Mzg0NTc4MDM2MDkS1&spJobID=883988254&spRepo_rId=ODgzOTg4MjU0S0

- 5. Title: Climate Change Monitoring in the Developing World. *International Innovation*.** Hoelzle, M. (2016, January 26).

Description: Professor Martin Hoelzle outlines the need for climate change monitoring and forecasting techniques based around glaciers and, specifically, why his team is helping to amend the dearth of such strategies in the developing world.

Retrieved from <http://www.internationalinnovation.com/build/wp-content/uploads/2016/01/Martin-Hoelzle-Intl-Innovation-Research-Impacts-Q3-2-Research-Media-LR-1.pdf>

- 6. Title: Crops and Climate Change. *International Innovation*.** Veiseth, S.V. (2015, September 7).

Description: Expose an animal to uncomfortable heat and it will up and leave; for plants, however, this is not an option. Dr. Silje Veie Veiseth discusses how her work is revealing the epigenetic mechanisms underpinning a plant's acclimation to climate change.

Retrieved from <http://www.internationalinnovation.com/build/wp-content/uploads/2015/09/Silje-Veie-Veiseth-189-Research-Media.pdf>

- 7. Title: For normally Stoic Farmers, the stress of climate change can be too much to bear. *The Star.com*.** Hamilton, T. (2016, February 28).

Description: Farms are on the front lines of climate change, and few people confront the stresses of extreme weather as intimately as farmers.

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Retrieved from <https://www.thestar.com/news/world/2016/02/28/for-normally-stoic-farmers-the-stress-of-climate-change-can-be-too-much-to-bear.html>

- 8. Title: Mess on the Mississippi: Damage to Coastal Marshes may mean lasting problems for Nation's Vital River. *The Wall street journal*.** Machalaba, D., Opdyke, D., & Wells, K. (2005, September 2).

Description: As state and federal officials grappled with the massive human toll wrought by one of the most powerful hurricanes to ravage the U.S. coastline, evidence mounted that the storm also damaged the critical Mississippi River shipping corridor south of New Orleans as well as the remote towns and ecologically sensitive marshes that surround it.

Retrieved from <http://www.wsj.com/articles/SB112562764584229964>

- 9. Title: Thanks to climate change, the Arctic is turning green. *The Washington Post*.** Mooney, C. (2016, June 27).

Description: Earlier this month, NASA scientists provided a visualization of a startling climate change trend - the Earth is getting greener, as viewed from space, especially in its rapidly warming northern regions. And this is presumably occurring as more carbon dioxide in the air, along with warmer temperatures and longer growing seasons, makes plants very, very happy.

Now, new research in Nature Climate Change not only reinforces the reality of this trend which is already provoking debate about the overall climate consequences of a warming Arctic but statistically attributes it to human causes, which largely means greenhouse gas emissions (albeit with a mix of other elements as well).

Retrieved from <http://www.adn.com/arctic/2016/06/27/thanks-to-climate-change-the-arctic-is-turning-green/>