

Annotated Bibliography

“Climate change causes: A blanket around the Earth.” *NASA*, NASA, 10 Aug. 2017, climate.nasa.gov/causes/. Accessed 18 Sept. 2017.

This article provides three big factors that dispute the argument of the sun being one of the main causes of climate change. The first is Since 1750, the average amount of energy coming from the sun either remained constant or increased slightly. The second is if the warming were caused by a more active sun, then scientists would expect to see warmer temperatures in all layers of the atmosphere. And the third is climate models that include solar irradiance changes can't reproduce the observed temperature trend over the past century without including a rise in greenhouse gases.

“Deforestation and Its Effect on the Planet.” *National Geographic*, 9 Oct. 2009, <http://www.nationalgeographic.com/environment/global-warming/deforestation/>.

This article begins by discussing the scope of the problem of deforestation. It explains some of the motivating factors for deforestation such as agriculture, logging, and land development. After discussing some of the common contributors to deforestation, the article describes the long term consequences of deforestation and how it contributes to climate change as well as offering a solution to mitigate the impact of deforestation.

“Deforestation and Its Extreme Effect on Global Warming.” *Scientific American*, <https://www.scientificamerican.com/article/deforestation-and-global-warming/>. Accessed 20 Sept. 2017.

This article primarily focuses on the contribution of deforestation on global carbon emissions as well as steps that countries are currently undertaking to slow or reverse

the process of deforestation. It begins by stating that the rate of deforestation has only increased and that the current growth rate is unsustainable while also providing an explanation for the increase. The article also details important programs aimed to curb the effect of deforestation such as REDD and their effectiveness in solving the problem.

“Deforestation Of The Amazon Up 29 Percent From Last Year, Study Finds.” *NPR.org*, <http://www.npr.org/sections/thetwo-way/2016/11/30/503867628/deforestation-of-the-amazon-up-29-percent-from-last-year-study-finds>. Accessed 20 Sept. 2017.

This article discusses the alarming growth rate of deforestation in Brazil and the inability of law enforcement to punish illegal loggers and other individuals cutting down trees in the amazon. The increased rate of deforestation has raised concerns over Brazil's ability to uphold its commitments to the Paris Agreement. The lack of resources faced by law enforcement officials make it difficult for them to track down and halt illegal logging operations since loggers are much better equipped and often disappear before law enforcement can find them.

Evans, Erv. “Tree Facts.” *NC State*, 3 Oct. 2017, <https://projects.ncsu.edu/project/treesofstrength/treefact.htm>.

This article is a collection of facts to show the positive impact that trees make in the environment. In addition to detailing exactly how much carbon a single tree can absorb, the article highlights the different products of trees that humans rely on on a daily basis.

Friedman, Thomas L. *THANK YOU FOR BEING LATE: an optimists guide to thriving in the age of accelerations*. New York, NY, Farrar, Straus and Giroux, 2017.

The novel *Thank you for Being Late*, by Thomas Friedman, discusses the tectonic movements that are reshaping the world and their worst impacts. Although the author focuses on various worldwide impacts, he dedicates a portion of the novel to climate change. It is stated that climate change is a direct result of human activities that have been building up throughout the past centuries. For instance, the author emphasizes that daily activities, ranging from atomic testing to the hundreds of millions of tons of cement poured on the Earth's surface, will contribute to the increase in climate change over time. Other causes such as the burning of fossil fuels and volcanic eruption are discussed further throughout the novel.

“How do human activities contribute to climate change and how do they compare with natural influences?” *European Environment Agency*, EEA, 17 June 2017.

This brief article focuses on the increase in greenhouse gases from human activities that contribute to climate change. These gases and aerosols alter the incoming solar radiation as well as the outgoing infrared radiation, which results in the warming or cooling of the climate system. The burning of fossil fuels has the greatest impact on the increase of greenhouse gases, which has had a warming influence on the atmosphere ever since the industrial era.

“National Geographic: Eye in the Sky--Deforestation.” *National Geographic Eye in the SKy*, 3 Oct. 2017, <http://www.nationalgeographic.com/eye/deforestation/effect.html>.

Rather than focusing on the long term effect of deforestation on climate change, this article discusses some of the more immediate effects of deforestation. After explaining some motivating factors for deforestation, the article describes the impact

that deforestation has on the animals that rely on the forest as well as the lack of rainfall in drought prone areas. Furthermore, it brings up the point that burning trees not only removes a carbon sink but releases a significant amount of carbon and methane into the atmosphere.

Naudts, Kim, et al. "Europe's Forest Management Did Not Mitigate Climate Warming." *Science*, vol. 351, no. 6273, Feb. 2016, pp. 597–600. science.sciencemag.org, doi:10.1126/science.aad7270.

A commonly accepted solution to deforestation is to simply plant more trees, but this paper explains that the simplest solution isn't necessarily the best one. By failing to ensure that the newly trees are a good ecological "fit" for the area, these newly planted tree can actually contribute to climate change by becoming carbon sources. Additionally, planting different types of trees can lead to a change in the properties of a forest, also contributing to warming.

Studies Show Impact of Forest Management and Deforestation on Climate.

<https://phys.org/news/2016-02-impact-forest-deforestation-climate.html>. Accessed 20 Sept. 2017.

This article qualifies the claim that deforestation can be resolved by simply planting new trees and through forest management. Researchers found that poor forest management can lead to increased emissions and contribute to climate change. Additionally, researchers found that forest loss causes an increase in diurnal temperature which ultimately leads to a variation in mean and maximum air temperatures over time.

“Tropical Deforestation and Global Warming.” *Union of Concerned Scientists*,

http://www.ucsusa.org/global_warming/solutions/stop-deforestation/tropical-deforestation-and-1.html. Accessed 20 Sept. 2017.

This article discusses the benefits of reducing deforestation and the effectiveness of some possible solutions. After identifying the major industries that are the biggest contributors to deforestation, the article delves into the benefits of reducing deforestation such as saving biodiversity and supporting sustainable development.

The article explains that current efforts to fight deforestation are a good starting point but require more active collaboration and communication from political leaders and governments.