

How The Burning of Fossil Fuel Contributes to Climate Change

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How The Burning Of Fossil Fuel Contributes To Climate Change

The United States alone gets over fifty percent of its total energy from coal, oil, and natural gasses which are all made from fossil fuels. We depend on these fuels to heat our homes, vehicles, and electrical industries. But even though we burn fossil fuel for our needs we don't understand all the negative effects that the burning of fossil fuels can cause. We don't realize that the burning of fossil fuels is harmful to our environment. "The burning of fossil fuels causes environmental problems like air pollution and smog which then can cause long-term health problems like lung cancer, heart diseases, respiratory disease, and even death" (Harvard T.H Chan). Not only does air pollution cause long-term health problems, but it can also cause deaths worldwide. The ongoing use of fossil fuels is causing long-term harm to our health and unending harm to the climate of our planet.

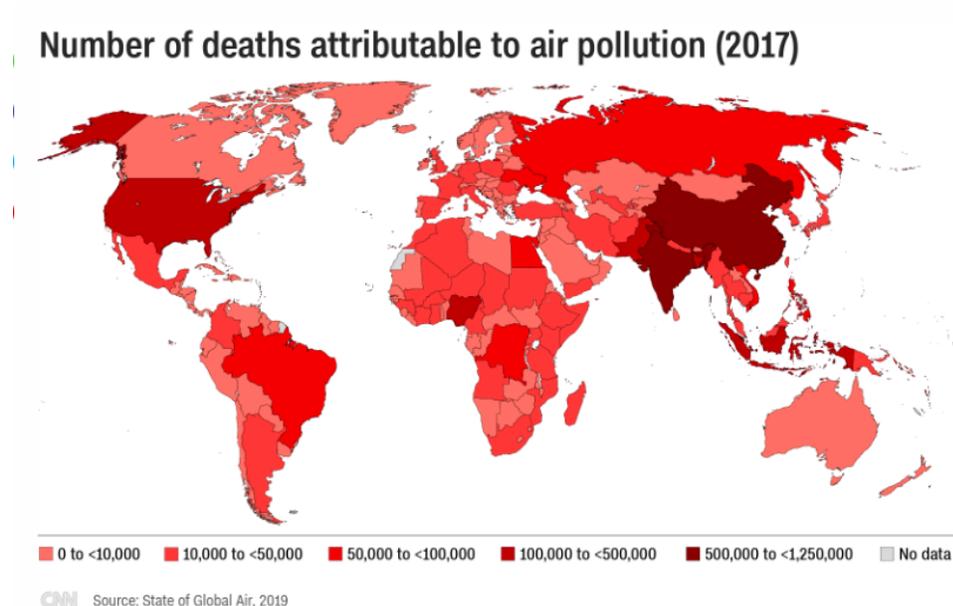
How Fossil Fuel Production And Combustion Affect Human Health

The burning of Fossil Fuels is known to cause life-threatening health problems. Studies show that Fossil fuel combustion is responsible for "1 in 8 premature deaths worldwide, including more than a hundred thousand deaths a year in the United States" (Milman, 2021, p1). Burning fossil fuel causes a particulate matter called PM 2.5 which is an air pollutant that is known to spike someone's health when levels increase in the air. PM 2.5 air pollution is also linked to respiratory diseases like asthma and low birth weight defects. According to Frederica P. Perera (2017) "including PM 2.5, O3, and NO2 are linked to reduced lung function, a recent study found out that almost 2,000 schoolchildren has been exposed to higher levels of air pollution, including NO2 and PM 2.5, and had lower lung function growth at 18 years of age" (Frederica P. Perera 2017, p.143). Air pollution affects infants and Children drastically which can be serious because children's bodies aren't fully developed so they have a higher chance of

developing long-term health problems that can affect them even in their adulthood. Air pollution also contributes to mental health in children, particulate matter/ PM has been found to contribute to anxiety and depression in children. According to Harvard T.H Chan School of Public Health “ Burning fossil fuels produces carbon pollution such as particulate matter or PM, that have been found to contribute to symptoms of depression and anxiety in children” (Harvard T.H CHAN). P.M 2.5 can ultimately lead to even death, P.M 2.5 is known to be one of the the most highest factors of death around the world, inhaling particles of P.M 2.5 is dangerous because when you inhale the particles they can go directly to yours lungs and bloodstream which can cause you to suffer from long term illnesses or death. As shown below in Figure 1 the amount of deaths caused by Air Pollution due to the P.M 2.5.

Figure 1

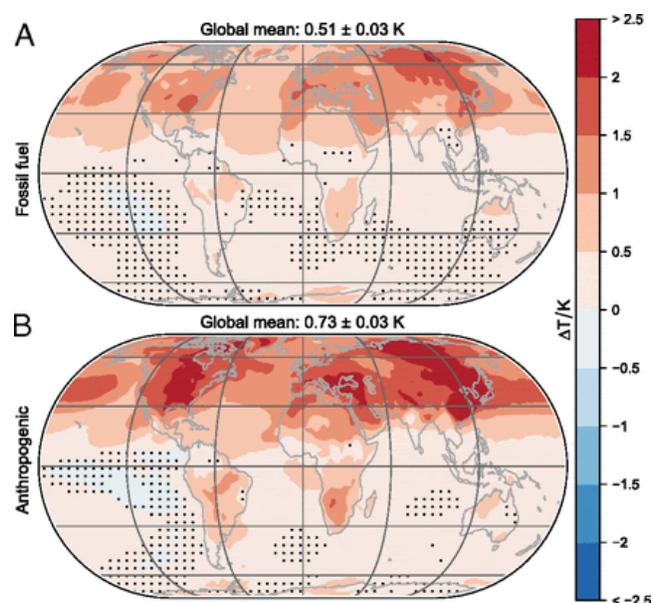
Map of deaths from Air Pollution (2017)



Note. This map states all the number of deaths that have been caused by air pollution in 2017, in the map both Asia and the United States both have over 500,000 deaths from air pollution due to both continents having high levels of harmful particulate matter (PM 2.5). *Air pollution causes*

more deaths than alcohol, malnutrition and drug addiction. Our Daily Planet. (2019, April 4). Retrieved November 18, 2021, from <https://www.ourdailyplanet.com/story/air-pollution>.

Not only does the burning of Fossil fuels cause life threatening health problems it could also affect our climate negatively, when fossil fuels are burned they release a massive amount of carbon dioxide into the atmosphere which is known as a greenhouse gas. These greenhouse gasses trap heat into our atmosphere causing global warming. When Global warming is in effect there are risks of sea level rise, extreme weather conditions, food shortage, extinction of animal species, health problems, and increase of poverty. The Burning of fossil fuels is ultimately one of the main causes of global warming on our planet. I say this because stated by ClientEarth Communications (2020) “The Intergovernmental Panel on Climate Change (IPCC) has found that emissions from fossil fuels are the dominant cause of global warming, In 2018, 89% of global CO₂ emissions came from fossil fuels” (p.1). We Humans rely so much on Fossil we power vehicles, planes, and even our homes with fossil fuel. We should be blamed because we use fossil fuels daily but we don't even seem to care to think about all the negative things that could lead to using fossil fuels emissions. As shown Below in Figure 2 pollution is caused by Human activities.

Figure 2*Global Temperature changes*

Note. Temperature changes at the earth's surface from removing particulate air pollution. (A) Fossil fuel related (B) GHGs and aerosols caused by human activities. *Lelieveld, J., Klingmüller, K., Pozzer, A., Burnett, R. T., Haines, A., & Ramanathan, V. (2019, April 9). Effects of fossil fuel and total anthropogenic emission removal on public health and climate. PNAS. Retrieved November 18, 2021, from <https://www.pnas.org/content/116/15/7192>.*

Keeping Fossil Fuels Underground

Recently there has been a discovery of whether or not people should leave fossil fuels in the ground to prevent climate change. Scientists found out that if fossil fuels reserves are kept underground there is a drastically low chance of climate change, they found that “90% of coal should remain unextracted and over 60% of oil and fossil Fuel must be kept underground” (Meredith 2021) in order to even have a chance to keeping global temperature from rising over 2 degrees. Even though these fossil fuel industries know about the Climate change crisis they still don't want to make a change, companies like Koch and Exxon hired climate change deniers to confuse the public of thinking that Fossil Fuel is not affecting climate change in any way. We

could have managed to switch to clean renewable energy but because of these industries denying the cause of Climate change millions of people suffered illness and died due to the companies denial. The best option going forward is to store fossil fuels underground and start to use clean renewable energy sources like Green power (Solar, wind, biomass and geothermal) in order for us to stop the chance of climate change disasters. For us to limit global heating to 2 degrees celsius each country has to store a certain amount of fossil Fuel reserves for-example “The US, Russia and the Soviet have close to half of global coal reserves but will need to keep over 90% underground and China and india will have to keep 76% of coal underground” (Meredith 2021). If we don’t keep these fossil fuels underground in the coming decades global heating and climate change disasters will continue to rise.

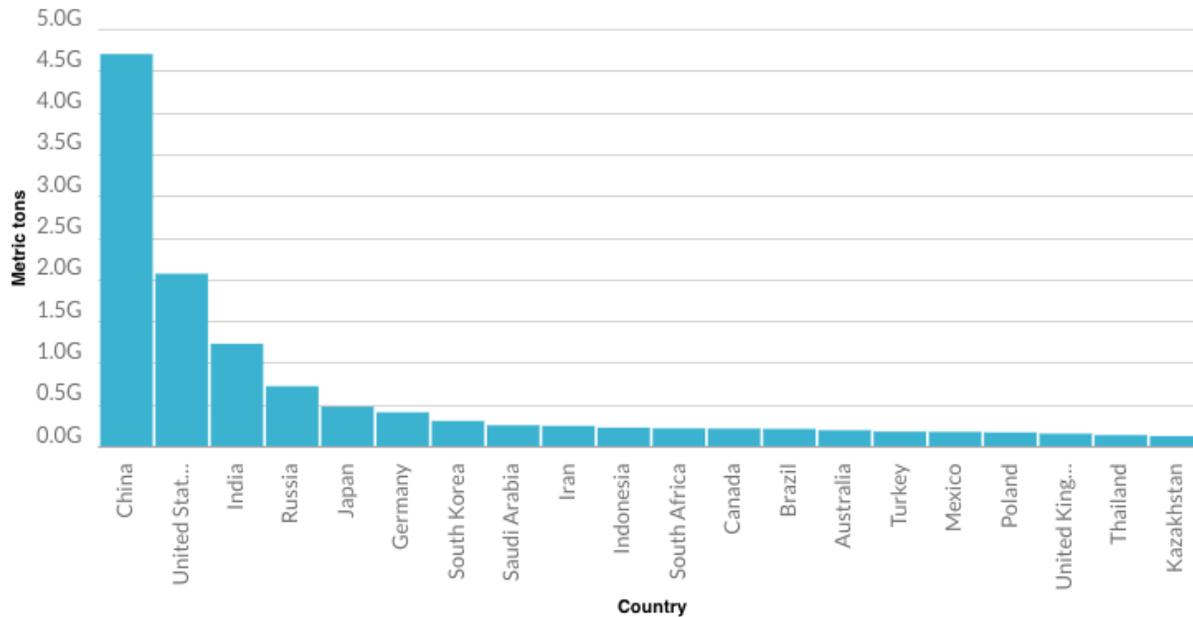
China Being the Biggest Contributing Country to CO2 Emissions

Unlike any country China over the years has been one of the largest contributors to CO2 Emission, “with almost 9,838 million metric tons of CO2 emission from fossil fuel” (Frohlich, Blossom, 2019). Due to China's massive coal production, China is the top country that uses the most CO2 emissions in the world per year. China being the world's largest source of emissions makes China suffer from bad air pollution. Like the entire world China will face severe climate change in the coming few years including massive floods and droughts. You could see this by looking at **Figure 3**, when you look at the Figure 3 of the bar graph you could see that the country that use the most fossil fuels by weight is China and it isn't even close. China, US, and India use almost half of all fossil fuels by weight. According to a research “China became the world’s largest emitter of CO2 from fossil-fuel combustion and cement production in China were 9.9 Gt CO2 in 2016, accounting for approximately 28 % of all global fossil-fuel-based CO2

emissions” (Han, Zeng, Oda, Lin, Cripa, Guan et al.,2019). This tells us that in the future China will deal with climate change disasters like sea levels rises and it will continue to get worse due to the increased use of fossil fuels.

Figure 3

Amount of fossil fuels used by different countries



Note. The bar graph shows three countries that consume the most fossil fuels every year: China, the United States, and India. Together these three countries consume almost 50% of the world's fossil fuel by weight according to the bar graph. *Institute, B. W. R. (2019, May 20). Which countries use the most fossil fuels? CleanTechnica. Retrieved November 18, 2021, from <https://cleantechnica.com/2019/05/03/which-countries-use-the-most-fossil-fuels/>.*

Demanding A Change

Thus if we keep burning fossil fuels it will result in climate change disasters and pollution. We have to demand change and use clean renewable energy, we have to find an alternative option to fossil fuels. One of the options could be Solar energy, Solar energy is known to be one of the cleanest renewable energy in the world. Solar energy is the best alternative to

Fossil Fuels because solar energy is a renewable energy which means solar energy will never run out as long as nothing happens to the Sun. Unlike fossil fuels which are a nonrenewable resource that will eventually run out. Another advantage is that solar energy does not produce air pollution or carbon dioxide and Solar Energy has close to no impact on the environment. If we want to reduce emissions the best way is to switch to Solar energy. If we don't make the switch to solar energy and continue to use fossil fuels we will continue to have long term health problems and we will face climate change disaster in the coming years.

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