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Overview of Environmental Health Issues

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Air Pollution

91% of the world's population live in places where air quality exceeds WHO guideline limit

In China, 98% of its cities exceeded WHO guideline

In India, in November 2019, a public health emergency was declared due to the air quality index of India exceeded 800 (more than 3 times of “hazardous” level)

In Indonesia itself, Jakarta has been several times ranked first in the city with the worst air quality in the world by AirVisual.

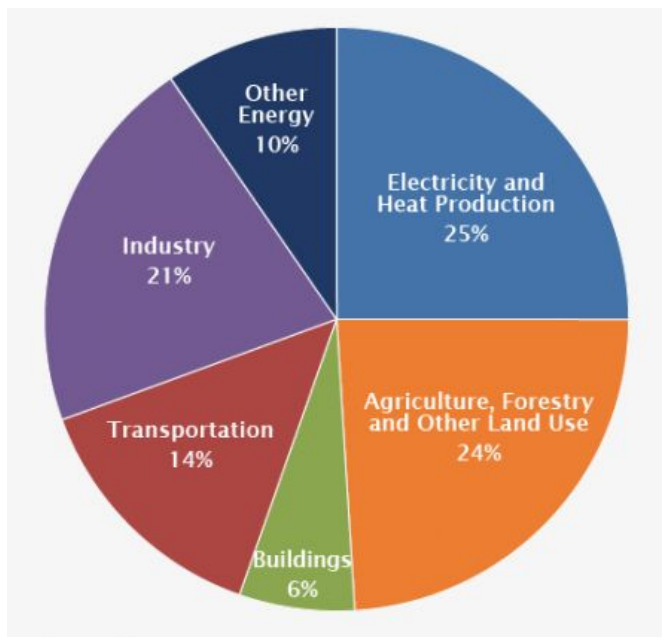


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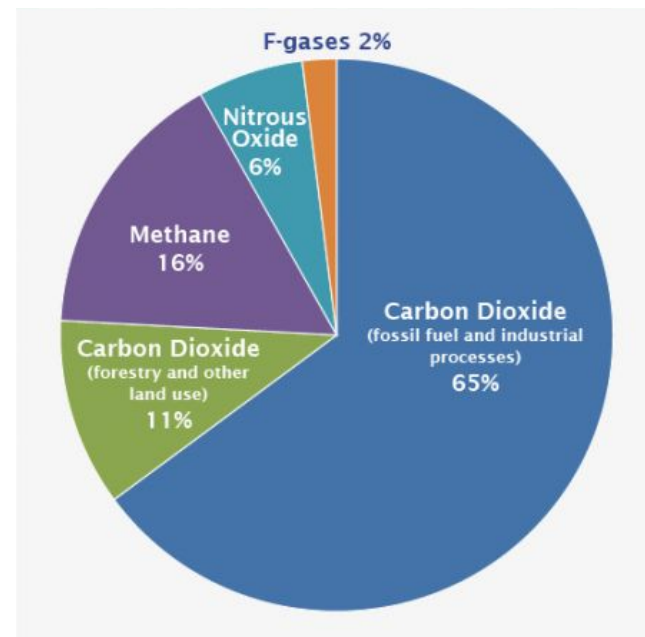
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Air Pollution Has Contributed to the Global Greenhouse Gas Emissions



Distribution of global greenhouse gas emission by economic sector



Distribution of global greenhouse gas emission by gas

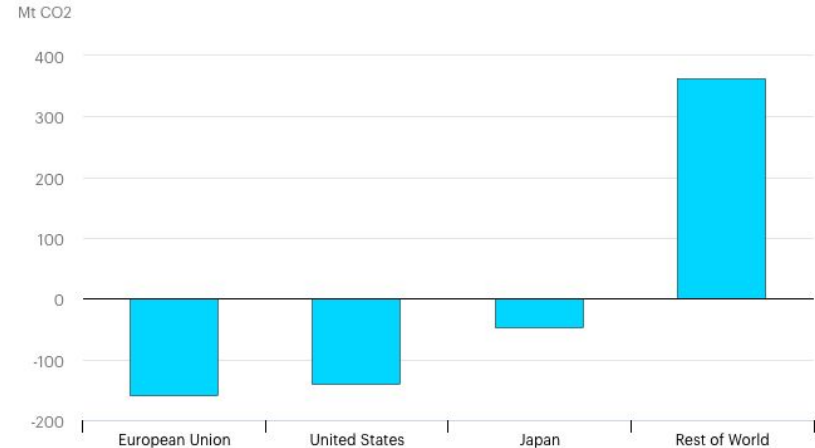
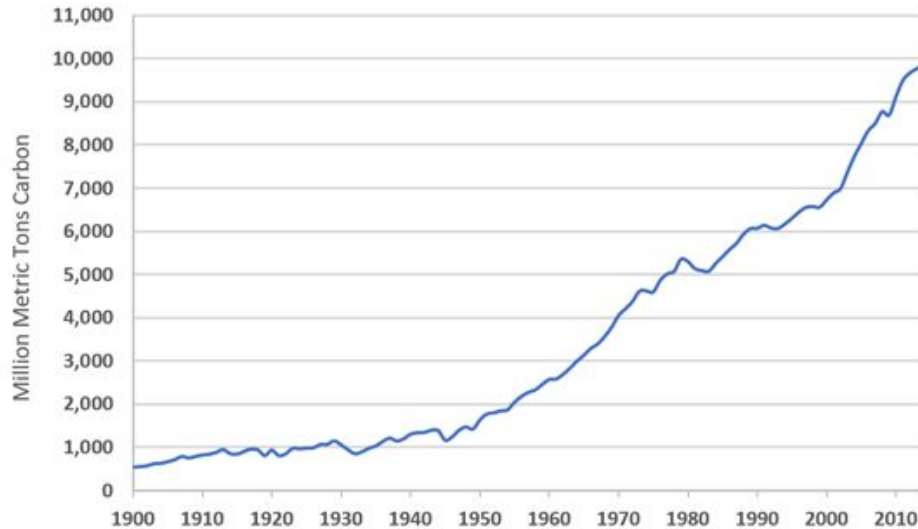


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Trend of Global Carbon Emission



Trend of global carbon emissions from fossil fuels from 1900-2014
Change in energy related CO2 emissions by region, 2018-2019

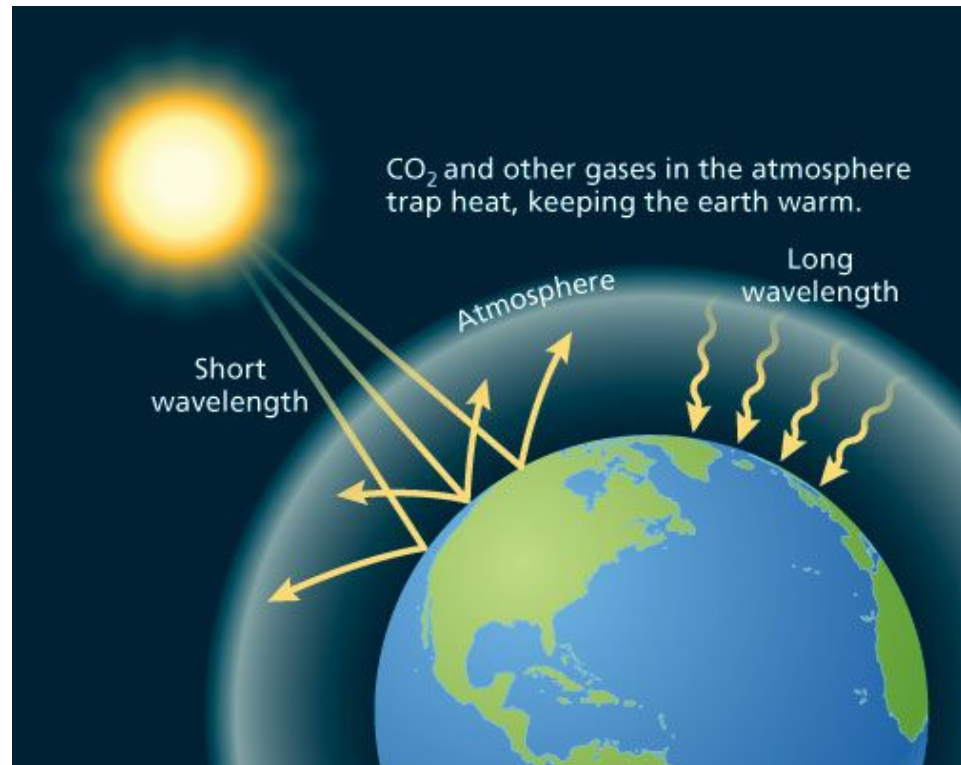


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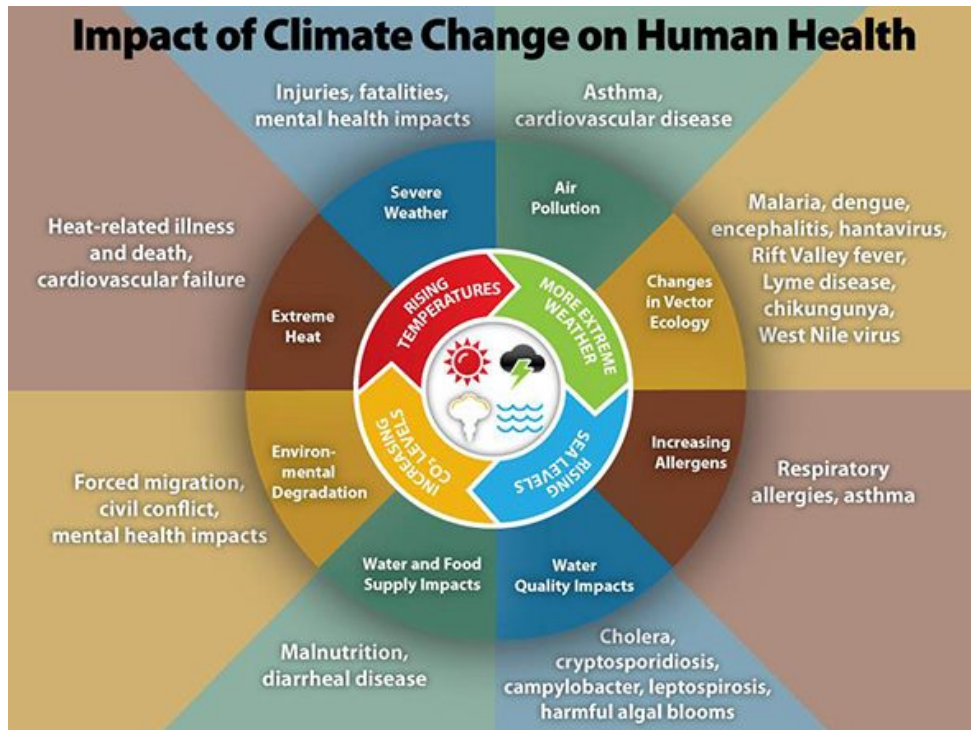
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Climate Change

Climate change means a significant change in the measures of climate, such as temperature, rainfall, or wind, lasting for an extended period – decades or longer.



Effects of Climate Change



Communicable Diseases

Non Communicable Diseases



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Example of Climate Change Effects

Australia's Bushfire 2019

Climate change can 'supercharge' wildfires in Australia through more extreme heat, drought

Climate experts say Australia's hottest, driest year has made the fires worse.

By **Stephanie Ebbs**

7 January 2020, 05:01 • 10 min read



Australia fires burn through 15 million acres of land, kill at least 25 people



Ebbs, S. (2020). *Climate Change Can 'Supercharge' Wildfires in Australia Through More Extreme Heat, Drought*. Available at

<https://abcnews.go.com/International/climate-change-supercharge-wildfires-australia-extreme-heat-drought/story?id=68096029>

Cheung, E., Yee, I. (2019). *Australia reckons with wildfires' destruction*. Available at <https://edition.cnn.com/2019/12/27/australia/australia-new-heat-wave-wildfire-intl-hnk-scli/index.html>



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Example of Climate Change Effects

Australia's Bushfire 2019



- Thousands of buildings and homes were destroyed
- Billions of animals are predicted to die due to the loss of habitat and food sources
- Poor air quality
- Huge damages in farmland

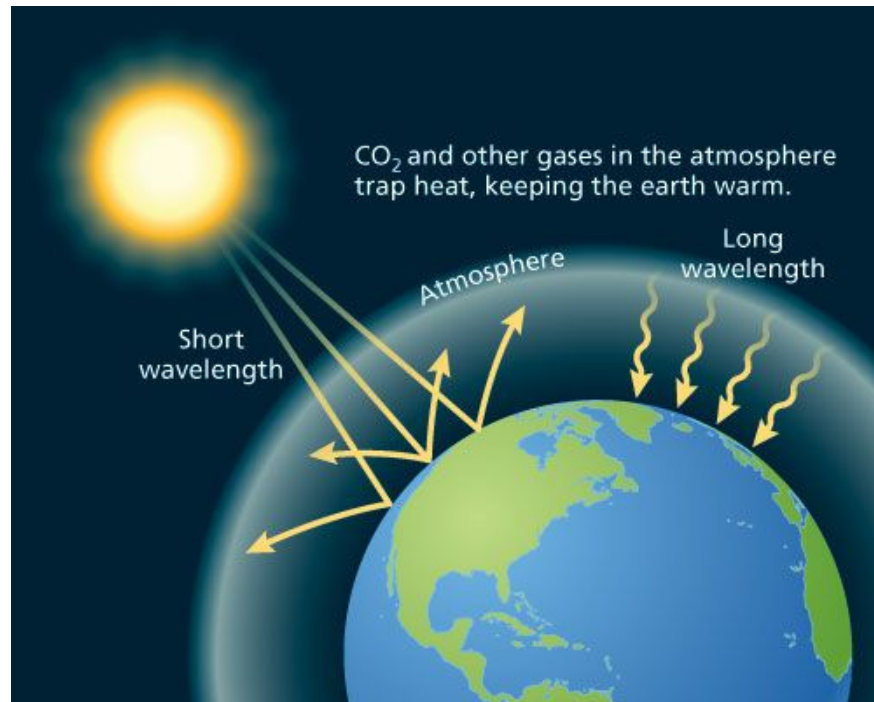


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Liquid Waste Contributes to the Water Pollution

Citarum River was called as the world's most polluted river by the World Bank, yet about 28 million people in Indonesia rely on Citarum River in West Java for water.



Citarum River



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Waste Problem in Indonesia



Every day, Indonesia generates 175,000 tons of waste and about 14% or 24,500 tons a day of plastics.

Unfortunately, currently 81% of waste in Indonesia is unsorted.



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Plastic Pollution in the Ocean



- To overcome this problem, some cities in Indonesia have started banning single-use plastic bags.
- Example of regulation: Gubernatorial Regulation No. 142/2019 (single-use plastic bags in Jakarta)

Vatvani, C. (2018). *The toxic waste that enters Indonesia's Citarum River, one of the world's most polluted*. Available at <https://www.channelnewsasia.com/news/asia/indonesia-citarum-river-worlds-most-polluted-toxic-waste-10124436>

Kahfi, K. (2020). *Jakarta to ban single-use plastic bags by June*. Available at <https://www.thejakartapost.com/news/2020/01/07/jakarta-to-ban-single-use-plastic-bags-by-june.html#:~:text=The%20regulation%20%E2%80%93%20Gubernatorial%20Regulation%20No.142%20on%20Dec.&text=The%20regulation%20copy%20of%20as%20well%20as%20traditional%20markets>