

As temperatures rise, greenhouse gases from CO₂, hydrofluorocarbons and other gas emissions trap heat.



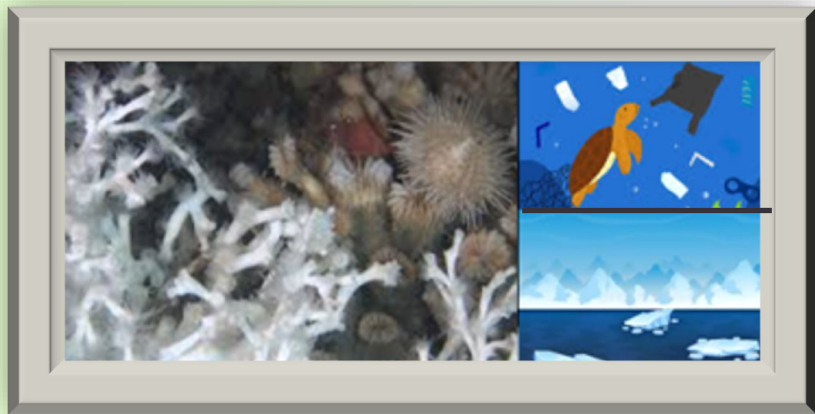
The consequence is climate change which, in totality, is a rise in temperature and the consequential triggering of hazardous and erratic changes in weather patterns that cause floods, droughts, fires, and violent storms, that in turn impact our entire ecosystems.



Unrecycled trash ends up in landfills or in the sea, impacting wildlife, fish and sea creatures. Deforestation forces vectors into habited areas.



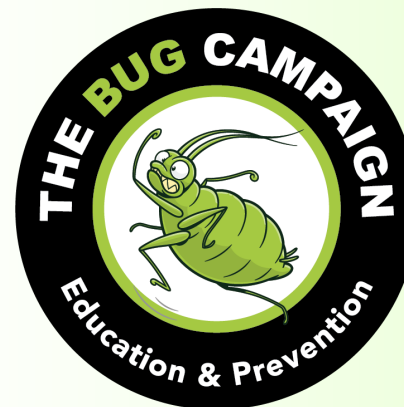
Vectors thrive and spread geographically with warmer temperatures. Excess water, provides more breeding opportunities.



With appreciation to



HATTIESBURG CLINIC



CLIMATE CHANGE

The Fuel That Ignites Bug Diseases

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CLIMATE CHANGE AND THE ENVIRONMENT

RISING TEMPERATURES & BUG DISEASE



Higher temperatures attract vectors into new areas, providing more opportunity to breed and transmit disease.



Given sufficient temperature rise, vectors can breed year-round

There is evidence that an acquired pathogen can replicate more quickly in higher temperatures thereby increasing a vector's competency to transmit an infectious disease.

RISING TEMPERATURES / GLOBAL WARMING

CLIMATE CHANGE =



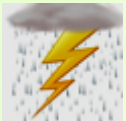
EXTREME WEATHER PATTERNS



Carbon dioxide (CO₂) is the largest contributor to greenhouse gases that feed climate change, but methane, ozone, nitrous oxide, chlorofluorocarbons and water vapor also contribute to these emissions.



Global Warming refers to the steady rise in temperatures worldwide due to human activity over the last 100+ years. Gas emissions trap solar radiation in our atmosphere adding to heat.



Climate Change is a more inclusive concept that includes the resultant conditions of extreme weather such as heatwaves, torrential rains and flooding, intense hurricanes and storms, more intense wildfire, and a loss of biodiversity



Warmer oceans and more moisture in the air result in intense rainfall during more intense storms, hurricanes and tropical cyclones. The sea is expanding with warmer water and storms risk coastal flooding.



Trees and plants absorb carbon dioxide. They convert it and store it in their leaves and roots. Destroying trees and plants means less CO₂ is absorbed at the same time as stored CO₂ is released!

THE ENVIRONMENT AND BUGS

DROUGHT



As temperatures rise, water evaporates more quickly into warmer air that can hold more water. That leaves surface areas drier making drought more common.



While ticks will deposit/lay eggs in several soft and warm places including coat linings, mosquitoes seek water. But droughts mean less availability causing birds and other potential creature reservoirs or hosts to gather in the same area. Once a vector is introduced, germs/pathogens can be passed to more hosts in turn providing more opportunities to spread disease.

FIRES



With warmer temperatures, dry conditions, dried vegetation and other forest growth becoming fuel, forest fires are more likely to break out, be more intense, and spread over larger areas at accelerated rates.

DEFORESTATION



In addition to wildfires, deforestation (cutting and stripping trees and forest), particularly in Amazon forests is devastating to climate change and alters the ecosystem,



Vectors migrate toward inhabited areas and adapt their biting and breeding patterns; humans become a more reliable blood source

FLOODING



Warmer temperatures have increased the melting of snow raising the sea levels. Additionally, a warmer atmosphere holds more water vapor which can mean more rain and water accumulation. The earth and drainage systems can only accommodate so much.



Mosquitoes deposit and lay eggs in water or in areas that will collect water—the larva and pupa stages require water. The amount of water can be minimal, a teaspoon's amount for hundreds of eggs. More water provides more opportunity for breeding.