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Can Homo Sapiens Survive the Anthropocene?

I Am Watching My Planet, My Home, Die (abridged)

By [Margaret Renkl](#), October 19, 2020 New York Times

<https://www.nytimes.com/2020/10/19/opinion/trump-environment-vote.html?searchResultPosition=1>

“NASHVILLE — I was writing [a love letter to autumn](#) and its perfect miracle of timing — the way berries ripen just as songbirds migrate through berry-filled forests — when the songbirds suddenly began to die. With no warning at all, thousands and thousands of birds, possibly millions of birds, were [simply falling out of the sky](#).

It’s not yet clear why the birds were dying — smoke from the wildfires on the West Coast? an unseasonable cold snap? the prolonged drought? — but whatever its immediate reason, the die-off was almost certainly related to climate change or some other human-wrought hazard. Every possible explanation for the birds’ deaths leads back to our own choices.

We think of [songbirds as indicator species](#) — so sensitive to environmental disruptions that they serve as an early warning of trouble. But the fact that the environment has become increasingly inhospitable to songbirds — and to human beings — is only one measure of a planet under life-threatening stress.

The earth is getting measurably hotter, [each year breaking records set the year before](#), while Arctic [sea ice continues to thin](#). [Wildfires are growing hotter](#), more frequent, more widespread, and more deadly. [Northeastern forests are sick](#). Our oceans are [full of plastic](#). The world’s [largest wetland is on fire](#), and the Amazon rainforest is [on its way to becoming a savanna](#). The pandemic that has paralyzed global life is itself the manifestation of a disordered relationship between human beings and the natural world.

None of this is new. We’ve seen it all happening, worsening with every passing year, for decades now. [Any chance of reversing climate change is long since gone](#), and the climate will inevitably continue to warm. The question now is only how *much* it will warm, how terrible we will let it become.

There are days when I lose all hope, when it feels as if the only thing left to do is to sit quietly and bear witness to all that will soon be gone. I held my father’s hand as he died, and I held my mother’s hand as she died, and now it feels as though I am watching my planet die, too.

But that isn’t how I feel most days. On most days I am still fighting as hard as I can possibly fight, living as lightly on the earth as I can manage. The only other option is surrender.

But personal responsibility [isn't going to save the planet](#) by itself. Saving the earth at this late date will also require us to reform the entire global economy. It will require government regulation, industry innovation, companies to invest in the very planet they have been profiting from.

As the costs of failing to address climate change have become increasingly clear, people on both sides of the political aisle are beginning to wake up: Today, [72 percent of Americans recognize that climate change is happening](#), a marked departure from the position of the climate-denier in the White House. [Fewer than 10 percent share his view](#) that climate science is a hoax.

Every single issue that matters to me — education, social justice, women's rights, affordable health care, criminal justice reform, gun control, immigration policy etc. — won't mean a single thing if the planet becomes uninhabitable. The same is true for my brothers and sisters across the political aisle: If they care about the right to life, as they say they do, if they care about the economy, about freedom, about national security, as they say they do, then they have no choice but to vote for candidates who are committed to halting the rate at which the planet is heating up.

For now and for the foreseeable future, there is only one issue because there is only one planet we can call home.”

The Great Die-offs

In the past half-billion years, there have been five mass extinctions during which a large percentage of species on our planet died. The percent going extinct ranged from 60 – 70% in the Ordovician-Silurian extinction to 90 – 96% in Permian-Triassic extinction.

These “die-offs” have been caused by catastrophic changes in Earth's atmosphere, either from volcanic activity or an asteroid colliding with our planet. These events led to habitat destruction, which caused endangerment and extinction and a profound loss of biodiversity over thousands or millions of years.

Many scientists believe we are in a sixth mass extinction, which was triggered far more gradually than the previous five, beginning with the Industrial Revolution in the mid-1700s. We are seeing a gradual but accelerating degradation of habitat necessary for life on Earth, aptly named the “Anthropocene” because humans appear to be the primary cause. Over one million potentially crucial species are now under duress or extinct. Will we manage to survive?

Major Signs of Destruction

Evidence of habitat destruction is everywhere. The [Climate Clock](#), a project of artists, scientists, and activists, will tick down to six years — six years until, at present levels of CO2 emissions, the global rise in temperatures over pre-industrial levels reaches 1.5 degrees Celsius.  [news-press.com/story/opinion/2021/01/08/florida-and-national-political-leaders-must-work-fast-emissions/6579843002](https://www.news-press.com/story/opinion/2021/01/08/florida-and-national-political-leaders-must-work-fast-emissions/6579843002)

Habitat necessary for life on earth consists of **atmosphere, water, and land**. Like everything else on Earth, these habitats interact. Our warming atmosphere melts polar ice, which floods land. Chemical fertilizers are used in factory farming, and the run-off pollutes oceans, rivers, etc., which causes algae to increase and promotes red tide, which can sicken and even kill humans and other animals. And so it goes...

As each habitat degrades, plants and animals perish in increasing numbers, resulting in species extinction. Life on earth has evolved over the eons to reach the current delicate balance among millions of species. As species are dying, that balance is eroding in cascades that many scientists fear may no longer support civilization as we know it.

Land. Approximately 40% of the habitable land on Earth is used for agriculture (<https://ourworldindata.org/global-land-for-agriculture>), and over half of the food produced by factory farming is used to feed animals that we eat. As world population continues to grow, more forests are being cleared to provide more farmland (<https://www.onegreenplanet.org/environment/livestock-feed-and-habitat-destruction>). Furthermore, factory farming of animals requires huge amounts of water and produces vast amounts of waste that further pollutes our sources of water.

Between 15 and 17 percent of the Amazon rainforest has been lost, and if the amount of cleared forest land reaches 25 percent, there won't be enough trees cycling moisture through the rainforest. That will cause the rainforest to dry out and degrade into a savanna. (<https://www.vox.com/science-and-health/2019/11/18/20970604/amazon-rainforest-2019-brazil-burning-deforestation-bolsonaro>). Then the "lungs of our planet", consisting of billions of trees that absorb tons of carbon dioxide per year and produce 20% of our oxygen, will be gone, along with nearly 3 million plant and animal species.

Water. Global ice loss has increased rapidly over the past two decades, and scientists are still underestimating just how much sea levels could rise, according to alarming new research ([washingtonpost.com/climate-environment/2021/01/25/ice-melt-quicken-greenland-glaciers/](https://www.washingtonpost.com/climate-environment/2021/01/25/ice-melt-quicken-greenland-glaciers/)).

From the thin ice shield covering most of the Arctic Ocean to the mile-thick mantle of the polar ice sheets, ice losses have soared from about 760 billion tons per year in the 1990s to more than 1.2 trillion tons per year in the 2010s, a [new study](#) shows. That is an increase of more than 60 percent, equating to 28 trillion tons of melted ice in total — and it means that roughly 3 percent of all the extra energy trapped within Earth's system by climate change has gone toward turning ice into water. Earth is now losing 1.2 trillion tons of ice each year. And it's going to get worse.

Atmosphere. Rising air temperature is the most well-known result of human activity as we approach a 1.5 degree Celsius increase in average global temperature since the Industrial Revolution began, and energy production through burning fossil fuels is a significant cause. Steps for improvement include Individual actions such as recycling, turning off lights, driving less, etc., plus broader changes such as a whole new industry producing alternative sources of energy, organic farming, mass transportation, electric cars and even blocking the sun's rays by spraying chemicals into the air (

<https://www.sciencedaily.com › releases › 2020/06>) But which changes should we focus on, both individually and collectively, to have the most impact?

Major Causes and Potential High-Impact Corrective Actions

There is a plethora of ideas to offset or even reverse the impact of our habitat destruction. Even Bill Gates has weighed in with an emphasis on technological solutions (*How to Avoid a Climate Disaster*, New York: Knopf Doubleday Publishing Group, 2020).

Major research and analyses have identified major underlying causes and solutions to our current die-off (Hawken, Paul (ed.) *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*, New York: Penguin Books, 2017). See also <https://www.greenamerica.org/climate-change-100-reasons-hope/top-10-solutions-reverse-climate-change>. Population growth, factory farming of animals, tropical forest destruction and transportation are among the key causes. The solutions will require individual actions as well as a coordinated global effort.

Switch to renewable forms of energy. We are all familiar with the effect of burning fossil fuels to produce energy and the importance of alternative, renewable forms of energy. But the next three have received much less emphasis but are equally if not more important.

Educate girls/family planning. The difference between a woman with no years of schooling and with 12 years of schooling is four to five children per woman. Women with more years of education have fewer, healthier children and actively manage their own reproductive health. The resulting reduced population growth dramatically affects the remaining causes.

Adopt a plant-rich diet. Seven kilograms of grain produces only one kilogram of meat. Reducing the consumption of animal products would cut out the “middle animal” and dramatically reduce world hunger. It would also reverse the destruction of forests to create more farmland. We also need to grow our food with fewer chemicals, which kill vast numbers of pollinators and other insects that keep our soil healthy and productive (see *Kiss the Ground*, 2020 on Netflix for optimistic ideas).

Restore forests. Campaigns are underway all over the world to grow more trees, probably our most effective plant to absorb carbon dioxide and produce oxygen (see David Attenborough: *A Life On Our Planet*, 2020 on YouTube or Netflix for hope).

Discussion Questions

1. What can we do to reduce the effects of our habitat destruction?
2. What can be done to change our economy to save our future on Earth?
3. Do we have the political will to make needed changes? How can we strengthen that will?
4. How about passing a federal law that for every tree downed, another is planted?
5. What odds do you give for our species to make enough changes to survive?