



Medium

Earth Day at 50 — A Brief History of Environmental Progress & Reasons for Optimism Moving Forward



Joanna Underwood receiving the 1992 US EPA Administrator Award from William K. Reilly

This 50th anniversary of Earth Day is the right time to ask, how far have humans really come in protecting our environment? Many people, especially young people, are understandably discouraged and think we have done much too little. But for those of us who were around for the first Earth Day in 1970, it's clear that we have, in fact, come a long way.

In the early 1970s, with the explosive passion and support of millions of Americans and our President, the first federal environmental laws were passed: The National Environmental Policy Act which set up the US Environmental Protection Agency, and the Clean Air and Clean Water Acts. We thought then that the problem we faced was mainly pollution from factories. Cities were blanketed with smog. Industrial smokestacks were the enemy. The solutions involved finding ways to trap pollutants.

We set concrete goals, and we were optimistic. With this country's industrial skills and know-how, Americans would meet the federal standards and would have healthy air to breathe by 1975. Our major waterways would be fishable and swimmable by 1982. With the 1976 Resource Conservation and Recovery Act, the solid waste problem would be addressed.

By the mid-1980s, however, we started to realize the problem we faced was deeper than simply cleaning up the pollution and waste we released into the environment. There was too much of it to get rid of. We had to prevent pollution and waste. We needed to recycle. We also had to deal with toxic substances, for which there were really no measurably safe levels of exposure on which to base federal standards. This meant the flow of wastes and contaminants had to be stopped at the source.

The Pollution Prevention Law of 1990 made prevention the EPA's top environmental priority. This would take considerable ingenuity, re-engineering, and innovation. But it didn't yet call into question the strong industrial foundation of our economy, including the oil industry, the chemical industry, the auto industry, etc. They were still seen as a kind of social good in and of themselves.

But by the dawn of the 21st century, our understanding of the problem we faced changed again. More and more, customers wanted toxic-free and recyclable products and clean energy sources and fuels. Industries made efforts to look "green" to cultivate customer loyalty. But environmentalists were taking a more fundamental view. Instead of tweaking supply chains or embracing green consumerism, they saw the need to change the whole basis of our economy.

For the last 150 years — just a fraction of a second in geologic time — our species had built a way of life based on massive exploitation of sequestered carbon in fossil fuels. Before that it had been wind, horses, and our feet that got us around. Now fossil fuels transported us, heated our homes and powered our factories. Petroleum-based synthetic chemical production also generated a world of amazing products, from disposable plastics and nail polish to prosthetic limbs.

In the last century, the US put 230 million cars, buses and trucks on hundreds of thousands of miles of US roadways, powered by the petroleum drilling and refining industry. We built over 200 coal-burning plants and, just since World War II, we added more than 200 huge synthetic chemical plants. We created a culture of disposable consumer goods.

At the same time, the population exploded. Since the first Earth Day, the US population has grown from 205 to 330 million, and the world population has doubled from 3.7 billion to more than 7.5 billion, headed for over 9 billion by 2050. In the US, annual population growth is slowing but it's still over 1.5 million a year. Where will they all live? What will they eat? What will their quality of life be?

Layered on top of all this are the catastrophic consequences for the climate of burning fossil fuels. We've suffused the thin layer of our atmosphere — the layer that has made life as we know it on this planet possible — with heat-trapping gases. Fossil fuels long gave us comfort, variety, speed and convenience. But they're clearly not sustainable for the US economy, let alone for the billions in developing countries. And the injustice they feel is untenable, knowing we have gobbled up so much of the world's resources, wanting the same benefits we have had, but being told they can't have them.

So now, 50 years after the first Earth Day, we've finally arrived at a viable working definition of the problem we face. It's the entire system. We have to move to a sustainable way of life. We need to reuse and recycle. We need toxic-free renewable feedstocks for our products. We have to shift to renewable, carbon-free and pollution-free energy. We have to finally embrace and implement the definition of sustainability framed in 1972 by The Brundtland Commission: Living in ways that "meet our own generation's needs but do not deprive future generations of meeting theirs."

There are signs this view is taking hold. Over the last decade, toxic-free cleaning products have poured into the market; electronic devices are getting redesigned for sustainability and refurbished, reused, and recycled. Energy producers and vehicle manufacturers are under increasing pressure to move beyond fossil fuels. Electric vehicles and renewable energy are growth industries. Renewable natural gas made from organic wastes, a net carbon-negative fuel, is increasingly powering heavy vehicles including municipal bus and truck fleets. And the "Green New Deal" embodies these concepts of sustainability.

The private sector has produced and scaled up innovations like these, though there are still vested interests and inertia in markets that stand in the way of sustainability. Yes, we need more independent research and breakthroughs, but the greatest need is to leverage and scale up the solutions we already have. They can take us a long way and get markets further aligned with sustainability goals, especially if governments facilitate deployment and implementation, and help level the playing field. That may sound like wishful thinking, but if we elect leaders who are receptive to it, it will happen.

On this milestone Earth Day, to young people who view this juncture in history with alarm, to leaders like Greta Thunberg who say that the global establishment and its incrementalism have failed and it's time for a revolution, I'd say, don't despair or disengage. Vote. Organize. Fight for the future. Yes, it took 50 years, but we evolved a fuller understanding of the problem and the solutions, and we've come a long way since 1970. We can build on that progress to implement what we've learned. We can build a new world.

Joanna Underwood, Founder of Energy Vision, launched the organization in 2007 and served as President until 2016. Its goal has been to identify and promote the clean, renewable, low- and no-carbon energy technologies and fuel sources needed for a sustainable future.

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